

# Re: Countercurrents: Is now the right time to pull the plug on mammography?

The Editor  
*Current Oncology*  
22 August 2019

We read with interest the recent commentary by Professor Steven Narod<sup>1</sup> on mammography breast screening. In his article, Narod refers to a paper previously published by us and our colleagues<sup>2</sup> using data from several Canadian breast screening programs and provincial cancer registries. Our analysis found that breast cancer mortality was reduced by an average of 40% among screened women—a finding that Narod attributes to bias. Although any observational study is subject to many potential biases, often more so than trials are, we do not believe that his criticism—that prevalent cancers contribute significantly to breast cancer mortality in the comparison group—is correct.

Our paper used the observed cohorts of screening participants in participating Canadian programs and calculated breast cancer incidence and mortality in those cohorts through linkage with the individual provincial cancer registries. Those calculated results were subsequently compared with synthetic province-specific cohorts of non-participants, constructed using population demographic data and cancer registry data to have the same province, age, and time-at-risk distribution as the screening cohorts. Mortality from breast cancer in the comparison cohorts was based on provincial age-specific breast cancer mortality for women not screened in the respective provincial program by time since cohort entry (analogous to the time of the first screen in the screened cohorts) for women with no record of earlier breast cancer in the relevant registry. Consequently, women with a past diagnosis of breast cancer would not be included in the comparison group if that diagnosis had been added to the provincial cancer registry. Incomplete registration in the provincial cancer registries can result in potential misclassifications, but we do not think that those misclassifications would produce substantial bias, because, throughout the study period, most participating registries met the certification standards of the North American Association of Central Cancer Registries<sup>3</sup>—requirements for which include completeness of registrations. Similarly, interjurisdictional migration of women with a history of breast cancer, who then die

from that cancer, could also result in their inclusion in the unscreened cohort; however, we do not believe that such cases had a major effect on our findings.

In summary, although it is impossible to exclude all potential sources of bias in our observational study, we do not believe that deaths from unrecognized prevalent cancers contributed significantly to our findings of a beneficial effect of mammography screening on breast cancer mortality.

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## CONFLICT OF INTEREST DISCLOSURES

We have read and understood *Current Oncology's* policy on disclosing conflicts of interest, and we declare the following interests: GD and JP hold appointments with breast cancer screening programs in their respective provinces; AC formerly held an appointment with BC Cancer breast screening.

## REFERENCES

1. Narod SA. Countercurrents: Is now the right time to pull the plug on mammography? *Curr Oncol* 2019;26:162–3.
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3. North American Association of Central Cancer Registries (NAACCR). *Standards for Completeness, Quality, Analysis, and Management of Data*. Vol. III. Springfield, IL: NAACCR; 2008. [Available online at: <https://www.naacr.org/standards-for-completeness-quality-analysis-and-management-of-data>; cited 20 August 2019]