MALIGNANCY DETECTION IN DERMOSCOPY IMAGES WITH TEXTURE ANALYSIS

by

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ABSTRACT

Automated skin lesion border examination and analysis techniques have become an important field of research for distinguishing malignant pigmented lesions from benign lesions. An abrupt pigment pattern cutoff at the periphery of a skin lesion is one of the most important dermoscopic features for detection of neoplastic behavior. In current clinical setting, the lesion is divided into a virtual pie with eight sections. Each section is examined by a dermatologist for abrupt cutoff and scored accordingly, which can be tedious and subjective. This study introduces a novel approach to objectively quantify abruptness of pigment patterns along the lesion periphery. In the proposed approach, first, the skin lesion border is detected by the density based lesion border detection method. Second, the detected border is gradually scaled through vector operations. Then, along gradually scaled borders, pigment pattern homogeneities are calculated at different scales. Through this process statistical texture features are extracted. Moreover, different color spaces are examined for the efficacy of texture analysis. The proposed method has been tested and validated on 100 (31 melanoma, 69 benign) dermoscopy images. Analyzed results indicate that proposed method is efficient on malignancy detection. More specifically we obtained specificity of 0.96 and sensitivity of 0.86 for malignancy detection in a certain color space. The F-measure, harmonic mean of recall and precision, of the framework is reported as 0.87.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS iv

ABSTRACT v

LIST OF TABLES viii

LIST OF FIGURES ix

Chapter 1. INTRODUCTION 1

Chapter 2. LITERATURE REVIEW 4

2.1 What is skin cancer? 4

2.1.1 Normal Skin 4

2.1.2 Benign skin tumors 5

2.1.3 Melanoma skin cancers 5

2.1.4 Skin exams 6

2.2 Dermoscopy 6

2.2.1 What is dermoscopy? 6

2.2.2 Procedures and Instruments 7

2.2.3 Dermatoscope 7

2.2.4 Stereomicroscope 8

2.2.5 Videodermatoscope 8

2.2.6 Digital imaging 9

2.2.7 How to evaluate dermoscopic diagnosis 10

2.2.8 Color 10

2.2.9 Evaluation Criteria 11

2.2.10 The ABCD Rule 28

2.2.11 7-point checklist 31

Chapter 3. DERMOSCOPY IMAGE ANALYSIS AND FEATURES EXTRACTION 32

3.1 Overview 32

3.2 Preprocessing 36

3.2.1 Colorspace Transformations 37
3.2.2 FDBLD Algorithm 39
3.2.3 Morphological Operations 41
3.3 Boundary Detection 43
3.3.1 Chain Code 43
3.3.2 Boundary detection 44
3.4 Feature Extraction 46
3.4.1 Statistical measures 47
3.4.2 Statistical texture feature 48
3.4.3 1st Method: Texture Feature Extraction on the boundary 50
3.4.4 2nd Method: Texture Feature Extraction on the inner-shifted boundary by vector scaling 53
3.4.5 3rd Method: Texture Feature Extraction on the inner-shifted boundary by dynamic scaling 61
Chapter 4. EXPERIMENTS AND DATA ANALYSIS 71
4.1 Support Vector Machine (SVM) 74
Chapter 5. GRAPHICAL USER INTERFACE (GUI) SKIN ANNOTATION AND BORDER ANAYSIS TOOL 76
5.1 The GUI of Skin Annotation 76
5.2 The GUI of Border Analysis 82
5.3 The GUI of Fractal Dimensions 84
Chapter 6. RESULTS, DISCUSSION, AND CONCLUSIONS 85
6.1 Results and Discussion 85
6.2 Conclusions 88
REFERENCES 89
APPENDIX A. HOMOGENEITY DATA 93

LIST OF TABLES

Table 1. The ABCD Rule for Color [7] 30
Table 2. 7-point checklist [7]..... 31
Table 3. The structure of 6 sample features in Gray Scale Channel 72
Table 4. The sum of the rank of each color set..... 73

LIST OF FIGURES

Figure 1. The skin structure in details [1] 4
Figure 2. Dermastoscope 8
Figure 3. Stereomicroscope 8
Figure 4. Videodermatoscope 9
Figure 5. Brown pigment network in melanocytic lesion 11
Figure 6. Dark-brown pigment network in melanocytic lesion 12
Figure 7. Asymmetric color distribution, irregular pigment network and different sized pigment dots 12
Figure 8. Pseudopigmented network on the face 15
Figure 9. (a) Radial streaming on skin lesion (b) Pseudopods on skin lesion 16
Figure 10. Melanocytic nevus with globular pattern 17
Figure 11. Melanocytic nevus with pigmented dots 20
Figure 12. White and gray areas in lesion 21
Figure 13. Gray-blue areas in melanoma 25
Figure 14. (a) Steel-blue areas in blue nevus [7] (b) Hypopigmented areas in a nevus [7] 26
Figure 15. Negative pigment network in melanoma[7] 26
Figure 16. Milialike cysts and comedolike openings in seborrheic keratosis [7] 27
Figure 17. Red-black lagoons 28
Figure 18. ABDC rule (Courtesy of [7]) 29
Figure 19. Preprocessing flow scheme 36
Figure 20. Color space conversion 39
Figure 21. Preprocessing operations: Lesion Border Detection with FDBLD and Complement 42
Figure 22. Preprocessing operations: Clear outside of the rectangle and Opening operations 43
Figure 23. (a) Rectangular-grid and (b) Digital boundary on grid 44
Figure 24. (a) The finalized dermoscopy image mask (b) The starting point 45
Figure 25. The detected boundary 46
Figure 26. The first circle on the boundary 50
Figure 27. Zoom in the circle 51
Figure 28. The Circular mask under shaded color image 51
Figure 29. The Circular mask 52
Figure 30. The Circular region 53
Figure 31. The vector and the unit vector in between centroid(x,y) and boundary(x,y) . 56
Figure 32. The shifted boundary(x',y') 56
Figure 33. The intersecting polygon regions on both borders 57
Figure 34. The red polygon is the result of polygon set operations 57

Figure 35. The mask of intersecting polygon region 58
Figure 36. The extracted region of the intersecting polygon region 58
Figure 37. The intersecting polygon circle with radius size (a) 5 (b) 7 (c) 10 60
Figure 38. The intersecting polygon circle with radius size 15 61
Figure 39. The failing case of the dermoscopy image 61
Figure 40. From irregular to perfect circle 62
Figure 41. The original and scale down boundary 65
Figure 42. The distance vector and the inner-shifted boundary 65
Figure 43. The intersecting polygon region 66
Figure 44. The result of polygon set operations 66
Figure 45. The mask obtained by polymask operation 67
Figure 46. The extracted region by matrix multiplication 67
Figure 47. The intersecting polygon circle with (a) radius size 5 (b) radius size 7 68
Figure 48. The intersecting polygon circle with (c) radius size 10 (d) radius size 15 (e) the fixed case 69
Figure 49. The hyperplane with maximum margin 74
Figure 50. GUI Skin Annotation and Border Analysis Tool 76
Figure 51. The pop-up window to prompt user to enter a tick length 77
Figure 52. The green + symbol is marked by the user on the image 78
Figure 53. The computed feature types and values 78
Figure 54. The automatic scale estimation by detecting the three major tick marks 79
Figure 55. The computed feature types and values 80
Figure 56. The image with annotations by means of annotation box 81
Figure 57. The XML file with 64-bit encoded dermoscopic image 81
Figure 58. (a) The Loaded dermoscopic image (b) The boundary detected dermoscopic image 83
Figure 59. The outcome of the analysis and the features' values 84
Figure 60. Experiments with only Blue, Cr, and Green-based features 85
Figure 61. Experiments with only Blue, Cr, and Green-based homogeneity features and Fractal features 87

Chapter 1. INTRODUCTION

Skin cancer is one of the most prevalent cancer types in the United States. In fact, the prevalence of skin cancer is increasing dramatically in the United States [1]. Each year the number of patients being diagnosed has been risen up compared to a previous year. The most common skin cancer type for young adults 25-29 years old has been known as melanoma [1] which could lead to serious complications such as scarring, deformity, even loss functionality of some parts of the body.

Early detection of possible melanoma signs play a significant role in order to be cured in early stages. Potential signs and symptoms of melanoma could be identified by taking the ABCD rule [2] into account during examination of the skin by health care professionals. The way that health care professionals apply a physical exam test is so called dermatoscopy (also known as dermoscopy) in which dermoscopy images are visually checked and the border of lesion is drawn. One of the criteria for detecting melanoma is abrupt cutoff. In current clinical approach in order to detect abrupt cutoff feature for malignancy detection; the lesion is segmented into eight virtual pies in which a dermatologist examines them for abrupt cutoff and assigns a score for each of the pies, which is a manual intervention, a tedious process, and it is subjective.

On the other hand, dermoscopy image analysis has been trended and featured prominently in not only dermoscopy research area and but also in the computer science field. Notably border analysis approaches [3][4] has been presented and highly cited in the literature. In this study, a unique framework is developed specifically for detecting

and measuring abruptness of pigment patterns along the lesion periphery. In the first stage of the developed method, the skin lesion border is detected by means of the density based lesion border detection method along with incorporation of freeman chain code [5]. Secondly, the shrinking and the shifting operations are applied to detect borders with the help of vector operations and dynamic scaling. Then, along gradually scaled border, pigment patterns' statistical texture measures and statistical texture features, especially homogeneity, are computed in various scales in which diverse color channels are engaged in this process.

Moreover, the developed method has been evaluated and confirmed by utilizing a test dataset consisting of 100 dermoscopy images, in which 31 of them are melanoma and 69 of them are benign. According to analyzed results, the developed method is significantly competent on the detection of malignancy. More explicitly, in a particular color space, the specificity has been achieved up to 0.96, and whereas the sensitivity has reached up to 0.86 for malignancy detection. Lastly, the F-measure, harmonic mean of recall and precision, of the framework is recorded as 0.87.

The organization of the thesis is addressed as follows: Chapter 2 provides literature review and a brief overview of skin cancer, along with current clinical diagnosis technique such as dermoscopy, diagnosis evaluation criteria, and prominent algorithms for detecting lesion's malignancy. In Chapter 3, dermoscopy image analysis methods, border detection, region and feature extraction steps are articulated in details. The Chapter 4, experiments and data analysis, emphasizes how to rank the best features and harmonize Support Vector Machine's parameters while utilizing assessment methods. In

Chapter 5, a user-friendly graphical user interface is described which is designed and implemented as a prototype to examine and interpret dermoscopy images. Finally, the Chapter 6 interprets the experiments and results and portrays correlation and efficiency of this study.

Chapter 2. LITERATURE REVIEW

2.1 What is skin cancer?

2.1.1 Normal Skin

In order to comprehend how a skin cancer starts and spreads, normal skin structure and functionality should be articulated. The normal skin is responsible in body for the following tasks: Covering body while protecting organs from injury, functioning as a blockade against bacteria and virus, keeping the body temperature under control, taking a role making vitamin, protecting body from ultraviolet (UV) rays. The skin is comprised of three layers: the epidermis, the dermis, and the subcutis. This layered structure is illustrated in Figure 1 below.

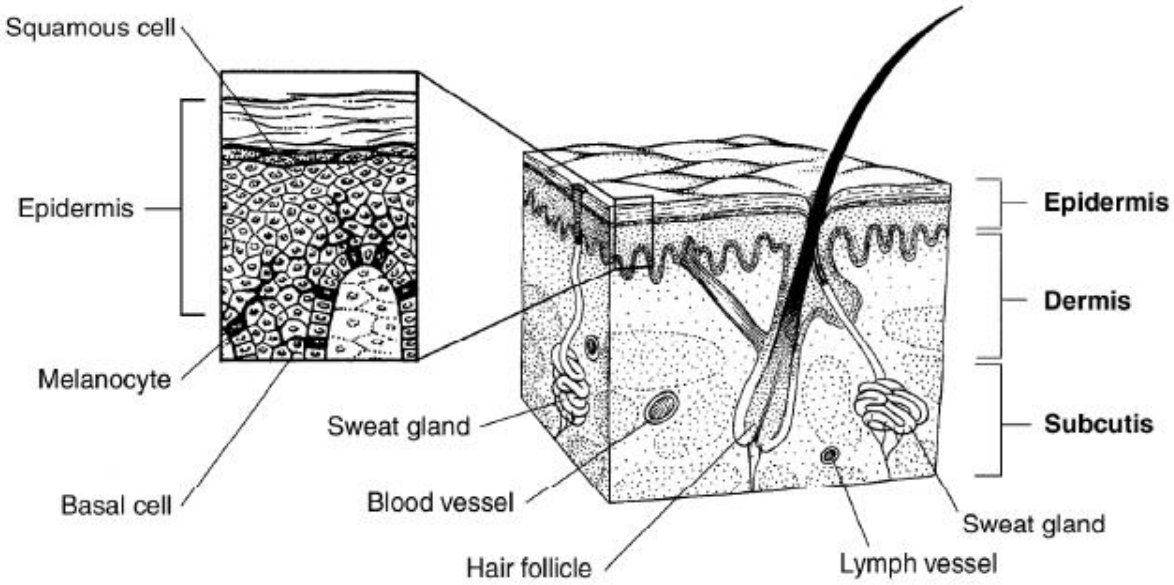


Figure 1. The skin structure in details [1]

The uppermost layer so-called epidermis is very thin form. The function of epidermis simply protects lower layers and organs from external factors. The epidermis consists of three type of cells as follows: squamous cells, basal cells, and melanocytes.

Melanocytes are the cells which are in charge of producing a pigment, namely melanin, which is the source of tan or brown color of the skin. Melanocytes cells may turn into melanoma in the skin. Melanocytes produce more melanin pigment as long as the skin stays under the sun. Thus, the skin color gets darker or tanner.

2.1.2 Benign skin tumors

Mostly, benign tumors begin to develop in melanocytes. A mole (nevus) is a type of benign skin tumor that starts off in melanocytes. Most moles (nevi) are considered as harmless, even though some types can turn into melanoma which could be risky. Another type of benign tumor is Spitz nevus, which is a sort of mole which occasionally resembles melanoma. Spitz nevus are seen mostly in children and teens, it may also occur in adults. These tumors do not spread due to the fact that they are benign ones.

2.1.3 Melanoma skin cancers

Melanoma is a cancer type which is also named as malignant melanoma and cutaneous melanoma. Generally, on one hand melanoma cells are capable of producing melanin, thus these are mostly brown or black. On the other hand, some of them appear to be pink, tan or white which cannot make melanin pigment.

Melanoma that starts in melanocytes and it spreads into anywhere in the skin. Melanoma's common starting regions in men are chest and back, whereas it starts from

legs in women. It is likely that it may also begin in neck and face. The darker pigmented skin, the lower risk it could occur in the common regions; however, at the same time, there are sites where this cancer can grow such as hand's palms, soles of the feet, and under the nails. Other than skin, less commonly, melanoma cancer can be seen in the other parts of human body such as the eyes, mouth, genitals, and anal area.

2.1.4 Skin exams

Melanoma can be found early by skin-self-examination or a health care professional. It is advised that you should check your own skin at least once a month. Thus, any changes or variations of the patterns-moles, blemishes, freckles and other marks- can be noticed. The skin exam also can be carried out by health professionals, particularly dermatologist, for skin problems. The technique many dermatologists use is called dermatoscopy (also known as dermoscopy, epiluminescence microscopy-ELM or surface microscopy) to examine the lesions/dots on the skin.

2.2 Dermoscopy

2.2.1 What is dermoscopy?

Dermoscopy is a method in which pigmented and non-pigmented skin lesions' features are examined with a handheld device, so-called dermatoscope, by health professionals. Dermoscopy is also known as dermastoscopy, skin-surface microscopy, epiluminescence microscopy (ELM) [6] [7] . The ultimate goal of dermoscopy is the early diagnosis of malignant melanoma by distinguishing them from benign. In order to differentiate malignant skin lesions from benign ones, the abnormal structural features and the

borderline of non-pigmented skin lesions are taken into account in the use of dermoscopy.

Due to the fact that microstructure of the epidermis, the dermoepidermal junction and the papillary dermis are not detectable by the naked eye, dermoscopy will be an invaluable asset for diagnosing particularly pigmented skin lesions. According to Vestergaard et al. [8] , in the case of the diagnosis of melanoma using dermoscopy provide more accurate result than using clinical evaluation by naked eye.

2.2.2 Procedures and Instruments

Dermoscopy consists of two major components which are a magnifier and a lighting system. When applying dermoscopy into skin surface, the skin lesion is covered with a special liquid (generally oil or a type of alcohol). Therefore, the reflection from the skin is minimized with the help of liquid. This allows the lighting system to capture better visualized structures from the skin. The new type of equipment, for instance polarization, does not need to use of a liquid and this type of tool is already capable of reducing reflection.

2.2.3 Dermatoscope

Dermatoscope is well known and widely used instrument during dermoscopy examination. As it is seen in Figure 2 below, it is a typical hand-held dermatoscope. Its optical system consists of monocular observation, magnification x10 and a halogen lamp.

Figure 2. Dermastoscope

2.2.4 Stereomicroscope

Stereomicroscope is another instrument which is more complex, expensive and larger than dermatoscope. Stereomicroscope image is shown in Figure 3. This device is equipped with binocular observations which provide large scale magnification ability along with the illumination system that includes a halogen lamp. When diagnostic feature and accuracy considered, the comparison of these two devices cannot be made because of not having sufficient research findings.

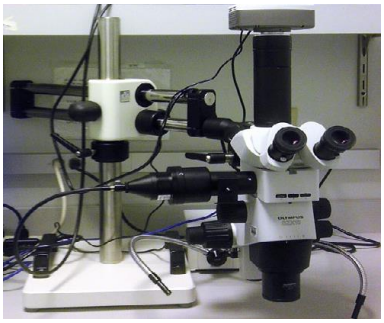


Figure 3. Stereomicroscope

2.2.5 Videodermatoscope

A videodermatoscope simply captures the skin lesion with a polarized/non-polarized probe and transmits the captured image into a monitor where the skin lesion can be visualized with more detail. In case of polarized dermoscopy, colors, structures and

patterns are visible clearly and coherently. On the other hand, non-polarized dermoscopy can be applied with either liquid or gel on the skin surface. Thus, colors, structures and patterns are less clearly distinguishable. Figure 4 shows a general videodermatoscope.

Figure 4. Videodermatoscope

Innovations and advances in technology significantly help the experts to make a more accurate diagnosis in dermoscopy. During examining of pigmented skin lesions, particularly high resolution images give a better understanding and insight to health care professionals.

2.2.6 Digital imaging

Digital technology allows experts to capture, store, review high quality images and videos in order to perform and examine dermoscopy images. With the help of digital photography, the accuracy of detection of melanoma can increase up to 92% [9]. This high accuracy rate occurs due to typical structures and features of melanoma. On the other

hand, 8% cannot be detected because of structural changes in melanoma skin lesion in time. [9][10]

There are also so called smart systems, namely, SolarScan [11][12] and Melafind [11] [12] which are capable of identifying benign and malignant from pigmented skin lesion. The idea behind these systems is that they do comparison of typical features between the new image and the older one. Therefore, their decision can be as good as an expert.

2.2.7 How to evaluate dermoscopic diagnosis

Research findings suggest that the dermoscopic diagnosis of pigmented skin lesions relies on some analytical approaches or certain algorithms. Most common analytical approaches for diagnosis of pigmented skin lesions are; pattern analysis, ABCD rule, and seven-point checklist. For pigmented skin lesion, the morphologic diagnosis is considered as the common backbone for all these diagnostic methods or algorithms.

2.2.8 Color

During accurate dermoscopic diagnosis, the color is considered as one of the most crucial elements because of pigmentation level and distribution of color are two important criteria for malignancy detection in a skin lesion. Since melanin is the original source of the colorful pigments, variety of structure and chromatic patterns are formed by melanin. Based upon the melanin's location, it can be categorized by lesion color as follows: Upper epidermis – black; Dermoepidermal junction - Light-to-dark brown; Papillary dermis - Slate blue; Reticular dermis - Slate blue.

2.2.9 Evaluation Criteria

Based upon chromatic and geometric distribution, epiluminescence microscopy (ELM) features can be categorized into two groups as follows.

2.2.9.1 Major criteria

2.2.9.1.1 Pigment network

Pigment network (PN) [7] is comprised of pigmented network lines and hypopigmented holes. In this feature, the rete ridges has more melanin and thicker structure which is formed by network line. Whereas the suprapapilary plate has considerably less melanin pigment and on the contrary to rete ridges suprapapilary plate is thinner and it is formed by hypopigmented holes. As it is seen Figure 5 below, network lines are slim and less pigmented towards periphery, while holes are distributed regularly.

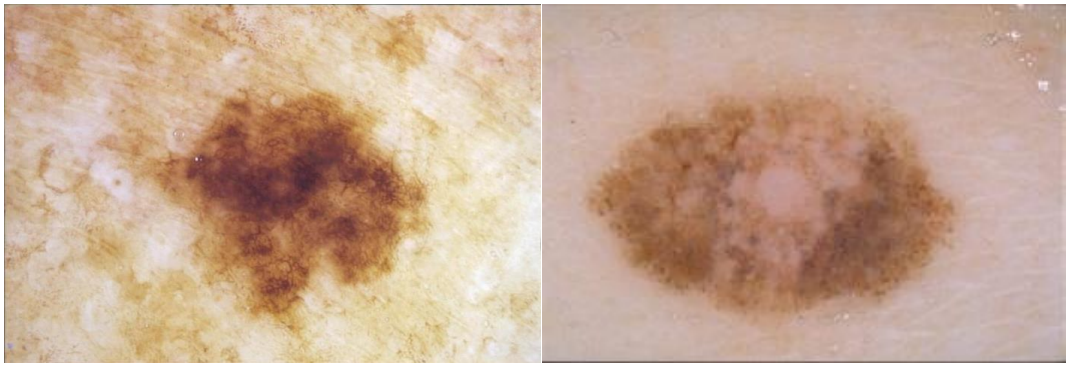


Figure 5. Brown pigment network in melanocytic lesion

Sometimes distribution is symmetric and heavy pigment color is accumulated in the center of the lesion. This type of cases is shown below in Figure 6.

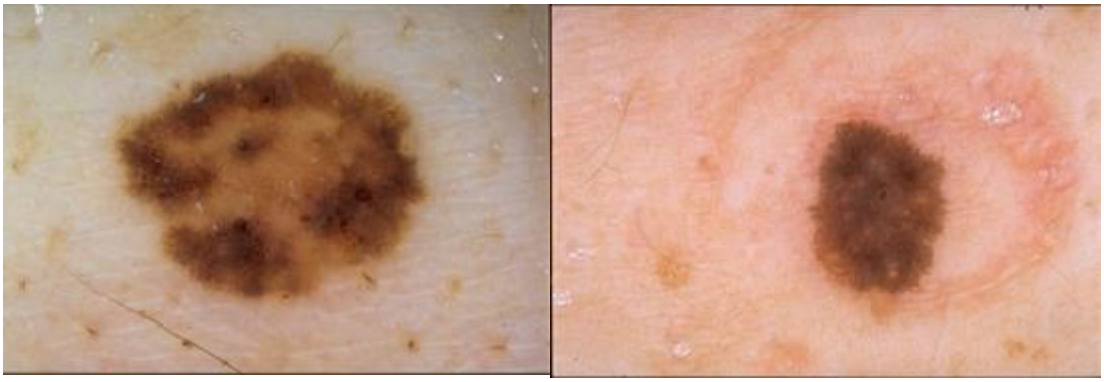


Figure 6. Dark-brown pigment network in melanocytic lesion

In the case of cutaneous malignant melanoma, PN cannot be easily noticeable when PN exposes itself as broad and widespread in malignant areas in the lesion.

Figure 7. Asymmetric color distribution, irregular pigment network and different sized pigment dots

In literature, PN is considered as the most critical melanocytic lesions' ELM feature. Significant research efforts have been put forward by using the pigment network. In the study given in [3], five different texture features- energy, inertia, correlation, inverse difference, and entropy were taken into account for extracting textural features from atypical pigment network (APN) and non-APN areas. For luminance plane of each RGB color channel, gray-level co-occurrence matrix (GLCM) was computed using pixel distances of 6, 12, 20, 30, and 40. Six classifiers (BayesNet, ADTree, DecisionStump, J48, NBTree, and Random Forest) were trained using 10-fold-cross validation by using these

computed GLCM dataset. In the classification skim, they obtained up to 95.4% accuracy of differentiating melanoma from benign lesions.

Wighton et al. [13] proposed automated skin lesion detection by generalizing tasks. In the training phase of this work, CIE L*a*b* channels were used for filtering with Gaussian & Laplacian of Gaussian (G-LoG) Filters and only L* channel was taken into account for computing histogram oriented gradient features with nine orientations. Then linear discriminant analysis (LDA) was applied to the features to reduce dimensionality along with eigenvectors. In the Labeling phase of this work, features of unseen images were computed with eigenvectors by filtering G-LoG. Then, in order to label the image, Maximum a Posteriori (MAP) estimation along with the posterior probabilities was used. Finally, the common tasks in ASLD (lesion segmentation, hair detection and the detection of the dermoscopic structure of pigmented network) were performed. In conclusion, the proposed model relied on supervised learning and MAP estimation.

Barata et al. [14] presented an automatic system which detects pigment network in dermoscopy images using a bank of directional filters. In the presented work, it consisted of three major steps as follows: pre-processing, pigment network detection, and lesion classification. In the pre-processing step, image was converted to a gray scale and reflection detection was performed by simple thresholding algorithms. Then hair detection was carried out by using 2D Gabor bank filters [15]. After detection of these artifacts, these were removed by inpainting [16] method. In the pigment network detection phase, first directional bank filter was applied to the image, and then by using 4 or 8 connectivity criteria all connected components were extracted and classified. All

the connected regions meet the certain threshold were taken into account as pigment network. Finally, in lesion classification, five features (network/lesion ratio, network/region ratio, number of holes, holes/lesion ratio and holes/region ratio) were employed to train a classifier. The statistical classification was also compared with a ground truth. The results achieved up to 91.1% sensitivity and 82.1% specificity.

In one of the recent works, Arroyo et al. [17] proposed a pigment network detection algorithm by means of machine learning and structural analysis. In training data, color features such as RGB, HSV, CIEXYZ, CIELab and CIELuv and spectral texture features such as Sobel, Hessian, Gaussian, DoG, and finally statistical texture feature (using GLCM-Gray Level Co-occurrence Matrix) were extracted from the images. With the help of these features, decision tree classifier was created and trained. Then machine learning process was applied to the images and its masks were used to determine whether they were part of the pigmented network or not, by means of generated rules. In the next phase, detection of pigment network structure, 8-connected components were obtained using the masks from the previous phase. A certain threshold value was applied to the 8-connected components to achieve sub-masks of these. Then pigment network shape candidates were determined. Finally, the diagnosis was carried out by means of number of holes total. According to the results, this proposed study achieved overall 83.64% accuracy. In terms of sensitivity and specificity, 86% and 81.67% ratios were accomplished respectively.

2.2.9.1.2 Pseudopigmented network

Due to the hypopigmented hair follicles and sweat gland openings, pseudopigmented network is formed in the face where ELM features of homogeneous pigmentation exists. The pseudonetwork exhibits different variations in benign and lentigo maligna lesions. In benign lesions, it manifests symmetric and uniform distribution in color and pattern wise. In contrast, in lentigo maligna, this network shows asymmetric and non-uniform variations in color and pattern wise. This happens due to the fact that typical melanocytes increases towards to hair follicles and adnexal structures. A sample is given in Figure 8.

Figure 8. Pseudopigmented network on the face

2.2.9.1.3 Radial streaming and pseudopods

The extension of the pigment is spread in radial growth. Near the border of the lesion, a parallel group of linear radial structure is observed. This structure is called radial streaming. Degree of color, from brown to black, depends upon the depth of the pigment. Pseudopods resemble bowed leaves or fingers which are dark brown or black. At the edge of each finger or leave, it has a knob. Radial streaming and pseudopods are seen in Figures 9 (a) and 9 (b) below.

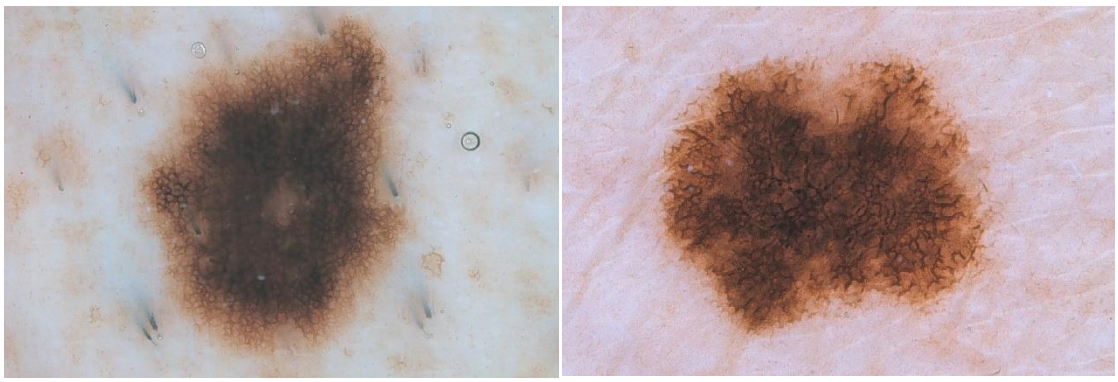


Figure 9. (a) Radial streaming on skin lesion (b) Pseudopods on skin lesion

Sadeghi et al. [18] proposed a method which detects streak lines and classifies them as absent, regular, or irregular in dermoscopy images of skin lesions. First of all, valid streak lines from candidate streaks were identified by using streaks features which included three structural, three geometric, six orientation, and six chromatic characteristics. In order to be revealed and determined geometric features, density ratio feature was employed along with coverage and completeness features. For orientation features, valid streaks were ordered so that the orientation change could be detected. Then, linear regression was taken into account to measure error from the orientation patterns. So that, regular and irregular streaks could be determined and localized in images. To extract chromatic features, mean and standard deviation of intensity values in H and S of HSV color space were used along with L* color band. Structural features were included shape, length, and variability of lines. Lastly, the classic texture features (energy, contrast, correlation and homogeneity), mean, standard deviation and reciprocal of the coefficient of S and H from HSV color space and L* from L*a*b* color space were extracted in order to be used in the classification phase. Classification was carried out by SimpleLogistic classifier which adopted LogitBoost algorithm [19] with streaks features. A 10-fold cross-

validation was performed to assess the performance of the classification. This assessment resulted in 85% accuracy for classifying streaks into absent, regular, or irregular.

In one of the studies, Mirzaalian et al. [20] proposed a machine-learning approach that identifies and localizes streaks in dermoscopy images by using a unique melanoma feature. In the proposed method, a tubularness filter was employed to enhance streak structure by means of eigenvalue decomposition of a Hessian matrix. Radial streaming pattern of the streaks were defined as a vector field and the amount of flux of the field was computed. Thus, the mean and variance of the flux in different bands could be calculated. In the final step, the best descriptors which differentiates three different classes: the absence (ABS), presence of regular (REG), and presence of irregular (IRG) were extracted using the Support Vector Machine (SVM) classifier. According to the results, 91% accuracy was obtained in over all groups.

2.2.9.1.4 Pigmented globules

General shape of pigmented globule is either round or oval along with dark brown or black colors. In nevi and melanoma, there could be some changes in color, size and shape. In benign melanocytic lesions, it exhibits brick patterns when accumulated regions lie.

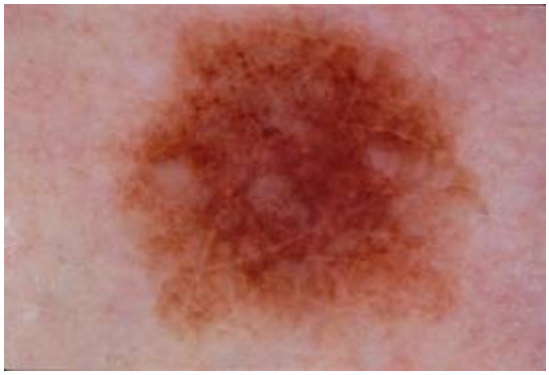


Figure 10. Melanocytic nevus with globular pattern

Pigmented globes also take attention in dermoscopy. In the following research, Fleming et al. [21] proposed several approaches to evaluate globule size variations. One of the first approaches was required detecting globule boundaries using a type of radial search which rays stretched from the center to the point of the highest edge of the boundaries. Even though it worked in some of the cases, it was not completely applicable for others. Another approach was that four points were attained, by using two principal directions, which were located at the edge of these directions. Additionally, another edge point was projected by fitting a Catmull-Rom spline [22] with the help of these four points. By means of these four points, a closed snake was initialized to obtain a better boundary estimate. It used a “balloon” adaptation where internal and external forces had the ability to expand the “balloon.” Thus, once the “balloon” entirely filled globule region, the region features could be extracted. Sometimes, the “balloon” boundary can exceed the real boundaries of a globule. That is where this approach does not produce more accurate results.

In this type of cases, statistical snake [23][24] offered a better approach where it attempted to increase the homogeneity in the closed region by utilizing statistical comparison between the value at the location of the snake and the mean & covariance of the entire region.

In another research, Thon et al. [24] proposed a Bayesian multi-scale method in which significant statistical features were detected via adapting Gaussian Markov random field model. In this research, significant features were identified utilizing a scale-space approach by computing posterior means and covariances over a large scale domain. Since

this method required remarkable competition, the block-circulant structure of the precision matrix-proposed by Rue and Held (2005) [25] - was employed to reduce calculation complexity. Significant features was referred to as significant gradient and significant curvature. In the Bayesian multi-scale analysis (BMulA) method, watershedding segmentation algorithm [26] was applied to the negative smoothed 2-D histogram of first two principle component of CIElab image. So that, the histogram was divided into regions. Then pixel classification was performed for each segmented regions by adapting this scheme [27]. The same cycle was carried out for only lesion pixels by computing principal component score, thus, the variance was maximized in the actual region of interest. As a result, 75% classification accuracy was obtained for dots.

2.2.9.2 Minor criteria

2.2.9.2.1 Pigmented dots

Morphological structure of pigmented dots are generally small, oval, has irregular formation, and its color could be dark brownish or black. The existence of pigmented dots stems from either the aggregation of free melanin or vastly pigmented melanocytes in the epidermis.

The formation of blue-gray and slate blue dots arise from melanophages or melanocytes in skin lesions. Pigmented dots display distinctive characteristics based upon lesions type. They are distributed uniformly in the center of benign melanocytic lesions with regular size and share, whereas they are located near the border of lesions with irregular size and shape. This is illustrated in Figure 11.

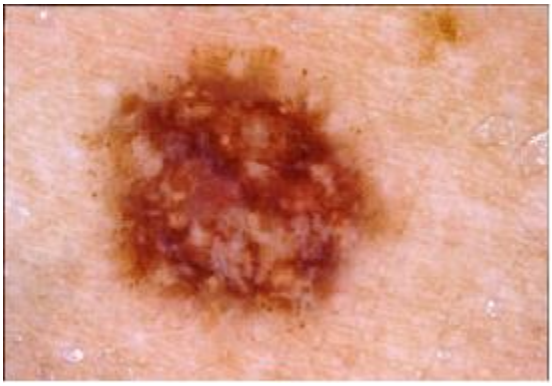


Figure 11. Melanocytic nevus with pigmented dots

Some research has been conducted on detection of pigmented dots in dermoscopy images. In one of them, Sigurdsson et al. [28] presented how to identify black dots using template matching based on area correlation. In the template matching method, a cross-correlation function was occupied in between image and template. In case of close match, the correlation amplitude made a peak in each color band of RGB space. 3 regions of interest (region with black dots, with brown dots, air bubbles, and pigmented network) were selected to be used for experiments. In order to generate template, 11x11 pixel size with 6 different black dot candidates were used in the red color channel. After the black color was determined in this template, the average pixel value subtracted from each and every pixel value. By means of correlation values in predefined black dots, a threshold value was identified. Thus, template matching method could be tested with all 3 regions with help of the threshold value. In conclusion, the expected result was not satisfying by template matching along with area correlation.

Yoshino et al. [4] introduced an automatic detection of pigmented dots by using morphological operations and filtering. Closing operation was applied to gray scale images with a threshold value between 20 and 40. The threshold also was automated

with a certain function. They concluded that it gives best result through closing operation with middle number for detecting dots.

2.2.9.2.2 Blue-white veil

The pigmentation color varies from blue-gray to blue white. When the epidermis gets thicker, lesions color is seen as black or dark brown. Histologically, this morphological feature corresponds to orthokeratosis and hypergranulosis in the dermis.

Figure 12. White and gray areas in lesion

In state of the art dermoscopy, significant research has been conducted in detection of blue-white veils. Celebi et al. [29] proposed an automatic detection of blue-while veils utilizing machine learning approach. The proposed research consisted of four major phases. In the first phase, manually border detection was carried out and employing flood-fill algorithm binary border mask was obtained. In order to extract color features from the background skin of a lesion area, 10% and 20% outside of border was marked by means of the Euclidean distance equation. Training and text pixels were determined with the help of blue-white veil and veil-related structure by a dermatologist. In feature extraction phase, the absolute color features of RGB channels were extracted since the absolute color feature does not get changed under various directions and illuminations.

Relative color features were also taken into account due to the fact that this provided several benefits such as equalization for variations, more genuine and no effects from illuminations. Lastly, statistical texture features were also included by means of Gray Level Co-occurrence Matrix (GLCM). In the pixel classification phase, a decision tree classifier was used to classify image as veil or non-veil subsets. 84.33% in sensitivity and 96.16% in specificity accuracy was obtained as classification result.

Leo et al. [30] demonstrated an automated diagnosis system to detect blue-white veil and regression structure based on ELM 7 point checklist along with image processing and classification techniques. This study consisted of image segmentation, lesion segmentation, and region classification phases. In the image segmentation phase, monochrome image was obtained from RGB image. Then a binary mask is gained by means of adaptive thresholding. Lastly, the contour of lesion border was detected by employing blob-finding algorithm [31]. For the lesion segmentation part, the region of skin lesion was broken into multiple chromatically homogenous regions with help of a proper multithresholding of color image. Principal Component Analysis (PCA), histogram construction, histogram partitioning, and lesion partitioning were performed in order to complete the lesion segmentation phase. In the region classification phase, a Logistic Model Tree (LMT) was adapted as a classifier to classify regions in the lesion map of an ELM image. As a result, sensitivity and specificity ratios were obtained as 0.87 and 0.85 respectively.

In the following work, Arroyo et al. [32] presented a blue-white veil and dark-red patterns detection system by means of supervised machine learning methods. In this study, Otsu

method [33] was used to segment out image in CIE color space to extract basic features. By choosing RGB color space, pixel features were selected and later these were feed into a classifier. Thus, blue-white veil pixel rules were obtained. With the help of blue-white pixel rules, segmentation method was applied to region candidates to attain binary masks. After applying the classifier algorithm, dark-red pixel rules were also obtained that would be used for dark-red regions segmentation. Using the same methodology, blue-white veil image rules were acquired which would be a major rule to decide whether an image was diagnosed as melanoma with blue-white veil or not. As a result, classification accuracy reached up to 89.06%.

Madooei et al. [29] claimed that an automatic detection system of blue-white veil could be designed such that it would imitate human perception of skin lesions. In the proposed system, blue-white veil color data in CIELab space was map to the Munsell color notation [34] which turned into a discretization of blue-white veil color. In the blue-white veil detection section, RGB image was converted to CIELAB, and segmentation was carried out by means of a mean-shift based segmentation tool. Moreover, for each segmented region, the detection was an attempt to match best color palette in which the region was classified as veil if within threshold distance. If not, it was classified as non-veil. Finally, the method was tested and validated for a set of 223 images and the experimental results were as produced with the ratios of 0.71 sensitivity and 0.97 specificity.

In another study of Madooei et al. [35], presented a novel approach based on color analysis and computer vision techniques for detecting blue-white veil regions in skin lesions. In the article, two phases for blue-white veil detection were described;

thresholding and the novel approach that was to imitate human perception. In the thresholding phase, a decision tree classifier was employed to classify pixels in training section in which the latter color, Lum=R+G+B, was used. This technique enhanced Celebi et al. [29]'s approach with regards to computational cost and complexity. The second approach, CIELab color space was map to the Munsell color system which was one of the fundamental color spaces. The aim of this phase was to perform discrete color matching to achieve better human perception. Then, color image segmentation was carried out by means of the mean shift method. Furthermore, for each segmented region, they tried to detect best color match in palette in which the region was classified as veil if within threshold distance. If not, it was classified as non-veil. As a result, the method was tested and validated for a set of 223 images and the experimental results were produced. The ratios of sensitivity and specificity were 0.71 and 0.97 respectively.

One of the recent studies in the literature is Lingala et al. [36]. In this study they proposed a vector based fuzzy logic technique to analyze shades of blue areas in dermoscopic images for melanoma detection. In this study, manual blue marking was performed on training images using a second-order best-fit B-spline by an experienced dermatologist. Next, feature characterization and absolute thresholding were empirically determined from training images. In order to recognize blue areas in images, a set of fuzzy logic was defined to give high membership to pixels. With the help of red chromaticity, blue chromaticity, green chromaticity, and relative fuzzy color set, blue shades segmentation was fulfilled in images. Diverse color, texture, and contour features were extracted from segmented blue region areas in images. For skin lesion classification, a Support Vector

Machine (SVM), which adapted an algorithm having a linear kernel and parameter, was utilized to perform classification. Finally, 82.7 % classification accuracy was obtained along with three different alpha cuts from features by applying this method.

2.2.9.2.3 Blue-gray areas

The color range could be in between gray-blue to deep gray as seen in Figure 13. This color type emerges in dermis due to the confined disseminated granules or peppering. Histologically, it is associated with melanocytes and melanophages which both hold melanin or hemosiderin.

Figure 13. Gray-blue areas in melanoma

2.2.9.2.4 Steel blue areas

Generally, steel blue areas (see Figure 14 (a)) appears in blue nevi with dot and/or globules and its color formation is simply gray-blue.

2.2.9.2.5 Depigmentation

Depigmentation is referred as having not sufficient pigment on particular area in skin lesions. It exhibits different formation depending on where it is located. In

hypopigmented regions, the degree of pigmentation is less which makes it lighter than area. In contrast, in white areas, the pigmentation level appears to be white or milky red.

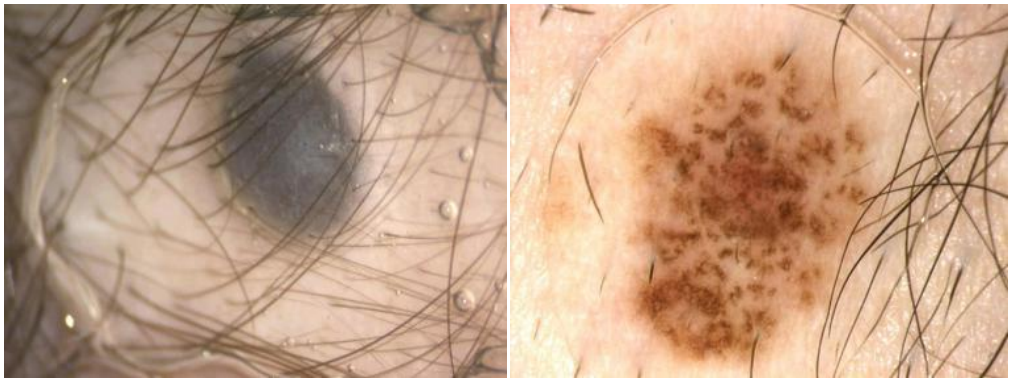


Figure 14. (a) Steel-blue areas in blue nevus [7] (b) Hypopigmented areas in a nevus [7]

2.2.9.2.6 Negative pigment network

This morphological feature depicts itself as a negative of the pigmented network in which the structures like cords of the network appears to be lighter whereas darker areas are seen as curved globular like formations along with filling the holes. Negative pigment network can be observed in Spitz, dysplastic, and melanocytic nevus. It exhibits different features from benign lesions such that it is scattered asymmetrically and it resembles to thin elongated hypopigmented rete ridges in which it includes densely pigmented melanocytic cells in lesions. Below is the negative pigment network in Figure 15.

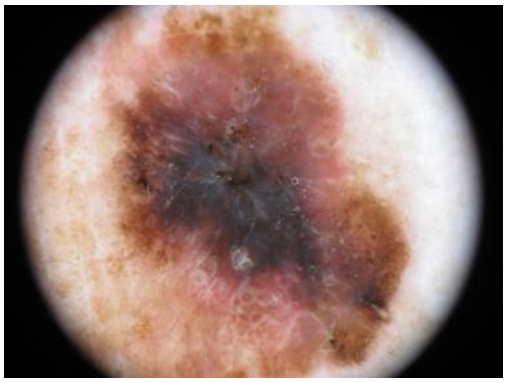


Figure 15. Negative pigment network in melanoma[7]

2.2.9.3 Guideless criteria

2.2.9.3.1 Milialike cysts

Milialike cysts are seen as small, round and whitish-yellow areas in certain size in between 0.1 and 1 mm. Milialike cysts play a significant role to diagnose seborrheic keratosis in which they appear to be bigger than regular size and they also relate to keratin-filled cysts in histologically.

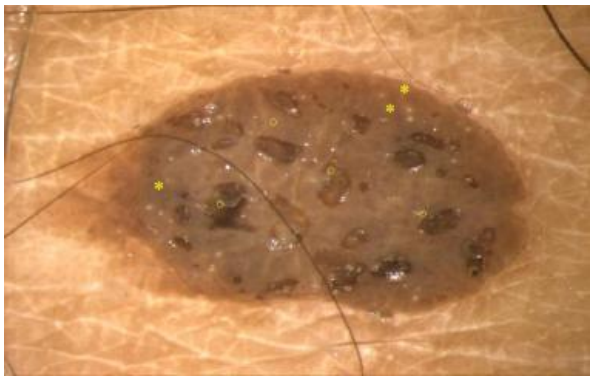


Figure 16. Milialike cysts and comedolike openings in seborrheic keratosis [7]

2.2.9.3.2 Comedolike opennings

Comedolike opennings' structure looks like circular and yellow-brownish color and histologically they correspond to keratin where they contact with the surface of the lesion as seen in Figure 16.

2.2.9.3.3 Red-black lagoons

Red-black lagoons exhibit themselves in small, round or oval with blue-red or blue-black color forms which is shown in Figure 17. They include pathognomonic diagnostic benchmarks such as hemangioma and angiokeratomas. Histologically, they correlate with large lagoons and thrombi inside papillary dermis.

Figure 17. Red-black lagoons

2.2.10 The ABCD Rule

The ABCD rule assesses geometric and morphologic variables such as asymmetry, color, and border of a given melanocytic lesion [2]. Due to applicability of the ABCD rule, it is recommended also for clinicians who are not fully experienced in dermoscopic observation [37]. Besides Stolz et al. [38], reliability of the ABCD is tested also by Nachbar et al [2]. For 172 melanocytic lesions, which consists of 69 melanomas and 103 melanocytic nevi, specificity and sensitivity are recorded as 90.3% and 92.8% respectively. After assessing, asymmetry, color, differential structure and border are multiplied by a weight factor that builds a total dermoscopy score (TDS). Critical values for TDS values are 4.75, 4.8, and 5.45. If TDS value is less than 4.75, it is indicator for benign. If it is between 4.8 and 5.45, then this case indicates a suspicious lesion, and the values greater than 5.45 indicates malignant for melanoma [38]. In the following, the explanation of the ABCD score calculation is provided in details.

2.2.10.1 Asymmetry

A given melanocytic lesion is divided into two sectors by 90 degree axes that have the lowest asymmetry score. If dermoscopically asymmetric contours, which are with respect to different structures and colors, are seen in both axes, the asymmetry score is 2. If there

is no asymmetry with respect to both axes, score is zero. Significantly, while the asymmetry score of most melanomas is 2, only 25% of benign nevi have 2 as their asymmetry score. Using dermoscopy can accurately evaluate asymmetry. Even though colors and structures can be detected and compared by naked eye, due to its higher weight factor (1.3), the symmetry assessment is remarkable for the final TDS, and notably none of the objects in nature are completely symmetric.

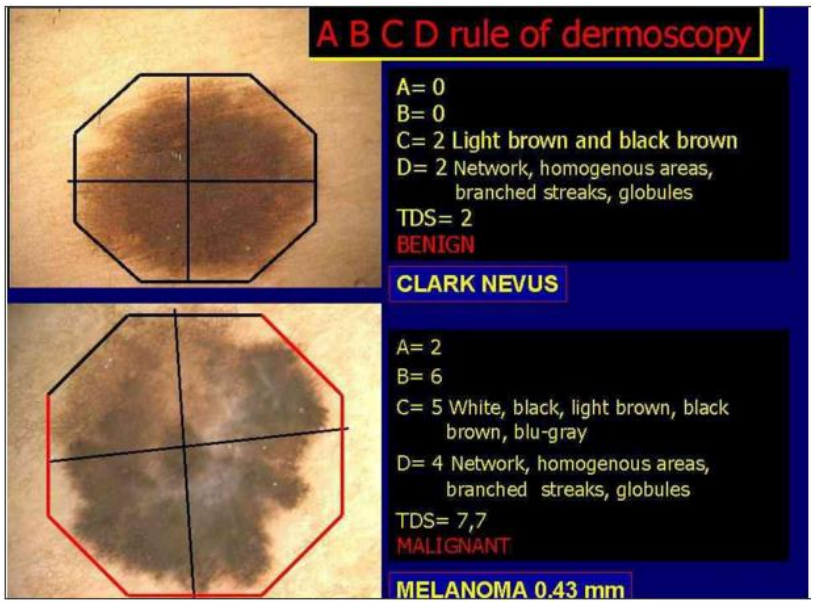


Figure 18. ABDC rule (Courtesy of [7])

2.2.10.2 Border

In order to extract information from border for producing TDS requires dividing the lesion into eight pies to observe abrupt interrupts at the periphery of these pies. The number of segments those have brusque cut off will be counted. This score ranges from 0-8.

2.2.10.3 Color

The emphasis is the different colors in the lesion. They include red, white, light and dark brown, blue-gray, and black. White should be counted only if it is lighter than the surrounding skin (white areas) and should not be confused with the hypopigmentation commonly seen in all types of melanocytic lesions. Each color is assigned 1 point, and the total score ranges from 1-6. The color spectrum includes red, light and dark brown, blue-gray, white and black. Notably, hypopigmentation is commonly seen in melanocytic lesions and potent to be confused with white areas. All in all, weight of each color is 1 point and, the range for total score is from 1-6.

Table 1. The ABCD Rule for Color [7]

Criterion	Description	Score	Weight
Color	Presence up to 6 colors (white, red, light brown, dark brown, blue-grey, black)	1-6	x 0,5
Dermoscopic structure	Presence of Network, Structureless or homogeneous areas, branched streaks, dots, globules	1-5	x 0,5

2.2.10.4 Different structural components

Pigmented networks, branched streaks, dots, and globules, structureless or homogeneous areas (color without structures such as Pigmented Network). To be counted, the area of structureless or homogeneous areas must form more than 10 % of the lesion. On the other hand, more two streaks and dots must be clearly visible to be counted. The more a lesion contains these differential structures, the higher the probability it is melanoma.

2.2.11 7-point checklist

This method was developed for the dermoscopic diagnosis of melanoma based on a blind evaluation of 342 melanocytic skin lesions (117 melanomas and 225 clinically atypical nevi) [39]. 7 features were selected because of their frequent association with melanoma. Note that, these were referred in the guidelines of the Consensus Meeting of Hamburg [40]. Three of them are major dermoscopic criteria with the weight of 2 points each, and four of them are minor criteria with the weight of 1 point. To be labeled as suspect melanoma, lesion requires to have a minimum 3 points. While atypical pigment network, blue-whitish veil, atypical vascular pattern are considered as major criteria, irregular streaks, irregular dots and globules, irregular blotches, regression structures are considered as minor criteria. Table 2 provides more details about description of these features and their histopathologic correlation.

Table 2. 7-point checklist [7]

Minimum Total Score of 3	
Major Criteria	**7-Point Score**
Atypical Pigment Network	2
Blue-White Veil	2
Atypical Vascular Pattern	2
Irregular Streaks	1
Irregular Pigmentation	1
Irregular Dots/Globules	1
Regression Structure	1

Chapter 3. DERMOSCOPY IMAGE ANALYSIS AND FEATURES EXTRACTION

3.1 Overview

This chapter describes essential image processing steps, in which a dermoscopy image is exposed to, and the feature extraction process. The underlying idea behind image processing steps is to finalize the dermoscopy image and its mask for the feature extraction process. Basically, these steps can be summarized as color transformations, skin lesion segmentation and border detection. These steps are summarized in Algorithm 1 below. More details of these will be articulated in chapter 3.2 and 3.3.

In the feature extraction process, the goal is to extract the region of interest at the periphery of a skin lesion and compute homogeneity features. Three unique methods are developed. 1st method basically expresses how to locate circular regions around the border of a skin lesion and extract the features in these circular regions. The extracted features from 1st method were used in data analysis and experiments, however, 1st method didn't yield a promising classification accuracy. Therefore, 2nd method is developed which includes vector operations to shrink down the border toward the centroid of the skin lesion and, thus, the region of the interior of the border is utilized for the feature extraction purpose. Since 2nd method fundamentally skews the border toward the centroid of the skin lesion, this technique may fail in some cases. More details can be found at chapter 3.4.4. That's why 3rd method is developed to overcome for deficiencies in 2nd method (section 3.4.4). The scaling approach is taken into account in 3rd method. More details for 3rd method is be given in section 3.4.5.

Algorithm 1. Texture Feature Extraction on the boundary

```
for each image do
    Read image
    if necessary
        Color transformation
    end if
        FDBLD is applied to the dermoscopy image
        for each channel do
            Read mask
            Complement and Clear outside of the rectangle
            Morphological Opening
            Find starting point for chain code
            Detect boundary
                for each circle size do
                    while cycle not completed around boundary
                        Locate the center and draw circle
                        Create Circular_mask
                        Circular_region=Image_channel.*Circular_mask
                        Compute mean, std and homogeneity of Circular_region
                    end while
                    Calculate average and minimum (mean, std and homogeneity)
                    Write results on a file
                end for
                move next line on the file
        end for
end for
```

Algorithm 2. Texture Feature Extraction on the inner-shifted boundary by vector scaling

```
for each image do
    Read image
    if necessary
        Color transformation
    end if
        FDBLD is applied to the image
        for each channel do
            Read mask
            Complement and Clear outside of the rectangle
            Morphological Opening
            Find starting point for chain code
            Detect boundary
                for each circle size do
                    Find the centroid of segmented lesion region
                    while cycle not completed around boundary
                        Create a unit vector
                        Apply shifting operation
                        Locate the center and draw circle
                        Polybool – Polygon set operation
                        Generate Polygon_mask of the intersection of polygons
                        Polygon_region=Image_channel.* Polygon_mask
                        Compute mean, std and homogeneity of Polygon_region
                    end while
                    Calculate average and minimum (mean, std and homogeneity)
                    Write results on a file
                end for
                move next line on the file
        end for
end for
```

Algorithm 3. Texture Feature Extraction on the inner-shifted boundary by dynamic scaling

```
for each image do
    Read image
    if necessary
        Color transformation
    end if
        FDBLD is applied to the dermoscopy image
        for each channel do
            Read mask
            Complement and Clear outside of the rectangle
            Morphological Opening
            Find starting point for chain code
            Detect boundary
                for each circle size do
                    Find the centroid of segmented lesion region
                    Obtain Dynamic Scaling factor and apply it
                    Create scaled mask and find its centroid
                    Find the difference vector
                    Shift the scaled boundary
                    while cycle not completed around boundary
                        Locate center and draw circle
                        Polybool – Polygon set operation
                        Generate Polygon_mask of the intersection of polygons
                        Polygon_region=Image_channel.* Polygon_mask
                        Compute mean, std and homogeneity of Polygon_region
                    end while
                    Calculate average and minimum (mean, std and homogeneity)
                    Write results on a file
                end for
                move next line on the file
        end for
end for
```

3.2 Preprocessing

This section consists of fundamental image processing operations to make the dermoscopy image and its mask ready for the further steps. These operations can be listed as follows: color space transformation for dermoscopy image, lesion border detection with fast density-based lesion detection method [41], complement, clearing outside of the rectangle, and morphological opening operations. The flow diagram of preprocessing phase is depicted in Figure 19 below.

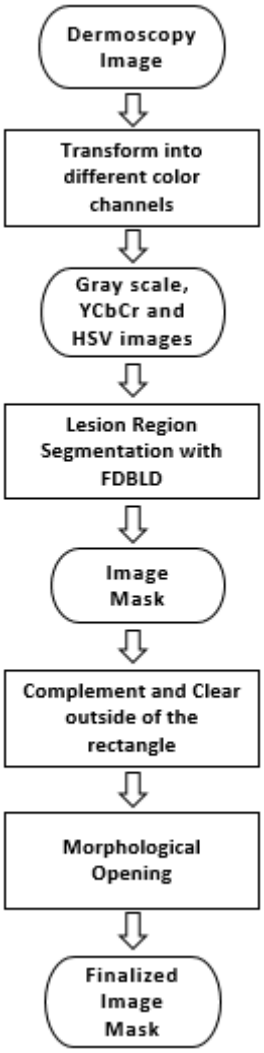


Figure 19. Preprocessing flow scheme

3.2.1 Colorspace Transformations

The mathematical background of colorspace transformation from RGB (Red-Green-Blue) color space to YCbCr is defined by equation (3.1) [42] where Y is the luma component and Cb, Cr are the blue-difference and the red-difference chroma components respectively.

$$\begin{bmatrix} Y \\ Cb \\ Cr \end{bmatrix} = \begin{bmatrix} 16 \\ 128 \\ 128 \end{bmatrix} + \begin{bmatrix} 65.481 & 128.553 & 24.966 \\ -37.797 & -74.203 & 112.000 \\ 112.000 & -93.786 & -18.214 \end{bmatrix} \begin{bmatrix} R \\ G \\ B \end{bmatrix} \tag{3.1}$$

Additionally, the conversion from RGB color space to HSV (Hue-Saturation-Value) color model is illustrated with the following equations [43]. In the HSV color model, Hue is a number in between 0 and 360, whereas Saturation indicates amount of grayness, and lastly, Value represents the brightness of the color. In order to convert from RGB to HSV color space, maximum and minimum values in RGB set are determined which would give us Saturation, S, written below:

$$S = \frac{(max - min)}{max} \tag{3.2}$$

And Value, V, is:

$$V = max \tag{3.3}$$

The Hue, H, is computed as follows. First, R'G'B' is calculated:

$$R' = \frac{max - R}{max - min} \tag{3.4}$$

$$G' = \frac{max - G}{max - min} \tag{3.5}$$

$$B' = \frac{max - B}{max - min} \tag{3.6}$$

While Saturation is equal to 0, Hue becomes undefined, otherwise:

Then, If R=max and G=min

$$H = 5 + B' \tag{3.7}$$

else if R=max and G≠min

$$H = 1 - G' \tag{3.8}$$

else if G=max and B=min

$$H = R' + 1 \tag{3.9}$$

else if G=max and B≠min

$$H = 3 - B' \tag{3.10}$$

else if R=max

$$H = 3 + G' \tag{3.11}$$

otherwise

$$H = 5 - R' \tag{3.12}$$

Finally, Hue, H, is transformed into degrees by multiplying 60 which would complete the conversion.

In the color transformation phase, RGB color image of dermosopic image is transformed into gray scale, YCbCr, HSV color space which is demonstrated in Figure 20.

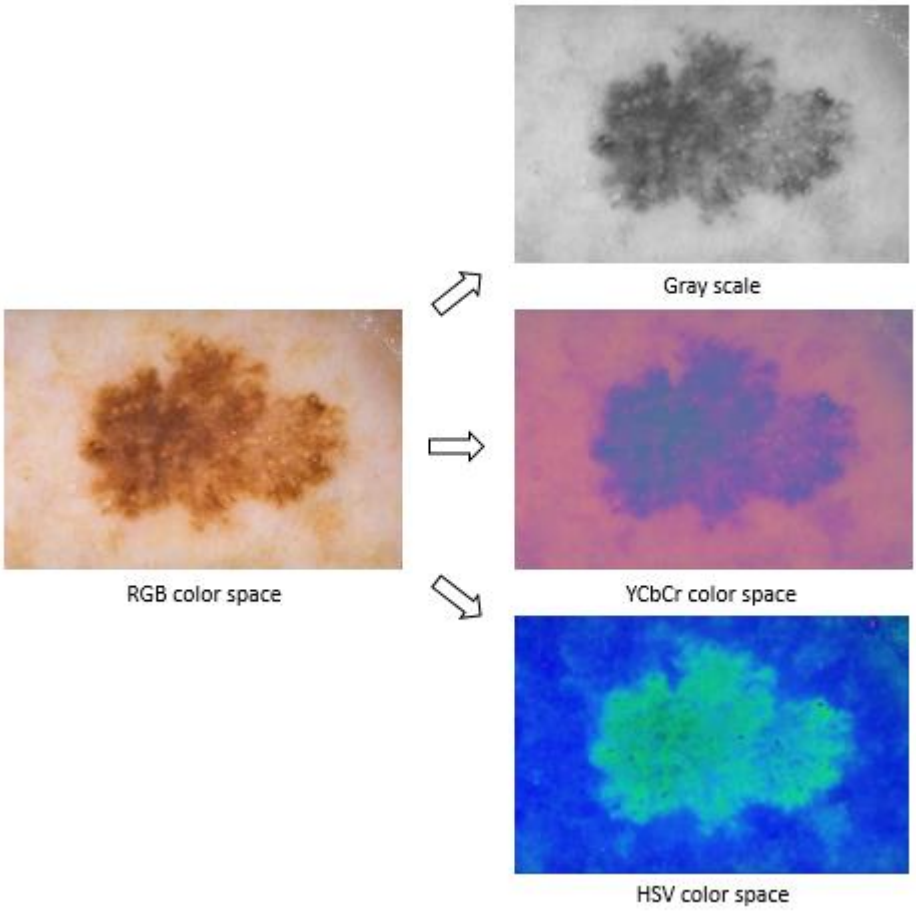


Figure 20. Color space conversion

3.2.2 FDBLD Algorithm

In order to obtain the dermoscopy image mask from the dermoscopy image, fast density-based lesion detection method (FDBLD) [41][44] is used. The algorithm of FDBLD is described below. The number of clusters detected in the image is given by the output of this FDBLD function. The Algorithm also calls a particular function, namely Expand, which decides to whether expand the existing cluster or not. Cls variable refers the boundary of each cluster and includes at least one simple polygon.

Algorithm FDBLD (Binary Image, α, MinPTS)

```
 ForeGrd=All zero-value pixels
 ClusId = nextId(NOISE);
 for i from 1 to ForeGrd.size do
       pxl = ForeGrd.get(i);
       if pxl.ClId = UNCLASSIFIED then
          if Expand(ForeGrd,pxl,ClusId,α,MinPts) then
             ClusId = nextId(ClusId);
          end if
       end if
 end for
end;
```

Boolean Expand (ForeGrd, Pxl, ClusId, α, MinPts)

```
PriCls = CxHull(Pxl, α, MinPts); //First Pri.Cls.
if PriCls.size = 0 return false;
else // Core point, PriCls becomes Cls
 Cls = PriCls // Cls is a regular cluster
 Update(BoundPxl,Cls);
 while BoundPxl.size > 0
   Pxl = BoundPxl.next();
   PriCls = CxHull(Pxl, α, MinPts);
   Union(PriCls,Cls);
   Update(BoundPxl,Cls);
 end while;
end if
return True;
```

Primitive Cluster, PriCls is computed by initiating ε neighborhood query around Pxl, CxHull. After that, the cluster is expanded as long as the list of boundary pixels is not empty. By doing so, union brings Cls by combining (e.g. union) PriCls and Cls. In the final step, the update function simply returns updated boundary pixels by getting the list of boundary pixels and the current cluster.

3.2.3 Morphological Operations

Since the mask is a negative version of a regular standardized mask, the complement operation is applied to the mask to generate standardized mask. Moreover, due to the fact that some of the images' masks include noisy pixels other than the region of interest. Thus, the clear outside region of the rectangle operation is taken into consideration by following two major approaches. In the first approach, a boundary rectangle is drawn around the region. The following function is employed along with percentage clipping parameter from left, right, top, and bottom in the mask.

$$Left\ Boundary = 1 + \frac{w}{2*\frac{percentage\_of\_edges\_to\_clip}{100}} \tag{3.13}$$

$$Right\ Boundary = w - \frac{w}{2*\frac{percentage\_of\_edges\_to\_clip}{100}} \tag{3.14}$$

$$Top\ Boundary = 1 + \frac{h}{2*\frac{percentage\_of\_edges\_to\_clip}{100}} \tag{3.15}$$

$$Bottom\ Boundary = h - \frac{h}{2*\frac{percentage\_of\_edges\_to\_clip}{100}} \tag{3.16}$$

In the same methodology, the right, top, and bottom boundaries' pixel locations are determined by the equations above. Thus, the boundary rectangle can be drawn around the region as seen in Figure 21. The idea behind the boundary rectangle is that the pixels which are located outer of the boundary rectangle are assigned to 0 value in order to get rid of these noisy pixels.

