Letter to the Editor

Cancer Epidemiology, Biomarkers & Prevention

Impact of Screening on Breast Cancer Mortality—Response

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Dr. Berrino raises the possibility of a healthy screenee bias in our estimates of the effect of being screened between 3 and 36 months before diagnosis and of ever being screened (1, 2). The argument for the presence of such bias hangs on the exclusion of the 3-month period before diagnosis and therefore of the screen-detected cancers. We have repeated the analysis combining the interval within 3 months of diagnosis with 3 to 36 months (and including the diagnostic screen in women with screen-detected cancer). The estimated OR is 0.625 (95% CI, 0.50–0.78) corresponding to a 37.5% reduction in breast cancer mortality. However, this would underestimate the benefit of screening, as now, cases have two ways of being exposed to screening: if they were screen-detected or if they attended screening in the three years prior to diagnosis (3). Controls without breast cancer would have only one route to screening exposure, if they had attended in the three years prior to pseudodiagnosis. We countered this by extending the interval for controls matched to screen-detected cases beyond the date of diagnosis of the case to take account of the period during which the case's cancer would have been screen detectable but asymptomatic. Adding one year (i.e., 36 months prior to 12 months post) resulted in a reduction of 39.0% (OR, 0.61; 95% CI, 0.49–0.76) and adding 3 years 43.8% (OR, 0.56; 95% CI, 0.45–0.70).

We accept that the 61% reduction in mortality cited in our abstract is likely to be an overestimate of what is achievable and that an estimate of around 40% is far more realistic. We disagree, however, with the proposed remedy of excluding all screens within a plausible preclinical screen-detectable period, which would remove much of the effect of screening. The life of a participant can only be saved by one screen, that which detects the cancer (4).

Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed.

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