INTRODUCTION

- Breast cancer is a major public health problem affecting millions of women in developed countries.
- Various randomized controlled trials (RCTs) showed that mammographic screening substantially reduced breast cancer mortality.
- Developed countries in Europe, North America, Australia, Japan, and others have initiated early detection programs for breast cancer that use mammography as the screening test.
- In most low- and middle-income countries (LMIC) breast cancer incidence is lower than that in high-income countries.
- However, the absolute number of deaths attributable to breast cancer in these countries is almost two times the number in high-income countries.
- Data is inadequate regarding the clinical and cost-effectiveness of breast cancer screening using mammography in India.

OBJECTIVES

- To assess the clinical and cost-effectiveness of mammography for breast cancer screening in India.

MATERIALS AND METHODS

- A systematic literature search was conducted in Cochrane library, MEDLINE, PUBMED Science Direct, EMBASE, SCOPUS and Google Scholar for relevant studies.
- We identified 31 studies and literature filter started by scanning titles, abstracts, and the content of the articles according to Inclusion criteria. Finally 12 studies were included in quantitative synthesis (Meta-analysis).
- We estimated risk of bias using Cochrane collaborating guidelines.
- Review Manager 5.2 was used to do the data analysis.
- PICO:
  - Population: Females above 30 years of age.
  - Intervention: Mammography
  - Comparator: No Screening
  - Primary Outcome: Mortality
  - Secondary Outcome: Detection of Breast Cancer

RESULTS

- Total records identified through database searching N=100
- Records after duplicates removed N=31
- Articles assessed for full-text eligibility N=17
- Articles included for final review N=12
- Records excluded after abstract screening N=14
- Full Text Articles excluded: N=5
  - Studies with incomplete data, N=2
  - Studies with irrelevant outcomes, N=2
  - Study regarding safety and not on effectiveness, N=1

Risk of Bias Analysis

- Overall the studies show a low risk of any form of bias
- The findings of respective studies are of high scientific validity and credibility

Mammography for Breast Cancer Screening in India -
A Health Technology Assessment

Kautila Kachroo1, Atendar Sharma2, Akriti Chahar3, Kiranmai Ganji4, Amit Dang2
1WHO Collaborating Centre for Priority Medical Devices & Health Technology Policy, NHSRC, India 2MarksMan Healthcare Solutions LLP (HEOR and RWE Consulting), Navi Mumbai, India

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DISCUSSIONS

- In most of India, breast cancer has become the second most common cancer among women, after cervical cancer.
- Majority of women with breast cancer in India are premenopausal; factors contributing include:
  - Young age of the population
  - Relatively lower life expectancy (about 62 years)
  - Age at which incidence peaks (around 45 years)
- Further, over 70% of patients are diagnosed with clinically advanced disease, with either locally advanced breast cancer or higher stage.
- The advantage of screening an asymptomatic population of women is the benefit of identifying pre-clinical disease with sufficient lead time to potentially alter the natural and more adverse course of breast cancer.
- Unlike other cancers, breast cancer is treatable if detected at an early stage.
- However, there is a need for systematically implement breast cancer screening, education and intervention strategies.

CONCLUSIONS

- Annual screening of female population above 30 years of age could reduce breast cancer associated mortality by 24% mainly due to early detection of breast cancer.
- Annual mammographic screening is a cost-effective strategy associated with an excellent social return on investment on this technology.

REFERENCES