

Breast cancer mortality in Copenhagen after the introduction of mammography screening

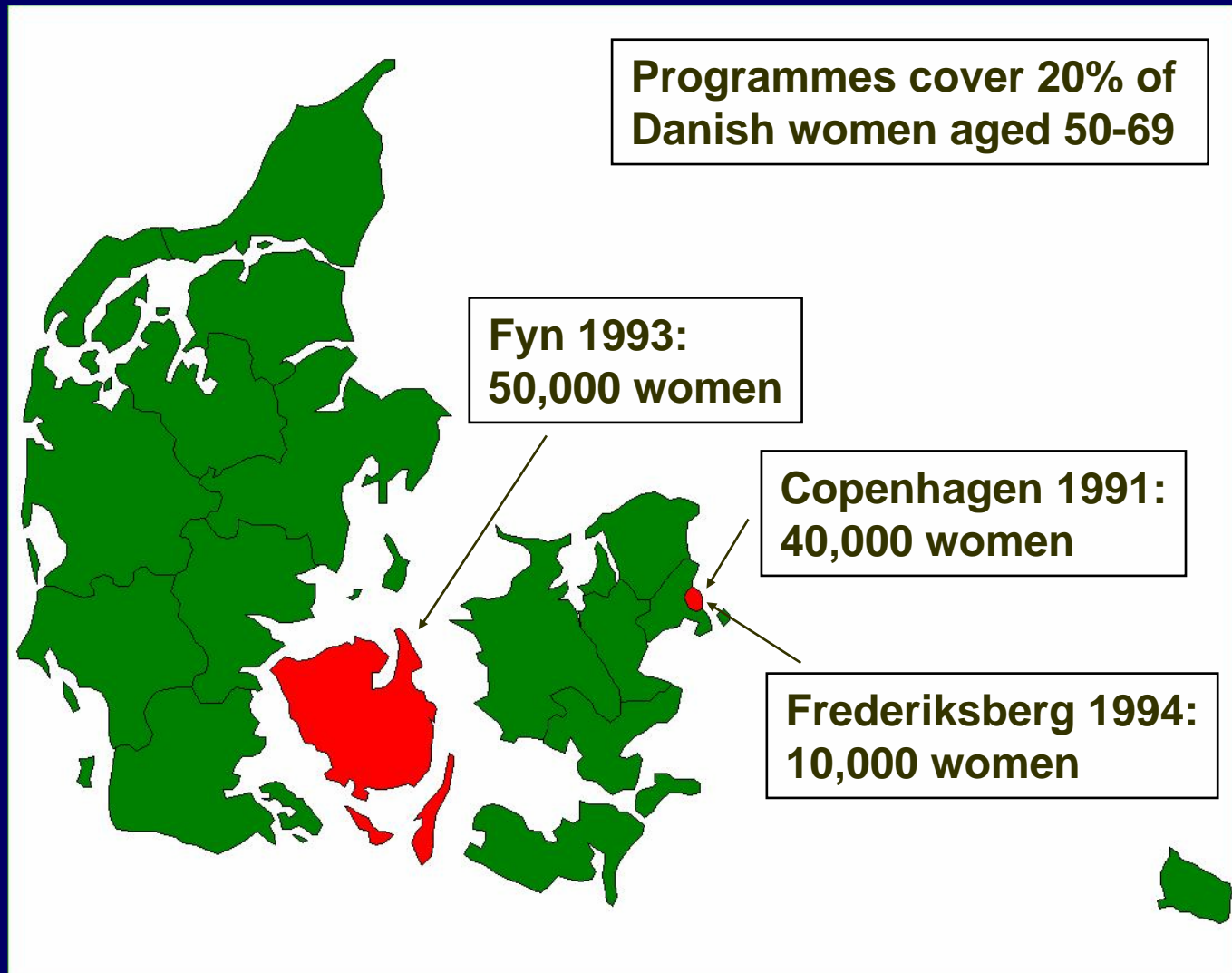
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Danish programmes

Screening of women aged 50-69 every second year



Objective

**To estimate the effect of
the Copenhagen
mammography
screening programme on
breast cancer mortality**

Study and control groups

	Copenhagen	Rest of Denmark
Before screening	Historical control group	Historical national control group
Screening period	Study group	National control group

Methods

Breast cancer mortality rates in the study group were compared with rates in the control groups, adjusting for age, period and region.

Women were followed up from their first date of invitation to screening until death, emigration or end of follow-up.

Refined mortality was used.

Poisson regression was used for the analyses.

**Historical
control group**



**RR1:
Region**

**Historical
national
control group**

Study group



**RR2:
Region* screening**

**National control
group**

Screening effect estimated by $RR2/RR1$

Do regional differences in pre-screening period reflect those of the screening period?

If not: Screening effect confounded with region*period interaction

Data sources

- 1. Mammography screening databases**
- 2. Danish Cancer Register**
- 3. Central Population Register**
- 4. Cause of Death Register**

Linkage by personal identification number

Results

Historical
control group

RR 1.22



Historical
national
control group

Study group

RR 0.91



National control
group

Results

**Estimated effect of being offered screening:
RR 0.75 (95% C.I. 0.63-0.89)**

**Estimated effect of participating in screening:
RR 0.63**

Regional differences time dependent?

Since 1977: diagnostic and therapeutic strategies organised nationwide by Danish Breast Cancer Cooperative Group

Breast cancer patients in study and control groups have been offered the same treatment

Conclusion

It has been possible within the Copenhagen mammography screening programme to reduce breast cancer mortality by an estimated 25% for women offered screening and 37% for women participating in screening

Reference

Olsen AH, Njor SH, Vejborg I, Schwartz W, Dalgaard P, Jensen M-B, Tange UB, Blichert-Toft M, Rank F, Mouridsen H, Lynge E.

Breast cancer mortality in Copenhagen after introduction of mammography screening: cohort study.

BMJ 2005; 330: 220-2.

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