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Assessing the Accuracy of Ultrasound and Mammography in Diagnosing Fibroadenoma among Patients with High Breast Density

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Abstract

Breast cancer is one of the most common malignancies among women worldwide and remains a leading cause of cancer-related mortality. This study evaluates that early and accurate detection is essential for improving patient outcomes. Imaging modalities such as mammography and ultrasonography (USG) play a crucial role in the evaluation of breast lesions. However, factors such as breast density may influence diagnostic accuracy. Mammography is considered the gold standard for screening, but its sensitivity decreases in dense breast tissue, where ultrasound may provide additional diagnostic value.

Objective: This study evaluates and compares the diagnostic performance of ultrasound and mammography in detecting fibroadenomas within dense breast tissue.

Methods: A cross-sectional study was conducted including 140 patients presenting with breast-related complaints. Mammography and ultrasonography were performed for all participants. Data regarding age, breast density, imaging findings, BI-RADS categories, and final diagnosis were collected. Patients were categorized based on breast density (A–D), BI-RADS classification, and lesion characteristics. Detection rates of both imaging modalities

were assessed, and statistical analysis including chi-square tests was performed to evaluate associations between imaging findings and final diagnosis.
Results: The findings revealed that ultrasound achieved a higher lesion detection rate of **86.4%** compared to mammography, which stood at **82.1%**. Furthermore, higher BI-RADS categories in both modalities were strongly associated with an increased risk of malignancy.
Conclusion: While mammography remains an essential screening tool, adjunct ultrasonography is crucial for improving diagnostic accuracy and successfully detecting lesions in patients with dense breasts.

Introduction

The Prevalence and Nature of Fibroadenomas

Breast lesions are among the most common conditions affecting women, with fibroadenoma being the most frequently encountered benign tumor. These tumors typically occur in women aged 15 to 35 and are closely linked to hormonal fluctuations. Although fibroadenomas are non-cancerous, their presence often causes significant psychological distress and anxiety for the patient, making timely and accurate diagnosis essential. Histologically, it is recognized as a biphasic tumor consisting of both stromal and epithelial components.

The Diagnostic Challenge of Dense Breast Tissue

The primary challenge in breast imaging is dense breast tissue, characterized by a higher proportion of glandular and fibrous tissue relative to fat. Radiologically, dense tissue appears white on a mammogram, similar to how fibroadenomas and malignant tumors appear. This shared radiopacity leads to a masking effect, where the tumor is hidden behind the dense tissue, significantly reducing the sensitivity of mammography.

Evolution of Imaging Modalities

Both mammography and ultrasound play distinct roles in breast health. Mammography is the gold standard for screening due to its ability to detect micro-calcifications. However, its limited effectiveness in dense tissue has necessitated the use of supplementary tools. Ultrasonography is superior in this regard, utilizing acoustic properties to distinguish between solid and cystic lesions regardless of tissue density. It offers real-time imaging, allowing radiologists to assess lesion margins and vascularity in real time.

Standardization via the BI-RADS System

To ensure consistency in reporting, the Breast Imaging-Reporting and Data System (BI-RADS) is utilized. This system enables radiologists to classify lesions based on specific characteristics. Research indicates that higher BI-RADS categories (4 and 5) are strongly correlated with malignancy, whereas lower categories indicate benign conditions. This classification is vital for clinical decision-making and determining the necessity of a biopsy.

Rationale and Clinical Significance

High breast density lowers mammography's sensitivity and may cause fibroadenoma to go undetected. By comparing detection rates in 140 individuals, this study seeks to determine if ultrasound offers superior diagnostic accuracy in such situations. For patients with dense breast tissue, the findings of this study may help guide the choice of suitable imaging modalities and enhance diagnostic techniques.

Research Methodology

This research employed a **cross-sectional study design** to compare the diagnostic performance of ultrasound and mammography in detecting fibroadenomas. The study population consisted of **140 patients** selected based on breast density and suspected lesions. All participants were examined using **high-resolution ultrasonography** and **digital mammography** to maintain diagnostic precision. Lesions were standardized and classified using the **BI-RADS** scoring system. Finally, the correlation between imaging findings and the risk of malignancy was statistically evaluated to validate the clinical outcomes.

RESULTS

The present study included a total of 140 patients with ages ranging from 25 to 65 years. The mean age of the participants was 43.02 years, with a standard deviation of 11.375 years, indicating a moderately wide dispersion of age within the sample. This suggests that the study population primarily consists of middle-aged individuals, which is clinically significant as the risk of breast pathology, particularly malignancy, tends to increase with advancing age. The relatively large standard deviation reflects heterogeneity in the age distribution, allowing for a more comprehensive assessment across different age groups.

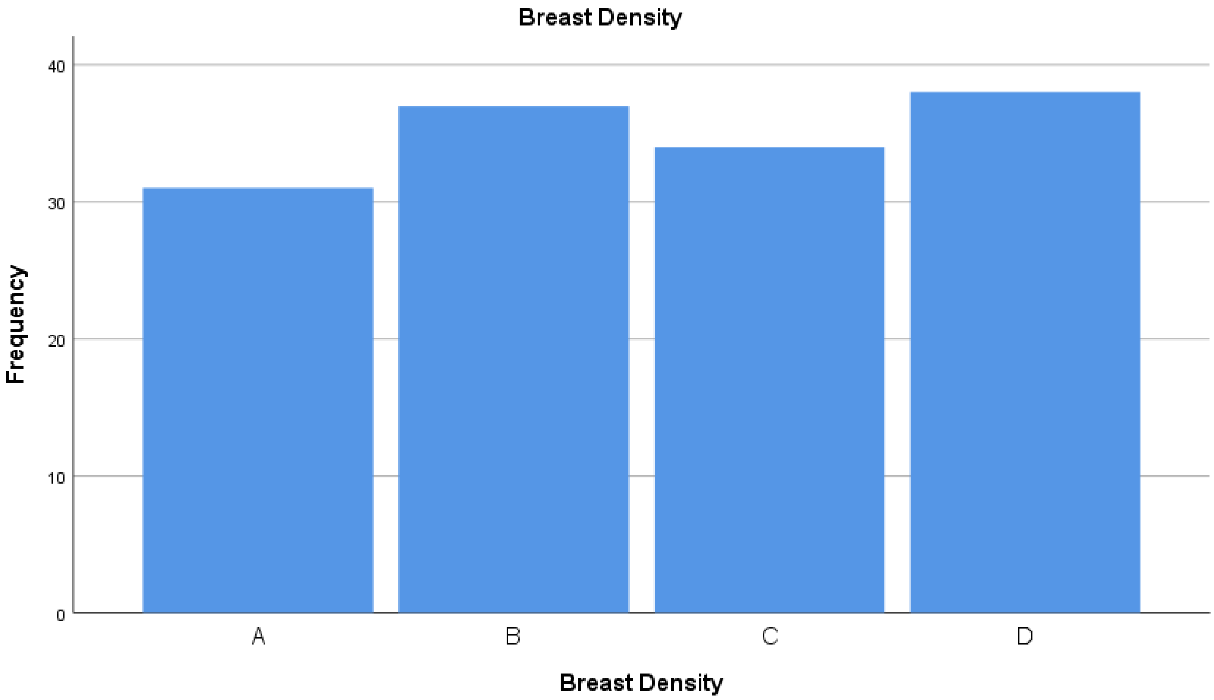
Table 4.1. Age Distribution

	N	Minimum m	Maximum m	Mean	Std. Deviation
Age	140	25	65	43.02	11.375

Breast density analysis revealed that 22.1% of patients were classified as category A, 26.4% as category B, 24.3% as category C, and 27.1% as category D. A notable observation is that more than half of the study population (51.4%) falls within the higher density categories (C and D). High breast density is clinically important because it can obscure lesions on mammography, thereby reducing its sensitivity. Additionally, dense breast tissue is considered an independent risk factor for breast cancer. This distribution emphasizes the importance of adjunct imaging modalities, such as ultrasound, in improving diagnostic accuracy in dense breasts.