Final step of the Preprocessing phase is Morphological Opening operation [42] which aims to remove the left out noisy pixels from the mask. Opening simply removes small objects

from the foreground of the image and puts back them into the background. Opening also opens up a gap in between objects which are connected to each other with thin bridges. The mathematical morphological idea behind opening operation can be described as the following equation.

$$A \circ B = (A \ominus B) \oplus B \tag{3.17}$$

where A denotes an image, B refers to a structuring element and two operation symbols are an erosion and a dilation respectively. In this stage, opening operation is applied to the mask which would generate noiseless region which is shown in Figure 22.

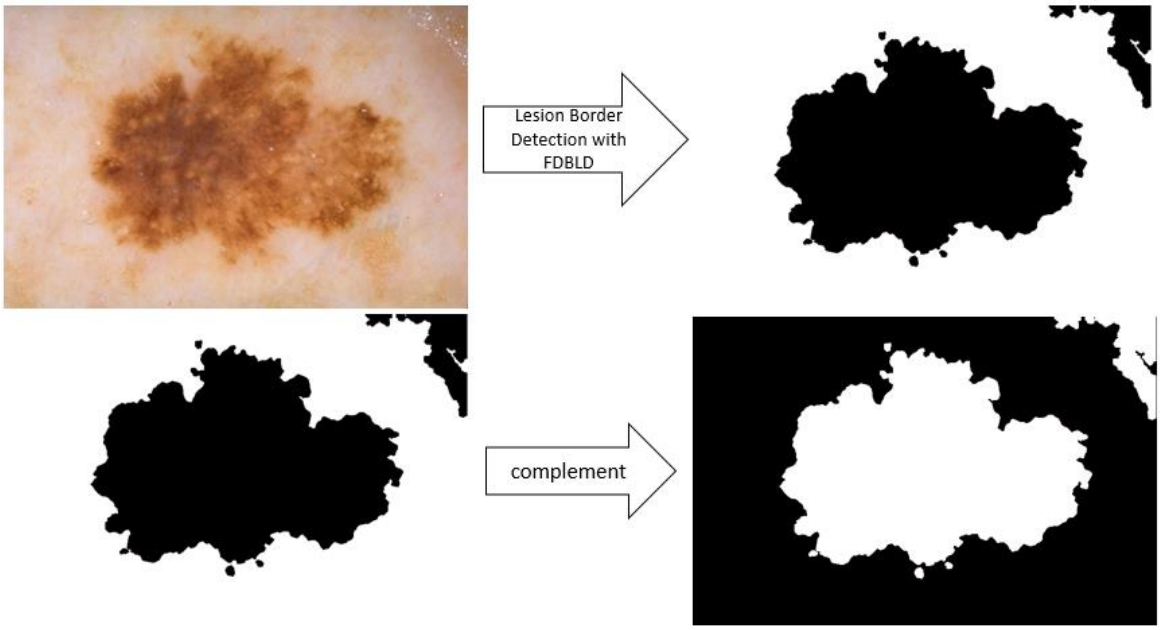


Figure 21. Preprocessing operations: Lesion Border Detection with FDBLD and Complement

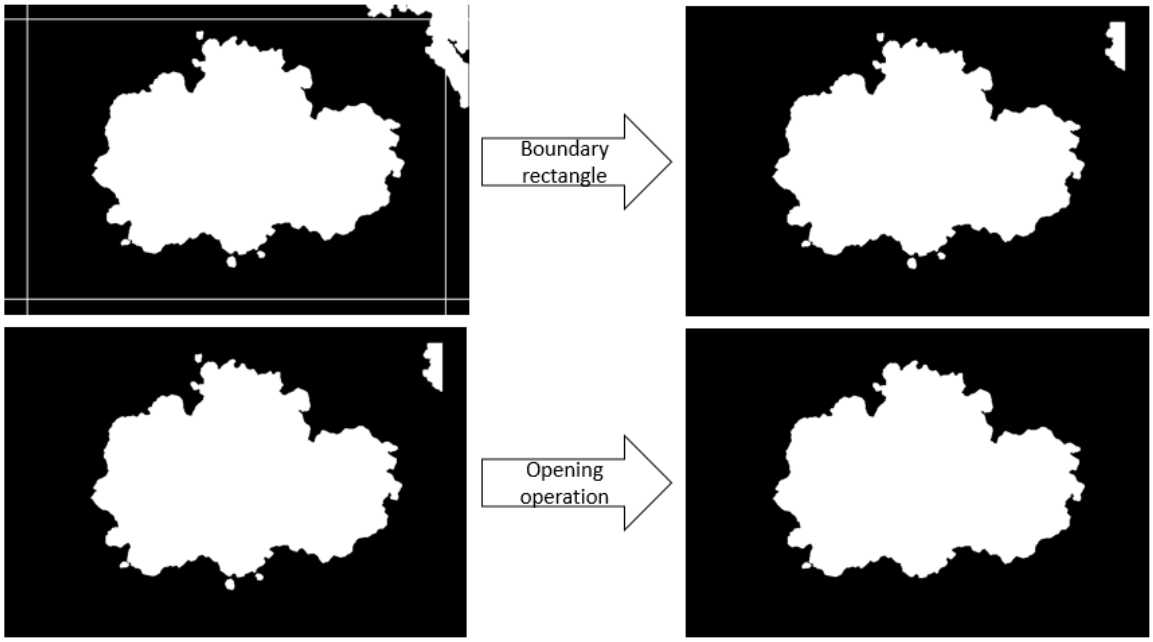


Figure 22. Preprocessing operations: Clear outside of the rectangle and Opening operations

3.3 Boundary Detection

3.3.1 Chain Code

The chain code was first proposed by Herbert Freeman [5] and, thus, it is also known as Freeman code or Freeman Chain code in the literature. He proposed that an arbitrary geometric curve could be represented by utilizing a rectangular-grid. Moreover, the idea behind the chain code is to obtain a way to identify a binary object representation by encoding its boundary. In a continuous curve, since consecutive points are adjacent to each other, each point is dependent on the previous one. For that reason, it causes a limitation for the next point's location. Therefore, the next point can only have 8 possible locations which are a sequence of numbers from 0 to 7 in the rectangular-grid. Each number refers a transition direction in between two consecutive points. As it is seen in

the rectangular-grid (Figure 23), the increase of numbers progresses in the counter-clockwise direction.

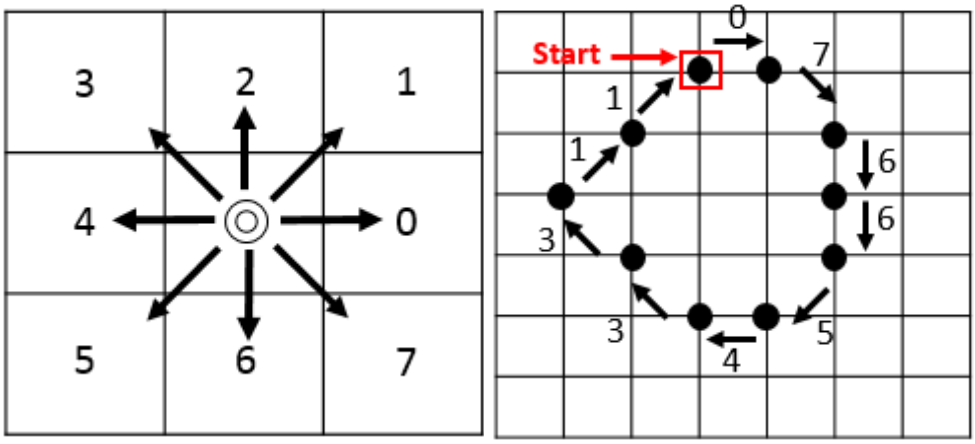


Figure 23. (a) Rectangular-grid and (b) Digital boundary on grid

Interpretation of the numbers is that one walks along the pixels on the object's boundary from starting and ending at the same pixel. For instance, for the given digital boundary in Figure 23, when one walks around the shape in the clock-wise direction, it would result in a number sequence such as [0,7,6,6,5,4,3,3,1,1]. This sequence simply refers to as an encoding form of the boundary.

3.3.2 Boundary detection

The goal of this stage is to determine the starting point of chain code of the mask by utilizing the finalized dermocopic image mask. The idea behind this approach is to first scan through the entire pixels and record the ones which belong to foreground. Then, find the minimum among all rows (vertical direction of the image mask) pixels. With the help of this minimum row value, the lowest value among all column pixels is detected in the image mask. By doing so, this approach gives us the row and column of the starting point

for boundary detection. The starting point is shown in Figure 24 (b). By applying the chain code [5], the boundary of the region in the dermoscopy image is captured as depicted in Figure 25.

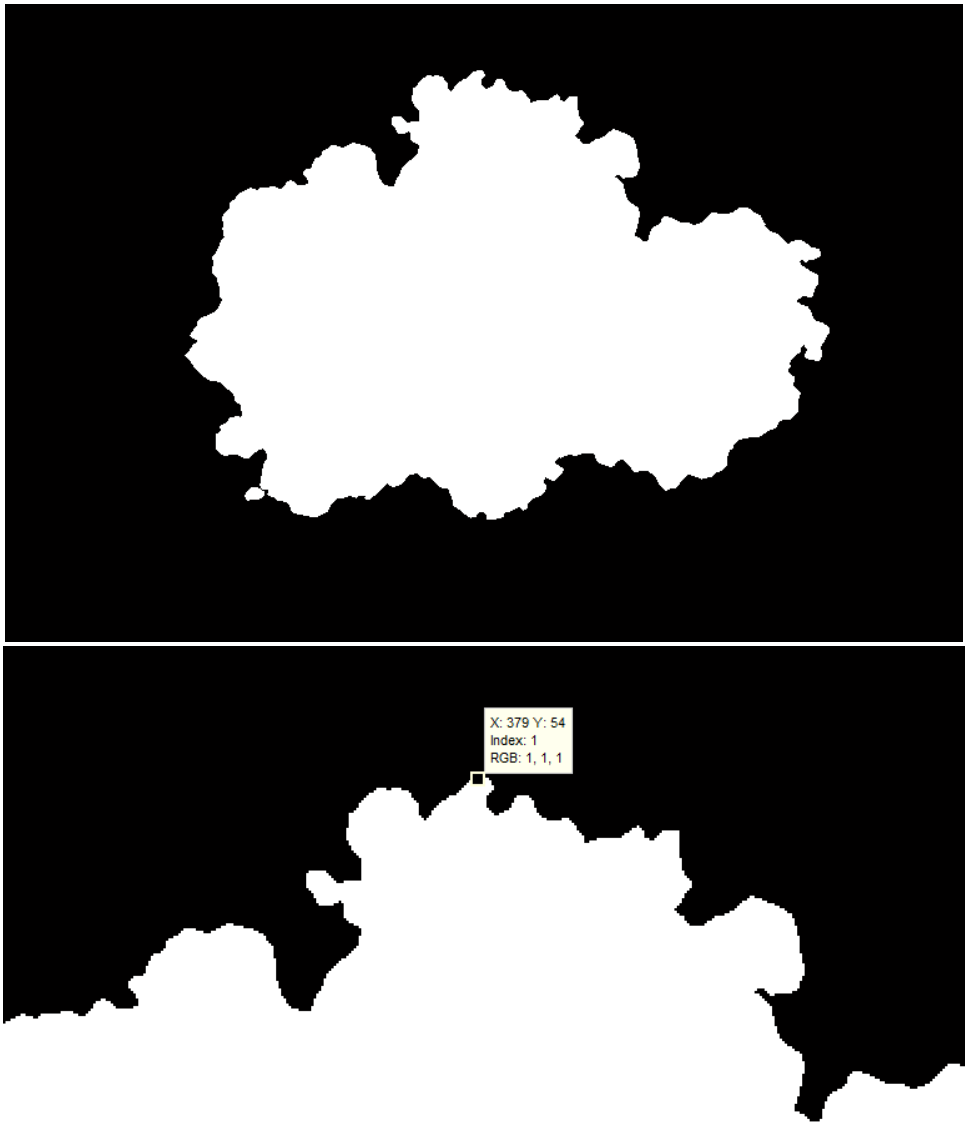


Figure 24. (a) The finalized dermoscopy image mask (b) The starting point

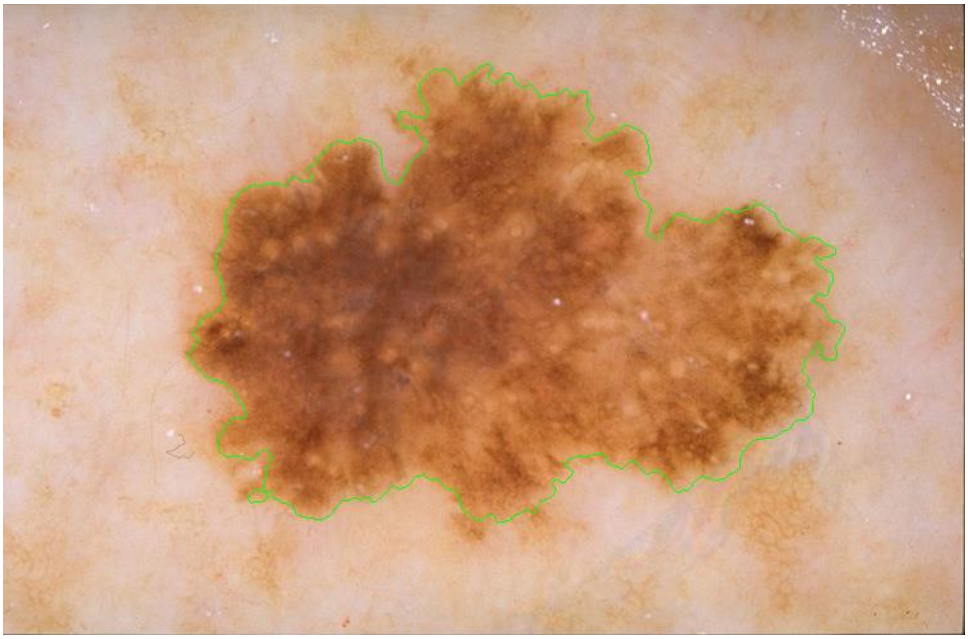


Figure 25. The detected boundary

3.4 Feature Extraction

For feature extraction, we developed three different approaches: texture feature extraction along the lesion border (detailed in section 3.4.3), along the inner border which is found by utilizing vector operations towards the center of the lesion mass border (detailed in section 3.4.4), and along the inner aligned/shifted border by utilizing a scaling factor border (detailed in section 3.4.3) respectively. From these three different methods we extract statistical measures and statistical texture features of dermoscopy images and compare each method's accuracy for malignancy detection. Statistical measures that are considered here are mean and standard deviation [45], whereas Gray Level Co-occurrence Matrix (GLCM) [42] is described as texture descriptor in the texture analysis.

3.4.1 Statistical measures

3.4.1.1 Mean

In general, mean refers to the sum of all possible values divided by the number values. However in image processing, it is generally used as a first order texture measure which depicts the degree of brightness of the image. Average value of intensities is measured by the mean. In a particular region in an image, the average brightness, m_x, can be expressed with the following equation.

$$m_x = \frac{1}{N}\sum_{(r,c)\epsilon\mathbb{R}} x[r,c] \tag{3.18}$$

where N denotes the number of pixels in the region $\mathbb{R}$ and [r,c] indicate pixel coordinates. In addition to this, m_x can also be expressed based on the brightness histogram where $h(x) = N * p(x)$ in which x is discrete brightness values and p is brightness probability distribution. This is formalized as follows.

$$m_x = \frac{1}{N}\sum_{x} x * h[x] \tag{3.19}$$

3.4.1.2 Standard deviation

The standard deviation is a metric and used for quantifying the amount of variation in a data set. Moreover, the standard deviation simply implies the second order moment as well. In image processing, standard deviation truly interprets the contrast of gray level intensities. Low contrast is caused by low value of standard deviation and high contrast in the image generates a high value standard deviation. The standard deviation for an image is given as:

$$s_x = \sqrt{\frac{1}{N-1}\sum_{r,c\epsilon\mathbb{R}}(x[r,c] - m_x)^2} \tag{3.20}$$

in which s_x is the sample standard deviation of brightness of the region, $\mathbb{R}$, and N indicates the number of pixels in the region. s_x also can be expressed in terms of histogram notation as below.

$$s_x = \sqrt{\frac{(\sum_x x^2 * h[x]) - N * m_x^2}{N-1}} \tag{3.21}$$

which emphasizes the standard deviation that relies on brightness probability distribution.

3.4.2 Statistical texture feature

3.4.2.1 Gray-Level Co-occurrence Matrix (GLCM)

The gray-level co-occurrence matrix (GLCM) [42] is a statistical method that scrutinizes texture characteristics that rely on the spatial relationship between pixels. GLCM is also referred to as the gray-level spatial dependence matrix and co-occurrence distribution. The texture of an image can be represented with GLCM functions where specific values of pair of pixels are computed and spatial relationship that arises in the image is represented by the GLCM. Thus, statistical measures can be extracted from the GLCM matrix. Mathematically, the gray-level co-occurrence matrix (C, as given in below equation 3.22) can be described over an image in which co-occurrence distribution parameters are illustrated for specific offset values.

$$C_{\Delta x,\Delta y}(i,j) = \sum_{p=1}^{n}\sum_{q=1}^{m}\begin{cases}1, & if\ I(p,q) = i\ and\ I(p+\Delta x, q+\Delta y) = j \\ 0, & otherwise\end{cases} \tag{3.22}$$

where C is the co-occurrence matrix, I is the image with nxm size, i and j are the image intensity values, $p\ and\ q$ are the spatial coordinates in the image, and lastly $(\Delta x, \Delta y)$ is an offset parameter which is the function of the direction θ and the distance d. The co-occurrence matrix is susceptible to rotation due to offset parameters. In order to create the GLCM, the graycomatrix function [46] is taken into account which constructs the gray-level co-occurrence matrix (GLCM) by computing the frequency of a pixel's occurrence with intensity value i in a certain spatial relationship to a corresponding pixel with the intensity value j. By definition, the spatial relationship is described as the pixel of interest which is the right adjacent of the pixel by default. However, other spatial relationship can be defined among the two pixels. The sum of the frequency occurrence of pixel i with respect to the pixel j based on the particular spatial relationship which builds up the basis of each element (i,j) in the GLCM matrix. The size of the GLCM refers to the number of gray levels in the image.

Moreover, numerous statistical features can be acquired by utilizing the GLCM matrix. These statistics, which presents information regarding the texture of the image, include contrast, correlation, energy, and homogeneity.

Furthermore, Homogeneity measures how similar the gray levels are in the spatial distribution of the image. Homogeneity can be expressed with the equation below.

$$\sum_{i=1}^{m} \sum_{j=1}^{n} \frac{GLCM\ (i,j)}{1+|i-j|} \tag{3.23}$$

In equation (3.23), m denotes pixels in the vertical direction and n denotes pixels in the horizontal direction of the image.

3.4.3 1st Method: Texture Feature Extraction on the boundary

The goal of this approach is to extract the features mentioned in previous sections from the border of dermoscopy images by employing circular masks at different scales. In order to carry out utilizing circular masks on the border of dermoscopy images, first, the radius and the coordinates of the center of the circle must be determined. Hence, for the first circle's center we pick a pixel at the lesion border which is the upmost pixel at the lesion border. This is illustrated in Figure 26 and 27.

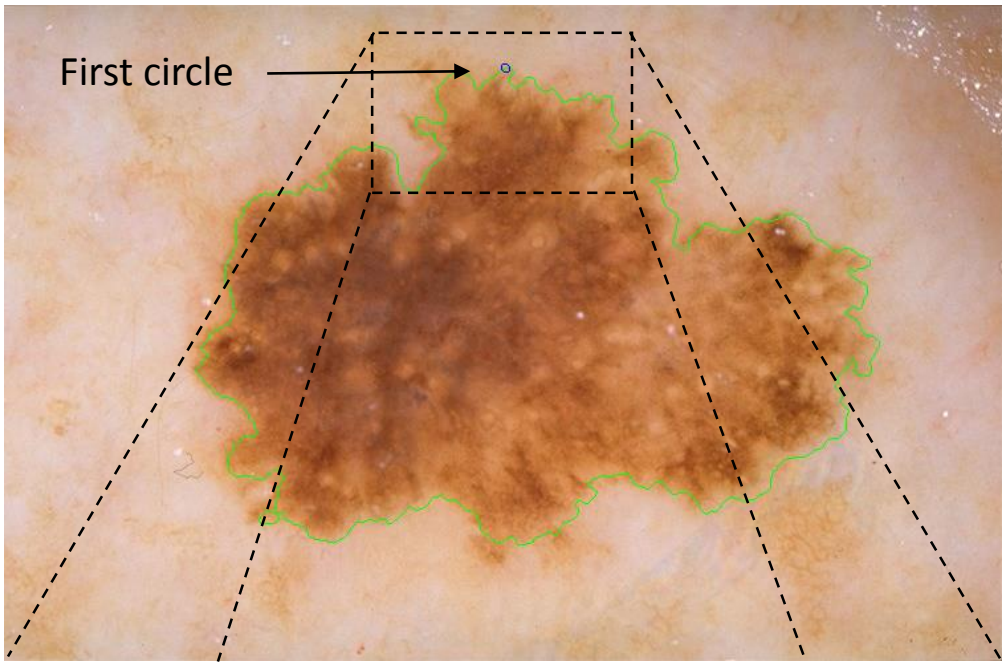


Figure 26. The first circle on the boundary

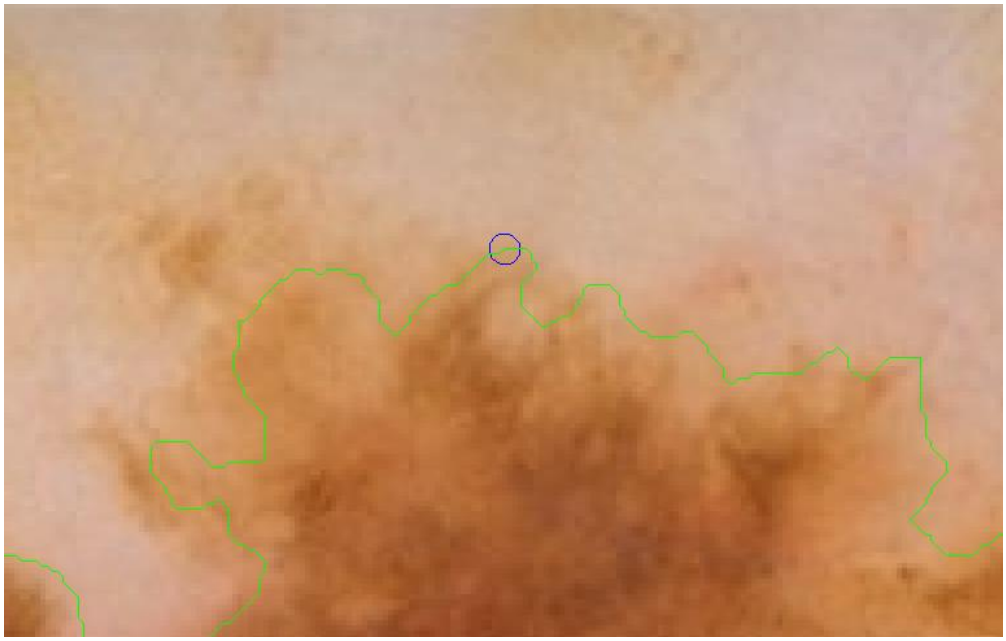


Figure 27. Zoom in the circle

Figure 28. The Circular mask under shaded color image

The next step is the feature extraction from where the circular mask, which is illustrated in Figure 29, is located. Feature extraction is a computation of statistical features of a particular region. In our case, in order to obtain the region from the image, an element

by element matrix multiplication is performed in between a color channel of the image and the circular mask as expressed in the following equation.

$$Circular\_region = Image\_channel.* \, Circular\_mask \tag{3.24}$$

The result of this element by element matrix multiplication operation is shown in Figure 30. The obtained $Circular\_region$ now can be taken into account to accomplish feature extraction operations which are mean, standard deviation and homogeneity with the help of GLCM matrix.

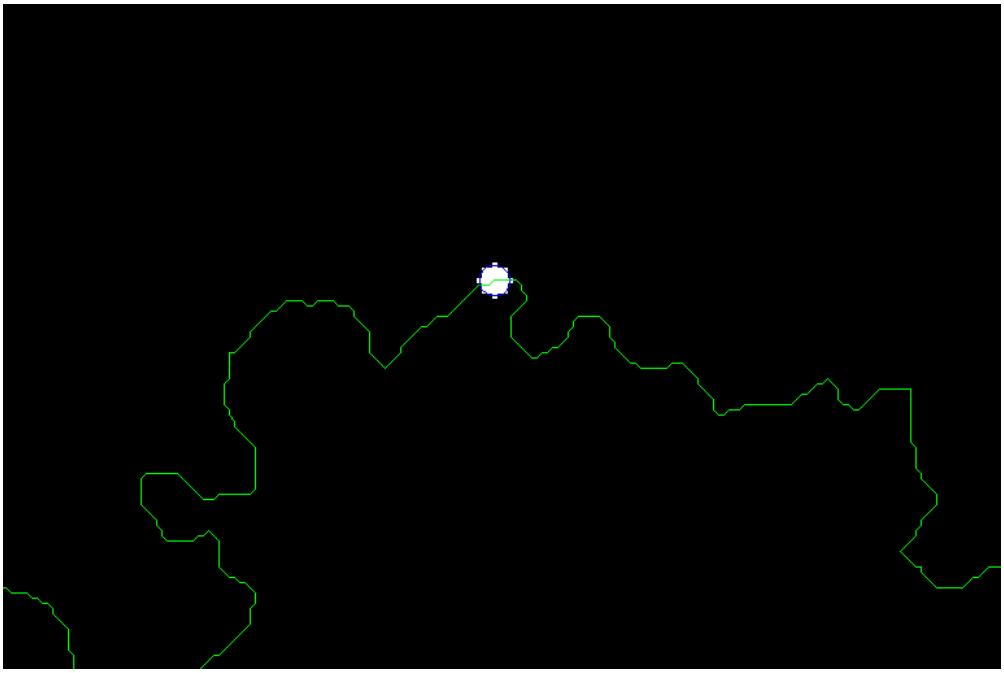


Figure 29. The Circular mask

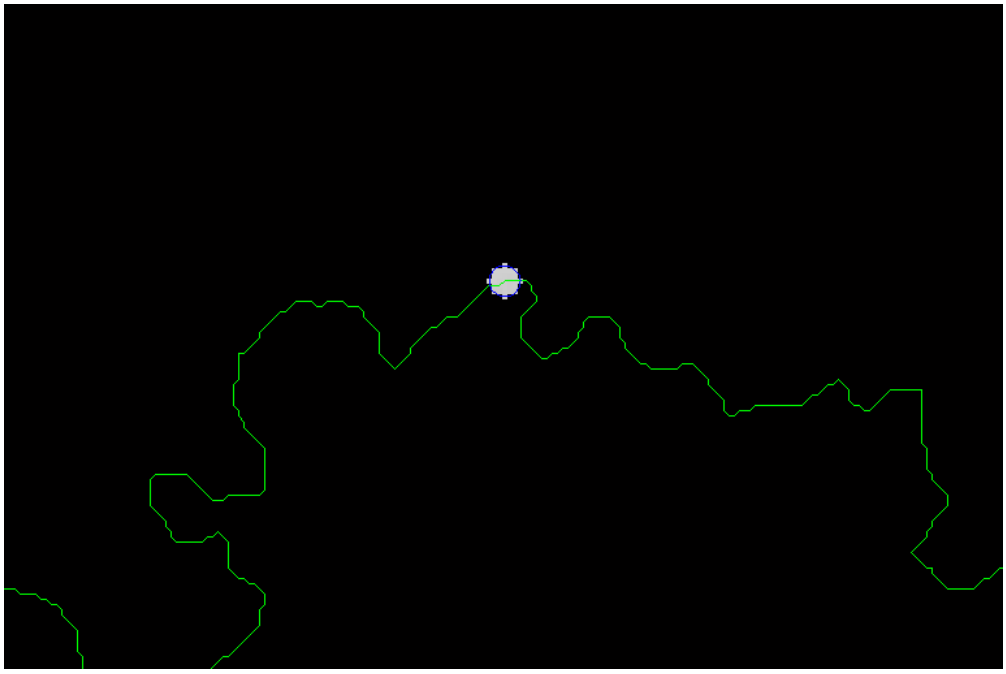


Figure 30. The Circular region

In essence, this feature extraction cycle is simply performed in a particular image channel for each circle along the lesion border. This process is cyclic where feature extraction continuous for each circle along the lesion border until cycle is completed. Cycle is completed when process returns back to where it is started (upmost pixel). This method is employed on all 100 images with varying radius of the circles.

3.4.4 2nd Method: Texture Feature Extraction on the inner-shifted boundary by vector scaling

The purpose of this method, which is also summarized in the Algorithm 2 in the introductory section, is to describe how the vector scaling operation and polygon techniques are achieved in order to identify the intersecting polygon region and extract them from the dermoscopy image. First and foremost, the centroid of the segmented skin lesion is located and marked on the finalized dermoscopy image mask. For this method,

a vector is defined in between the starting point on the boundary of the mask and the centroid of the segmented skin lesion. And then, the unit vector is computed from this vector by utilizing equation (3.25). Moreover, the unit vector is used to perform a vector operation, namely vector scaling, and to shift boundary points towards to the centroid of the segmented skin lesion. This vector scaling operation and the shifting process are shown with the equations (3.26) and (3.27) respectively. For the given equation,

$$\vec{u} = \frac{centroid(x,y) - boundary(x,y)}{\|centroid(x,y) - boundary(x,y)\|} \tag{3.25}$$

where $centroid(x, y)$ is the center of mass of the skin lesion, $boundary(x, y)$ is the starting point (upmost pixel) on the boundary of skin lesion and finally $\vec{u}$ is the unit vector at the boundary directed towards the center. The vector scaling is given by

$$\vec{u} \cdot r = u * r = (u_x * r,\ u_y * r) \tag{3.26}$$

where $\vec{u}$ is the unit vector directed towards the center and r is the radius (a scalar). Furthermore, in order to perform shifting operation to the boundary, simply, the result of vector scaling operation, which is $\vec{u} \cdot r$, is added to the original boundary coordinates $boundary(x, y)$. Equation (3.27) basically shows how to perform shifting operation. For the given equation,

$$boundary(x', y') = \left(boundary(x) + u_x \cdot r,\ boundary(y) + u_y \cdot r\right) \tag{3.27}$$

where *r* denotes radii, u_x and u_y refer to x and y coordinates of u unit vector. Figure 31 illustrates how to create the vector between $centroid(x, y)$ and $boundary(x, y)$ and finding a unit vector along that direction. After applying shifting operation (shrinks

boundary towards centroid) to each point of the original boundary, it would create boundary which is illustrated as dotted boundary in Figure 32.

The next step is to investigate texture features of the circular regions along the shrank new boundary. As it is seen in Figure 33, there are two boundaries; actual lesion boundary and shrank boundary where in-between distance of these boundaries are always r. We find the texture homogeneities and statistics between those two boundaries in circular regions whose centers are placed on the inner boundary. Those circular regions are equally distanced from each other. These circles distances are set as 3/2.r and this is measured by using chain code. For instance if r is 2 then next center will be 3 distanced pixel apart in the chain code. After locating all circular regions' centers on the inner boundary, we apply polygon intersection operation between these circular regions and the actual boundary for each circular region. This helps us to remove noisy data coming from pixels out of the actual boundary, which reduces the automated diagnosis accuracy. It is noted that the intersecting region must be inside of the outer boundary, the reason is that outside of the boundary is considered as noise or outliers that is not incorporated into the intersecting region. Since these regions insert noises in to the region of interest, it reduces the accuracy of the results. An exemplary polygon intersection operation between a circular region and the boundary is illustrated in Figure 33 and 34. Mask of the intersecting polygon is generated for further steps of the work. The mask is illustrated in Figure 35.

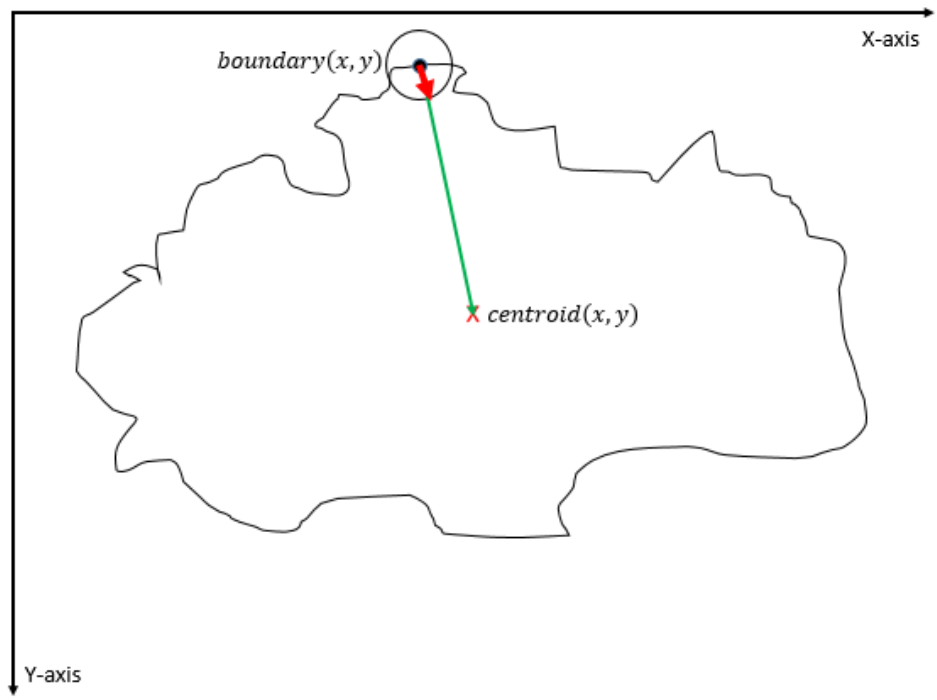


Figure 31. The vector and the unit vector in between centroid(x,y) and boundary(x,y)

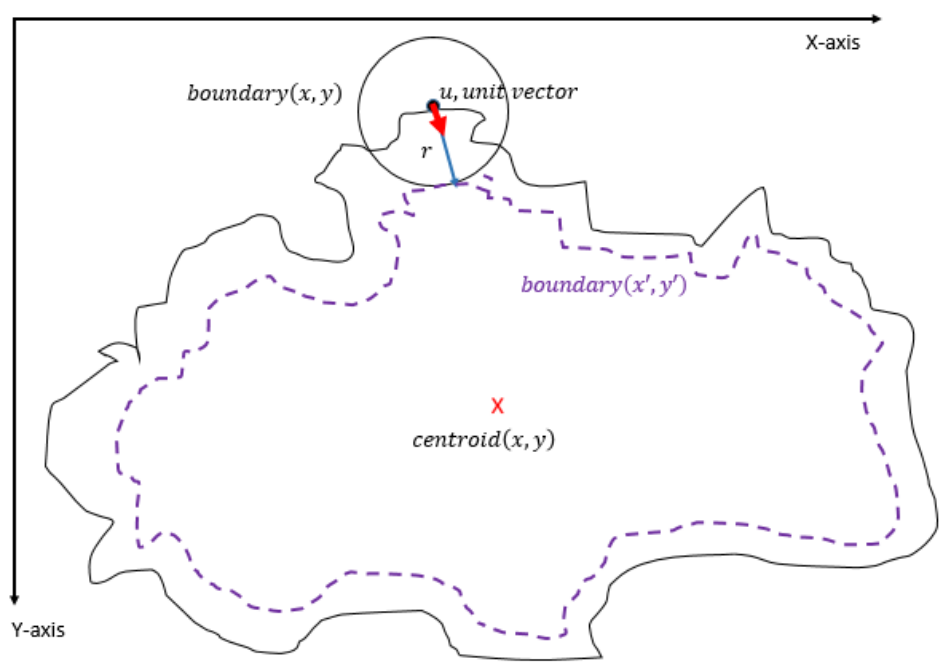


Figure 32. The shifted boundary(x',y')

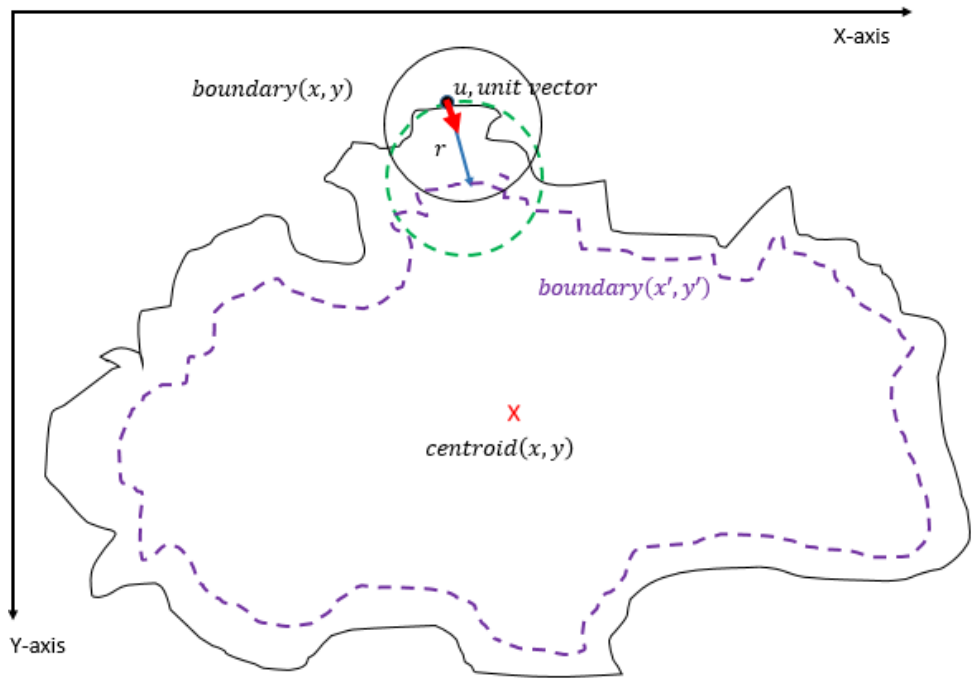


Figure 33. The intersecting polygon regions on both borders

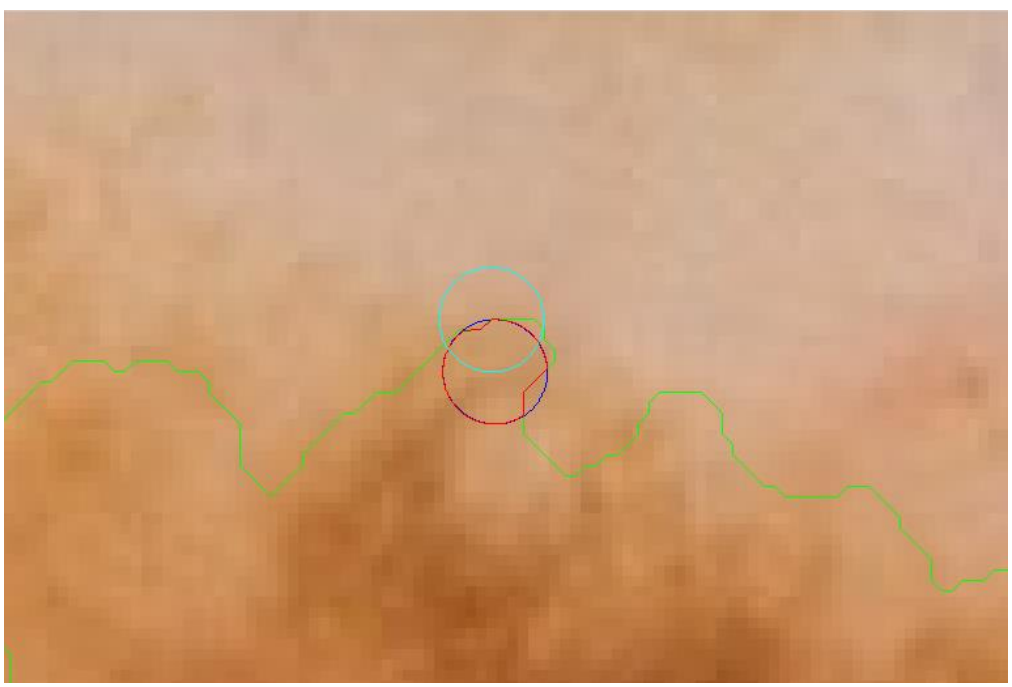


Figure 34. The red polygon is the result of polygon set operations

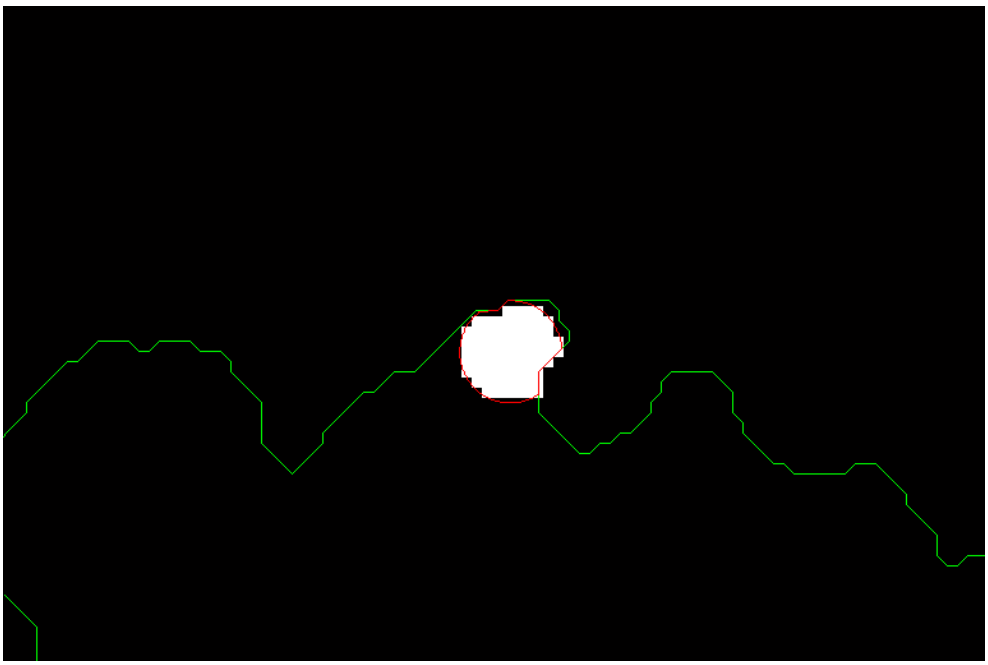


Figure 35. The mask of intersecting polygon region

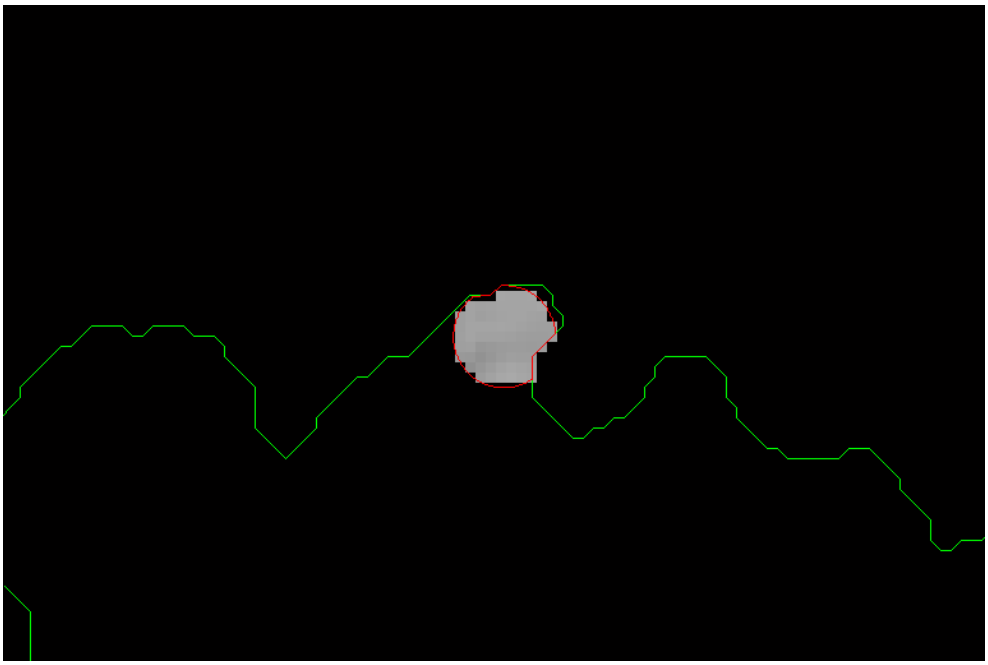


Figure 36. The extracted region of the intersecting polygon region

In the last step of this method, in order to extract the intersecting polygon region, an element by element matrix multiplication operation is performed between actual image and the intersecting polygon mask. This helps us to extract texture information of the corresponding region of interest which are the pixels located at the coordinates of the mask's elements (e.g. pixels). The extracted region is illustrated in Figure 36. This matrix operation's equation is described as following:

$$Polygon\_region = Image\_channel.* \, Polygon\_mask \tag{3.28}$$

Then, the statistical texture measures (mean and standard deviation) and the statistical texture features, particularly homogeneity features, are computed over this polygon (e.g. mask and image intersecting pixels). Figure 37 and 38 illustrate the intersecting polygon feature extraction at different scales (different radii).

Additionally, there are some images which include certain characteristics where this method (e.g. shrinking border towards the center of mass) simply fails while determining the intersecting polygon region. For instance, a sample case is shown in Figure 39 where the extracted region is simply outside of the boundary. This due to the imbalance of the mask where the unit vector's definition becomes not valid. Another reason is that when the border is shrunk towards the center of mass, many points are mapped to a single point (there is not necessarily unique one-to-one mapping). That's the reason we developed 3rd method to overcome these deficiencies in the 2nd method.

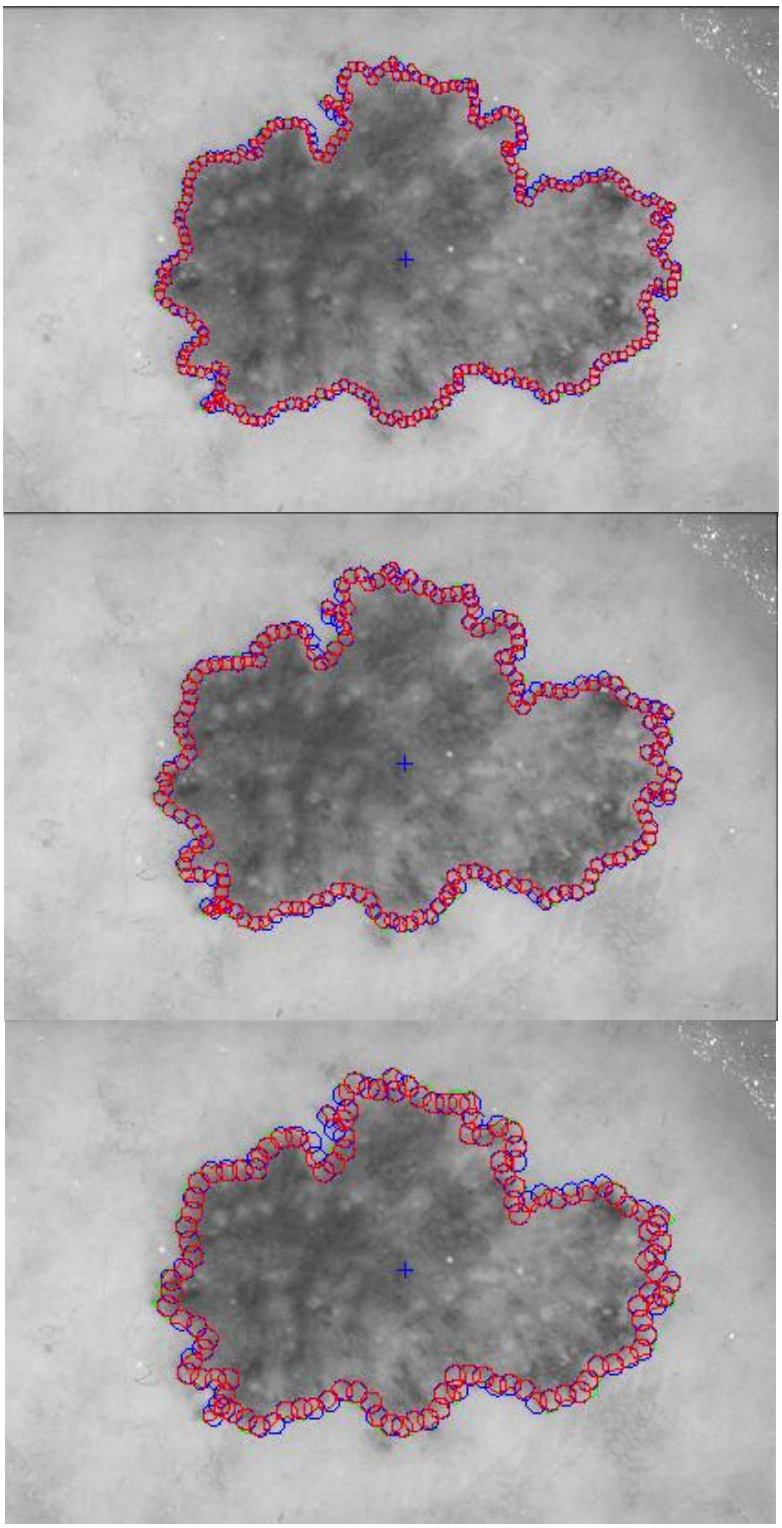


Figure 37. The intersecting polygon circle with radius size (a) 5 (b) 7 (c) 10

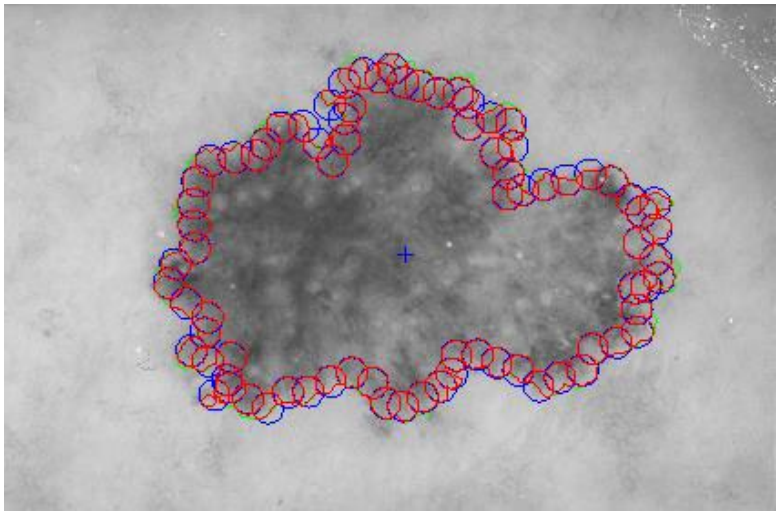


Figure 38. The intersecting polygon circle with radius size 15

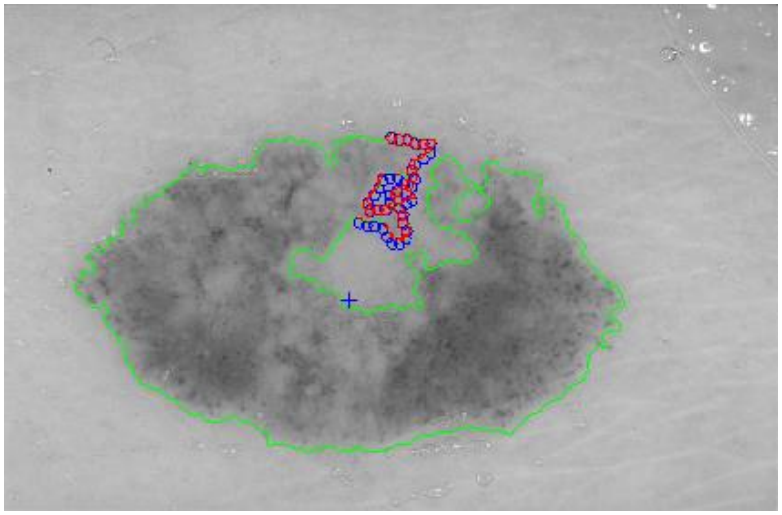


Figure 39. The failing case of the dermoscopy image

3.4.5 3rd Method: Texture Feature Extraction on the inner-shifted boundary by dynamic scaling

The aim of this method is to scale down the boundary by means of a dynamic scaling approach, so that the original boundary would be shifted to inside and with the help of circular regions, the polygon intersection is determined, and features are calculated over the intersecting polygon region.

First of all, the centroid of the segmented lesion is located and marked on the finalized dermoscopy image mask. The novelty of this method is to explore how to obtain scaling factor. The proposed approach is that the segmented lesion region and the scaled region are assumed as perfect circles in a coordinate system. This assumption is shown in Figure 40 on the right. Under this assumption, the radius is known and the distance between the starting point *(x,y)* and the scaled point *(sx,sy)* can be written by means of the following equation (3.29).

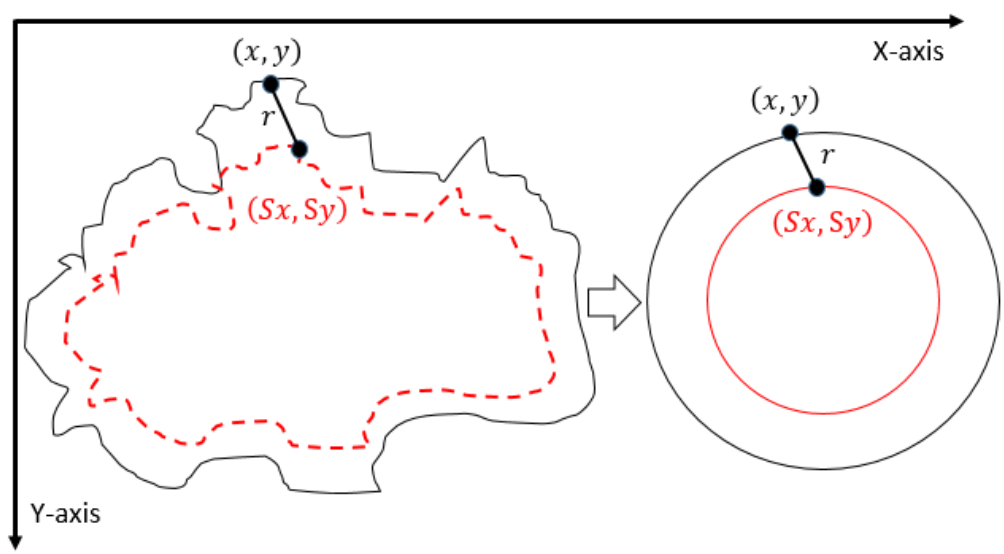


Figure 40. From irregular to perfect circle

$$(sx - x)^2 + (sy - y)^2 = r^2 \tag{3.29}$$

$$(sx)^2 + x^2 - 2sx^2 + (sy)^2 + y^2 - 2sy^2 = r^2 \tag{3.30}$$

$$x^2(s^2 + 1 - 2s) + y^2(s^2 + 1 - 2s) = r^2 \tag{3.31}$$

$$(s - 1)^2(x^2 + y^2) = r^2 \tag{3.32}$$

$$(s - 1)^2 = \frac{r^2}{(x^2+y^2)} \tag{3.33}$$

$$s - 1 = \pm\sqrt{\frac{r^2}{(x^2+y^2)}} \tag{3.34}$$

$$s = 1 - \sqrt{\frac{r^2}{(x^2+y^2)}} \tag{3.35}$$

By deriving the distance equation (3.29), the scaling factor becomes (3.34) and the negative one (3.35) is taken into account due to the fact that the operation would be a scale down operation (taking the inner border). Next step is applying this scaling factor each and every pixel at the lesion border.

3.4.5.1 Scaling

Scaling [47] is a transformation where the image size gets bigger or smaller. We are interested in scaling down the original image's lesion boundary since out of lesion boundary is considered as noise/outlier (e.g. reduces diagnostic accuracy). This transformation is expressed with the equations (3.36) and (3.37).

$$x' = s_x x \tag{3.36}$$

$$y' = s_y y \tag{3.37}$$

where x' is a scaled down x coordinate and y' is a scaled down y coordinate of a corresponding boundary pixel's x and y coordinates respectively, and s_x and s_y are scaling factors along x and y axes for 2D.

This can be also written in a matrix form as follows with homogenous coordinates where last column represents translation (used for aligning centers of actual lesion border and newly produced inner lesion border) as follows.

$$\begin{bmatrix} x' \\ y' \\ 1 \end{bmatrix} = \begin{bmatrix} s & 0 & dx \\ 0 & s & dy \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \\ 1 \end{bmatrix} \tag{3.38}$$

After obtaining the scale factor, the new boundary coordinates $boundary(x', y')$ can be calculated by using equation (3.38). This is illustrated in Figure 41. Since the goal is to extract the regions inside the original boundary, the new $boundary(x', y')$ has to be shifted (translation last column in transformation matrix in equation 3.38) from new center to the old boundary's center. For that reason, a difference vector $\vec{d} = \{dx, dy\}$ is defined in between the centroid of two boundaries which is demonstrated in Figure 42. This vector also is expressed in the following equation.

$$\vec{d} = centroid(x, y) \ - centroid(x', y') \tag{3.39}$$

In the next step, the $\vec{d}$ vector is utilized to locate the inner shifted boundary with the help of the following equation. The inner shifted boundary $n\_boundary(nx, ny)$ is displayed in Figure 42.

$$n\_boundary(nx, ny) = (boundary(x') + d_x \, , boundary(y') + d_y) \tag{3.40}$$

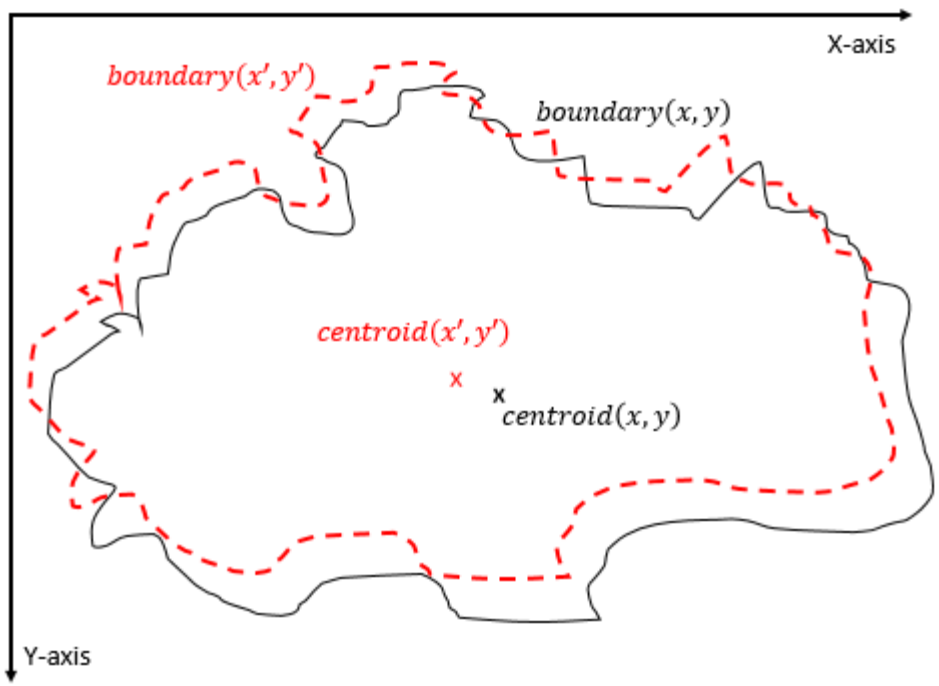


Figure 41. The original and scale down boundary

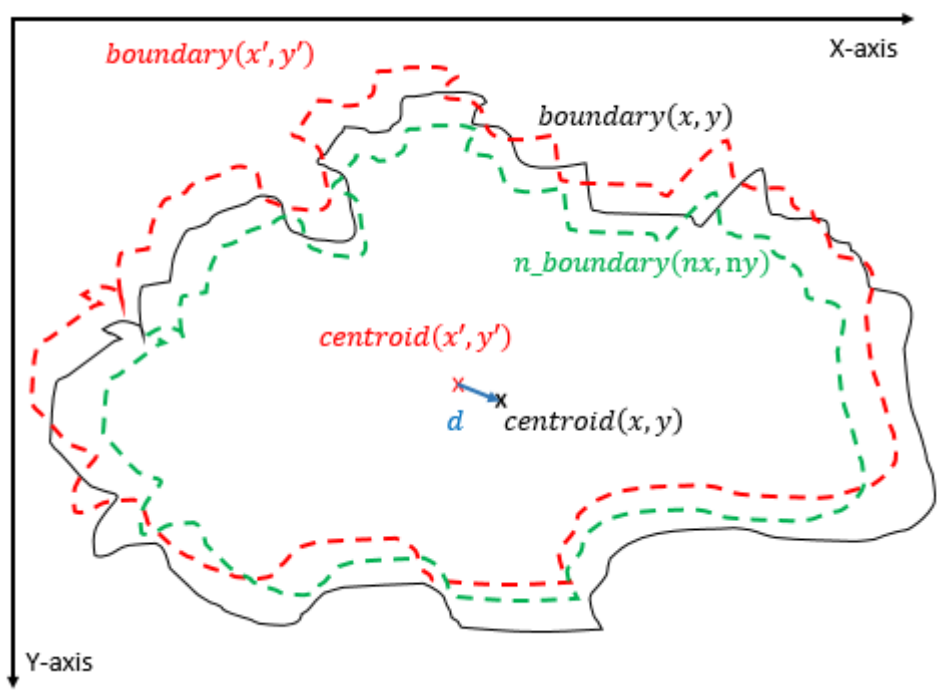


Figure 42. The distance vector and the inner-shifted boundary

Moreover, the circle can be located and drawn on the inner-shifted boundary as depicted in Figure 43. Now, in order to figure out the intersecting polygon regions among two boundaries and the circle, the polygon set operations are applied to all of the circular

regions. The outcome of polygon set operations is given in Figure 44 which is the intersecting polygon region.

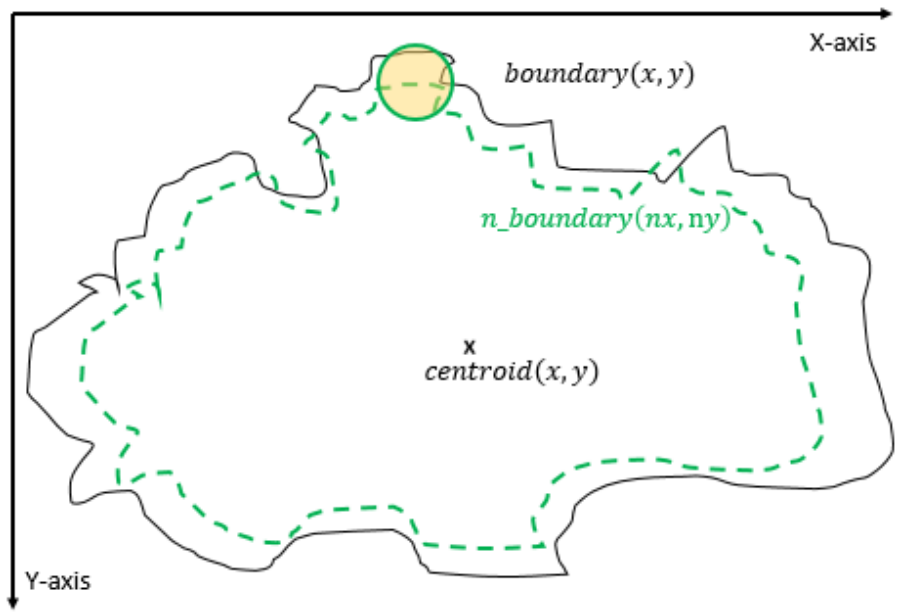


Figure 43. The intersecting polygon region

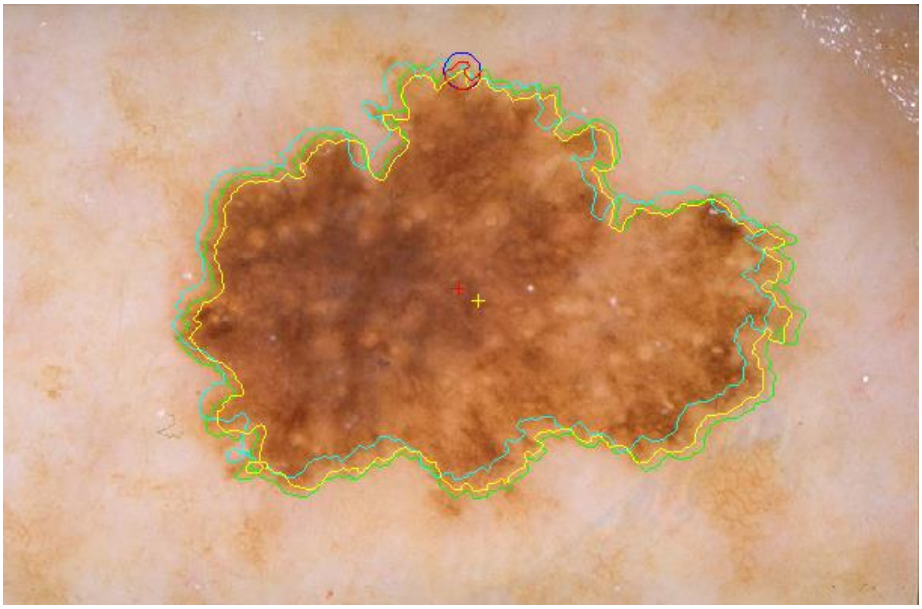


Figure 44. The result of polygon set operations

After having the intersecting polygon region, the mask of the intersecting polygon region is obtained with the help of polymask operations. The resulted mask is shown in Figure 45.

