Tomosynthesis - Mammography of the Future?

The National Comprehensive Cancer Network (NCCN) recommends considering tomosynthesis as part of annual breast cancer screening in both average and increased risk women.

The newly updated NCCN guidelines recommend the use of tomosynthesis as an adjunct to digital mammography. This is based on results from multiple studies that show the combined use of mammography and tomosynthesis improves cancer detection and decreases call back rates. Most of these studies use double the dose of radiation but this can be minimized by synthetic 2-D reconstruction.

According to Debra Monticciolo, MD, a spokesperson for the American College of Radiology, tomosynthesis is the mammography of the future. She explains that conventional digital mammography produces one image of overlapping tissue while tomosynthesis provides multiple small pictures of breast tissue. The difference between the images of the two is akin to a 3 dimensional ball vs. a flat circle.

She also points out that both mammography and tomosynthesis are digital based technologies and approximately 25 to 50 percent of US mammography facilities have tomosynthesis units. With these updated guidelines, the use of tomosynthesis may increase.

"We don't have mortality reduction studies with tomo — that would take years and years. However, studies of tomosynthesis "consistently" show an increase in the breast cancer detection rate," she said. "We have found a 40% to 66% increase in detection of invasive cancers."

Source: NCCN
Image Credit: Vimeo

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