Table 4.2. Distribution of Breast Density

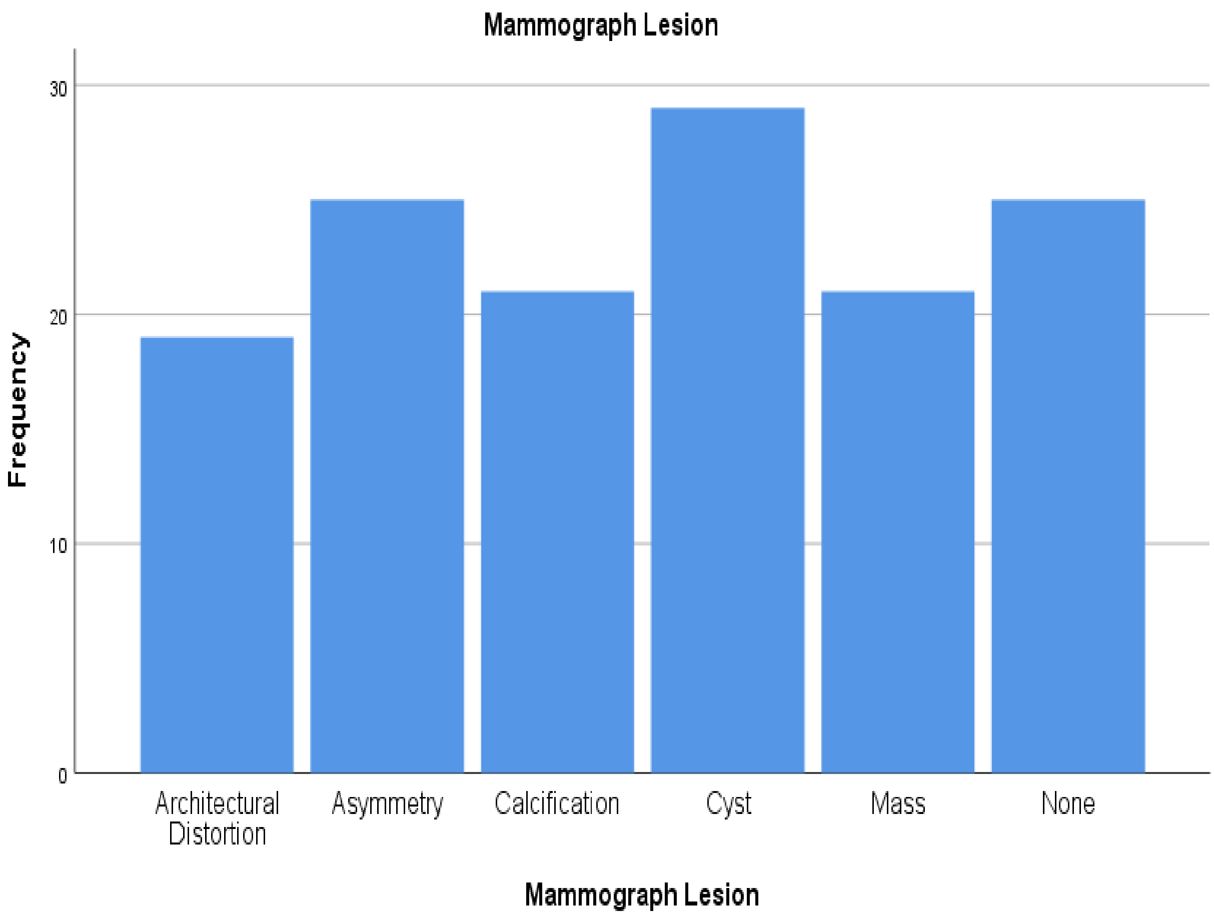
	Frequency	Percent	Valid Percent	Cumulative Percent
A	31	22.1	22.1	22.1
B	37	26.4	26.4	48.6
C	34	24.3	24.3	72.9
D	38	27.1	27.1	100.0
Total	140	100.0	100.0	



The evaluation of mammographic findings demonstrated a diverse range of lesion types. The most frequently observed finding was cysts (20.7%), followed by asymmetry (17.9%) and cases with no detectable abnormality (17.9%). Calcifications and masses were each observed in 15.0% of cases, while architectural distortion was the least common finding (13.6%). The presence of cysts, which are typically benign, may explain a portion of non-malignant diagnoses; however, features such as masses, calcifications, and architectural distortion are clinically significant as they are often associated with malignancy. The relatively high percentage of “no lesion” cases highlights potential limitations of mammography, particularly in dense breast tissue.

Table 4.3. Mammographic Lesion Characteristics

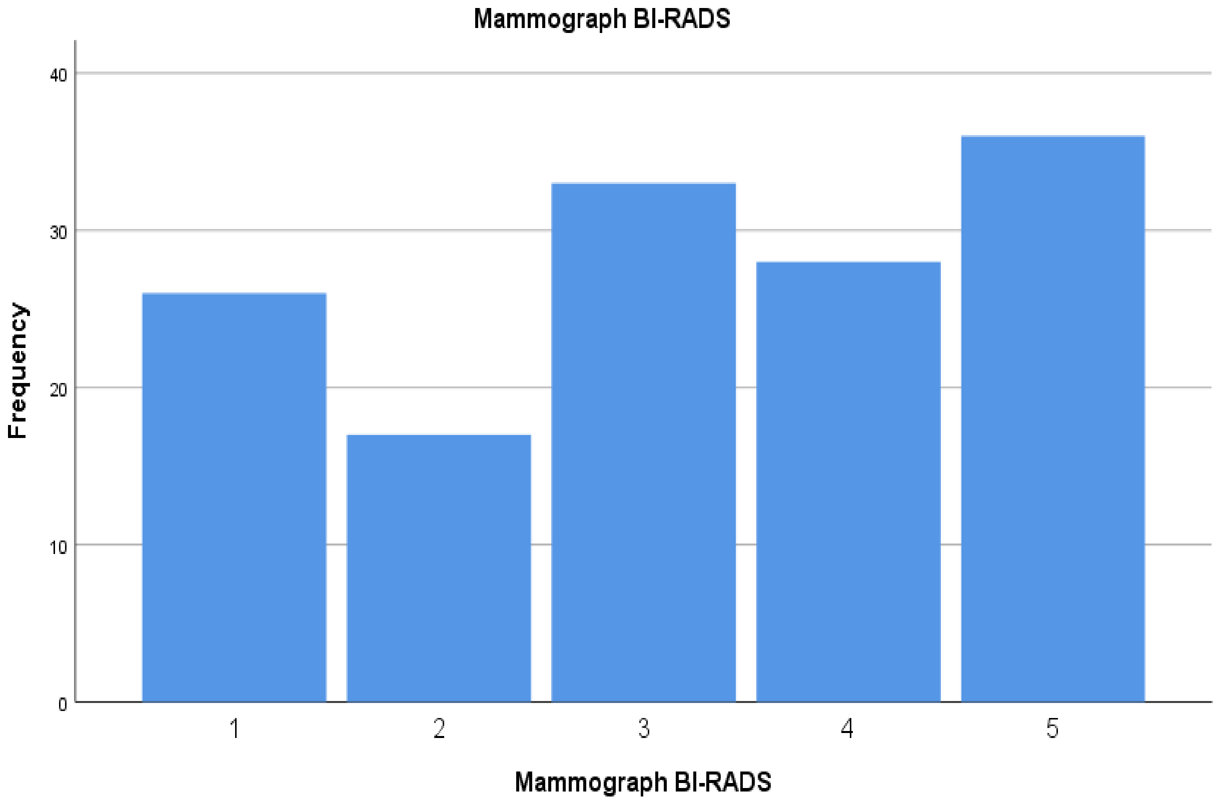
	Frequency	Percent	Valid Percent	Cumulative Percent
Architectural Distortion	19	13.6	13.6	13.6
Asymmetry	25	17.9	17.9	31.4
Calcification	21	15.0	15.0	46.4
Cyst	29	20.7	20.7	67.1
Mass	21	15.0	15.0	82.1
None	25	17.9	17.9	100.0
Total	140	100.0	100.0	