Figure 45. The mask obtained by polymask operation

Figure 46. The extracted region by matrix multiplication

Moreover, the region extraction operation is carried out in between the image channel and polymask which is essentially element by element matrix multiplication that can be computed with the equation (3.41) below.

$$Polygon\_region = Image\_channel.* \, Polygon\_mask \tag{3.41}$$

Finally, statistical measures (mean and standard deviation) and statistical texture feature, particularly, homogeneity, are calculated over these masks. Intersecting polygon feature extraction are is shown at different scales (different radii) by computing features in Figure 47 and 48.

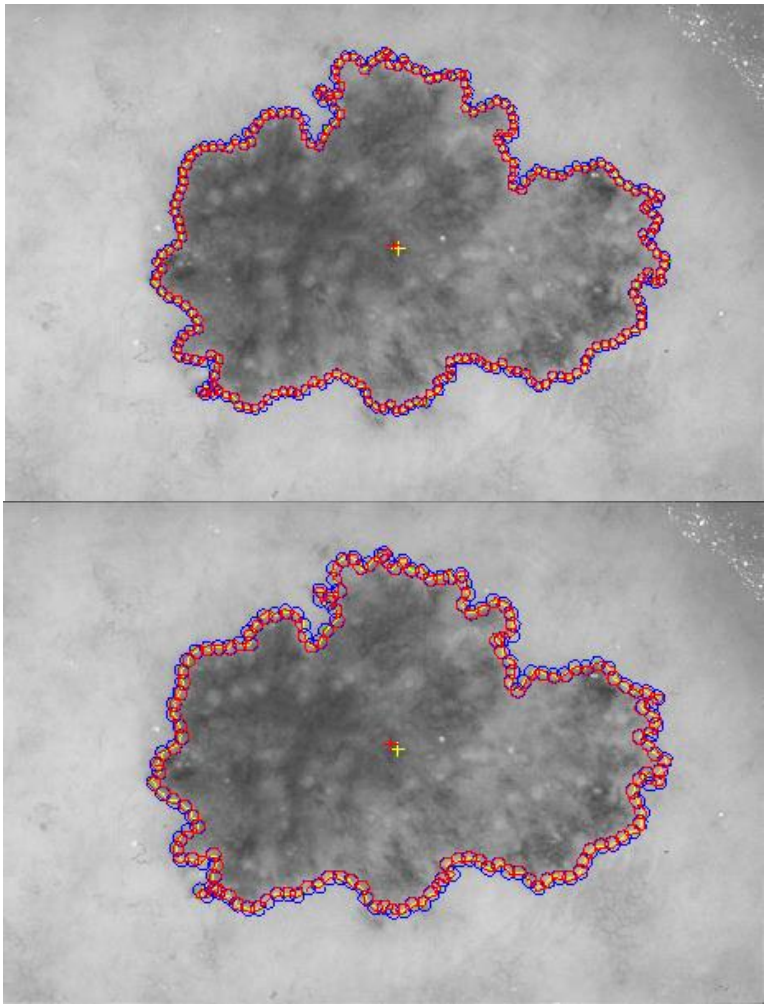


Figure 47. The intersecting polygon circle with (a) radius size 5 (b) radius size 7

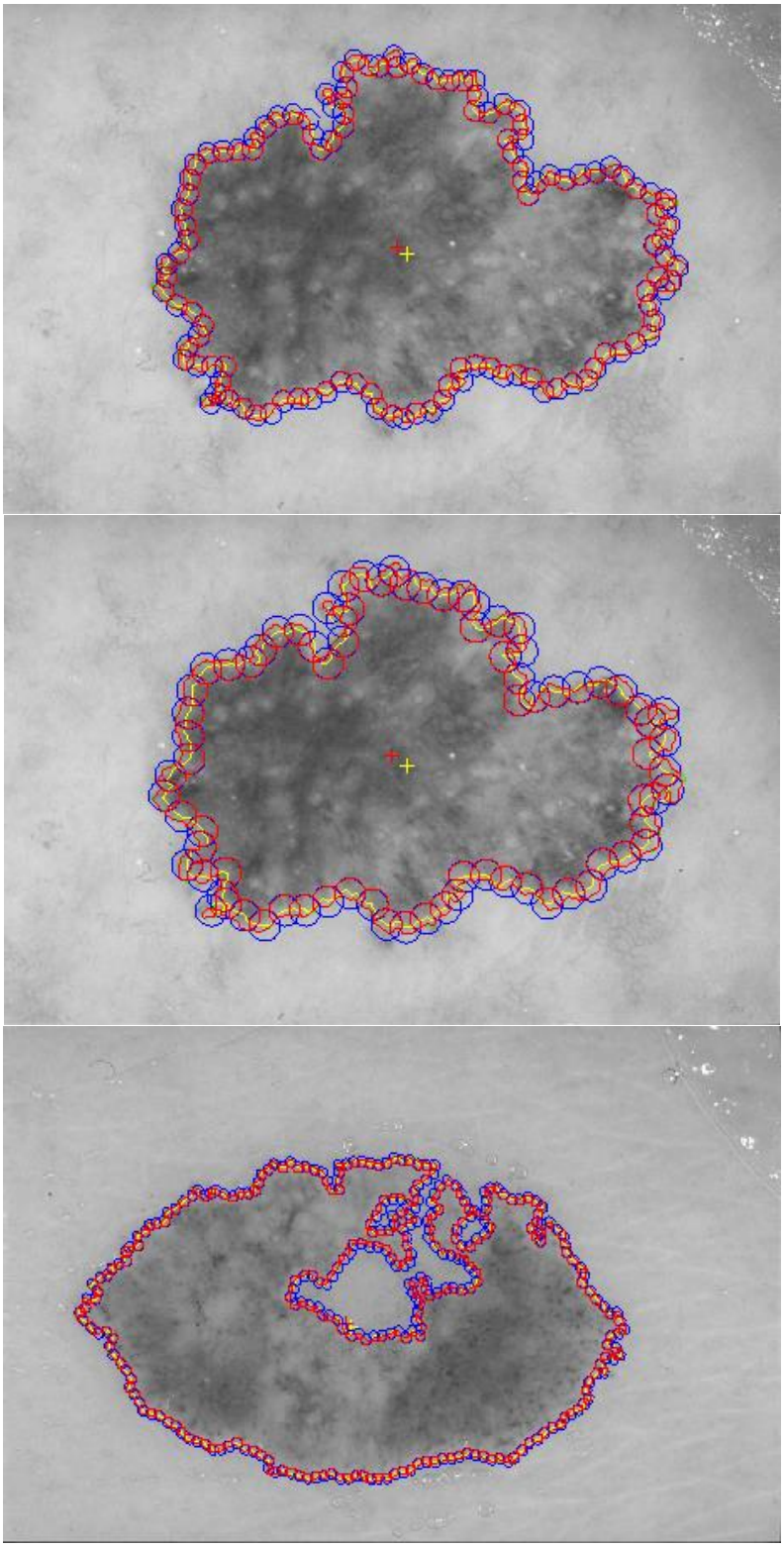


Figure 48. The intersecting polygon circle with (c) radius size 10 (d) radius size 15 (e) the fixed case

As seen from Figure 48 (e), deficiencies in previous method (the inner-shifted boundary by vector scaling in section 3.4.4.2) are overcome with this approach.

Chapter 4. EXPERIMENTS AND DATA ANALYSIS

100 dermoscopic images are selected as a test bed to perform experiments and validate the proposed approach. Initially, the structure of features is created based upon the following variations:

- 100 Dermoscopy images
- Color spaces and channels: 10 base color (Gray, Red, Green, Blue, Y, Cb, Cr, Hue, Saturation, Value)
- Circle radius size: 4 different scale (5, 7, 10, 15)
- Average and Minimum :
    - Homogeneity,
    - Mean
    - Standard deviation

A sample of features is illustrated in the table 3. In each circle's radius size; average homogeneity, minimum homogeneity, average mean, minimum mean, average standard deviation, and minimum standard deviation are described, and there are 4 different circle radius sizes under gray scale image channel. Moreover, each row also refers to a dermoscopic image and there are 6 rows for the given sample table.

Table 3. The structure of 6 sample features in Gray Scale Channel

GrayScale											
Circle r=5						Circle r=7					
Ave. Homogei	Min Homogen	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogei	Min Homogen	Ave. Mean	Min Mean	Ave. St	Min St
0.909390437	0	0.465659342	0.25573152	0.0380198	0.0116177	0.918479922	0.811827957	0.4520555	0.2897409	0.04814	0.0217
0.931067744	0.767857143	0.622562759	0.47930283	0.0260224	0.0069957	0.927899599	0.824074074	0.61217634	0.4615017	0.03412	0.0076
0.957239231	0.819444444	0.532137649	0.39511654	0.0253051	0.0071475	0.955880838	0.854651163	0.52180736	0.3890832	0.03172	0.0114
0.961488285	0.758064516	0.595332926	0.46689735	0.0202593	0.0052663	0.961545164	0.813043478	0.58874061	0.4943137	0.02547	0.0091
0.838528466	0.678571429	0.549922861	0.48296569	0.058736	0.0304688	0.838942321	0.722222222	0.54145686	0.4620168	0.06178	0.0375
0.859931007	0.691056911	0.56898516	0.45189821	0.052428	0.027766	0.857458717	0.740061162	0.56073613	0.4846374	0.0556	0.0306

Circle r=10						Circle r=15					
Ave. Homogei	Min Homogen	Ave. Me	Min Me	Ave. St	Min St	Ave. Homogei	Min Homogen	Ave. Me	Min Me	Ave. St	Min Std
0.922695928	0.844896332	0.4328	0.24215	0.05758	0.023	0.926945939	0.883574879	0.40392	0.2865	0.07089	0.0315
0.931786659	0.866487455	0.59425	0.47324	0.04561	0.0171	0.938256002	0.872053872	0.5695	0.4453	0.05953	0.0189
0.9519725	0.891447368	0.50713	0.39351	0.04099	0.0199	0.950811678	0.906847936	0.48837	0.3743	0.05127	0.0242
0.963719666	0.852623457	0.57991	0.48542	0.03206	0.012	0.961316465	0.873563218	0.56695	0.4894	0.03969	0.0183
0.841592397	0.766509434	0.53238	0.45087	0.06459	0.0433	0.844350435	0.816399287	0.52088	0.461	0.06833	0.0507
0.857618793	0.776094276	0.55382	0.45003	0.05821	0.0375	0.858120639	0.793398533	0.54614	0.4567	0.06215	0.0417

One of the major preparation steps to make the features ready is to normalize all features in the range of [-1, 1]. As described above, there are 10 distinct base colors and also each circle radius has 6 unique texture feature types, and finally 4 different scale is considered for this experiment. All these make 240 total number of features per a single dermoscopy image. We extract all these features for 100 dermoscopy images. With these in mind, the challenging question is which features are more significant or in other words, which features will yield better result when the classification experiment is performed by Support Vector Machine (SVM) [48] classifier. Hence, in order to select significant features among all, SVM Recursive Feature Elimination (SVM RFE) [49] algorithm, which iteratively works backward from the given set of features, is employed. In each cycle, it essentially sorts the features according to their weights in the SVM classifier by discarding the features that have lower weight. Once the SVM RFE is applied to all features, it basically yields an order, based on rank (R) and sorts these features accordingly. The higher value R has, the more significant the feature is. After generating the ranking of these features, the most informative color-based feature is selected in which each color channel (total of 24 channels) for different color spaces is ranked with the following equation,

$$T^C = \sum_{k=1}^{24} R_k\,, \quad R\ of\ C \tag{4.1}$$

where k is the feature number and R is the ranking value. The equation (4.1) will generate a total score for each color channel by summing up R in each color set. Ranking of total score is shown in the table 4. What can be interpreted from table 4 is that the sum of the rank of all Blue-based features is 3910 which rank top in the list. The second best color is Cr, and Green is the third one. Thus, two sets of features, which are listed below, are considered to perform classification experiments.

- Blue, Cr, Green (Top three features according to the rank result)
- Blue, Cr, Green and Fractals by Kockara et al. 2015 [50].

Table 4. The sum of the rank of each color set

Color	Score
Blue	3910
Cr	3293
Green	3237
Y	2904
Cb	2796
Gra	2698
Sat	2647
Hue	2581
V	2428
Red	2426

4.1 Support Vector Machine (SVM)

Support Vector Machine (SVM) [48], which is a widely used model in machine learning, is a discriminative classifier and it is therefore commonly used for classification and regression analysis in data mining. SVM is essentially utilized for supervised learning which finds a separating hyperplane. The goal of SVM algorithm is that it determines optimum location of the hyperplane where the margin of the training data is maximized. The optimal hyperplane parameters can be determined by using Lagrange multipliers [51] which is a simply Lagrangian optimization technique [51]. The samples on the margin, which is illustrated in Figure 49, are called the Support Vector Machine.

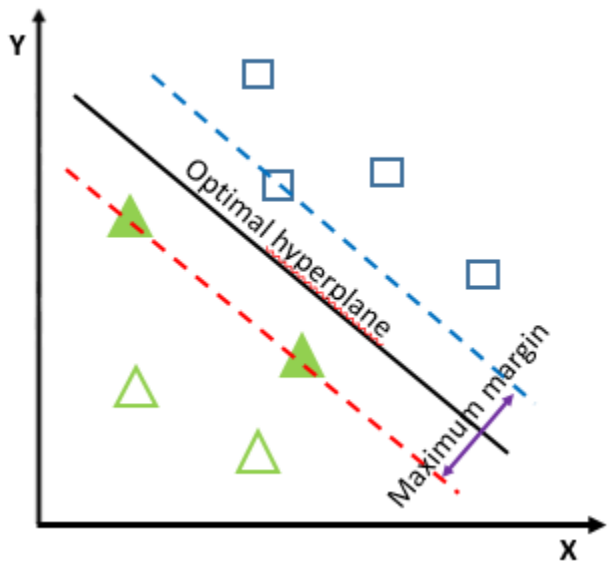


Figure 49. The hyperplane with maximum margin

In the classification scheme of this study, SVM would be taken into account. The aim of the classification is to correctly classify dermoscopic images as malignant or non-malignant. Due to the fact that SVM consists of several parameters as follows:

- SVM Type: ν-SVM, C-SVM

- Kernel; Polynomial, Radial Basis, Linear,
- C, penalization parameter
- R, coefficient
- D, degree
- G, gamma in kernel function

Several experiments are conducted utilizing each and every single parameter and theirs combinations to tune up these parameters while using three unique classification assessment methods, which are listed below, in order to attempt to find the best set of features.

- Leave-one-out
- 10-fold cross validation
- Model accuracy

Leave-one-out: In this assessment method, 99 of dermoscopy images are used for building a model and training the SVM classifier. Then, one of dermoscopy images is used for testing purposes.

10-fold cross validation: In the case of 10-fold cross validation, 90 of dermoscopy images are used for building a model and training the SVM classifier, whereas 10 of dermoscopy images are intended to use for testing the classifier. This process repeated 10 times for different randomly selected 10 test data.

Model accuracy: Entire set of dermoscopy images are used for building a model and training purposes.

Chapter 5. GRAPHICAL USER INTERFACE (GUI) SKIN ANNOTATION AND BORDER ANAYSIS TOOL

The Graphical User Interface (GUI) has been developed as a user-friendly prototype to analyze and interpret dermoscopy images. It essentially consists of three major sub-interfaces which are called as gui_skin_annotation interface, gui_border analysis interface and gui_fractal dimension interface. The snapshot of it is in Figure 50.

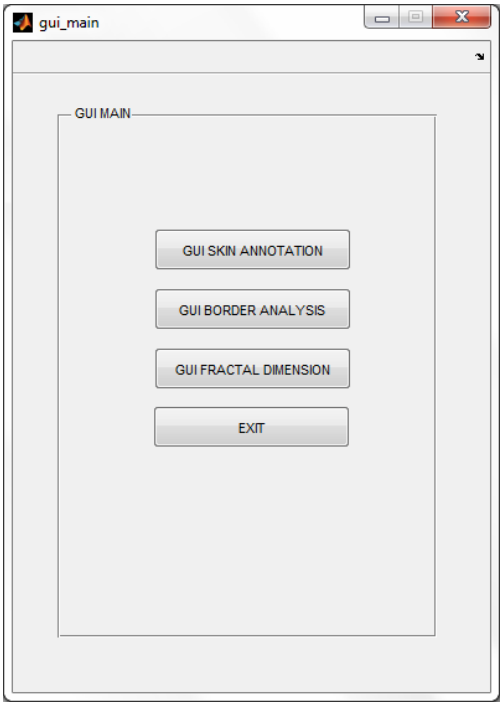


Figure 50. GUI Skin Annotation and Border Analysis Tool

5.1 The GUI of Skin Annotation

The GUI of Skin Annotation interface is comprised of two major capabilities in which the first one is feature computation by estimating the scale either manually or automatically. The second one is to annotate important information on the dermoscopic images for dermatologists' future reference. In the manual scale estimation case, the dialog box pops

up and prompts user to enter a tick length which refers a metric in between two consecutive ticks (locations) in the image. This is illustrated in Figure 51.

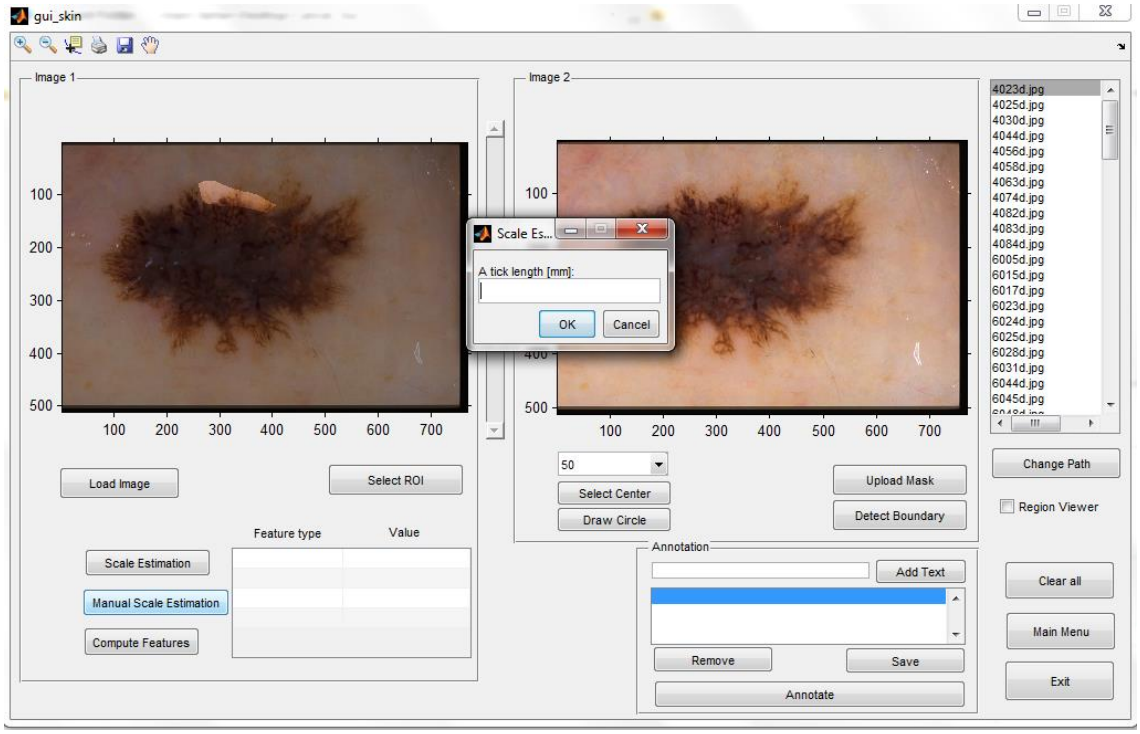


Figure 51. The pop-up window to prompt user to enter a tick length

Then, it lets the user mark the distance on the image which is depicted as green + symbols in Figure 52. Thus, certain features such as homogeneity, mean, standard deviation, area, and boundary length can be computed with respect to the metric entered by the user. This is illustrated in Figure 53.

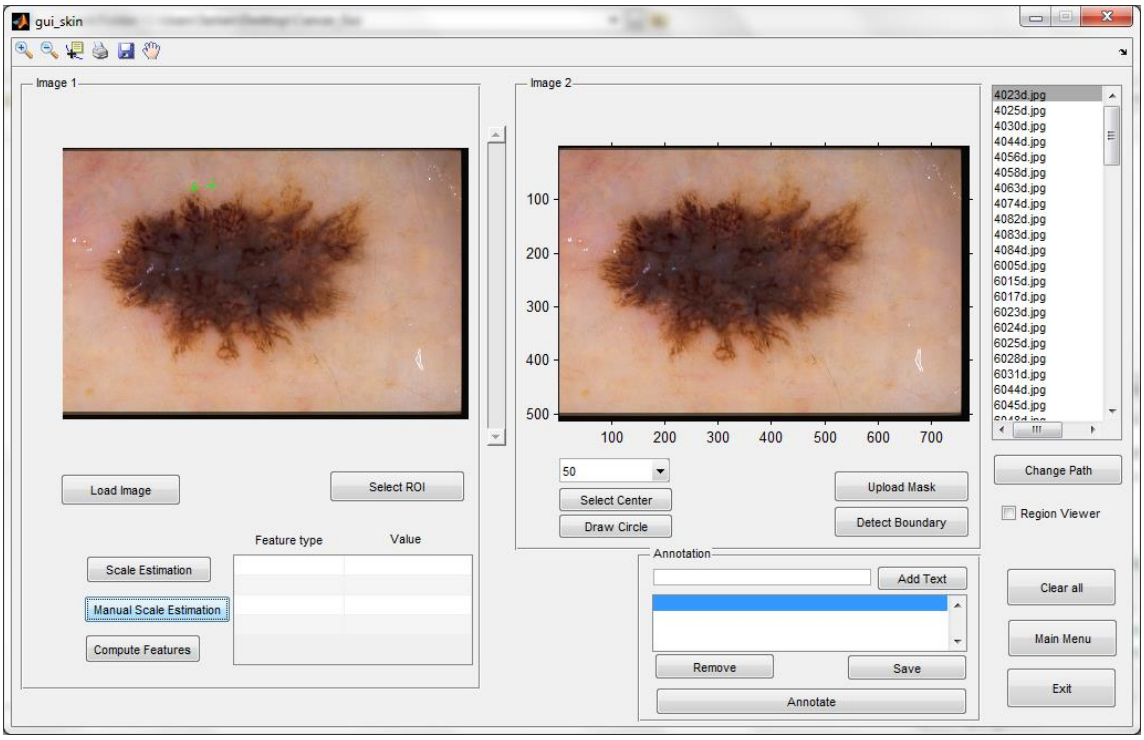


Figure 52. The green + symbol is marked by the user on the image

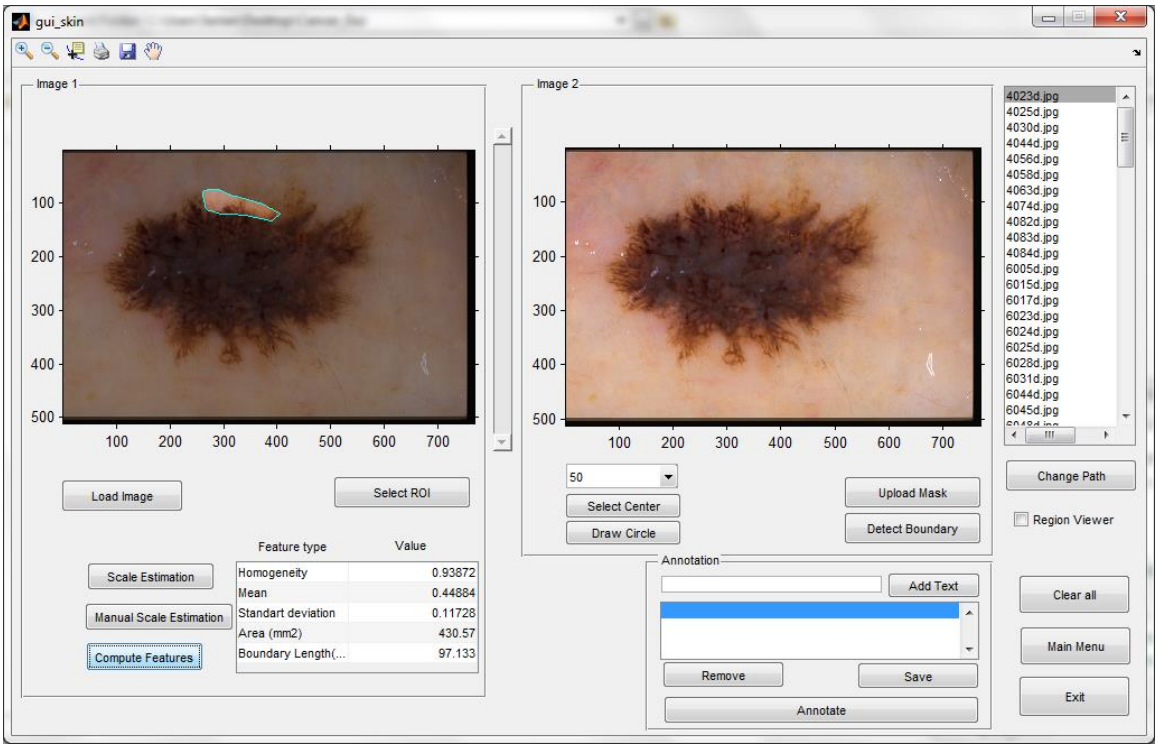


Figure 53. The computed feature types and values

On the other hand, firstly, the automatic scale estimation requires the image to have a ruler on itself as depicted in Figure 54. It also requires user to enter a tick length by popping-up a window. After the metric value is entered, the three major tick marks are automatically detected by finding connected components and applying threshold operations. This detection and the distance between those are shown in Figure 54 with respect to the metric determined by means of automatic scaling. The values of the same group of feature set can be calculated as it is seen in Figure 55.

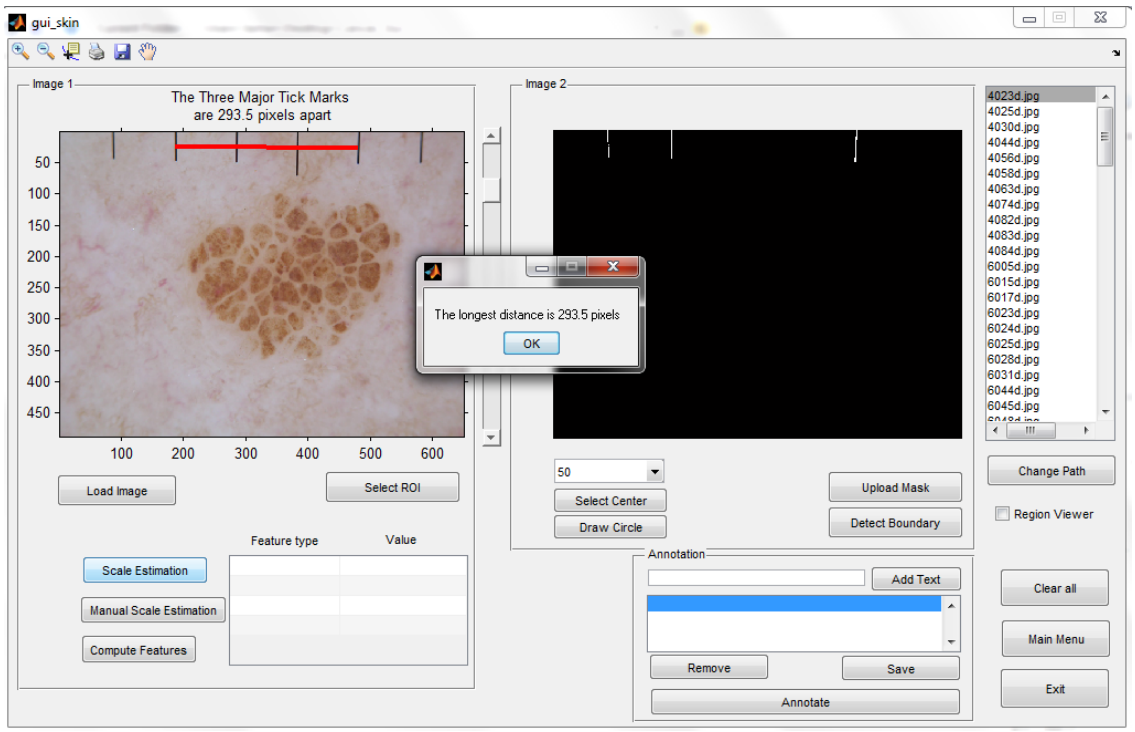


Figure 54. The automatic scale estimation by detecting the three major tick marks

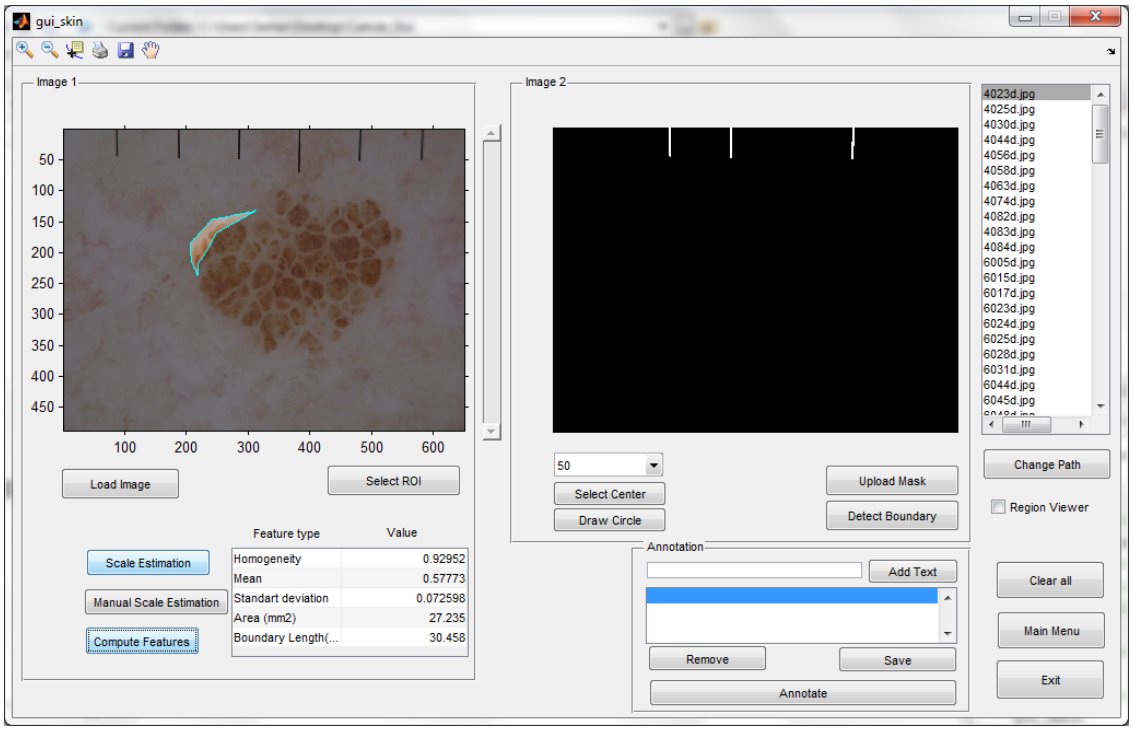


Figure 55. The computed feature types and values

Moreover, in the second capability of the GUI skin annotation, informative texts are typed into annotation box, saved and added annotations to the dermoscopy image. This process is shown in Figure 56. These informative texts are stuck onto the dermoscopic image. These information also are saved into an XML file along with the image in a 64-bit encoded format which could be used for healthcare professional to analyze and interpret in detail. The XML file and detail is illustrated in Figure 57 below.

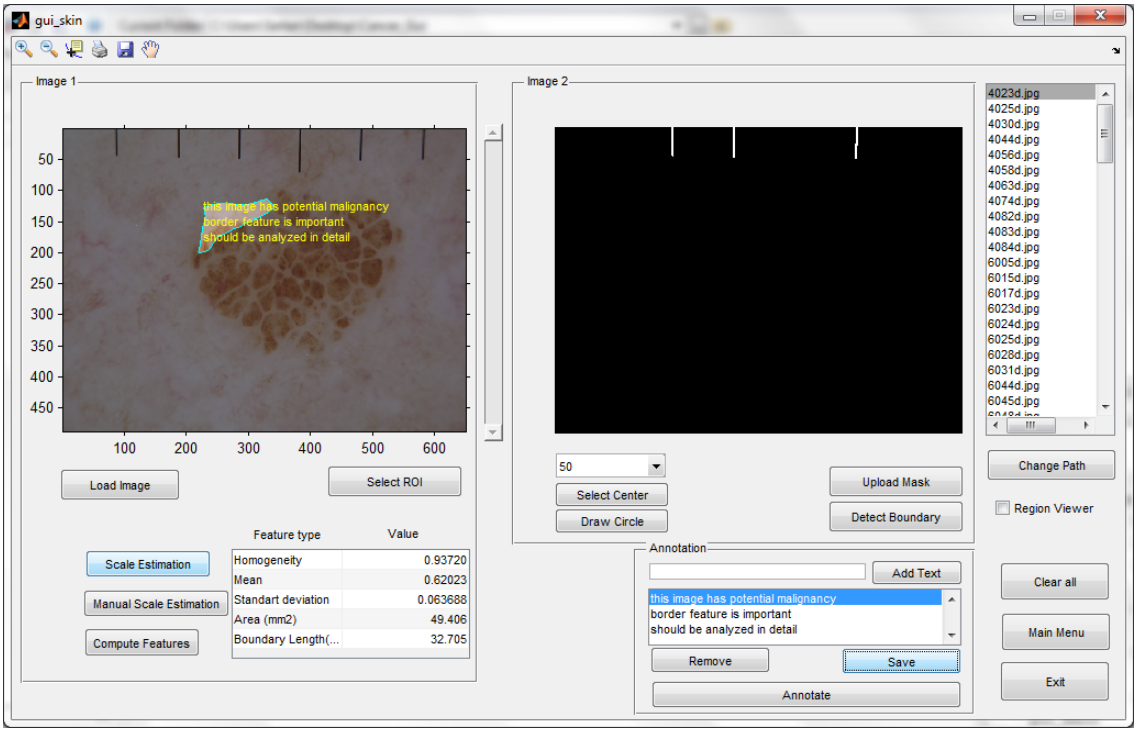


Figure 56. The image with annotations by means of annotation box

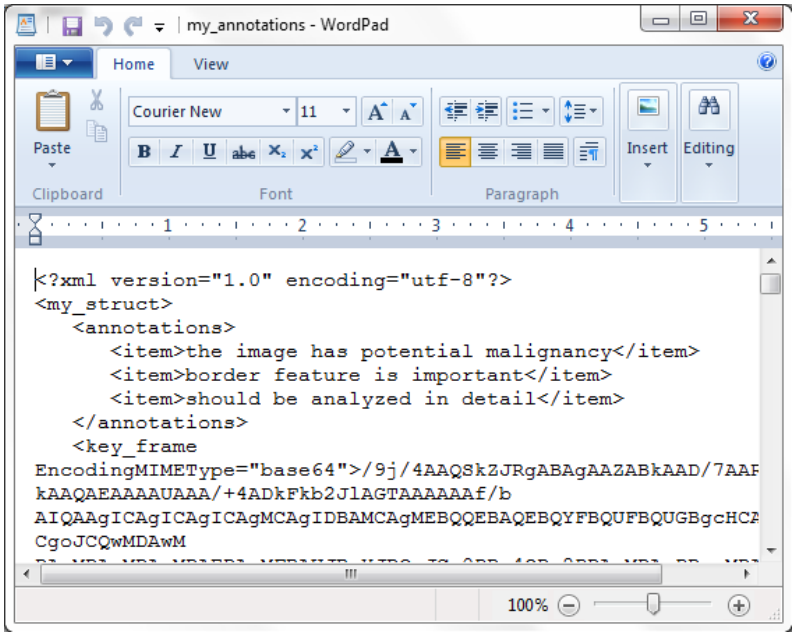


Figure 57. The XML file with 64-bit encoded dermoscopic image

5.2 The GUI of Border Analysis

The goal of the GUI of Border Analysis is to basically draw, extract circular regions around border, and carry out feature extraction step by computing variation of homogeneity, mean, and standard deviation for a particular color channel. This process is described in Chapter 3 with more details. As it is seen in Figure 58, first, the dermoscopy image is loaded and would be segmented with either manually or automatically. After that, the boundary is detected by means of chain code which is also depicted in Figure 58 (b). In the next step, one or more color channels are selected to start border analysis in the interface. The results of border analysis is shown in Figure 59 where variety of feature types and their values are listed in the interface. The results can be exported into an Excel or a PDF file format for documentation purposes.

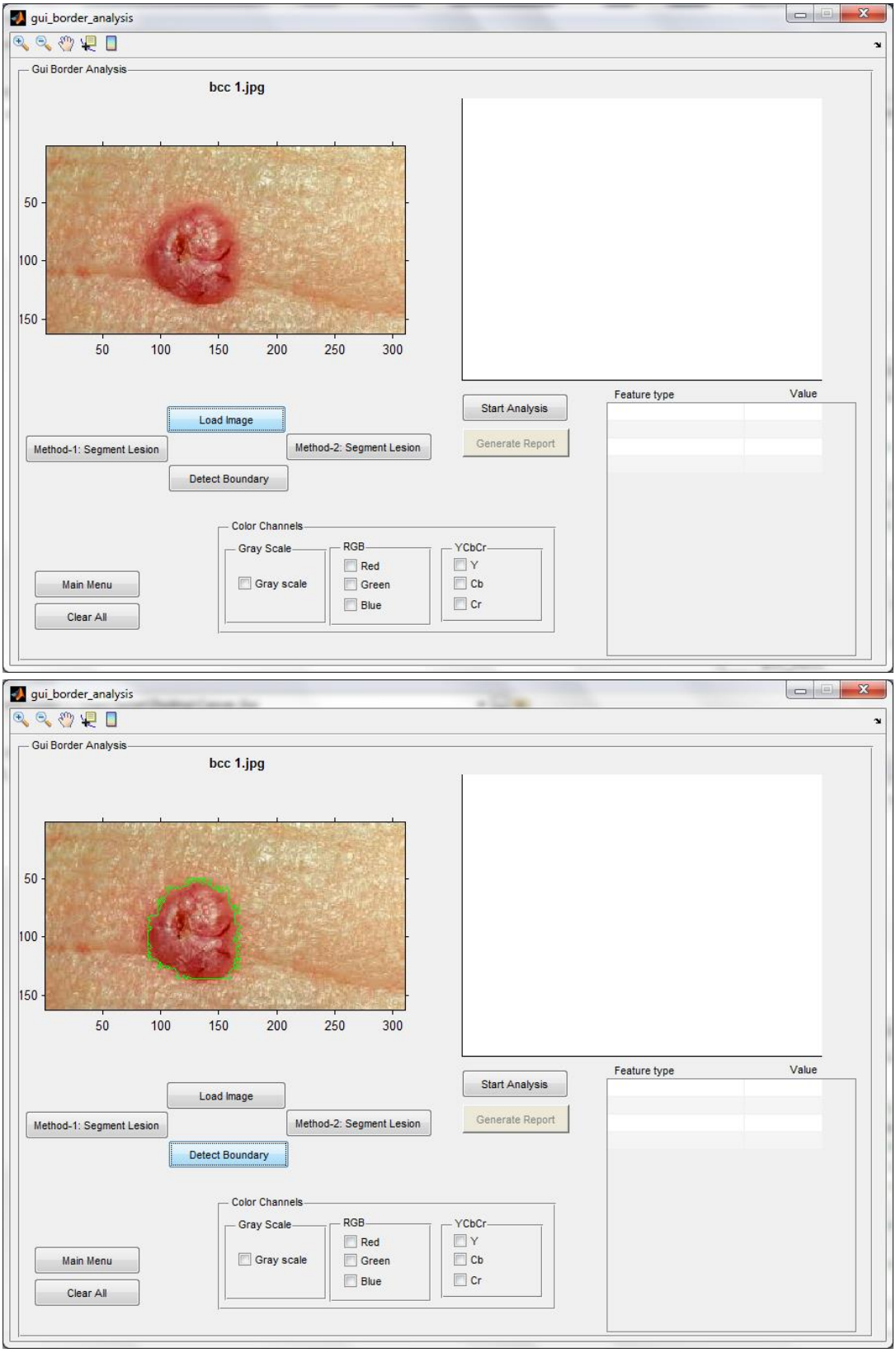


Figure 58. (a) The Loaded dermoscopic image (b) The boundary detected dermoscopic image

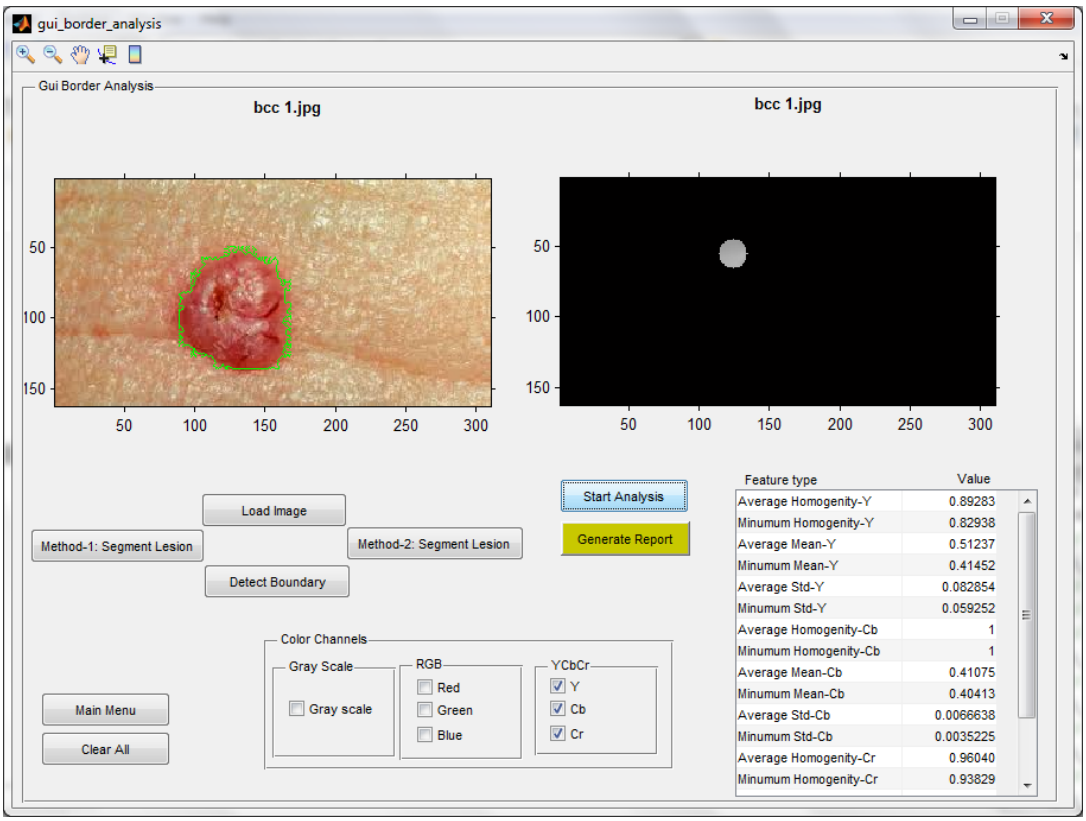


Figure 59. The outcome of the analysis and the features' values

5.3 The GUI of Fractal Dimensions

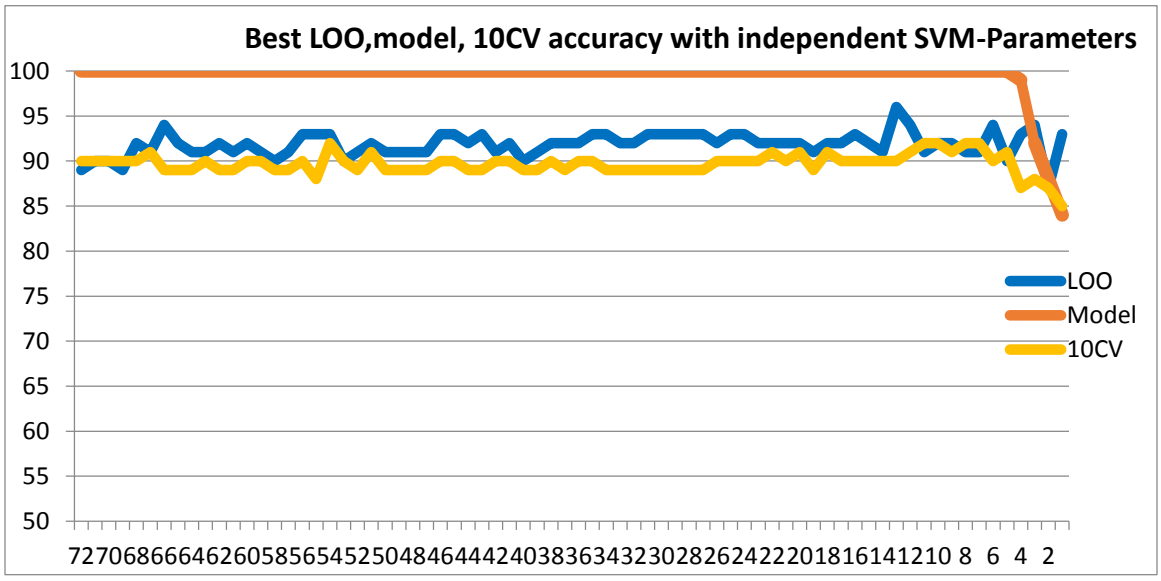
This part of study and the development of GUI was conducted by Kockara et al. 2015 [50].

Author is referred to [50] for details of that study.

Chapter 6. RESULTS, DISCUSSION, AND CONCLUSIONS

6.1 Results and Discussion

The graph in Figure 60 is shaped by using the best three features, which are Blue, Cr and Green-based features, each of them has 24 possible features and 3 color channels which makes a total of 72 features. As it is seen in the graph, 72 is starting point for the x axis. This graph is obtained as follows. First, SVM classifier starts to run with this 72 features, and the best achieved accuracy is obtained and marked on the graph. In the next step, the worst feature is discarded from the 72 features, and 71 features are left behind to train and test SVM. The value which is obtained by this process is also marked on the graph which simply corresponds to 71 in the x axis. This discarding of one feature process is plotted until 1 feature left behind in this routine. By doing so, the graph is formed and finalized as seen in Figure 60.

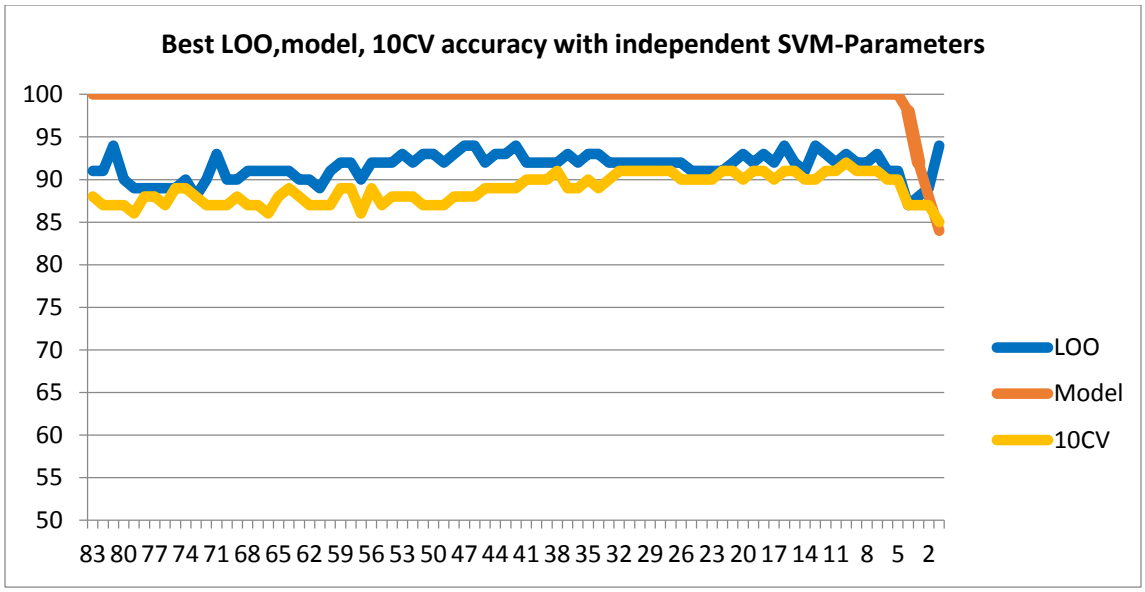


The top (sorted best-to-worst) 10 features are: Gre-5-AH, Cr-10-AM, Gre-15-AM, Blu-10-MM, Blu-7-MH, Gre-15-MS, Gre-5-MH, Cr-7-AM, Blu-5-MS, and Blu-7-AS.

Figure 60. Experiments with only Blue, Cr, and Green-based features

Results presented in Figure 60 are for the third method that we developed (the inner-shifted boundary by dynamic scaling, details provided in Section 3.4.5). The other two methods given in sections 3.4.3 (74% accuracy) and 3.4.4 (83%) as expected have not produced higher accuracies for malignancy detection. This is due to having noise (outside region of the lesion border) incorporated in these methods. Since the model accuracy is 100%, this emphasizes that the proposed model for 3rd method (section 3.4.5) can accurately distinguish malignant lesions from benign lesions. This means that the proposed model is an accurate approach for classification purposes.

For a particular case where 100 dermoscopic images are tested by using only 13 features. According to the graph, it can be inferred that 13 features could yield almost the best result. This basically implies that 13 features are sufficient to model and train the SVM classifier. In the 13 feature scenario on Figure 60, leave-one-out (LOO) methodology achieves up to 96% classification accuracy and 10-fold cross validation (10CV) accomplishes up to 90% classification accuracy. It should be noted that less than 6 features cannot represent the proposed model well based upon the graph.



Top 25 features, where it seems all assessment models yield better cumulative: Gre-5-AH, Cr-10-AM, Blu-10-MM, Blu-5-AM, MassRadS, Blu-15-MS, Gre-5-MH, Cr-7-AM, Blu-7-MH, Blu-7-AM, Cr-15-AM, Blu-15-AH, Gre-7-AH, Blu-10-AS, Blu-5-MH, MassRadL, Blu-5-MS, Cr-15-AH, Cr-15-MH, Fast-Hyb, Blu-5-AH, CornerC, Cr-5-AM, Blu-15-AM, Gre-15-AH.

Figure 61. Experiments with only Blue, Cr, and Green-based homogeneity features and Fractal features

In Figure 61, the graph is formed by using the best three features plus fractal features that means 83 total number of features are used for the experiments. The idea behind generating this graph is the same as one explained in the first case. In each training and testing cycle, the worst feature, based upon its ranking score, is eliminated from the 83 feature set, and training and testing is applied to the remaining feature and obtained classification accuracy is recorded and plotted on the graph. Again, this cycle routine is carried out until one feature left behind. Thus, the graph is built up as illustrated in Figure 61.

With the same analytical approach, as it is comprehended from the graph, 16 features stand out a promising result with 94% correct classification accuracy for LOO method and 91% correct classification accuracy for 10 CV. Less number of features also can be

considered to represent the model. For a complete list of results reader is referred Appendix A.

6.2 Conclusions

For differentiating malignant pigmented lesion from benign ones, automated skin lesion border examination and analysis techniques have recently taken attention of researchers. Accurate detection and objective evaluation of abrupt pigment pattern cutoff at the perimeter of a skin lesion is one of the important criteria for malignancy detection. However, it is still challenging task and biased by a dermatologist's experience level. In this thesis, an exclusive approach is proposed where abruptness of pigment pattern along the lesion perimeter is measured. The boundary of the skin lesion is determined with the help of the density based lesion border detection technique. By using 2 different methods, the detected boundary is step by step scaled down. Then, throughout scaled down borders, pigment motifs' homogeneities are extracted and computed in various color channels and at different scales.

The proposed method has been experimented and validated by selecting a test bed which includes 100 dermoscopy images (69 benign and 31 melanoma). The results prove that the proposed approach is highly effective to detect malignancy in dermoscopy images. More precisely, up to 96% classification accuracy, 0.96 specificity value, and 0.86 sensitivity value are accomplished in detection of malignancy in a particular color space. Finally, in addition to that, 0.87 of the F-measure is attained on malignancy detection.

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APPENDIX A. HOMOGENEITY DATA

