

Are You Dense? Handy Patient Guide to Screening Options for Dense Breasts★

The purpose of breast screening is to find cancer **EARLY** when there are better survival outcomes & more treatment options

SCREENING TEST	Approximate CANCER Detection Rate per 1000 Screenings	BENEFITS	POTENTIAL HARMS	OTHER CONSIDERATIONS
2D Mammography	3-5	15 to 40% reduction in deaths (Randomized Controlled Trials)	Radiation, False Negatives-Cancer masked by dense tissue Under diagnosis	Standard for Front-line Breast Cancer Screening Readily available Potential for over diagnosis
3D Mammography/Tomosynthesis	4-7 (2D+3D)	15 to 40% reduction in deaths (Randomized Controlled Trials) Less callbacks	Radiation, False Negatives-Cancer masked by dense tissue Under diagnosis	Becoming Standard of Care Current Breast Cancer Screening Trial 2D vs 3D (TMIST)
Contrast Enhanced Spectral Mammography (CESM)	Detects more cancer than mammography Similar detection as MRI (see below)	Less expensive & shorter exam than MRI w/similar yield	Injection - Iodine contrast	Mostly used when mammography is inconclusive
Hand-Held Ultrasound	3-7 (as secondary screen after 'normal' mammo in women w/ dense breasts)	No Ionizing Radiation No Compression Readily Available	False Positives – Biopsies that end up being negative for cancer	Operator Dependent/Practice & Training Reduces False Positives/ Insurance coverage varies depending on coding/state law/ patient plan
Automated Ultrasound	2-4 (as secondary screen after 'normal' mammo in women w/ dense breasts)	No Ionizing Radiation/No Compression/Designed to reduce operator dependence	Mixed findings on reducing False Positives	Not readily available/Patient may be recalled for second look/ Insurance coverage varies depending on coding/state law/ patient plan
Magnetic Resonance Imaging (MRI)	11 (average-risk) to 18+ (high risk)	High Sensitivity in seeing cancer	Gadolinium Contrast Injection Potential for false positives	Mostly Reserved for high risk & women w/genetic mutations/ Confined space & patient size may lead to non-compliance/ Costly
Abbreviated/Fast MRI	15-18	High Sensitivity in Seeing Cancer/Shorter exam time & reading time than traditional MRI w/similar results	Gadolinium Contrast Injection Potential for false positives	Not readily available Multi-Center Trial for women with dense breast tissue ECOG/ACRIN EA1141
Molecular Breast Imaging	8-9	Sensitive to finding cancer in dense breasts Less false positives	Radioactive Tracer Injection/Whole body radiation	Not readily available/Fasting before study/Ask about dose as radiation dose varies

★ References - Guide will be updated as new studies are published

2D Mammography

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