

Breast screening

How to interpret the evidence?

Overdiagnosis

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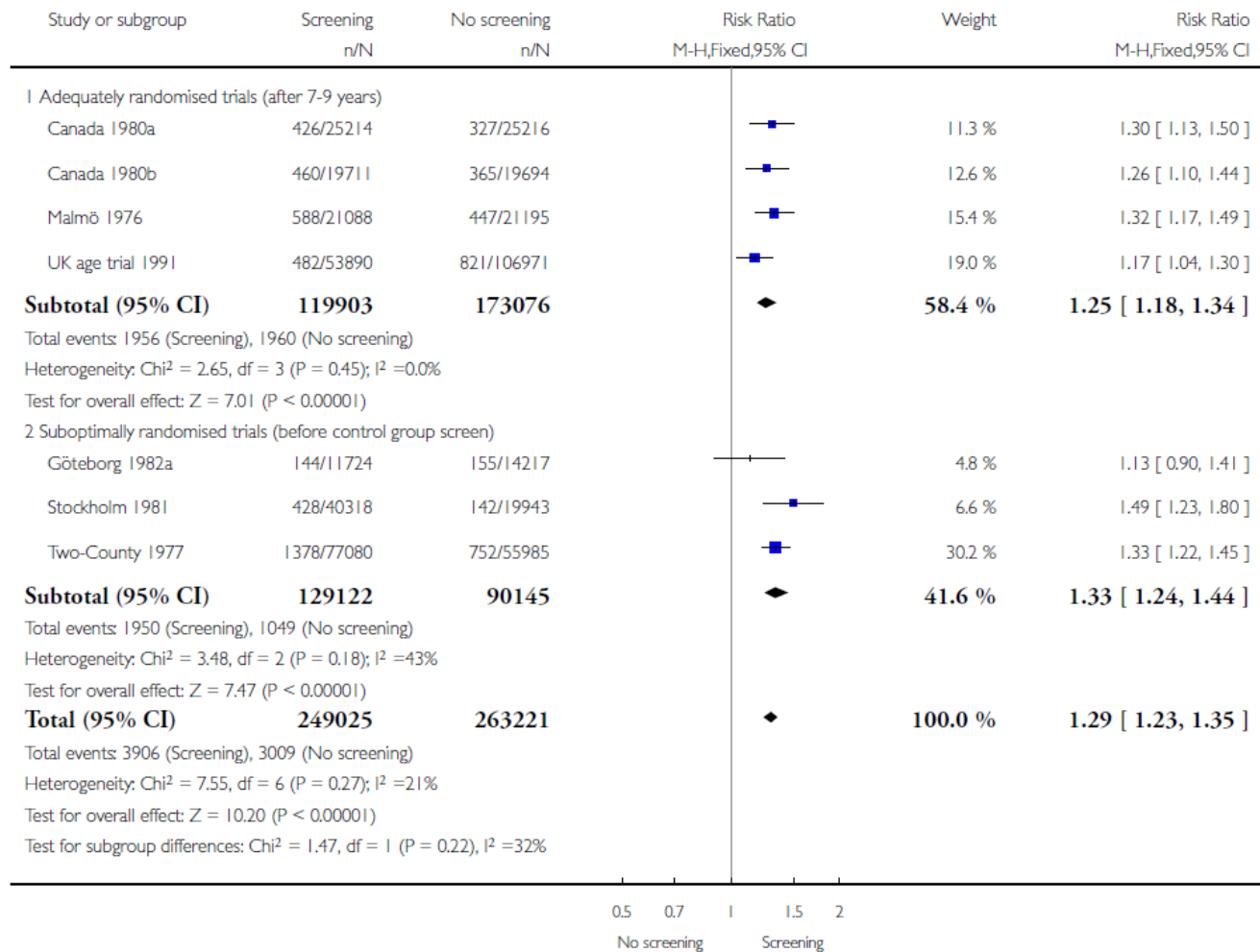
The Nordic Cochrane Centre