GrayScale

Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
CANCER IMAGES	4023d	0.909390437	0	0.465659342	0.255731523	0.038019821	0.011617658	0.918479922	0.811827957	0.452055498	0.289740896	0.0481448	0.021698	0.922695928	0.844896332	0.4328039	0.242149	0.0575832	0.023033	0.926945939	0.883574879	0.4039242	0.286533	0.0708946	0.031472
	4025d	0.931067744	0.767857143	0.622562759	0.479302832	0.026022387	0.006995727	0.927899599	0.824074074	0.612176345	0.461501674	0.0341247	0.007557	0.931786659	0.866487455	0.5942503	0.473245	0.0456122	0.017064	0.938256002	0.872053872	0.5694992	0.445269	0.0595263	0.018877
	4030d	0.957239231	0.819444444	0.532137649	0.395116537	0.025305105	0.007147467	0.955880838	0.854651163	0.521807356	0.389083201	0.0317174	0.011438	0.9519725	0.891447368	0.5071268	0.393512	0.0409927	0.019884	0.950811678	0.906847936	0.4883713	0.374322	0.051269	0.024174
	4044d	0.961488285	0.758064516	0.595332926	0.466897347	0.020259347	0.005266276	0.961545164	0.813043478	0.588740611	0.494313725	0.0254715	0.009123	0.963719666	0.852623457	0.579907	0.48542	0.0320607	0.011999	0.961316465	0.873563218	0.5669526	0.489384	0.0396911	0.018346
	6015d	0.838528466	0.678571429	0.549922861	0.482965686	0.058735982	0.030468783	0.838942321	0.722222222	0.541456861	0.462016807	0.0617807	0.037451	0.841592397	0.766509434	0.5323817	0.450875	0.0645931	0.043315	0.844350435	0.816399287	0.5208803	0.460989	0.0683306	0.050679
	6052d	0.859931007	0.691056911	0.56898516	0.451898206	0.052427974	0.027765953	0.857458717	0.740061162	0.560736127	0.48463735	0.0555974	0.030583	0.857618793	0.776094276	0.5538233	0.450026	0.0582112	0.037519	0.858120639	0.793398533	0.5461387	0.456669	0.0621463	0.041694
	95-13-15.jpg	0.967227268	0.794117647	0.405249951	0.022200066	0.016373996	2.23951E-16	0.966233586	0.833333333	0.402107805	0.024355005	0.0209679	3.9E-16	0.966207604	0.872060858	0.3956879	0.020988	0.0271713	0.007672	0.969697788	0.905974843	0.3879582	0.018311	0.0356563	0.011781
	95-13-17.jpg	0.96171666	0.785714286	0.821512234	0.534663866	0.025579922	0	0.963976901	0.825581395	0.820245404	0.522378869	0.0296894	0	0.964811736	0.841772152	0.8181348	0.520688	0.0351751	0	0.968046075	0.873717949	0.8160098	0.546478	0.0401755	0
	96-22-19	0.96089302	0.642857143	0.590242018	0.335582468	0.01970287	0.00415725	0.960794528	0.833333333	0.585298983	0.38612368	0.0247267	0.007019	0.960414244	0.8875	0.5778617	0.379967	0.0308678	0.010329	0.96122226	0.891472868	0.5667136	0.424529	0.0387258	0.011486
	Bg0899ad	0.903137609	0.573412698	0.534364538	0.161630142	0.044056109	0.010218385	0.903599616	0.71641791	0.525768993	0.166418751	0.0527438	0.015091	0.90784961	0.765811966	0.5101638	0.173064	0.0653615	0.015928	0.905420709	0.781236897	0.4759035	0.165621	0.0891614	0.019296
	Bm0300ad	0.9511027	0.792682927	0.579731115	0.434972678	0.025724705	0.005205363	0.952030058	0.821705426	0.569344979	0.426153846	0.0321616	0.011468	0.953884525	0.883753501	0.5569453	0.402792	0.0398045	0.015054	0.956527927	0.902695595	0.5381737	0.387125	0.0487951	0.022053
	Fj0297ad	0.956329169	0.793209877	0.411928303	0.278143022	0.029106191	0.006497809	0.95108512	0.798245614	0.399398338	0.258428077	0.0373713	0.009379	0.949692415	0.859195402	0.3815902	0.248122	0.0470874	0.011526	0.953344192	0.890445402	0.358411	0.24723	0.0577421	0.012396
	Fj1200ad	0.957570606	0.759259259	0.682331809	0.545905421	0.019472509	0.006702547	0.956192606	0.813559322	0.675295519	0.554509804	0.0245935	0.008818	0.954861727	0.846938776	0.6662268	0.560855	0.0304115	0.010973	0.952755009	0.881578947	0.6563757	0.57535	0.0365553	0.014963
	Fn1200ad	0.982851785	0.825	0.597961421	0.549098039	0.023280555	0.005589645	0.986380715	0.856862745	0.590583962	0.546304676	0.0259623	0.00913	0.988787865	0.917569194	0.5811188	0.545329	0.0293819	0.010393	0.985435396	0.945993031	0.5678823	0.519992	0.0338084	0.01783
	Gs0499ad	0.972966228	0.771317829	0.778582559	0.56004902	0.012234255	0.003872044	0.972112198	0.86328125	0.774031794	0.566528583	0.0156805	0.004266	0.971196211	0.863013699	0.7670389	0.556831	0.0202593	0.006123	0.968839571	0.88462963	0.7553014	0.569491	0.0285937	0.009587
	hn0996ad	0.984509177	0.85	0.604928219	0.522211508	0.016708107	0.004787649	0.985605308	0.892561983	0.600240775	0.483702989	0.0196176	0.006632	0.987270746	0.930851064	0.593885	0.481203	0.0230488	0.007153	0.986685082	0.934369603	0.5860196	0.477029	0.0276317	0.01066
	kh0598ad	0.92244563	0.75	0.767733142	0.665630781	0.019535161	0.006014895	0.934799414	0.828431373	0.761739629	0.655312792	0.0229842	0.008459	0.945303925	0.821428571	0.7533271	0.656017	0.0278263	0.009229	0.952728504	0.875706215	0.7410744	0.63416	0.0357911	0.013495
	Kr1196ad	0.978069385	0.790697674	0.55719351	0.420852786	0.02487446	0.004988609	0.968250248	0.822916667	0.546185985	0.389721695	0.0325649	0.007349	0.962582271	0.867256637	0.5318001	0.345322	0.0428097	0.009978	0.961462057	0.900133601	0.5130435	0.316599	0.0558683	0.017076
	Lj0899ad	0.902563141	0.776315789	0.463522696	0.252388135	0.042376999	0.011048371	0.89294806	0.801282051	0.441880184	0.23623366	0.0539909	0.023254	0.894564623	0.835984848	0.4147908	0.235955	0.0715159	0.035785	0.900418069	0.857909605	0.3710592	0.231678	0.0932457	0.044636
	lj1196ad	0.948808679	0.790322581	0.620448648	0.454049446	0.013676301	0.001841836	0.95645477	0.791666667	0.61356192	0.457013575	0.0188512	0.002245	0.962631868	0.848484848	0.6042685	0.472302	0.0257273	0.003849	0.968418307	0.886120996	0.5921147	0.444641	0.0359932	0.00739
	mk1096ad	0.953126055	0.729166667	0.272536312	0.179039892	0.032447485	0.012555146	0.945568464	0.789473684	0.265603411	0.182296919	0.034725	0.014014	0.939075786	0.823529412	0.2566372	0.170565	0.0380556	0.015906	0.936637832	0.857448107	0.2438499	0.152522	0.0430687	0.018491
	mm0598ad	0.929960694	0.716666667	0.460785161	0.245290273	0.03423356	0.00775222	0.928976582	0.767217631	0.449559671	0.227152194	0.0437778	0.014967	0.928456658	0.814814815	0.4322757	0.191823	0.0566345	0.018021	0.931722398	0.826856649	0.4062723	0.194501	0.0730452	0.027064
	Mm0899ad	0.9383366	0.802083333	0.566397147	0.472614379	0.032681768	0.011315972	0.937033894	0.838709677	0.557933796	0.46401012	0.0399968	0.017772	0.931934779	0.867330017	0.5411894	0.416036	0.0504761	0.023709	0.929263132	0.889711465	0.5196341	0.389902	0.0657406	0.031972
	Nd0599ad	0.888033801	0.75	0.632070064	0.530889457	0.02847437	0.006134429	0.898855406	0.796296296	0.624176255	0.517249603	0.0331661	0.012003	0.910082761	0.841071429	0.6134727	0.49819	0.0387753	0.014568	0.925714969	0.846820809	0.5995963	0.484643	0.0448762	0.017896
	Rk0399ad	0.931809872	0.788888889	0.530156598	0.19769821	0.0385851	0.008426819	0.93016811	0.812734082	0.517337437	0.193837535	0.0504136	0.01438	0.928098407	0.873511905	0.4913538	0.19275	0.0671709	0.022071	0.928413098	0.893149284	0.4556187	0.202655	0.0900817	0.024969
	Rl0298ad	0.877595103	0.741071429	0.504451725	0.415021602	0.034554898	0.015265669	0.882170453	0.786585366	0.492082806	0.401539579	0.0406387	0.023101	0.892520357	0.798403194	0.4775705	0.394348	0.0467826	0.0262	0.902597881	0.859447005	0.4563161	0.381448	0.0570844	0.034878
	sd0597ad	0.948818905	0.76	0.49753912	0.410903874	0.015897808	0.002047972	0.950120655	0.803030303	0.493453034	0.406470588	0.0195182	0.007879	0.950297518	0.880733945	0.4864772	0.410579	0.024404	0.010997	0.958690151	0.915948276	0.4756766	0.420539	0.030906	0.016788
	Wa0499ad	0.957798223	0.821428571	0.556608637	0.485260311	0.033276598	0.00949975	0.943671681	0.846534653	0.544634398	0.475615887	0.0381809	0.017068	0.939214258	0.888601036	0.5289957	0.459917	0.0436293	0.023423	0.944563312	0.908602151	0.5085385	0.439628	0.0499561	0.028101
	zp0298ad	0.939227741	0.794871795	0.52924065	0.43130375	0.030100396	0.01103395	0.932181045	0.851694915	0.517637543	0.415356731	0.0367272	0.013119	0.931019106	0.856741573	0.5025171	0.429924	0.0465256	0.023827	0.932720207	0.88536036	0.4834366	0.388959	0.0573281	0.028101
	zr0798ad	0.980621077	0.788461538	0.565934645	0.485608583	0.021267488	0.005101519	0.97274134	0.808712121	0.557610232	0.451861644	0.0269159	0.006937	0.965884747	0.817745803	0.5468306	0.406061	0.0337136	0.012375	0.95620293	0.837825696	0.5296191	0.392009	0.0450916	0.014502
NOT CANCER IMAGES	4056d	0.925159376	0.794117647	0.45574502	0.318190045	0.030624849	0.009824766	0.926883743	0.815217391	0.439316771	0.304637411	0.0415171	0.019672	0.93672021	0.851476015	0.4158538	0.298566	0.0543631	0.028203	0.940600043	0.8908	0.3822221	0.273871	0.0701219	0.039881
	4058d	0.956078906	0.793478261	0.551493354	0.412870789	0.020219995	0.007241136	0.956190915	0.844036697	0.543264793	0.421441304	0.0261399	0.010549	0.953692616	0.858139535	0.530239	0.418987	0.0349074	0.015581	0.951046096	0.900921659	0.5111284	0.417883	0.0440999	0.020574
	4063d	0.937648694	0.807692308	0.526688725	0.327170868	0.024508233	0.00763458	0.934539359	0.86163522	0.514690973	0.319183007	0.0319744	0.010155	0.93746685	0.868380062	0.4972543	0.309665	0.041929	0.011956	0.940646963	0.900826446	0.4706293	0.312198	0.0580092	0.028778
	4074d	0.927732378	0.676136364	0.742222878	0.573925009	0.025057777	0.009270718	0.934437812	0.821180556	0.733360496	0.5463954	0.0309069	0.013035	0.943400209	0.837191358	0.7200721	0.56262	0.0382541	0.014564	0.948061168	0.888888889	0.7008823	0.547812	0.0475088	0.019453
	4082d	0.980549454	0.833333333	0.549450232	0.501023018	0.020165387	0.007590648	0.96913532	0.877192982	0.541891879	0.5	0.0245144	0.012154	0.956462265	0.889361702	0.5315585	0.487662	0.0290742	0.015252	0.951652015	0.910526316	0.5189902	0.480326	0.0338344	0.019525
	4083d	0.964803523	0.820707071	0.543672995	0.464005602	0.021297838	0.005941695	0.948496942	0.843283582	0.533682048	0.450814224	0.0280887	0.008793	0.942020891	0.876322751	0.5186203	0.439248	0.0366	0.012404	0.948791788	0.882163743	0.4945511	0.414457	0.0501423	0.016226
	4084d	0.927884579	0.778735632	0.543607749	0.392717087	0.0312734	0.01065966	0.928717216	0.822097378	0.530522029	0.402117647	0.0401843	0.013143	0.922982584	0.830788804	0.5113228	0.38649	0.0517569	0.027388	0.92513643	0.889145497	0.4798978	0.375384	0.0666944	0.037858
	6005d	0.806313734	0.62037037	0.587027343	0.488735102	0.062284194	0.030650942	0.813515358	0.699588477	0.571395424	0.472746897	0.0687471	0.038452	0.816447463	0.746275605	0.5523273	0.468601	0.0761353	0.049498	0.821919638	0.777988215	0.5309525	0.40975	0.0813117	0.051158
	6017d	0.903786347	0.763888889	0.538548558	0.463709418	0.039378399	0.015914763	0.89709901	0.788461538	0.53127857	0.462432761	0.0414958	0.02263	0.894198739	0.830396476	0.5215487	0.457335	0.0448163	0.026655	0.895138689	0.843035343	0.5088666	0.450865	0.0499757	0.030517
	6023d	0.802154289	0.688888889	0.49390874	0.425836217	0.06056358	0.029604445	0.81072823	0.724637681	0.485018867	0.400610736	0.0622712	0.038589	0.816890139	0.770042194	0.4728673	0.395035	0.0659025	0.044746	0.823371106	0.780787037	0.4556908	0.381206	0.0716871	0.048706
	6024d	0.806746112	0.661458333	0.580050911	0.511357751	0.061755573	0.034447686	0.809948257	0.724770642	0.569094357	0.497023558	0.0650267	0.032134	0.815883692	0.757092199	0.5568358	0.489219	0.0677114	0.043946	0.824534814	0.773138833	0.5401423	0.473074	0.0716656	0.044758
	6025d	0.867016099	0.736842105	0.655044917	0.581134075	0.054328843	0.029314429	0.862500807	0.753012048	0.645842535	0.568079275	0.0587644	0.033474	0.867974455	0.82441701	0.6376131	0.5684	0.0631229	0.040182	0.866829008	0.822368421	0.6245607	0.549938	0.0683993	0.04783
	6028d	0.88695417	0.747126437	0.461616383	0.406732026	0.038364184	0.015249626	0.903742011	0.791304348	0.453001227	0.389671362	0.0403875	0.019153	0.90967449	0.819121447	0.4421738	0.392074	0.043626	0.023409	0.907300348	0.844632768	0.4260034	0.387784	0.0491976	0.033716
	6031d	0.837453746	0.691489362	0.489142063	0.411638204	0.056232097	0.023471671	0.845240299	0.761316872	0.471832334	0.401131222	0.061988	0.033853	0.855337988	0.798063624	0.4524208	0.36816	0.0684176	0.040945	0.868802201	0.827363897	0.4270563	0.352564	0.0746872	0.043756
	6044d	0.883500088	0.732142857	0.598624302	0.483351159	0.041477859	0.020555604	0.89316028	0.777777778	0.588689069	0.4890158	0.0452505	0.025483	0.895495689	0.831380208	0.5748459	0.475628	0.050733	0.029428	0.895305695	0.842105263	0.5544125	0.485812	0.0585032	0.032774
	6045d	0.836235101	0.710526316	0.519084608	0.420983832	0.056830606	0.027076554	0.842456149	0.734848485	0.507043473	0.409504819	0.0608393	0.037989	0.845378967	0.789316239	0.4933173	0.366097	0.0648592	0.038886	0.846867411	0.812458582	0.4730694	0.388638	0.071619	0.040779
	6048d	0.913656804	0.727272727	0.450892899	0.371221719	0.041014079	0.014135296	0.917997964	0.817073171	0.445220181	0.381357466	0.0429749	0.019379	0.919542502	0.840909091	0.4387091	0.359786	0.0447689	0.024657	0.92084232	0.861336032	0.4266377	0.360169	0.0486705	0.030608
	6049d	0.8763756	0.760869565	0.517242732	0.462042728	0.040700593	0.008874881	0.881851178	0.786666667	0.510777691	0.448376471	0.0434013	0.012389	0.883856826	0.825123153	0.5041295	0.442093	0.0462994	0.01659	0.88861457	0.849557522	0.4901861	0.419399	0.052151	0.032294
	6050d	0.912520697	0.761904762	0.568607105	0.484770346	0.043827764	0.018163878	0.904385961	0.796747967	0.556067704	0.494913328	0.0489791	0.019095	0.898870617	0.81884058	0.5411521	0.48831	0.0552203	0.027931	0.898003635	0.821712538	0.517291	0.457158	0.0643293	0.034873
	6051d	0.864944548	0.75	0.584482521	0.496218487	0.052147335	0.031986578	0.86728438	0.756637168	0.574366324	0.487882353	0.055113	0.034112	0.869667188	0.771973466	0.5620973	0.474494	0.0585814	0.035594	0.870403735	0.824166667	0.5450991	0.460198	0.0655069	0.042935
	6053d	0.871481073	0.722222222	0.562797395	0.470758738	0.052927956	0.027150299	0.869164248	0.752380952	0.555129982	0.483234534	0.0553458	0.033511	0.870389422	0.805989583	0.5447703	0.492073	0.0589442	0.044552	0.870098392	0.828351449	0.527666	0.456866	0.0649446	0.048023
	6054d	0.816972237	0.705882353	0.485606205	0.248466566	0.040294321	0.013695009	0.82917285	0.726190476	0.475394433	0.259071207	0.0447468	0.02026	0.847147933	0.761627907	0.4625029	0.350142	0.0520888	0.02572	0.863623247	0.790983607	0.4414064	0.351601	0.0631152	0.026355
	6055d	0.858056375	0.745762712	0.519344208	0.463387978	0.041011247	0.016031759	0.857134397	0.75	0.512229381	0.447689076	0.0433593	0.01939	0.862401541	0.788990826	0.5025496	0.406154	0.045685	0.026161	0.874850152	0.824624625	0.4875972	0.413604	0.0502361	0.035813
	6056d	0.848159657	0.719512195	0.538712341	0.479815456	0.052319143	0.028153565	0.847226374	0.764492754	0.529904082	0.479528082	0.0549869	0.030175	0.847098466	0.789351852	0.5206277	0.482876	0.0580153	0.039637	0.847404903	0.80647535	0.5067712	0.457051	0.0626194	0.045505
	6061d	0.852947946	0.75	0.496109327	0.435294118	0.035286119	0.01269006	0.862491723	0.77027027	0.49078183	0.439215686	0.0379767	0.015965	0.873080852	0.815340909	0.4842261	0.441481	0.0403253	0.020739	0.885800271	0.833737864	0.4755983	0.440825	0.0444232	0.02727
	6065d	0.86501696	0.738636364	0.527133639	0.458278867	0.047129014	0.02045598	0.867660683	0.763888889	0.51845471	0.463881253	0.0498067	0.030081	0.871293154	0.814465409	0.507204	0.456836	0.0536689	0.032261	0.874680512	0.827743902	0.4902955	0.425633	0.0590981	0.036071
	6074d	0.870436757	0.727272727	0.466114964	0.375052149	0.042224027	0.017990507	0.884196061	0.785714286	0.452645574	0.357107843	0.047393	0.024064	0.889324925	0.821895425	0.4361123	0.342012	0.054868	0.028168	0.900313459	0.858736059	0.4085318	0.326618	0.066446	0.035262
	6075d	0.878937549	0.777777778	0.51527107	0.482921284	0.032751983	0.014039216	0.87813143	0.798780488	0.505964373	0.467325032	0.0359804	0.018587	0.891495775	0.831896552	0.4936845	0.43948	0.0399311	0.019876	0.91267835	0.866336634	0.4734074	0.435233	0.0472121	0.023349
	6077d	0.854920493	0.755555556	0.50648706	0.450392157	0.040147546	0.011357391	0.856970335	0.775423729	0.495805762	0.420980392	0.043781	0.021012	0.87219142	0.810810811	0.4816615	0.408695	0.0486482	0.028126	0.88978432	0.828571429	0.4624139	0.400847	0.0555474	0.033348
	6079d	0.859715088	0.68	0.515435464	0.445614035	0.052073275	0.012350824	0.858983076	0.742990654	0.503448148	0.426907397	0.055841	0.024871	0.862701656	0.760466989	0.4890215	0.407825	0.0612279	0.026656	0.8711784	0.792771084	0.4704574	0.390004	0.0666847	0.034741
	6084d	0.885765335	0.698412698	0.580123592	0.522875817	0.048159546	0.019340033	0.886089333	0.762536873	0.567485871	0.506189258	0.053003	0.029191	0.88556586	0.811111111	0.5524969	0.483082	0.0592565	0.035968	0.88456464	0.833673469	0.5324277	0.46209	0.0682728	0.042739
	6085d	0.819739863	0.734693878	0.632122845	0.589215686	0.05497107	0.029555772	0.825880995	0.726027397	0.624669093	0.587344029	0.0576814	0.037837	0.829635119	0.738292011	0.6157448	0.550676	0.060307	0.044515	0.836774215	0.803738318	0.6031321	0.534226	0.0639445	0.050804
	6089d	0.831512417	0.680851064	0.333447289	0.218196078	0.05702542	0.02609674	0.844169756	0.717228464	0.321788004	0.251263392	0.0608446	0.038565	0.852129678	0.745555556	0.3048597	0.237676	0.0669648	0.040783	0.857638714	0.82195216	0.2801799	0.225586	0.0762671	0.05493
	6091d	0.926334029	0.804878049	0.399751999	0.33793962	0.034253574	0.009698056	0.913848352	0.834745763	0.391764764	0.327596824	0.0364313	0.015002	0.904160689	0.844129555	0.3802355	0.306513	0.0401999	0.021205	0.911461791	0.873860182	0.3623406	0.317736	0.0476184	0.037155
	6093d	0.845954984	0.716666667	0.510933273	0.441322798	0.036065253	0.009315065	0.844702647	0.755555556	0.504223029	0.415775401	0.0383391	0.012522	0.854060866	0.792467949	0.4969587	0.410612	0.0404566	0.017775	0.867106305	0.811850312	0.4884238	0.371297	0.0435711	0.029061
	6094d	0.83628664	0.735849057	0.50913422	0.464799253	0.049939552	0.03284214	0.841962922	0.735849057	0.499055155	0.435112564	0.0520593	0.033166	0.859073156	0.792553191	0.4832585	0.430872	0.0551729	0.038819	0.871383104	0.809572301	0.4643786	0.415507	0.0598689	0.041369
	6102d	0.878849147	0.728571429	0.55222975	0.469791667	0.051983979	0.017568957	0.880337829	0.76984127	0.545288223	0.469281046	0.0546249	0.031591	0.882148114	0.813931298	0.5366159	0.434847	0.0580269	0.034352	0.885214208	0.846121057	0.5225117	0.451669	0.0631696	0.032984
	6105d	0.863011364	0.710884354	0.573476982	0.485682575	0.054463292	0.018737717	0.857774402	0.737547893	0.562701284	0.452264446	0.058759	0.031488	0.858001191	0.789162113	0.5497525	0.415974	0.0634891	0.038286	0.862127318	0.81920904	0.5315525	0.409767	0.0705599	0.046769
	6599d	0.916100324	0.743169399	0.558453567	0.451844467	0.043348359	0.016714161	0.909004612	0.79248366	0.545768028	0.43866042	0.048105	0.020225	0.901955106	0.820450886	0.5301717	0.442336	0.0528061	0.030042	0.90360779	0.849264706	0.5079668	0.450278	0.0600148	0.030752
	6602d	0.934332201	0.75	0.538660417	0.479873126	0.029844188	0.009952193	0.922872081	0.812672176	0.530401545	0.470514935	0.0323724	0.011511	0.911439088	0.818918919	0.5188849	0.445345	0.036667	0.016921	0.915366225	0.850938967	0.5022378	0.432181	0.0437331	0.021824
	6605d	0.880481564	0.653594771	0.391427894	0.191805677	0.054262334	0.017024375	0.878446572	0.675757576	0.372359634	0.191477536	0.061766	0.016776	0.879203896	0.702439024	0.3503451	0.185621	0.0698437	0.021885	0.889145131	0.807174888	0.3237462	0.187381	0.0775312	0.034312
	6612d	0.883444929	0.719512195	0.406479476	0.320915033	0.051807472	0.022636361	0.878192532	0.779069767	0.395122382	0.328989442	0.054932	0.023944	0.884320568	0.816455696	0.3828462	0.300828	0.0585581	0.034562	0.89223123	0.837247228	0.3662776	0.287814	0.0621179	0.042171
	6617d	0.847106195	0.699404762	0.496218518	0.385031759	0.047847771	0.018186385	0.853233752	0.734496124	0.487369031	0.368992248	0.0518657	0.021754	0.858415757	0.785014006	0.4773014	0.371306	0.0570204	0.032008	0.864944225	0.813244048	0.4599995	0.336957	0.0656527	0.036176
	6622d	0.835731135	0.726190476	0.640899463	0.592208462	0.044008771	0.021557165	0.845849823	0.74742268	0.634580321	0.588488299	0.0451914	0.019837	0.855334236	0.780701754	0.6258298	0.578773	0.0478837	0.031515	0.865229302	0.812903226	0.6136903	0.573056	0.0516429	0.039462
	6627d	0.794074407	0.590909091	0.397942649	0.241980071	0.091463529	0.036436087	0.803269919	0.643518519	0.382211009	0.262848297	0.0993669	0.054946	0.813960019	0.689393939	0.3676814	0.26568	0.104769	0.066495	0.824804493	0.760498688	0.3505174	0.25021	0.1097544	0.080023
	6637d	0.840358672	0.694444444	0.530028684	0.455652899	0.056569197	0.03119203	0.840503878	0.739247312	0.519950166	0.463521646	0.0603864	0.036663	0.844622183	0.783410138	0.5056863	0.442534	0.0653339	0.04262	0.853434491	0.808788599	0.4874837	0.427884	0.0705758	0.053012
	6642d	0.855180926	0.748792271	0.50359363	0.418775995	0.052373066	0.02534455	0.862798925	0.754716981	0.490737933	0.408765859	0.0557028	0.030679	0.870312294	0.820273632	0.4747664	0.399776	0.0609724	0.036473	0.879781675	0.843047035	0.4497619	0.380198	0.0684461	0.03981
	6643d	0.826271595	0.705357143	0.479604431	0.411212372	0.054926253	0.028579815	0.836805421	0.764227642	0.46388368	0.404621849	0.0605746	0.034924	0.838898956	0.788934426	0.440499	0.382353	0.069978	0.042772	0.84456345	0.79787234	0.4050828	0.339189	0.0834377	0.054322
	6644d	0.965698654	0.75	0.446899804	0.359270726	0.028638205	0.007296161	0.966681148	0.85483871	0.439621908	0.365403789	0.0321312	0.01108	0.96238754	0.87037037	0.4287171	0.380303	0.0364803	0.018399	0.944988349	0.876760563	0.412565	0.370028	0.0446186	0.028504
	6667d	0.844772487	0.628787879	0.584014613	0.519344454	0.055738465	0.029465772	0.847278314	0.741666667	0.575839625	0.503288084	0.0593393	0.036588	0.84893888	0.789529915	0.5676972	0.514806	0.0621797	0.03934	0.851331345	0.810021436	0.5513755	0.483025	0.068426	0.04374
	6675d	0.851841486	0.65	0.521943158	0.37737062	0.057679573	0.021029048	0.852976509	0.718253968	0.513425736	0.388478492	0.0618725	0.031338	0.852094956	0.771043771	0.505155	0.391401	0.0649135	0.03308	0.852458143	0.81010929	0.4919695	0.424872	0.0702218	0.037526
	6677d	0.8299836	0.65	0.518052034	0.423770739	0.06196912	0.031172465	0.831838503	0.693069307	0.500658113	0.378193702	0.0683162	0.034978	0.839062787	0.745951417	0.4778832	0.359719	0.0770098	0.042295	0.851677892	0.797572178	0.4460402	0.350821	0.0910803	0.049034
	6687d	0.840254349	0.673913043	0.466644251	0.360690943	0.059334236	0.025845745	0.850427028	0.728174603	0.455082817	0.371288515	0.0644198	0.027679	0.859415788	0.79342723	0.4419382	0.37042	0.0681911	0.031927	0.869433033	0.828445748	0.4242975	0.364531	0.0750952	0.039646
	6688d	0.837615074	0.689655172	0.472497701	0.197812971	0.046325809	0.016244555	0.849319525	0.753144654	0.458138053	0.235893887	0.0536219	0.025934	0.862076366	0.810559006	0.4376253	0.304051	0.0648024	0.031188	0.871802815	0.832061069	0.4118692	0.30383	0.0769242	0.037829
	6706d	0.868676891	0.731638418	0.58525988	0.47624558	0.052697812	0.024209116	0.870049387	0.776255708	0.576303084	0.49245283	0.0575472	0.035652	0.873296195	0.798941799	0.566882	0.502114	0.0616382	0.038891	0.871594661	0.825968992	0.5511972	0.501378	0.0695609	0.046057
	6707d	0.877790948	0.738095238	0.586407708	0.50487395	0.047763012	0.028254015	0.880097944	0.773504274	0.57917418	0.504334365	0.0497021	0.02825	0.882307671	0.799180328	0.5708315	0.526141	0.0520737	0.03676	0.877794953	0.822241183	0.5596454	0.516372	0.055929	0.040594
	6709d	0.867367963	0.649425287	0.546110716	0.45983363	0.051543408	0.025286213	0.856135197	0.707364341	0.533976078	0.428454902	0.0554608	0.029174	0.84961953	0.761792453	0.5179161	0.424837	0.0622782	0.035875	0.851026058	0.798923679	0.4977029	0.402359	0.0688782	0.042328
	6714d	0.876399575	0.734722222	0.524970663	0.478555867	0.038404221	0.019494702	0.867326303	0.791989664	0.514812404	0.469441931	0.0420363	0.021836	0.873286297	0.814136126	0.5009097	0.460296	0.0464377	0.029274	0.88863258	0.838963964	0.4789854	0.438514	0.0558508	0.038483
	96-3-21	0.956369662	0.75	0.475679144	0.343833017	0.017761535	0.003378982	0.954555483	0.806122449	0.472736214	0.360237866	0.0207155	0.008039	0.952445971	0.8515625	0.4686447	0.360684	0.0247697	0.008995	0.948343022	0.874663073	0.4607107	0.365755	0.0304628	0.011388
	As0598ad	0.917922729	0.738333333	0.530935409	0.395564127	0.040219938	0.011649319	0.920238495	0.801900585	0.516335567	0.40233498	0.0481971	0.016249	0.926981981	0.812064156	0.4961262	0.389727	0.0575703	0.026976	0.932879453	0.880373502	0.4692136	0.385596	0.0678115	0.039362
	gc0697ad	0.980191432	0.830188679	0.426003671	0.354661163	0.02169861	0.007550081	0.969035664	0.865497076	0.416427811	0.351250225	0.0281773	0.008843	0.958184147	0.866666667	0.4036919	0.335096	0.0352012	0.013534	0.953073199	0.887331839	0.3862599	0.300092	0.0444732	0.017183

hm1096ad	0.995778293	0.901960784	0.708623054	0.671045752	0.016856172	0.005784115	0.992440036	0.893617021	0.70318467	0.661191269	0.0195933	0.008443	0.984885803	0.91576087	0.6958569	0.647148	0.023037	0.011011	0.970224333	0.912573674	0.6845456	0.626257	0.0293475	0.014502
jb0298ad	0.968724391	0.869230769	0.58801495	0.532045654	0.026605392	0.01119215	0.964378696	0.888489209	0.578146574	0.520571035	0.0311064	0.014675	0.963557789	0.908843537	0.5649644	0.481996	0.0366689	0.015129	0.960054434	0.91634981	0.5469574	0.462193	0.0456232	0.018871
kk0498ad	0.863439736	0.75	0.490498348	0.402124183	0.064829349	0.033148202	0.856673434	0.75	0.465670351	0.359580664	0.0772234	0.040361	0.85961404	0.811363636	0.4381915	0.339193	0.0880513	0.055134	0.874528518	0.827192982	0.4048168	0.311194	0.0996803	0.071166
km0301ad	0.964574746	0.75	0.480486629	0.339869281	0.018768131	0.007127327	0.964780229	0.796296296	0.476016967	0.338830233	0.0217858	0.009562	0.963438548	0.844	0.4698952	0.344511	0.0258385	0.011225	0.959956137	0.902925532	0.4591942	0.371225	0.0313597	0.016621
Ld1196ad	0.98161921	0.81	0.69609173	0.632630411	0.021196216	0.003310519	0.97311774	0.857142857	0.689689436	0.624897401	0.0256883	0.007301	0.968871064	0.890995261	0.6818549	0.62451	0.0308912	0.009388	0.962651472	0.913907285	0.6675804	0.602043	0.0394691	0.018248
Ma0899ad	0.868820373	0.721264368	0.470894967	0.326423903	0.06147465	0.015010554	0.870409965	0.805936073	0.441961245	0.287976323	0.0776479	0.033317	0.879917339	0.819651741	0.4051336	0.246835	0.0965003	0.047069	0.891355746	0.856780735	0.3555155	0.267696	0.1146212	0.091663
mj0798ad	0.956122613	0.817073171	0.455980245	0.382318541	0.025893942	0.009959134	0.958957456	0.817028986	0.447374835	0.375319302	0.0314566	0.012111	0.963016581	0.864433812	0.4362068	0.349734	0.036895	0.017691	0.95819986	0.905568096	0.4188951	0.324154	0.0472936	0.02376
Ra0199ad	0.951200618	0.788461538	0.72091214	0.555173454	0.021341496	0.00553467	0.950160237	0.842342342	0.711556397	0.555860239	0.0272779	0.009362	0.950482848	0.875771605	0.6965869	0.550833	0.0367353	0.016753	0.953041667	0.904898219	0.6707202	0.525799	0.0522824	0.023721
Ra0997ad	0.962279023	0.82	0.59476414	0.418552036	0.02503921	0.010387442	0.95027991	0.826530612	0.586097653	0.396775599	0.0308944	0.012359	0.946759419	0.844941957	0.5723288	0.389526	0.0403025	0.018362	0.942119908	0.855815348	0.5483282	0.374208	0.0556992	0.020385

Red Channel (R)

Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
CANCER IMAGES	4023d	0.917462178	0	0.646102982	0.388763198	0.037210395	0.011219957	0.915465117	0.836336336	0.632675843	0.430287115	0.047567	0.018876	0.917726394	0.851851852	0.6125184	0.38442	0.0584022	0.022342	0.922607817	0.879204893	0.580591	0.438253	0.0750966	0.028403
	4025d	0.95077049	0.729166667	0.814483693	0.68583878	0.020879577	0.006814895	0.945919765	0.814285714	0.807526368	0.664418938	0.0267441	0.006586	0.940874749	0.869369369	0.7945501	0.684403	0.035574	0.012485	0.938572886	0.890572391	0.7760676	0.65931	0.0480889	0.016715
	4030d	0.958515455	0.8	0.739801882	0.620409982	0.020998995	0.007895374	0.962351373	0.851351351	0.733075024	0.624977919	0.0252326	0.011284	0.964213332	0.89	0.7227319	0.617255	0.0319608	0.015831	0.966216948	0.910967344	0.7085378	0.599849	0.0403343	0.02023
	4044d	0.982178346	0.758064516	0.73183427	0.58650519	0.01840594	0.005266276	0.981805885	0.860655738	0.727046308	0.621084798	0.0228896	0.008088	0.981313393	0.895061728	0.7206711	0.616599	0.0281256	0.010769	0.975049182	0.917307692	0.7106661	0.640318	0.03465	0.01445
	6015d	0.827557372	0.678571429	0.75861334	0.657806826	0.05960707	0.030835966	0.83392547	0.752427184	0.749178241	0.669057867	0.0636916	0.03711	0.83617572	0.776995305	0.7377832	0.629873	0.0683642	0.042108	0.840957946	0.802281369	0.7217243	0.633724	0.0756031	0.051994
	6052d	0.864271752	0.718954248	0.728798027	0.621372549	0.049980381	0.029246741	0.867737825	0.743902439	0.724178282	0.59988578	0.0519912	0.03114	0.869423377	0.786195286	0.7208185	0.58041	0.0534239	0.037574	0.870191024	0.803108808	0.7173696	0.631668	0.0561643	0.040177
	95-13-15.jpg	0.967241087	0.790229885	0.558972361	0.031173147	0.017840881	3.37104E-16	0.965986411	0.794985251	0.555211606	0.028648091	0.0227552	0.000748	0.967212398	0.838174274	0.5480139	0.026037	0.0292067	0.008583	0.969300433	0.879528302	0.5387633	0.025138	0.0390654	0.011484
	95-13-17.jpg	0.966554086	0.805555556	0.885921545	0.709313725	0.023291288	0	0.968395281	0.813953488	0.884944202	0.698492951	0.0261008	0	0.968420237	0.835526316	0.8836309	0.691841	0.0296891	0	0.970904821	0.886363636	0.8825415	0.709656	0.0322221	0
	96-22-19	0.962739575	0.736842105	0.811613564	0.629008074	0.017759512	0.004608389	0.962662816	0.755319149	0.808346767	0.664390511	0.0212521	0.005976	0.962382261	0.857723577	0.8033106	0.662278	0.0255366	0.010375	0.963829934	0.902534113	0.7957255	0.683319	0.0305486	0.012736
	Bg0899ad	0.909725264	0.626984127	0.824958391	0.385851596	0.042197095	0.004754334	0.908863455	0.713804714	0.816621197	0.392607618	0.0503313	0.005245	0.91175157	0.775485437	0.8009285	0.39998	0.0628433	0.010946	0.909215895	0.798672257	0.7675381	0.381081	0.0881017	0.016526
	Bm0300ad	0.939498083	0.71875	0.91291021	0.749019608	0.030965991	0.006398006	0.936354633	0.8125323	0.899415944	0.688235294	0.0400381	0.011869	0.934343146	0.851470588	0.882342	0.661067	0.0518188	0.018789	0.937936367	0.873446894	0.8560101	0.639703	0.0661374	0.030036
	Fj0297ad	0.949527064	0.771428571	0.674059828	0.549241583	0.021614999	0.00580495	0.947689582	0.805263158	0.666277674	0.528851541	0.0272245	0.006997	0.948710042	0.836065574	0.6545796	0.527385	0.0340379	0.009495	0.953058307	0.889008621	0.6382434	0.529487	0.042919	0.010487
	Fj1200ad	0.925565061	0.762711864	0.910231064	0.802768166	0.015288295	0.005530946	0.932009838	0.806122449	0.906447617	0.796470588	0.0181104	0.006448	0.938995861	0.848591549	0.9014012	0.80567	0.0221293	0.010421	0.947302054	0.879482072	0.8956601	0.831208	0.0259155	0.014268
	Fn1200ad	0.917034472	0.731481481	0.775047134	0.685198001	0.02347937	0.005883013	0.929668496	0.799019608	0.767263135	0.696862745	0.0266558	0.008114	0.94444352	0.860215054	0.7573774	0.693304	0.0307257	0.010887	0.956009139	0.909345794	0.7431358	0.683095	0.0361858	0.017677
	Gs0499ad	0.99731552	0.741935484	0.992944348	0.923406863	0.007486092	0.000584593	0.997520031	0.835714286	0.992509038	0.924993096	0.0086407	0.001708	0.998026174	0.882113821	0.9923584	0.920493	0.0093375	0.002378	0.997094836	0.901162791	0.9913574	0.930026	0.0111152	0.004042
	hn0996ad	0.92516491	0.722222222	0.76698308	0.694199346	0.01553095	0.005779628	0.934911335	0.783333333	0.763928428	0.66364513	0.0177621	0.007252	0.945028366	0.833333333	0.7595331	0.656321	0.0202471	0.007411	0.953777157	0.884236453	0.7542812	0.65436	0.0235103	0.011094
	kh0598ad	0.999580468	0.968085106	0.989217349	0.971323529	0.010558247	0.003033622	0.999403318	0.969230769	0.989516867	0.973262032	0.0112015	0.004358	0.999090158	0.970954357	0.9894125	0.975693	0.0117855	0.004989	0.997790315	0.972392638	0.9884796	0.965642	0.0135799	0.006719
	Kr1196ad	0.969049567	0.804878049	0.824431118	0.608486977	0.022814225	0.005765226	0.963849309	0.829787234	0.814809843	0.603371173	0.0298593	0.006915	0.960338838	0.867256637	0.8018081	0.570613	0.0391567	0.010679	0.960651346	0.889111556	0.7848649	0.541561	0.0508011	0.014655
	Lj0899ad	0.899949423	0.776315789	0.7256883	0.501055807	0.040152872	0.01129793	0.892574754	0.801282051	0.703947246	0.484885621	0.0529026	0.026019	0.890700758	0.83219697	0.6750698	0.479284	0.0733269	0.043756	0.896186624	0.843396893	0.6249691	0.469018	0.1034919	0.062987
	lj1196ad	0.995340027	0.851851852	0.987829041	0.853537937	0.008288922	0	0.993128121	0.897058824	0.984964522	0.857315234	0.0115194	0.001343	0.990495537	0.923992674	0.9802299	0.868381	0.0162925	0.002778	0.987464677	0.933857236	0.9731839	0.837307	0.0242653	0.003434
	mk1096ad	0.937406956	0.74754902	0.576948236	0.398377282	0.036565624	0.012517662	0.935649026	0.815705128	0.566611562	0.405378151	0.0417668	0.014014	0.931603581	0.832704403	0.550794	0.378077	0.0514431	0.016684	0.929874655	0.858272283	0.5251228	0.320826	0.0679042	0.018504
	mm0598ad	0.962276308	0.704545455	0.705549671	0.460037348	0.029004721	0.008011639	0.961591064	0.751181102	0.697776457	0.442647059	0.0365849	0.011508	0.957730129	0.808689459	0.6851269	0.373817	0.0486438	0.011737	0.950040537	0.837651123	0.6614092	0.377092	0.0696984	0.013663
	Mm0899ad	0.951437547	0.808510638	0.881407788	0.78869281	0.029016287	0.009922311	0.951194158	0.852941176	0.875102128	0.802614379	0.0349992	0.016026	0.950938629	0.891566265	0.8610989	0.7309	0.0445924	0.022188	0.948490234	0.905472637	0.8424174	0.696644	0.059249	0.029457
	Nd0599ad	0.878199368	0.681818182	0.939573914	0.918954248	0.021212372	0.002264119	0.883355622	0.794871795	0.939718528	0.925608138	0.0218876	0.010828	0.88766644	0.833333333	0.9400177	0.914832	0.0225634	0.012315	0.892869502	0.855046948	0.9399477	0.90981	0.0234131	0.014938
	Rk0399ad	0.933918456	0.72037037	0.875166829	0.495396419	0.037597524	0.003602079	0.934826258	0.752621723	0.862620043	0.488459384	0.0503045	0.0051	0.931285365	0.806872852	0.8342408	0.477632	0.070492	0.008299	0.926886169	0.856143001	0.7933926	0.458906	0.1013067	0.010327
	Rl0298ad	0.886814491	0.785714286	0.789844817	0.692455965	0.034197889	0.01649833	0.889457312	0.792682927	0.777851321	0.696325345	0.0403936	0.023318	0.898215902	0.835658915	0.7636207	0.687628	0.0467645	0.025164	0.905654527	0.868663594	0.7426445	0.670697	0.0568681	0.036559
	sd0597ad	0.991959378	0.877358491	0.696021135	0.629260935	0.013855398	0.003547192	0.991053737	0.868131868	0.694225804	0.629176471	0.0158359	0.007609	0.987829117	0.889447236	0.6905403	0.639052	0.0184516	0.010079	0.982505216	0.927595628	0.6848903	0.642377	0.0218339	0.013898
	Wa0499ad	0.927796115	0.805031447	0.838909566	0.725300443	0.041234376	0.012659391	0.92476165	0.830033003	0.820240376	0.699346405	0.0507438	0.018979	0.925739827	0.857142857	0.7948207	0.691745	0.0633091	0.026213	0.93162968	0.890360559	0.757956	0.618622	0.0802362	0.039167
	zp0298ad	0.950570722	0.8125	0.831868217	0.69755762	0.029750124	0.009919109	0.941800174	0.858126722	0.820611678	0.689536991	0.0364662	0.012452	0.939983904	0.874048706	0.8052687	0.706255	0.0468673	0.022915	0.93889781	0.881134481	0.7849462	0.660394	0.0595093	0.027436
	zr0798ad	0.888596961	0.728571429	0.794688494	0.743901628	0.01440457	0.005731013	0.894736533	0.794871795	0.794208511	0.723243005	0.0160128	0.006768	0.899772797	0.796401515	0.7928056	0.692796	0.0180224	0.008695	0.903019471	0.843216532	0.7899289	0.674404	0.0221617	0.010597
NOT CANCER IMAGES	4056d	0.945977458	0.794117647	0.64158405	0.453273002	0.032431775	0.009923599	0.934796835	0.815217391	0.623636645	0.442141301	0.0446349	0.018023	0.933621236	0.859163592	0.5968768	0.413589	0.0605717	0.027017	0.934898897	0.8728	0.5572874	0.406608	0.081896	0.038092
	4058d	0.952221116	0.815789474	0.774087833	0.634489693	0.018281793	0.006075268	0.940306957	0.838235294	0.767298819	0.647211612	0.0233655	0.008611	0.938691252	0.880239521	0.7556563	0.636832	0.0315493	0.01297	0.943265086	0.903946002	0.7380101	0.626608	0.0409511	0.016954
	4063d	0.962255154	0.788461538	0.650506165	0.461554622	0.022688189	0.005861851	0.95390573	0.861788618	0.640091402	0.433300654	0.0292192	0.008593	0.950301628	0.882147838	0.6248526	0.447128	0.038058	0.010596	0.946394739	0.890306122	0.6017018	0.424921	0.0519787	0.017693
	4074d	0.948675609	0.746212121	0.888483213	0.768902649	0.019123691	0.006217438	0.955766418	0.84469697	0.884549966	0.736576736	0.0217998	0.009623	0.961486986	0.865921788	0.8782482	0.757081	0.0257015	0.011069	0.968372805	0.909009009	0.8682954	0.748419	0.0312415	0.012896
	4082d	0.987094644	0.877777778	0.698203229	0.644245524	0.018566821	0.00738307	0.977280541	0.872807018	0.691806146	0.642412617	0.0223208	0.011072	0.965302399	0.889361702	0.6827529	0.637726	0.0264023	0.01378	0.956130933	0.905263158	0.6713103	0.634535	0.031246	0.018739
	4083d	0.967038416	0.852459016	0.685643502	0.609193185	0.02191646	0.005628963	0.948284053	0.844527363	0.674893673	0.595314058	0.028967	0.010124	0.941807648	0.885290148	0.6586201	0.580807	0.0391652	0.014443	0.945571673	0.876900585	0.6307957	0.553174	0.0564322	0.018137
	4084d	0.917310545	0.754098361	0.744586521	0.583778966	0.031974196	0.008271108	0.914526523	0.803191489	0.730722666	0.57003617	0.041964	0.013659	0.918778471	0.816326531	0.709073	0.551668	0.0554281	0.027268	0.919495769	0.856182796	0.6737912	0.538154	0.0737437	0.039623
	6005d	0.811011645	0.689814815	0.785860392	0.671851113	0.057693475	0.029252458	0.808884426	0.727777778	0.776137408	0.628134557	0.0619648	0.035862	0.811935294	0.690891473	0.7621201	0.632276	0.0685862	0.044216	0.819600664	0.767283951	0.7458953	0.554946	0.0739324	0.04719
	6017d	0.926286133	0.776315789	0.700829566	0.612793314	0.04056738	0.015514966	0.918876461	0.798076923	0.692281764	0.605726184	0.0435633	0.022324	0.913668452	0.845299145	0.6797168	0.598207	0.0490235	0.026647	0.907547255	0.857460317	0.6623286	0.582122	0.0581592	0.030482
	6023d	0.804583041	0.65	0.633496504	0.554153298	0.061328943	0.029160144	0.811382005	0.703389831	0.623536704	0.51243973	0.0640583	0.040476	0.815093346	0.753535354	0.6090143	0.488728	0.0696143	0.042798	0.819590067	0.772685185	0.5869486	0.468845	0.079817	0.04928
	6024d	0.802224066	0.610294118	0.798960164	0.717171717	0.065616256	0.035451607	0.804217214	0.717171717	0.785114031	0.697670521	0.0712175	0.032975	0.808616778	0.748447205	0.769388	0.680053	0.0763324	0.043554	0.814137962	0.775787188	0.7467795	0.649662	0.0845963	0.045722
	6025d	0.88296972	0.718518519	0.85857862	0.788977213	0.050281702	0.028991367	0.88278302	0.76371308	0.854938746	0.795098039	0.0527227	0.034857	0.879933901	0.799295775	0.8521619	0.802235	0.0550779	0.036331	0.881042943	0.833702065	0.8462527	0.796164	0.0581443	0.044064
	6028d	0.850304584	0.712643678	0.611387862	0.53751634	0.040683431	0.015402657	0.869440313	0.773700306	0.600436992	0.507290804	0.0442863	0.019075	0.878706613	0.80608365	0.5861034	0.513244	0.0499594	0.025336	0.885906599	0.837111671	0.5634941	0.49778	0.06045	0.034967
	6031d	0.837115327	0.666666667	0.584624387	0.437615046	0.06145131	0.026087976	0.843646868	0.722222222	0.563434245	0.416488414	0.0702714	0.034344	0.854742418	0.774261603	0.5379766	0.397113	0.0809525	0.04551	0.871068754	0.807545368	0.5046605	0.387921	0.0934612	0.048309
	6044d	0.904085111	0.772727273	0.677396021	0.540035651	0.042284225	0.02317856	0.898760775	0.806122449	0.666970505	0.550314106	0.0468943	0.025554	0.892771425	0.814728682	0.6517268	0.531452	0.0539179	0.028782	0.895749774	0.84375	0.6282238	0.535086	0.0642144	0.032905
	6045d	0.848231422	0.68128655	0.674937696	0.495469912	0.058928443	0.026005462	0.848536389	0.723646724	0.660233666	0.477201728	0.0650752	0.038696	0.849580505	0.782186949	0.6421119	0.422709	0.0726008	0.038832	0.85086448	0.809717208	0.6138734	0.462943	0.0857838	0.041026
	6048d	0.922857902	0.741666667	0.574366137	0.447239819	0.041567335	0.013636072	0.924150189	0.798780488	0.568368915	0.465098039	0.0440921	0.019894	0.921365753	0.831060606	0.5608213	0.433752	0.0468263	0.024399	0.917775785	0.851851852	0.5462217	0.436164	0.0529604	0.030459
	6049d	0.862036104	0.75	0.630657797	0.549956102	0.040690629	0.010476108	0.873097959	0.793650794	0.624620367	0.547187099	0.0435369	0.012294	0.880496446	0.815789474	0.6183257	0.555609	0.0469904	0.014645	0.888249942	0.842568162	0.6035547	0.506202	0.0543802	0.032447
	6050d	0.846483389	0.73255814	0.645692375	0.531345689	0.042549749	0.01880301	0.854384862	0.756410256	0.634599713	0.540593097	0.0475474	0.020504	0.861015246	0.787202381	0.6203325	0.531689	0.0541843	0.025655	0.873095332	0.813019391	0.5964946	0.500427	0.0651535	0.032874
	6051d	0.848457728	0.74702381	0.758476994	0.635714286	0.052151401	0.031378308	0.855801353	0.790540541	0.749525083	0.62427451	0.0550308	0.032888	0.862247273	0.801229508	0.7386661	0.618339	0.0589167	0.033821	0.86420869	0.820881226	0.7223735	0.607627	0.0670891	0.041414
	6053d	0.874233345	0.738888889	0.685553254	0.608411481	0.051075759	0.02537757	0.870780839	0.785714286	0.680574187	0.623073415	0.0528525	0.032598	0.872935355	0.806451613	0.6727996	0.609188	0.0557388	0.04172	0.871453508	0.823899371	0.6586742	0.579478	0.0614867	0.043949
	6054d	0.90030401	0.757575758	0.592887058	0.293011564	0.038807352	0.015057316	0.901278876	0.765789474	0.585529127	0.297337461	0.0424278	0.019337	0.904467068	0.801155116	0.5757606	0.423593	0.0486789	0.02583	0.903258859	0.826809015	0.5581968	0.453044	0.0595956	0.026295
	6055d	0.917033272	0.764705882	0.703297354	0.501960784	0.042048085	0.017137983	0.90980894	0.786363636	0.695424368	0.497634609	0.0450121	0.0196	0.902541382	0.802752294	0.6845423	0.462158	0.0486094	0.026568	0.89577373	0.842105263	0.6663873	0.48632	0.055841	0.036516
	6056d	0.853295136	0.725	0.742584171	0.664359862	0.050757491	0.028579758	0.857694425	0.772222222	0.737154955	0.669486307	0.052657	0.030902	0.861212871	0.791079812	0.7318734	0.658354	0.0546711	0.039229	0.861992401	0.813655337	0.7227452	0.644283	0.0583973	0.044248
	6061d	0.878566552	0.744897959	0.613369963	0.53650519	0.034839753	0.014673166	0.885443579	0.776190476	0.60939923	0.537647059	0.0374268	0.017554	0.896396879	0.820197044	0.6045024	0.536779	0.039876	0.02213	0.906549663	0.848524306	0.5976487	0.555642	0.0446224	0.026416
	6065d	0.862401205	0.745283019	0.660556992	0.57211329	0.048342118	0.021642349	0.865704654	0.773148148	0.650346279	0.573673587	0.0522643	0.029954	0.86948983	0.811904762	0.6362946	0.563766	0.0587387	0.033042	0.87122917	0.839939024	0.6139526	0.514235	0.0683838	0.037389
	6074d	0.868093231	0.748677249	0.607335987	0.499621603	0.044493805	0.019035257	0.876271903	0.744680851	0.591739757	0.47379025	0.0516981	0.025655	0.882464263	0.818035427	0.5714058	0.427162	0.062558	0.030432	0.88969289	0.853448276	0.5356863	0.406692	0.0811916	0.036377
	6075d	0.853781269	0.715517241	0.631249924	0.573401535	0.032270773	0.013635552	0.871967557	0.788461538	0.62259889	0.564361885	0.0355173	0.017495	0.892952071	0.824468085	0.6106595	0.541534	0.0399384	0.020005	0.908685511	0.862121212	0.5889459	0.543718	0.0495847	0.021922
	6077d	0.869827197	0.725490196	0.606244295	0.525735294	0.039766325	0.011484144	0.883043982	0.76056338	0.596371923	0.502969188	0.043477	0.018968	0.895791125	0.812687688	0.5828211	0.47639	0.0488258	0.026754	0.904941168	0.845501475	0.5624061	0.472218	0.0582293	0.034155
	6079d	0.859928178	0.699275362	0.656670647	0.576547482	0.052291257	0.012791102	0.860433615	0.747663551	0.644643175	0.549407882	0.0569268	0.024323	0.863188024	0.768365696	0.6294954	0.519626	0.0639565	0.027634	0.87121497	0.808594378	0.6084753	0.496639	0.0726236	0.035619
	6084d	0.857328743	0.762626263	0.757062788	0.689746062	0.047904089	0.018167352	0.865271068	0.76969697	0.745104756	0.691871658	0.0531225	0.027391	0.870289562	0.794573643	0.7295566	0.658112	0.0613447	0.03363	0.873009753	0.823828383	0.7068369	0.614505	0.0744335	0.042178
	6085d	0.825059224	0.710526316	0.894304265	0.803254068	0.054837076	0.030455867	0.830221707	0.739726027	0.889264462	0.820474716	0.0571718	0.040895	0.833487467	0.76584022	0.8830016	0.796719	0.0594123	0.044701	0.83878496	0.801313629	0.8737218	0.783048	0.0627419	0.050144
	6089d	0.848677345	0.677672956	0.55789203	0.378980392	0.057705388	0.027573691	0.849253464	0.725490196	0.54644691	0.421831413	0.0624771	0.039572	0.850137214	0.758278146	0.5280833	0.426168	0.0716247	0.042099	0.855020129	0.786535494	0.4975271	0.41318	0.0877791	0.054834
	6091d	0.889986375	0.794117647	0.519170446	0.451416122	0.034842331	0.011226985	0.887992268	0.813333333	0.510565563	0.437238697	0.0378193	0.018152	0.892156948	0.825327511	0.4973633	0.408053	0.0431801	0.023311	0.907448818	0.874472574	0.4752882	0.404381	0.0548575	0.037728
	6093d	0.844306741	0.708333333	0.651096805	0.574714662	0.035472162	0.009033095	0.847155228	0.752380952	0.645326211	0.543582888	0.0376006	0.015746	0.853502767	0.771875	0.639186	0.535803	0.0395245	0.019423	0.865347802	0.811983471	0.6313393	0.486421	0.0430005	0.028494
	6094d	0.880590838	0.755102041	0.691257887	0.608723489	0.050742428	0.032823924	0.877926495	0.804761905	0.680141384	0.571568627	0.0541791	0.032515	0.876909387	0.826633166	0.6607491	0.572914	0.0604578	0.037327	0.879472398	0.850501849	0.6357868	0.556524	0.0698958	0.042872
	6102d	0.880244629	0.765625	0.726986741	0.633823529	0.052058997	0.017916289	0.883023469	0.789115646	0.720355688	0.62380461	0.0550346	0.031599	0.88463577	0.823091248	0.7114474	0.582584	0.0594696	0.034047	0.885417419	0.842898551	0.6952151	0.604295	0.0671974	0.033052
	6105d	0.843742591	0.714285714	0.803992583	0.70638033	0.054192443	0.018878775	0.846221347	0.746527778	0.792988671	0.657192434	0.0591184	0.035438	0.852115263	0.781420765	0.7792547	0.587431	0.0651667	0.038537	0.856769132	0.818722944	0.7573799	0.573748	0.0761137	0.044867
	6599d	0.882296198	0.68579235	0.7271125	0.56404121	0.046961035	0.01675665	0.888100727	0.754385965	0.711092199	0.537011973	0.0544614	0.021361	0.893126646	0.799516908	0.690865	0.543615	0.0621389	0.029576	0.898052053	0.829103053	0.6615612	0.570978	0.0735845	0.033082
	6602d	0.943773954	0.766666667	0.726002836	0.625641026	0.034326212	0.013668544	0.94204502	0.825688073	0.713494772	0.612854031	0.039367	0.013021	0.929298782	0.842342342	0.6953433	0.563664	0.047233	0.019927	0.926778772	0.864543115	0.6684514	0.568435	0.0600575	0.028771
	6605d	0.824239325	0.653005464	0.583758061	0.266081358	0.063841416	0.015922059	0.835617667	0.712809917	0.556348277	0.253296279	0.0772223	0.015531	0.851024844	0.725446429	0.5226996	0.241011	0.0933136	0.023881	0.873897646	0.791162634	0.480637	0.244297	0.1110695	0.035907
	6612d	0.86907399	0.742424242	0.541101237	0.429827689	0.056528877	0.02217427	0.869532495	0.752873563	0.525440794	0.424217406	0.062263	0.025843	0.875112842	0.8	0.5078237	0.378877	0.0696991	0.037258	0.883398914	0.821794872	0.4830698	0.358236	0.0784157	0.047837
	6617d	0.874972646	0.725490196	0.660061943	0.535487434	0.0458484	0.017728702	0.875888435	0.79342723	0.65423308	0.515883873	0.0492451	0.023878	0.876401288	0.810866013	0.6472245	0.524553	0.0546896	0.034012	0.87539639	0.832990398	0.6319874	0.487004	0.0644795	0.037012
	6622d	0.847557571	0.755319149	0.798130037	0.746139706	0.043052823	0.021822361	0.851822813	0.765957447	0.793918232	0.7443074	0.0435833	0.020128	0.855639433	0.789473684	0.787881	0.737469	0.04569	0.03095	0.860278206	0.80875	0.7787564	0.725653	0.0487276	0.03673
	6627d	0.786893811	0.537878788	0.5098324	0.304725169	0.10225546	0.040788835	0.797972206	0.631790123	0.488458883	0.319006958	0.1142131	0.057617	0.812736857	0.731012658	0.4676695	0.320422	0.1241667	0.068554	0.826353874	0.776889535	0.4426311	0.295598	0.1345082	0.087519
	6637d	0.84621977	0.718085106	0.676646969	0.581935069	0.057217606	0.030645551	0.845399017	0.751893939	0.666082146	0.580806632	0.0618383	0.036423	0.847335845	0.784946237	0.6497382	0.568276	0.0688608	0.042287	0.853021897	0.808788599	0.6281621	0.539723	0.0776443	0.053448
	6642d	0.871956825	0.751572327	0.666122543	0.57332145	0.054842966	0.026776632	0.873916227	0.767295597	0.650436596	0.54322376	0.0598571	0.032513	0.873547695	0.787935323	0.6296765	0.531134	0.0686214	0.038463	0.87963472	0.836748634	0.5958393	0.497905	0.0824588	0.047028
	6643d	0.832759202	0.720319635	0.505434229	0.389837062	0.05848803	0.028957226	0.835586311	0.759114583	0.485486538	0.378676471	0.0665167	0.041276	0.835341931	0.772592593	0.4552689	0.364706	0.0797079	0.051848	0.842159925	0.797320807	0.4103217	0.329095	0.0980775	0.065994
	6644d	0.88947954	0.724358974	0.478818138	0.368137255	0.03083851	0.009708053	0.905870315	0.819672131	0.469619857	0.377966102	0.0351253	0.012087	0.920072562	0.839449541	0.4560806	0.389671	0.0408434	0.017577	0.92158161	0.878183832	0.4357651	0.3714	0.0514099	0.033971
	6667d	0.841112262	0.713114754	0.742254077	0.676703224	0.054319066	0.029725261	0.845928255	0.76	0.735707639	0.662956259	0.0574187	0.035119	0.849684468	0.782973621	0.7289568	0.674004	0.0599751	0.036359	0.850700411	0.803125	0.7136441	0.612444	0.066525	0.042033
	6675d	0.862173964	0.673202614	0.703217666	0.541947927	0.058162353	0.022687598	0.863669972	0.731837607	0.695504135	0.551512388	0.0633205	0.031315	0.866545237	0.748677249	0.6875934	0.552642	0.0677904	0.032557	0.866748741	0.773273273	0.6737758	0.592902	0.0756597	0.03744

	6677d	0.830110859	0.627777778	0.657239897	0.534709322	0.064234822	0.031861394	0.832587807	0.708745875	0.637183872	0.46761735	0.0734333	0.033968	0.837274772	0.733130904	0.6088915	0.441074	0.0869739	0.042473	0.84638508	0.79337653	0.5670857	0.44272	0.1104202	0.053605
	6687d	0.846172832	0.703333333	0.635104289	0.511111111	0.061353219	0.025547548	0.850657177	0.740079365	0.621641227	0.493041818	0.0684992	0.028775	0.854471407	0.795175439	0.6049307	0.496329	0.0753997	0.03133	0.864517883	0.816959922	0.5812147	0.47991	0.0882187	0.03863
	6688d	0.869428909	0.656589147	0.643580569	0.240723982	0.04705961	0.016249529	0.869438416	0.739622642	0.629810726	0.294809689	0.0551872	0.025231	0.869989578	0.789055794	0.6089568	0.393801	0.0685463	0.030172	0.874218314	0.827380952	0.5804177	0.441391	0.0853286	0.035834
	6706d	0.882093142	0.753968254	0.723732506	0.636901318	0.049363292	0.024047922	0.882120071	0.777777778	0.71923054	0.655234924	0.0529135	0.034843	0.882585331	0.822429907	0.7143612	0.660014	0.0557582	0.038388	0.879820856	0.837016575	0.7043928	0.64952	0.0623848	0.043421
	6707d	0.861715461	0.759259259	0.749452785	0.667226891	0.045936155	0.029527825	0.868567815	0.767857143	0.745358527	0.691868512	0.046977	0.028895	0.874439385	0.795031056	0.7408478	0.694765	0.0483544	0.034477	0.877711172	0.810691824	0.73429	0.684143	0.0509921	0.036184
	6709d	0.837314682	0.69	0.646723833	0.532442068	0.050885883	0.026148064	0.836053068	0.720930233	0.634654459	0.503811765	0.054943	0.028352	0.839760254	0.764218009	0.6182909	0.495572	0.0626063	0.033843	0.842300767	0.794871795	0.5961382	0.471475	0.0710501	0.041797
	6714d	0.884463669	0.755555556	0.668661657	0.580456445	0.040882226	0.021705989	0.876456164	0.807575758	0.65608656	0.57040724	0.0461813	0.023602	0.879007739	0.819371728	0.6384983	0.568915	0.0539176	0.029405	0.887264641	0.852721088	0.608105	0.523965	0.070443	0.041796
	96-3-21	0.974745853	0.741935484	0.683224332	0.618026565	0.015275679	0.005304664	0.974210092	0.834745763	0.682124105	0.628736741	0.016671	0.008644	0.970690051	0.860103627	0.6805851	0.633194	0.0183844	0.00971	0.966020536	0.872274143	0.6777349	0.641412	0.0200532	0.011202
	As0598ad	0.920428563	0.755555556	0.838518508	0.626286765	0.042910643	0.012215177	0.921970195	0.811904762	0.82184427	0.638721074	0.0527832	0.018838	0.923919106	0.841900312	0.7981774	0.633849	0.0652934	0.033206	0.929634274	0.886697602	0.7647021	0.637334	0.0812871	0.051473
	gc0697ad	0.948470525	0.78125	0.612922238	0.551014792	0.017588711	0.006451745	0.953720009	0.833333333	0.606663367	0.550665266	0.0219291	0.006653	0.959171623	0.877112135	0.5983599	0.527641	0.026392	0.012236	0.963147588	0.903846154	0.5868495	0.503654	0.032656	0.014441
	hm1096ad	0.962135295	0.8	0.901281428	0.870424837	0.014648855	0.004973364	0.966773943	0.842857143	0.899007397	0.864306785	0.0159203	0.007372	0.972413489	0.885204082	0.8960377	0.858217	0.0172877	0.009135	0.977591488	0.915187377	0.8904678	0.850912	0.0200559	0.013479
	jb0298ad	0.907887947	0.768518519	0.792274761	0.73368984	0.023427636	0.011123337	0.908021403	0.826771654	0.785878046	0.720624016	0.026726	0.013556	0.914016784	0.855018587	0.7754413	0.695749	0.0317713	0.014726	0.914536638	0.863198459	0.7599636	0.693733	0.0403008	0.015472
	kk0498ad	0.847635103	0.740196078	0.752176145	0.614460784	0.078770132	0.033617488	0.843449285	0.719551282	0.717922503	0.564938847	0.097232	0.053076	0.845230114	0.769545455	0.678638	0.542157	0.1131195	0.084857	0.86077107	0.824691358	0.6341071	0.514749	0.1272085	0.092269
	km0301ad	0.954305583	0.720588235	0.749211641	0.555935829	0.019346574	0.005647598	0.953275636	0.784090909	0.74441464	0.552505447	0.0226362	0.009819	0.951562541	0.836	0.7376556	0.550655	0.0271608	0.011607	0.950366906	0.889254386	0.7256283	0.583441	0.0338198	0.015976
	Ld1196ad	0.996383925	0.894230769	0.873391054	0.813096559	0.016436296	0.002455146	0.995967016	0.935643564	0.870970099	0.804036909	0.0188825	0.005325	0.994991148	0.946127946	0.867818	0.826131	0.0217455	0.009292	0.992045281	0.943859649	0.8606146	0.813234	0.0261778	0.014158
	Ma0899ad	0.888141493	0.75	0.800987744	0.62334267	0.061033208	0.016725499	0.879131676	0.766323024	0.770542088	0.581834998	0.0799409	0.033143	0.881287539	0.815920398	0.7295795	0.530547	0.1045125	0.043088	0.888047391	0.831210393	0.6696568	0.558422	0.1328479	0.097299
	mj0798ad	0.905946142	0.777777778	0.76598005	0.652620321	0.028173927	0.010483312	0.911377513	0.824275362	0.756198655	0.630911188	0.0348661	0.012414	0.919870063	0.863354037	0.7431023	0.598957	0.0425545	0.019658	0.923535788	0.892966361	0.7214113	0.561396	0.0573748	0.02383
	Ra0199ad	0.966067243	0.798076923	0.948203717	0.831613876	0.015771602	0.004198254	0.964991438	0.853773585	0.944012507	0.82960342	0.0186655	0.004909	0.963560317	0.88277512	0.9363688	0.826684	0.0235158	0.006972	0.959694499	0.914233577	0.9214114	0.805422	0.0329428	0.012678
	Ra0997ad	0.928295642	0.684210526	0.809131905	0.665667051	0.021163021	0.008541511	0.92686792	0.75	0.804195917	0.644095861	0.0247275	0.010903	0.921253348	0.834782609	0.7956549	0.636735	0.0308676	0.016038	0.914960709	0.856557377	0.7797028	0.624224	0.0422048	0.019146

Green Channel (G)

Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
	4023d	0.91620974	0	0.40993398	0.207993967	0.03850353	0.01237261	0.921774725	0.809859155	0.396061365	0.241036415	0.0487303	0.021968	0.921046363	0.825581395	0.3766262	0.19085	0.0580851	0.023668	0.923740441	0.855351682	0.347877	0.227928	0.0710293	0.032314
	4025d	0.934942211	0.79	0.571719053	0.424618736	0.02761383	0.008044453	0.93701101	0.827868852	0.56041092	0.405978001	0.0363227	0.008344	0.936595746	0.867424242	0.5409898	0.407775	0.0487086	0.017953	0.936983943	0.869107744	0.5141252	0.381175	0.0633964	0.019866
	4030d	0.937202007	0.756410256	0.473286429	0.322382538	0.027571246	0.007664402	0.933298365	0.826666667	0.461454161	0.314926691	0.0349325	0.012403	0.939068775	0.878666667	0.4448329	0.321283	0.0455239	0.022045	0.943701852	0.900742115	0.4237302	0.300222	0.0571728	0.027038
	4044d	0.955540192	0.759259259	0.552282285	0.424106113	0.020716975	0.005266276	0.950189116	0.768361582	0.545360036	0.445475113	0.0260479	0.009015	0.945458937	0.819553806	0.5360438	0.440839	0.0329207	0.012477	0.941319724	0.866894198	0.5224662	0.44341	0.0407488	0.017858
	6015d	0.829858347	0.717391304	0.469787728	0.397032326	0.058720127	0.030286378	0.836061316	0.770491803	0.461674919	0.381820728	0.0614924	0.037849	0.835623221	0.782978723	0.4534058	0.374384	0.0637565	0.044162	0.840397164	0.811336717	0.4435386	0.386576	0.066468	0.050931
	6052d	0.835505901	0.656862745	0.516368554	0.394493116	0.053776786	0.027044476	0.834201136	0.737704918	0.506883207	0.425891803	0.057532	0.030559	0.836145037	0.748903509	0.4987241	0.399497	0.0608081	0.038187	0.838333069	0.796195652	0.4895111	0.396346	0.0654332	0.042495
	95-13-15.jpg	0.968244597	0.774509804	0.347211075	0.018999324	0.016687985	3.07932E-16	0.968702548	0.829896907	0.344270905	0.023309804	0.0211974	5.3E-16	0.968687796	0.882022472	0.33811	0.020618	0.0273077	0.008311	0.969670274	0.91689008	0.3308966	0.016631	0.0351916	0.011269
	95-13-17.jpg	0.963408974	0.787878788	0.809737148	0.487745098	0.026261279	0	0.96523709	0.814102564	0.808380189	0.476875709	0.0306235	0	0.965749468	0.839662447	0.806142	0.475706	0.0364817	0	0.969387762	0.881313131	0.8037163	0.505541	0.0418379	0
C	96-22-19	0.962642522	0.777777778	0.519110828	0.234890427	0.019970295	0.00441358	0.960566799	0.818181818	0.513794747	0.288029617	0.0251944	0.006182	0.960743101	0.877906977	0.5059382	0.281999	0.0315644	0.010015	0.959664243	0.881481481	0.4940733	0.330994	0.0400733	0.010397
A	Bg0899ad	0.901515152	0.611111111	0.416508321	0.072971934	0.044732439	0.012292999	0.903771743	0.709349593	0.408052097	0.077439712	0.053336	0.014042	0.911115955	0.777912621	0.392674	0.083819	0.0657234	0.018831	0.906788213	0.808106219	0.358806	0.079878	0.0887014	0.018244
N	Bm0300ad	0.964722462	0.792682927	0.447001069	0.320668595	0.023093488	0.006250956	0.964297813	0.85042735	0.438575924	0.325188537	0.0280463	0.00978	0.964526149	0.888888889	0.4289589	0.308934	0.0334111	0.013447	0.965052036	0.911290323	0.4142457	0.294793	0.0398153	0.018103
C	Fj0297ad	0.912577499	0.720125786	0.325315375	0.176989619	0.033218788	0.007302456	0.914227013	0.777777778	0.310557405	0.155149118	0.0430946	0.008861	0.921697198	0.853448276	0.2895022	0.141343	0.0547643	0.013187	0.929201263	0.874159462	0.2622828	0.141935	0.0671882	0.015994
E	Fj1200ad	0.945999396	0.763157895	0.610501858	0.464013841	0.021307758	0.007231973	0.948681235	0.826086957	0.6025037	0.473286949	0.0271723	0.009898	0.953040784	0.860515021	0.5921942	0.478348	0.0335653	0.011933	0.957492922	0.897402597	0.5810294	0.494301	0.0404911	0.015971
	Fn1200ad	0.931454319	0.743939394	0.529952785	0.477490196	0.023690018	0.006227626	0.922271014	0.783980583	0.522488669	0.476219206	0.0263859	0.00917	0.920557886	0.8261563	0.5127892	0.475688	0.0299154	0.010513	0.929916718	0.855555556	0.4993501	0.452767	0.0343315	0.018119
R	Gs0499ad	0.972435198	0.794573643	0.689388041	0.418504902	0.014818935	0.004396777	0.972221129	0.825242718	0.683492145	0.428666114	0.0193238	0.005969	0.97087105	0.84439528	0.6742108	0.41556	0.0253509	0.007354	0.968681283	0.9	0.6588844	0.430122	0.0361943	0.011578
	hn0996ad	0.985888752	0.797222222	0.550749274	0.464480874	0.017374921	0.004405276	0.981401343	0.805785124	0.545594875	0.427418836	0.0205355	0.006979	0.975987027	0.857487923	0.5386766	0.419974	0.0242122	0.007739	0.971543669	0.918552036	0.5301434	0.413246	0.028937	0.011466
I	kh0598ad	0.973373368	0.833333333	0.693173461	0.55627081	0.024588666	0.00817413	0.966750921	0.87037037	0.685019548	0.541251167	0.029329	0.009508	0.961821769	0.881051176	0.6736915	0.541061	0.0359871	0.011518	0.959286187	0.912334353	0.6571946	0.51605	0.0467143	0.015514
M	Kr1196ad	0.936897131	0.75	0.468723269	0.33600996	0.02497023	0.004727405	0.944883472	0.824324324	0.457838555	0.303510436	0.0325349	0.006054	0.946975917	0.852201258	0.4436083	0.25471	0.0428548	0.010123	0.949828869	0.862244898	0.4246215	0.226538	0.0565981	0.017586
A	Lj0899ad	0.906607064	0.80952381	0.360529354	0.152136752	0.042194037	0.011932787	0.895593786	0.801282051	0.339582109	0.137785948	0.0531391	0.022073	0.895508304	0.844017094	0.313688	0.139344	0.0695716	0.031458	0.906288776	0.868502825	0.2724201	0.135523	0.089099	0.038418
	lj1196ad	0.948812795	0.714285714	0.495366347	0.319408923	0.015634491	0.001846781	0.949917586	0.756097561	0.487597056	0.322926094	0.0214257	0.002713	0.953894834	0.80952381	0.4772062	0.340421	0.0290474	0.004841	0.957862641	0.8955	0.463566	0.299201	0.040468	0.010173
G	mk1096ad	0.947653581	0.75	0.15536268	0.092679739	0.032165765	0.012498463	0.951892789	0.8365	0.149634428	0.094271434	0.0337307	0.014014	0.95296452	0.852873563	0.1432891	0.091094	0.0351883	0.015791	0.951238957	0.873170732	0.1355813	0.089054	0.0363508	0.018896
E	mm0598ad	0.926047708	0.708333333	0.375262385	0.149096501	0.038272015	0.009372732	0.924065463	0.741784038	0.362447278	0.143043884	0.0491445	0.017133	0.919556602	0.794444444	0.3428701	0.122153	0.0626673	0.020279	0.924632257	0.833333333	0.3152033	0.121997	0.0780142	0.029949
S	Mm0899ad	0.943671878	0.829268293	0.450893223	0.354621849	0.033529668	0.011315972	0.939577599	0.841346154	0.442019842	0.343158339	0.0410594	0.018197	0.934980331	0.871359223	0.4248191	0.300543	0.0515584	0.024513	0.936298377	0.884044065	0.4026365	0.275659	0.0670968	0.031749
	Nd0599ad	0.92466302	0.762254902	0.519883448	0.37635692	0.033985275	0.008601213	0.923788172	0.792857143	0.509172495	0.357790143	0.0408322	0.015035	0.926181808	0.85011655	0.4945833	0.3394	0.0490601	0.016262	0.928825886	0.890221402	0.4755967	0.324191	0.0580268	0.021488
	Rk0399ad	0.925807573	0.788888889	0.388934513	0.079084967	0.039487982	0.010371502	0.921468233	0.812734082	0.376214661	0.077310924	0.0509729	0.01467	0.922135324	0.87654321	0.3514569	0.079438	0.0662491	0.021455	0.924763218	0.885531575	0.3181333	0.089158	0.0861933	0.025642
	Rl0298ad	0.922422057	0.738095238	0.394923585	0.305616484	0.034574926	0.015291961	0.910684547	0.807377049	0.382727987	0.289963689	0.0404703	0.0232	0.901989657	0.820359281	0.368392	0.28273	0.0464043	0.02645	0.905689917	0.860215054	0.3472484	0.271415	0.056956	0.034136
	sd0597ad	0.9730348	0.75	0.422624699	0.324725012	0.01735958	0.002047972	0.969803276	0.833333333	0.41775596	0.31854902	0.0216116	0.009054	0.965691588	0.884831461	0.4097179	0.324288	0.0271941	0.011456	0.959810379	0.894021739	0.3972762	0.33278	0.0345522	0.019076
	Wa0499ad	0.937109383	0.7875	0.455667433	0.385665991	0.031726624	0.009029722	0.948024587	0.842592593	0.445711321	0.384094118	0.0352857	0.01625	0.955723839	0.877887789	0.4332049	0.375707	0.0385277	0.021404	0.954581545	0.905745063	0.4184975	0.367496	0.0410397	0.024999
	zp0298ad	0.947066507	0.780864198	0.411081392	0.324183007	0.029451659	0.01103395	0.939799826	0.824858757	0.399949347	0.306442577	0.0358437	0.013249	0.936352692	0.865740741	0.3856205	0.314131	0.0450764	0.024105	0.937144265	0.870299554	0.3674578	0.282174	0.0554229	0.027328
	zr0798ad	0.895255176	0.757142857	0.481186907	0.381132075	0.025680613	0.005502213	0.89933143	0.81097561	0.470190523	0.351354924	0.0332303	0.007931	0.909706054	0.840909091	0.4561129	0.298752	0.0422405	0.014749	0.921222831	0.860736748	0.4337055	0.285083	0.0568314	0.0178
	4056d	0.939198731	0.833333333	0.392366342	0.258180649	0.030461694	0.01000349	0.936071333	0.862318841	0.376236739	0.246448087	0.0411368	0.019978	0.931482198	0.882533825	0.3534121	0.23318	0.0534988	0.0259	0.938654581	0.901234568	0.3207898	0.221172	0.0681834	0.03589
	4058d	0.951509355	0.827272727	0.480599913	0.340070387	0.02112444	0.007391279	0.942041234	0.840659341	0.471853157	0.348357525	0.02738	0.011476	0.942180378	0.866459627	0.4581767	0.344526	0.0365005	0.016751	0.949075757	0.901869159	0.4382081	0.343192	0.0459749	0.021695
	4063d	0.944012295	0.844262295	0.494255263	0.28907563	0.025655265	0.007079497	0.938538174	0.851485149	0.481585916	0.284379085	0.0335566	0.011037	0.940981552	0.882993197	0.4632465	0.268029	0.0439815	0.012542	0.941614283	0.897108844	0.4351439	0.27052	0.0609322	0.030676
	4074d	0.952624777	0.75	0.695127909	0.512899897	0.02681441	0.011137557	0.952757984	0.798611111	0.685208572	0.487100103	0.0333152	0.014057	0.949387222	0.851405622	0.6704543	0.501694	0.041411	0.017068	0.949845545	0.904907975	0.6491906	0.485642	0.0515044	0.020871
	4082d	0.908312902	0.793103448	0.507287009	0.459079284	0.020496334	0.008060096	0.913787527	0.833333333	0.499548094	0.457800512	0.0249816	0.012564	0.925043259	0.856617647	0.4888336	0.444764	0.0297567	0.015301	0.943347022	0.89632107	0.4757732	0.436429	0.0347939	0.019315
	4083d	0.927257807	0.766129032	0.496553709	0.408823529	0.021208465	0.006520551	0.929458589	0.814553991	0.486715604	0.398637421	0.0278747	0.008884	0.94268328	0.870734908	0.4719645	0.389495	0.0360689	0.012345	0.950015246	0.875730994	0.4487478	0.366529	0.0486402	0.016511
	4084d	0.920222846	0.743243243	0.476631128	0.328211285	0.030981305	0.012074187	0.914284846	0.823529412	0.464064703	0.338039216	0.0393541	0.01357	0.917543627	0.858078603	0.4458706	0.330271	0.0501998	0.025991	0.923372975	0.859318996	0.4158617	0.320668	0.0642926	0.036733
	6005d	0.807987422	0.62962963	0.522232215	0.423606305	0.064874015	0.032010696	0.805776301	0.706270627	0.504290848	0.41750946	0.0725504	0.040075	0.809807783	0.717248062	0.482791	0.377659	0.0808794	0.051359	0.817892505	0.768637532	0.4586157	0.357344	0.0868274	0.053355
	6017d	0.848493825	0.73255814	0.478426373	0.407907425	0.039228126	0.016689578	0.864825498	0.747524752	0.471511471	0.408190179	0.0411717	0.022915	0.876082389	0.808641975	0.4626412	0.404082	0.0439092	0.026397	0.886199134	0.832352941	0.4514851	0.401399	0.0478131	0.030669
	6023d	0.805774554	0.652173913	0.451762422	0.383237216	0.060725197	0.028588968	0.81702747	0.720164609	0.442994319	0.365477338	0.062264	0.038009	0.820405326	0.757662835	0.4312609	0.360448	0.0655437	0.045304	0.825303011	0.774509804	0.4152332	0.355897	0.0702413	0.049745
	6024d	0.801682836	0.670289855	0.496508025	0.43008487	0.060759104	0.033855834	0.808388455	0.694444444	0.48657195	0.415488785	0.0633184	0.032219	0.812565346	0.752066116	0.4755419	0.412054	0.0653146	0.04408	0.818607427	0.758333333	0.460918	0.403358	0.0680333	0.044609
	6025d	0.857477014	0.67962963	0.587704522	0.508214096	0.056470178	0.029469114	0.859987889	0.759493671	0.576580081	0.490533418	0.0618659	0.035661	0.864772424	0.805739514	0.5664275	0.489419	0.0671609	0.041564	0.865603731	0.825958702	0.5506936	0.460485	0.0735802	0.050418
	6028d	0.920100995	0.744444444	0.408696319	0.360196078	0.038057726	0.015011406	0.907144267	0.810397554	0.400535973	0.346534107	0.0398095	0.019808	0.893691003	0.812312312	0.3904263	0.348111	0.0425491	0.023438	0.889368012	0.851816444	0.375907	0.347498	0.0467559	0.034163
	6031d	0.84900931	0.724137931	0.455716186	0.385262492	0.054546988	0.024531033	0.853116867	0.744855967	0.439954932	0.379430263	0.0592299	0.033361	0.861259529	0.784136546	0.4229283	0.35899	0.0642068	0.0402	0.875794264	0.820063694	0.4005839	0.342258	0.0683276	0.04296
	6044d	0.919904683	0.74829932	0.576334601	0.468520499	0.041453894	0.01939023	0.915959588	0.804093567	0.566620165	0.472263468	0.0449463	0.023928	0.907207207	0.827669903	0.5533017	0.461361	0.0499525	0.030073	0.903372091	0.857894737	0.5339269	0.469261	0.0569303	0.033386
	6045d	0.842623111	0.678571429	0.465997259	0.379841761	0.056733826	0.027624982	0.849610857	0.73125	0.454428592	0.383449651	0.060277	0.03771	0.853281143	0.76984127	0.4417092	0.344834	0.0634363	0.038946	0.855936178	0.818215339	0.4235256	0.361816	0.0684368	0.041033
	6048d	0.917281066	0.763888889	0.411289559	0.343348416	0.041206827	0.014657278	0.913782002	0.792682927	0.40542594	0.351644042	0.0431604	0.01967	0.913062425	0.840463458	0.3988027	0.331879	0.0449089	0.025104	0.909967389	0.856125356	0.3868959	0.333067	0.0484445	0.031012
	6049d	0.864535541	0.770833333	0.483189324	0.429534314	0.041009806	0.009237521	0.876517705	0.791262136	0.47642527	0.413552941	0.043787	0.01289	0.887064618	0.807692308	0.4694625	0.405963	0.0466373	0.018071	0.895917008	0.85483871	0.4553342	0.390323	0.0522463	0.032265
	6050d	0.907075873	0.7265625	0.553590839	0.475369326	0.045036949	0.018898909	0.898929621	0.789915966	0.540034979	0.475902245	0.050602	0.019057	0.89202155	0.809269162	0.5242538	0.466246	0.0571376	0.028252	0.892408653	0.838797814	0.4992615	0.441907	0.0663473	0.036639
	6051d	0.856797355	0.731707317	0.530354847	0.436993464	0.052465507	0.031018511	0.857433304	0.773611111	0.519756394	0.433935464	0.0556031	0.034618	0.856905096	0.799242424	0.5067931	0.429159	0.0591966	0.03646	0.85852209	0.828362573	0.4891765	0.412613	0.0660376	0.043154
	6053d	0.861257773	0.727272727	0.531803237	0.430804206	0.054183081	0.026677292	0.856307309	0.783333333	0.522972895	0.443319653	0.0570625	0.033817	0.859190586	0.777777778	0.5112298	0.448467	0.0613673	0.045529	0.860639518	0.810549313	0.4921121	0.41302	0.0682666	0.049813
	6054d	0.8906199	0.740112994	0.452577123	0.233584716	0.041325693	0.013860819	0.894714406	0.755263158	0.44135786	0.246398349	0.0462345	0.020411	0.896397602	0.788617886	0.4272679	0.305655	0.0542597	0.025934	0.896885522	0.851461039	0.4045445	0.317815	0.0658659	0.02714
	6055d	0.882298977	0.714285714	0.459701103	0.420526961	0.041049212	0.01598314	0.894522686	0.805280528	0.452718849	0.412171387	0.0433244	0.019792	0.902333991	0.834154351	0.443241	0.384242	0.0454007	0.026394	0.904345686	0.854723708	0.4290643	0.387251	0.0493218	0.036454
	6056d	0.835671623	0.666666667	0.465148188	0.397647059	0.053458747	0.028782425	0.84188042	0.72815534	0.455095594	0.398760092	0.0566054	0.030018	0.844712101	0.775453278	0.4442728	0.396927	0.0602382	0.039818	0.848119781	0.802675585	0.4284537	0.370249	0.0654362	0.046309
	6061d	0.91113426	0.776595745	0.457793444	0.393627451	0.035864408	0.012579491	0.917255642	0.793103448	0.452014863	0.397586727	0.0387331	0.016824	0.926011784	0.850724638	0.4448688	0.389772	0.0411766	0.022216	0.928405896	0.88403452	0.4355609	0.394697	0.0452637	0.028123
N	6065d	0.850595621	0.74	0.481231988	0.417102397	0.047244712	0.02045598	0.863155198	0.767241379	0.472622149	0.420120946	0.0497531	0.030093	0.871023679	0.791139241	0.4618168	0.416037	0.0530517	0.032792	0.879024261	0.833707025	0.4461311	0.394527	0.0572977	0.035898
	6074d	0.918137379	0.7625	0.425118554	0.336016512	0.04211629	0.01715553	0.912361411	0.810945274	0.411951981	0.319901961	0.0469119	0.023951	0.907212845	0.828478964	0.3961307	0.317342	0.0537076	0.028078	0.910961435	0.864321608	0.3703032	0.302698	0.0635995	0.035085
O	6075d	0.872175422	0.739583333	0.477807814	0.441176471	0.033342284	0.014805293	0.894882999	0.782352941	0.468077353	0.427333919	0.0367292	0.017897	0.913444396	0.838358459	0.4553254	0.403906	0.0407665	0.020567	0.919662279	0.877934272	0.4348407	0.397397	0.0477731	0.024874
T	6077d	0.857723557	0.716666667	0.475373097	0.407124183	0.040678007	0.013300287	0.8740898	0.718309859	0.464204374	0.394845938	0.0444261	0.021044	0.890318197	0.75170068	0.4495204	0.384688	0.0494369	0.029307	0.900394041	0.823377581	0.4301342	0.372499	0.0559233	0.033138
	6079d	0.838900224	0.704545455	0.472862726	0.402339181	0.052438048	0.012574182	0.850044481	0.764840183	0.460699183	0.387570621	0.0560737	0.025213	0.859221694	0.782352941	0.4461414	0.372355	0.0611966	0.026639	0.872137546	0.822745098	0.4278155	0.354942	0.0659823	0.034889
C	6084d	0.868041441	0.732142857	0.521652897	0.452425181	0.048763883	0.020305305	0.865521518	0.769125683	0.50837465	0.439181586	0.0538002	0.029921	0.86881486	0.787949922	0.4929797	0.422436	0.0598209	0.036871	0.871516947	0.828397874	0.47306	0.405363	0.0679666	0.043465
A	6085d	0.849258866	0.743589744	0.540524862	0.497974928	0.055623858	0.029144965	0.845847455	0.776595745	0.532232752	0.482947118	0.0587087	0.037057	0.84277791	0.784338358	0.5223881	0.463151	0.0616395	0.044728	0.843145332	0.808224163	0.5085118	0.445436	0.0656486	0.051872
	6089d	0.851646896	0.671296296	0.255791787	0.159058824	0.057384612	0.025913833	0.849104984	0.75093633	0.243698721	0.186883029	0.0611607	0.038732	0.854700336	0.753863135	0.2266619	0.163444	0.0668323	0.040638	0.863203427	0.802662037	0.203133	0.149644	0.0745196	0.054434
N	6091d	0.852188825	0.75862069	0.358628079	0.297183601	0.034353687	0.009474205	0.8641908	0.786885246	0.350795245	0.288770053	0.0363256	0.014253	0.885308214	0.809392265	0.3397195	0.269551	0.0396311	0.020976	0.910374924	0.86039886	0.3230358	0.280263	0.0458624	0.035599
C	6093d	0.900854036	0.75877193	0.461266423	0.393151888	0.036397355	0.009183683	0.911193082	0.818066158	0.454286365	0.369518717	0.0387716	0.011644	0.92102503	0.839333333	0.4466098	0.364721	0.0409371	0.017597	0.925389667	0.841269841	0.4377757	0.328906	0.0439317	0.029706
E	6094d	0.875124978	0.778571429	0.443534676	0.401742919	0.050145902	0.032545178	0.879772864	0.789473684	0.433526147	0.38405955	0.0519756	0.033752	0.880175141	0.815566836	0.4185737	0.375486	0.054272	0.039956	0.878658101	0.834996673	0.4011988	0.360886	0.057714	0.041722
R	6102d	0.850977884	0.73255814	0.494565538	0.411703431	0.052380215	0.018256204	0.854881885	0.771428571	0.487255408	0.416030272	0.0550651	0.032226	0.863328553	0.817204301	0.4783114	0.382703	0.0583465	0.035208	0.866841428	0.821197411	0.4644351	0.398406	0.0629557	0.033127
	6105d	0.832368161	0.711538462	0.48855898	0.397928228	0.055075036	0.018559281	0.838868509	0.753472222	0.477589687	0.372201978	0.0593548	0.031322	0.845512195	0.771676301	0.4645256	0.347985	0.063905	0.038985	0.849992596	0.800117578	0.4469722	0.344048	0.0701623	0.048044
I	6599d	0.859235077	0.735849057	0.49759005	0.410169492	0.042629385	0.016463961	0.864829463	0.775700935	0.485807315	0.401804616	0.0466787	0.019829	0.881171446	0.820232897	0.4714832	0.399842	0.0505152	0.030607	0.895793275	0.84351145	0.4514774	0.39555	0.0563787	0.031146
	6602d	0.91708911	0.772727273	0.467494203	0.415686275	0.028830582	0.009474709	0.930696997	0.81871345	0.460671492	0.409675646	0.0306446	0.011461	0.941474667	0.840490798	0.4514338	0.391367	0.0338424	0.015862	0.943721376	0.833001988	0.4383682	0.37555	0.0390382	0.020958
M	6605d	0.845150121	0.693910256	0.318982307	0.163301141	0.05225579	0.018091234	0.856871361	0.758953168	0.302267539	0.167793732	0.0581179	0.017907	0.869321916	0.764285714	0.2839037	0.164407	0.0636556	0.021858	0.888098801	0.807795699	0.2623342	0.16508	0.0678436	0.034504

A	6612d	0.846665438	0.722222222	0.358991071	0.279679144	0.051151314	0.023722828	0.857407198	0.780612245	0.348626495	0.290346908	0.0537661	0.024129	0.872128563	0.818897638	0.3375817	0.269668	0.0564731	0.034749	0.88893174	0.835777126	0.3230183	0.258546	0.0587354	0.040324
G	6617d	0.861732857	0.692307692	0.454425125	0.342999171	0.048928439	0.018887783	0.871983844	0.736111111	0.444561054	0.32631099	0.0533684	0.022356	0.879935159	0.782679739	0.433363	0.326828	0.0588049	0.031763	0.884688541	0.828692962	0.4148577	0.287837	0.0676655	0.036932
E	6622d	0.890206953	0.763636364	0.590419755	0.531581143	0.044617504	0.022850314	0.89487617	0.795107034	0.583514046	0.537571157	0.0461465	0.020909	0.893768471	0.830128205	0.573884	0.52552	0.0491165	0.031746	0.89166985	0.844122024	0.5607006	0.52232	0.0532478	0.041036
S	6627d	0.803169388	0.586419753	0.352938734	0.217293475	0.088180305	0.035327658	0.811008691	0.663580247	0.339175096	0.237048504	0.0947775	0.054332	0.821869613	0.694092827	0.3268691	0.238594	0.0986278	0.066875	0.832975387	0.781960227	0.3124838	0.229446	0.1017281	0.077587
	6637d	0.825970459	0.708333333	0.484312885	0.413350021	0.05704898	0.032167668	0.831393156	0.728888889	0.473885026	0.419265484	0.0608737	0.037305	0.838584467	0.768571429	0.4596225	0.397285	0.0655616	0.043024	0.843469542	0.788343558	0.4416759	0.386946	0.0701063	0.053507
	6642d	0.882346188	0.736666667	0.435999671	0.356625074	0.051419597	0.024375615	0.883358571	0.773913043	0.42447859	0.353950404	0.0540771	0.02955	0.879741952	0.811342593	0.4106493	0.346162	0.0580141	0.035543	0.884109899	0.838383838	0.3893663	0.330107	0.0631488	0.037798
	6643d	0.847750522	0.711442786	0.456316382	0.38671024	0.054116732	0.027380986	0.849414928	0.759887006	0.441910634	0.377816798	0.0590948	0.032101	0.846143293	0.787157287	0.4207059	0.35557	0.0673029	0.040158	0.848150796	0.803782506	0.3886159	0.326912	0.0789833	0.0511
	6644d	0.967446319	0.760416667	0.42840219	0.347574819	0.028265975	0.007595059	0.964617746	0.857142857	0.421672329	0.353605849	0.0315336	0.011134	0.955006972	0.857253086	0.4115358	0.365669	0.0354867	0.019024	0.935800881	0.863556338	0.3966919	0.362409	0.0428122	0.027144
	6667d	0.841851823	0.718390805	0.534050133	0.462393913	0.056607942	0.029879002	0.842824715	0.75	0.525203691	0.448325792	0.0605149	0.038193	0.84261213	0.786324786	0.5163924	0.460834	0.063623	0.041178	0.845969131	0.805699482	0.4992405	0.429138	0.070061	0.045025
	6675d	0.835670902	0.707711443	0.463545593	0.319832851	0.057773539	0.019808833	0.84215408	0.718253968	0.454829633	0.332786138	0.0617712	0.031329	0.849111291	0.769713262	0.4463398	0.336998	0.0645713	0.033831	0.857487184	0.802752294	0.4331112	0.368936	0.0693826	0.037656
	6677d	0.811037977	0.649717514	0.47840858	0.384675716	0.061997129	0.030976876	0.823004525	0.694252874	0.461333573	0.351841949	0.0678961	0.03555	0.836888749	0.745177305	0.4394557	0.33526	0.0756597	0.042808	0.853294203	0.797265122	0.4096261	0.321268	0.0875377	0.048098
	6687d	0.867073337	0.734567901	0.406497871	0.303921569	0.059075495	0.026053946	0.869837966	0.738095238	0.395366842	0.312920168	0.0636311	0.027687	0.873628205	0.781818182	0.3831729	0.311857	0.0665496	0.032246	0.883012221	0.82797619	0.3673233	0.320727	0.0717055	0.04052
	6688d	0.907575519	0.728395062	0.420476978	0.184087481	0.04681883	0.016603074	0.902185493	0.776422764	0.405607904	0.217301038	0.0542477	0.025416	0.896559733	0.801682692	0.3845928	0.277093	0.0652729	0.031523	0.896719863	0.826388889	0.358926	0.258096	0.0765029	0.039485
	6706d	0.85967005	0.71875	0.540399926	0.422436516	0.054244459	0.02405485	0.862556478	0.757201646	0.530102858	0.438031817	0.0596717	0.036498	0.863626465	0.794217687	0.5192959	0.447042	0.0643409	0.039969	0.860995998	0.817961165	0.5016495	0.452673	0.0730081	0.047097
	6707d	0.85325746	0.72	0.528455259	0.44627451	0.04890156	0.027999183	0.852185973	0.758503401	0.520179889	0.432679739	0.0512805	0.028605	0.852055948	0.788770053	0.5105605	0.458991	0.0541866	0.037062	0.854060823	0.820468839	0.497746	0.455243	0.0586196	0.042907
	6709d	0.819539653	0.683908046	0.508197583	0.429411765	0.051913504	0.025144906	0.819992574	0.719219219	0.496237313	0.399623529	0.0557596	0.029277	0.831972591	0.767699115	0.4804307	0.39558	0.0622565	0.036612	0.842318517	0.788148148	0.4610515	0.372616	0.0682292	0.04297
	6714d	0.857441125	0.655172414	0.476271595	0.42745098	0.037893974	0.018731458	0.879117373	0.777777778	0.466901669	0.433303167	0.041068	0.021354	0.896217626	0.834883721	0.4540336	0.413045	0.0446327	0.029698	0.899555606	0.848915989	0.4346619	0.396621	0.0519644	0.037705
	96-3-21	0.956790335	0.791666667	0.403370347	0.242871386	0.019170898	0.004399271	0.956720647	0.816326531	0.399921574	0.264431794	0.0227853	0.008294	0.959966303	0.855072464	0.3950868	0.263146	0.0276524	0.010051	0.95906397	0.86377709	0.3856089	0.269775	0.0347697	0.011465
	As0598ad	0.92099934	0.711111111	0.414457759	0.28756027	0.039988353	0.01262164	0.921769735	0.789054726	0.400507155	0.295045652	0.0473457	0.015774	0.927585123	0.863976084	0.3813751	0.29118	0.0557343	0.024641	0.938090414	0.88761175	0.3565117	0.285137	0.0642885	0.036229
	gc0697ad	0.901252278	0.802083333	0.353954155	0.279600963	0.023246814	0.008420789	0.910625535	0.791291291	0.343414214	0.27254902	0.0304439	0.010643	0.922084624	0.846390169	0.3292774	0.254614	0.0383129	0.013776	0.932508812	0.879912664	0.3097114	0.217037	0.0488858	0.018892
	hm1096ad	0.892101518	0.75	0.641805697	0.59771836	0.018241297	0.006638957	0.898801318	0.806818182	0.635402434	0.588494266	0.0215793	0.008643	0.918377968	0.862745098	0.6267004	0.572513	0.0257827	0.013132	0.938266765	0.896028037	0.6136639	0.549624	0.0330397	0.014199
	jb0298ad	0.910993086	0.805555556	0.512613401	0.450920974	0.028009585	0.010306905	0.912715752	0.845528455	0.501679001	0.43876849	0.0328608	0.015812	0.918292988	0.872791519	0.4876448	0.400603	0.0385272	0.015359	0.922216751	0.900234742	0.4689604	0.381385	0.0473385	0.0211
	kk0498ad	0.868921804	0.711111111	0.394365431	0.324929972	0.059260602	0.026859925	0.867094994	0.751207729	0.373981189	0.287284023	0.0689702	0.031274	0.86499059	0.787878788	0.3517095	0.267579	0.0779147	0.042793	0.877983902	0.833625731	0.3226783	0.238048	0.0893017	0.064027
	km0301ad	0.955834521	0.79787234	0.383084767	0.260980392	0.018648607	0.007317976	0.959802269	0.815789474	0.378775767	0.261370873	0.0215677	0.009238	0.962454829	0.873333333	0.3729186	0.268651	0.0254744	0.011432	0.962764193	0.896072013	0.3627838	0.277243	0.0306118	0.01552
	Ld1196ad	0.912853704	0.78125	0.644754135	0.568387355	0.024257824	0.003952996	0.922761232	0.823170732	0.636749855	0.559917921	0.0298192	0.00902	0.928471673	0.870967742	0.6268747	0.555846	0.0362935	0.010546	0.937774795	0.897177419	0.6093344	0.529121	0.0468496	0.020484
	Ma0899ad	0.877489009	0.738505747	0.35067262	0.212791783	0.061936995	0.016031589	0.872962749	0.79403794	0.321870496	0.173214946	0.0776602	0.033656	0.88199014	0.819735007	0.2856684	0.135896	0.0955383	0.048526	0.897874137	0.856440072	0.2380688	0.155863	0.1113038	0.091115
	mj0798ad	0.903947528	0.770833333	0.337213255	0.274578603	0.025561663	0.009426863	0.918388266	0.825757576	0.328937049	0.27098399	0.0308686	0.012717	0.93179525	0.864583333	0.3183025	0.252082	0.0356296	0.016873	0.94139985	0.89520202	0.3023926	0.231588	0.0446346	0.023433
	Ra0199ad	0.950279201	0.835714286	0.641220432	0.455082956	0.023934618	0.007161631	0.949569834	0.850724638	0.63019588	0.453814226	0.0309425	0.010074	0.947622478	0.869937695	0.6128289	0.451364	0.0420274	0.018227	0.949636162	0.911630929	0.5830792	0.425378	0.0599516	0.024911
	Ra0997ad	0.914561106	0.740740741	0.512432978	0.32571644	0.026512006	0.011377675	0.919975848	0.784482759	0.502783139	0.305098039	0.0330524	0.012692	0.917222247	0.817391304	0.4876206	0.298743	0.0433467	0.018856	0.922580777	0.831168831	0.4614058	0.282206	0.0598687	0.020766

Blue Channel (B)																									
Group	Image Name	Circle r=5						Circle 7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
	4023d	0.916768023	0	0.278593294	0.152413273	0.039667215	0.012001444	0.922985429	0.810231023	0.265948378	0.162028398	0.0489504	0.021242	0.925729975	0.822048611	0.2499702	0.133121	0.0557299	0.024821	0.92867463	0.858604091	0.228479	0.145351	0.0631656	0.036328
	4025d	0.925642752	0.785714286	0.380246732	0.211446741	0.036274919	0.007716422	0.923740354	0.804232804	0.365601291	0.214347202	0.0470781	0.010506	0.922716687	0.834733894	0.3424562	0.20205	0.0607919	0.018313	0.92866782	0.856902357	0.3123209	0.205591	0.0744953	0.02247
	4030d	0.930162232	0.77027027	0.289542572	0.162412135	0.029705856	0.008592389	0.936271833	0.83480826	0.277514517	0.152163929	0.0370302	0.012335	0.943778203	0.869333333	0.2615396	0.156819	0.0462542	0.02026	0.94655725	0.898791541	0.2429926	0.157459	0.0547454	0.024989
	4044d	0.949282598	0.764957265	0.458466215	0.30124183	0.025843432	0.006701512	0.947193891	0.781835206	0.448965296	0.303256607	0.0328985	0.011098	0.948018776	0.839646465	0.4362271	0.30045	0.0419409	0.01547	0.947513609	0.872587719	0.4189084	0.306004	0.0517195	0.021889
	6015d	0.836033606	0.678571429	0.414535291	0.33968517	0.058955852	0.031670305	0.837074949	0.702702703	0.406820166	0.329971989	0.0617253	0.040041	0.840758111	0.773373984	0.3996451	0.325701	0.0636034	0.045138	0.847206335	0.797858099	0.3915942	0.33714	0.0652564	0.050597
	6052d	0.844607257	0.647058824	0.420044085	0.300625782	0.056682257	0.026701185	0.844357172	0.732200647	0.408564464	0.334750768	0.0611951	0.031643	0.846575718	0.770257827	0.3987054	0.309481	0.0651607	0.0415	0.848431557	0.787512588	0.3877061	0.307952	0.0701142	0.046344
	95-13-15.jpg	0.96422982	0.785714286	0.300296516	0.001161946	0.017624539	4.19907E-16	0.963275642	0.845238095	0.297659826	0.003178535	0.0223547	6.41E-16	0.962331181	0.892638037	0.2919066	0.009341	0.0289614	0.007285	0.96628078	0.907258065	0.2855717	0.008419	0.0372002	0.009473
	95-13-17.jpg	0.948153798	0.75	0.712849738	0.304154204	0.032542731	0	0.948987639	0.818181818	0.7112993	0.295414033	0.0397691	0	0.947897297	0.803797468	0.7077404	0.299056	0.0494626	0	0.950827047	0.799242424	0.7044098	0.310754	0.0602783	0
C	96-22-19	0.946596377	0.571428571	0.374591718	0.084602076	0.029118918	0.005902701	0.944900315	0.774193548	0.367169149	0.135378151	0.0378001	0.008922	0.945923385	0.857142857	0.3556701	0.143137	0.0481455	0.01388	0.946692506	0.87854251	0.3390273	0.184742	0.0606155	0.019415
A	Bg0899ad	0.898186272	0.642857143	0.379214226	0.029527105	0.051748462	0.008434962	0.899237159	0.669154229	0.369333526	0.030006609	0.0635189	0.011164	0.901120486	0.756877023	0.3528767	0.036621	0.0796399	0.023196	0.901592513	0.78665269	0.3142669	0.041342	0.1062609	0.031494
N	Bm0300ad	0.937725259	0.794871795	0.390193039	0.173320476	0.030927896	0.007385207	0.939302918	0.845381526	0.377850444	0.211430309	0.0387652	0.01203	0.938669776	0.867256637	0.3632974	0.208148	0.0481869	0.015392	0.942131638	0.885833333	0.3433631	0.200188	0.0574081	0.023416
C	Fj0297ad	0.921094519	0.761006289	0.170270455	0.068973472	0.032513511	0.00538515	0.928598326	0.789272031	0.156866347	0.070417732	0.03987	0.009849	0.935812149	0.845614035	0.1398352	0.055708	0.0474598	0.011565	0.943864518	0.888888889	0.1197373	0.05057	0.0541606	0.01573
E	Fj1200ad	0.936218931	0.764705882	0.454008063	0.291810842	0.027271109	0.009236532	0.9414265	0.808411215	0.443428126	0.298872549	0.0346912	0.011276	0.945645081	0.851973684	0.4301964	0.291855	0.042368	0.013852	0.9481315	0.8791423	0.4163364	0.307037	0.050815	0.016782
	Fn1200ad	0.954553269	0.752923977	0.483458406	0.424678837	0.023582227	0.006060761	0.958847322	0.794117647	0.47750442	0.420371334	0.0256609	0.008531	0.966236319	0.830926594	0.4702399	0.41646	0.0278396	0.009227	0.974302917	0.876033058	0.4606565	0.404085	0.030277	0.010655
R	Gs0499ad	0.970584333	0.810077519	0.674574683	0.338602941	0.018974092	0.004393036	0.969015562	0.849557522	0.666250907	0.339077603	0.0250882	0.005111	0.966786335	0.890855457	0.6531707	0.331752	0.0338721	0.009779	0.965888633	0.914285714	0.631893	0.342859	0.0489546	0.015102
	hn0996ad	0.981916944	0.822222222	0.458425784	0.346112238	0.020161852	0.005779628	0.98354271	0.82369146	0.451429423	0.299871424	0.0243071	0.00821	0.98302091	0.876811594	0.4423784	0.296833	0.0293609	0.007866	0.980544568	0.922477064	0.4307677	0.303327	0.0366894	0.011599
I	kh0598ad	0.970382734	0.836363636	0.569979202	0.40873104	0.030227587	0.008877829	0.964975933	0.875	0.558603642	0.391335201	0.0363353	0.011845	0.960756324	0.893141946	0.5435724	0.385967	0.0448884	0.013645	0.957113356	0.91729639	0.5236099	0.363175	0.0565882	0.019965
M	Kr1196ad	0.940898067	0.647058824	0.31195526	0.158685446	0.034139806	0.00661999	0.938737936	0.829787234	0.296784558	0.173453997	0.0446579	0.010849	0.938827795	0.857487923	0.2780223	0.175933	0.0574264	0.013092	0.944805633	0.891950568	0.2557076	0.157085	0.071319	0.022414
A	Lj0899ad	0.880102039	0.742690058	0.306028357	0.092307692	0.052461285	0.012866228	0.884759597	0.753401361	0.281139736	0.076805356	0.064552	0.022265	0.891702258	0.781880734	0.2526385	0.077158	0.0805901	0.028019	0.902666178	0.839361702	0.2127251	0.090031	0.0934307	0.031199
	lj1196ad	0.97821797	0.859649123	0.300608757	0.094117647	0.026058932	0.002353902	0.974157179	0.871666667	0.287771834	0.097707391	0.0338248	0.005891	0.970491505	0.911605938	0.2723365	0.108299	0.0423232	0.007229	0.968381722	0.927884615	0.25464	0.114928	0.0529284	0.014879
G	mk1096ad	0.895169736	0.700564972	0.078133552	0.019117647	0.030498112	0.012555146	0.895542687	0.733009709	0.073847	0.020713927	0.0315374	0.012379	0.898655074	0.779698217	0.0693941	0.022234	0.0325931	0.016689	0.90506095	0.813882259	0.0642084	0.022403	0.0335767	0.017738
E	mm0598ad	0.925280254	0.675	0.259169538	0.083352557	0.038742027	0.009146591	0.925980313	0.746556474	0.247029395	0.074733894	0.0490167	0.013586	0.924133971	0.775925926	0.2294592	0.072741	0.0607448	0.021159	0.929152608	0.805699482	0.2061316	0.068181	0.0715539	0.025209
S	Mm0899ad	0.927111681	0.806818182	0.336385896	0.210663915	0.041195062	0.011588847	0.921458755	0.846825397	0.324223066	0.200716846	0.0511901	0.019009	0.919016333	0.857605178	0.3026819	0.186345	0.0638696	0.026991	0.924546642	0.867974806	0.2766857	0.17433	0.0800848	0.040192
	Nd0599ad	0.944103683	0.788359788	0.404357284	0.24779767	0.03845311	0.007843137	0.936334432	0.829059829	0.389779084	0.226020138	0.0462255	0.015209	0.932840101	0.878205128	0.3700617	0.223721	0.0554207	0.021919	0.93482391	0.888372093	0.3461769	0.196282	0.0647954	0.026489
	Rk0399ad	0.918007225	0.793939394	0.352919549	0.018082789	0.044964764	0.013478716	0.917452314	0.810869565	0.338879535	0.023137255	0.0576586	0.019669	0.919551524	0.852003643	0.3128881	0.029463	0.0740343	0.020766	0.92183336	0.865695297	0.2781633	0.04467	0.0953855	0.028826
	Rl0298ad	0.907586559	0.777777778	0.320217669	0.219607843	0.037158561	0.015550501	0.916946069	0.826388889	0.306112395	0.201655773	0.043968	0.023687	0.919430053	0.839933993	0.2901422	0.198311	0.050578	0.029653	0.92119391	0.865207373	0.2678511	0.188911	0.0602555	0.035836
	sd0597ad	0.951249088	0.78	0.361703819	0.222165388	0.019623242	0.002047972	0.950486766	0.821428571	0.355693902	0.240691545	0.0251398	0.010555	0.948794741	0.838235294	0.3455942	0.241271	0.0325486	0.011935	0.957696674	0.892746914	0.3296218	0.252838	0.0426718	0.022045
	Wa0499ad	0.913976728	0.76	0.336256037	0.270511342	0.027753729	0.012778657	0.926659257	0.805970149	0.33139916	0.282659847	0.029461	0.014934	0.942461314	0.875222816	0.3251673	0.280159	0.0302013	0.015247	0.958327852	0.921155347	0.3179027	0.28022	0.0303234	0.01836
	zp0298ad	0.89815272	0.704166667	0.344320104	0.233918129	0.037410902	0.012433615	0.901692869	0.782051282	0.329381531	0.191956491	0.0461462	0.017783	0.909187286	0.826719577	0.310843	0.207167	0.058404	0.025443	0.914477234	0.848583878	0.2903185	0.194808	0.0688622	0.028932
	zr0798ad	0.948012971	0.7	0.401297476	0.284054754	0.03218896	0.008080705	0.936198341	0.754789272	0.386373887	0.256550802	0.0417565	0.012516	0.930169633	0.80734767	0.3680891	0.207843	0.0523768	0.017419	0.932557211	0.833557951	0.3404073	0.203068	0.0685951	0.023594
	4056d	0.934568013	0.769607843	0.293644774	0.204253905	0.029511407	0.012283582	0.932683363	0.829710145	0.279848587	0.197466597	0.0383079	0.018407	0.933505729	0.862853629	0.2616977	0.189506	0.0466133	0.022869	0.935722296	0.888	0.2384312	0.183845	0.0540607	0.026398
	4058d	0.954779741	0.815789474	0.331828957	0.204524887	0.02310832	0.009515276	0.952483665	0.847222222	0.322525628	0.203565062	0.0296205	0.012432	0.951251638	0.891812865	0.3090605	0.208153	0.0382754	0.019009	0.954146271	0.903202329	0.2906284	0.209508	0.0455077	0.02595
	4063d	0.934778962	0.823529412	0.368115033	0.166736695	0.027312699	0.009394347	0.926631997	0.847670251	0.355462594	0.18464986	0.0353659	0.013127	0.927611648	0.873484848	0.3369007	0.162787	0.0458888	0.022107	0.933940549	0.897038567	0.3087923	0.16871	0.0628578	0.025926
	4074d	0.921623266	0.720454545	0.600442175	0.376952184	0.038826184	0.012646544	0.922205336	0.779861111	0.584177154	0.353884712	0.0496821	0.016322	0.926317545	0.821759259	0.5600376	0.352224	0.0622511	0.022669	0.9333304	0.883960573	0.5272263	0.342154	0.0768482	0.032538
	4082d	0.919647731	0.774509804	0.37569754	0.320710784	0.024288111	0.009030673	0.918414622	0.86	0.366238149	0.323594053	0.0294851	0.015863	0.926531531	0.863970588	0.3548638	0.31602	0.0341977	0.01747	0.943537441	0.89632107	0.3421692	0.302632	0.0377663	0.018946
	4083d	0.956132479	0.758064516	0.413955653	0.337795808	0.022827899	0.007541272	0.949399735	0.823383085	0.404974982	0.334238311	0.0297285	0.009499	0.945728057	0.847338936	0.3914261	0.313003	0.0364627	0.011375	0.94658603	0.859356725	0.3726196	0.297227	0.0456171	0.016106
	4084d	0.93032526	0.781609195	0.360509493	0.21272509	0.033838023	0.012064939	0.929182755	0.840707965	0.34696112	0.227019608	0.0424543	0.016922	0.927323486	0.885496183	0.3289879	0.219496	0.0530791	0.021867	0.924798163	0.893326759	0.3004477	0.222388	0.063908	0.029149
	6005d	0.809265518	0.597222222	0.398251006	0.287427912	0.068078495	0.031451976	0.809824339	0.695340502	0.3790374	0.301601007	0.0747663	0.040944	0.809758363	0.738333333	0.3592578	0.280703	0.0802207	0.053052	0.81713627	0.775974026	0.3388332	0.275109	0.082223	0.057446
	6017d	0.924165513	0.744186047	0.42139089	0.361105754	0.038557625	0.017268847	0.92117343	0.776315789	0.41571845	0.365399965	0.0398931	0.022934	0.915826125	0.820247934	0.4090859	0.361441	0.0414103	0.026637	0.909245587	0.850104822	0.4010832	0.36173	0.0437138	0.029264
	6023d	0.806464401	0.670289855	0.344067122	0.289042676	0.05947133	0.031360015	0.816499431	0.722222222	0.337460439	0.287945998	0.0601991	0.038624	0.823874104	0.777462121	0.3294065	0.284339	0.0617182	0.044667	0.833790171	0.790350877	0.3192198	0.281423	0.0630958	0.04991
	6024d	0.810246278	0.661458333	0.435281532	0.361428153	0.059760621	0.033310294	0.815887792	0.720164609	0.426606713	0.353279729	0.0619109	0.032513	0.816181213	0.731884058	0.41717	0.356519	0.0632685	0.044458	0.819270848	0.779252704	0.4053852	0.356444	0.0646098	0.044394
	6025d	0.845704906	0.67962963	0.467150597	0.377846577	0.060513491	0.032923838	0.849646914	0.74497992	0.453194899	0.359940966	0.0669074	0.037163	0.855663475	0.796925566	0.4406681	0.360822	0.0726865	0.048606	0.859581753	0.804026403	0.4227401	0.347337	0.0786005	0.051281
	6028d	0.842880824	0.707317073	0.340960161	0.304052288	0.036120288	0.014586494	0.861751478	0.768292683	0.336148588	0.304142502	0.0364354	0.019163	0.88029512	0.817647059	0.3309562	0.30152	0.0370074	0.022715	0.90298639	0.831536388	0.3232993	0.306417	0.0381912	0.028707
	6031d	0.856967975	0.708333333	0.410633059	0.344607843	0.054025901	0.025370731	0.856633986	0.758258258	0.395636984	0.343741983	0.0581665	0.034139	0.869153923	0.792349727	0.3798072	0.322383	0.062017	0.03911	0.889702484	0.848639456	0.3597832	0.308648	0.0641326	0.042218
	6044d	0.85437237	0.759615385	0.506585622	0.413475936	0.041730664	0.018958172	0.863635049	0.774509804	0.496867421	0.41541976	0.0451879	0.02513	0.875422279	0.790948276	0.4839555	0.404436	0.0496866	0.030694	0.890551819	0.839201878	0.4661458	0.409664	0.0556008	0.032355
	6045d	0.832978716	0.701149425	0.383334568	0.33486208	0.054336199	0.025376942	0.837664525	0.712121212	0.375887313	0.342787115	0.0560034	0.036447	0.844029737	0.79245283	0.3685365	0.326213	0.0569947	0.040475	0.853264409	0.817204301	0.3586669	0.331277	0.0585645	0.040874
	6048d	0.886194238	0.681818182	0.329890754	0.277379244	0.040244332	0.014135296	0.895933607	0.798850575	0.326147371	0.295768834	0.0412009	0.022889	0.90747732	0.843283582	0.3229068	0.292604	0.0414013	0.024235	0.920831405	0.88045738	0.316726	0.289403	0.0420716	0.028953
	6049d	0.900119019	0.786885246	0.39428508	0.343500363	0.040942277	0.01034294	0.899753775	0.820895522	0.388207382	0.340586761	0.0433943	0.013274	0.89766072	0.830882353	0.3823871	0.330714	0.045296	0.018859	0.897031649	0.860850532	0.3716968	0.334208	0.0485767	0.030716
	6050d	0.890989079	0.742690058	0.443995754	0.367401961	0.043608747	0.017807902	0.892980138	0.772727273	0.432732707	0.373149905	0.0476265	0.018939	0.889842722	0.776119403	0.420491	0.371162	0.0517901	0.028214	0.889694285	0.808690013	0.4022813	0.356991	0.0561544	0.034838
	6051d	0.864380047	0.675	0.405771305	0.335882353	0.052948877	0.031629521	0.861185034	0.757142857	0.395155719	0.313204443	0.0558951	0.036136	0.859955485	0.801251956	0.3827248	0.324557	0.0584857	0.037864	0.863136729	0.828556263	0.3670933	0.310645	0.0631474	0.046026
	6053d	0.863738314	0.719512195	0.399665344	0.313839159	0.054814598	0.026698879	0.858556889	0.760606061	0.390916162	0.321082231	0.0574254	0.033566	0.862924911	0.788888889	0.3807638	0.318547	0.0601215	0.044471	0.870246041	0.823657928	0.3661642	0.319446	0.0631328	0.051154
	6054d	0.869666213	0.71875	0.374169187	0.208345902	0.042752468	0.014940349	0.864331856	0.75	0.361656882	0.224231166	0.04799	0.022163	0.868802865	0.798048048	0.3466474	0.238875	0.0555571	0.026337	0.872157136	0.819642857	0.3245236	0.247664	0.0643982	0.028609
	6055d	0.847698009	0.666666667	0.342790755	0.293634992	0.04059059	0.016190112	0.860625063	0.757731959	0.337010449	0.297225853	0.0426463	0.018917	0.877635057	0.76980198	0.3294568	0.298392	0.0438788	0.026081	0.900745611	0.818706697	0.3190035	0.293969	0.0452574	0.035284
	6056d	0.837068284	0.696428571	0.381927428	0.291260504	0.054829829	0.029516914	0.837701053	0.724489796	0.370616477	0.289934641	0.0584014	0.031619	0.843068653	0.752	0.3587701	0.294059	0.0624444	0.041779	0.847085426	0.801575203	0.342614	0.285306	0.0673981	0.048846
	6061d	0.896090478	0.75	0.385495027	0.305237712	0.036701929	0.013165186	0.893219697	0.788235294	0.378922032	0.318634504	0.0397005	0.016968	0.894089688	0.831168831	0.370995	0.304173	0.0423312	0.025805	0.898610129	0.847912525	0.361191	0.309848	0.0458484	0.028962
N	6065d	0.892026586	0.72	0.412996306	0.36752451	0.045169202	0.019408888	0.891303157	0.781446541	0.408000142	0.369836154	0.0461672	0.030487	0.888901637	0.810691824	0.4018298	0.368977	0.0470436	0.030782	0.886960483	0.833830104	0.392919	0.353165	0.0490273	0.035427
	6074d	0.913722307	0.736111111	0.305974311	0.232123488	0.039107891	0.016356923	0.920238984	0.809782609	0.296636948	0.231911765	0.0416809	0.024091	0.920808399	0.821428571	0.2864757	0.233987	0.044611	0.027469	0.914628881	0.858855375	0.2713658	0.230637	0.0476377	0.032934
O	6075d	0.932979223	0.811320755	0.404101031	0.365286855	0.03297667	0.014041601	0.915385288	0.793187348	0.395273514	0.361041935	0.0356462	0.019086	0.898300393	0.816742081	0.3843361	0.355898	0.0384443	0.020429	0.902520315	0.857030016	0.3687265	0.345607	0.0415461	0.02518
T	6077d	0.910017197	0.753333333	0.405011458	0.349321267	0.040358816	0.01081905	0.899845791	0.805555556	0.394812535	0.338823529	0.0434314	0.020826	0.892716732	0.804054054	0.381961	0.332989	0.0468723	0.028417	0.896554008	0.839761905	0.3665083	0.324436	0.0499603	0.032122
	6079d	0.852775361	0.691056911	0.363431334	0.289164087	0.051725354	0.01184575	0.85699709	0.751557632	0.352451429	0.287038883	0.0543331	0.025254	0.864070498	0.766990291	0.3406324	0.285436	0.0573948	0.025895	0.878949804	0.817269076	0.3273628	0.280822	0.058726	0.035539
C	6084d	0.887416582	0.740740741	0.416556806	0.354548377	0.047850983	0.02054952	0.881086079	0.760124611	0.405323858	0.348951407	0.0513663	0.030972	0.879748556	0.797169811	0.3937795	0.335919	0.0544847	0.037735	0.878222984	0.822799097	0.3799336	0.329843	0.0585821	0.043399

ANCER IMAGES	6085d	0.8452118	0.727272727	0.416293554	0.363541667	0.057006631	0.030403621	0.843916045	0.752873563	0.406913889	0.362669683	0.0603501	0.038566	0.842569698	0.777647975	0.3959353	0.348963	0.0632961	0.046459	0.84320593	0.808749096	0.3811654	0.337053	0.0669391	0.053305
	6089d	0.846509654	0.706666667	0.143610179	0.083600713	0.055627956	0.027629956	0.850959636	0.742647059	0.133655073	0.099190502	0.0579071	0.03772	0.854073462	0.777777778	0.1211419	0.088739	0.0597965	0.039224	0.858065755	0.815891473	0.1059692	0.075553	0.0615454	0.048453
	6091d	0.947267308	0.823529412	0.297581119	0.241568627	0.034082197	0.009661108	0.950152704	0.834782609	0.290405868	0.239118457	0.0357441	0.014513	0.946544834	0.868292683	0.2808425	0.230156	0.0382283	0.021662	0.938201097	0.877758913	0.2678583	0.231818	0.0412272	0.033129
	6093d	0.903239488	0.755050505	0.39882245	0.32442672	0.037862706	0.011493256	0.897002729	0.787531807	0.391062262	0.318716578	0.0404381	0.013183	0.894750967	0.826007326	0.3828948	0.31651	0.0428836	0.01843	0.894669611	0.839756592	0.3740184	0.286288	0.0459193	0.030663
	6094d	0.833533333	0.736842105	0.369117039	0.33070028	0.048636655	0.029663192	0.838950633	0.753521127	0.361428195	0.331459054	0.0494528	0.032758	0.856195712	0.793522267	0.3506502	0.322638	0.0497219	0.03638	0.874335269	0.807535642	0.3398555	0.319565	0.0498272	0.039222
	6102d	0.868649178	0.73	0.388540592	0.323284314	0.051356025	0.016257965	0.870079049	0.758974359	0.382717665	0.337459506	0.0532964	0.030386	0.874087983	0.807471264	0.3761612	0.315187	0.0549609	0.034275	0.878308482	0.837595908	0.3667018	0.324657	0.0569032	0.033538
	6105d	0.858393223	0.728070175	0.405306986	0.337920829	0.054255245	0.019042415	0.855893197	0.751633987	0.396126349	0.326739545	0.0575742	0.032513	0.858184742	0.789333333	0.3856943	0.316282	0.0604683	0.040182	0.865530196	0.808698297	0.3738033	0.31783	0.0630368	0.047551
	6599d	0.907998861	0.721264368	0.428869953	0.344499834	0.040573232	0.018524578	0.910699259	0.788690476	0.420298123	0.351708683	0.0428267	0.020053	0.909436905	0.834077381	0.4104234	0.345361	0.0450131	0.028534	0.907254147	0.863230241	0.3955928	0.344214	0.04888	0.032165
	6602d	0.956252693	0.803921569	0.413151176	0.359457901	0.028363743	0.008102429	0.953769451	0.814606742	0.408575111	0.364206774	0.0294375	0.012428	0.944959583	0.825641026	0.4028146	0.3404	0.0316499	0.014689	0.936960608	0.844064386	0.3946692	0.327326	0.0353178	0.02035
	6605d	0.899283089	0.660130719	0.259147938	0.142698273	0.045211525	0.017886758	0.897106472	0.733009709	0.249936971	0.150563532	0.0475302	0.017489	0.899108314	0.802259887	0.2397116	0.149763	0.0494265	0.01873	0.907745873	0.828965054	0.2278875	0.152438	0.0504985	0.022823
	6612d	0.895858599	0.772727273	0.297692026	0.24741533	0.046732652	0.021847447	0.89998006	0.770308123	0.292607953	0.256385798	0.0471211	0.023154	0.907220373	0.79587156	0.2880597	0.25711	0.0471032	0.032288	0.918486699	0.835897436	0.2826347	0.253363	0.0458299	0.033644
	6617d	0.887506186	0.723404255	0.281545575	0.193464052	0.05227641	0.019377735	0.89035845	0.764150943	0.270012601	0.184350376	0.0569226	0.02311	0.893076878	0.810379242	0.2577219	0.16991	0.0608688	0.036254	0.892379571	0.835193452	0.2410997	0.153432	0.0658828	0.041188
	6622d	0.847408195	0.744680851	0.487685842	0.410423117	0.046302961	0.024242546	0.858669014	0.770833333	0.478887571	0.426080026	0.0484021	0.023135	0.86838237	0.785714286	0.4674752	0.416536	0.0518304	0.034582	0.875365546	0.829032258	0.4527408	0.410214	0.0562058	0.041948
	6627d	0.809315505	0.596491228	0.335930486	0.203857281	0.084220962	0.034752817	0.814194886	0.694444444	0.324869151	0.240075679	0.0893877	0.053149	0.82280996	0.740675991	0.315241	0.246724	0.0918572	0.064856	0.830760794	0.761126894	0.3044526	0.239277	0.0935304	0.073647
	6637d	0.839969138	0.6875	0.38078191	0.329316117	0.054663306	0.031225287	0.840239811	0.717741935	0.37380432	0.33653906	0.056935	0.03611	0.843335124	0.770833333	0.3649325	0.325289	0.0585769	0.040968	0.853373114	0.79954181	0.3542686	0.327087	0.0592183	0.047169
	6642d	0.873706975	0.736666667	0.425245136	0.334165181	0.053304347	0.023100719	0.87253294	0.753623188	0.412917336	0.332434641	0.0566855	0.029517	0.877285584	0.82079646	0.3984011	0.327235	0.0608674	0.034347	0.885639188	0.839275104	0.3773725	0.315616	0.0651871	0.037857
	6643d	0.84250492	0.701492537	0.531638465	0.428921569	0.052663651	0.027246783	0.841681272	0.751968504	0.520347852	0.423851332	0.0565834	0.029767	0.839927735	0.777462121	0.5036027	0.405444	0.0635018	0.036971	0.841873697	0.798132184	0.4761544	0.384194	0.0736905	0.045267
	6644d	0.938323459	0.766666667	0.458499908	0.386996904	0.027717484	0.006609192	0.946423117	0.790229885	0.453509886	0.393253573	0.030465	0.011084	0.952961457	0.847005208	0.4454888	0.384626	0.0335097	0.016741	0.949738986	0.882042254	0.4336553	0.393508	0.0394601	0.021609
	6667d	0.843553675	0.68	0.425437344	0.340122915	0.057969476	0.02940259	0.846781613	0.766666667	0.416410174	0.340060332	0.0619096	0.038172	0.845020328	0.777777778	0.407903	0.343659	0.0646168	0.043241	0.848045851	0.797573436	0.393065	0.344124	0.069432	0.047627
	6675d	0.842149574	0.69858156	0.346147601	0.239858566	0.058611471	0.019823112	0.848218495	0.73015873	0.336492276	0.246329229	0.0618837	0.032273	0.853555983	0.775280899	0.32855	0.247772	0.0633075	0.034745	0.859778099	0.816352201	0.3172847	0.267613	0.065271	0.037527
	6677d	0.819984669	0.664814815	0.355943214	0.276561086	0.058668823	0.030479566	0.83443426	0.731363636	0.343939322	0.272733367	0.0609759	0.037902	0.847908308	0.785425101	0.3311477	0.269891	0.0632447	0.042236	0.86276123	0.803030303	0.3153101	0.261277	0.0658966	0.045433
	6687d	0.854126433	0.697368421	0.334128835	0.248366013	0.057531354	0.026362198	0.858171993	0.720238095	0.325285938	0.263830532	0.0608389	0.026279	0.866597459	0.800469484	0.3166627	0.266713	0.0619995	0.035722	0.873157454	0.829059829	0.3057801	0.27438	0.0639449	0.042296
	6688d	0.889534503	0.726190476	0.29089198	0.155128205	0.045571373	0.015703929	0.890942202	0.772012579	0.27763893	0.17716263	0.0512893	0.027017	0.889722412	0.821173104	0.2604865	0.190611	0.0583678	0.029934	0.893848552	0.823315118	0.241545	0.177891	0.0643175	0.03807
	6706d	0.84127407	0.709302326	0.452528592	0.331372549	0.058720854	0.030555629	0.847641687	0.75	0.438816127	0.345763966	0.0654343	0.037108	0.8540003	0.799578059	0.4245344	0.354454	0.0714185	0.043117	0.855518883	0.822411003	0.4038617	0.33727	0.0797159	0.050416
	6707d	0.852007197	0.732758621	0.456341091	0.376246499	0.050811637	0.027297033	0.856814699	0.755707763	0.446270927	0.35751634	0.0537775	0.027865	0.86426015	0.79357022	0.4346264	0.391099	0.0569846	0.038076	0.863529501	0.81400209	0.4197524	0.382391	0.0616829	0.046325
	6709d	0.831816755	0.614942529	0.477214215	0.347224992	0.054292997	0.024740434	0.840529915	0.749031008	0.464002673	0.353676471	0.0592765	0.033334	0.84607585	0.766982622	0.4473578	0.362525	0.0665033	0.040095	0.851093408	0.803713528	0.427777	0.333973	0.0722235	0.045272
	6714d	0.905074539	0.777777778	0.398815029	0.346405229	0.037445707	0.019515147	0.88893433	0.818181818	0.391000187	0.359837728	0.0397807	0.022867	0.877099895	0.817351598	0.3812581	0.347323	0.0410555	0.029032	0.879262707	0.844919786	0.3683848	0.338897	0.04393	0.034192
	96-3-21	0.951068638	0.770833333	0.302694856	0.109205716	0.023442261	0.005785833	0.950125022	0.818681319	0.297522213	0.113132312	0.0286425	0.007136	0.949221361	0.841059603	0.2906244	0.112434	0.0357287	0.009733	0.947913998	0.886178862	0.2774331	0.11114	0.0454496	0.014158
	As0598ad	0.930739242	0.742753623	0.325312184	0.20064288	0.039465639	0.012200225	0.935045082	0.792039801	0.312706346	0.208950756	0.0462739	0.013031	0.937986394	0.826708508	0.295988	0.220247	0.0528334	0.020347	0.937325971	0.886011276	0.2754911	0.213978	0.0578752	0.031138
	gc0697ad	0.945424482	0.790960452	0.306662898	0.219215686	0.028416552	0.00847781	0.940882083	0.806089744	0.293152178	0.21263231	0.037332	0.01073	0.940540161	0.861788618	0.2757985	0.202237	0.046681	0.01343	0.942487489	0.882266372	0.2536351	0.182246	0.0573636	0.021912
	hm1096ad	0.97184511	0.825	0.546525552	0.491866376	0.021473074	0.008017851	0.957355277	0.842105263	0.537689725	0.476738906	0.0262256	0.009396	0.947396184	0.87254902	0.5257668	0.461402	0.0323388	0.012758	0.94676249	0.894736842	0.5081176	0.431886	0.0426264	0.022039
	jb0298ad	0.945573861	0.818965517	0.439642352	0.352644088	0.032807913	0.010799691	0.94260361	0.84469697	0.426266092	0.341055807	0.0388612	0.01785	0.947909558	0.870292887	0.4102279	0.283299	0.0453533	0.020484	0.948117842	0.896181384	0.3889741	0.270719	0.0559774	0.026194
	kk0498ad	0.864933738	0.722222222	0.298843752	0.212908497	0.065362422	0.030238335	0.863894804	0.78525641	0.275748144	0.19355465	0.0756048	0.042936	0.865917605	0.812121212	0.2522233	0.175718	0.0834485	0.05223	0.883301163	0.842105263	0.2258888	0.153282	0.0891066	0.067387
	km0301ad	0.948546806	0.71875	0.277812442	0.170849673	0.020132726	0.006924259	0.94738137	0.793103448	0.273250403	0.176303	0.0234661	0.009699	0.947311414	0.856818182	0.2673055	0.190729	0.0276028	0.013905	0.948160729	0.88150289	0.2571284	0.188374	0.032836	0.014879
	Ld1196ad	0.899272857	0.777777778	0.49462441	0.418441971	0.025676117	0.007870136	0.913439488	0.84057971	0.486095075	0.404149567	0.0308134	0.01203	0.927170425	0.860795455	0.4765222	0.426055	0.0364353	0.015479	0.938639791	0.893857272	0.4604843	0.413958	0.0453025	0.021873
	Ma0899ad	0.880633631	0.755747126	0.225372384	0.125846702	0.062709673	0.02068151	0.878452678	0.800687285	0.199618474	0.107621162	0.074421	0.03751	0.879113634	0.812327824	0.170361	0.073822	0.0843363	0.053658	0.888742918	0.843480935	0.1371946	0.080598	0.0895467	0.073966
	mj0798ad	0.957392127	0.797619048	0.255655624	0.191815857	0.024931366	0.009390616	0.947494231	0.85106383	0.248300652	0.195329368	0.0294193	0.010872	0.942456446	0.854700855	0.2393789	0.196963	0.0333951	0.01486	0.938085578	0.899371069	0.2261512	0.175672	0.0408042	0.022062
	Ra0199ad	0.934665493	0.8203125	0.535071164	0.328163993	0.030493362	0.010288265	0.93157085	0.836769759	0.520798074	0.320681265	0.0395667	0.012131	0.931537917	0.86707989	0.4990727	0.33063	0.0526008	0.014203	0.937092219	0.89408707	0.4647389	0.312238	0.0704812	0.019624
	Ra0997ad	0.935908485	0.798611111	0.455929993	0.23627451	0.032476702	0.010387442	0.924944099	0.812189055	0.442612307	0.217298475	0.041558	0.012965	0.919062268	0.81840796	0.4221904	0.205614	0.0549737	0.019874	0.917209508	0.848021583	0.3883889	0.187786	0.0749499	0.025749

