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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





## جامعة عين شمس

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## ACR BI-RADS breast density and its correlation with breast cancer screening program

### Thesis

Submitted For Partial Fulfillment of Master Degree in Radiodiagnosis



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# Acknowledgment

First of all, I thank **Allah** for allowing me to finish this work.

In a few grateful words, I would like to express my deepest gratitude and appreciation to **Prof. Dr**. **Mounir Sobhy Guirguis** Professor of Radiodiagnosis, Faculty of Medicine – Ain Shams University, for his unlimited help, kind encouragement and generous support throughout this whole work. It was a great honor for me to work under his guidance and supervision and to accept me to be one of his students.

I would like to express my deepest gratitude and appreciation to **Dr. Mona Gamalludin Alsayed**Alkaphoury, Lecturer of Radiodiagnosis, Faculty of Medicine – Ain Shams University, for her precious help and beneficial advices throughout this thesis. It has been a great honor to work under her supervision.

Last but not least, I can't forget to thank all members of my Family, specially my Parents and my Husband, for pushing me forward in every step of my life.

🖎 Ghada Khaled Ahmed

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### **List of Abbreviations**

Two-Dimensional 2D 3D Three-Dimensional ACOG American College of Obstetricians and Gynecologists American College of Radiology **ACR** ACS American Cancer Society Breast Cancer Surveillance Consortium **BCSC BI-RADS** Breast Imaging Reporting and Data System **BRCA** BReast CAncer gene **BSE Breast Self-Examination CBE** Clinical Breast Examination CC CranioCaudal Contrast-Enhanced Mammography **CEM** CESM Contrast Enhanced Spectral Mammography **CISNET** Cancer Intervention and Surveillance Modeling Network **DBT Digital Breast Tomosynthesis**  $\mathbf{DM}$ Digital Mammography Digital Mammographic Imaging Screening **DMIST Trial** FN False Negative FP False Positive **FFDM** Full-Field Digital Mammography **HRT** Hormonal Replacement Therapies **IBIS** International Breast Cancer Intervention Study LM view LateroMedial view LMO view LateroMedial Oblique view ML view MedioLateral view MedioLateral Oblique **MLO** MRI Magnetic Resonance Imaging Negative Predictive Value **NPV** 

### List of Abbreviations

PMD	Percent Mammographic Density
$\mathbf{PPV}$	Positive Predictive Value
<b>RCTs</b>	Randomized Controlled Trials
SFM	Screen-Film Mammography
TN	True Negative
TP	True Positive
UK	United Kingdom
US	United States
XCCL	Exaggerated CC Views

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### **Abstract**

Background: Breast cancer remains one of the leading causes of death in women over the age of 40 years. Breast cancer screening is used to identify women with asymptomatic cancer with the goal of enabling women to undergo less invasive treatments that lead to better outcomes, ideally at earlier stages and before the cancer progresses. Breast imaging is currently undergoing a major change with the wide spread implementation of Full Field Digital Mammography equipments. Mammography is the best-studied breast cancer screening modality and the only recommended imaging tool for screening the general population of women. Aim of the work: to correlate the relation between ACR density of breast and breast cancer in screening program. **Patients and Methods:** Our study included 40 women of breast cancer were depicted radiologically and histo-pathologically diagnosed after outreaching for screening by Digital Mammography by the Egyptian National Breast Cancer Screening Program in Ain Shams University Hospitals at period from January 2018 to October 2019. Their data were collected from the medical records of the program. Their age ranged between 40 and 65 years. Results: Frequency of breast cancer cases increases with ACR class B and C respectively. **Conclusion:** dense breast is not a risk factor for breast cancer, so further researches are needed to study the relationship between breast density and breast cancer in Egyptian population, to elucidate the role of breast density estimation in prediction of breast cancer considering the genotypical and phenotypical differences of the Egyptian population.

**Key words:** breast cancer – breast density – screening program –ACR – BIRADS – mammography