

Article details: 2017-0106	
Title	Cost-effectiveness of mammography policies from a publicly-funded health system perspective
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Reviewer 1	Christopher Longo
Institution	School of Business, McMaster University, Hamilton, Ont.
General comments (author response in bold)	<p>I take some exception to your interpretation of the results. I think Table 6 is the most relevant for policy makers as they consider moving from triennial to biennial to annual and here the attractiveness of annual is much less attractive (assuming historical \$50K/QALY threshold). I also note your reference to a US \$300K threshold, but would suggest, at least in a Canadian context, this is not an appropriate barometer for the cost-effectiveness threshold. In fact recent work by Claxton and later by Paulden suggest that perhaps this threshold should drop below \$50K/QALY. I would encourage the authors to consider adding some dialogue in the interpretation that as jurisdictions are considering the implementation of a screening program they look incrementally and compare triennial, biennial and annual in sequence. In my opinion this would clearly land them on biennial (the common strategy in developed countries).</p> <p>We agree with the reviewer and have modified the statement to reflect other thresholds: "All ratios comparing active scenarios to No Screening generally fell below or close to commonly accepted and proposed threshold and Included the references suggested.</p> <p>Pg. 9 of 55, line 46 I would consider including an explanation of how assuming a screening rate of less than 100% might affect your results (if at all). Either in the intro or the interpretation.</p> <p>We did assume a screening rate less than 100% in the one-way sensitivity analyses. Here we looked at costs and outcomes if women were screened half of the time.</p> <p>Pg. 10 of 55, line 15 I would suggest you provide justification for using a US reference case for utilities. Are there no Canadian references easily available?</p> <p>We agree there are Canadian references for utility in breast cancer. However, upon review we did not find any references for utilities or disutilities that could easily be used as exact inputs into the model because of difference in stage and time horizon. As such, to maintain the integrity of the model, we adopted the US utilities. We added the sensitivity analysis to incorporate any changes to utility values +/- 25% which would incorporate any Canadian values.</p> <p>Pg. 19 of 55, line 8 I would consider either deleting this reference or highlighting that in a Canadian setting where public funding predominates this may not be an appropriate threshold.</p> <p>We agree with the reviewer and have modified the statement to reflect other thresholds: "All ratios comparing active scenarios to No Screening generally fell below or close to commonly accepted and proposed thresholds" and Included the appropriate references.</p>
Reviewer 2	Waseem Sharieff
Institution	Faculty of Medicine, Department of Radiation Oncology, Dalhousie University, Halifax, NS
General comments (author response in bold)	<p>Objective. The authors may choose to explicitly state that they wish to compare the strategy for screening 40-74 years old women with 50-69 years old. Currently, there are too many permutations and I am not sure if all of these are relevant to decision makers.</p> <p>As described in the response to the Editor. We wanted to model the outcomes, cost effectiveness and cost-utility for all screening scenarios that are currently being used in Canada and the US as well as those that have been recommended by bodies such as the US Preventive Services Task Force, The Canadian Task Force on Preventive Health Care (CTFPHC), Canadian Partnership Against Cancer (CPAC), The American Cancer Society.</p> <p>The Methods section could be improved by: Description of the study population. Is it an open cohort that runs over a fixed number of years during which women enter and leave on an annual basis? Or is it a closed cohort with a fixed number of women who are followed over lifetime?</p> <p>We have added a description about the CISNET model into the methods section.</p> <p>Description of the simulation model. A brief description of the model (how it was built, validated and modified) would be helpful for the general readers.</p> <p>The CISNET Wisconsin model was used for this work. We have added a description to the methods section. This is a very long description and we are cognizant of space and word limit. We leave the addition of this information to the discretion of the editor.</p> <p>Resource utilization and costing. Costing is presented in aggregate form from cited work in Ontario. It would be helpful to provide the breakdown of cost (cost = unit price x resource utilization). What cost items were included, e.g., mammograms, ultrasounds, biopsies, pathology, surgery, radiotherapy, chemotherapy, hormonal therapy, etc., and what cost items were not included e.g., out of pocket costs. Unit prices vary across provinces and thus, providing a break down would help decision makers in extrapolating results to their own settings.</p> <p>The resources and unit cost as used in the model are provided in the Appendix with references.</p> <p>A list of model assumptions, and subsequent testing in sensitivity analyses.</p> <p>We refer to the response to reviewer 2, comment 3.</p> <p>Addition of best versus worst case scenario analyses and probabilistic analyses.</p> <p>We have conducted one-way sensitivity to test the robustness of the evaluation. This analysis was based on the CISNET model and as such was dependent on their available sensitivity analyses. Probabilistic analyses were not part of the original model.</p> <p>Addition of budget impact analyses. Cost effectiveness analyses are not enough to inform policy decisions.</p> <p>A budget impact analysis is beyond the scope of this analysis.</p> <p>Costs in international dollars (PPV method) would be useful for broad readership. These could be presented alongside Canadian dollars.</p> <p>We have added provided the US\$ conversion for the CAN\$. This should allow for international comparisons.</p>

	<p>The authors may consider concluding the paper with a policy recommendation.</p>
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	<p>We emphasize the following conclusion statement as a policy statement: "The work done here will be helpful in informing the issue regarding the most appropriate screening scenario for a population. We showed that the greatest single cost contributor in a screening program is the screening mammography itself. The more screens that a woman receives in her life, the greater the financial cost to the health care system, but the greater the gain in LYs and QALYs. The decision on how to screen is mainly related to willingness to pay and a decision as to what is an acceptable rate for recalling women for further examinations after positive screens.</p>
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