

Health Quality Ontario

The provincial advisor on the quality of health care in Ontario

Magnetic Resonance Imaging as an Adjunct to Mammography for Breast Cancer Screening in Women at Less Than High Risk for Breast Cancer: OHTAC Recommendation

ONTARIO HEALTH TECHNOLOGY ADVISORY COMMITTEE RECOMMENDATION

- The Ontario Health Technology Advisory Committee (OHTAC) recommends against publicly funding screening breast magnetic resonance imaging (MRI) as an adjunct to screening mammography for women who are at less than high risk for breast cancer and who have no personal history of breast cancer

RATIONALE FOR THE RECOMMENDATION

Given the absence of evidence of benefit¹ and given the concerns associated with false-positives and overdiagnosis, as well as the cost of magnetic resonance imaging, there was consensus among OHTAC members that screening breast MRI should not be publicly funded as an adjunct to screening mammography for women at less than high risk for breast cancer.

Public Comment: Held August 23 to September 13, 2016

Let's make our health system healthier

Decision Determinants for Magnetic Resonance Imaging as an Adjunct to Mammography for Breast Cancer Screening Among Women at Less Than High Risk for Breast Cancer

Decision Criteria	Subcriteria	Decision Determinants Considerations
Overall clinical benefit How likely is the health technology/intervention to result in high, moderate, or low overall benefit?	Effectiveness How effective is the health technology/intervention likely to be (taking into account any variability)?	No comparative studies evaluating the effectiveness or diagnostic accuracy of MRI as an adjunct to mammography for breast cancer screening in comparison to mammography screening alone among women at less than high risk for developing breast cancer were identified.
	Safety How safe is the health technology/intervention likely to be?	MRI screening is a safe procedure that does not emit radiation. Downstream harms associated with false-positive tests may include unnecessary diagnostic testing, biopsy, and treatment. It is unknown if adjunct screening with MRI among women at less than high risk may result in overdiagnosis or overtreatment of breast cancer.
	Burden of illness What is the likely size of the burden of illness pertaining to this health technology/intervention?	An estimated 1 in 9 Canadian women will develop breast cancer in their lifetime. In Ontario, approximately 9,500 women are diagnosed with and 1,950 die from the disease annually. In Ontario, women are primarily classified as being at less than high risk (average risk or higher than average risk) for breast cancer if they have no major risk factors for the disease, no genetic mutations or a lifetime risk of less than 25% based on genetic and family history models.
	Need How large is the need for this health technology/intervention?	Women at average risk for developing breast cancer currently receive mammography screening every two years. Women at higher than average risk but below high risk, receive screening mammography annually. Between 2013 and 2014, approximately 1.3 million women in Ontario aged 50 to 74 years were screened with mammography. This represents 65% of all women who were eligible for screening. Screening mammography is not perfect, and sometimes women may have their cancers missed (undetected).
Consistency with expected societal and ethical values^a How likely is adoption of the health technology/intervention to be congruent with societal and ethical values?	Societal values How likely is the adoption of the health technology/intervention to be congruent with expected societal values?	Prior research, which did not focus on the use of MRI or specific risk factors, found that the experience of a false-positive test causes immediate and recurring anxiety for women, particularly for those at high risk for breast cancer. ² Despite this anxiety, women are generally supportive of screening practices for breast cancer.
	Ethical values How likely is the adoption of the health technology/intervention to be congruent with expected ethical values?	
Value for money How efficient is the health technology/intervention likely to be?	Economic evaluation How efficient is the health technology/intervention likely to be?	We did not do an economic evaluation for this intervention as no eligible studies were identified. The individual cost for a unilateral (one side) or bilateral (both sides) breast screening MRI in the Ontario Schedule of Benefits for Physician Services is \$73.35.

Decision Criteria	Subcriteria	Decision Determinants Considerations
Feasibility of adoption into health system How feasible is it to adopt the health technology/intervention into the Ontario health care system?	Economic feasibility How economically feasible is the health technology/intervention? Organizational feasibility How organizationally feasible is it to implement the health technology/intervention?	We did not conduct a budget impact analysis as no eligible studies were identified. Ontario currently does not publicly fund screening breast MRI for women at average risk for breast cancer. Ontario publicly funds screening breast MRI for women at high risk for breast cancer.

Abbreviation: MRI, magnetic resonance imaging.

^aThe anticipated or assumed common ethical and societal values held in regard to the target condition, target population, and/or treatment options. Unless there is evidence from scientific sources to corroborate the true nature of the ethical and societal values, the expected values are considered.

REFERENCES

- (1) Health Quality Ontario. Magnetic resonance imaging as an adjunct to mammography for breast cancer screening in women at less than high risk for breast cancer: a health technology assessment. Ont Health Technol Assess Ser [Internet]. 2016 November;16(20):1-30. Available from: <http://www.hqontario.ca/evidence-to-improve-care/journal-ontario-health-technology-assessment-series>
- (2) Health Quality Ontario. Women's experiences of inaccurate breast cancer screening results: a systematic review and qualitative meta-synthesis. Ont Health Technol Assess Ser [Internet]. 2016 July;16(16):1-22. Available from: <http://www.hqontario.ca/evidence-to-improve-care/journal-ontariohealth-technology-assessment-series>

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Citation

Health Quality Ontario. Magnetic resonance imaging as an adjunct to mammography for breast cancer screening in women at less than high risk for breast cancer: OHTAC recommendation [Internet]. Toronto (ON): Queen's Printer for Ontario; 2016 November; 4 pp. Available from: <http://www.hqontario.ca/evidence-to-improve-care/recommendations-and-reports/OHTAC/screening-breast-mri>