



Cost-effectiveness of digital mammography compared to film mammography in screening of breast cancer: a systematic review

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Abstract

Mammography because the best method of diagnosing carcinoma in its early stages has been accepted in many countries. Digital mammography is in development and is employed in carcinoma screening in countries like the us, however, cost-effectiveness of digital mammography screening (DMS) compared to film mammography screening (FMS) is debatable. This study is meant to systematically review the available evidence during this regard.

Methods: This study is meant as a scientific review using PRISMA guidelines. The search was conducted on October 2019 on the PubMed, Web of Science core collection, Embase, Scopus, Cochrane library and ProQuest databases. All full economic evaluation studies (cost-effectiveness analysis (CEA), cost-utility analysis (CUA), and analysis (CBA)) that assessed DMS compared to FMS are included. the standard of ultimate articles was evaluated by CHEERS checklist and data was collected employing a data extraction form. Finally, the info was analysed by a meta-synthesis method.

Results: Five studies were included. Three of them were conducted within the U.S., one within the Australia, and one the Brazil. Studies show that despite the slight difference within the effectiveness of DMS, its costs increased more. Three studies concluded that age-targeted DMS and FMS could be cost-effective and two concluded biennial DMS could be cost-effective digital strategy, however one study concluded that biennial FMS remains cost-effective.

Conclusion: there's currently little evidence on the cost-effectiveness of DMS over FMS and more evidence is required, especially in developing countries. While the cost-effectiveness of DMS has not been fully confirmed, manufacturers are developing digital mammography and film mammography are getting obsolete. Therefore, the move towards digital mammography, especially in developing countries, should be gradual and targeted.

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