

Talking Points: Jorgensen, Gotzsche et al. Annals Jan 2017 Breast Cancer Screening in Denmark: A Cohort Study of Tumor Size and Overdiagnosis

1. This study has already been done – and done better – by Njor and colleagues in Denmark looking directly at patient data, so a study that uses assumptions and guesses is not needed.

Using tumor registry data Jorgensen cites an overdiagnosis rate of 24-39% for invasive cancers. In contrast, **Njor et al published an article (BMJ 2013 February 26)** which evaluated overdiagnosis in Denmark. In their population based cohort study, which used direct patient data and the proper variables, they found that overdiagnosis in Denmark in 2 counties (time frame 1991 and 1993 with follow-up to 2009) was **2.3%**.

2. The authors got a wide range of OD with their own data, just by making different assumptions and sometimes removing women from the data: 9.9 – 48% (less than 10% to over 45%). This wide range shows the difficulty in estimating OD and how guessing at who is getting screened and at what age makes the calculation unreliable.

3. There is no direct patient data on who were actually screened/not screened. Noncompliance and contamination, known to exist – sometimes substantially – in every screening trial would markedly affect these results. This is not accounted for, even though they had about 62% compliance in one of the screening regions, by their own estimates.

4. The authors state that Danish women do not get screened outside the organized program. They based this on one study in 2000 that looked at DIAGNOSTIC mammography outside the national program. They have no information on the actual screening program which had been going on in Denmark. This would have had a major impact on their results.

5. Figure 1a- if the women in “screened-areas” and “non-screened areas” who were never offered screening because they are under age 50 are comparable then the starting rate of advanced cancers should be the same. The trend for both groups should have moved in the same direction or no change in both groups. However the starting rates are significantly different and the trends move in opposite directions- decreasing for the unscreened women in the “screening areas” and increasing for the non-screened group. Either the regions were different in their underlying rates of breast cancer and the proportion of advanced cancers, or women in the “screening area” who were not offered screening were being screened outside the program.