



## Testing and Early Diagnosis

### Types of Imaging Tests for Breast Cancer

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**Maria** You just highlighted the importance of getting screening imaging for breast cancer. Could you talk more about the different imaging tests that are available to women for the detection of breast cancer?

**Dr. Medhavi** So, overall I would say there are three imaging modalities that are commonly used for breast cancer. One is mammograms, and the other ones are ultrasounds and MRIs. So, the most common screening modality that is used to detect breast cancer for screening is by far the mammograms. So mammograms are nothing but low-dose x-rays that are used to look for abnormalities in breast cancer. So basically, the mammogram machine has two plates that compresses the breast tissue so that the tissue is spread apart and we can look at the abnormalities. The traditional mammograms used to be 2-D films, nowadays we do have 3-D mammograms that are called digital tomosynthesis; and they're becoming quite popular due to a number of reasons. Studies have shown that 3-D mammograms, when we compare them with 2-D mammograms, they may be more helpful in women who may have dense breasts, they are more likely to find cancer, and they have less probabilities of finding false positives abnormalities. So, breast ultrasounds is another imaging modality that can be used; even though I must say it is not used commonly for screening purposes. Ultrasounds do not use any radiation. They use a probe and sounds waves to generate images of the breast tissue. Usually, breast ultrasounds are used when we see an abnormality on the mammogram, and we want to look at that area in more detail. They may also be used to do biopsies of suspicious areas. For screening purposes, they can really be used when women have dense breasts. So the third modality are breast MRIs. So, MRIs use strong magnets instead of radiation in order to generate images of the breast tissue. Patients do need to get a dye before getting the imaging. Breast MRIs can be used for screening, as I said earlier, for high-risk women. Otherwise they are more commonly used once we see an area of abnormality either on the mammogram or the ultrasound, and we want to look at the suspicious are in more detail. And they could also be used to do biopsies for the suspicious areas.