The BI-RADS categorization based on mammography findings showed that 18.6% of cases were classified as BI-RADS 1, 12.1% as BI-RADS 2, and 23.6% as BI-RADS 3. Importantly, a substantial proportion of cases fell into higher-risk categories, with 20.0% in BI-RADS 4 and 25.7% in BI-RADS 5. This indicates that nearly half of the study population (45.7%) had suspicious or highly suggestive findings of malignancy. The high proportion of BI-RADS 4 and 5 cases suggests that the study population may include a significant number of symptomatic or high-risk individuals, which aligns with the observed malignancy rate in the final diagnosis.

Table 4.4. Mammography BI-RADS Assessment

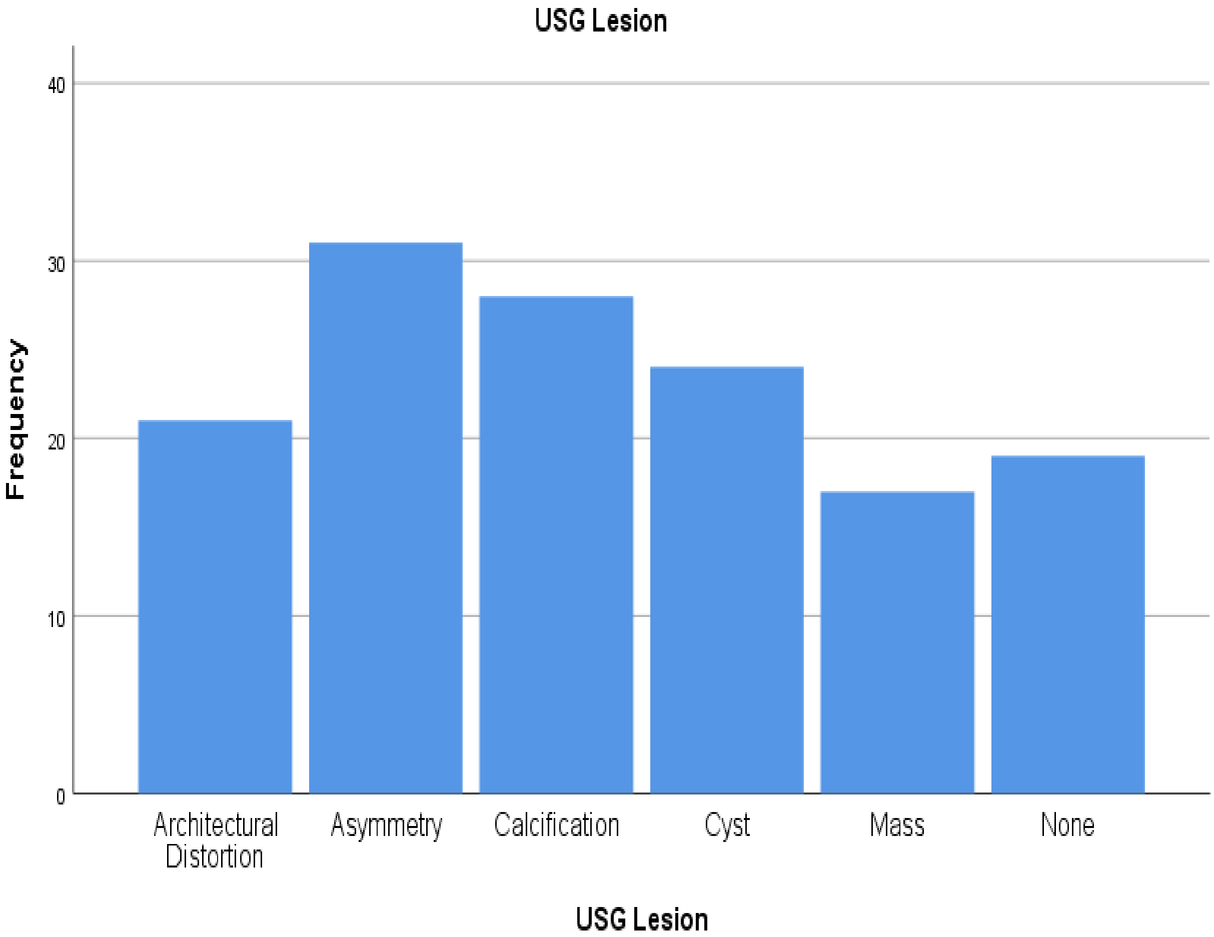
	Frequency	Percent	Valid Percent	Cumulative Percent
1	26	18.6	18.6	18.6
2	17	12.1	12.1	30.7
3	33	23.6	23.6	54.3
4	28	20.0	20.0	74.3
5	36	25.7	25.7	100.0
Total	140	100.0	100.0	



Ultrasound evaluation revealed that asymmetry was the most common finding (22.1%), followed by calcifications (20.0%) and cysts (17.1%). Architectural distortion was observed in 15.0% of cases, while 13.6% showed no detectable abnormality, and masses were identified in 12.1% of patients. Compared to mammography, ultrasound demonstrated a higher ability to detect asymmetries and subtle lesions, likely due to its superior performance in dense breast tissue. Additionally, ultrasound is particularly effective in differentiating cystic from solid lesions, which enhances diagnostic confidence and clinical decision-making.

Table 4.5. Ultrasound (USG) Lesion Characteristics

	Frequency	Percent	Valid Percent	Cumulative Percent
Architectural Distortion	21	15.0	15.0	15.0
Asymmetry	31	22.1	22.1	37.1
Calcification	28	20.0	20.0	57.1
Cyst	24	17.1	17.1	74.3
Mass	17	12.1	12.1	86.4
None	19	13.6	13.6	100.0
Total	140	100.0	100.0	

