Prior Mammography and Tomosynthesis Operate Independently to Reduce Recalls

Patients' prior full-field digital breast mammography (FFDM) and current digital breast tomosynthesis (DBT) images are largely independent contributing factors for lower mammography recall rates in noncancer cases, according to a study published online in the journal Radiology. The researchers asked eight radiologists to independently interpret anonymous mammograms from 153 female patients who were 54 years old, on average. Current and prior FFDM and DBT images obtained in the researchers' facility between June 2009 and January 2013 were used for the studies, which included 50 confirmed cancer cases, 60 negative and benign cases that were not recalled, and 43 benign cases that met recall criteria. Sequential readings included a sequence in which current and prior FFDM images were used with and without DBT images, and one where current mammography images and DBT were used with and without prior FFDM images. The researchers observed average recall rates in noncancer cases were significantly lowered with the addition of prior FFDM images by 34 percent and 32 percent without and with DBT images, respectively. Meanwhile, DBT images led to a smaller reduction in recall rates of 19 percent and 26 percent without and with prior FFDM images, respectively. Utilizing FFDM images without and with DBT images yielded lower sensitivity of 7 percent and 4 percent, while using DBT without and with FFDM images boosted sensitivity by 4 percent and 8 percent.