Y Channel (Y)																									
Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
CANCER IMAGES	4023d	0.921984794	0	0.46257358	0.282277526	0.032693893	0.010024394	0.929132031	0.830246914	0.450894489	0.311414566	0.0413728	0.018541	0.933779995	0.865079365	0.434362	0.270771	0.0494834	0.019797	0.937714642	0.90059727	0.4095661	0.308694	0.0608951	0.026946
	4025d	0.944157042	0.8125	0.597341051	0.474400871	0.022382919	0.006272554	0.946551953	0.833333333	0.588420553	0.458967001	0.0293435	0.006769	0.949259482	0.869747899	0.5730253	0.46914	0.0391891	0.01473	0.951871343	0.893428064	0.5517839	0.445157	0.0511304	0.016183
	4030d	0.962670495	0.819444444	0.51964444	0.40199778	0.021803535	0.006254176	0.957632377	0.843023256	0.510772654	0.396961668	0.0272835	0.009803	0.954400411	0.875	0.4981811	0.400499	0.0352359	0.017162	0.954239232	0.910367171	0.4820791	0.384055	0.0440552	0.020689
	4044d	0.978365459	0.790322581	0.57397925	0.46366782	0.017446062	0.005061256	0.9768545	0.862068966	0.568326895	0.487372549	0.0219193	0.007961	0.97425511	0.883561644	0.5607506	0.479537	0.0275591	0.010492	0.966151355	0.905263158	0.5496484	0.483172	0.0340942	0.015663
	6015d	0.863084874	0.755102041	0.534964923	0.477573529	0.050472281	0.026209991	0.860838866	0.779411765	0.527687221	0.45952381	0.0531043	0.032185	0.86188172	0.811594203	0.5198988	0.450003	0.0555002	0.037131	0.864509302	0.829516539	0.510017	0.458663	0.0587035	0.043611
	6052d	0.893806273	0.719512195	0.551326316	0.450563204	0.045048835	0.024148403	0.885429556	0.793478261	0.544242077	0.479002475	0.0477642	0.025843	0.882011379	0.805709024	0.5383024	0.449141	0.0500136	0.032331	0.880279389	0.82183908	0.531697	0.455008	0.0533893	0.035953
	95-13-15.jpg	0.974703911	0.794117647	0.410703427	0.082153539	0.014132991	1.11975E-16	0.973373236	0.833333333	0.408003972	0.083095975	0.0180521	0.000374	0.972135334	0.894683027	0.40249	0.080603	0.023375	0.007377	0.973464326	0.915938865	0.3958815	0.078319	0.030652	0.010004
	95-13-17.jpg	0.967304251	0.794117647	0.768257637	0.521568627	0.022021951	1.11801E-16	0.969011639	0.813953488	0.767168969	0.511391995	0.0255236	1.12E-16	0.967626284	0.852320675	0.7653504	0.509737	0.030221	2.23E-16	0.970565424	0.893939394	0.7635224	0.531977	0.0345255	3.33E-16
	96-22-19	0.965201266	0.785714286	0.569525833	0.350692042	0.016971441	0.003037634	0.964480095	0.836134454	0.565283572	0.394844371	0.0212745	0.005718	0.964960074	0.875	0.5589106	0.389425	0.0265242	0.00882	0.966918022	0.888429752	0.5493542	0.427554	0.0332686	0.010038
	Bg0899ad	0.9121801	0.603174603	0.521699329	0.20153787	0.037873502	0.008982386	0.917379559	0.696517413	0.514318687	0.205544287	0.0453293	0.012989	0.920437688	0.786407767	0.5009186	0.21119	0.056147	0.013753	0.916024794	0.811740042	0.4714892	0.204802	0.0765932	0.016531
	Bm0300ad	0.96397185	0.8	0.560686173	0.436129862	0.02211581	0.004467656	0.964238723	0.831395349	0.551780929	0.428687783	0.0276342	0.009592	0.963598223	0.884453782	0.5411255	0.408637	0.0341984	0.012725	0.962708631	0.911823647	0.5249955	0.395131	0.0419188	0.01892
	Fj0297ad	0.967489616	0.804347826	0.416518203	0.301557093	0.025017889	0.006319156	0.960169944	0.836917563	0.40577461	0.284791564	0.0320947	0.008043	0.958056063	0.883739837	0.3904998	0.275872	0.0404301	0.009816	0.960270772	0.899509804	0.3706102	0.275261	0.0495589	0.01093
	Fj1200ad	0.92914593	0.76	0.648677987	0.531372549	0.016751841	0.005672066	0.932497092	0.816326531	0.642640163	0.538872549	0.0211353	0.007611	0.936811979	0.861111111	0.6348558	0.544342	0.0261348	0.009574	0.94129303	0.892624729	0.6263909	0.556828	0.0314169	0.012991
	Fn1200ad	0.989135562	0.841145833	0.576260872	0.534039216	0.020067779	0.005052416	0.990711667	0.872168285	0.569917129	0.531758002	0.0223615	0.007801	0.990232942	0.920512821	0.5617651	0.530866	0.0253012	0.008887	0.982765832	0.934298441	0.550392	0.50937	0.0290811	0.01533
	Gs0499ad	0.983299145	0.802325581	0.731285315	0.544362745	0.010555205	0.002997447	0.984156596	0.822916667	0.727373139	0.549737642	0.0135114	0.004162	0.985572911	0.888888889	0.7213814	0.541145	0.0174181	0.005531	0.985823308	0.923440454	0.7113135	0.551975	0.0245612	0.008297
	hn0996ad	0.998040515	0.85	0.582245041	0.51083253	0.014478988	0.00470161	0.996696694	0.892561983	0.578169411	0.47785278	0.016998	0.005863	0.994666907	0.93442623	0.5726551	0.475886	0.0199375	0.006243	0.992068886	0.943868739	0.5658684	0.472169	0.0238475	0.009305
	kh0598ad	0.996291322	0.913461538	0.722047748	0.634480207	0.016818801	0.005698462	0.992583344	0.925742574	0.716888282	0.625658263	0.0197649	0.007134	0.988859718	0.923636364	0.7096843	0.626182	0.0238834	0.007871	0.982812841	0.926952141	0.6991631	0.607456	0.0307263	0.011582
	Kr1196ad	0.972094163	0.790697674	0.541294251	0.423902894	0.021403387	0.004814736	0.96351114	0.829787234	0.531843575	0.397533207	0.0279981	0.006632	0.960329125	0.867256637	0.5194975	0.35928	0.0367695	0.008773	0.960445595	0.909151637	0.5033948	0.334706	0.0479804	0.014645
	Lj0899ad	0.914771976	0.801886792	0.460799982	0.279235797	0.036422591	0.009169829	0.901676735	0.820512821	0.442219194	0.265604575	0.046383	0.020469	0.906516701	0.847859327	0.4189693	0.265367	0.0614375	0.030681	0.915617301	0.873049645	0.3813879	0.26148	0.0801056	0.038274
	lj1196ad	0.9964067	0.87037037	0.595605543	0.452514919	0.011815506	0.001846781	0.994624414	0.91	0.589685869	0.455173454	0.0162416	0.002302	0.992131018	0.925925926	0.5817142	0.468453	0.0221323	0.003445	0.989184428	0.944444444	0.5712805	0.44476	0.0309073	0.006362
	mk1096ad	0.969586783	0.752459016	0.296873533	0.21663286	0.027897565	0.010917185	0.970417666	0.852586207	0.290903521	0.219271709	0.0298569	0.012124	0.966528728	0.880434783	0.2832079	0.209544	0.0327105	0.01368	0.96126838	0.904327248	0.2722248	0.193813	0.0370169	0.015799
	mm0598ad	0.941949512	0.736666667	0.458479286	0.273279508	0.029446562	0.007235539	0.937396094	0.8125	0.448832675	0.25774043	0.0376245	0.012896	0.938633914	0.852490421	0.4339948	0.227451	0.0486541	0.01581	0.942074561	0.870179063	0.4116732	0.229749	0.0627436	0.023247
	Mm0899ad	0.941668075	0.8125	0.549336096	0.468823529	0.028096923	0.009563446	0.941483206	0.871212121	0.542049307	0.461480076	0.0343854	0.015166	0.934445468	0.877232143	0.527666	0.420168	0.0433856	0.02055	0.93242584	0.897771318	0.5091424	0.397596	0.0564807	0.027562
	Nd0599ad	0.935743025	0.775862069	0.605718386	0.518670077	0.024489751	0.006134429	0.945118692	0.782258065	0.598918981	0.506889242	0.0285284	0.010208	0.951828775	0.835664336	0.5896994	0.490633	0.0333568	0.012644	0.959089147	0.902842377	0.577767	0.479004	0.0386006	0.015463
	Rk0399ad	0.938882725	0.807407407	0.518094315	0.232736573	0.033157082	0.007192243	0.936804905	0.812734082	0.507097146	0.22952381	0.0432962	0.012259	0.937073779	0.877147766	0.4847669	0.228354	0.0576859	0.019166	0.936351066	0.900820283	0.4540891	0.236778	0.0773673	0.02151
	Rl0298ad	0.872172419	0.771186441	0.496003194	0.418876703	0.029702229	0.013084606	0.884326521	0.780487805	0.485387648	0.407436456	0.0349037	0.02003	0.89942204	0.816367265	0.4729576	0.40127	0.0401431	0.022476	0.910241995	0.865513054	0.4547278	0.390281	0.0489989	0.030022
	sd0597ad	0.950722143	0.78	0.489938968	0.415686275	0.013715382	0.002047972	0.953751789	0.821428571	0.486425679	0.411803922	0.0168122	0.007232	0.95563961	0.847457627	0.4804333	0.415433	0.0210077	0.009513	0.965435252	0.905092593	0.4711555	0.423751	0.0265825	0.014404
	Wa0499ad	0.95423472	0.819148936	0.540819283	0.479445571	0.028631679	0.008290559	0.940529225	0.859375	0.530519618	0.471191554	0.0328626	0.014657	0.937241488	0.878306878	0.5170687	0.457748	0.0375334	0.020248	0.945317455	0.905660377	0.4994694	0.440271	0.0429681	0.024399
	zp0298ad	0.933142996	0.743589744	0.517306794	0.433298934	0.02591642	0.009428338	0.930759363	0.860169492	0.507340761	0.41950898	0.0315872	0.011555	0.931031252	0.866104869	0.4943644	0.432068	0.0399827	0.020599	0.933517995	0.889189189	0.4779793	0.396887	0.049268	0.024081
	zr0798ad	0.975085884	0.789473684	0.548677005	0.480059193	0.018293187	0.004689724	0.966614203	0.804924242	0.541569808	0.450760079	0.0231579	0.006733	0.962244651	0.815347722	0.5323197	0.411576	0.0289468	0.010751	0.953074085	0.859389039	0.5175717	0.399473	0.0387045	0.012478
	4056d	0.935592407	0.825581395	0.45405858	0.335987934	0.026313074	0.008463284	0.935953406	0.873188406	0.439961232	0.324431995	0.0356526	0.016708	0.945007072	0.891758918	0.4198162	0.31929	0.0466947	0.024119	0.947239483	0.904533333	0.3909287	0.29792	0.0602077	0.034228
	4058d	0.956830797	0.791666667	0.53632436	0.416993464	0.0174071	0.006230001	0.957788612	0.836842105	0.529263151	0.42459893	0.0224801	0.009459	0.954514731	0.865217391	0.5180587	0.42251	0.0300184	0.013522	0.952901148	0.915742794	0.5016534	0.421443	0.0379039	0.017521
	4063d	0.961041571	0.806122449	0.515012891	0.343277311	0.021106193	0.006918854	0.956002821	0.867768595	0.504707305	0.336633987	0.0275112	0.00887	0.95078301	0.882398754	0.4897298	0.328647	0.0360419	0.010377	0.949572033	0.907509158	0.466862	0.330706	0.0498334	0.024813
	4074d	0.968949494	0.772727273	0.700114204	0.555968352	0.021582347	0.007939884	0.969092642	0.85483871	0.69251347	0.532094943	0.0265887	0.011287	0.965101811	0.890625	0.6810904	0.546066	0.0328699	0.012506	0.959228526	0.908528646	0.6646029	0.533269	0.0408235	0.016739
	4082d	0.968818418	0.838461538	0.534582322	0.492924126	0.017342243	0.006797477	0.956234867	0.868421053	0.528092701	0.492114237	0.0210546	0.010729	0.945412952	0.898584906	0.5192538	0.481702	0.0249473	0.013288	0.944895124	0.916037736	0.5084913	0.475358	0.0290227	0.016685
	4083d	0.959106526	0.850746269	0.529673179	0.461554622	0.018333975	0.005099245	0.94402722	0.854460094	0.521090362	0.450083084	0.0241553	0.007476	0.940222709	0.890873016	0.5081413	0.440061	0.0314768	0.010531	0.952651942	0.897368421	0.4874544	0.418675	0.0430894	0.013992
	4084d	0.945246707	0.815217391	0.529512012	0.400160064	0.02689923	0.008981029	0.944656887	0.852564103	0.51829768	0.408039216	0.0345477	0.011194	0.938310537	0.866412214	0.5018051	0.394559	0.0444652	0.023536	0.937441835	0.899538106	0.474818	0.385109	0.0573018	0.032481
	6005d	0.858560505	0.638888889	0.56682304	0.482583622	0.053507191	0.026369081	0.858388508	0.739711934	0.553391841	0.468753373	0.0590417	0.033125	0.851417463	0.769379845	0.5370268	0.465105	0.0653837	0.042556	0.853093449	0.795670996	0.5186581	0.414664	0.0698322	0.043878
	6017d	0.889140085	0.75	0.525148958	0.460945034	0.033841759	0.01378276	0.884878272	0.808411215	0.518914971	0.45982995	0.0356594	0.019569	0.886463905	0.827586207	0.5105696	0.455638	0.0384967	0.022669	0.891698571	0.835360908	0.4996996	0.450073	0.0429077	0.026156
	6023d	0.812846051	0.659090909	0.486866257	0.428219915	0.052038026	0.025231516	0.826063731	0.724637681	0.479240387	0.406846673	0.0534934	0.032806	0.83609616	0.774305556	0.4688011	0.402121	0.0566196	0.038239	0.843395891	0.794736842	0.454056	0.390051	0.061575	0.041801
	6024d	0.848512913	0.703125	0.560823895	0.501886792	0.053043381	0.02959615	0.844243455	0.745421245	0.551405903	0.48959276	0.055864	0.027865	0.845788901	0.769151139	0.540884	0.48289	0.0581681	0.037632	0.851436088	0.807400932	0.5265521	0.468912	0.061561	0.03853
	6025d	0.858564965	0.728813559	0.625214014	0.562056174	0.04668955	0.025403061	0.867136077	0.765060241	0.617304447	0.550537634	0.0504821	0.028879	0.873202706	0.81441048	0.6102497	0.550876	0.0542193	0.034413	0.876233857	0.829537954	0.599058	0.535083	0.0587385	0.041012
	6028d	0.919259681	0.798850575	0.459168717	0.411960784	0.032951148	0.012754666	0.93353204	0.847094801	0.451763241	0.397486882	0.0347018	0.016385	0.939312194	0.879694836	0.442487	0.399684	0.037474	0.02016	0.934202174	0.874899112	0.4285999	0.395769	0.0422557	0.028939
	6031d	0.846027261	0.744680851	0.482812581	0.416065781	0.048321002	0.020427911	0.860873151	0.765822785	0.467951397	0.407352941	0.0532581	0.028996	0.8696217	0.804245283	0.4512693	0.37889	0.0587804	0.035001	0.879899207	0.839821573	0.4294974	0.365655	0.0641554	0.037495
	6044d	0.948645959	0.802469136	0.57684902	0.478003565	0.035670971	0.017453966	0.943508149	0.847953216	0.568322164	0.482695603	0.0388975	0.021847	0.932341968	0.867895545	0.5564305	0.47128	0.0435962	0.025311	0.922282672	0.86996337	0.5388814	0.479782	0.0502602	0.028359
	6045d	0.842152715	0.710526316	0.508486101	0.424355005	0.048846066	0.023098865	0.849715429	0.75	0.498159434	0.414190761	0.0522602	0.032785	0.856714061	0.791125541	0.4863786	0.376985	0.0557058	0.033521	0.861143449	0.824666667	0.4690021	0.396386	0.0615022	0.035089
	6048d	0.938890116	0.8125	0.449907214	0.381719457	0.035245939	0.012058135	0.941996262	0.838709677	0.445030367	0.390316742	0.036931	0.016708	0.942772847	0.854545455	0.4394275	0.371668	0.0384792	0.021316	0.941954048	0.881916329	0.4290662	0.372127	0.0418249	0.026162
	6049d	0.868371791	0.758333333	0.506888948	0.459467369	0.034963482	0.007982173	0.878174653	0.775280899	0.501326965	0.447937255	0.0372908	0.010828	0.883913501	0.802259887	0.4956227	0.442462	0.0397653	0.014208	0.892884866	0.844758065	0.4836701	0.422903	0.0447789	0.027673
	6050d	0.932614481	0.78125	0.551088078	0.479076014	0.037680338	0.015501918	0.917920811	0.81512605	0.540306443	0.487695368	0.0421034	0.016548	0.908993927	0.828063241	0.5274925	0.482188	0.0474609	0.02423	0.90867913	0.8382263	0.5069935	0.455346	0.0552752	0.030015
	6051d	0.908257591	0.785310734	0.564588054	0.488655462	0.044824782	0.027671864	0.902213252	0.811594203	0.555908588	0.481568627	0.0473577	0.02903	0.897343985	0.800995025	0.5453785	0.470181	0.0503333	0.030347	0.89427057	0.852552553	0.5307945	0.45786	0.0562674	0.03681

NOT CANCER IMAGES	6053d	0.897954256	0.773049645	0.546021612	0.467064507	0.045465763	0.023224955	0.890299089	0.8	0.539426454	0.477671379	0.0475504	0.02819	0.889102523	0.834101382	0.5305172	0.485269	0.0506464	0.038408	0.886773159	0.844370861	0.5158205	0.455107	0.0557993	0.041301
	6054d	0.827403553	0.6875	0.479779272	0.276319759	0.034630905	0.011497347	0.847770672	0.7	0.47100428	0.285366357	0.0384544	0.017463	0.866193244	0.75	0.459927	0.363569	0.0447547	0.021979	0.882578491	0.810344828	0.4417935	0.36482	0.0542246	0.022571
	6055d	0.845091846	0.728813559	0.508634613	0.460945034	0.035251055	0.013814205	0.848620783	0.76635514	0.502528314	0.447233894	0.0372703	0.016611	0.858956221	0.789325843	0.4942173	0.411607	0.0392615	0.02243	0.879157973	0.81884058	0.4813791	0.417942	0.0431624	0.030775
	6056d	0.851506674	0.75203252	0.525285808	0.474798155	0.044960189	0.02417395	0.849690751	0.780797101	0.517717534	0.474343636	0.0472541	0.025706	0.851742223	0.800518135	0.5097547	0.477478	0.0498506	0.034252	0.855811194	0.811377246	0.497856	0.455211	0.0537962	0.039322
	6061d	0.849671624	0.734042553	0.488787971	0.43627451	0.030334649	0.010779361	0.864451338	0.783783784	0.484222807	0.439517345	0.0326351	0.013724	0.879928648	0.810386473	0.4785821	0.442077	0.0346638	0.018034	0.894723891	0.845873786	0.4711669	0.441312	0.0381859	0.023477
	6065d	0.86035389	0.76	0.51540658	0.456427015	0.040487013	0.017566993	0.864917338	0.763888889	0.507951366	0.46109584	0.042783	0.025803	0.872823071	0.819095477	0.4982877	0.454929	0.046091	0.027709	0.88199135	0.834128878	0.4837726	0.428257	0.0507532	0.030908
	6074d	0.892849356	0.763888889	0.462950021	0.384480601	0.036239916	0.015333684	0.905927451	0.782608696	0.451410081	0.369166667	0.0406814	0.020885	0.910112136	0.830935252	0.4372227	0.356606	0.047111	0.024268	0.916628653	0.874501992	0.4135524	0.343302	0.0570371	0.030198
	6075d	0.858423041	0.732758621	0.505293584	0.477578858	0.028152872	0.012027385	0.868359383	0.784946237	0.497305347	0.463804208	0.0309263	0.016048	0.889749978	0.822115385	0.4867429	0.440336	0.0343275	0.016897	0.917709736	0.863036304	0.4693082	0.436674	0.0405846	0.020146
	6077d	0.842684134	0.711538462	0.497724996	0.449346405	0.034514381	0.009952407	0.854286104	0.778761062	0.488560783	0.424229692	0.0376141	0.018114	0.87692757	0.792517007	0.4764268	0.413725	0.0418063	0.023986	0.898130212	0.845870206	0.4598959	0.406958	0.0477178	0.028536
	6079d	0.859432371	0.73	0.505340725	0.445407637	0.044747638	0.010696495	0.862744171	0.75	0.495042322	0.429198214	0.0479727	0.021476	0.87108366	0.76489533	0.4826531	0.412878	0.052593	0.022832	0.88112197	0.806827309	0.4667199	0.397615	0.0572723	0.029692
	6084d	0.921107209	0.752688172	0.560903642	0.512211902	0.04137585	0.01655729	0.91171201	0.771386431	0.550039059	0.497254902	0.0455249	0.025028	0.905541541	0.82248062	0.5371585	0.477512	0.0508908	0.030727	0.901734172	0.838600451	0.5199315	0.459478	0.0586225	0.036824
	6085d	0.850511669	0.710526316	0.605629541	0.5683391	0.047226268	0.025182251	0.857762986	0.766129032	0.599234361	0.567320261	0.0495642	0.032297	0.864273159	0.818466354	0.5915879	0.535536	0.0518104	0.038251	0.869928139	0.835025381	0.580766	0.521421	0.054927	0.043705
	6089d	0.83620822	0.720125786	0.349020836	0.249960784	0.048972094	0.022546068	0.847558924	0.741304348	0.338998754	0.278390944	0.0522595	0.032928	0.86409375	0.778888889	0.3244739	0.266722	0.0575199	0.034923	0.87222952	0.819932998	0.3032888	0.25629	0.0654944	0.047215
	6091d	0.953750564	0.805555556	0.405992507	0.352655971	0.029482754	0.008954179	0.941750365	0.83984375	0.399119937	0.34402852	0.0313548	0.013329	0.926598438	0.868085106	0.3892026	0.325911	0.0345925	0.018391	0.923876769	0.886414254	0.3738587	0.335553	0.0409251	0.031869
	6093d	0.832076602	0.685714286	0.501526981	0.441673983	0.031009523	0.008181687	0.839769269	0.698275862	0.495761642	0.419815805	0.0329564	0.010555	0.856042756	0.783783784	0.4895177	0.415132	0.0347594	0.015195	0.872429069	0.810810811	0.482184	0.381457	0.0374365	0.025003
	6094d	0.833424198	0.711111111	0.499990113	0.461935885	0.042918703	0.028013089	0.847855371	0.754716981	0.491332096	0.436528686	0.0447291	0.028547	0.869341001	0.811507937	0.4777626	0.432668	0.0474083	0.033364	0.886718163	0.83956044	0.4615342	0.419522	0.0514416	0.035722
	6102d	0.895108681	0.773584906	0.536755764	0.465931373	0.044667014	0.015471522	0.892271681	0.787735849	0.53079524	0.465875473	0.0469327	0.027461	0.892656274	0.83045977	0.5233676	0.436129	0.0498362	0.02948	0.89569888	0.850383632	0.5112867	0.450548	0.0542358	0.028391
	6105d	0.896472596	0.714285714	0.555184047	0.479837218	0.046770127	0.0154785	0.885798241	0.760536398	0.545920777	0.451258025	0.0504706	0.02706	0.882527801	0.818666667	0.5347896	0.420039	0.0545288	0.032955	0.884199479	0.829987835	0.5191546	0.414677	0.0606052	0.040146
	6599d	0.923988475	0.786885246	0.542287628	0.45078099	0.037239129	0.014262846	0.91401722	0.806451613	0.531395253	0.439319799	0.0413219	0.0172	0.907736511	0.841897233	0.518008	0.442523	0.0453465	0.025694	0.91186205	0.873091603	0.4989531	0.449522	0.0515393	0.026451
	6602d	0.91596221	0.783333333	0.525295452	0.475028835	0.025695057	0.008677008	0.906536454	0.777777778	0.518192809	0.466849918	0.0278628	0.009813	0.902162557	0.795495495	0.508309	0.445275	0.031531	0.01475	0.912861272	0.847026604	0.4940194	0.433874	0.0375762	0.018898
	6605d	0.906004876	0.68115942	0.398828852	0.227216857	0.046603254	0.014795604	0.901511603	0.745454545	0.382468937	0.226864289	0.0530364	0.014518	0.904906585	0.769417476	0.363564	0.221923	0.0599814	0.018713	0.914150212	0.823440644	0.3407321	0.223613	0.066578	0.029511
	6612d	0.909227567	0.699186992	0.41183304	0.338146168	0.044512312	0.01956236	0.900275029	0.794520548	0.402088696	0.345218703	0.0471883	0.020675	0.899866982	0.825	0.3915419	0.321271	0.0502865	0.029751	0.901692369	0.846581197	0.3773129	0.309952	0.0533549	0.036287
	6617d	0.844739292	0.691176471	0.488875005	0.393537697	0.041107769	0.015813212	0.855146761	0.74137931	0.481288688	0.379632163	0.0445463	0.018613	0.865595004	0.775757576	0.4726353	0.381636	0.0489803	0.027476	0.876122757	0.830494037	0.4577692	0.352112	0.0564028	0.031108
	6622d	0.869896852	0.739130435	0.613072866	0.571362229	0.037788977	0.018528883	0.886133848	0.793103448	0.607652261	0.568532574	0.0388199	0.017029	0.896389638	0.813793103	0.6001347	0.559923	0.04113	0.027086	0.905648074	0.842783505	0.5897042	0.555324	0.0443774	0.03385
	6627d	0.819150269	0.625	0.404479937	0.270523947	0.078580144	0.031654413	0.830641112	0.722222222	0.390965777	0.288544892	0.0853818	0.047295	0.846508846	0.765060241	0.3784738	0.290967	0.0900134	0.057419	0.861421879	0.8166215	0.3637359	0.277782	0.0942853	0.068703
	6637d	0.84775001	0.720930233	0.517940877	0.453566959	0.048620546	0.026904008	0.848297984	0.733870968	0.509291309	0.460531936	0.0518889	0.031598	0.85725568	0.784946237	0.4970381	0.442764	0.0561365	0.036655	0.867367366	0.815518606	0.4814088	0.430264	0.0606393	0.045557
	6642d	0.859339938	0.75	0.495228718	0.422222222	0.044986892	0.021373658	0.872406837	0.783018868	0.484195512	0.41384083	0.0478518	0.026329	0.885250911	0.828638498	0.4704707	0.406162	0.0523811	0.031381	0.894448361	0.858554874	0.4489992	0.389284	0.058799	0.034209
	6643d	0.844428851	0.705357143	0.474613953	0.415741508	0.047185193	0.024714687	0.859229817	0.780054645	0.461117071	0.410196078	0.0520264	0.030117	0.861702134	0.803961749	0.4410349	0.391095	0.0601117	0.036834	0.866240435	0.806737589	0.4106294	0.354046	0.0716616	0.046843
	6644d	0.978218634	0.844444444	0.446570613	0.371585827	0.024620633	0.006519083	0.978787576	0.899082569	0.440328635	0.376703224	0.0276157	0.009535	0.975786908	0.877893519	0.4309626	0.389449	0.0313519	0.015758	0.960099742	0.896713615	0.4170873	0.380589	0.0383403	0.024504
	6667d	0.890179602	0.704545455	0.564237608	0.508750366	0.047912278	0.025570776	0.886918922	0.783950617	0.557213357	0.494901961	0.0510024	0.031605	0.880783958	0.80982906	0.5502096	0.504553	0.0534645	0.034017	0.877514349	0.833333333	0.5361711	0.477536	0.0588303	0.037759
	6675d	0.859516713	0.7	0.510916826	0.386563806	0.04952887	0.017998648	0.861166016	0.771186441	0.503594973	0.39626083	0.0531324	0.026879	0.860419122	0.797058824	0.4964965	0.398731	0.0557546	0.028377	0.862647443	0.820402299	0.4851746	0.427478	0.0603081	0.032235
	6677d	0.838653559	0.672222222	0.507551032	0.42678733	0.053224569	0.027015125	0.844703099	0.745049505	0.49261401	0.387700535	0.0586717	0.030079	0.851960936	0.787786775	0.4730655	0.371606	0.066125	0.036147	0.865353395	0.808798646	0.445741	0.363962	0.0781993	0.042076
	6687d	0.854029862	0.730769231	0.463482415	0.372362278	0.050994673	0.022189275	0.863805373	0.763888889	0.453549761	0.381407563	0.0553561	0.023891	0.874087416	0.814553991	0.4422572	0.380668	0.0585789	0.027456	0.88302514	0.840664712	0.4271229	0.375723	0.0645102	0.034035
	6688d	0.856317693	0.721311475	0.468465544	0.232428356	0.039810054	0.013982586	0.870546879	0.749213836	0.456128621	0.26532872	0.0460992	0.022234	0.880188781	0.803648069	0.4384961	0.323752	0.0556974	0.026834	0.885791324	0.838169643	0.4163789	0.32358	0.066071	0.032693
	6706d	0.914123315	0.777777778	0.565306431	0.471809707	0.045261493	0.021085745	0.908620855	0.769547325	0.557614271	0.485571587	0.049437	0.030816	0.904651843	0.81462585	0.5495248	0.49388	0.0529452	0.03358	0.899023829	0.851806904	0.5360527	0.493326	0.0597539	0.039583
	6707d	0.926860016	0.789473684	0.566293618	0.495910364	0.041034502	0.024246665	0.920194071	0.807692308	0.560087446	0.495734434	0.0427078	0.024256	0.91322089	0.825	0.5529437	0.514785	0.0447432	0.031417	0.902332275	0.84556314	0.5433376	0.506215	0.0480462	0.034772
	6709d	0.872076921	0.683908046	0.531728378	0.457278669	0.044282961	0.021617956	0.858428572	0.751937984	0.521316221	0.43052549	0.0476398	0.024729	0.855380324	0.776190476	0.5075236	0.427468	0.0535097	0.030809	0.860156032	0.807566862	0.4901482	0.407958	0.0591845	0.036366
	6714d	0.85367809	0.744444444	0.513603929	0.473887333	0.033003715	0.016670347	0.856170064	0.785714286	0.504872597	0.465761689	0.0361144	0.018662	0.871494498	0.810945274	0.4929287	0.458055	0.0399037	0.025203	0.894908562	0.845890411	0.4740895	0.439346	0.0479945	0.033037
	96-3-21	0.96243512	0.758928571	0.471158978	0.358127767	0.015314369	0.003378982	0.959637785	0.805825243	0.468635541	0.372516876	0.017843	0.006925	0.957892452	0.840659341	0.465129	0.372416	0.0213087	0.008008	0.954848329	0.872315036	0.4583326	0.376877	0.0261838	0.009672
	As0598ad	0.925693936	0.764367816	0.518853506	0.402828672	0.034566859	0.010226426	0.928491623	0.801900585	0.50629549	0.408501721	0.0414262	0.013991	0.935770246	0.835425384	0.488939	0.39737	0.0494682	0.023352	0.941794939	0.898148148	0.4657997	0.393887	0.0582742	0.033895
	gc0697ad	0.989012899	0.830188679	0.428611585	0.367251462	0.018686359	0.00667051	0.977952002	0.88115942	0.420365726	0.364166217	0.0242529	0.007766	0.967373121	0.898907104	0.4093994	0.350315	0.0302736	0.011698	0.960016108	0.912529551	0.3944144	0.320253	0.0382328	0.014858
	hm1096ad	0.971910103	0.839285714	0.6712323	0.638823529	0.014540291	0.005784115	0.960628197	0.855855856	0.666555938	0.630410655	0.0168925	0.007488	0.949534192	0.885714286	0.6602445	0.618533	0.0198509	0.009674	0.945948321	0.899122807	0.6505176	0.600635	0.0252582	0.012521
	jb0298ad	0.986864662	0.876923077	0.567635888	0.519520047	0.022875574	0.009768162	0.977042197	0.889380531	0.559174574	0.50994152	0.0267098	0.012649	0.97085332	0.908745247	0.5478671	0.476813	0.0315174	0.013126	0.966671133	0.922686946	0.532394	0.459686	0.0392125	0.016499
	kk0498ad	0.872010551	0.75	0.483920579	0.408251634	0.055733735	0.028459955	0.871477957	0.784946237	0.462604718	0.371655989	0.0663745	0.034696	0.874037304	0.821969697	0.4389798	0.354036	0.0756769	0.047477	0.88539969	0.845321637	0.4103409	0.329957	0.0856278	0.06121
	km0301ad	0.965008046	0.763157895	0.475448897	0.354313725	0.016169945	0.00610694	0.965362377	0.806818182	0.471595051	0.353578012	0.0187663	0.008011	0.965984054	0.86	0.466326	0.358514	0.0222519	0.009709	0.964449766	0.896551724	0.4571342	0.381568	0.0269892	0.014059
	Ld1196ad	0.949085614	0.802083333	0.660494564	0.606215316	0.018251665	0.002900706	0.94442613	0.842857143	0.655000282	0.599680803	0.022102	0.006634	0.943744158	0.887417219	0.648283	0.599038	0.026556	0.008251	0.948118293	0.91367713	0.6360208	0.579724	0.033913	0.015621
	Ma0899ad	0.872236007	0.75862069	0.467298439	0.343417367	0.052840766	0.012782383	0.876387859	0.796747967	0.44244928	0.310025897	0.066712	0.028772	0.888798975	0.838624339	0.4108005	0.274716	0.0829113	0.040378	0.903907605	0.872503121	0.3681622	0.292549	0.0984768	0.078762
	mj0798ad	0.974117573	0.843137255	0.454473731	0.391331269	0.022296649	0.009061864	0.974877232	0.862318841	0.447057357	0.385141212	0.0270898	0.010493	0.975370597	0.878787879	0.4374585	0.363122	0.0317573	0.015201	0.970395695	0.917983446	0.4225669	0.341125	0.0407117	0.020547
	Ra0199ad	0.971839267	0.833333333	0.681867384	0.540030166	0.018375447	0.005030403	0.972600891	0.869158879	0.673845267	0.54052779	0.0234454	0.008287	0.970237529	0.89516129	0.6609992	0.535972	0.0315509	0.014506	0.966111676	0.923440454	0.6388061	0.514508	0.0448819	0.020268
	Ra0997ad	0.955582781	0.810344828	0.573509315	0.422096531	0.021528173	0.009098601	0.949166438	0.820512821	0.566066052	0.403311547	0.0265759	0.011233	0.947427415	0.851388889	0.5542231	0.397017	0.03466	0.015939	0.94250365	0.864808153	0.533597	0.383766	0.0478725	0.017652

Cb Channel (Cb)

Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
CANCER IMAGES	4023d	0.995454545	0	0.409454616	0.372268908	0.004531092	1.68158E-16	1	1	0.409915062	0.37933635	0.0055697	0.001965	1	1	0.4115344	0.381761	0.0069635	0.002314	1	1	0.415215	0.384758	0.009859	0.003161
	4025d	0.984368612	0.851851852	0.381809405	0.347641759	0.006890007	1.14439E-16	0.981590506	0.868852459	0.379658751	0.346310895	0.0087061	0.00149	0.979796167	0.897142857	0.3770615	0.349566	0.0108672	0.002224	0.98092373	0.943661972	0.3743639	0.352039	0.0120716	0.003757
	4030d	0.994920156	0.821428571	0.381727461	0.359325125	0.004452057	2.2727E-16	0.99521858	0.882653061	0.38087426	0.358486829	0.0054736	0.001515	0.99499563	0.929460581	0.3801729	0.359229	0.0067083	0.002151	0.995581313	0.945233266	0.3802919	0.361626	0.0082096	0.003356
	4044d	1	1	0.434359936	0.403660131	0.004464074	5.62368E-17	1	1	0.432920669	0.403176146	0.0057072	5.6E-16	1	1	0.4309982	0.403594	0.0072662	0.001305	1	1	0.4288351	0.404805	0.0086836	0.002658
	6015d	1	1	0.435382921	0.420359925	0.003401877	5.61681E-17	1	1	0.43572856	0.42254902	0.0040382	5.58E-17	1	1	0.4366175	0.425087	0.0050449	0.001096	1	1	0.4382786	0.42674	0.0065036	0.002085
	6052d	0.999452298	0.78125	0.428429238	0.404719176	0.005562978	0.000627954	0.999765176	0.93220339	0.426841377	0.403610333	0.0064625	0.001449	0.999878056	0.971830986	0.4253934	0.40457	0.0075209	0.002635	0.99982198	0.98136646	0.4237399	0.404142	0.0085012	0.003548
	95-13-15.jpg	0.997273651	0.833333333	0.450038714	0.37254902	0.003419313	0	0.996732074	0.882075472	0.45028816	0.37254902	0.0045998	0	0.996639825	0.906504065	0.4506306	0.376515	0.0060244	0	0.996378709	0.939114391	0.4512884	0.389357	0.0079627	1.11E-15
	95-13-17.jpg	0.998257034	0.920634921	0.448345375	0.369550173	0.005666612	0	0.998295905	0.940366972	0.448195371	0.369659443	0.0075763	0	0.99859318	0.971861472	0.4474848	0.369539	0.0100862	5.61E-16	0.998317765	0.978873239	0.4469	0.376463	0.0130688	1.56E-15
	96-22-19	0.990640074	0.714285714	0.395100857	0.324537815	0.006614581	0	0.990023442	0.85483871	0.393873448	0.326134036	0.0086216	6.15E-16	0.99051602	0.888157895	0.3918209	0.327582	0.0109232	0.001491	0.988834637	0.912751678	0.3890463	0.331158	0.0135575	0.003721
	Bg0899ad	0.997054571	0.84375	0.42514736	0.361378491	0.008099748	0.001574509	0.996549841	0.910958904	0.424513113	0.369173492	0.0104602	0.002933	0.997927149	0.949612403	0.4241149	0.379559	0.0136671	0.004177	0.99786836	0.971681416	0.4219897	0.382858	0.018318	0.006965
	Bm0300ad	0.999219592	0.898305085	0.408129658	0.363091119	0.004848348	0	0.999550735	0.9453125	0.407144742	0.365374677	0.006148	1.12E-16	0.999560377	0.961722488	0.406068	0.366368	0.0077425	0.000388	0.999615377	0.98034398	0.405501	0.371611	0.0092434	0.002928
	Fj0297ad	0.994481199	0.714285714	0.382070994	0.352168746	0.004383862	1.14439E-16	0.994207631	0.722222222	0.381611145	0.353693258	0.0052718	0.000423	0.994820344	0.876106195	0.381982	0.352454	0.0064523	0.001866	0.995535989	0.930155211	0.3835086	0.356914	0.0082773	0.002609
	Fj1200ad	0.997868127	0.836734694	0.388648811	0.36130719	0.005482134	2.24873E-16	0.997174113	0.866197183	0.386835256	0.359204793	0.0068408	0.000915	0.996223142	0.927272727	0.3847344	0.359483	0.0080408	0.003129	0.994739165	0.939252336	0.3827246	0.362318	0.0092877	0.004476
	Fn1200ad	1	1	0.445264513	0.425008036	0.003017693	5.6184E-17	1	1	0.445993107	0.426741761	0.0039203	5.58E-17	1	1	0.4471226	0.429773	0.0051345	0.001039	1	1	0.4490017	0.429379	0.0065077	0.002226
	Gs0499ad	1	1	0.45063039	0.391285403	0.004342842	1.12277E-16	1	1	0.448755312	0.388898094	0.0056678	5.03E-16	1	1	0.4457552	0.390386	0.0077223	0.001078	0.99978731	0.986449864	0.44106	0.386634	0.0109902	0.002555
	hn0996ad	1	1	0.430035527	0.407640297	0.003160932	5.61681E-17	1	1	0.428928174	0.406699346	0.0039621	1.12E-16	1	1	0.4276048	0.407227	0.0049293	0.000687	1	1	0.4257229	0.403523	0.0063508	0.001975
	kh0598ad	0.999851376	0.96031746	0.40389686	0.374916759	0.006508521	0.001107176	0.999039771	0.92173913	0.401246951	0.371316527	0.0079535	0.002117	0.997545685	0.93852459	0.3979613	0.367935	0.009844	0.003121	0.996151855	0.948412698	0.3941186	0.367531	0.0117851	0.004452
	Kr1196ad	0.971073356	0.722222222	0.380213971	0.328307097	0.006622044	2.79938E-16	0.972229345	0.783018868	0.378147056	0.3285483	0.0084078	0.001377	0.973467625	0.845238095	0.3759886	0.325347	0.0103427	0.001996	0.975824901	0.911578947	0.3742094	0.331253	0.0120788	0.003843
	Lj0899ad	1	1	0.424097047	0.384730914	0.008103075	0.00057202	1	1	0.422499157	0.391682827	0.0100494	0.002705	1	1	0.4218003	0.396021	0.0121565	0.003115	1	1	0.423716	0.403437	0.0142746	0.007589
	lj1196ad	0.97233667	0.75862069	0.343137251	0.29428815	0.007108569	5.59239E-17	0.977004242	0.787878788	0.340223088	0.299155354	0.0087286	0.002214	0.982259288	0.862903226	0.3371906	0.300561	0.0101683	0.00392	0.986426518	0.917085427	0.3344329	0.306255	0.0116084	0.005961
	mk1096ad	0.99969986	0.925531915	0.405784641	0.361356209	0.004903976	0	0.999751166	0.95505618	0.407099115	0.368932462	0.0061414	0	0.999827872	0.98245614	0.40935	0.38082	0.0079649	3.36E-16	0.999833126	0.991208791	0.4131705	0.385471	0.0105264	0.000734
	mm0598ad	0.99988461	0.976190476	0.401964772	0.366884532	0.006532547	0.000636162	0.999642452	0.96039604	0.401511166	0.366828566	0.0084994	0.000636	0.999664481	0.968944099	0.4013923	0.367793	0.0102767	0.001965	0.999380108	0.989719626	0.4027693	0.373859	0.0122926	0.004194
	Mm0899ad	0.995406271	0.857142857	0.387740203	0.361953904	0.006102106	0.00152569	0.994017829	0.899082569	0.385910638	0.361283422	0.0075302	0.001899	0.993049019	0.917410714	0.3834956	0.361464	0.0090516	0.003513	0.989827154	0.959876543	0.3812752	0.366332	0.0107464	0.005828
	Nd0599ad	0.996524339	0.867924528	0.38898786	0.361352657	0.007659627	0.001482214	0.992830554	0.896226415	0.385610898	0.357313196	0.0092601	0.003203	0.988320671	0.922619048	0.3811612	0.355978	0.0110132	0.004789	0.982929551	0.941400304	0.3762216	0.35291	0.0127487	0.006796
	Rk0399ad	1	1	0.414250805	0.378641457	0.007964161	0.001022201	1	1	0.413635228	0.377868375	0.010334	0.00126	1	1	0.4136379	0.381757	0.0131763	0.003776	1	1	0.4141489	0.383067	0.0166613	0.005641
	Rl0298ad	1	1	0.410125714	0.399179207	0.003007359	1.12336E-16	1	1	0.409294829	0.401731143	0.0036196	7.25E-16	1	1	0.4085934	0.402434	0.0041846	0.000705	1	1	0.4081064	0.402573	0.0048653	0.001668
	sd0597ad	1	1	0.43510146	0.401449275	0.003332443	0	1	1	0.434179479	0.404145658	0.0042627	1.67E-16	1	1	0.4326785	0.407941	0.005533	0.000469	1	1	0.4301544	0.41197	0.0073508	0.00315
	Wa0499ad	0.999007968	0.916666667	0.39264778	0.370915033	0.006868248	0.000791925	0.999239051	0.956896552	0.396241949	0.37486174	0.0090891	0.002088	0.999310242	0.974226804	0.4009741	0.378733	0.0116902	0.004339	0.999648694	0.989563567	0.4075674	0.384967	0.0146051	0.007106
	zp0298ad	1	1	0.41049774	0.378772379	0.005869218	1.12277E-16	1	1	0.40883741	0.376041219	0.0075798	0.001825	0.99973559	0.983870968	0.4071122	0.383376	0.009937	0.002803	0.999762154	0.992351816	0.4063502	0.385321	0.0116897	0.004455
	zr0798ad	1	1	0.421010209	0.396461023	0.00720778	0.001990271	1	1	0.417596598	0.391221034	0.0092108	0.002322	1	1	0.4137347	0.390784	0.0112168	0.003602	0.99978623	0.993258427	0.4084215	0.388632	0.0138096	0.005997
	4056d	1	1	0.421794209	0.391133845	0.004979987	3.35878E-16	1	1	0.423047669	0.399536823	0.0066478	0.001388	1	1	0.4257043	0.402369	0.0090623	0.003491	1	1	0.4309086	0.405438	0.0127968	0.005937
	4058d	1	1	0.393256232	0.368701443	0.003469632	2.79938E-16	1	1	0.3926807	0.369673203	0.0043241	0.00102	1	1	0.3924395	0.369374	0.0054065	0.002185	1	1	0.3927124	0.371343	0.0062112	0.002929
	4063d	1	1	0.423625837	0.3826953	0.005554476	0.001623684	1	1	0.423301251	0.392960463	0.0073828	0.002362	1	1	0.4227464	0.396602	0.0096342	0.004559	1	1	0.4220211	0.399382	0.0125401	0.005341
	4074d	1	1	0.431991368	0.397960784	0.008222528	0.001926077	1	1	0.428347677	0.394782609	0.0106972	0.001966	1	1	0.4229048	0.39321	0.0133746	0.002744	1	1	0.4161146	0.393624	0.0160848	0.003406
	4082d	1	1	0.415869694	0.401437908	0.003515867	5.61384E-17	1	1	0.414857895	0.400993464	0.0041877	0.001676	1	1	0.4143145	0.40201	0.0047838	0.002453	1	1	0.414243	0.405181	0.0055446	0.003124
	4083d	1	1	0.437647691	0.418495757	0.003439137	4.47968E-16	1	1	0.438117785	0.417647059	0.0043381	0.001163	1	1	0.4388738	0.420881	0.0056303	0.001468	1	1	0.4415244	0.430353	0.0080249	0.003678
	4084d	1	1	0.41148948	0.391157247	0.004150937	1.68296E-16	1	1	0.411198307	0.391489362	0.0052194	0.001786	1	1	0.4118169	0.392872	0.0065028	0.003196	1	1	0.4131964	0.393774	0.007856	0.004632
	6005d	1	1	0.408536117	0.387226891	0.00714977	0.00089967	1	1	0.406811769	0.391148459	0.0079608	0.001807	1	1	0.4065321	0.393274	0.0092447	0.002695	1	1	0.4070299	0.394661	0.0107056	0.005127
	6017d	1	1	0.443789023	0.431693989	0.002871082	5.61681E-17	1	1	0.444633939	0.432851173	0.0036514	2.23E-16	1	1	0.4462679	0.434845	0.0049562	0.000651	1	1	0.4487004	0.4376	0.0066423	0.001779

NOT CANCER IMAGES	6023d	1	1	0.428285327	0.409851746	0.003717171	5.61529E-17	1	1	0.429374472	0.41318214	0.0048351	0.000905	1	1	0.4313461	0.41472	0.0064458	0.002284	1	1	0.43477	0.414244	0.0090881	0.002768
	6024d	1	1	0.430841758	0.412231559	0.004205976	2.24346E-16	1	1	0.431904987	0.413202614	0.0051447	0.000732	1	1	0.4332614	0.417451	0.0063721	0.001716	1	1	0.4356574	0.423854	0.0082403	0.002492
	6025d	1	1	0.408955856	0.390574475	0.006624006	0.002050247	1	1	0.406625276	0.392695117	0.0077497	0.002953	1	1	0.4045217	0.393585	0.0085095	0.005117	1	1	0.402133	0.393849	0.009102	0.006002
	6028d	1	1	0.44189032	0.431434796	0.003834249	1.12474E-16	1	1	0.443907715	0.432886818	0.0053407	0.001806	1	1	0.446869	0.438829	0.0073138	0.002256	1	1	0.4512101	0.4429	0.0096348	0.003422
	6031d	0.999495968	0.9375	0.463549668	0.445820433	0.003933217	0.001178064	0.99956179	0.965517241	0.464645054	0.448413547	0.0050667	0.001435	0.999752972	0.983783784	0.466369	0.448921	0.0065023	0.002226	0.999713395	0.993644068	0.4689515	0.451942	0.0086441	0.004511
	6044d	1	1	0.456747914	0.434562978	0.003167775	1.68896E-16	1	1	0.456864127	0.43522409	0.0038246	0	1	1	0.4573232	0.435204	0.0046067	0.001489	0.999877601	0.989473684	0.4586293	0.436655	0.0057097	0.002146
	6045d	1	1	0.435009401	0.422197558	0.004726962	1.12474E-16	1	1	0.437222111	0.421192315	0.0064489	0.000712	1	1	0.4403686	0.427114	0.008737	0.00231	0.999831532	0.987826087	0.4455354	0.432918	0.0120451	0.003311
	6048d	1	1	0.441651783	0.433666297	0.002997178	0	1	1	0.442656265	0.434063822	0.0039967	1.12E-16	1	1	0.4443805	0.435027	0.0053519	0.000894	1	1	0.4474199	0.436379	0.0073943	0.002216
	6049d	1	1	0.44079855	0.432144005	0.002648961	0	1	1	0.44098738	0.432533333	0.0032337	3.35E-16	1	1	0.4413802	0.433992	0.0039794	0.000874	1	1	0.4430501	0.434253	0.0054306	0.001109
	6050d	1	1	0.440348524	0.420211161	0.00307272	2.80318E-16	1	1	0.440987623	0.422939068	0.0040831	0.001062	1	1	0.4423201	0.42771	0.0054568	0.001782	1	1	0.4451303	0.430474	0.007885	0.003093
	6051d	1	1	0.413277332	0.396455505	0.003565343	5.61384E-17	1	1	0.413002964	0.401364024	0.0042986	0.00062	1	1	0.4129499	0.401042	0.0051932	0.002217	1	1	0.4136655	0.403717	0.0065116	0.002808
	6053d	1	1	0.421424744	0.404201681	0.004316727	0	1	1	0.420871252	0.404603581	0.0049503	0.001279	1	1	0.4209692	0.405468	0.0057232	0.001337	1	1	0.4222399	0.405801	0.0076338	0.003448
	6054d	0.999482434	0.906976744	0.446823135	0.42780112	0.004384787	0.000578204	0.999435937	0.946808511	0.445643761	0.428296809	0.005255	0.001466	0.999571049	0.959349593	0.4445851	0.429506	0.0064623	0.002467	0.999787609	0.983766234	0.4440621	0.431701	0.0078758	0.003821
	6055d	0.998517505	0.844827586	0.414267096	0.398308343	0.003234052	0	0.998795292	0.902061856	0.414942511	0.399746996	0.0040919	0.00042	0.999129698	0.943786982	0.4160652	0.401371	0.0051297	0.001938	0.999554376	0.976789168	0.4184109	0.402121	0.0069257	0.002643
	6056d	1	1	0.424504557	0.399286988	0.0046285	0.000855234	1	1	0.423240625	0.399157349	0.0055194	0.002122	1	1	0.4219562	0.402098	0.0064238	0.002963	1	1	0.4207984	0.402487	0.0073237	0.002942
	6061d	1	1	0.447116747	0.431204482	0.003761459	3.92159E-16	1	1	0.446485014	0.431848739	0.0043803	0.001867	1	1	0.4457972	0.432635	0.0052049	0.002142	1	1	0.4452186	0.432591	0.0062029	0.002696
	6065d	1	1	0.445360119	0.434690799	0.004180342	0	1	1	0.447304785	0.435294118	0.0057618	6.15E-16	1	1	0.4499325	0.436627	0.0075697	0.002449	1	1	0.4539625	0.441503	0.0095491	0.00304
	6074d	1	1	0.422963772	0.400217865	0.004497153	0.00078398	1	1	0.424997629	0.402427638	0.0061184	0.001341	1	1	0.428158	0.404831	0.0086053	0.001853	0.999973737	0.998003992	0.4343109	0.407816	0.0131258	0.003505
	6075d	1	1	0.446735302	0.433511586	0.002621441	2.24612E-16	1	1	0.447001119	0.434093637	0.0031308	1.12E-16	1	1	0.44777	0.437264	0.0039608	0.000935	1	1	0.4502497	0.440043	0.0060455	0.002533
	6077d	1	1	0.452059626	0.437908497	0.003125415	2.80318E-16	1	1	0.452262263	0.440294118	0.0036594	1.11E-15	1	1	0.4529091	0.439937	0.0045663	0.001029	1	1	0.4548124	0.440801	0.0062679	0.002111
	6079d	1	1	0.427276087	0.410482655	0.003529327	5.62183E-17	1	1	0.427786222	0.41211329	0.0044653	0.000379	1	1	0.4290568	0.413805	0.0058738	0.00196	1	1	0.4316301	0.416618	0.0080466	0.002472
	6084d	1	1	0.421239893	0.405374001	0.003862833	5.03613E-16	1	1	0.421982914	0.408550789	0.0050907	0.000986	1	1	0.4237315	0.411376	0.0067959	0.002328	1	1	0.4268389	0.41642	0.0094279	0.003208
	6085d	1	1	0.395010931	0.37780559	0.004895496	5.60635E-17	1	1	0.393997066	0.378249818	0.0057432	0.00195	1	1	0.3929187	0.379648	0.0063094	0.002554	1	1	0.3917899	0.379891	0.0068963	0.00327
	6089d	1	1	0.407988517	0.389715131	0.004210097	1.12336E-16	1	1	0.408786314	0.391029412	0.0053387	0.001611	1	1	0.4109825	0.396866	0.0078207	0.002809	1	1	0.4157624	0.401284	0.0119856	0.005272
	6091d	1	1	0.451787045	0.439548023	0.002430639	0	1	1	0.452213173	0.441209704	0.0031003	3.9E-16	1	1	0.453258	0.442432	0.0039308	0.0012	1	1	0.4556829	0.4457	0.0060806	0.001924
	6093d	1	1	0.446426121	0.433263305	0.003111863	1.12306E-16	1	1	0.445884537	0.433660131	0.0034805	3.91E-16	1	1	0.4454221	0.434891	0.0039002	0.00198	1	1	0.4452309	0.43582	0.0042474	0.002376
	6094d	1	1	0.433201993	0.423590686	0.00302942	4.47714E-16	1	1	0.434277418	0.424152465	0.0039035	0.000581	1	1	0.4366406	0.426169	0.0057088	0.001475	1	1	0.4406042	0.428644	0.0085016	0.002516
	6102d	1	1	0.421476242	0.407692308	0.003314197	1.12249E-16	1	1	0.422077997	0.409976932	0.0041459	0.000492	1	1	0.4231398	0.411977	0.0052021	0.001962	1	1	0.4254324	0.413745	0.0070155	0.002886
	6105d	1	1	0.418861275	0.402185792	0.003758569	5.62008E-17	1	1	0.419695645	0.406035539	0.0048429	0.001069	1	1	0.4209797	0.407711	0.0061329	0.001811	1	1	0.4241497	0.408102	0.0086998	0.002666
	6599d	1	1	0.438157843	0.413132695	0.004895341	3.36254E-16	1	1	0.440181078	0.416122004	0.0065385	0.000929	1	1	0.4429918	0.417792	0.0081065	0.001536	0.999922696	0.994897959	0.4466497	0.419694	0.0096965	0.003936
	6602d	1	1	0.439934943	0.414805922	0.004221025	0.000800117	1	1	0.441761653	0.422237601	0.005362	0.00143	1	1	0.4446822	0.425677	0.0071094	0.002535	1	1	0.4489699	0.435762	0.0093862	0.003085
	6605d	0.999590156	0.951612903	0.436810892	0.41324333	0.008650891	0.00082922	0.999416346	0.952380952	0.441644997	0.417006033	0.0114113	0.001074	0.999470705	0.974895397	0.4474496	0.424901	0.0144339	0.002324	0.998928353	0.984126984	0.4547407	0.433016	0.0175417	0.003535
	6612d	1	1	0.448267557	0.428921569	0.007289356	0.001811055	1	1	0.451410205	0.429274966	0.0091627	0.002063	0.999825484	0.987068966	0.4552546	0.434161	0.0113429	0.004335	0.998350706	0.958415842	0.4607876	0.438298	0.014063	0.005908
	6617d	0.999927114	0.979591837	0.395682141	0.377896613	0.006376558	0.001492801	0.999903735	0.989795918	0.394293098	0.374369748	0.0074559	0.002656	0.999908229	0.994845361	0.3931064	0.376271	0.0086689	0.003596	0.999888114	0.996978852	0.3933809	0.378612	0.0102997	0.005642
	6622d	1	1	0.426322571	0.407140767	0.004596897	0.00103832	1	1	0.425079028	0.406515362	0.005427	0.001472	1	1	0.4237575	0.407056	0.0059449	0.002694	1	1	0.4224497	0.407227	0.0065635	0.00399
	6627d	0.995353821	0.875	0.471523266	0.451787774	0.007533324	0.001577937	0.991386821	0.901785714	0.473814265	0.455861785	0.009242	0.002249	0.987520141	0.903508772	0.4762244	0.46148	0.01078	0.004446	0.982764381	0.929133858	0.4793524	0.465745	0.0124797	0.005186
	6637d	1	1	0.428415844	0.409625668	0.004804956	0.00081729	1	1	0.429882966	0.412023677	0.0060685	0.001834	1	1	0.4325169	0.412964	0.0079746	0.002742	1	1	0.4362478	0.417846	0.0105515	0.005289
	6642d	0.998216931	0.9	0.463475066	0.44054396	0.004141628	0.000687718	0.997976124	0.911016949	0.463759108	0.443030303	0.0048653	0.001986	0.998371516	0.941509434	0.4644759	0.445392	0.0058653	0.002282	0.998737874	0.966611018	0.4664441	0.448108	0.0073796	0.003656
	6643d	0.988088832	0.816326531	0.527571265	0.491040724	0.005175077	0.000936161	0.989884181	0.87037037	0.529712658	0.497347174	0.006607	0.00239	0.993404556	0.90625	0.5329839	0.503215	0.008442	0.003688	0.995591733	0.944227006	0.536901	0.509135	0.0103027	0.006057
	6644d	0.978650526	0.845238095	0.507603779	0.487705352	0.003710605	0.000930809	0.981550309	0.88559322	0.508749639	0.48912081	0.0043123	0.001868	0.984179854	0.900406504	0.5101794	0.491371	0.0049955	0.001978	0.985827074	0.913559322	0.5122929	0.494169	0.0059948	0.003163
	6667d	1	1	0.423690589	0.405550528	0.004841169	0	1	1	0.423278688	0.405946641	0.0056209	0.001898	1	1	0.4231368	0.409214	0.0061664	0.002027	1	1	0.4239155	0.409861	0.0069641	0.003407
	6675d	1	1	0.414889062	0.396440422	0.00524143	2.24299E-16	1	1	0.414313425	0.398924731	0.0061682	0.00076	1	1	0.4144752	0.401923	0.0073908	0.001002	1	1	0.4154502	0.403177	0.0088683	0.002566
	6677d	1	1	0.421938445	0.393656286	0.006475131	0.001428711	1	1	0.424588693	0.395665635	0.0089338	0.001949	0.999707167	0.982978723	0.4295265	0.398522	0.0126512	0.003627	0.99958454	0.99034749	0.4374434	0.410437	0.0184389	0.007783
	6687d	1	1	0.436744989	0.417183601	0.004365751	3.36254E-16	1	1	0.438044026	0.421337947	0.0057294	0.001095	1	1	0.4402496	0.425266	0.0074757	0.001891	1	1	0.4435744	0.429879	0.0101294	0.003988
	6688d	0.999702819	0.960784314	0.412167306	0.384238311	0.005386653	0.001636634	0.999697116	0.976190476	0.412710804	0.390029203	0.0069139	0.001861	0.999859905	0.987951807	0.4143719	0.391874	0.0090031	0.002712	0.999858277	0.995535714	0.417753	0.396919	0.012271	0.003893
	6706d	1	1	0.436455435	0.396907994	0.006900012	0.001775748	1	1	0.43410388	0.399858936	0.0082383	0.00197	1	1	0.4317022	0.400957	0.009619	0.005069	1	1	0.429243	0.400092	0.0104791	0.006179
	6707d	1	1	0.437831611	0.422829132	0.004617259	3.36254E-16	1	1	0.436498857	0.422724987	0.0052837	0.001854	1	1	0.4349393	0.423807	0.0059286	0.002973	1	1	0.4332127	0.425633	0.0065485	0.003383
	6709d	0.992740532	0.833333333	0.468078912	0.425379208	0.00492368	0.001064801	0.992994555	0.870967742	0.467535094	0.429867761	0.0060374	0.001777	0.992576574	0.907407407	0.4672356	0.432657	0.0072002	0.002744	0.99221992	0.936677632	0.4675572	0.434335	0.0080982	0.003694
	6714d	1	1	0.439519186	0.425568627	0.003821801	5.61681E-17	1	1	0.440644388	0.427781218	0.0048232	0.000804	1	1	0.4427655	0.430532	0.006655	0.002902	1	1	0.4473224	0.432034	0.0099084	0.004521
	96-3-21	1	1	0.416403995	0.371503268	0.004761486	5.60864E-17	0.999970056	0.992424242	0.415276948	0.372136223	0.0060615	0	0.999875555	0.985436893	0.4138468	0.372166	0.0075367	3.35E-16	0.999819474	0.994011976	0.4112194	0.370446	0.0094439	0.002477
	As0598ad	0.999808429	0.966666667	0.400262261	0.377254902	0.005004373	1.68097E-16	0.999882477	0.985074627	0.401242308	0.382865762	0.0060073	3.9E-16	0.999938203	0.994252874	0.4029497	0.385288	0.0075708	0.002173	0.999945896	0.99669967	0.4061182	0.387322	0.0099041	0.003938
	gc0697ad	1	1	0.442883653	0.427324478	0.004564483	1.1306E-16	1	1	0.440977314	0.425098039	0.0057343	7.27E-16	1	1	0.4387752	0.424035	0.0068878	0.001381	1	1	0.4365765	0.42418	0.0078362	0.003653
	hm1096ad	1	1	0.422264918	0.407509387	0.00426128	3.36316E-16	1	1	0.420447601	0.407437458	0.0053569	0.001405	1	1	0.418044	0.403097	0.0066552	0.002125	1	1	0.4148109	0.403357	0.0084462	0.002874
	jb0298ad	1	1	0.4288007	0.411705288	0.005188584	2.24346E-16	1	1	0.427068202	0.408476621	0.0060602	8.37E-16	1	1	0.4257374	0.403771	0.0066236	0.00249	1	1	0.4241697	0.40713	0.0076975	0.003486
	kk0498ad	1	1	0.406938904	0.388832055	0.004874709	0.001195199	1	1	0.40782168	0.393437375	0.0065615	0.00344	1	1	0.4098272	0.396676	0.0084575	0.003468	1	1	0.4133734	0.402956	0.0106622	0.007205
	km0301ad	1	1	0.401707058	0.381325864	0.002608701	0	1	1	0.401660112	0.382225618	0.0032834	0	1	1	0.4017558	0.383523	0.0041414	3.9E-16	1	1	0.402011	0.384427	0.0051826	0.000392
	Ld1196ad	1	1	0.402386335	0.37945098	0.004310737	0.000554594	1	1	0.40132336	0.379144385	0.0050749	0.001295	1	1	0.4004168	0.380153	0.0060889	0.002441	1	1	0.3994934	0.382931	0.0071583	0.003189
	Ma0899ad	0.99302636	0.846153846	0.379904018	0.359156493	0.005541365	0.002201012	0.993478777	0.903846154	0.381540449	0.362016807	0.0074584	0.003556	0.994907738	0.943661972	0.3853841	0.363863	0.0112831	0.005979	0.996394483	0.964221825	0.3936623	0.371506	0.0173179	0.009565
	mj0798ad	1	1	0.40288164	0.386399666	0.002911227	0	1	1	0.403478887	0.388235294	0.0036527	4.48E-16	1	1	0.4045729	0.388509	0.0048901	0.00095	1	1	0.4066031	0.389686	0.0070297	0.001993
	Ra0199ad	1	1	0.409943295	0.375778547	0.006401698	1.12085E-16	1	1	0.40749732	0.376329525	0.0081894	2.24E-16	1	1	0.4041143	0.376832	0.0104957	2.23E-16	1	1	0.3998743	0.378668	0.0126898	0.001556
	Ra0997ad	0.999608764	0.916666667	0.43358687	0.407911937	0.005448949	0	0.999765396	0.963636364	0.431196135	0.410222893	0.0071899	0.000568	0.999845429	0.982378855	0.4278432	0.406227	0.0092739	0.001926	0.999909788	0.995153473	0.4228973	0.407277	0.0116852	0.003057

