

Title	Digital Breast Tomosynthesis
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Aim

This information brief is in response to a request from the Direction québécoise de cancérologie concerning the possible use of digital breast tomosynthesis (DBT) in the Quebec Breast Cancer Screening Program (PQDCS).

Conclusions and results

The examination of the selected studies suggests that the use of DBT would lead to a decrease in unnecessary recalls (false positives) and an increase in the cancer detection rate (true positives). Its diagnostic use in asymptomatic participants recalled after screening, in symptomatic patients or in high-risk patients seems promising. Although the data stem from studies involving tens of thousands of women, confirmation regarding a number of parameters must await additional evidence. Within the next year or two, large population-based trials should provide answers to the questions concerning screening and diagnosis.

Since the number of relevant publications will likely reflect the current-increasing pace of DBT use, it does not seem premature to start planning practice harmonization and standardization scenarios, including the related costs, for a possible integration of DBT into structured breast cancer screening programs.

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Methods

A multiple bibliographic database search of the scientific literature published between January 1, 2008 and October 8, 2013 identified 213 relevant publications, and a search of the grey literature, which included assessments by public and private organizations, identified 25 publications. Applying the study selection criteria yielded 22 publications. Throughout the writing of this information brief, publications that appeared before or after the search period were considered as well.

The maturity of the available evidence was examined from the standing point of a possible integration of DBT into a structured screening program. With this in mind, studies conducted on in-development or research prototypes of DBT scanners and aimed at a preliminary validation of sensitivity or specificity parameters were not considered. Preference was given to population-based studies in which the participants were asymptomatic or recalled for diagnostic purposes. Studies on reader performance were also considered.

Written by

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