Oslo Tomosynthesis Trial Kicks Off

Digital breast tomosynthesis (DBT) is a promising new technology that acquires 3-dimensional images of the breast. The individual images are presented as thin high-resolution slices that can be displayed individually or in a dynamic cine mode. Preliminary studies in a clinical setting have demonstrated that this new technology has the potential to improve not only the detection of breast cancers (increased sensitivity) but also to reduce the number of false positives (i.e., increase the specificity).

Many experts consider that the greatest benefit of this new technology would be in breast cancer screening. After initial experimental clinical study carried out in the Oslo University Hospital Ullevaal March-May 2010, the Oslo tomosynthesis screening trial is scheduled to start about the mid of October 2010.

The Oslo tomosynthesis screening trial will include women aged 50 to 69 years invited to the population-based mammography-screening program in Oslo. All women attending the screening unit in downtown Oslo will be asked if they want to attend the program. If so, they will be informed about the project, the technique, and the additional compression and radiation dose. All mammographic examinations of women attending the trial will be independently interpreted by the 8 radiologists taking part in the study. Since the project is part of the official Norwegian Breast Cancer Screening Program (NBCSP), the interpretations will be carried out on-line into the national database of the NBCSP. In the study arms independent reading will include traditional (conventional) digital 2D mammograms only, 2D plus DBT, and synthetic 2D plus DBT. There will be a common consensus meeting for all examinations having a positive score in at least one of the study arms. Recalls and diagnostic work-up will be according to daily practice at the Oslo University Hospital Ullevaal and the guidelines of the NBCSP.

Outcome measures will include the performance indicators for organized screening programs including recall rate, false positive scores, cancer detection rate, positive predictive values, and cancer characteristics for the individual readers and the study arms of the project.

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