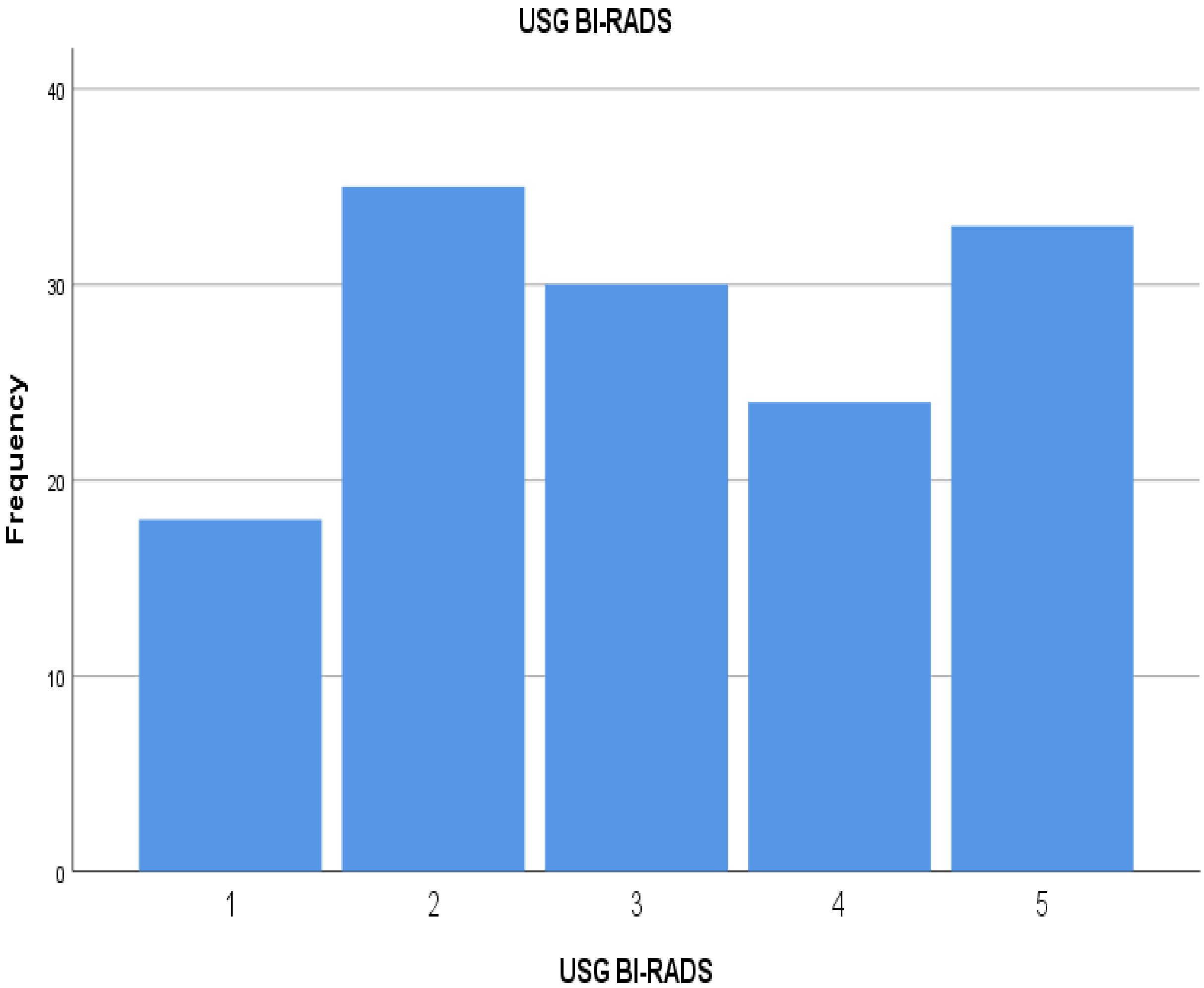


The BI-RADS classification based on ultrasound findings showed that 25.0% of cases were categorized as BI-RADS 2, 21.4% as BI-RADS 3, 17.1% as BI-RADS 4, and 23.6% as BI-RADS

5. The distribution indicates a relatively balanced spread across categories, with a slightly lower proportion of high-risk cases (BI-RADS 4 and 5) compared to mammography. This difference may reflect the complementary role of ultrasound in further characterizing lesions that appear suspicious on mammography, potentially refining the risk stratification.

Table 4.6. Ultrasound BI-RADS Assessment

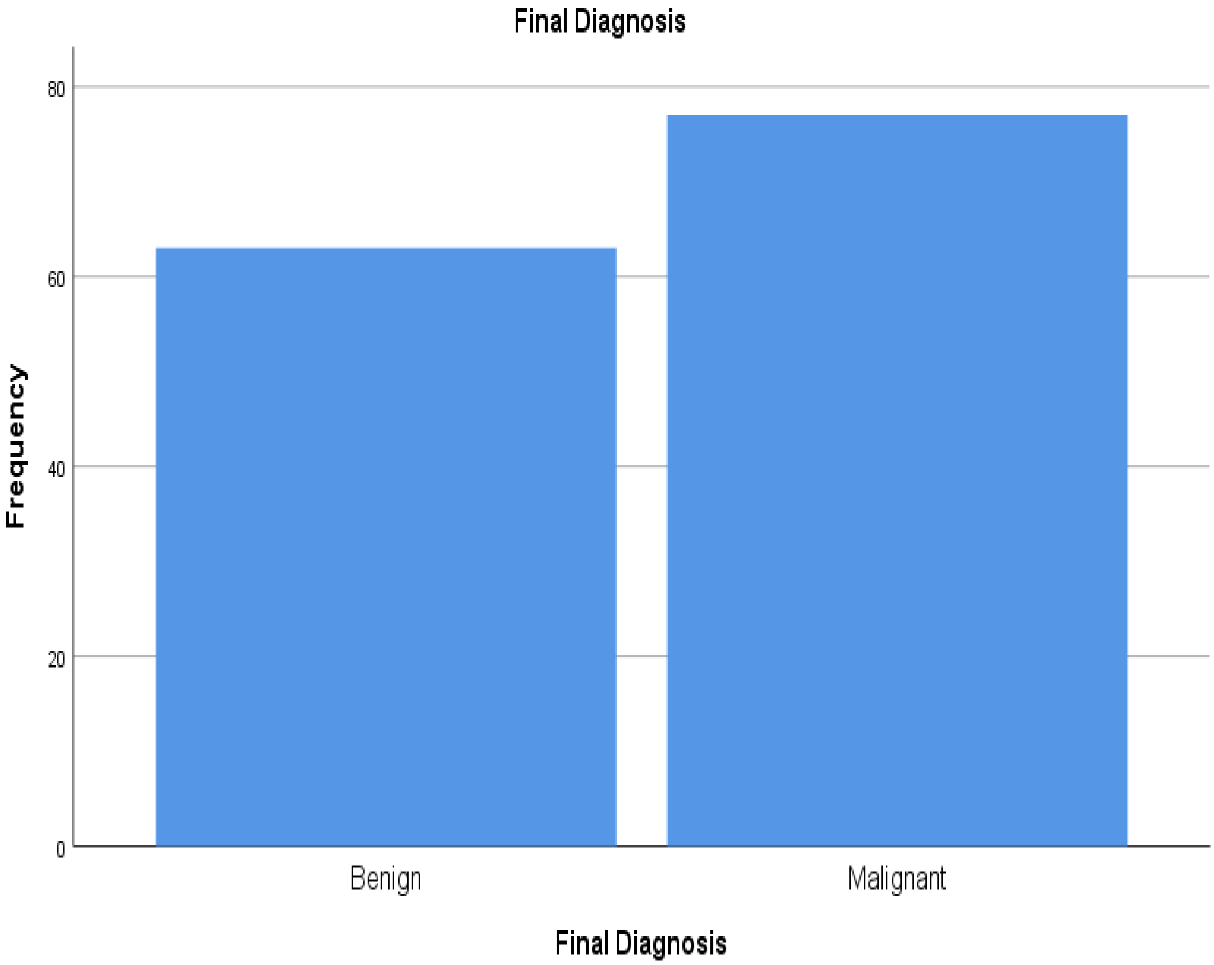
	2	35	25.0	25.0	37.9
	3	30	21.4	21.4	59.3
	4	24	17.1	17.1	76.4
	5	33	23.6	23.6	100.0
	Total	140	100.0	100.0	



The final diagnosis revealed that 45.0% of cases were benign, while 55.0% were malignant. The higher proportion of malignant cases suggests that the study population may have been enriched with patients presenting clinical symptoms or high-risk features. This finding underscores the importance of accurate imaging and early detection, as a significant number of patients were ultimately diagnosed with malignancy.

