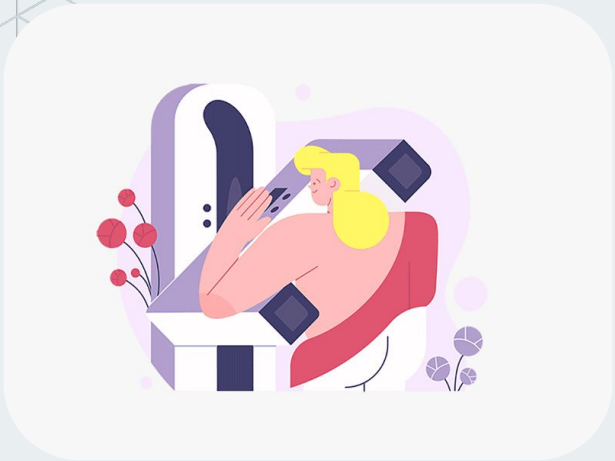

Breast cancer detection methods using medical imaging techniques

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Barau Elena Raluca
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Marculescu Tudor

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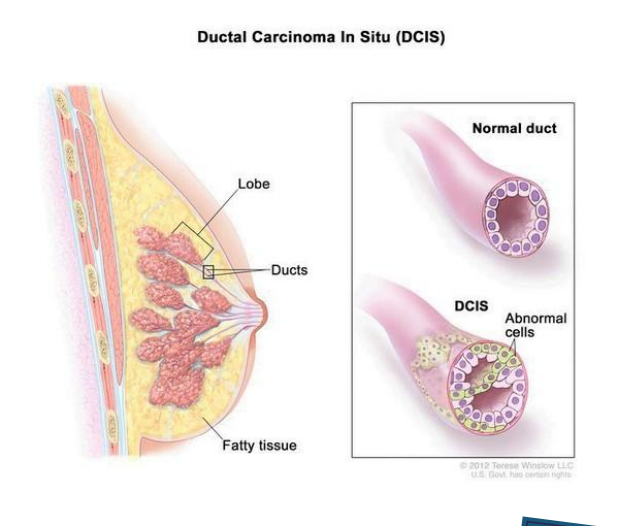
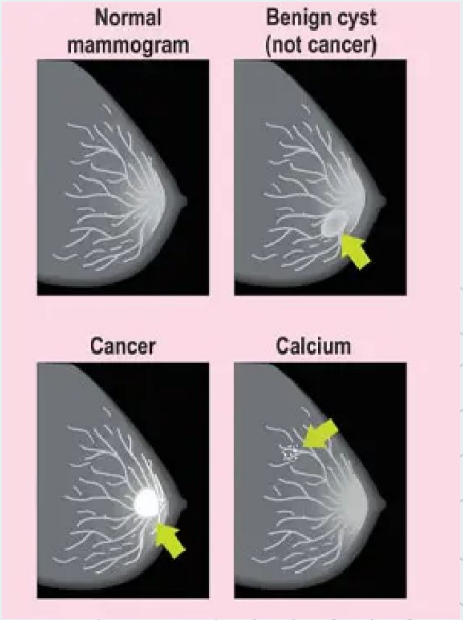
What is breast cancer?

- The **second** leading cause of cancer deaths among women.
- Over 1.5 million women (25% of all women with cancer) are diagnosed every year throughout the world.
- It is a metastatic cancer and can commonly transfer to distant organs such as the bone, liver, lung and brain, which mainly accounts for its incurability
- Its prevention remains challenging in the world

