Reviewer's report

Title: Comparison of breast and bowel cancer screening uptake patterns in a common cohort of South Asian women in England

Version: 4 Date: 13 July 2009

Reviewer: John Brodersen

Reviewer's report:

Comparison of breast and bowel cancer screening uptake patterns in a common cohort of South Asian women in England

Major Compulsory Revisions

In my previous review I asked the authors to report on the best available evidence, which they have done. However, I also asked them to communicate the effect “in an understandable way using absolute risk reduction and/or number need to screen and harm as a minimum. The same denominators should also be used to be able to compare the benefits and harms”. The authors have only reported the relative risk reduction (RRR). It is not possible to calculate how small or great an effect is if only the RRR is reported, e.g. a RRR of 50% can be a reduction from 2 to 1 death among 100 people but it could also be a reduction of 2 to 1 death among 1,000,000 people. In the first case the absolute risk reduction (ARR) is 1% in the second case the ARR is 0.0001%.

I can recommend the authors to read this paper:


In the abstract Gigerenzer and colleagues write:

“Many doctors, patients, journalists, and politicians alike do not understand what health statistics mean or draw wrong conclusions without noticing. Collective statistical illiteracy refers to the widespread inability to understand the meaning of numbers. For instance, many citizens are unaware that higher survival rates with cancer screening do not imply longer life, or that the statement that mammography screening reduces the risk of dying from breast cancer by 25% in fact means that 1 less woman out of 1,000 will die of the disease.”

Another change the authors have made from their first submission is that they now argue that an increased survival rate is an indication of an effect of breast and colorectal cancer screening:

page 4:

“Five year relative survival in England and Wales for women diagnosed with
breast cancers in 2001 to 2003 was estimated at 80% [2]. In comparison, five year relative survival in the UK for women with screen detected breast cancers diagnosed in 2000/01 was 96.4% [3], thus indicating the benefits of early detection through screening.

The survival rate cannot be used as an indicator for an effect of any cancer screening programme because all cancer screening programmes result in overdiagnosis. As stated in this week’s editorial in BMJ by Professor Gilbert Welch: “Overdiagnosis and mammography screening - The question is no longer whether, but how often, it occurs”.


“Survival time is defined as the period elapsing between diagnosis and death. In breast cancers discovered by early detection programs, survival times are also prolonged by bringing forward the time of diagnosis in cases in which the disease course is not influenced by providing treatment earlier. The effectiveness of screening therefore cannot be gauged from the survival times. Mortality is the only variable quantifiable without bias for studies on the effectiveness of early detection activities (3–5).”

Or in Gigerenzer and colleagues’ paper mentioned above:

“We recommend using frequency statements instead of single-event probabilities, absolute risks instead of relative risks, mortality rates instead of survival rates, and natural frequencies instead of conditional probabilities.”

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests