#### Mammography Screening Cascade



For every 1,000 women screened,

100 will be called back for additional tests

For every 100 women who return for more tests, 20 will progress to biopsy

For every 20 biopsies performed, 4 breast cancers will be found

For every 1,000 women screened, 1 breast cancer will be missed and will continue to grow until detected on a subsequent screening exam (Ref: *Radiology*, May 2005)

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## Why Breast Tomosynthesis?

- Tissue superimposition hides pathologies in 2D
- Tissue superimposition mimics pathologies in 2D





### Lesion Superimposed in 2D

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### Breast Tomosynthesis Improves Visibility by Reducing Tissue Superimposition



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# Breast Tomosynthesis: Principle of Operation

- X-ray tube moves in an arc across the breast
- A series of low dose images are acquired from different angles
- Total dose approximately the same as one 2D mammogram
- Projection images are reconstructed into 1 mm slices

X-ray tube arc of motion

Reconstructed Slices

Compression
Paddle
Compressed
Breast
Detector Housing

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