Cr Channel (Cr)																									
Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
CANCER IMAGES	4023d	0.993132653	0	0.614928321	0.585218703	0.003602422	2.24947E-16	0.997996225	0.908396947	0.615035528	0.586018755	0.0043418	0	0.998748967	0.957894737	0.6144589	0.587141	0.0053181	0.001194	0.998774486	0.980487805	0.6125683	0.584547	0.0070628	0.001722
	4025d	0.982846054	0.833333333	0.622234009	0.572997199	0.005814684	0.000876093	0.97864377	0.886554622	0.624393117	0.580279306	0.007353	0.001583	0.977615976	0.91588785	0.6274866	0.590348	0.0092094	0.002105	0.97735516	0.934504792	0.6314226	0.602322	0.0105966	0.002956
	4030d	0.977610847	0.8125	0.632120628	0.598284314	0.005409576	0.001222198	0.975636375	0.881578947	0.634383183	0.60410831	0.0068191	0.00195	0.975208238	0.901069519	0.6370895	0.61512	0.0084498	0.002278	0.976879421	0.933839479	0.6399869	0.62316	0.0100044	0.002746
	4044d	1	1	0.587823271	0.556149733	0.003352159	1.12692E-16	1	1	0.58890039	0.56241033	0.0042392	5.61E-16	1	1	0.5904003	0.56693	0.0053495	0.001017	1	1	0.5922242	0.57326	0.0063956	0.0021
	6015d	0.969990947	0.8125	0.632792101	0.593339558	0.004854764	5.60228E-16	0.971632203	0.878504673	0.632157047	0.593416345	0.0059842	0.001841	0.972394173	0.886699507	0.6306954	0.593218	0.007525	0.002333	0.977355997	0.928438662	0.6278477	0.596778	0.0100275	0.003917
	6052d	0.999617428	0.936170213	0.602096237	0.561245675	0.006749767	0.000754432	0.999204795	0.925925926	0.604379596	0.569362745	0.0081333	0.001042	0.998354022	0.940711462	0.6065947	0.573772	0.0097159	0.003446	0.997918799	0.967244701	0.6092503	0.580343	0.011152	0.004942
	95-13-15.jpg	0.995414581	0.868852459	0.598433121	0.506318083	0.003836655	0	0.995045549	0.889830508	0.59804048	0.504313725	0.004961	0	0.994205304	0.895238095	0.5975529	0.505007	0.0064095	1.12E-16	0.994763111	0.943887776	0.5965759	0.506186	0.0081369	0.000234
	95-13-17.jpg	0.999138748	0.966101695	0.542323228	0.499969834	0.003956732	0	0.999407832	0.983193277	0.542512055	0.500392157	0.0050985	0	0.99958028	0.986842105	0.5430035	0.501745	0.0065211	5.61E-16	0.999615014	0.99270073	0.5436539	0.501652	0.0082396	1.56E-15
	96-22-19	0.979349637	0.769230769	0.640699894	0.602679739	0.003783822	0	0.979440994	0.857142857	0.641755916	0.607741717	0.0049825	2.23E-16	0.981152001	0.887755102	0.6432409	0.612609	0.0062721	7.81E-16	0.982099279	0.928294574	0.6454568	0.615283	0.0081361	0.002246
	Bg0899ad	0.987452099	0.838983051	0.684021398	0.606828938	0.006752253	4.47837E-16	0.987915006	0.876712329	0.684196402	0.626405229	0.008676	0.000839	0.988265912	0.939922481	0.6841435	0.623348	0.0115469	0.003096	0.988164239	0.936770428	0.6847124	0.636985	0.0159287	0.0048
	Bm0300ad	0.99992172	0.97761194	0.710689906	0.663935574	0.006360996	0.000494071	0.999356209	0.926356589	0.708753093	0.658755328	0.0078968	0.001743	0.998660107	0.950892857	0.7058384	0.655094	0.0102392	0.002068	0.996933471	0.959266802	0.7011062	0.654374	0.0131658	0.004777
	Fj0297ad	0.987972638	0.783333333	0.666140522	0.635854342	0.00696892	3.35581E-16	0.990932057	0.85	0.66909212	0.636622391	0.0087157	1.11E-15	0.99320556	0.921768707	0.6729213	0.64338	0.0106629	0.00167	0.994886029	0.94731405	0.6771814	0.650777	0.0123034	0.004222
	Fj1200ad	0.954804375	0.794117647	0.64469807	0.611895425	0.005469629	1.1292E-16	0.960324395	0.853658537	0.646741269	0.624915825	0.0068965	0.000539	0.965791352	0.884375	0.6492475	0.624561	0.0080404	0.002303	0.973121758	0.912128713	0.6517934	0.629645	0.0095834	0.003385
	Fn1200ad	1	1	0.613032225	0.571799308	0.002799992	0	1	1	0.612779761	0.578269202	0.0035246	1.11E-16	1	1	0.6125185	0.580195	0.0047097	3.34E-16	1	1	0.6118599	0.582627	0.0058887	0.000665
	Gs0499ad	0.987237395	0.838461538	0.636379373	0.580622837	0.005532721	0.001184255	0.984990159	0.884328358	0.638944059	0.583611971	0.0074039	0.00197	0.983552347	0.905529954	0.6432226	0.587211	0.0102358	0.002736	0.981995958	0.936023622	0.6499526	0.597489	0.0149131	0.004786
	hn0996ad	1	1	0.603412709	0.593220339	0.00287214	0	1	1	0.604392589	0.595856456	0.003469	2.24E-16	1	1	0.6056316	0.597748	0.0041588	4.46E-16	0.999988387	0.998165138	0.6072986	0.600139	0.0050474	0.001173
	kh0598ad	0.93339625	0.774193548	0.640737437	0.612796698	0.009826688	0.002630668	0.939377221	0.846590909	0.644673289	0.616884532	0.0119728	0.003436	0.949074219	0.878504673	0.6498745	0.622176	0.0150065	0.004988	0.958317256	0.892	0.6569803	0.628508	0.0192504	0.005724
	Kr1196ad	0.998467491	0.9	0.66938952	0.605104264	0.004087047	0	0.998351468	0.929752066	0.670265123	0.606019952	0.0050182	3.34E-16	0.998005503	0.9437751	0.6711281	0.613066	0.006069	0.000274	0.998227279	0.956647399	0.6722597	0.620016	0.0073505	0.003323
	Lj0899ad	0.979801728	0.822916667	0.666206567	0.621794872	0.005590898	4.49223E-16	0.982409777	0.862244898	0.666174685	0.623492063	0.0067076	0.001117	0.981320048	0.910194175	0.6650436	0.634473	0.0085782	0.002689	0.97380832	0.937234043	0.6610513	0.62885	0.0122368	0.005505
	lj1196ad	0.99922236	0.904761905	0.732099069	0.707028658	0.005715048	0.00056603	0.998205648	0.896396396	0.734614505	0.71174902	0.0071091	0.001526	0.997455213	0.922077922	0.7374699	0.715826	0.0084456	0.002692	0.996942514	0.941943128	0.7406782	0.717851	0.0100938	0.003727
	mk1096ad	0.997727762	0.857142857	0.692690384	0.632641292	0.006011247	0	0.99601838	0.882352941	0.690554787	0.638235294	0.0082905	1.14E-16	0.992324846	0.928082192	0.6862379	0.632034	0.0125098	2.24E-16	0.988477471	0.949109415	0.6781607	0.607405	0.0195898	0.000183
	mm0598ad	0.975705431	0.825	0.655246583	0.538562092	0.01032092	1.11975E-16	0.970351842	0.864583333	0.657412623	0.573152338	0.0136337	0.000371	0.971997924	0.888888889	0.6603173	0.594727	0.0167044	0.001624	0.976809427	0.924630925	0.6617682	0.588396	0.0191929	0.004195
	Mm0899ad	1	1	0.699364691	0.660784314	0.004776669	0.001451775	1	1	0.700719267	0.666888642	0.005834	0.001888	1	1	0.702445	0.676802	0.0066154	0.001726	1	1	0.7042605	0.683046	0.0078533	0.00303
	Nd0599ad	0.999838958	0.963235294	0.69455104	0.663562092	0.012025583	0.002264119	0.999224849	0.946564885	0.6995827	0.667344469	0.0151262	0.005307	0.998110915	0.944055944	0.7064839	0.676364	0.0189204	0.006352	0.997306133	0.950471698	0.7151504	0.687362	0.0229975	0.009489
	Rk0399ad	0.994211543	0.869047619	0.718093195	0.612950296	0.011618522	0.001970326	0.993377145	0.89010989	0.718261871	0.619518717	0.0154245	0.003044	0.992187245	0.924698795	0.7167846	0.630096	0.0198787	0.004659	0.988606909	0.951661631	0.7135981	0.651927	0.0257175	0.005932
	Rl0298ad	1	1	0.680712251	0.663935574	0.002970849	0	1	1	0.680975691	0.665426512	0.0034535	2.23E-16	1	1	0.6812081	0.667195	0.0038583	8.9E-16	1	1	0.6814148	0.669202	0.0043785	0.001787
	sd0597ad	0.98708445	0.772727273	0.626373231	0.58868531	0.004305975	3.35472E-16	0.98264683	0.821428571	0.627799806	0.595405326	0.0054987	8.93E-16	0.979696055	0.898305085	0.6298323	0.599925	0.0068527	0.001716	0.974959652	0.930513595	0.6331111	0.608971	0.0086494	0.003507

	Wa0499ad	0.989688501	0.852459016	0.678870622	0.617337461	0.007781718	1.12027E-16	0.984610195	0.891509434	0.674684195	0.619242273	0.0106473	0.001028	0.978798101	0.913636364	0.6685555	0.623422	0.0149582	0.004183	0.978492985	0.932598039	0.6582729	0.607435	0.0212076	0.008562
	zp0298ad	1	1	0.691459335	0.664300203	0.003531389	2.24254E-16	1	1	0.691694056	0.663652869	0.0046522	1E-15	0.999778467	0.986486486	0.6915567	0.667698	0.0059864	0.001411	0.999236536	0.986486486	0.6907705	0.663692	0.0076923	0.001913
	zr0798ad	0.915024214	0.791666667	0.645370223	0.626989619	0.009929292	0.001686992	0.925910816	0.833333333	0.650284036	0.629721362	0.0130693	0.003597	0.938260471	0.884615385	0.6561546	0.634531	0.0166432	0.004663	0.953819026	0.911552347	0.6651358	0.638648	0.0218995	0.008152
NOT CANCER IMAGES	4056d	0.993093071	0.853448276	0.618471863	0.581035037	0.00433612	0.00047556	0.994010887	0.91796875	0.617522193	0.580232093	0.0057703	0.001721	0.994503599	0.931034483	0.6154602	0.572804	0.0076132	0.001898	0.995112719	0.943622921	0.6117233	0.57364	0.0104664	0.004327
	4058d	0.961700638	0.714285714	0.641490041	0.621568627	0.003364522	1.13137E-16	0.96080853	0.833333333	0.642413131	0.622809858	0.0040255	5.6E-16	0.962105034	0.883152174	0.6433587	0.627516	0.0048735	0.000644	0.967940423	0.926086957	0.6443041	0.631135	0.0054835	0.001665
	4063d	1	1	0.579541551	0.541641741	0.00383393	0.000506272	1	1	0.580539561	0.545306001	0.0049965	0.001147	1	1	0.5819206	0.548199	0.0063266	0.002321	1	1	0.5841323	0.554825	0.0083419	0.003562
	4074d	1	1	0.593627168	0.557324106	0.006861703	0.001815334	1	1	0.596701829	0.563398693	0.0088532	0.00206	0.999601149	0.986956522	0.6010473	0.57102	0.0108664	0.002751	0.998685344	0.977436823	0.6068015	0.585116	0.0131544	0.003567
	4082d	1	1	0.595600257	0.585751634	0.002515607	0	1	1	0.596276929	0.588159879	0.0029696	8.93E-16	1	1	0.5969877	0.590738	0.003421	0.001189	1	1	0.5976451	0.590842	0.0037613	0.001857
	4083d	1	1	0.591214264	0.571918768	0.002811255	3.37104E-16	1	1	0.590705131	0.57287336	0.0034782	0.000596	1	1	0.5899033	0.574593	0.0046206	0.001908	1	1	0.5874816	0.574229	0.0068732	0.003085
	4084d	0.978064368	0.79787234	0.627851868	0.607130125	0.004069417	0.000808567	0.979731398	0.877906977	0.627327891	0.60590139	0.0048039	0.001443	0.981193541	0.9	0.6258119	0.605256	0.0060441	0.002498	0.985345858	0.935334873	0.6234046	0.603886	0.0075299	0.004044
	6005d	0.942927889	0.764705882	0.626465045	0.598983297	0.009722269	0.003408733	0.942744398	0.814516129	0.630177348	0.599208491	0.0111414	0.003626	0.946026858	0.873417722	0.633374	0.599477	0.0122386	0.005986	0.954307551	0.911111111	0.6366342	0.592982	0.0134267	0.006259
	6017d	1	1	0.603688715	0.583386809	0.003125495	1.11873E-16	1	1	0.602921441	0.585132515	0.0040334	6.69E-16	1	1	0.6011783	0.585299	0.0055477	0.001561	1	1	0.5982243	0.578377	0.0081848	0.002873
	6023d	1	1	0.589525359	0.565002971	0.003949985	3.37538E-16	1	1	0.58884762	0.565737874	0.0051939	0.001933	1	1	0.5873784	0.557597	0.0067465	0.002437	1	1	0.5843153	0.556747	0.0094933	0.004168
	6024d	0.928105241	0.8	0.639263935	0.613990461	0.006466488	0.001437603	0.93570199	0.827868852	0.637440599	0.615078708	0.0082301	0.00225	0.944335455	0.885714286	0.6352641	0.611993	0.0101291	0.003431	0.955037423	0.904220779	0.6315485	0.609455	0.0131376	0.004435
	6025d	0.960027555	0.822916667	0.629414555	0.610319917	0.008692081	0.002357052	0.949526753	0.86746988	0.632910417	0.615565611	0.010563	0.003853	0.952302389	0.896774194	0.6363356	0.622655	0.0120155	0.005671	0.956164807	0.922434368	0.6408276	0.626762	0.0135853	0.008872
	6028d	1	1	0.59617189	0.581084198	0.003956901	4.4889E-16	1	1	0.594666993	0.575724938	0.0051437	0.000867	1	1	0.592409	0.578053	0.0068166	0.001931	1	1	0.5882964	0.570885	0.0098003	0.002899
	6031d	0.99918192	0.885416667	0.561849206	0.50260104	0.006216222	0.001178064	0.999005725	0.896551724	0.559407251	0.502228164	0.0084115	0.001976	0.999099314	0.951351351	0.5555982	0.508054	0.011159	0.002793	0.998268303	0.961864407	0.5506077	0.512358	0.0149057	0.006578
	6044d	1	1	0.551250837	0.522066604	0.003729591	7.833E-16	1	1	0.550945969	0.522962243	0.0047057	0.001912	1	1	0.5500661	0.526248	0.0059198	0.001784	0.99986693	0.993684211	0.5481197	0.521803	0.0076347	0.003225
	6045d	1	1	0.599694169	0.54198783	0.00452269	2.25194E-16	1	1	0.598037758	0.544566301	0.0060569	3.35E-16	1	1	0.5953122	0.537533	0.0085149	0.002474	0.999984399	0.998439938	0.5903086	0.548639	0.012741	0.003291
	6048d	1	1	0.579139291	0.543692194	0.002937951	0	1	1	0.578922716	0.544385027	0.0034629	0	1	1	0.5782636	0.548256	0.0041821	1.56E-15	1	1	0.5766759	0.549062	0.00546	0.00173
	6049d	1	1	0.572862951	0.552670723	0.00327021	0	1	1	0.573138593	0.553859742	0.0038343	0	1	1	0.5733633	0.555313	0.0043195	0.000319	1	1	0.572883	0.556556	0.0050399	0.001756
	6050d	1	1	0.549986289	0.526182238	0.004478714	5.61384E-16	1	1	0.550938393	0.525741579	0.0051365	0.002274	1	1	0.5513804	0.527756	0.0058365	0.003276	1	1	0.551424	0.528988	0.0068257	0.004226
	6051d	0.999637188	0.918367347	0.610956285	0.586029412	0.004554743	5.60228E-16	1	1	0.611671151	0.587215686	0.0052668	0.001168	0.999484173	0.965317919	0.6125709	0.592141	0.0062078	0.001851	0.999402036	0.98089172	0.6130154	0.592816	0.007335	0.003861
	6053d	1	1	0.578678513	0.556030897	0.0056658	0.001797448	1	1	0.580393965	0.561714855	0.0066937	0.002103	1	1	0.5820805	0.563179	0.0075935	0.00259	1	1	0.5839931	0.56949	0.0085133	0.005347
	6054d	0.999909157	0.976744186	0.569261593	0.52991453	0.005468246	0.000672391	0.999850109	0.982758621	0.571061238	0.525944272	0.0065455	0.001883	0.99991421	0.991869919	0.573005	0.53833	0.0078601	0.002877	0.99996352	0.996753247	0.5752099	0.548918	0.0088463	0.004434
	6055d	0.998721139	0.857142857	0.617171744	0.518207283	0.003990774	2.24947E-16	0.998997812	0.921568627	0.616719399	0.522128852	0.0048927	8.92E-16	0.999211119	0.96347032	0.6159821	0.537269	0.005959	0.002511	0.999546635	0.984375	0.613985	0.547619	0.0073344	0.003397
	6056d	0.961590576	0.802631579	0.629832173	0.585276918	0.006371502	0.001688477	0.960608216	0.847826087	0.631959324	0.586365709	0.0076133	0.001732	0.961376246	0.872807018	0.6344607	0.591441	0.0090031	0.003223	0.964512939	0.91356383	0.6374157	0.594023	0.0101735	0.004543
	6061d	1	1	0.575325636	0.540819964	0.004319791	0.001329606	1	1	0.576180048	0.540941176	0.0051791	0.001845	1	1	0.5772306	0.54487	0.0060063	0.002327	1	1	0.5783796	0.548639	0.0071691	0.004202
	6065d	1	1	0.585552401	0.565927355	0.003643	1.12597E-16	1	1	0.584563942	0.568742791	0.0046159	7.82E-16	1	1	0.5827838	0.567507	0.0062561	0.002385	1	1	0.579381	0.557354	0.0090246	0.003348
	6074d	1	1	0.590462826	0.55130719	0.004196986	0.00057202	1	1	0.589135657	0.554405229	0.0055649	0.000656	1	1	0.5867651	0.554359	0.0075755	0.001673	1	1	0.581671	0.55112	0.0118181	0.003653
	6075d	1	1	0.57457412	0.553921569	0.003134694	6.72273E-16	1	1	0.574918221	0.557344341	0.0035372	3.34E-16	1	1	0.5751247	0.560889	0.0040692	0.001059	1	1	0.574224	0.561837	0.0051875	0.002411
	6077d	1	1	0.564646885	0.529176471	0.003550737	6.71952E-16	1	1	0.565138241	0.531523379	0.0041467	0.001408	1	1	0.5655141	0.536251	0.0048977	0.002058	1	1	0.5647695	0.542775	0.0060951	0.002454
	6079d	1	1	0.590529301	0.574901961	0.004275258	4.49606E-16	1	1	0.590530127	0.568935025	0.0051203	5.58E-16	1	1	0.5901202	0.570898	0.0063967	0.00196	1	1	0.5885959	0.568924	0.0080752	0.002199
	6084d	0.999852703	0.967741935	0.612845276	0.592968222	0.004022122	5.60046E-16	0.999885649	0.981818182	0.613269092	0.596078431	0.0048132	0.001694	0.999845997	0.990950226	0.612909	0.598538	0.0061371	0.001589	0.999946404	0.99592668	0.6112491	0.596616	0.0085927	0.004132
	6085d	0.988453114	0.849056604	0.666156669	0.62252816	0.006985346	0.001830171	0.989847554	0.896551724	0.667656817	0.628235294	0.0083788	0.003269	0.991829146	0.909547739	0.6693147	0.638098	0.0092857	0.003925	0.994193048	0.942139738	0.6714026	0.650596	0.0103108	0.006054
	6089d	0.955739002	0.759615385	0.642859748	0.602823529	0.004803673	0.001249912	0.956311838	0.873684211	0.643025379	0.608651708	0.0058898	0.001963	0.954740319	0.896634615	0.642131	0.613491	0.0079447	0.003415	0.957426445	0.914739884	0.6383881	0.616158	0.0118952	0.00554
	6091d	1	1	0.576628628	0.555786236	0.003095863	3.37538E-16	1	1	0.576244737	0.554491564	0.0038057	1.12E-16	1	1	0.5752199	0.55325	0.0047519	0.001035	1	1	0.5726094	0.551181	0.0069052	0.002661
	6093d	1	1	0.590113084	0.569351433	0.003432203	1.12692E-16	1	1	0.590714806	0.56969697	0.0039459	0.00148	1	1	0.5914624	0.572432	0.0042639	0.001752	1	1	0.5919382	0.574	0.0046076	0.002034
	6094d	0.999923319	0.985507246	0.616164858	0.590876351	0.003847851	0.000923546	0.999945118	0.992481203	0.6155178	0.587291213	0.0047842	0.001286	0.999962918	0.996254682	0.6132642	0.590807	0.0066269	0.00227	0.999972402	0.998178506	0.6094391	0.586734	0.0093475	0.00388
	6102d	1	1	0.611474447	0.589243697	0.003505591	4.48789E-16	1	1	0.61165814	0.590271493	0.0040844	1.11E-15	1	1	0.6114942	0.594483	0.0047263	0.001748	1	1	0.6101379	0.596398	0.0062369	0.002383
	6105d	0.959979614	0.80952381	0.646819006	0.6054155	0.004527539	0.001302375	0.961796782	0.871794872	0.646654706	0.604586241	0.0054545	0.001957	0.964339382	0.895833333	0.6461408	0.601082	0.0064962	0.002216	0.967254906	0.921957672	0.6437904	0.595558	0.0088328	0.00369
	6599d	0.999424591	0.926470588	0.607747593	0.567189542	0.005069665	0.000808958	0.999443823	0.958677686	0.605665631	0.563560645	0.0068593	0.002224	0.999722124	0.980392157	0.6027686	0.565405	0.0087539	0.00343	0.999806356	0.990671642	0.5983117	0.561523	0.0112127	0.003903
	6602d	0.989497118	0.817307692	0.619402875	0.592609351	0.005470502	0.001169186	0.991764432	0.893258427	0.616740201	0.585882353	0.0071548	0.002445	0.993901491	0.898963731	0.6126086	0.576064	0.0094222	0.002698	0.995758026	0.953629032	0.6061869	0.578843	0.013092	0.005149
	6605d	0.97471573	0.785714286	0.62252522	0.548668423	0.009274805	0.001279	0.980420633	0.876404494	0.617311072	0.540898564	0.0130934	0.003001	0.984410603	0.914285714	0.6100462	0.53653	0.0179948	0.003208	0.988071313	0.938181818	0.6003643	0.537552	0.02409	0.004998
	6612d	1	1	0.58635167	0.557859754	0.006097615	0.001894298	1	1	0.583656661	0.556449948	0.0079219	0.002353	1	1	0.5803198	0.551087	0.0102909	0.00351	1	1	0.5751984	0.546077	0.0133894	0.00535
	6617d	0.999441481	0.947761194	0.60465623	0.583117315	0.006118642	0.001436113	0.999182246	0.950819672	0.606516225	0.586229947	0.0072458	0.00279	0.998829078	0.942084942	0.6084308	0.592673	0.0082344	0.003518	0.998613735	0.964412811	0.609717	0.59316	0.0092218	0.00551
	6622d	1	1	0.6005452	0.582854537	0.004406536	0.0018261	1	1	0.60185455	0.585921569	0.0052409	0.001849	1	1	0.6035331	0.589754	0.0059631	0.0029	1	1	0.605397	0.592688	0.0067383	0.003796
	6627d	1	1	0.57211136	0.53056119	0.010476963	0.001548122	1	1	0.568590689	0.535768501	0.0133069	0.003956	1	1	0.5646796	0.534706	0.0161152	0.005153	0.999940545	0.996062992	0.5597517	0.530534	0.0193873	0.008058
	6637d	1	1	0.593915713	0.567389061	0.003959564	5.5996E-16	1	1	0.593640889	0.571993464	0.0047767	0.000669	1	1	0.5923466	0.571967	0.006053	0.002191	1	1	0.5902198	0.567777	0.0080396	0.003167
	6642d	1	1	0.603924971	0.556663343	0.004719188	2.2682E-16	1	1	0.602148976	0.559795951	0.0061973	0.001616	1	1	0.5991465	0.563467	0.0085364	0.002871	1	1	0.5936236	0.565219	0.0123088	0.004144
	6643d	0.980356637	0.849206349	0.518281082	0.480653595	0.005489074	0.000502105	0.975721435	0.867521368	0.515591245	0.477324478	0.0073323	0.002307	0.970176308	0.907725322	0.5112756	0.479924	0.0098398	0.004349	0.969303012	0.941340782	0.5052733	0.476925	0.012658	0.007292
	6644d	0.997455289	0.939393939	0.522220061	0.502217936	0.00356709	3.37205E-16	0.994838046	0.918518519	0.521036757	0.502619608	0.0041978	0.001334	0.99149644	0.932098765	0.5193905	0.502073	0.0050534	0.001597	0.987993612	0.94095941	0.5167755	0.501524	0.0064028	0.003691
	6667d	1	1	0.601135955	0.577967914	0.004863622	0.001558575	1	1	0.602143126	0.582737409	0.0055704	0.002096	1	1	0.6030095	0.586203	0.0060665	0.002735	1	1	0.6036264	0.5832	0.0066273	0.003419
	6675d	0.999170061	0.93442623	0.615492277	0.592075163	0.004783206	2.24873E-16	0.999110562	0.934065934	0.616013149	0.598491704	0.0056541	0.000923	0.999159969	0.95959596	0.6162392	0.600515	0.0067271	0.001996	0.999527079	0.979166667	0.6158512	0.602003	0.0080992	0.002099
	6677d	1	1	0.589414054	0.557189542	0.005197863	3.37421E-16	1	1	0.587713669	0.557575758	0.0070108	0.000476	1	1	0.5842097	0.552723	0.0100504	0.002765	1	1	0.5779129	0.553727	0.0155259	0.00418
	6687d	1	1	0.607583821	0.572816399	0.004636287	1.12744E-16	1	1	0.60639839	0.570501475	0.006244	0.000851	1	1	0.6041587	0.572603	0.0083004	0.000479	1	1	0.6003555	0.564538	0.0119174	0.004538
	6688d	0.996674769	0.886792453	0.609109625	0.528959276	0.005582147	0.001677995	0.997552636	0.898989899	0.609491328	0.538915802	0.0069057	0.002385	0.99785001	0.945544554	0.6093097	0.558272	0.0085502	0.003191	0.99833659	0.969945355	0.6075824	0.581014	0.0111318	0.004518
	6706d	1	1	0.588745585	0.565490196	0.007269849	0.001388897	0.999858936	0.980392157	0.591562328	0.571114299	0.0087767	0.001878	0.999856395	0.989304813	0.5944199	0.576229	0.0103201	0.005008	0.999547861	0.990791897	0.5979997	0.581181	0.0115085	0.005728
	6707d	1	1	0.604209451	0.585544022	0.005777412	0.001662412	1	1	0.606176282	0.588007957	0.0067635	0.002931	1	1	0.6085625	0.592476	0.0079278	0.002848	0.999638818	0.987096774	0.6114941	0.598019	0.0089865	0.004137
	6709d	1	1	0.565028792	0.530457516	0.00465506	4.49472E-16	0.999903386	0.984251969	0.565059864	0.53195432	0.0056549	0.001015	0.999863565	0.991150442	0.5648696	0.528643	0.0067729	0.002185	0.999934552	0.996539792	0.5636524	0.528978	0.0078762	0.003591
	6714d	1	1	0.592092398	0.560462874	0.004557933	0.000835618	1	1	0.590614015	0.560493827	0.0056874	0.002152	1	1	0.5882828	0.562619	0.0076952	0.00376	1	1	0.5829661	0.553517	0.0117644	0.0043
	96-3-21	0.989291994	0.838235294	0.632041797	0.592076831	0.004717899	1.12858E-16	0.986881825	0.897727273	0.633177249	0.591243099	0.0060801	4.49E-16	0.98712641	0.898373984	0.6347583	0.592414	0.0077392	4.46E-16	0.98562805	0.937861272	0.6379164	0.592751	0.0102409	0.002033
	As0598ad	0.99772535	0.908163265	0.694689308	0.628066128	0.006187313	1.12065E-16	0.99742533	0.921428571	0.693371302	0.638985006	0.0073804	3.34E-16	0.997373708	0.958158996	0.6911691	0.64598	0.0094056	0.003045	0.996952583	0.960474308	0.687061	0.656302	0.0124535	0.00503
	gc0697ad	0.995296098	0.853658537	0.61916531	0.593571199	0.004850037	2.26119E-16	0.992059905	0.883333333	0.621248593	0.595424837	0.0061683	6.71E-16	0.98477782	0.904109589	0.6240144	0.602883	0.0076208	0.002336	0.975484077	0.912529551	0.6277532	0.612334	0.0095035	0.004511
	hm1096ad	0.99659559	0.888888889	0.622868741	0.610644258	0.004499233	0.000644702	0.990344452	0.893333333	0.624794205	0.612317039	0.0056335	0.000817	0.983969233	0.897959184	0.6274829	0.616919	0.0070475	0.002279	0.977417364	0.912280702	0.6310615	0.617752	0.008897	0.003498
	jb0298ad	0.971970885	0.84	0.630024159	0.60899654	0.005457375	0.001084869	0.973780899	0.869318182	0.632223689	0.612477718	0.0063117	0.001598	0.977588698	0.923404255	0.6339073	0.616884	0.0065945	0.00271	0.979600626	0.944067797	0.6354761	0.619223	0.0069669	0.003758
	kk0498ad	0.972213476	0.825	0.665933978	0.635375817	0.012475723	0.004934532	0.961022895	0.878787879	0.660052887	0.630868861	0.0158503	0.009072	0.956727459	0.906735751	0.6526364	0.629298	0.0190453	0.012618	0.960845717	0.93375	0.6456685	0.628732	0.0204866	0.014207
	km0301ad	0.998034427	0.842857143	0.670431916	0.636292335	0.002115727	0	0.998009408	0.88559322	0.670222517	0.635930954	0.0026504	1.12E-16	0.997761634	0.901162791	0.6698303	0.63096	0.0034313	3.34E-16	0.997337745	0.933510638	0.6689605	0.63202	0.004585	1.56E-15
	Ld1196ad	0.998034853	0.881355932	0.612928786	0.599762329	0.006426719	0.001773899	0.995983657	0.910569106	0.615433593	0.601822143	0.0078563	0.002155	0.991261286	0.941810345	0.6183632	0.602537	0.0094947	0.003719	0.983069182	0.940298507	0.6228239	0.602179	0.0117034	0.004793
	Ma0899ad	1	1	0.708873593	0.687768441	0.004631839	0.001375436	1	1	0.707899477	0.685941546	0.0057902	0.001976	1	1	0.7052665	0.679584	0.00877	0.003293	0.998183905	0.973782772	0.6987998	0.677644	0.0147418	0.006011
	mj0798ad	0.999813572	0.972222222	0.696167035	0.652620321	0.003988641	1.12597E-16	0.999408227	0.961538462	0.695412316	0.652250233	0.0050343	0.000645	0.99915521	0.966019417	0.6942115	0.650867	0.006567	0.000486	0.996843324	0.965324385	0.6914789	0.64768	0.0094227	0.002088
	Ra0199ad	0.978530365	0.842105263	0.644368964	0.588235294	0.006714738	0.000887429	0.977771272	0.870967742	0.647600357	0.590123457	0.0087544	0.0023	0.978209319	0.915929204	0.6521869	0.598464	0.0115603	0.002815	0.980783201	0.939698492	0.6590004	0.618102	0.0153088	0.004423
	Ra0997ad	0.968353907	0.758064516	0.636435264	0.585568627	0.005337931	1.14065E-16	0.964709966	0.819148936	0.638820931	0.592088662	0.0069798	4.49E-16	0.963545763	0.852941176	0.6421314	0.599125	0.0089648	4.46E-16	0.969862689	0.921052632	0.6471287	0.618995	0.0113646	0.003021

Hue Channel (H)																									
Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
CANCER	4023d	0.989692507	0	0.058791932	0.03304919	0.00259183	0.000358935	0.994780821	0.88961039	0.058236683	0.032525309	0.0031382	0.000472	0.99635023	0.921052632	0.0571696	0.033561	0.0038715	0.001079	0.997435822	0.962616822	0.0550022	0.033186	0.0056431	0.001315
	4025d	0.953380516	0.767241379	0.073331394	0.050948888	0.002237321	0.000533503	0.95564434	0.8	0.073351179	0.054476918	0.0025274	0.000936	0.95863909	0.860714286	0.0730939	0.057657	0.0029748	0.001205	0.962325923	0.885826772	0.072427	0.06036	0.0033727	0.001393
	4030d	0.964292704	0.763157895	0.068209441	0.054159787	0.002241776	0.000759828	0.96392491	0.830645161	0.067473979	0.054078013	0.002683	0.001175	0.968359769	0.889162562	0.0664075	0.054411	0.0034768	0.001699	0.974491405	0.92264574	0.0648324	0.052142	0.0045967	0.002497
	4044d	0.984474087	0.798245614	0.056234499	0.022010959	0.003361114	0.00030105	0.983701291	0.834782609	0.056814842	0.024841786	0.0039498	0.000293	0.983331894	0.843283582	0.0575128	0.029451	0.0046065	0.000897	0.984335179	0.906593407	0.0581672	0.033747	0.0051612	0.001886
	6015d	0.999276736	0.895522388	0.027290108	0.011203332	0.005736195	0.001046388	0.999420664	0.94214876	0.027105259	0.015540851	0.0062748	0.001046	0.999591916	0.969957082	0.0267263	0.017409	0.0063506	0.001795	0.999520805	0.985685072	0.0264459	0.019843	0.0090714	0.002393
	6052d	0.998023893	0.6171875	0.05315259	0.021186782	0.005525186	0.000910066	0.998788316	0.836864407	0.052366985	0.024663051	0.0058316	0.001589	0.99896333	0.889084507	0.0519789	0.024027	0.0060744	0.001767	0.999075047	0.945097604	0.0518524	0.034861	0.00715	0.00236
	95-13-15.jpg	0.968247145	0.682079082	0.19389111	0.002688172	0.073392102	0	0.967928146	0.754490393	0.196262902	0.006107876	0.0928156	1.09E-17	0.968618963	0.794382269	0.1926557	0.006889	0.1169152	2.89E-17	0.968993288	0.845321637	0.1892423	0.010691	0.1481326	0.001268
	95-13-17.jpg	0.978424673	0.679166667	0.088506906	0	0.020126187	0	0.979618822	0.777777778	0.089087343	0	0.0245026	0	0.981394355	0.887295082	0.0884134	0	0.0280715	0	0.980955042	0.897264919	0.0912287	0	0.036464	0
	96-22-19	0.990907205	0.833333333	0.053892443	0.023629597	0.004262763	9.81308E-18	0.990352584	0.847368421	0.054174759	0.026786605	0.0051415	5.75E-17	0.98935353	0.842105263	0.0547616	0.028206	0.006066	0.000911	0.989230198	0.872483221	0.0555289	0.030678	0.0072643	0.001203
	Bg0899ad	0.967249227	0.728448276	0.281427986	0.004450145	0.088280266	0.000806078	0.969821069	0.75862069	0.263917375	0.005090798	0.1067711	0.001605	0.967911997	0.876533742	0.238587	0.010512	0.1692036	0.002142	0.970153575	0.901627219	0.1985006	0.013367	0.2087083	0.003728
	Bm0300ad	0.98506438	0.72	0.051487164	0.004520727	0.043630993	2.78559E-05	0.986694984	0.799698795	0.046448069	0.006360929	0.0463751	0.000983	0.990329542	0.827755906	0.0413785	0.008988	0.0468209	0.00165	0.992773224	0.885498047	0.0384495	0.012678	0.0478399	0.002836
	Fj0297ad	0.999570531	0.943396226	0.05117816	0.024184342	0.003121773	0.000730917	0.99967349	0.971962617	0.050202957	0.0238903	0.0041257	0.001054	0.999708827	0.982532751	0.0483942	0.025351	0.0055208	0.001834	0.999549448	0.984861592	0.0460165	0.024651	0.0093061	0.002644
	Fj1200ad	1	1	0.057061807	0.044932495	0.002110626	0.000100981	1	1	0.057155612	0.047180052	0.0025246	0.000341	0.999973103	0.995884774	0.0571907	0.048917	0.0027908	0.000946	0.999957599	0.997716895	0.0571581	0.049021	0.0029788	0.001259
	Fn1200ad	0.989131525	0.718220339	0.0549958	0.002182965	0.033842232	1.06787E-17	0.989150793	0.779040404	0.055149725	0.005425356	0.043106	1.41E-17	0.989515929	0.850225225	0.0569566	0.011746	0.0528907	0.001142	0.988636799	0.881910569	0.0650038	0.011643	0.067715	0.002057
	Gs0499ad	0.967053433	0.63372093	0.285036344	0.004638083	0.102244081	0.00065576	0.969131233	0.698275862	0.270827044	0.005744701	0.1198595	0.000672	0.966300896	0.783	0.2481104	0.006965	0.1501013	0.001214	0.965370719	0.850138122	0.2051133	0.010157	0.1899432	0.002039
	hn0996ad	0.999936928	0.971428571	0.049626207	0.025081716	0.002607731	9.26442E-18	0.99995338	0.984615385	0.049955755	0.027737333	0.0030188	3.5E-17	0.999762309	0.986013986	0.0503023	0.030594	0.00357	0.000123	0.999299071	0.970642202	0.0508145	0.035664	0.004143	0.001511

IMAGES	kh0598ad	0.999850483	0.97826087	0.049119749	0.031315991	0.002714451	0.000772293	0.99987333	0.990196078	0.049067844	0.035606889	0.0032168	0.00106	0.999752737	0.982352941	0.0488416	0.036202	0.003651	0.001292	0.999812399	0.989932886	0.048199	0.035731	0.0042108	0.002463
	Kr1196ad	0.99782706	0.78125	0.055129847	0.011176361	0.007916157	0.000485733	0.997705222	0.852876106	0.056073204	0.016849726	0.0105791	0.001202	0.997416147	0.875494071	0.0569919	0.019763	0.0120878	0.001317	0.99725294	0.906952965	0.0571119	0.019111	0.0147241	0.00175
	Lj0899ad	0.940037672	0.674019608	0.172274355	0.009819971	0.130621998	0.001048382	0.949245201	0.759615385	0.142479693	0.010804822	0.1374548	0.001248	0.959982027	0.837780899	0.1167434	0.016393	0.1395897	0.002115	0.969941161	0.853174603	0.0900042	0.014581	0.1276718	0.003742
	lj1196ad	1	1	0.047063364	0.018391122	0.00215273	0.000523354	1	1	0.047587136	0.019730824	0.0026141	0.000628	1	1	0.0480547	0.022235	0.0031564	0.0013	0.999932435	0.988243762	0.0485342	0.026581	0.0048867	0.001792
	mk1096ad	0.99804406	0.717741935	0.028456883	0.009974199	0.008428869	3.00463E-18	0.998464801	0.817164179	0.027547748	0.011611509	0.0095327	7.9E-18	0.99873248	0.931372549	0.0268784	0.013292	0.0106927	3.56E-17	0.997966448	0.964895636	0.0273886	0.016437	0.0138502	0.00034
	mm0598ad	0.986781924	0.81	0.044990147	0.015695515	0.006827678	0.000325649	0.989205291	0.855670103	0.043657952	0.019885324	0.0077324	0.000395	0.991463241	0.895973154	0.0423505	0.021958	0.0109515	0.001011	0.993017876	0.926902537	0.0413376	0.02139	0.0155832	0.002255
	Mm0899ad	1	1	0.034623854	0.022361766	0.002713739	0.000853896	1	1	0.035244784	0.024140588	0.0032453	0.000916	1	1	0.0360883	0.025907	0.0038294	0.001505	1	1	0.0367608	0.031993	0.0044068	0.002514
	Nd0599ad	1	1	0.035999955	0.013109785	0.003044912	0.000979077	1	1	0.036227673	0.01383349	0.0035936	0.001353	0.999818968	0.969405594	0.0367437	0.014651	0.0051793	0.001636	0.999776587	0.986242138	0.0370255	0.016226	0.0075144	0.002217
	Rk0399ad	0.963964888	0.713636364	0.166132539	0.006865074	0.093866122	0.000414016	0.967474802	0.774484536	0.144952009	0.008574491	0.1120392	0.00115	0.968264336	0.826054217	0.1212497	0.00985	0.1303527	0.001537	0.972166908	0.892985612	0.1028806	0.010714	0.1663054	0.00177
	Rl0298ad	1	1	0.026481622	0.020551944	0.002117432	1.71039E-17	1	1	0.027020516	0.01995654	0.0025767	0.000581	1	1	0.0274822	0.020653	0.0030207	0.001278	1	1	0.0277932	0.020618	0.0034116	0.001386
	sd0597ad	0.997784417	0.887096774	0.031481533	0.007069277	0.009707988	2.105E-17	0.998449048	0.888888889	0.031210419	0.011281448	0.0091929	0.001017	0.998925972	0.958661417	0.0313718	0.01235	0.0092319	0.001465	0.999356264	0.978695652	0.0318351	0.014899	0.009224	0.002223
	Wa0499ad	1	1	0.039629049	0.030733908	0.002792722	0.001107421	1	1	0.038994228	0.030315268	0.0032961	0.001347	1	1	0.0383314	0.030718	0.0037869	0.001858	0.999593603	0.991906475	0.0383508	0.031547	0.0046638	0.002649
	zp0298ad	0.995587951	0.796511628	0.03507663	0.007716049	0.016657471	7.85429E-18	0.993753081	0.844626168	0.035579573	0.010926565	0.0249765	0.001075	0.994956588	0.886658031	0.0387822	0.010824	0.0297754	0.001966	0.993542569	0.92475	0.0446761	0.014058	0.0504642	0.003487
	zr0798ad	1	1	0.033727957	0.01482064	0.00307146	0.001465446	1	1	0.034117893	0.016510949	0.0034428	0.001554	1	1	0.0344202	0.017977	0.0037992	0.002129	1	1	0.0345342	0.020549	0.0040976	0.002436
NOT CANCER IMAGES	4056d	0.998669116	0.854166667	0.048640987	0.01651037	0.006786933	0.001005551	0.998649941	0.921875	0.047413297	0.017110579	0.0091393	0.001577	0.998525006	0.95911215	0.0458973	0.020037	0.0133787	0.002123	0.99785504	0.9641527	0.0446141	0.017998	0.0235283	0.003473
	4058d	1	1	0.055890545	0.04376431	0.001714331	0.000448759	1	1	0.055785709	0.045325984	0.0020275	0.000715	1	1	0.055465	0.047157	0.0023839	0.000997	1	1	0.0547475	0.045036	0.0029394	0.001176
	4063d	0.955037153	0.775	0.074660969	0.058194288	0.003707974	0.000458345	0.95424268	0.849593496	0.074226443	0.057018489	0.0054942	0.001799	0.956570158	0.888655462	0.0733384	0.060532	0.0061149	0.00208	0.962416383	0.928181818	0.0721877	0.059575	0.009084	0.002945
	4074d	0.98850259	0.857954545	0.054487169	0.021660358	0.014338705	0.001102482	0.988271965	0.87704918	0.055728503	0.030110865	0.0165711	0.001007	0.988215686	0.891534392	0.057184	0.038923	0.0157207	0.001412	0.989947821	0.889400922	0.058765	0.045795	0.0141695	0.001512
	4082d	0.951507234	0.792682927	0.067844367	0.055158027	0.002150981	0.000435502	0.951165676	0.865384615	0.068089387	0.057204684	0.0024156	0.000955	0.957647559	0.891826923	0.0679553	0.058873	0.0026684	0.001263	0.965410279	0.921978022	0.0674934	0.061908	0.0030992	0.00163
	4083d	0.998837204	0.920454545	0.05198561	0.026225877	0.007655322	6.04019E-17	0.998660921	0.947761194	0.051547293	0.031807562	0.0086976	0.000921	0.99902032	0.964574899	0.0515405	0.035044	0.0107362	0.001204	0.999208901	0.983944954	0.049595	0.038137	0.0118882	0.002944
	4084d	1	1	0.050184695	0.037258674	0.002544921	0.001166168	1	1	0.050657528	0.042356115	0.0030088	0.001505	1	1	0.051013	0.043448	0.0035962	0.001899	1	1	0.0512048	0.044796	0.0039892	0.002475
	6005d	0.998520985	0.931034483	0.05343259	0.03903433	0.003619155	0.001035969	0.998733645	0.965217391	0.052886813	0.040385914	0.0054044	0.001702	0.997603554	0.946646341	0.0524939	0.036196	0.0112546	0.002095	0.997341783	0.929648241	0.0518484	0.031956	0.0175634	0.002423
	6017d	1	1	0.033870886	0.024539531	0.002675486	0.000154286	1	1	0.033456039	0.024493754	0.0031182	0.000682	1	1	0.0327366	0.02439	0.0037572	0.001568	1	1	0.0318508	0.023485	0.0044316	0.002488
	6023d	0.992122033	0.8375	0.062007014	0.0537301	0.003230415	0.000240538	0.991517835	0.890243902	0.061455692	0.053743405	0.0039098	0.00151	0.990235728	0.929487179	0.060648	0.053348	0.0046757	0.001808	0.989032807	0.945147679	0.0597455	0.05212	0.0060178	0.003053
	6024d	1	1	0.027883537	0.015270059	0.003149023	0.000912777	1	1	0.02769645	0.017057269	0.0036031	0.001174	0.999863221	0.982081911	0.0275026	0.019608	0.0048918	0.001676	0.999654472	0.985743381	0.0273639	0.020378	0.0084578	0.002539
	6025d	1	1	0.051219816	0.039074927	0.002831826	0.00121961	1	1	0.051111695	0.039897377	0.0031781	0.001168	1	1	0.0508998	0.040346	0.0034696	0.001638	1	1	0.0503866	0.040248	0.0038588	0.002008
	6028d	1	1	0.041714496	0.029561884	0.003348033	0.001133658	1	1	0.040463237	0.029398488	0.0043135	0.001898	1	1	0.0384736	0.029573	0.0057339	0.002586	1	1	0.0357704	0.027652	0.007164	0.003893
	6031d	0.990652885	0.649875992	0.04715437	0.027492027	0.012874615	0.001811511	0.987857982	0.742952928	0.048484839	0.030778386	0.0159177	0.002671	0.984482988	0.851061776	0.0499336	0.036297	0.0171144	0.00343	0.977188714	0.8729091	0.0536734	0.038239	0.0209873	0.004293
	6044d	0.939263822	0.75	0.068125947	0.034330226	0.004571956	0.000293474	0.941970388	0.780898876	0.068559705	0.040125402	0.0051418	0.000412	0.941654842	0.823671498	0.0693339	0.042994	0.0060814	0.002059	0.944249433	0.860169492	0.0709547	0.05463	0.0090504	0.002494
	6045d	0.998980709	0.801136364	0.047453953	0.025506762	0.005984472	0.000743282	0.999253896	0.921171171	0.046012588	0.032568624	0.0072162	0.001306	0.999392811	0.953703704	0.0441931	0.033416	0.0080333	0.002405	0.998379162	0.950289275	0.0426784	0.032884	0.0151235	0.003489
	6048d	0.999603309	0.9375	0.05519929	0.027202381	0.0034621	2.06669E-17	0.999467307	0.961538462	0.054187627	0.026530652	0.0043461	0.000628	0.999642886	0.980314961	0.0526132	0.027098	0.0054351	0.001694	0.999595513	0.990654206	0.0500807	0.029647	0.0070862	0.00227
	6049d	0.989379953	0.861538462	0.062677841	0.047096313	0.003042877	2.73385E-17	0.990225526	0.863636364	0.062166108	0.049423912	0.0034887	0.000544	0.99185215	0.898477157	0.0614497	0.052198	0.0039923	0.000867	0.994578721	0.931718062	0.0599151	0.051644	0.0054236	0.002784
	6050d	0.99660123	0.875	0.090995436	0.078320962	0.005806919	4.64534E-17	0.991203307	0.883495146	0.088978683	0.077421005	0.0068709	0.002143	0.982490097	0.902439024	0.0868531	0.074371	0.0082716	0.002956	0.971083037	0.929319372	0.0831754	0.071103	0.0101844	0.004804
	6051d	0.99684214	0.833333333	0.058975936	0.048437025	0.002562715	0.000784073	0.996842601	0.897058824	0.058699811	0.050869807	0.0029043	0.001361	0.997515832	0.962264151	0.0581612	0.049711	0.0033034	0.001644	0.998190999	0.975247525	0.0572593	0.049646	0.0038852	0.002349
	6053d	0.958775352	0.802631579	0.077076144	0.054416273	0.004142246	0.001454988	0.953948994	0.823529412	0.076023085	0.057704009	0.0048202	0.001747	0.954045989	0.864678899	0.074473	0.059042	0.0059252	0.002407	0.955798219	0.896761134	0.0718626	0.054455	0.0096146	0.003644
	6054d	0.983596078	0.666666667	0.060697308	0.047180947	0.00632737	0.001203945	0.984916001	0.778571429	0.060604206	0.049612231	0.007575	0.001478	0.987011731	0.842315137	0.0598453	0.042363	0.009427	0.002467	0.989618224	0.899590164	0.0582326	0.045286	0.0165418	0.003227
	6055d	0.996354322	0.713203463	0.061576701	0.041397928	0.007995507	0.000518018	0.996791274	0.765832106	0.059935442	0.044699914	0.0098356	0.000994	0.997374568	0.839215272	0.0580679	0.045553	0.0103506	0.0014	0.998465541	0.922803261	0.0561227	0.046294	0.0103291	0.001722
	6056d	0.998753898	0.805555556	0.041984337	0.007520424	0.007206241	0.001082716	0.998646224	0.849462366	0.042302316	0.012750552	0.0086367	0.001409	0.998714795	0.859518349	0.0417159	0.019462	0.0098494	0.001527	0.998859451	0.921006944	0.0405407	0.023102	0.0111462	0.002153
	6061d	0.998426624	0.86328125	0.053525012	0.021940627	0.008071793	0.000829475	0.99879671	0.950934579	0.053143657	0.026468812	0.0083644	0.001298	0.998806529	0.963286713	0.0528233	0.027876	0.0082999	0.002134	0.999057981	0.982869379	0.0522999	0.03316	0.0077639	0.002595
	6065d	1	1	0.045678009	0.029569671	0.004047704	1.30923E-17	1	1	0.044009535	0.030456308	0.0053853	4.22E-17	1	1	0.0419581	0.030124	0.0068237	0.002433	0.999944308	0.996694215	0.0391388	0.028445	0.0083718	0.003615
	6074d	0.960300098	0.761904762	0.065999841	0.053511595	0.003306174	0.001094164	0.96442477	0.857142857	0.065130788	0.053032304	0.0040234	0.00127	0.96865104	0.854054054	0.063884	0.053721	0.0049171	0.001877	0.976314099	0.901041667	0.0615083	0.052041	0.0071444	0.002619
	6075d	0.999586306	0.934782609	0.054095259	0.039548337	0.003428305	4.03088E-17	0.999720188	0.967032967	0.053381613	0.040645012	0.0040013	0.000484	0.999743946	0.985781991	0.0522363	0.041332	0.0046904	0.002038	0.999882736	0.993839836	0.0496996	0.041973	0.0063538	0.003201
	6077d	0.972731541	0.8	0.058644874	0.036643967	0.004373889	0.000669727	0.97738144	0.856557377	0.057664929	0.036319125	0.0050079	0.001491	0.980538206	0.874449339	0.0561791	0.037223	0.0059249	0.002079	0.985839303	0.903803132	0.053882	0.036624	0.0075313	0.003288
	6079d	0.983099693	0.821428571	0.062144584	0.047260984	0.003281906	0.000541274	0.984243475	0.842105263	0.061673882	0.050296221	0.0038341	0.000521	0.988654028	0.896475771	0.0606773	0.050321	0.0045806	0.00195	0.991631931	0.916831683	0.059046	0.049535	0.0056769	0.002142
	6084d	1	1	0.051428446	0.036981082	0.00306478	0.000858658	1	1	0.050492828	0.037716945	0.0038301	0.001494	1	1	0.0489965	0.036983	0.0049176	0.001917	1	1	0.0468909	0.035687	0.0062363	0.002307
	6085d	1	1	0.043229206	0.03263448	0.002700697	0.000840359	1	1	0.043225636	0.033396941	0.0030537	0.001492	1	1	0.0432084	0.033638	0.0032495	0.001828	1	1	0.0430409	0.036587	0.0033961	0.002292
	6089d	1	1	0.044929399	0.035500703	0.002951056	0.000694267	1	1	0.044225016	0.034619149	0.0035479	0.00098	1	1	0.0428892	0.032381	0.0046119	0.001957	1	1	0.0406394	0.030797	0.0063042	0.002411
	6091d	1	1	0.045800699	0.031748562	0.003397776	3.2144E-17	1	1	0.045603655	0.033246505	0.0038507	3.85E-17	1	1	0.045169	0.031616	0.0044014	0.001841	0.999962886	0.997624703	0.0440143	0.033822	0.005693	0.002295
	6093d	1	1	0.040925184	0.025379789	0.003073488	0.000894556	1	1	0.041114092	0.025462808	0.0034206	0.001156	1	1	0.0411298	0.029125	0.0037319	0.001743	1	1	0.0410166	0.03256	0.0039946	0.0025
	6094d	1	1	0.038399574	0.022586689	0.003067262	5.43563E-06	1	1	0.037563008	0.024611312	0.003583	0.00145	1	1	0.0362183	0.026067	0.0044285	0.002035	1	1	0.0339039	0.027014	0.0058009	0.002798
	6102d	1	1	0.05210884	0.036206626	0.002594656	0.000793382	1	1	0.051474199	0.037869173	0.0031133	0.001249	1	1	0.0505973	0.039013	0.0037127	0.001403	1	1	0.0492732	0.040028	0.0045107	0.002007
	6105d	1	1	0.034636459	0.020427142	0.002657753	0.00054537	0.999776429	0.966085271	0.034492066	0.019764697	0.0049229	0.000876	0.999515478	0.942095588	0.0340403	0.019457	0.0070175	0.001107	0.997673861	0.924307958	0.0348723	0.0195	0.0220412	0.0017
	6599d	0.997696815	0.825	0.041783186	0.014158268	0.010460574	0.000737559	0.997246865	0.856557377	0.041582246	0.015840806	0.0163034	0.001595	0.996740766	0.892307692	0.0426003	0.021278	0.0195919	0.001938	0.996978294	0.912202381	0.0434532	0.021597	0.0253298	0.002849
	6602d	0.999618788	0.931372549	0.028910929	0.010273198	0.004391422	0.000944972	0.998523559	0.85252809	0.030265386	0.012051496	0.0098524	0.000954	0.998203671	0.877262443	0.0332869	0.014066	0.0151311	0.001719	0.997994133	0.90212528	0.0338701	0.012333	0.0220633	0.002115
	6605d	0.993140817	0.745454545	0.037381742	0.010729699	0.021923511	0.001362745	0.988788557	0.804705215	0.039832613	0.01389398	0.0455206	0.001554	0.979827674	0.850649351	0.0523656	0.011715	0.0951971	0.002211	0.963451978	0.896639511	0.0880544	0.011448	0.1943153	0.002694
	6612d	0.998600194	0.909482759	0.041969523	0.020708051	0.010360127	0.001172509	0.99529322	0.896186441	0.043889987	0.026236809	0.027752	0.002259	0.988279358	0.894396552	0.0544896	0.024517	0.0693046	0.003682	0.973038887	0.888826025	0.0942086	0.02748	0.1627574	0.00473
	6617d	0.960066798	0.76	0.076157716	0.061145977	0.002810628	0.000973527	0.957950054	0.813131313	0.075747975	0.063442502	0.0032166	0.001219	0.958393898	0.857526882	0.0751419	0.063681	0.0037423	0.001669	0.954402714	0.878755365	0.0739633	0.061597	0.0056457	0.00221
	6622d	0.998319222	0.896551724	0.054670726	0.031471089	0.003421549	0.000608111	0.998508744	0.941176471	0.054911863	0.035309198	0.0038807	0.001272	0.998991921	0.968325792	0.0549975	0.038717	0.0041648	0.002122	0.999257496	0.985245902	0.0548972	0.040717	0.0044041	0.002879
	6627d	0.924212076	0.676630435	0.14371218	0.009011773	0.198230386	0.00242097	0.913354664	0.733276644	0.185083808	0.009303379	0.2704291	0.004317	0.903862501	0.791861827	0.2357524	0.017774	0.3435529	0.005761	0.899858559	0.806298218	0.3190097	0.0394	0.4055377	0.134784
	6637d	0.997726755	0.914893617	0.058026435	0.045320859	0.00395604	0.001161185	0.998128392	0.949494949	0.056684887	0.04631102	0.0048046	0.001799	0.998521679	0.964646465	0.054776	0.045625	0.0059805	0.002877	0.999211476	0.989059081	0.0520798	0.041021	0.0079269	0.004511
	6642d	0.943063234	0.638888889	0.252667406	0.005764161	0.151013697	0.001420309	0.942395567	0.621134021	0.236453234	0.006505081	0.181012	0.001998	0.946211285	0.661184211	0.2241397	0.011173	0.2018333	0.002403	0.947759021	0.733398438	0.2114604	0.012356	0.2354385	0.003514
	6643d	0.946549296	0.827272727	0.790051493	0.640392039	0.030724413	0.004746382	0.9505523	0.87037037	0.777681014	0.636714908	0.0384819	0.007762	0.952486727	0.888663968	0.7567675	0.639295	0.0495962	0.008758	0.953832725	0.907612032	0.729632	0.633644	0.0609118	0.011836
	6644d	0.919717077	0.685714286	0.825492579	0.209538997	0.093787507	0.001611443	0.92835798	0.751096491	0.822183087	0.36214424	0.1041634	0.010885	0.936845358	0.767421603	0.8197677	0.492707	0.1051033	0.014573	0.945511075	0.838947368	0.8048906	0.69512	0.1077833	0.034169
	6667d	0.995741322	0.806451613	0.056859063	0.031623335	0.003368431	0.001050209	0.996286155	0.872727273	0.056534645	0.036339483	0.0038149	0.001475	0.997362541	0.95505618	0.0560857	0.041676	0.004092	0.001671	0.997779314	0.972696246	0.0549145	0.043051	0.0047343	0.002899
	6675d	0.999504409	0.886792453	0.054533154	0.040509928	0.002913079	0.000318417	0.999521658	0.917647059	0.05469348	0.045268647	0.0031944	0.000528	0.99960256	0.964824121	0.0544014	0.047369	0.0036124	0.001128	0.999692109	0.985655738	0.0538197	0.048704	0.0040776	0.00195
	6677d	0.947060462	0.764705882	0.067195194	0.039214619	0.003957908	0.001104315	0.950740403	0.824324324	0.065958256	0.045887813	0.0056822	0.001313	0.958890692	0.878453039	0.064409	0.047733	0.0115991	0.002027	0.968430228	0.894946461	0.0622186	0.048103	0.0238587	0.003695
	6687d	1	1	0.039562741	0.022278264	0.003390991	0.001196105	1	1	0.038900956	0.027246477	0.0040025	0.001294	0.999730873	0.97254902	0.0380138	0.028646	0.0061201	0.002267	0.999528186	0.983705773	0.0367322	0.029268	0.0090522	0.003385
	6688d	0.994187124	0.844537815	0.061333167	0.04286635	0.004746376	0.001314316	0.99454519	0.881802721	0.060693792	0.04997686	0.0063433	0.001714	0.995742578	0.902538726	0.0593317	0.050663	0.0064395	0.002073	0.996854584	0.963887117	0.0574774	0.049639	0.0095397	0.002502
	6706d	0.99951201	0.978723404	0.053026001	0.020273688	0.004441463	0.001288875	0.999495078	0.97979798	0.053382215	0.027420999	0.0048824	0.001343	0.999390847	0.989473684	0.0536623	0.034518	0.0051365	0.001865	0.999439182	0.992172211	0.053489	0.039019	0.0054219	0.002876
	6707d	1	1	0.040765643	0.02205101	0.003553792	0.000843012	1	1	0.040954887	0.023430165	0.0039226	0.001272	1	1	0.0411245	0.025855	0.0041338	0.00208	1	1	0.0411522	0.029791	0.0043455	0.002405
	6709d	0.944929527	0.63372093	0.200063116	0.011841644	0.121721682	0.001212168	0.949760614	0.753205128	0.1967114	0.012060205	0.1379004	0.001459	0.956247367	0.786152498	0.1942534	0.019803	0.1477929	0.002293	0.95880644	0.811322256	0.1900142	0.025435	0.1639363	0.003413
	6714d	1	1	0.047732203	0.035053396	0.003469263	0.00036521	1	1	0.047621621	0.037501918	0.0039779	0.001714	1	1	0.0469627	0.039401	0.0046023	0.001855	0.999891669	0.996323529	0.0456404	0.040419	0.0055677	0.003149
	96-3-21	0.999790469	0.927083333	0.042112253	0.01023317	0.003866415	1.82856E-17	0.99964924	0.931372549	0.04290913	0.01427718	0.0055952	2.03E-17	0.999592558	0.942258883	0.0437003	0.015387	0.0074836	2.34E-17	0.999331338	0.926401869	0.0448874	0.025236	0.0091965	0.001819
	As0598ad	0.997828065	0.854166667	0.034426562	0.018416047	0.011536459	6.2854E-18	0.997410205	0.856343284	0.03366426	0.015329385	0.0132448	1.14E-17	0.998066585	0.929597701	0.0319152	0.020159	0.0150711	0.001237	0.99850428	0.959570957	0.0308618	0.019665	0.0169259	0.002171
	gc0697ad	0.998857766	0.872727273	0.025964922	0.008848876	0.006863547	1.26686E-17	0.998972842	0.932692308	0.026843819	0.01091074	0.0082687	1.3E-17	0.999420898	0.965853659	0.0274845	0.012915	0.0078148	0.001645	0.999587877	0.984547461	0.0278664	0.013164	0.0083768	0.003362
	hm1096ad	1	1	0.044627743	0.030350369	0.002557966	0.000801434	1	1	0.044914735	0.030502718	0.0029701	0.001134	1	1	0.0452493	0.031601	0.0032992	0.001265	1	1	0.0457683	0.03218	0.0038087	0.001963
	jb0298ad	1	1	0.034076481	0.019662019	0.003319289	0.000800342	1	1	0.034521249	0.020610066	0.0036917	0.001061	1	1	0.0349007	0.023002	0.0040739	0.001567	1	1	0.0354731	0.025408	0.0046674	0.002285
	kk0498ad	1	1	0.035365642	0.02467932	0.005517839	0.001668656	1	1	0.037400003	0.028969569	0.006554	0.00363	1	1	0.0392948	0.029779	0.0074043	0.003899	1	1	0.039772	0.031348	0.0075497	0.004805
	km0301ad	1	1	0.037078577	0.021920107	0.001677881	1.05817E-18	1	1	0.037183859	0.023952375	0.0020316	9.58E-18	1	1	0.0372713	0.024024	0.002409	6.11E-05	1	1	0.0374183	0.026948	0.0028332	0.000693
	Ld1196ad	0.95394431	0.805555556	0.065918683	0.042282139	0.003550497	0.000834766	0.957467194	0.826086957	0.065145706	0.045432739	0.0042959	0.001499	0.963179837	0.866477273	0.0639902	0.047445	0.005208	0.001801	0.971281757	0.912532637	0.0620459	0.046417	0.0064718	0.002562
	Ma0899ad	1	1	0.036093374	0.02413243	0.002400827	0.001137054	1	1	0.03542804	0.022940825	0.003145	0.001131	1	1	0.0339249	0.022076	0.0045626	0.001721	1	1	0.030702	0.025054	0.006805	0.003202
	mj0798ad	1	1	0.026511832	0.016340645	0.001767903	1.46259E-17	1	1	0.026315614	0.017976818	0.0020801	0.000244	1	1	0.0259421	0.020442	0.0024869	0.000291	1	1	0.0254055	0.020085	0.0031141	0.001108
	Ra0199ad	0.99950219	0.902777778	0.042123124	0.018098986	0.005687826	0.000666274	0.999550488	0.95	0.042557609	0.02316119	0.0066372	0.000794	0.999754324	0.972868217	0.0429617	0.029028	0.0071233	0.001624	0.99984543	0.989045383	0.0430164	0.033315	0.0075151	0.002233
	Ra0997ad	0.964588379	0.708333333	0.137262679	0.01254581	0.087022186	1.34868E-17	0.967149881	0.75390625	0.114645881	0.013105826	0.1012379	0.000505	0.975861918	0.850925926	0.0896214	0.022669	0.0985313	0.001073	0.983367898	0.904854369	0.0713263	0.024586	0.0928167	0.001536

Saturation Channel (S)																									
Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
	4023d	0.911596715	0	0.572984556	0.443218966	0.040075222	0.012208975	0.918558704	0.823943662	0.584098524	0.454263284	0.0502728	0.020374	0.918983687	0.835548173	0.5974361	0.486235	0.0580722	0.027669	0.922316841	0.857030016	0.6129952	0.530964	0.066338	0.041408
	4025d	0.9244526	0.785714286	0.535751682	0.295374803	0.035502131	0.007747048	0.922102735	0.82629108	0.55037233	0.338046713	0.0464032	0.011598	0.926760127	0.848290598	0.5732778	0.396972	0.0606501	0.016054	0.932858979	0.849326599	0.6034782	0.468894	0.0746805	0.02128
	4030d	0.940745939	0.792397661	0.612929977	0.439421692	0.031508627	0.009159946	0.940981014	0.831989247	0.625926771	0.469311862	0.0398765	0.013762	0.940568778	0.863194444	0.643004	0.516561	0.0504508	0.022071	0.94351953	0.894947628	0.662693	0.560445	0.0601838	0.027316
	4044d	0.955056504	0.761904762	0.375124265	0.210775766	0.022868751	0.005849062	0.953783664	0.833333333	0.384137751	0.240227448	0.0297495	0.008782	0.953454232	0.862068966	0.396489	0.284951	0.0390897	0.011837	0.954482687	0.893859649	0.4128379	0.32666	0.0491602	0.015488

