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By Helen Saul

Breast screening 'should be considered' in younger women



Dr Mireille Broeders, National Expert and Training Centre for Breast Cancer Screening, Nijmegen, the Netherlands

Biennial mammographic screening may halve the risk of dying from breast cancer among women aged 40-49, according to a study in the Netherlands. Researchers say in a forthcoming issue of *EJC* ([doi:10.1016/j.ejca.2010.09.041](https://doi.org/10.1016/j.ejca.2010.09.041)) that their work 'adds convincing evidence of the effectiveness of biennial mammographic screening in women aged 40 to 49.'

The study included 272 breast cancer deaths; 1360 referents aged 40-69 were sampled from the population invited for screening. The odds ratio (OR) for dying of breast cancer was calculated in screened versus unscreened women.

In women aged 40-49, the effect of screening was OR = 0.50, similar to that among those aged 50-59 (OR = 0.54) or 60-69 (OR = 0.65). Dr Mireille Broeders (National Expert and Training Centre for Breast Cancer Screening, Nijmegen, the Netherlands), one of the authors of the study, said that the effect of screening in case control studies – which compare screened with unscreened women – tends to be larger than that seen in randomised controlled trials (RCTs).

"RCTs usually evaluate women invited versus women not invited. With case control studies you're looking at women who have actually had the screening examination, which is different from women who are invited and who may or may not take up the invitation. In RCTs you also get contamination of the groups: not all of the women who are invited actually come for screening and further, some of the women in the control group go and get a mammogram even though they are not invited through the programme. This cross-over dilutes the effect."

She said the approximate halving of breast cancer mortality risk has been reported before, and was backed by new data from Sweden (*Cancer 2010* [doi:10.1002/cncr.25650](https://doi.org/10.1002/cncr.25650)). It found a relative risk of dying from breast cancer of 0.71 among women aged 40-49 who attended screening. However, at almost the same time, another study was published, albeit among women aged 50-69 years, which found a much smaller effect with screening (*N Engl J Med 2010; 363:1203-10*). This study, in Norway, looked at women living in counties with screening programmes and compared them to historical controls. It found that screening was associated with only a 10% reduction in breast cancer mortality.

The *EJC* data covers women screened between 1975 and 1990 with analogue mammography and Dr Broeders said the effect of screening might be larger with newer technology. “Trials have found that digital mammography tends to perform better in younger women. This, combined with the fact that breast cancer incidence in the Netherlands has increased immensely between the ages 45 and 49, means we should carefully consider a reduction in the age that we start screening.

“But there are aspects to consider. We don’t really know what digital mammography does in terms of the mortality reduction, and we know even less about its effect in younger women because there are few digital programmes running that screen younger women. We also need to look at the cost effectiveness of lowering the age limit. We don’t know enough about it yet, but I think there’s certainly reason enough to look at this group and reconsider.

“The UK is moving the age limit for screening down from 50 to 47 but in the Netherlands we would probably first do a pilot on the impact of digital mammography in women under 50. For us, it may be too soon to go for a national change because of the limited evidence on digital screening in younger women in Europe. There is some US data but it’s difficult to compare the results because screening in the US is different – they use a different dose in mammography, and so on – and it is difficult to generalise from their results to our situation. We need data on screening younger women with digital mammography in our own health environment. And obviously, we would look at potential harms as well as benefits.”