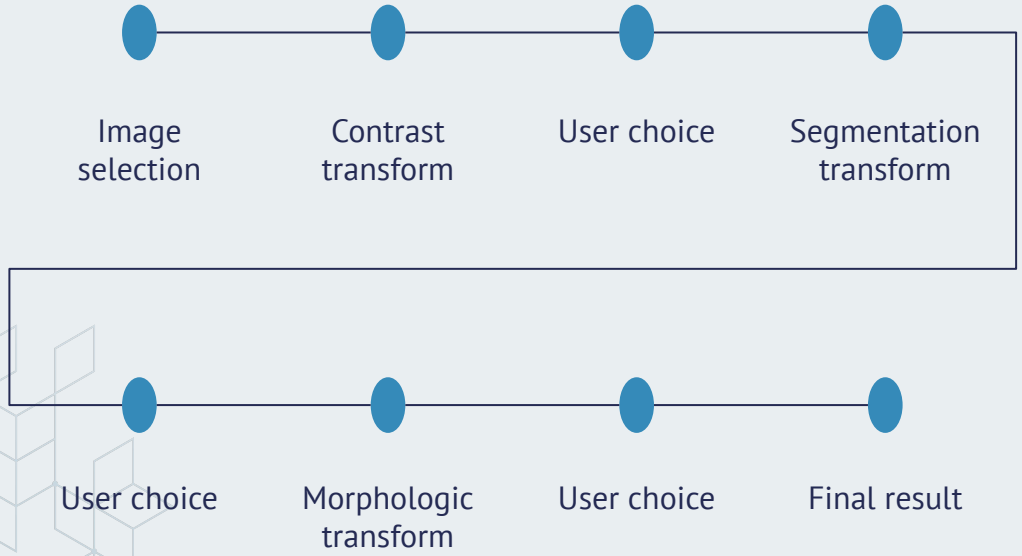


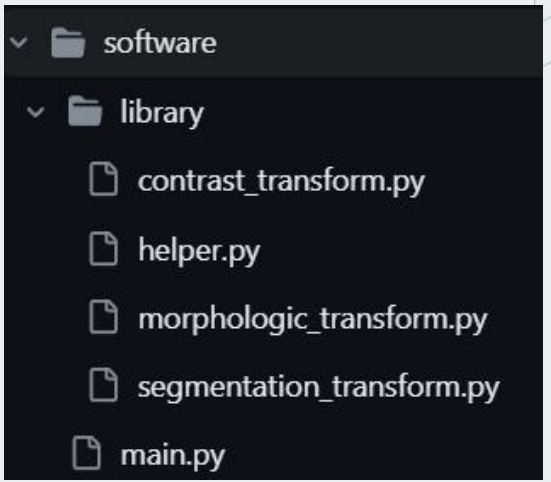
Mammograms

- An x-ray picture of the breast that can be used to check for breast cancer in women who have no signs or symptoms of the disease.
- Make it possible to detect tumors that cannot be felt
- Can also find microcalcifications (tiny deposits of calcium) that sometimes indicate the presence of breast cancer