CANCER IMAGES	6015d	0.897732715	0.75	0.455888799	0.304656002	0.037610667	0.019471981	0.892918204	0.776470588	0.459560159	0.318899356	0.0402957	0.025719	0.892624371	0.81504065	0.4610659	0.327343	0.0421319	0.028973	0.894572718	0.844827586	0.4600247	0.36036	0.0438972	0.030506
	6052d	0.8920537	0.673333333	0.425385116	0.223024247	0.04428428	0.016664687	0.891079041	0.740506329	0.438019375	0.301474878	0.0512152	0.019379	0.890908232	0.769188596	0.4495938	0.319969	0.0580029	0.028072	0.887803719	0.830691057	0.4630515	0.345513	0.0654241	0.034129
	95-13-15.jpg	0.946698562	0.692810458	0.511528036	0.217508103	0.028335862	3.91914E-16	0.946763062	0.693285297	0.513180051	0.226701745	0.0360875	0.000882	0.946205614	0.74715858	0.5171347	0.23692	0.0478717	0.003939	0.948499305	0.767744302	0.5180283	0.242388	0.0624596	0.011401
	95-13-17.jpg	0.962768378	0.804347826	0.206059147	0	0.022373	0	0.96275584	0.847457627	0.206921702	0	0.02895	0	0.962248724	0.854651163	0.2098608	0	0.0380749	0	0.964114873	0.867424242	0.2128291	0	0.049034	0
	96-22-19	0.948628029	0.701388889	0.543168063	0.304104657	0.028483716	0.003146156	0.947947942	0.807511737	0.550611001	0.316401931	0.0379553	0.006249	0.949058453	0.842039801	0.5622053	0.349442	0.0492393	0.010051	0.949884528	0.894654088	0.5790354	0.380526	0.0632255	0.019678
	Bg0899ad	0.903774447	0.683712121	0.583070558	0.300118229	0.045041018	0.005146951	0.907823273	0.741319444	0.59170306	0.316191662	0.0569418	0.009789	0.907082617	0.779935275	0.6041941	0.323548	0.0727466	0.019185	0.900729116	0.803459119	0.634979	0.394057	0.09965	0.053837
	Bm0300ad	0.963459737	0.76	0.575192004	0.430497092	0.022095518	0.005434336	0.962101751	0.875	0.583029611	0.446107783	0.0281804	0.00745	0.959985576	0.887407407	0.5919359	0.474406	0.0354175	0.009891	0.961667958	0.905833333	0.6035095	0.506133	0.0422152	0.013292
	Fj0297ad	0.913213972	0.709401709	0.749318458	0.631404886	0.042509682	0.008471687	0.914612936	0.765503876	0.767824502	0.660568592	0.0532448	0.012232	0.918571609	0.802681992	0.7916863	0.682405	0.064962	0.014624	0.927219542	0.866474544	0.820255	0.684978	0.0757885	0.019013
	Fj1200ad	0.936267416	0.793478261	0.502119976	0.391796622	0.02421316	0.005660532	0.938563425	0.829113924	0.511908055	0.423343917	0.0312883	0.006603	0.945158956	0.875796178	0.524121	0.439136	0.0383191	0.011518	0.951084879	0.898406375	0.5366819	0.446699	0.0464418	0.015498
	Fn1200ad	0.975066752	0.774509804	0.376988232	0.195195866	0.013910276	0.004026017	0.974831352	0.791666667	0.378115236	0.228445263	0.0162285	0.00464	0.975354713	0.806451613	0.3794113	0.252615	0.0190707	0.005979	0.978327348	0.894628099	0.3805121	0.269926	0.0221291	0.007938
	Gs0499ad	0.977935544	0.822580645	0.326890976	0.187421243	0.015969514	0.003069658	0.976706251	0.875	0.334507727	0.19306761	0.0216943	0.004761	0.974776151	0.898426323	0.3467853	0.200331	0.0300415	0.007879	0.972824248	0.916666667	0.3667438	0.225306	0.0447037	0.014679
	hn0996ad	0.988959174	0.791666667	0.402612876	0.338462749	0.016857425	0.002855889	0.988487465	0.831955923	0.409646425	0.350043781	0.0212898	0.004778	0.987092528	0.881642512	0.4184623	0.375608	0.0267257	0.006593	0.98416776	0.918807339	0.4303612	0.37153	0.0349657	0.008876
	kh0598ad	0.971869866	0.839285714	0.423897957	0.362811248	0.028584419	0.008571124	0.967736378	0.881578947	0.435582511	0.387633222	0.03483	0.010726	0.964306206	0.892076503	0.4507668	0.377259	0.0435796	0.013408	0.961736116	0.919514388	0.4706249	0.392797	0.0550315	0.017502
	Kr1196ad	0.930938181	0.722222222	0.620105096	0.379038936	0.032942478	0.00649432	0.930674425	0.764150943	0.635171251	0.401293532	0.0444584	0.010729	0.93215376	0.809734513	0.6541256	0.448409	0.0588392	0.014906	0.935842384	0.868778281	0.677345	0.52109	0.0752513	0.022275
	Lj0899ad	0.897475234	0.733630952	0.604308032	0.3399461	0.047537476	0.013756439	0.890537455	0.786011905	0.62687739	0.354866745	0.0600593	0.023764	0.888636883	0.816896024	0.6519209	0.433282	0.0766933	0.027682	0.895161084	0.843014184	0.6872354	0.517781	0.0914059	0.029684
	lj1196ad	0.97446252	0.85	0.696317422	0.641325829	0.025202266	0.002195054	0.97181825	0.875	0.708740752	0.646784433	0.0326258	0.005927	0.969785821	0.893939394	0.7235785	0.648855	0.040622	0.006894	0.968471442	0.927884615	0.7404853	0.659166	0.0505959	0.015707
	mk1096ad	0.886453177	0.595901639	0.866643019	0.71091454	0.04511499	0.016769636	0.890682582	0.717528736	0.87208176	0.711182903	0.0473564	0.01839	0.893000113	0.785907859	0.8771564	0.723289	0.0500053	0.023655	0.893705815	0.792987512	0.8820123	0.754871	0.0536613	0.025354
	mm0598ad	0.9096185	0.6	0.639032994	0.209752139	0.045380249	0.008656423	0.908489857	0.683195592	0.652923539	0.334579275	0.0582779	0.015748	0.908465538	0.753703704	0.6730795	0.411998	0.0723747	0.024153	0.910832406	0.775906736	0.6982994	0.497021	0.0850741	0.028865
	Mm0899ad	0.923309325	0.819148936	0.621649207	0.438835174	0.03659552	0.008656112	0.92423707	0.821428571	0.633140626	0.477239651	0.0463315	0.013292	0.9185404	0.861111111	0.6534919	0.502871	0.0598428	0.021608	0.916841161	0.861702128	0.6789146	0.561814	0.0778768	0.033986
	Nd0599ad	0.951931354	0.75	0.569963466	0.497887379	0.036701232	0.005403476	0.947663066	0.831989247	0.585609357	0.495257407	0.0454137	0.015923	0.943169133	0.868298368	0.6068285	0.525265	0.0557836	0.022568	0.943760373	0.905057652	0.6323499	0.547899	0.0663593	0.027697
	Rk0399ad	0.921372313	0.787878788	0.625198687	0.265113211	0.040152733	0.012046233	0.921057624	0.823024055	0.635990795	0.279047386	0.0518394	0.015187	0.920980959	0.865591398	0.656716	0.302495	0.0669628	0.019084	0.915804008	0.878697042	0.6835833	0.354929	0.0878915	0.024265
	Rl0298ad	0.951838438	0.793650794	0.596242974	0.557913155	0.030570652	0.011189439	0.937273321	0.845959596	0.608842531	0.566419232	0.0376236	0.018597	0.923486149	0.859353024	0.623414	0.578825	0.0451325	0.02202	0.920946767	0.885899814	0.6446486	0.600728	0.0565828	0.027945
	sd0597ad	0.950203238	0.78	0.481546652	0.334364389	0.021182908	0.001921354	0.948541787	0.821428571	0.488926506	0.356233679	0.0280968	0.008944	0.946712878	0.851694915	0.5009358	0.374978	0.0373576	0.012079	0.951920165	0.871141975	0.520385	0.425387	0.0503894	0.027183
	Wa0499ad	0.945713393	0.7	0.598078494	0.438292993	0.020534659	0.008384138	0.948835545	0.824786325	0.59438255	0.460479993	0.0233376	0.010923	0.949317375	0.846	0.5881797	0.487893	0.0275127	0.015109	0.951531299	0.860853432	0.5750516	0.482838	0.03499	0.015107
	zp0298ad	0.951210968	0.768518519	0.587882809	0.492797602	0.032345871	0.007757605	0.944965009	0.820621469	0.601363614	0.497974023	0.0423392	0.012486	0.938930149	0.850806452	0.6180561	0.512498	0.0565108	0.019999	0.932403915	0.859847036	0.6362096	0.541637	0.0690967	0.023751
	zr0798ad	0.903858324	0.685416667	0.495487315	0.425389916	0.037533099	0.007080434	0.901956704	0.740530303	0.514301454	0.437805193	0.0496206	0.013123	0.908320964	0.768100358	0.537041	0.460332	0.0630628	0.017188	0.912358579	0.802336029	0.5713785	0.474005	0.0832794	0.02852
NOT CANCER IMAGES	4056d	0.949306707	0.833333333	0.544393126	0.386529327	0.027571205	0.009367139	0.949226351	0.843478261	0.553173938	0.419279724	0.035971	0.013758	0.947289244	0.885964912	0.5630181	0.458493	0.0443417	0.020233	0.942917722	0.903524492	0.5733621	0.477117	0.0500915	0.02609
	4058d	0.946870802	0.692307692	0.573776339	0.452468985	0.021261427	0.008104408	0.945213635	0.805555556	0.582265755	0.482457793	0.0273751	0.011749	0.942381291	0.868932039	0.5940228	0.504824	0.0353361	0.015528	0.937892183	0.883079848	0.6098258	0.546345	0.0417364	0.020782
	4063d	0.933373985	0.758333333	0.447230012	0.211875496	0.028848155	0.009712354	0.933793757	0.833333333	0.458983396	0.229147919	0.0379765	0.013045	0.933824576	0.870068027	0.4766083	0.244207	0.0500194	0.020332	0.929606137	0.888141026	0.5044468	0.282006	0.0686186	0.024879
	4074d	0.936678566	0.797348485	0.326782753	0.15905973	0.034232879	0.011878304	0.930812326	0.830729167	0.342493304	0.186463485	0.0446945	0.01388	0.935291042	0.86405959	0.3654904	0.231284	0.0568312	0.021592	0.943078462	0.885685885	0.3966256	0.296171	0.0710985	0.024008
	4082d	0.951397114	0.823529412	0.462769484	0.378716622	0.022114032	0.005729573	0.939586002	0.860759494	0.47157145	0.402475569	0.0273204	0.011245	0.939159429	0.883333333	0.48149	0.43154	0.0319905	0.015565	0.945363151	0.889632107	0.4917735	0.448334	0.0353885	0.019133
	4083d	0.967714157	0.798387097	0.397542835	0.255387875	0.017854446	0.005789166	0.967460831	0.845070423	0.401337048	0.284841888	0.0230765	0.00734	0.969562282	0.894957983	0.4072871	0.306646	0.0278563	0.008249	0.969783417	0.901754386	0.4109657	0.347268	0.0342759	0.012413
	4084d	0.95864636	0.802083333	0.522739212	0.366860921	0.027411289	0.010404436	0.955575529	0.858695652	0.532151705	0.400574892	0.0333964	0.014781	0.954004912	0.860576923	0.5434642	0.422242	0.0413058	0.015571	0.953240166	0.878989362	0.5614601	0.477839	0.0487188	0.021098
	6005d	0.833983628	0.648148148	0.496498895	0.40660732	0.056318324	0.021924998	0.839035295	0.748971193	0.515900356	0.446963172	0.0645505	0.031494	0.843806412	0.718023256	0.5339752	0.40426	0.0703402	0.043017	0.848281124	0.781028807	0.551025	0.46917	0.0735112	0.043491
	6017d	0.956995371	0.723404255	0.399630901	0.311886642	0.023078714	0.01094144	0.959459093	0.788461538	0.400313191	0.328086284	0.0241831	0.013345	0.9559471	0.83127572	0.3987055	0.339728	0.0254216	0.014971	0.948691891	0.85665529	0.3943097	0.339334	0.0278705	0.018455
	6023d	0.860931927	0.704545455	0.460245259	0.357142226	0.045266259	0.021369814	0.85990305	0.765258216	0.461926148	0.364313731	0.0468117	0.026896	0.858357232	0.792079208	0.4617652	0.382523	0.048799	0.035507	0.861083179	0.807303807	0.4571479	0.375439	0.0515123	0.039144
	6024d	0.897757857	0.728571429	0.457295607	0.383104036	0.033812613	0.019755343	0.897055021	0.767676768	0.458731358	0.404639985	0.0353846	0.019806	0.8943335	0.792792793	0.4597362	0.411276	0.0372218	0.025508	0.894630692	0.815068493	0.4584896	0.409547	0.0401445	0.026976
	6025d	0.915703412	0.787581699	0.458028058	0.385695441	0.044337655	0.01883039	0.905961784	0.794372294	0.472401065	0.402975371	0.0520706	0.025499	0.907933278	0.85371179	0.4858712	0.417227	0.0588104	0.030907	0.906621392	0.858893557	0.5042142	0.440043	0.0659528	0.038422
	6028d	0.962251379	0.8125	0.443406077	0.398384064	0.026736526	0.012959324	0.964838218	0.862831858	0.44089149	0.394446383	0.0279388	0.016271	0.963516728	0.886574074	0.4354776	0.390375	0.0304228	0.018659	0.955958246	0.9004329	0.4251201	0.381349	0.0350675	0.024551
	6031d	0.914934168	0.697368421	0.295933861	0.042789159	0.028651241	0.013832365	0.914080095	0.804347826	0.295145857	0.042989849	0.0328201	0.018848	0.916439077	0.827651515	0.2891271	0.075385	0.0393349	0.023651	0.917540225	0.864583333	0.2781045	0.105888	0.0516172	0.029025
	6044d	0.954796767	0.791666667	0.251496352	0.131125249	0.020377659	0.009563747	0.955841003	0.823809524	0.254450978	0.152684156	0.0233949	0.011234	0.957811139	0.858208955	0.2567627	0.157525	0.0264517	0.014462	0.960244249	0.877263581	0.2570766	0.16545	0.0303614	0.018082
	6045d	0.932891174	0.773809524	0.433813325	0.222490923	0.035784793	0.014401005	0.933957622	0.8	0.432051493	0.244220869	0.0374724	0.023194	0.934271036	0.849056604	0.4263421	0.226914	0.0409969	0.026101	0.924082639	0.874517375	0.413764	0.266365	0.0484508	0.027526
	6048d	0.949503298	0.7625	0.42695734	0.228105762	0.031508232	0.011170611	0.95194137	0.851485149	0.427354516	0.236003659	0.0324597	0.016544	0.954632013	0.873134328	0.4249166	0.283874	0.0333553	0.017485	0.954964276	0.892553191	0.4197527	0.292543	0.0351151	0.02276
	6049d	0.916322486	0.777777778	0.376133989	0.288791639	0.027850964	0.00508676	0.921044675	0.816964286	0.379993022	0.304140269	0.0304142	0.010986	0.927208865	0.827380952	0.3831812	0.312322	0.0318407	0.01758	0.930915269	0.873287671	0.385688	0.327932	0.0336232	0.020936
	6050d	0.934927611	0.76119403	0.313329532	0.205712409	0.026797036	0.01169118	0.931103634	0.807017544	0.31929343	0.202696615	0.0299976	0.013585	0.924852323	0.838912134	0.3233862	0.207931	0.032995	0.016444	0.924745028	0.870335821	0.3261645	0.224313	0.0358915	0.023462
	6051d	0.895826859	0.779069767	0.466911838	0.357929617	0.035880356	0.01940355	0.890369289	0.786195286	0.475109678	0.384257801	0.0394796	0.023074	0.884709127	0.8	0.4846141	0.405896	0.0425598	0.025341	0.882928099	0.83110687	0.4950477	0.424907	0.0464355	0.031472
	6053d	0.905187117	0.7	0.419436077	0.324148133	0.04121289	0.014661093	0.902175614	0.791262136	0.428279854	0.335823721	0.0451777	0.023494	0.899662386	0.818807339	0.4370837	0.341556	0.0485883	0.029875	0.895373183	0.842391304	0.4473744	0.385721	0.0521557	0.039078
	6054d	0.887972994	0.674418605	0.369767779	0.20185456	0.038858375	0.012586505	0.886881939	0.737068966	0.384052593	0.223245026	0.0470125	0.015588	0.888645637	0.804054054	0.4010911	0.263731	0.0573383	0.019974	0.89185366	0.843073593	0.4235633	0.307664	0.0668352	0.026397
	6055d	0.894794126	0.730769231	0.512617267	0.104257286	0.030823866	0.011823548	0.898505649	0.761538462	0.515509495	0.130855596	0.0334259	0.012966	0.906702169	0.802631579	0.5188021	0.227635	0.0350261	0.019104	0.912274482	0.8117506	0.5211206	0.273763	0.0358286	0.027568
	6056d	0.874240227	0.75	0.48698727	0.287286011	0.042831243	0.021385304	0.876965556	0.771929825	0.49897281	0.296992417	0.0486286	0.023972	0.878365079	0.815336463	0.5119831	0.306659	0.0550465	0.028797	0.879139854	0.826347305	0.5288902	0.33625	0.0622492	0.038617
	6061d	0.928442767	0.798611111	0.371787721	0.167151773	0.029768363	0.011527796	0.931185588	0.824324324	0.378733013	0.181839399	0.0341579	0.01333	0.933821071	0.857142857	0.3870548	0.207863	0.0385243	0.018781	0.93813532	0.885113269	0.3968914	0.220849	0.0435974	0.026346
	6065d	0.890747589	0.756944444	0.376117819	0.292950268	0.02680297	0.009268163	0.887462222	0.796875	0.373663804	0.314092318	0.0286014	0.017951	0.885962048	0.817757009	0.3688482	0.324177	0.0304065	0.020728	0.889524253	0.8328125	0.3588833	0.301087	0.0357069	0.021875
	6074d	0.900172158	0.716666667	0.496535245	0.306334709	0.032159723	0.013652108	0.904867343	0.801587302	0.498695886	0.325270362	0.034343	0.021646	0.906766286	0.823741007	0.4974198	0.33495	0.0375508	0.022737	0.90912334	0.849484536	0.4876079	0.345401	0.0469184	0.029616
	6075d	0.89832589	0.709677419	0.360517812	0.252112285	0.022350809	0.00971254	0.905470437	0.802884615	0.365971161	0.297663546	0.024418	0.012381	0.91697122	0.810880829	0.3715772	0.310156	0.0264547	0.016332	0.925933289	0.849731664	0.3745548	0.328609	0.0277439	0.020193
	6077d	0.906540804	0.777777778	0.332922634	0.17022739	0.026656668	0.007017867	0.90198774	0.804545455	0.339092946	0.190568446	0.0295507	0.012576	0.902812905	0.806451613	0.3458438	0.226081	0.0324392	0.017255	0.909300287	0.85326087	0.3489411	0.269327	0.0341768	0.02236
	6079d	0.904804624	0.746376812	0.449593876	0.366506918	0.038432734	0.010766315	0.900208304	0.801886792	0.45663297	0.367236833	0.040948	0.018773	0.894881619	0.800970874	0.4621358	0.374581	0.043989	0.021125	0.8974464	0.841188525	0.4644892	0.391409	0.045367	0.028785
	6084d	0.926630319	0.783018868	0.451367761	0.371420799	0.031118395	0.013006298	0.919949594	0.799065421	0.458011067	0.385096711	0.0341852	0.018003	0.914624648	0.822869955	0.4623409	0.402493	0.0361153	0.027307	0.912363284	0.832957111	0.4641993	0.414225	0.0391059	0.029153
	6085d	0.901220859	0.75	0.536169754	0.432812553	0.038716602	0.016545409	0.905456421	0.794520548	0.544376632	0.450022921	0.0427653	0.023029	0.905987947	0.797520661	0.5538982	0.490208	0.0463311	0.031786	0.90447921	0.841743119	0.5665454	0.508442	0.0507354	0.034669
	6089d	0.7976082	0.632653061	0.751020927	0.625191522	0.077441492	0.0351791	0.794485848	0.654494382	0.764680008	0.634956068	0.0829461	0.049803	0.796982106	0.697777778	0.7819917	0.668662	0.0881897	0.050202	0.796975527	0.733410494	0.8022789	0.729879	0.0941703	0.070388
	6091d	0.939151391	0.784482759	0.428045064	0.29374315	0.030001703	0.008459277	0.93653603	0.817757009	0.432472062	0.315438942	0.0320324	0.012365	0.934399971	0.848888889	0.4366381	0.319907	0.0343289	0.019341	0.936818113	0.861570248	0.4368301	0.327686	0.0360132	0.027458
	6093d	0.923208214	0.75	0.388662483	0.293223845	0.027858769	0.011562319	0.932843577	0.787878788	0.39547696	0.300837572	0.0311149	0.011911	0.938646259	0.845	0.4027692	0.313155	0.0342895	0.016265	0.94481048	0.861961451	0.4096964	0.34386	0.0372157	0.021837
	6094d	0.883504169	0.75	0.467834316	0.391973676	0.033287183	0.019176113	0.880711682	0.790697674	0.470356098	0.403336001	0.0337507	0.021533	0.884094456	0.816371681	0.4707007	0.414934	0.0338283	0.026604	0.895998251	0.830396476	0.4657302	0.41215	0.034877	0.027043
	6102d	0.901034283	0.728571429	0.467918606	0.387206256	0.034360684	0.008916505	0.897750794	0.808080808	0.471206542	0.392626528	0.0361278	0.018784	0.89708588	0.791262136	0.4739052	0.401392	0.037169	0.020873	0.895811347	0.822115385	0.4751056	0.424754	0.038339	0.022144
	6105d	0.863293491	0.722222222	0.498011108	0.374025064	0.035732744	0.01167571	0.871050542	0.77173913	0.502825347	0.378612098	0.0387302	0.023423	0.878426694	0.817919075	0.5074077	0.386951	0.0411136	0.027416	0.883151144	0.842066958	0.5080981	0.391035	0.0435307	0.03127
	6599d	0.937704767	0.738095238	0.409090042	0.238242764	0.024501411	0.010721978	0.940050624	0.796052632	0.407446086	0.252568265	0.026759	0.014261	0.942458528	0.825396825	0.4039216	0.245187	0.0297622	0.017288	0.941985807	0.84608209	0.399215	0.243676	0.033486	0.020353
	6602d	0.972330507	0.816901408	0.430600874	0.324793039	0.020479318	0.007077333	0.972549468	0.828703704	0.42681058	0.322467929	0.0225868	0.008512	0.966347791	0.851612903	0.4197018	0.305163	0.0272447	0.009718	0.958143488	0.891304348	0.4076074	0.310469	0.034838	0.01704
	6605d	0.88692425	0.652777778	0.556180418	0.390784356	0.045879174	0.014680302	0.883308059	0.693939394	0.547589064	0.356275905	0.05134	0.017817	0.88303332	0.719255663	0.5333029	0.330545	0.0594141	0.022645	0.888143836	0.787182362	0.510429	0.337179	0.0720485	0.027325
	6612d	0.878717287	0.717948718	0.450318454	0.334105178	0.042120668	0.018882846	0.88005615	0.794642857	0.442073385	0.334036025	0.0464029	0.021731	0.883150151	0.802325581	0.4296222	0.321506	0.0520238	0.027869	0.890896756	0.819954128	0.4087081	0.298386	0.0617074	0.034591
	6617d	0.879434911	0.684294872	0.577270777	0.464612377	0.055130759	0.019518198	0.88030853	0.699612403	0.591983434	0.479351924	0.0626107	0.02658	0.880024617	0.772666667	0.6075109	0.513537	0.0684758	0.034308	0.876129917	0.78218006	0.6255998	0.550097	0.0752972	0.04613
	6622d	0.933338994	0.793478261	0.389736424	0.309668903	0.029010714	0.013574127	0.939740205	0.83125	0.397753964	0.323176571	0.0326388	0.014989	0.942679535	0.852657005	0.4079981	0.33867	0.0366632	0.022589	0.940620831	0.896713615	0.4204014	0.356651	0.0415386	0.027005
	6627d	0.863213383	0.733974359	0.347471596	0.189401477	0.05233307	0.023503054	0.863661287	0.734567901	0.340437001	0.218579834	0.0578888	0.03053	0.866972753	0.784810127	0.3303298	0.228108	0.0629434	0.037032	0.874417328	0.820075758	0.3150575	0.215341	0.0710674	0.045965
	6637d	0.901556977	0.734567901	0.439504662	0.318100786	0.037480663	0.021175028	0.902219723	0.78	0.441052795	0.354448352	0.0394931	0.021476	0.90685763	0.808988764	0.440198	0.356327	0.0406432	0.025958	0.910231702	0.840350877	0.4367303	0.341592	0.0423187	0.029709
	6642d	0.928840397	0.76	0.370750524	0.232318159	0.030891918	0.012744473	0.930164515	0.804347826	0.373442193	0.248394196	0.0335753	0.015889	0.92845857	0.849246231	0.3743494	0.264458	0.0366873	0.019933	0.929533055	0.868274583	0.3709376	0.280017	0.0405387	0.025324
	6643d	0.96421434	0.819672131	0.16835023	0.114442525	0.023279294	0.010745841	0.952914435	0.829656863	0.175349474	0.123224476	0.0288068	0.012834	0.936659711	0.865800866	0.1873379	0.138674	0.0382626	0.020445	0.919607191	0.866018368	0.2121152	0.147053	0.0563338	0.022179
	6644d	0.987374852	0.833333333	0.117312373	0.062485222	0.013745121	0.004054601	0.988582383	0.881889764	0.116945647	0.067669417	0.015101	0.007195	0.989443092	0.867788462	0.1178405	0.073141	0.0169929	0.008921	0.990855883	0.925493716	0.120023	0.087736	0.0200844	0.011231
	6667d	0.91416761	0.755319149	0.429168603	0.304127447	0.03997899	0.018089679	0.909585902	0.802867384	0.436768884	0.335780394	0.0445965	0.022559	0.905396333	0.838450292	0.4436108	0.36474	0.0477527	0.02858	0.898029796	0.837620579	0.453181	0.374039	0.052244	0.036048
	6675d	0.867168068	0.718181818	0.511561763	0.407320139	0.046978048	0.014679302	0.872524782	0.777777778	0.52031798	0.446383996	0.0503308	0.021436	0.87863992	0.782828283	0.5264524	0.443888	0.0521948	0.024949	0.884148707	0.813813814	0.5335289	0.452304	0.0532535	0.025934
	6677d	0.874529596	0.702380952	0.461075047	0.257393749	0.042349303	0.021505513	0.875413872	0.738095238	0.462136639	0.323171548	0.0448058	0.027332	0.874028144	0.780141844	0.4554565	0.354894	0.0508047	0.028555	0.88050502	0.826923077	0.43728	0.346194	0.0644482	0.034522
	6687d	0.881704185	0.757142857	0.477520454	0.308830795	0.04433645	0.01957971	0.881592795	0.804054054	0.480337991	0.334284868	0.0470692	0.01741	0.883717513	0.814634146	0.4796881	0.33315	0.048572	0.025685	0.887664681	0.845338983	0.4752585	0.343631	0.0505763	0.034595
	6688d	0.881623929	0.630392157	0.547949959	0.330971924	0.044961463	0.012550983	0.879515436	0.692460317	0.559804796	0.371234415	0.0525517	0.025951	0.87584294	0.745481928	0.5747649	0.428058	0.059427	0.027724	0.874280014	0.796130952	0.5878011	0.510033	0.0654938	0.03976
	6706d	0.888451855	0.714285714	0.376207356	0.249343004	0.046549535	0.019372199	0.889799183	0.780487805	0.392150363	0.285624599	0.0556603	0.022251	0.892813794	0.834296724	0.408742	0.30792	0.0649174	0.03228	0.893441221	0.853741497	0.4310259	0.336781	0.0747573	0.04016
	6707d	0.90704956	0.735294118	0.392662982	0.328843411	0.035621918	0.017106898	0.913725713	0.78125	0.403115142	0.333091027	0.0403794	0.018917	0.917204706	0.821212121	0.4154895	0.356071	0.0454588	0.024537	0.913114484	0.837381916	0.4310851	0.383645	0.0515522	0.032462
	6709d	0.899132194	0.724137931	0.266444339	0.120801293	0.031940308	0.009211204	0.896222249	0.726726727	0.273432987	0.118913882	0.0382579	0.010104	0.898527928	0.793394777	0.2816595	0.114896	0.0451161	0.016664	0.903155389	0.827050998	0.2874131	0.127003	0.0494976	0.022809
	6714d	0.949718444	0.758928571	0.403761436	0.28375245	0.024981804	0.012445666	0.952743378	0.802752294	0.404174614	0.305190622	0.0269494	0.015932	0.952606592	0.808900524	0.4023776	0.319742	0.0293263	0.020589	0.943493718	0.842857143	0.3915726	0.295179	0.0370462	0.024662
	96-3-21	0.941667689	0.803333333	0.560275511	0.312580425	0.028033146	0.003897786	0.939903292	0.801282051	0.567167727	0.324242432	0.0354644	0.006175	0.939502086	0.837057728	0.5765843	0.327607	0.0451909	0.005634	0.938348083	0.875855327	0.5947152	0.320515	0.0592372	0.014838
	As0598ad	0.925393769	0.744444444	0.614932567	0.37029689	0.029770822	0.010519711	0.921280806	0.763681592	0.622365192	0.432135881	0.0348482	0.011697	0.922960395	0.847222222	0.6324844	0.52172	0.0395422	0.017277	0.930268089	0.87449187	0.6435184	0.566581	0.0423759	0.021733
	gc0697ad	0.901883033	0.767295597	0.501497683	0.369849904	0.03497311	0.006503448	0.899164899	0.793269231	0.519680844	0.391683484	0.0477858	0.008217	0.906456625	0.811930783	0.5433753	0.434061	0.0618372	0.010182	0.916226684	0.847953216	0.5740765	0.477787	0.0781884	0.024495
	hm1096ad	0.974738447	0.81	0.393747318	0.351366583	0.017415359	0.004705354	0.98005056	0.880208333	0.402131361	0.363869474	0.0223211	0.005735	0.980465171	0.908256881	0.4136024	0.372905	0.0286466	0.010459	0.972795583	0.910818713	0.4300562	0.387618	0.0385488	0.019731
	jb0298ad	0.951849453	0.830769231	0.445620951	0.364807442	0.029146273	0.008327034	0.952348957	0.861356932	0.458716361	0.378700546	0.0355166	0.011102	0.95644604	0.887614679	0.4731627	0.406539	0.041678	0.017923	0.950302206	0.911423841	0.4923016	0.423679	0.052144	0.022492
	kk0498ad	0.896589202	0.766666667	0.609085648	0.559077382	0.051685123	0.019653301	0.883732479	0.782608696	0.62469543	0.567504458	0.061088	0.033062	0.872593873	0.823863636	0.6398259	0.571462	0.0705845	0.040311	0.879755188	0.847457627	0.6598673	0.581567	0.0798267	0.054874
	km0301ad	0.9568766	0.793478261	0.632038465	0.460381692	0.018677325	0.006193666	0.958852834	0.822115385	0.635756499	0.469846076	0.0220056	0.008028	0.959787008	0.867346939	0.6405214	0.492211	0.0262539	0.010498	0.960418222	0.908376963	0.6486086	0.512749	0.0315549	0.013595
	Ld1196ad	0.984298945	0.849206349	0.433931037	0.372692771	0.022390389	0.005746104	0.976910963	0.894117647	0.442300498	0.376820511	0.0272282	0.00729	0.971147972	0.910416667	0.4514674	0.384418	0.0326451	0.00787	0.9658833	0.927130045	0.4659181	0.407186	0.040728	0.021943
	Ma0899ad	0.880898333	0.739766082	0.72491813	0.647760753	0.060600682	0.014044745	0.877567661	0.744744745	0.750279444	0.676068684	0.0741802	0.036679	0.88140171	0.802341598	0.7800575	0.688479	0.0870015	0.052864	0.884290289	0.836501901	0.8134301	0.756049	0.0946139	0.076409
	mj0798ad	0.930169832	0.729166667	0.666631617	0.574963324	0.021917725	0.008497156	0.937914612	0.837606838	0.672326547	0.592640211	0.0258001	0.009224	0.947222183	0.865196078	0.6788712	0.619759	0.0295629	0.012465	0.953372445	0.860784314	0.6885331	0.628928	0.0367141	0.017357
	Ra0199ad	0.954048348	0.826923077	0.439464692	0.221239452	0.026182379	0.007019727	0.953648396	0.827272727	0.452386065	0.223098614	0.0345521	0.008997	0.954921588	0.875771605	0.4715222	0.267296	0.0461254	0.011536	0.957585456	0.912534435	0.5007279	0.344419	0.0610182	0.013625

Ra0997ad	0.920048809	0.684210526	0.44323909	0.226502565	0.027450847	0.007099882	0.916182467	0.818181818	0.455873128	0.246378037	0.0368863	0.008849	0.916149379	0.836650083	0.4761327	0.275264	0.0513251	0.014087	0.920705078	0.850961538	0.5103331	0.368895	0.0737515	0.020331

V Channel (V)

Group	Image Name	Circle r=5						Circle r=7						Circle r=10						Circle r=15					
		Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std	Ave. Homogeneity	Min Homogeneity	Ave. Mean	Min Mean	Ave. Std	Min Std
CANCER IMAGES	4023d	0.917462178	0	0.646102982	0.388763198	0.037210395	0.011219957	0.915465117	0.836336336	0.632675843	0.430287115	0.047567	0.018876	0.917726394	0.851851852	0.6125184	0.38442	0.0584022	0.022342	0.922607817	0.879204893	0.580591	0.438253	0.0750966	0.028403
	4025d	0.95077049	0.729166667	0.814483693	0.68583878	0.020879577	0.006814895	0.945919765	0.814285714	0.807526368	0.664418938	0.0267441	0.006586	0.940874749	0.869369369	0.7945501	0.684403	0.035574	0.012485	0.938572886	0.890572391	0.7760676	0.65931	0.0480889	0.016715
	4030d	0.958515455	0.8	0.739801882	0.620409982	0.020998995	0.007895374	0.962351373	0.851351351	0.733075024	0.624977919	0.0252326	0.011284	0.964213332	0.89	0.7227319	0.617255	0.0319608	0.015831	0.966216948	0.910967344	0.7085378	0.599849	0.0403343	0.02023
	4044d	0.982178346	0.758064516	0.73183427	0.58650519	0.01840594	0.005266276	0.981805885	0.860655738	0.727046308	0.621084798	0.0228896	0.008088	0.981313393	0.895061728	0.7206711	0.616599	0.0281256	0.010769	0.975049182	0.917307692	0.7106661	0.640318	0.03465	0.01445
	6015d	0.827557372	0.678571429	0.75861334	0.657806826	0.05960707	0.030835966	0.83392547	0.752427184	0.749178241	0.669057867	0.0636916	0.03711	0.83617572	0.776995305	0.7377832	0.629873	0.0683642	0.042108	0.840957946	0.802281369	0.7217243	0.633724	0.0756031	0.051994
	6052d	0.864271752	0.718954248	0.728798027	0.621372549	0.049980381	0.029246741	0.867737825	0.743902439	0.724178282	0.59988578	0.0519912	0.03114	0.869423377	0.786195286	0.7208185	0.58041	0.0534239	0.037574	0.870191024	0.803108808	0.7173696	0.631668	0.0561643	0.040177
	95-13-15.jpg	0.967241087	0.790229885	0.559029741	0.035028249	0.017789313	3.37104E-16	0.965986411	0.794985251	0.555268609	0.037110423	0.0227075	0.000748	0.967212398	0.838174274	0.5480874	0.03245	0.0291512	0.008583	0.969300433	0.879528302	0.5388203	0.028475	0.0390212	0.011484
	95-13-17.jpg	0.966554086	0.805555556	0.886093305	0.709313725	0.023229891	0	0.968395281	0.813953488	0.885111312	0.698492951	0.0260685	0	0.968420237	0.835526316	0.8837659	0.691841	0.0297084	0	0.970904821	0.886363636	0.8826959	0.709656	0.0322034	0
	96-22-19	0.962739575	0.736842105	0.811613564	0.629008074	0.017759512	0.004608389	0.962662816	0.755319149	0.808346767	0.664390511	0.0212521	0.005976	0.962382261	0.857723577	0.8033106	0.662278	0.0255366	0.010375	0.963829934	0.902534113	0.7957255	0.683319	0.0305486	0.012736
	Bg0899ad	0.909725264	0.626984127	0.824958391	0.385851596	0.042197095	0.004754334	0.908863455	0.713804714	0.816621197	0.392607618	0.0503313	0.005245	0.91175157	0.775485437	0.8009285	0.39998	0.0628433	0.010946	0.909215895	0.798672257	0.7675381	0.381081	0.0881017	0.016526
	Bm0300ad	0.939498083	0.71875	0.91291021	0.749019608	0.030965991	0.006398006	0.936354633	0.8125323	0.899415944	0.688235294	0.0400381	0.011869	0.934343146	0.851470588	0.882342	0.661067	0.0518188	0.018789	0.937936367	0.873446894	0.8560101	0.639703	0.0661374	0.030036
	Fj0297ad	0.949527064	0.771428571	0.674059828	0.549241583	0.021614999	0.00580495	0.947689582	0.805263158	0.666277674	0.528851541	0.0272245	0.006997	0.948710042	0.836065574	0.6545796	0.527385	0.0340379	0.009495	0.953058307	0.889008621	0.6382434	0.529487	0.042919	0.010487
	Fj1200ad	0.925565061	0.762711864	0.910231064	0.802768166	0.015288295	0.005530946	0.932009838	0.806122449	0.906447617	0.796470588	0.0181104	0.006448	0.938995861	0.848591549	0.9014012	0.80567	0.0221293	0.010421	0.947302054	0.879482072	0.8956601	0.831208	0.0259155	0.014268
	Fn1200ad	0.917034472	0.731481481	0.775047134	0.685198001	0.02347937	0.005883013	0.929668496	0.799019608	0.767263135	0.696862745	0.0266558	0.008114	0.94444352	0.860215054	0.7573774	0.693304	0.0307257	0.010887	0.956009139	0.909345794	0.7431358	0.683095	0.0361858	0.017677
	Gs0499ad	0.99731552	0.741935484	0.992944348	0.923406863	0.007486092	0.000584593	0.997520031	0.835714286	0.992509038	0.924993096	0.0086407	0.001708	0.998026174	0.882113821	0.9923584	0.920493	0.0093375	0.002378	0.997094836	0.901162791	0.9913574	0.930026	0.0111152	0.004042
	hn0996ad	0.92516491	0.722222222	0.76698308	0.694199346	0.01553095	0.005779628	0.934911335	0.783333333	0.763928428	0.66364513	0.0177621	0.007252	0.945028366	0.833333333	0.7595331	0.656321	0.0202471	0.007411	0.953777157	0.884236453	0.7542812	0.65436	0.0235103	0.011094
	kh0598ad	0.999580468	0.968085106	0.989217349	0.971323529	0.010558247	0.003033622	0.999403318	0.969230769	0.989516867	0.973262032	0.0112015	0.004358	0.999090158	0.970954357	0.9894125	0.975693	0.0117855	0.004989	0.997790315	0.972392638	0.9884796	0.965642	0.0135799	0.006719
	Kr1196ad	0.969049567	0.804878049	0.824431118	0.608486977	0.022814225	0.005765226	0.963849309	0.829787234	0.814809843	0.603371173	0.0298593	0.006915	0.960338838	0.867256637	0.8018081	0.570613	0.0391567	0.010679	0.960651346	0.889111556	0.7848649	0.541561	0.0508011	0.014655
	Lj0899ad	0.899949423	0.776315789	0.7256883	0.501055807	0.040152872	0.01129793	0.892574754	0.801282051	0.703947246	0.484885621	0.0529026	0.026019	0.890700758	0.83219697	0.6750698	0.479284	0.0733269	0.043756	0.896186624	0.843396893	0.6249691	0.469018	0.1034919	0.062987
	lj1196ad	0.995340027	0.851851852	0.987829041	0.853537937	0.008288922	0	0.993128121	0.897058824	0.984964522	0.857315234	0.0115194	0.001343	0.990495537	0.923992674	0.9802299	0.868381	0.0162925	0.002778	0.987464677	0.933857236	0.9731839	0.837307	0.0242653	0.003434
	mk1096ad	0.937406956	0.74754902	0.576948236	0.398377282	0.036565624	0.012517662	0.935649026	0.815705128	0.566611562	0.405378151	0.0417668	0.014014	0.931603581	0.832704403	0.550794	0.378077	0.0514431	0.016684	0.929874655	0.858272283	0.5251228	0.320826	0.0679042	0.018504
	mm0598ad	0.962276308	0.704545455	0.705549671	0.460037348	0.029004721	0.008011639	0.961591064	0.751181102	0.697776457	0.442647059	0.0365849	0.011508	0.957730129	0.808689459	0.6851269	0.373817	0.0486438	0.011737	0.950040537	0.837651123	0.6614119	0.377114	0.0696925	0.013663
	Mm0899ad	0.951437547	0.808510638	0.881407788	0.78869281	0.029016287	0.009922311	0.951194158	0.852941176	0.875102128	0.802614379	0.0349992	0.016026	0.950938629	0.891566265	0.8610989	0.7309	0.0445924	0.022188	0.948490234	0.905472637	0.8424174	0.696644	0.059249	0.029457
	Nd0599ad	0.878199368	0.681818182	0.939573914	0.918954248	0.021212372	0.002264119	0.883355622	0.794871795	0.939718528	0.925608138	0.0218876	0.010828	0.88766644	0.833333333	0.9400177	0.914832	0.0225634	0.012315	0.892869502	0.855046948	0.9399477	0.90981	0.0234131	0.014938
	Rk0399ad	0.933918456	0.72037037	0.875166829	0.495396419	0.037597524	0.003602079	0.934826258	0.752621723	0.862620043	0.488459384	0.0503045	0.0051	0.931285365	0.806872852	0.8342408	0.477632	0.070492	0.008299	0.926886169	0.856143001	0.7933926	0.458906	0.1013067	0.010327
	Rl0298ad	0.886814491	0.785714286	0.789844817	0.692455965	0.034197889	0.01649833	0.889457312	0.792682927	0.777851321	0.696325345	0.0403936	0.023318	0.898215902	0.835658915	0.7636207	0.687628	0.0467645	0.025164	0.905654527	0.868663594	0.7426445	0.670697	0.0568681	0.036559
	sd0597ad	0.991959378	0.877358491	0.696021135	0.629260935	0.013855398	0.003547192	0.991053737	0.868131868	0.694225804	0.629176471	0.0158359	0.007609	0.987829117	0.889447236	0.6905403	0.639052	0.0184516	0.010079	0.982505216	0.927595628	0.6848903	0.642377	0.0218339	0.013898
	Wa0499ad	0.927796115	0.805031447	0.838909566	0.725300443	0.041234376	0.012659391	0.92476165	0.830033003	0.820240376	0.699346405	0.0507438	0.018979	0.925739827	0.857142857	0.7948207	0.691745	0.0633091	0.026213	0.93162968	0.890360559	0.757956	0.618622	0.0802362	0.039167
	zp0298ad	0.950570722	0.8125	0.831868217	0.69755762	0.029750124	0.009919109	0.941800174	0.858126722	0.820611678	0.689536991	0.0364662	0.012452	0.939983904	0.874048706	0.8052687	0.706255	0.0468673	0.022915	0.93889781	0.881134481	0.7849462	0.660394	0.0595093	0.027436
	zr0798ad	0.888596961	0.728571429	0.794688494	0.743901628	0.01440457	0.005731013	0.894736533	0.794871795	0.794208511	0.723243005	0.0160128	0.006768	0.899772797	0.796401515	0.7928056	0.692796	0.0180224	0.008695	0.903019471	0.843216532	0.7899289	0.674404	0.0221617	0.010597
NOT CANCER IMAGES	4056d	0.945977458	0.794117647	0.64158405	0.453273002	0.032431775	0.009923599	0.934796835	0.815217391	0.623636645	0.442141301	0.0446349	0.018023	0.933621236	0.859163592	0.5968768	0.413589	0.0605717	0.027017	0.934898897	0.8728	0.5572874	0.406608	0.081896	0.038092
	4058d	0.952221116	0.815789474	0.774087833	0.634489693	0.018281793	0.006075268	0.940306957	0.838235294	0.767298819	0.647211612	0.0233655	0.008611	0.938691252	0.880239521	0.7556563	0.636832	0.0315493	0.01297	0.943265086	0.903946002	0.7380101	0.626608	0.0409511	0.016954
	4063d	0.962255154	0.788461538	0.650506165	0.461554622	0.022688189	0.005861851	0.95390573	0.861788618	0.640091402	0.433300654	0.0292192	0.008593	0.950301628	0.882147838	0.6248526	0.447128	0.038058	0.010596	0.946394739	0.890306122	0.6017018	0.424921	0.0519787	0.017693
	4074d	0.948675609	0.746212121	0.888483213	0.768902649	0.019123691	0.006217438	0.955766418	0.84469697	0.884549966	0.736576736	0.0217998	0.009623	0.961486986	0.865921788	0.8782482	0.757081	0.0257015	0.011069	0.968372805	0.909009009	0.8682954	0.748419	0.0312415	0.012896
	4082d	0.987094644	0.877777778	0.698203229	0.644245524	0.018566821	0.00738307	0.977280541	0.872807018	0.691806146	0.642412617	0.0223208	0.011072	0.965302399	0.889361702	0.6827529	0.637726	0.0264023	0.01378	0.956130933	0.905263158	0.6713103	0.634535	0.031246	0.018739
	4083d	0.967038416	0.852459016	0.685643502	0.609193185	0.02191646	0.005628963	0.948284053	0.844527363	0.674893673	0.595314058	0.028967	0.010124	0.941807648	0.885290148	0.6586201	0.580807	0.0391652	0.014443	0.945571673	0.876900585	0.6307957	0.553174	0.0564322	0.018137
	4084d	0.917310545	0.754098361	0.744586521	0.583778966	0.031974196	0.008271108	0.914526523	0.803191489	0.730722666	0.57003617	0.041964	0.013659	0.918778471	0.816326531	0.709073	0.551668	0.0554281	0.027268	0.919495769	0.856182796	0.6737912	0.538154	0.0737437	0.039623
	6005d	0.811011645	0.689814815	0.785860392	0.671851113	0.057693475	0.029252458	0.808884426	0.727777778	0.776137408	0.628134557	0.0619648	0.035862	0.811935294	0.690891473	0.7621201	0.632276	0.0685862	0.044216	0.819600664	0.767283951	0.7458953	0.554946	0.0739324	0.04719
	6017d	0.926286133	0.776315789	0.700829566	0.612793314	0.04056738	0.015514966	0.918876461	0.798076923	0.692281764	0.605726184	0.0435633	0.022324	0.913668452	0.845299145	0.6797168	0.598207	0.0490235	0.026647	0.907547255	0.857460317	0.6623286	0.582122	0.0581592	0.030482
	6023d	0.804583041	0.65	0.633496504	0.554153298	0.061328943	0.029160144	0.811382005	0.703389831	0.623536704	0.51243973	0.0640583	0.040476	0.815093346	0.753535354	0.6090143	0.488728	0.0696143	0.042798	0.819590067	0.772685185	0.5869486	0.468845	0.079817	0.04928
	6024d	0.802224066	0.610294118	0.798960164	0.717171717	0.065616256	0.035451607	0.804217214	0.717171717	0.785114031	0.697670521	0.0712175	0.032975	0.808616778	0.748447205	0.769388	0.680053	0.0763324	0.043554	0.814137962	0.775787188	0.7467795	0.649662	0.0845963	0.045722
	6025d	0.88296972	0.718518519	0.85857862	0.788977213	0.050281702	0.028991367	0.88278302	0.76371308	0.854938746	0.795098039	0.0527227	0.034857	0.879933901	0.799295775	0.8521619	0.802235	0.0550779	0.036331	0.881042943	0.833702065	0.8462527	0.796164	0.0581443	0.044064
	6028d	0.850304584	0.712643678	0.611387862	0.53751634	0.040683431	0.015402657	0.869440313	0.773700306	0.600436992	0.507290804	0.0442863	0.019075	0.878706613	0.80608365	0.5861034	0.513244	0.0499594	0.025336	0.885906599	0.837111671	0.5634941	0.49778	0.06045	0.034967
	6031d	0.837226143	0.666666667	0.584674587	0.443347339	0.061411457	0.026087976	0.843646868	0.722222222	0.563485458	0.421791444	0.0702334	0.034344	0.854742418	0.774261603	0.5380168	0.39723	0.0809217	0.04551	0.871039894	0.807545368	0.5047681	0.38917	0.0933486	0.048309
	6044d	0.904085111	0.772727273	0.677396021	0.540035651	0.042284225	0.02317856	0.898760775	0.806122449	0.666970505	0.550314106	0.0468943	0.025554	0.892771425	0.814728682	0.6517268	0.531452	0.0539179	0.028782	0.895765048	0.84375	0.6282372	0.535086	0.0642028	0.032905
	6045d	0.848231422	0.68128655	0.674937696	0.495469912	0.058928443	0.026005462	0.848536389	0.723646724	0.660233666	0.477201728	0.0650752	0.038696	0.849580505	0.782186949	0.6421119	0.422709	0.0726008	0.038832	0.850881872	0.809717208	0.6138776	0.462972	0.0857855	0.041026
	6048d	0.922857902	0.741666667	0.574366137	0.447239819	0.041567335	0.013636072	0.924150189	0.798780488	0.568368915	0.465098039	0.0440921	0.019894	0.921365753	0.831060606	0.5608213	0.433752	0.0468263	0.024399	0.917775785	0.851851852	0.5462217	0.436164	0.0529604	0.030459
	6049d	0.862036104	0.75	0.630657797	0.549956102	0.040690629	0.010476108	0.873097959	0.793650794	0.624620367	0.547187099	0.0435369	0.012294	0.880496446	0.815789474	0.6183257	0.555609	0.0469904	0.014645	0.888249942	0.842568162	0.6035547	0.506202	0.0543802	0.032447
	6050d	0.846483389	0.73255814	0.645692375	0.531345689	0.042549749	0.01880301	0.854384862	0.756410256	0.634599713	0.540593097	0.0475474	0.020504	0.861015246	0.787202381	0.6203342	0.531885	0.0541816	0.025655	0.873095332	0.813019391	0.5964968	0.500517	0.0651499	0.032874
	6051d	0.848457728	0.74702381	0.758476994	0.635714286	0.052151401	0.031378308	0.855801353	0.790540541	0.749525083	0.62427451	0.0550308	0.032888	0.862247273	0.801229508	0.7386661	0.618339	0.0589167	0.033821	0.86420869	0.820881226	0.7223735	0.607627	0.0670891	0.041414
	6053d	0.874233345	0.738888889	0.685553254	0.608411481	0.051075759	0.02537757	0.870780839	0.785714286	0.680574187	0.623073415	0.0528525	0.032598	0.872935355	0.806451613	0.6727996	0.609188	0.0557388	0.04172	0.871453508	0.823899371	0.6586742	0.579478	0.0614867	0.043949
	6054d	0.900364572	0.757575758	0.592896645	0.2942182	0.038798345	0.015057316	0.901278876	0.765789474	0.585539494	0.298534572	0.0424182	0.019337	0.904467068	0.801155116	0.5757703	0.42451	0.0486653	0.02583	0.903258859	0.826809015	0.5582013	0.453044	0.0595874	0.026295
	6055d	0.91721595	0.764705882	0.703361103	0.506008855	0.042099297	0.017137983	0.909829654	0.786363636	0.69549543	0.498786181	0.0450583	0.0196	0.902586695	0.802752294	0.6845952	0.463489	0.0486453	0.026568	0.895798487	0.842105263	0.6664149	0.487758	0.0558702	0.036516
	6056d	0.853295136	0.725	0.742584171	0.664359862	0.050757491	0.028579758	0.857694425	0.772222222	0.737154955	0.669486307	0.052657	0.030902	0.861212871	0.791079812	0.7318734	0.658354	0.0546711	0.039229	0.861992401	0.813655337	0.7227452	0.644283	0.0583973	0.044248
	6061d	0.878566552	0.744897959	0.613369963	0.53650519	0.034839753	0.014673166	0.885443579	0.776190476	0.60939923	0.537647059	0.0374268	0.017554	0.896396879	0.820197044	0.6045024	0.536779	0.039876	0.02213	0.906549663	0.848524306	0.5976487	0.555642	0.0446224	0.026416
	6065d	0.862401205	0.745283019	0.660556992	0.57211329	0.048342118	0.021642349	0.865704654	0.773148148	0.650346279	0.573673587	0.0522643	0.029954	0.86948983	0.811904762	0.6362946	0.563766	0.0587387	0.033042	0.87122917	0.839939024	0.6139526	0.514235	0.0683838	0.037389
	6074d	0.868093231	0.748677249	0.607335987	0.499621603	0.044493805	0.019035257	0.876271903	0.744680851	0.591739757	0.47379025	0.0516981	0.025655	0.882464263	0.818035427	0.5714058	0.427162	0.062558	0.030432	0.88969289	0.853448276	0.5356863	0.406692	0.0811916	0.036377
	6075d	0.853781269	0.715517241	0.631249924	0.573401535	0.032270773	0.013635552	0.871967557	0.788461538	0.62259889	0.564361885	0.0355173	0.017495	0.892952071	0.824468085	0.6106595	0.541534	0.0399384	0.020005	0.908685511	0.862121212	0.5889459	0.543718	0.0495847	0.021922
	6077d	0.869827197	0.725490196	0.606244295	0.525735294	0.039766325	0.011484144	0.883043982	0.76056338	0.596371923	0.502969188	0.043477	0.018968	0.895791125	0.812687688	0.5828211	0.47639	0.0488258	0.026754	0.904941168	0.845501475	0.5624061	0.472218	0.0582293	0.034155
	6079d	0.859928178	0.699275362	0.656670647	0.576547482	0.052291257	0.012791102	0.860433615	0.747663551	0.644643175	0.549407882	0.0569268	0.024323	0.863188024	0.768365696	0.6294954	0.519626	0.0639565	0.027634	0.87121497	0.808594378	0.6084753	0.496639	0.0726236	0.035619
	6084d	0.857328743	0.762626263	0.757062788	0.689746062	0.047904089	0.018167352	0.865271068	0.76969697	0.745104756	0.691871658	0.0531225	0.027391	0.870289562	0.794573643	0.7295566	0.658112	0.0613447	0.03363	0.873009753	0.823828383	0.7068369	0.614505	0.0744335	0.042178
	6085d	0.825059224	0.710526316	0.894304265	0.803254068	0.054837076	0.030455867	0.830221707	0.739726027	0.889264462	0.820474716	0.0571718	0.040895	0.833487467	0.76584022	0.8830016	0.796719	0.0594123	0.044701	0.83878496	0.801313629	0.8737218	0.783048	0.0627419	0.050144
	6089d	0.848677345	0.677672956	0.55789203	0.378980392	0.057705388	0.027573691	0.849253464	0.725490196	0.54644691	0.421831413	0.0624771	0.039572	0.850137214	0.758278146	0.5280833	0.426168	0.0716247	0.042099	0.855020129	0.786535494	0.4975271	0.41318	0.0877791	0.054834
	6091d	0.889986375	0.794117647	0.519170446	0.451416122	0.034842331	0.011226985	0.887992268	0.813333333	0.510565563	0.437238697	0.0378193	0.018152	0.892156948	0.825327511	0.4973633	0.408053	0.0431801	0.023311	0.907448818	0.874472574	0.4752882	0.404381	0.0548575	0.037728
	6093d	0.844306741	0.708333333	0.651096805	0.574714662	0.035472162	0.009033095	0.847155228	0.752380952	0.645326211	0.543582888	0.0376006	0.015746	0.853502767	0.771875	0.639186	0.535803	0.0395245	0.019423	0.865347802	0.811983471	0.6313393	0.486421	0.0430005	0.028494
	6094d	0.880590838	0.755102041	0.691257887	0.608723489	0.050742428	0.032823924	0.877926495	0.804761905	0.680141384	0.571568627	0.0541791	0.032515	0.876909387	0.826633166	0.6607491	0.572914	0.0604578	0.037327	0.879472398	0.850501849	0.6357868	0.556524	0.0698958	0.042872
	6102d	0.880244629	0.765625	0.726986741	0.633823529	0.052058997	0.017916289	0.883023469	0.789115646	0.720355688	0.62380461	0.0550346	0.031599	0.88463577	0.823091248	0.7114474	0.582584	0.0594696	0.034047	0.885417419	0.842898551	0.6952151	0.604295	0.0671974	0.033052
	6105d	0.843742591	0.714285714	0.803992583	0.70638033	0.054192443	0.018878775	0.846221347	0.746527778	0.792988671	0.657192434	0.0591184	0.035438	0.852115263	0.781420765	0.7792547	0.587431	0.0651667	0.038537	0.856769132	0.818722944	0.7573799	0.573748	0.0761137	0.044867
	6599d	0.882296198	0.68579235	0.7271125	0.56404121	0.046961035	0.01675665	0.888100727	0.754385965	0.711092199	0.537011973	0.0544614	0.021361	0.893126646	0.799516908	0.690865	0.543615	0.0621389	0.029576	0.898052053	0.829103053	0.6615612	0.570978	0.0735845	0.033082
	6602d	0.943773954	0.766666667	0.726002836	0.625641026	0.034326212	0.013668544	0.94204502	0.825688073	0.713494772	0.612854031	0.039367	0.013021	0.929298782	0.842342342	0.6953433	0.563664	0.047233	0.019927	0.926778772	0.864543115	0.6684514	0.568435	0.0600575	0.028771
	6605d	0.824239325	0.653005464	0.583758061	0.266081358	0.063841416	0.015922059	0.835617667	0.712809917	0.556348277	0.253296279	0.0772223	0.015531	0.851024844	0.725446429	0.5226996	0.241011	0.0933136	0.023881	0.873897646	0.791162634	0.480637	0.244297	0.1110695	0.035907
	6612d	0.86907399	0.742424242	0.541101237	0.429827689	0.056528877	0.02217427	0.869532495	0.752873563	0.525440794	0.424217406	0.062263	0.025843	0.875112842	0.8	0.5078237	0.378877	0.0696991	0.037258	0.883398914	0.821794872	0.4830698	0.358236	0.0784157	0.047837
	6617d	0.874972646	0.725490196	0.660061943	0.535487434	0.0458484	0.017728702	0.875888435	0.79342723	0.65423308	0.515883873	0.0492451	0.023878	0.876401288	0.810866013	0.6472245	0.524553	0.0546896	0.034012	0.87539639	0.832990398	0.6319874	0.487004	0.0644795	0.037012
	6622d	0.847557571	0.755319149	0.798130037	0.746139706	0.043052823	0.021822361	0.851822813	0.765957447	0.793918232	0.7443074	0.0435833	0.020128	0.855639433	0.789473684	0.787881	0.737469	0.04569	0.03095	0.860278206	0.80875	0.7787564	0.725653	0.0487276	0.03673
	6627d	0.786947462	0.537878788	0.509860057	0.304725169	0.102255832	0.040788835	0.798008742	0.631790123	0.488481798	0.319006958	0.1142027	0.057617	0.812765006	0.731012658	0.4676903	0.320422	0.1241557	0.068554	0.826343095	0.776889535	0.4426545	0.296072	0.1344927	0.087519
	6637d	0.84621977	0.718085106	0.676646969	0.581935069	0.057217606	0.030645551	0.845399017	0.751893939	0.666082146	0.580806632	0.0618383	0.036423	0.847335845	0.784946237	0.6497382	0.568276	0.0688608	0.042287	0.853021897	0.808788599	0.6281621	0.539723	0.0776443	0.053448
	6642d	0.871956825	0.751572327	0.666122543	0.57332145	0.054842966	0.026776632	0.873916227	0.767295597	0.650436596	0.54322376	0.0598571	0.032513	0.873547695	0.787935323	0.6296765	0.531134	0.0686214	0.038463	0.87963472	0.836748634	0.5958393	0.497905	0.0824588	0.047028
	6643d	0.851793356	0.701492537	0.546871984	0.468191721	0.055029815	0.027143441	0.845595825	0.751968504	0.533122589	0.458091893	0.0602149	0.029796	0.841587065	0.787966538	0.512888	0.430985	0.0682681	0.036971	0.842198302	0.798132184	0.4825136	0.407222	0.0788074	0.045267
	6644d	0.875899289	0.724358974	0.485189968	0.392638459	0.02988091	0.009708053	0.895842355	0.790229885	0.477437877	0.39670987	0.0334921	0.012087	0.915748712	0.839449541	0.4663484	0.412801	0.0377746	0.017577	0.925865514	0.879439252	0.450312	0.407503	0.0457159	0.026193
	6667d	0.841112262	0.713114754	0.742254077	0.676703224	0.054319066	0.029725261	0.845928255	0.76	0.735707639	0.662956259	0.0574187	0.035119	0.849684468	0.782973621	0.7289568	0.674004	0.0599751	0.036359	0.850700411	0.803125	0.7136441	0.612444	0.066525	0.042033
	6675d	0.862173964	0.673202614	0.703217666	0.541947927	0.058162353	0.022687598	0.863669972	0.731837607	0.695504135	0.551512388	0.0633205	0.031315	0.866545237	0.748677249	0.6875934	0.552642	0.0677904	0.032557	0.866748741	0.773273273	0.6737758	0.592902	0.0756597	0.03744
	6677d	0.830110859	0.627777778	0.657239897	0.534709322	0.064234822	0.031861394	0.832587807	0.708745875	0.637183872	0.46761735	0.0734333	0.033968	0.837274772	0.733130904	0.6088915	0.441074	0.0869739	0.042473	0.84638508	0.79337653	0.5670857	0.44272	0.1104202	0.053605
	6687d	0.846172832	0.703333333	0.635104289	0.511111111	0.061353219	0.025547548	0.850657177	0.740079365	0.621641227	0.493041818	0.0684992	0.028775	0.854471407	0.795175439	0.6049307	0.496329	0.0753997	0.03133	0.864517883	0.816959922	0.5812147	0.47991	0.0882187	0.03863
	6688d	0.869428909	0.656589147	0.643580569	0.240723982	0.04705961	0.016249529	0.869438416	0.739622642	0.629810726	0.294809689	0.0551872	0.025231	0.869989578	0.789055794	0.6089568	0.393801	0.0685463	0.030172	0.874218314	0.827380952	0.5804177	0.441391	0.0853286	0.035834
	6706d	0.882093142	0.753968254	0.723732506	0.636901318	0.049363292	0.024047922	0.882120071	0.777777778	0.71923054	0.655234924	0.0529135	0.034843	0.882585331	0.822429907	0.7143612	0.660014	0.0557582	0.038388	0.879820856	0.837016575	0.7043928	0.64952	0.0623848	0.043421
	6707d	0.861715461	0.759259259	0.749452785	0.667226891	0.045936155	0.029527825	0.868567815	0.767857143	0.745358527	0.691868512	0.046977	0.028895	0.874439385	0.795031056	0.7408478	0.694765	0.0483544	0.034477	0.877711172	0.810691824	0.73429	0.684143	0.0509921	0.036184
	6709d	0.837207725	0.69	0.646753606	0.532442068	0.050887803	0.026148064	0.836048466	0.720930233	0.634700331	0.503811765	0.0549423	0.028352	0.839911284	0.764218009	0.6183834	0.495572	0.0625945	0.033843	0.842413752	0.794871795	0.5962423	0.472241	0.071017	0.041797
	6714d	0.884463669	0.755555556	0.668661657	0.580456445	0.040882226	0.021705989	0.876456164	0.807575758	0.65608656	0.57040724	0.0461813	0.023602	0.879007739	0.819371728	0.6384983	0.568915	0.0539176	0.029405	0.887264641	0.852721088	0.608105	0.523965	0.070443	0.041796
	96-3-21	0.974745853	0.741935484	0.683224332	0.618026565	0.015275679	0.005304664	0.974210092	0.834745763	0.682124105	0.628736741	0.016671	0.008644	0.970690051	0.860103627	0.6805851	0.633194	0.0183844	0.00971	0.966020536	0.872274143	0.6777349	0.641412	0.0200532	0.011202

As0598ad	0.920428563	0.755555556	0.838518508	0.626286765	0.042910643	0.012215177	0.921970195	0.811904762	0.82184427	0.638721074	0.0527832	0.018838	0.923919106	0.841900312	0.7981774	0.633849	0.0652934	0.033206	0.929634274	0.886697602	0.7647021	0.637334	0.0812871	0.051473
gc0697ad	0.948470525	0.78125	0.612922238	0.551014792	0.017588711	0.006451745	0.953720009	0.833333333	0.606663367	0.550665266	0.0219291	0.006653	0.959171623	0.877112135	0.5983599	0.527641	0.026392	0.012236	0.963147588	0.903846154	0.5868495	0.503654	0.032656	0.014441
hm1096ad	0.962135295	0.8	0.901281428	0.870424837	0.014648855	0.004973364	0.966773943	0.842857143	0.899007397	0.864306785	0.0159203	0.007372	0.972413489	0.885204082	0.8960377	0.858217	0.0172877	0.009135	0.977591488	0.915187377	0.8904678	0.850912	0.0200559	0.013479
jb0298ad	0.907887947	0.768518519	0.792274761	0.73368984	0.023427636	0.011123337	0.908021403	0.826771654	0.785878046	0.720624016	0.026726	0.013556	0.914016784	0.855018587	0.7754413	0.695749	0.0317713	0.014726	0.914536638	0.863198459	0.7599636	0.693733	0.0403008	0.015472
kk0498ad	0.847635103	0.740196078	0.752176145	0.614460784	0.078770132	0.033617488	0.843449285	0.719551282	0.717922503	0.564938847	0.097232	0.053076	0.845230114	0.769545455	0.678638	0.542157	0.1131195	0.084857	0.86077107	0.824691358	0.6341071	0.514749	0.1272085	0.092269
km0301ad	0.954305583	0.720588235	0.749211641	0.555935829	0.019346574	0.005647598	0.953275636	0.784090909	0.74441464	0.552505447	0.0226362	0.009819	0.951562541	0.836	0.7376556	0.550655	0.0271608	0.011607	0.950366906	0.889254386	0.7256283	0.583441	0.0338198	0.015976
Ld1196ad	0.996383925	0.894230769	0.873391054	0.813096559	0.016436296	0.002455146	0.995967016	0.935643564	0.870970099	0.804036909	0.0188825	0.005325	0.994991148	0.946127946	0.867818	0.826131	0.0217455	0.009292	0.992045281	0.943859649	0.8606146	0.813234	0.0261778	0.014158
Ma0899ad	0.888141493	0.75	0.800987744	0.62334267	0.061033208	0.016725499	0.879131676	0.766323024	0.770542088	0.581834998	0.0799409	0.033143	0.881287539	0.815920398	0.7295795	0.530547	0.1045125	0.043088	0.888047391	0.831210393	0.6696568	0.558422	0.1328479	0.097299
mj0798ad	0.905946142	0.777777778	0.76598005	0.652620321	0.028173927	0.010483312	0.911377513	0.824275362	0.756198655	0.630911188	0.0348661	0.012414	0.919870063	0.863354037	0.7431023	0.598957	0.0425545	0.019658	0.923535788	0.892966361	0.7214113	0.561396	0.0573748	0.02383
Ra0199ad	0.966067243	0.798076923	0.948203717	0.831613876	0.015771602	0.004198254	0.964991438	0.853773585	0.944012507	0.82960342	0.0186655	0.004909	0.963560317	0.88277512	0.9363688	0.826684	0.0235158	0.006972	0.959694499	0.914233577	0.9214114	0.805422	0.0329428	0.012678
Ra0997ad	0.928295642	0.684210526	0.809131905	0.665667051	0.021163021	0.008541511	0.92686792	0.75	0.804195917	0.644095861	0.0247275	0.010903	0.921253348	0.834782609	0.7956549	0.636735	0.0308676	0.016038	0.914960709	0.856557377	0.7797028	0.624224	0.0422048	0.019146