

Screening mammography--an overview revisited

When Peter Gøtzsche and Ole Olsen concluded last year that "screening for breast cancer with mammography is unjustified",¹ there was a storm of debate and criticism in national media and medical journals alike. These investigators, working at the respected Nordic Cochrane Centre, had conducted a systematic review of randomised trials of screening mammography. Gøtzsche and Olsen found that the quality of many of these trials was poor. The best trials, they claimed, did not provide evidence of a reduction in either total or breast-cancer mortality. In a cautious Commentary, Harry de Koning questioned the quality of this analysis,² as did several subsequent correspondents.³ The editors of the Cochrane Breast Cancer Group later disowned Gøtzsche and Olsen's work,⁴ pointing out that "theirs was not a Cochrane Collaboration systematic review, and has not been reviewed by Cochrane Breast Cancer Group editors". Indeed, the Cochrane editors noted that a protocol for a Cochrane review by Gøtzsche and Olsen had been submitted and accepted before the *Lancet* publication. The Cochrane editors ended their letter by promising to publish the Cochrane review, if accepted by them, in the *Cochrane Library*.

On Oct 20, 2001, a version of that Cochrane review will be released in the latest update of the *Cochrane Library*. Although there are many common elements, it is not the version reported by Gøtzsche and Olsen in this week's issue of *The Lancet*, and published in full on *The Lancet's* website (www.thelancet.com). In a Research Letter, [Gøtzsche and Olsen summarise their findings](#) and write that they have confirmed and extended their earlier conclusions. Publication of the full peer-reviewed overview on the web has three benefits. First, the methods underpinning this controversial overview are now transparent and open to scrutiny. Second, detailed narrative critiques of the individual randomised trials are provided, which allow the principal investigators of these trials to respond to concerns that have so far been scattered in many different journals. Finally, important additional data about rates of mastectomy, lumpectomy, and radiotherapy give further insight into how screening influences treatment of breast cancer after diagnosis. The implications for women and policymakers are substantial and require careful reflection and discussion.

The Cochrane Collaboration has a rigorous and well-developed method for conducting systematic reviews. Cochrane reviews are of higher quality than reviews completed according to non-Cochrane protocols.⁵ It is for this reason that *The Lancet* is an enthusiastic partner of the Cochrane Collaboration.⁶ But the process of collaboration within the Cochrane Breast Cancer Group has broken down badly in the case of the Gøtzsche and Olsen overview. The resulting tensions among colleagues indicate that even in the best organisations raw evidence alone is sometimes insufficient to influence opinion. When the Nordic investigators submitted their systematic review to the editors of the Breast Cancer Group, they found that their conclusions were unwelcome. Rather than supporting their Nordic colleagues in the publication of their research, the Cochrane Breast Cancer Group editors insisted that changes, which Gøtzsche and Olsen disagreed with, be made to the review if it was to be published in the *Cochrane Library*. These changes appear in the Cochrane review against the authors' wishes, but not in the [version posted](#) on *The Lancet's* website today. The Cochrane editors added statements in the main results section of the abstract, which lent support to arguments in favour of screening, and excluded data about the effects of screening on subsequent treatment despite the fact that inclusion of these data was envisaged in the published protocol of the review.

According to its ten key principles (www.cochrane.org), the Cochrane Collaboration bases its scientific reputation on minimising bias and ensuring quality. But interference by Cochrane editors to insert what the authors of the overview believe to be invalid analyses erodes the academic freedom of these investigators. Editors make recommendations to authors all the time, but editors who insist on inappropriate analyses that seem to support a particular point of view hurt not only themselves and the institution they represent but also the credibility of the science they claim to value. At least one Cochrane Breast Cancer Group editor I have spoken to disputes this description of events. He argues that changes to the overview were made on scientific grounds alone and that Cochrane editors wished to negotiate with Gøtzsche and Olsen "conscientiously". However, e-mails from Gøtzsche and Olsen to senior Cochrane staff and to a senior Breast Cancer Group editor indicated their concern that "misleading statements" had been added to the abstract and that important data had been excluded by Breast Cancer Group editors. The Nordic team asked the Cochrane editors "to remove these two sentences" from the abstract and to reconsider their approach carefully once again. This request was refused.

The Cochrane Collaboration has done much to change the way doctors think about research evidence in clinical practice. Yet the Cochrane process, like any human enterprise, is not perfect--for example, some Cochrane reviews tend to overvalue the benefits of new treatments.⁷ Interventions by either reviewers or editors to diminish the validity of Cochrane reviews should be a more prominent concern of the Collaboration.

The more important issue is, of course, what next for screening mammography? For a full independent overview to be completed, principal investigators of all component randomised trials will have to supply individual patient data. Meanwhile, some critics might argue that mammographic techniques and treatments have advanced since the time of these original trials. That assertion is technically correct. But women should not be expected to forgive old--and disproven--screening practices. Instead, women should expect doctors to secure the best evidence about the value of screening mammography. At present, there is no reliable evidence from large randomised trials to support screening mammography programmes.

Richard Horton

The Lancet, London WC1X 8RR, UK

1 Gøtzsche PC, Olsen O. Is screening for breast cancer with mammography justifiable?
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2 de Koning HJ. Assessment of nationwide cancer-screening programmes.
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3 Duffy SW, Tabar L. Screening mammography re-evaluated.
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4 [Wilcken N](#), [Ghersi D](#), [Brunswick C](#), [Clarke M](#), [Ganz P](#). More on mammography.
Lancet 2000; **356**: 1275-76.

5 Jadad AR, Cook DJ, Jones A, et al. Methodology and reports of systematic reviews and meta-analyses.
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6 Clarke M, Horton R. Bringing it all together: *Lancet*-Cochrane collaborate on systematic reviews.
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7 Olsen O, Middleton P, Ezzo J, et al. Quality of Cochrane reviews in assessment of sample from 1998.
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