CURRENT ONCOLOGY COMMENTARY

Counterpoint re: "Mammography screening—sticking to the science"

S.A. Narod MD*

In the Canadian National Breast Screening Study, the hazard ratio for breast cancer–specific death was 1.47 for women with cancers detected in the prevalence screening round, 0.9 for women with cancers detected in the subsequent four screening rounds, and 1.05 for women with cancers detected in all screening rounds. Dr. Martin Yaffe claims that these figures are compelling evidence of a randomization problem.

The correct interpretation is this: An excess of 142 cancers occurred in the screening arm at the end of screening period, and an excess of 106 cancers were detected at 15 years post-screening. We therefore estimate that 106 of the 142 cancers in the initial excess were attributable to overdiagnosis, and 36 were attributable to early diagnosis. That is, if the controls had undergone screening, 36 more cancers would have been detected in year 1, and 36 fewer cancers would have been detected in years 2–4 (because of early diagnosis). The deaths from those 36 cancers, if any, would be counted among the prevalent screens, thereby increasing the hazard ratio for cancers diagnosed in year 1 and decreasing the hazard ratio for cancers diagnosed in years 2–4. For that reason, the odds ratio for deaths among cases diagnosed during the prevalence screens is expected to be higher than the odds ratio among the incident screens, and the proper interpretation relies on the hazard ratio generated for years 1–5 combined.

I have addressed the other issues previously.

CONFLICT OF INTEREST DISCLOSURES

I have read and understood *Current Oncology*'s policy on disclosing conflicts of interest, and I declare that I have none.

AUTHOR AFFILIATION

* Women's College Research Institute, Women's College Hospital, and Dalla Lana School of Public Health, University of Toronto, Toronto, ON.

Correspondence to: Steven A. Narod, Women's College Research Institute, 790 Bay Street, 7th Floor, Toronto, Ontario M5G 1N8.
E-mail: steven.narod@wchospital.ca ■ **DOI:** http://dx.doi.org/10.3747/co.22.2457