### 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.

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

*Use this Guide in Discussions w/Health-Care Providers about Your Personalized Screening*  

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3D/Mammography

Contrast Enhanced Spectral Mammography


Hand-held Ultrasound

Automated Ultrasound

Magnetic Resonance Imaging (MRI)

Abbreviated/Fast MRI

Molecular Breast Imaging

Dense Breast Tissue

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