Table 4.7. Final Diagnosis

	Frequency	Percent	Valid Percent	Cumulative Percent
Benign	63	45.0	45.0	45.0
Malignant	77	55.0	55.0	100.0
Total	140	100.0	100.0	



The detection rate of ultrasound was found to be 86.4%, with only 13.6% of cases not detected. In comparison, mammography demonstrated a slightly lower detection rate of 82.1%, with 17.9% of cases remaining undetected. These findings indicate that ultrasound has a marginally higher sensitivity in detecting breast lesions, particularly in patients with dense breast tissue. The difference in detection rates highlights the complementary role of ultrasound alongside mammography, reinforcing the value of combined imaging approaches in improving diagnostic accuracy.

Table 4.8 Detection Rates of Ultrasound

	Frequency	Percent	Valid Percent	Cumulative Percent
n	19	13.6	13.6	13.6
y	121	86.4	86.4	100.0
Total	140	100.0	100.0	

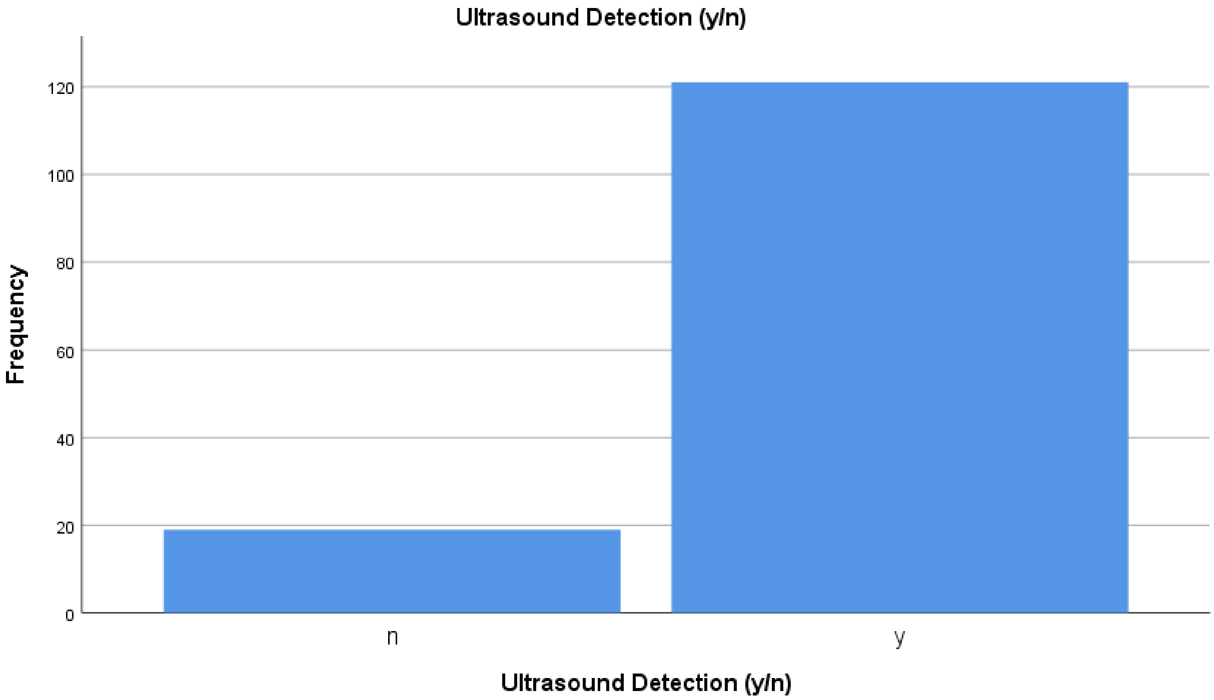
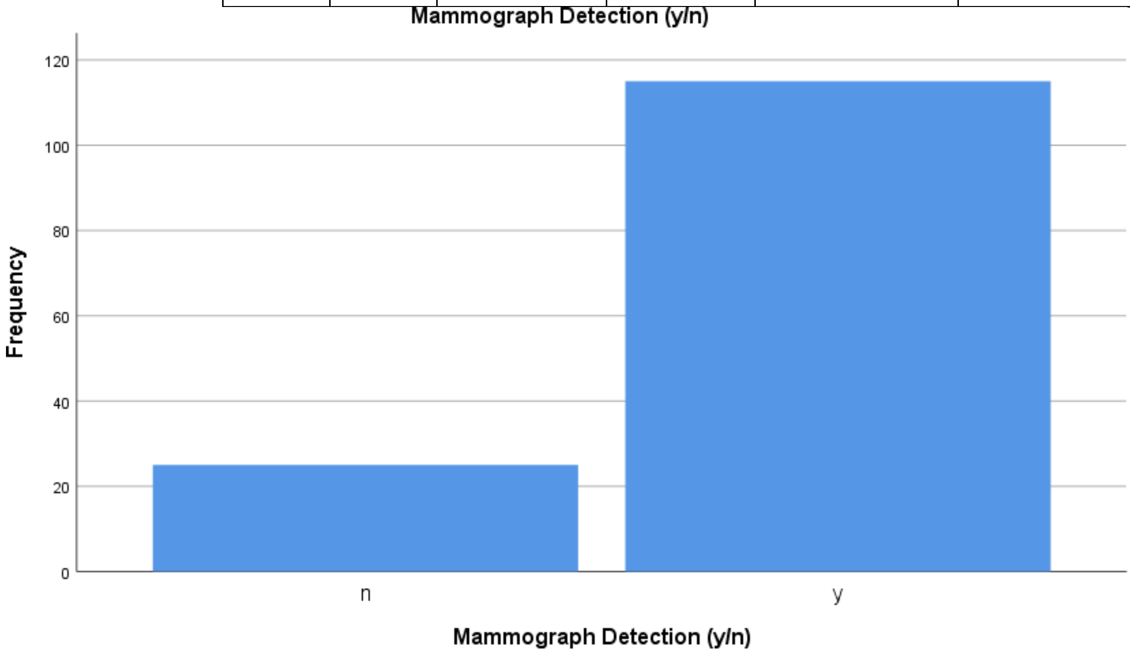


Table 4.9 Detection Rates of Mammammographic BI-RADSmography

		Frequency	Percent	Valid Percent	Cumulative Percent
	n	25	17.9	17.9	17.9
	y	115	82.1	82.1	100.0
	Total	140	100.0	100.0	



The cross-tabulation between RESULTS-RADS categories and final diagnosis demonstrates a clear trend in the distribution of benign and malignant cases across increasing BI-RADS scores. In BI-RADS category 1, the majority of cases were benign (19 cases) compared to malignant (7 cases), reflecting its classification as a negative finding. Similarly, BI-RADS category 2 showed more benign cases (10) than malignant (7), consistent with its benign nature. In BI-RADS category 3, which represents probably benign findings, benign cases (20) still exceeded malignant cases

(13), although the proportion of malignancy began to increase. A significant shift was observed in BI-RADS category 4, where malignant cases (20) surpassed benign cases (8), indicating a higher suspicion of malignancy. This trend became more pronounced in BI-RADS category 5, where a substantial majority of cases were malignant (30) compared to only 6 benign cases. Overall, the distribution shows a progressive increase in malignancy rates with higher BI-RADS categories, confirming the diagnostic reliability of mammographic BI-RADS classification.