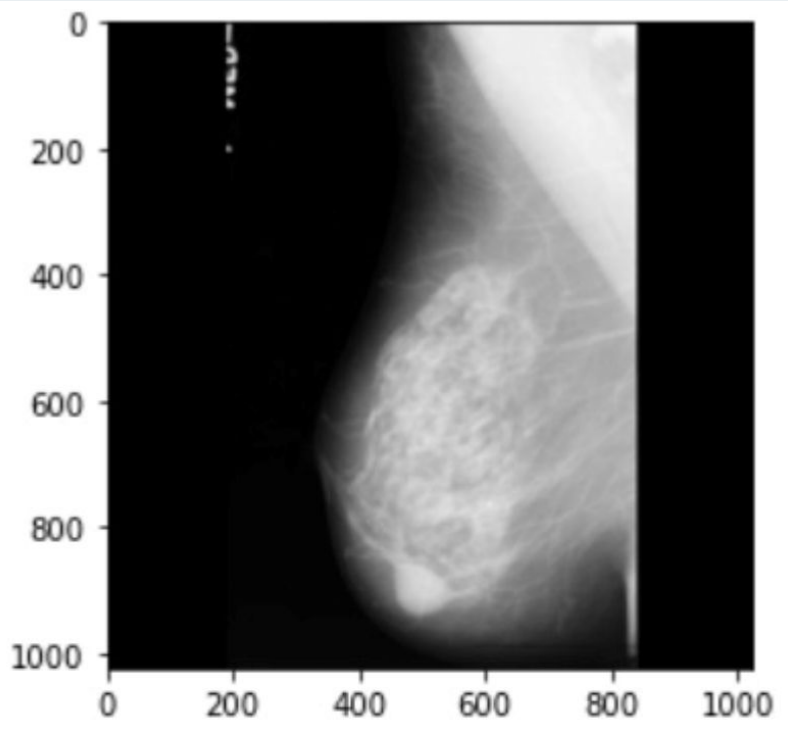


Software implementation



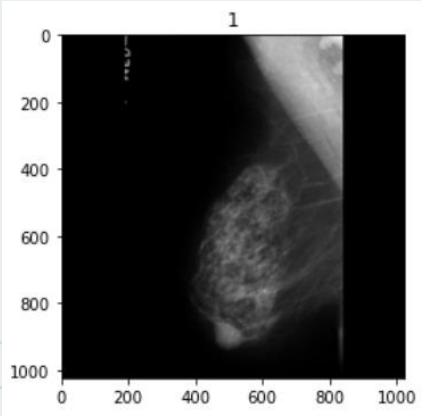


Mammogram - original image

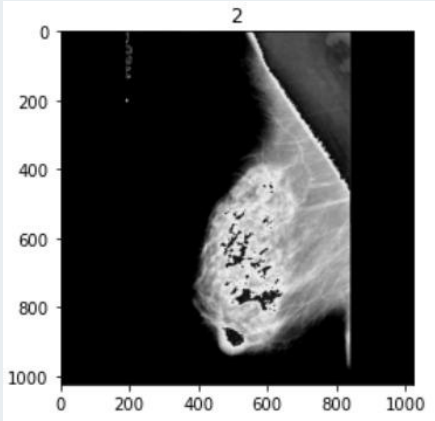


Contrast enhancement

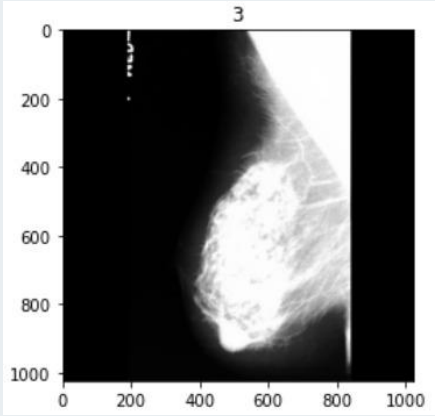
Exponential transform

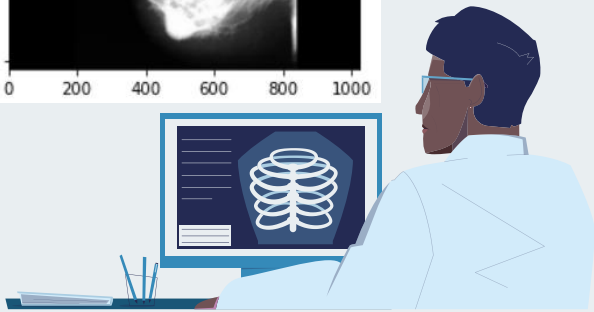


Contrast stretching transform



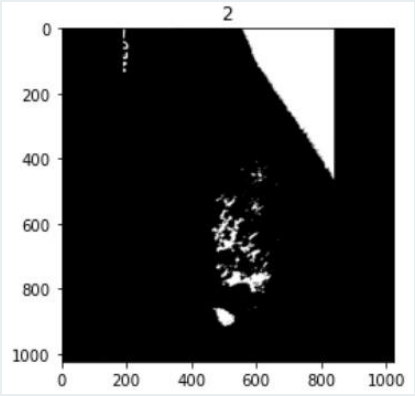
Linear transform



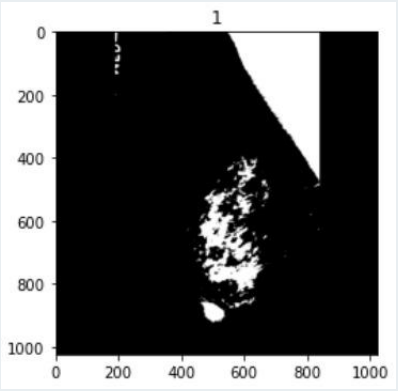


Segmentation

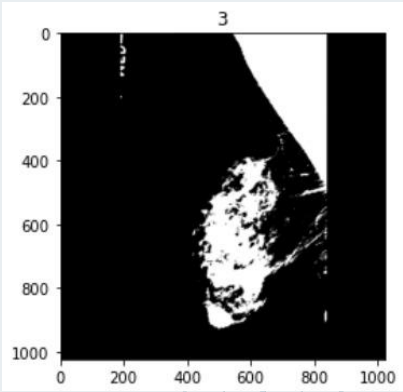
Binarization



Slicing

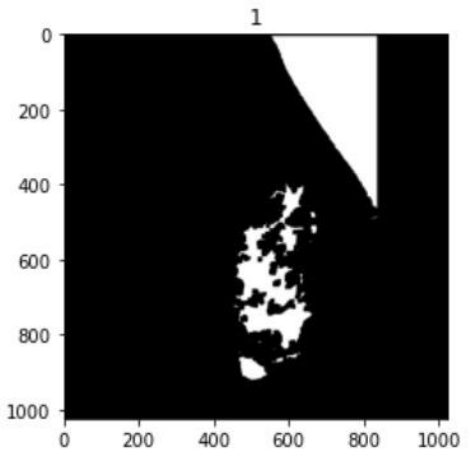


Otsu's Method

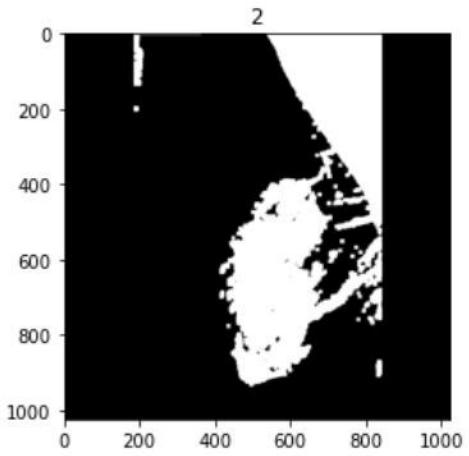


Morphologic transform

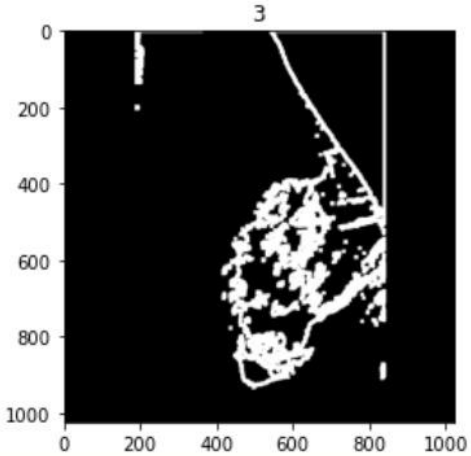
Erosion transform



Dilation transform



Morphologic gradient transform



Results

Data analysis

Present the analyzed data from the study. Describe the methods used for analysis and highlight key findings and trends

Comparison

Compare results with existing literature or previous studies. Highlight similarities, differences and novel insights for knowledge

Quant. results

Focus on numerical results derived from the analysis. Present percentages, means or correlations and use visual aids

Limitations

Acknowledge study limitations. Discuss challenges faced during data collection, analysis and interpretation

Qual. results

Discuss qualitative findings from interviews or surveys. Present themes, patterns, and include examples

Conclusions

Summarize the findings and their implications. Discuss the impact on medical practice, patient care or future research

Thank you!