

## Harms of mammography use in women over 70 years of age

Jacqueline Hirth, Shilpa Krishnan, Alai Tan, Monique Pappadis, Margaret Foster, Jeanne-Marie Guise, Linda Humphrey

### Citation

Jacqueline Hirth, Shilpa Krishnan, Alai Tan, Monique Pappadis, Margaret Foster, Jeanne-Marie Guise, Linda Humphrey. Harms of mammography use in women over 70 years of age. PROSPERO 2016 CRD42016046240 Available from:  
[http://www.crd.york.ac.uk/PROSPERO/display\\_record.php?ID=CRD42016046240](http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016046240)

### Review question

The objective of this review is to examine the harms using a taxonomy approach for women over 70 years of age.

### Searches

A comprehensive search, using a combination of free text words and subject headings will be run in three databases: MEDLINE (Ovid), EMBASE (Ovid), and PsycINFO (Ebsco). The search strategy was developed by a medical librarian experienced in conducting systematic reviews. The search will combine 3 concepts: mammography, aged/elderly, and harms. The harms searched include overall terms for harms (harm or discomfort or pain) in addition to specific issues (depression, anxiety, distress) and issues of faulty screening (false positive, false negative, overdiagnosis, or overtreatment). There was no restriction on study design or language. Publication year was limited from 2001 to February 11, 2015. We will search for published and unpublished studies, contact experts, and conduct forward and backward citation searching of included studies with Scopus.

### Types of study to be included

There are no restrictions on the types of study designs that are eligible for inclusion, with the exception of review and systematic review papers. However, we did search the references from all of these studies to make sure that we captured all relevant individual studies. Meta-analyses were eligible for inclusion, however.

### Condition or domain being studied

Breast cancer prevention

### Participants/population

- Study needs to be an original study.
- For qualitative studies: sample of 70+ year olds needs to be greater than 5.
- For quantitative studies: sample needs to be greater than 100.
- Study must include some participants who are at average risk (relative to the population of interest) of breast cancer at screening.
- Mammography screening must be included as an independent variable.
- Baseline mammography screening data must be 2000 or later.
- Study must occur in countries with modern screening capabilities and risk relative to US. Countries included were: UK, Finland, Denmark, Norway, Sweden, Ireland, Australia, Switzerland, Netherlands, United States, Germany, New Zealand, Canada, Liechtenstein, France, Austria, Belgium, or Luxembourg.
- Study must address at least one harm of mammography screening
- All members of sample must be 65+ years old, or results need to be broken down by age and include an age group of 65+ years or older
- Sample must include women who are 70+ years of age.

### Intervention(s), exposure(s)

## PROSPERO

### International prospective register of systematic reviews

The exposure is population-level mammography screening among women 70+ years of age. Studies that only include women who are at higher risk compared to the general population were not included. For example, samples of women who had a personal or family history of breast cancer would not be included unless there was a comparative sample of women from the general population. Screening data must have included information from 2000 or later, as this was the beginning of modern screening technologies.

### Comparator(s)/control

Any manuscript from a peer-reviewed journal which described at least one harm from breast cancer screening as an outcome was included. The manuscript must have conducted analyses so that results for women who were 65+ could be determined separately from other age groups.

### Context

Studies that occurred in countries with organized screening programs, and with prevalence of breast cancer similar to that of the US.

### Primary outcome(s)

Harms of mammography screening, including: cost, psychological harms, overdiagnosis, false positives, false negatives, pain, overtreatment, reduced follow-up.

### Secondary outcome(s)

None

### Data extraction (selection and coding)

Abstracts that were reviewed were selected for full-text review by examining the content of the abstract to find out whether it met the inclusion and exclusion criteria for the review. Abstracts that met, as well as those that did not have enough information to determine whether they met criteria, were reviewed as full-text articles. Full-text articles were included in Covidence, where they were assessed separately by 2 different reviewers (JMH, SK). Any disagreements were determined by a 3rd reviewer (AT). Data was extracted from the 1st 10 articles as a group process to set standards for extraction, with all authors providing input. Remaining articles had the data extracted by one author (either JMH or SK) and then the information was verified by the other author. All questions about what data to extract, or whether a full-text met criteria after the full-text review was complete was addressed to all authors during phone meetings that occurred 2 times each month after all relevant materials were shared via e-mail. All results that include older adults over 70 years of age will be extracted if the outcome includes a harm of mammography screening.

### Risk of bias (quality) assessment

Risk of bias will not be assessed for this systematic review. Most of the studies that will be used for this review are observational studies, and many are population-level research. We do not plan to exclude any studies based on quality.

### Strategy for data synthesis

Data to be used will be aggregate, with a mostly narrative synthesis to be conducted.

### Analysis of subgroups or subsets

none planned.

### Contact details for further information

Dr Hirth  
jmhirth@utmb.edu

### Organisational affiliation of the review

University of Texas Medical Branch  
[www.utmb.edu](http://www.utmb.edu)

### Review team members and their organisational affiliations

**PROSPERO**  
**International prospective register of systematic reviews**

Dr Jacqueline Hirth. University of Texas Medical Branch  
Dr Shilpa Krishnan. University of Texas Medical Branch  
Dr Alai Tan. Ohio State University  
Dr Monique Pappadis. University of Texas Medical Branch  
Ms Margaret Foster. Texas A & M  
Dr Jeanne-Marie Guise. Oregon Health & Science University  
Dr Linda Humphrey. Oregon Health & Science University

**Anticipated or actual start date**

01 January 2016

**Anticipated completion date**

01 January 2017

**Funding sources/sponsors**

NIH Patient Centered Outcomes Research in the Elderly R24-HS022134

**Conflicts of interest**

None known

**Language**

English

**Country**

United States of America

**Stage of review**

Review\_Ongoing

**Subject index terms status**

Subject indexing assigned by CRD

**Subject index terms**

Early Detection of Cancer; Female; Humans; Mammography

**Date of registration in PROSPERO**

30 September 2016

**Date of publication of this version**

30 September 2016

**Revision note for this version**

Changes were requested by Lesley Indge, a PROSPERO Administrator. We made requested changes to Field #16. Thank you! Jacqueline Hirth

**Details of any existing review of the same topic by the same authors****Stage of review at time of this submission**

<b>Stage</b>	<b>Started</b>	<b>Completed</b>
Preliminary searches	No	Yes
Piloting of the study selection process	No	Yes
Formal screening of search results against eligibility criteria	Yes	No
Data extraction	Yes	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

### Revision note

Changes were requested by Lesley Indge, a PROSPERO Administrator. We made requested changes to Field #16. Thank you! Jacqueline Hirth

### Versions

30 September 2016

---

#### PROSPERO

This information has been provided by the named contact for this review. CRD has accepted this information in good faith and registered the review in PROSPERO. CRD bears no responsibility or liability for the content of this registration record, any associated files or external websites.