Table 4.10.1 Association Between Mammographic BI-RADS and Final Diagnosis

		Final Diagnosis		Total
		Benign	Malignant	
Mammograph BI-RADS	1	19	7	26
	2	10	7	17
	3	20	13	33
	4	8	20	28
	5	6	30	36
Total		63	77	140

The chi-square test further supports this association, with a Pearson chi-square value of 27.571 and a p-value of 0.000, indicating a statistically highly significant relationship between mammographic BI-RADS categories and final diagnosis. This suggests that mammographic BI-RADS is a strong predictor of malignancy and plays a crucial role in clinical decision-making.

Table 4.10.2 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	27.571[a]	4	.000
Likelihood Ratio	29.159	4	.000
N of Valid Cases	140		

The cross-tabulation of ultrasound BI-RADS categories with final diagnosis also demonstrates a significant relationship between increasing BI-RADS scores and malignancy. In BI-RADS category 1, benign (10) and malignant (8) cases were relatively comparable, reflecting low suspicion. In BI-RADS category 2, benign cases (24) were notably higher than malignant cases (11), supporting its benign classification. In BI-RADS category 3, benign cases (17) still exceeded malignant cases (13), though the gap narrowed, indicating an increasing level of suspicion. In BI-RADS category 4, malignant cases (18) significantly outnumbered benign cases (6), highlighting its suspicious nature. The strongest association was observed in BI-RADS category 5, where malignant cases (27) overwhelmingly dominated compared to benign cases (6), confirming its classification as highly suggestive of malignancy.

Table 4.11.1 Association Between Ultrasound BI-RADS and Final Diagnosis

		Final Diagnosis		Total
		Benign	Malignant	
USG BI-RADS	1	10	8	18
	2	24	11	35
	3	17	13	30
	4	6	18	24
	5	6	27	33
Total		63	77	140

The Pearson chi-square value of 23.786 with a p-value of 0.000 indicates a statistically highly significant association between ultrasound BI-RADS categories and final diagnosis. This confirms that ultrasound BI-RADS classification is also a reliable predictor of malignancy and supports its complementary role alongside mammography.

Table 4.11.2 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.786[a]	4	.000
Likelihood Ratio	25.035	4	.000
N of Valid Cases	140		

The relationship between breast density and mammographic detection was assessed using cross-tabulation analysis. In breast density category A, most cases were successfully detected by mammography (29 detected vs. 2 not detected), indicating high sensitivity in less dense breasts. In category B, detection remained relatively high (29 detected vs. 8 not detected), although a slight decrease in sensitivity was observed. In category C, the number of undetected cases increased (10 not detected vs. 24 detected), suggesting reduced effectiveness of mammography in moderately dense breasts. In category D, although detection remained high (33 detected vs. 5 not detected), the presence of undetected cases still reflects the challenges posed by extremely dense breast tissue.

Table 4.12.1 Association Between Breast Density and Mammographic Detection

		Mammograph Detection (y/n)		Total
		n	y	
Breast Density	A	2	29	31

	B	8	29	37
	C	10	24	34
	D	5	33	38
Total		25	115	140

Despite these variations, the chi-square test revealed a Pearson chi-square value of 6.773 with a p-value of 0.079, indicating that the association between breast density and mammographic detection was not statistically significant at the conventional 0.05 level. However, the trend suggests a clinically relevant decrease in mammographic sensitivity with increasing breast density, even if statistical significance was not achieved in this sample.

Table 4.12.2 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.773[a]	3	.079
Likelihood Ratio	7.130	3	.068
N of Valid Cases	140		

The analysis of breast density in relation to ultrasound detection showed relatively consistent detection rates across all density categories. In category A, 28 cases were detected while only 3 were missed. In category B, 30 cases were detected compared to 7 undetected cases. In category C, detection was particularly high (31 detected vs. 3 undetected), indicating strong performance of ultrasound in moderately dense breasts. In category D, ultrasound maintained high detection rates (32 detected vs. 6 not detected), demonstrating its effectiveness even in highly dense breast tissue.

Table 4.13.1 Association Between Breast Density and Ultrasound Detection

		Ultrasound Detection (y/n)		Total
		n	y	
Breast Density	A	3	28	31
	B	7	30	37
	C	3	31	34
	D	6	32	38
Total		19	121	140

The chi-square analysis yielded a Pearson chi-square value of 2.116 with a p-value of 0.549, indicating no statistically significant association between breast density and ultrasound detection. This suggests that ultrasound performance is relatively independent of breast density, highlighting its advantage over mammography in dense breast evaluation.

Table 4.13.2 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.116[a]	3	.549
Likelihood Ratio	2.142	3	.543
N of Valid Cases	140		

DISCUSSION

The present study evaluated the diagnostic performance of mammography and ultrasound in relation to breast density, BI-RADS classification, and final diagnosis among 140 patients. The findings demonstrated a strong association between increasing BI-RADS categories and malignancy, as well as the complementary role of ultrasound in improving lesion detection, particularly in dense breast tissue. These findings are consistent with previously published literature and reinforce current clinical practices.

In this study, both mammographic and ultrasound BI-RADS classifications showed a statistically highly significant association with final diagnosis ($p = 0.000$). The proportion of malignant cases increased progressively from lower BI-RADS categories (1–3) to higher categories (4–5), confirming the predictive reliability of the BI-RADS system.

These findings are in strong agreement with previous studies, which have consistently reported that BI-RADS categories 4 and 5 are significantly associated with malignancy, while categories 1 and 2 are predominantly benign. The observed trend in this study where BI-RADS 5 showed the highest proportion of malignant cases—aligns with establish radiological principles and clinical guidelines. The ability of both mammography and ultrasound BI-RADS systems to stratify risk accurately highlights their critical role in guiding biopsy decisions and patient management.

The present study demonstrated that ultrasound had a slightly higher detection rate (86.4%) compared to mammography (82.1%). Although the difference appears modest, it becomes clinically significant when interpreted in the context of breast density.

These findings are consistent with recent studies showing that ultrasound has superior sensitivity compared to mammography, particularly in dense breasts. Ultrasound had a sensitivity of 85.3%, while mammography showed a lower sensitivity of 61.8%, especially in dense breast tissue . Similarly, a systematic review and meta-analysis found that combining mammography with ultrasound significantly increased detection sensitivity from 74% (mammography alone) to 96%. The slightly higher detection rate of ultrasound in the current study supports its role as an effective adjunct modality, particularly for detecting lesions that may be occult on mammography.

CONCLUSION

The findings of our study conclude that both mammography and ultrasound are essential tools in breast imaging, with BI-RADS classification serving as a reliable predictor of malignancy. While mammography remains indispensable, its limitations in dense breasts highlight the importance of ultrasound as a complementary modality. The combined use of these imaging techniques significantly enhances diagnostic accuracy and supports improved patient outcomes.

Limitations and Recommendations:

This study has several strengths, including a moderate sample size and the use of both mammography and ultrasound for comparison. Additionally, the inclusion of BI-RADS classification enhances the clinical relevance of the findings.
However, certain limitations should be acknowledged. The study population may not represent the general population, as a higher proportion of malignant cases suggests selection bias. Furthermore, advanced imaging modalities such as MRI were not included, which could have provided additional diagnostic insights.

