The psychosocial consequences of mammography

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Authors' objectives
To determine the impact of false positive mammograms and the broader psychological impact of mammography. This review focuses on the psychosocial consequences of abnormal mammograms. Some consideration of the more general mammography experience is presented in order to place reactions to abnormal mammograms in context. Where published, reports about interventions to help women cope with the abnormal mammography experience are also included. The larger issue of compliance with recommended follow-up for abnormal mammograms is beyond the scope of this report.

Searching
Three separate searches of MEDLINE, CancerLit, and PsycINFO were performed and investigators who were conducting research in this area were contacted, without result.

Study selection
Study designs of evaluations included in the review
Most studies were cohort studies. Only articles that provided data and were not exclusively case reports, single group analyses, or explanatory studies were included. Because of the relatively undeveloped nature of the field, non-experimental studies and cross-sectional surveys were included. However, anecdotal and case reports were excluded.

Specific interventions included in the review
Mammography.

Reference standard test against which the new test was compared
The review did not include any diagnostic accuracy studies that compared the performance of the index test with a reference standard of diagnosis.

Participants included in the review
6062 Women were included in studies on psychological responses to abnormal mammograms and 4247 women were included in general studies on psychological aspects of the mammography experience.

Outcomes assessed in the review
Psychological aspects (mood, stress, anxiety, depression, somatic arousal, worry about illness, concern about pain, and fear of dying), frequency of breast self-exam, quality of life, painfulness and unpleasantness of mammography, pain and discomfort.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection.

Assessment of study quality
The authors do not state that they assessed quality.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.
Methods of synthesis

How were the studies combined?
Studies were combined in a narrative way.

How were differences between studies investigated?
The authors do not state how differences between the studies were investigated.

Results of the review

Nine studies were included on psychological responses to abnormal mammograms and four on general studies on psychological aspects of the mammography experience.

Most of the nine studies on psychological responses to abnormal mammograms found short-term increases in such psychological measures as anxiety, distress, and intrusive thoughts. One study found substantial effects on these measures three months after an abnormal mammogram. Another study found an 18-month impact on anxiety. Few studies have used behavioural outcomes, but one reported over-practice of breast self-exam among women who had received false positive results. Another found no reduction in adherence to mammography among women who have had an abnormal test. The more general mammography literature suggests that many women are anxious about mammography before the exam; women with lower levels of education, African Americans, and women with a family history of breast cancer may be more vulnerable to distress.

Authors' conclusions

It is difficult to reach clear conclusions about the impact of mammography or abnormal mammograms on such outcomes as anxiety, distress, or adherence to recommended breast screening. Among some women, there does seem to be short-term distress, and at least one study shows that the level of distress is related to the index of mammogram suspicion. The effects are relatively modest but not insignificant, with most studies indicating a significant increase in anxiety among women with abnormal results. To date, there is no evidence of a negative impact on subsequent mammography adherence, but only one study included this as a major outcome.

CRD commentary

The search was accurate and complete, [AC: according to the author reference lists of included studies were checked ] although it was not clear which years the literature search had covered. Inclusion criteria are not specified. The quality of included studies was not assessed and it was not reported how data was extracted from primary studies, this may have biased the results. However, the discussion of the results seems appropriate.

Implications of the review for practice and research

The authors stated that more research is needed to characterise at-risk women and to test interventions designed to reduce the negative impact of abnormal mammograms. Improved communication is also needed throughout the entire mammography process.

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