

# A Novel Approach to Identify the Micro calcification Images

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## ABSTRACT

To identify the differentiate between tumor and micro calcification is still a great issue in present technology to give a remedy for those kind of issues by collecting the database of MIAS open source database and then give input to the system and extract the features like texture, edge by using novel approach process then go to the next step that is to match the extracted process with database through BWP algorithm and then give the exact result to problem from the implementation output has been justified in this approach large set of database has been used for the implementation purpose.

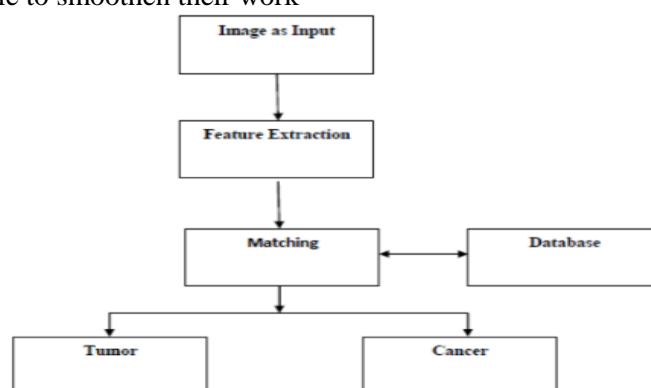
**KEY WORDS:** Micro calcification, BWP algorithm, Texture, MIAS database.

## 1. INTRODUCTION

Breast cancer is the very dangerous disease and high complex to find out in early stage even with the present technology to make the present technology more efficient along with the accuracy for the medical field this system is very useful to find out the disease in early stage itself. Every year so many women's are affected by this disease find out in the recent survey.

## 2. PROPOSED METHODOLOGY

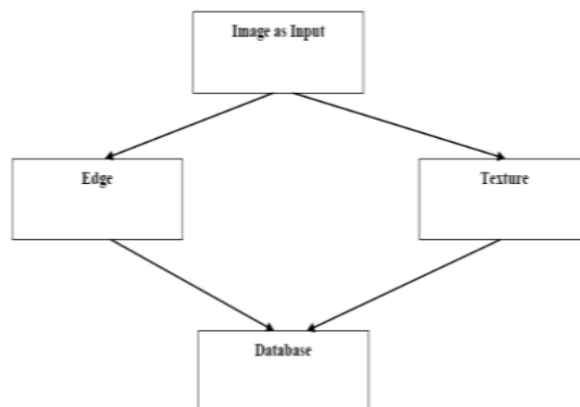
The proposed methodology deals the micro calcification with following process to achieve better process and to help the medical people to smoothen their work



**Figure.1. The proposed System Diagram**

**Image as input:** First step in our proposed system to collect the database and in this system we have used MIAS database for the process and all image in MIAS database has been preprocessed and then we have given to the system.

**Feature Extraction:** The second step for the proposed system is to be feature extraction is nothing but input image should be extract the features like texture and edges from the images and those details should be match with the database to identify whether the image is cancer or tumor.



**Figure.2. Feature Extraction techniques**

**Edge:** The given input image should be extract the edge from the image for that we are using the Proposed algorithm (BWP) to extract the edge.

**Step1:** Input image should be converted to black and white image

**Step2:** Then outer Layer of lines should be make it has the edge

**Step3:** Store the value and position of X and Y coordinates of the image

**Step4:** Repeat the above steps to extract the edge from the image

**Texture:** The second step in feature extraction is to extract the texture from the input image

**Step1:** Input image should be converted to black and white image

**Step2:** Then inner layer of lines should be make it has the texture

**Step3:** Store the value and position of X and Y coordinates of the image

**Step4:** Repeat the above steps to extract the texture from the image

**Matching:** The matching is very important to identify the image is tumor or cancer for that our proposed methodology deals with input image which has already extracted the features from the image and set of features extracted already in the database is compared by using the values of 0's and 1's total number of 0's and 1's will be counted and position of the 0's and 1's is also important to identify the image is tumor or cancer examples following below

**Case 1:** Database Matches

Database: 0 0 0 0 1 1 0 1 0 0 1 1 1 0 0 1 0 1 1

Input: 0 0 0 0 1 1 0 1 0 0 1 1 1 0 0 1 0 1 1

**Case 2:** Database Not Matches

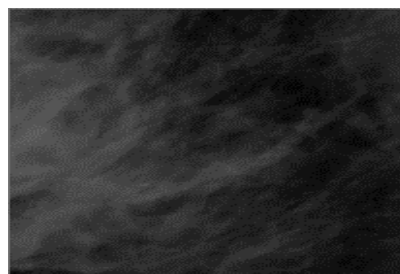
Database: 0 0 0 0 1 1 0 1 0 0 1 1 1 0 0 1 0 1 1

Input: 0 0 0 0 1 0 0 1 0 1 1 1 1 1 0 0 1 0 0 1

**Implementation:** The implementation deals with the process and output of the proposed algorithm and efficiency of the proposed system



**Benign Image**



**BWP Benign Image**

**Figure.3. Sample Image for Benign and BWP Benign Image**



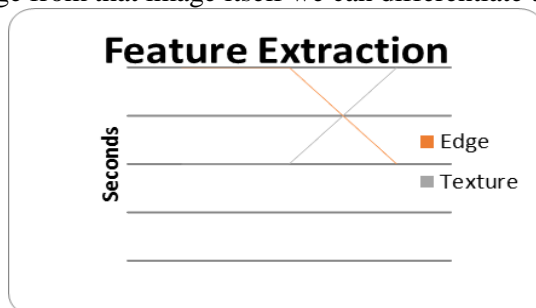
**Maligant Image**



**BWP Maligant Image**

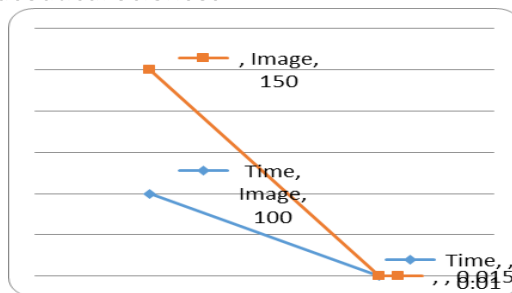
**Figure.4. Sample Image for Maligant and BWP Maligant Image**

The Figure.3. and Figure.4. represents the conversion of gray scale image into black white image conversion of both benign and malignant image from that image itself we can differentiate the tumor and cancer image



**Figure.5. Feature Extraction Graph**

The Figure.5, represents the graphical representation of edge and texture time taken to search the database as well as to extract the features of edge and texture from the input image.



**Figure.6. Time taken for database graphical representation**

The figure.6, indicates the time taken for set of images namely set1 has 100 images and total time taken for the conversion is 0.01 and in the set2 has 150 images 0.015 for the above result we have proven the justification of the proposed methodology.

### 3. CONCLUSION

The remedy for the identification and differentiation of tumor and cancer is possible from the proposed methodology has been successfully proved by the above implementation and justify by the output graph and it will help the medical people to smoothen their work and help the patients to rectify their diseases as soon as possible.

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