FINDINGS
The findings of this cross-sectional study on 140 patients provide a detailed comparison between ultrasound and mammography in the context of dense breast tissue.

Comparative Detection Accuracy
The primary objective was to measure how many lesions were correctly identified by each modality:

Ultrasound (USG) Performance: Successfully detected lesions in **121 out of 140** patients, resulting in a detection rate of **86.4%**.

Mammography Performance: Successfully detected lesions in **115 out of 140** patients, resulting in a detection rate of **82.1%**.

Statistical Variance: Ultrasound showed a higher sensitivity in dense tissue where mammography's effectiveness was limited.
BI-RADS Categorization and Findings
All detected lesions were classified using the Breast Imaging-Reporting and Data System (BI-RADS) to standardize the results:
Benign Lesions: The majority of fibroadenomas were correctly categorized under lower BI-RADS levels, confirming their non-cancerous nature.
Malignancy Correlation: A critical result of the study was that as the BI-RADS category increased (specifically Categories 4 and 5), the probability of malignancy also increased significantly.

Consistency:
This correlation between high BI-RADS scores and malignancy was observed in both ultrasound and mammography findings.
3. Impact of Breast Density
The results specifically highlighted the "Masking Effect" in dense breasts:
In dense tissue, mammography often failed to distinguish the lesion from the surrounding fibro-glandular tissue because both appeared radiopaque (white).
Ultrasound was able to bypass this density, providing clearer margins and better visualization of the internal structure of the fibroadenoma.

Summary Table of Key Findings

Metric	**Ultrasound (USG)**	**Mammography**
Total Patients	140	140
Lesions Detected	121	115
Detection Rate (%)	**86.4%**	**82.1%**
Best Use Case	Dense Breast Tissue	General Screening

Clinical Conclusion from Results

The data conclude that while mammography is essential, it is not sufficient as a standalone tool for patients with dense breasts. The **86.4% accuracy** of ultrasound proves that adjunct ultrasonography is vital for a definitive and accurate diagnosis of fibroadenoma in such cases.

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Case Study

APPENDICES

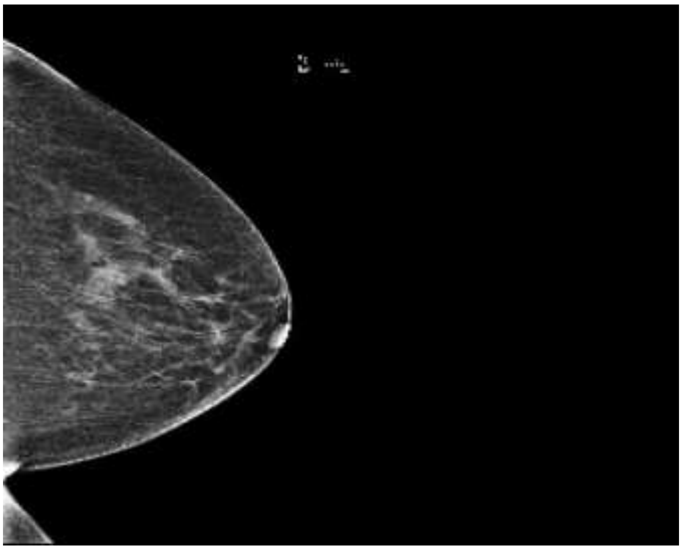
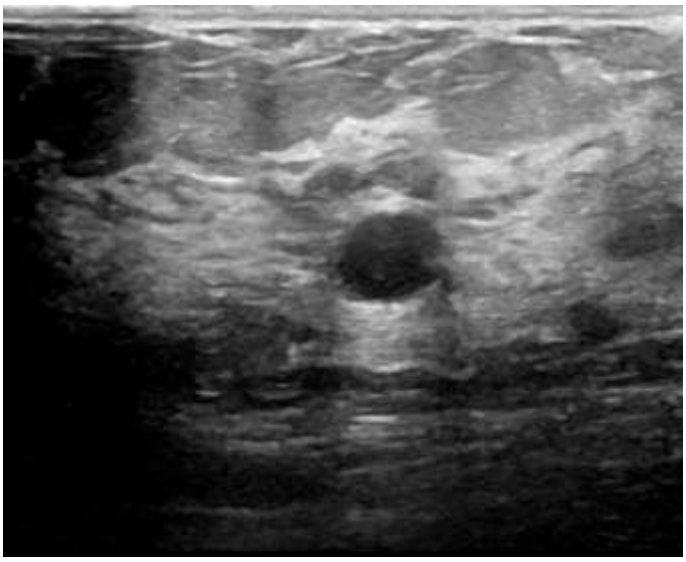


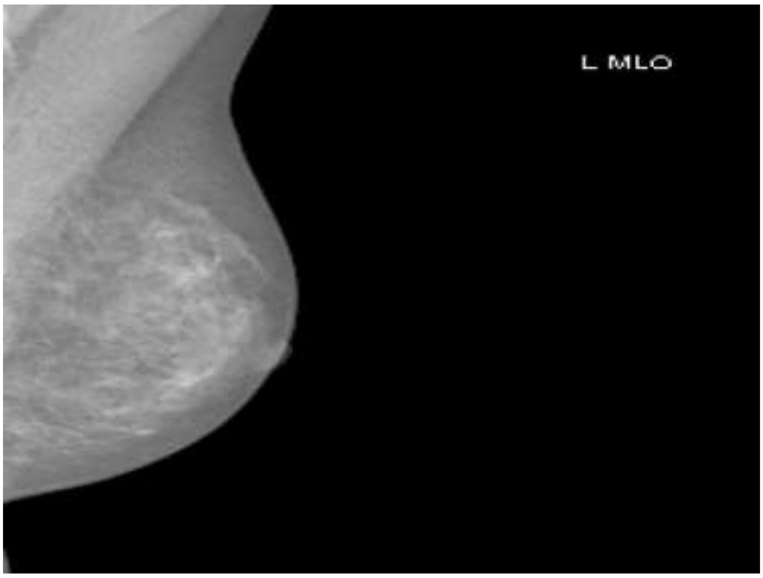
Fig.(A)

Fig.(B)



Case no 1:(A) Right breast mammogram without contrast demonstrating heterogeneously dense fibroglandular parenchyma with significant masking effect, no discrete mass or suspicious microcalcifications identified, skin and nipple unremarkable, in keeping with dense breast pattern limiting mammographic sensitivity.

(B) shows breast ultrasound without contrast demonstrating a well-defined oval hypoechoic solid mass with smooth circumscribed margins, homogeneous



echotexture and posterior acoustic enhancement within dense fibroglandular background, in keeping with a benign solid breast lesion consistent with fibroadenoma (BIRADS 3).

Fig.(A)

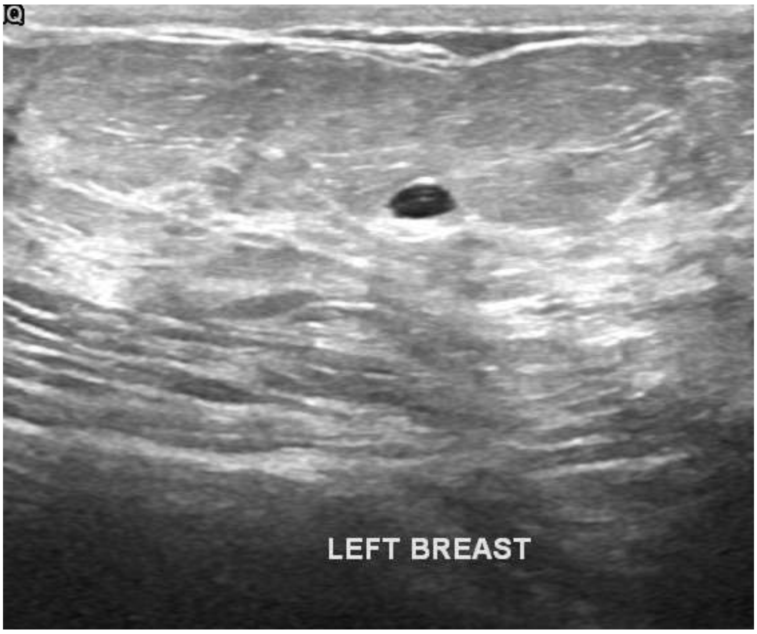


Fig.(B)

Case no 2 :(A) Left breast MLO mammogram without contrast demonstrating heterogeneously dense fibroglandular parenchyma with no discrete mass, suspicious microcalcifications or architectural distortion identified, pectoral muscle adequately visualized, skin and nipple unremarkable, in keeping with dense breast parenchyma (ACR Category C) limiting mammographic sensitivity for underlying lesion detection.

(B) Shows left breast ultrasound without contrast demonstrating a small well-defined oval anechoic/hypoechoic lesion with smooth circumscribed margins and posterior acoustic enhancement within echogenic dense fibroglandular parenchyma, no internal vascularity or suspicious features identified, in keeping with a benign small cyst or fibroadenoma (BIRADS 3).

Fig.(A)

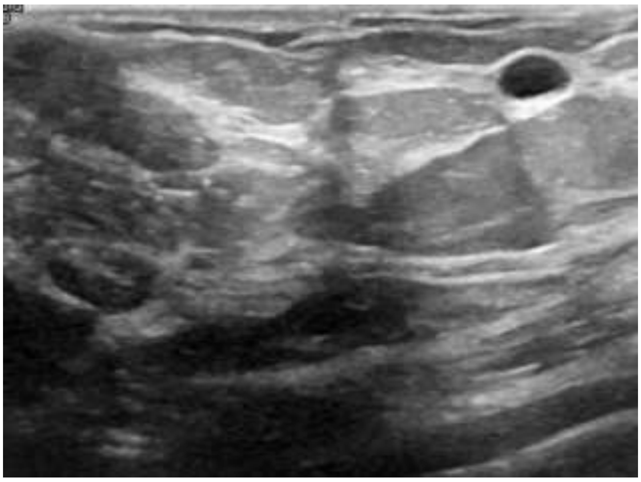
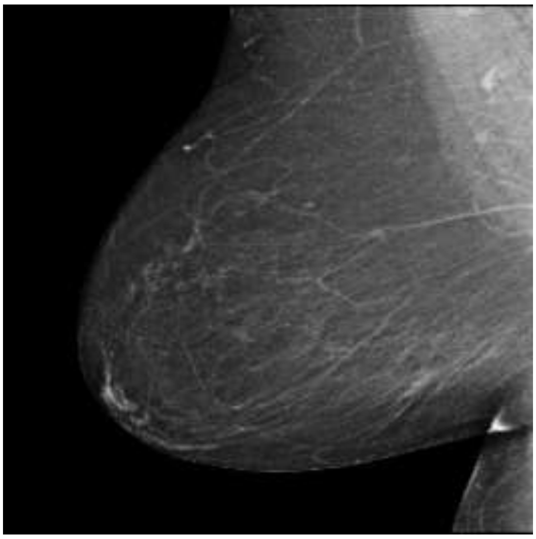


Fig.(B)

Case no 3 :(A) Breast mammogram without contrast demonstrating extremely dense fibroglandular parenchyma with prominent trabecular markings and diffuse parenchymal opacification, no discrete mass or suspicious microcalcifications identified, skin and nipple unremarkable, in keeping with extremely dense breast (ACR Category D) with significantly reduced mammographic sensitivity.

(B) Breast ultrasound without contrast demonstrating a small well-defined round anechoic lesion with smooth circumscribed margins and posterior acoustic enhancement within heterogeneous dense fibroglandular background, surrounding parenchyma shows echogenic fibrous stroma, no internal vascularity or suspicious solid components identified, in keeping with a simple benign cyst within dense breast tissue (BIRADS 2).



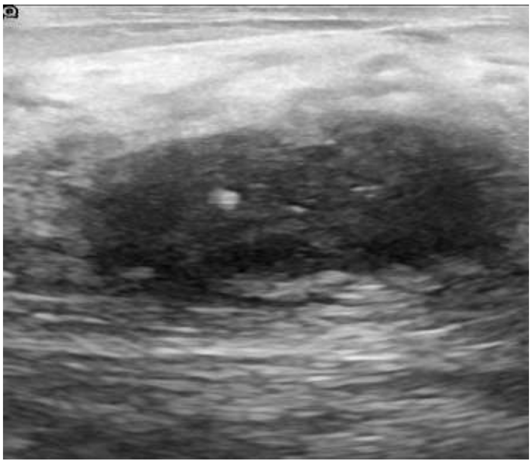
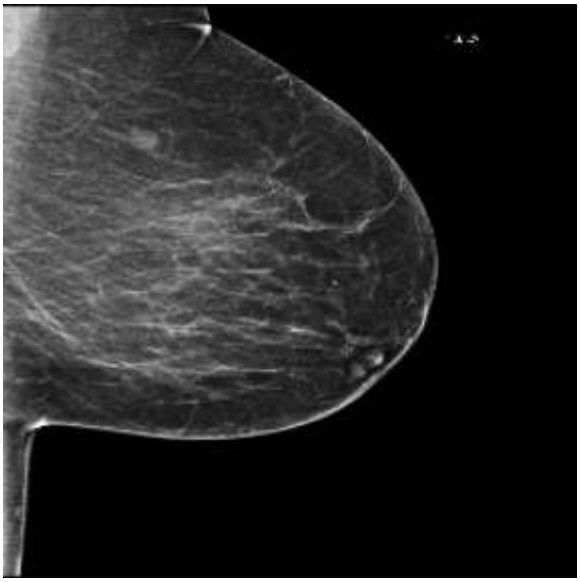


Fig.(B)

Case No. :04 (A) Breast mammogram without contrast demonstrating extremely dense fibroglandular parenchyma with prominent trabecular markings and diffuse parenchymal opacification, no discrete mass or suspicious microcalcifications identified, skin and nipple unremarkable, in keeping with extremely dense breast (ACR Category D) with significantly reduced mammographic sensitivity.

(B) Breast ultrasound without contrast demonstrating a small well-defined round anechoic lesion with smooth circumscribed margins and posterior acoustic enhancement within heterogeneous dense fibroglandular background, surrounding parenchyma shows echogenic fibrous stroma, no internal vascularity or suspicious solid components identified, in keeping with a simple benign cyst within dense breast tissue (BIRADS 2).



Case No. :05 (A) Breast mammogram without contrast demonstrating heterogeneously dense fibroglandular parenchyma with diffuse trabecular markings and parenchymal opacification, no discrete mass, architectural distortion or suspicious microcalcifications identified, skin and nipple unremarkable, in keeping with dense breast (ACR Category C) with reduced mammographic sensitivity.
(B) Breast ultrasound without contrast demonstrating a large well-defined oval hypoechoic mass with smooth lobulated margins, mixed internal echotexture with scattered echogenic foci suggesting calcific deposits, posterior acoustic enhancement noted, no irregular margins or suspicious vascularity identified, in keeping with a benign solid breast lesion with calcifications most consistent with fibroadenoma (BIRADS 3).