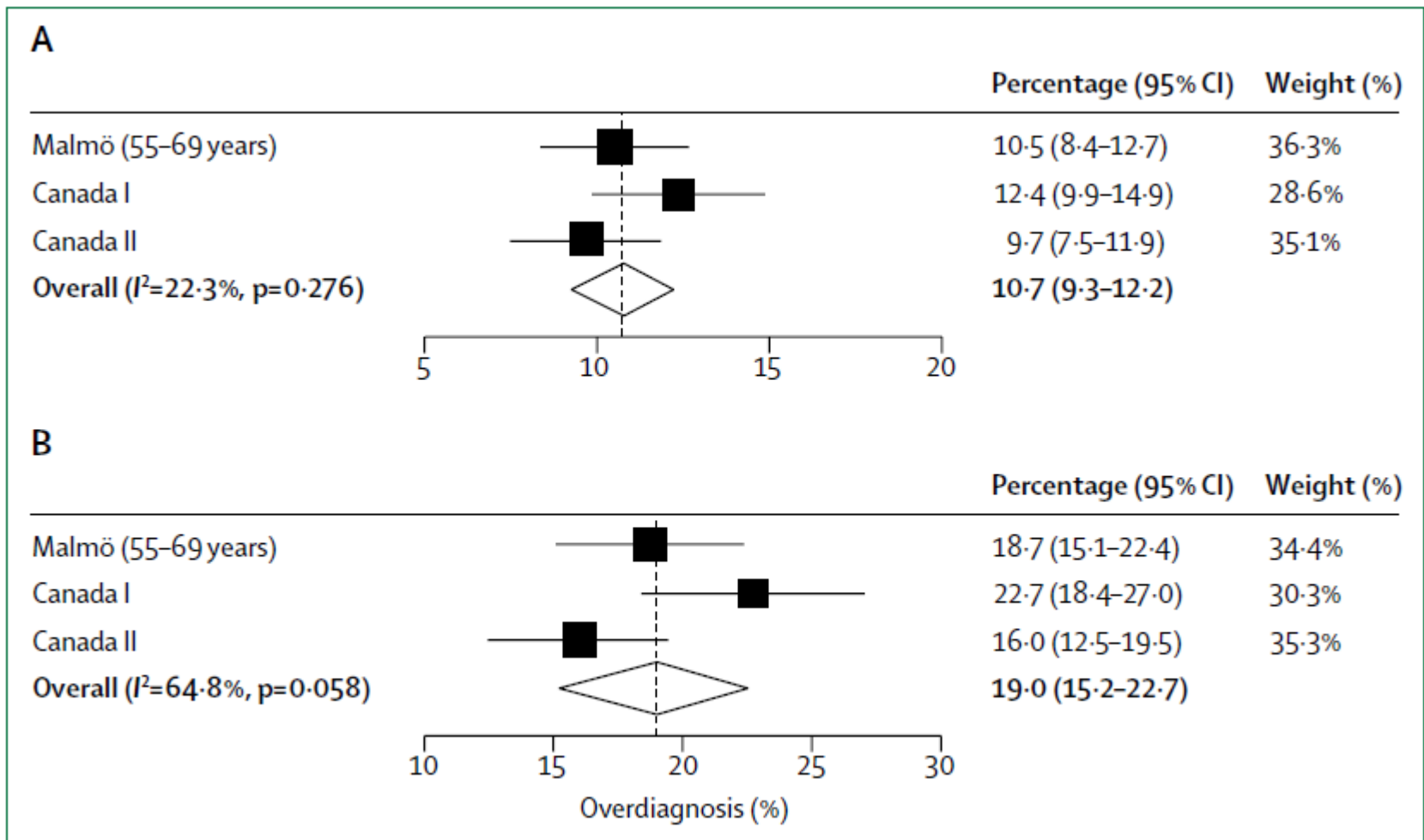
Analysis 1.21. Comparison 1 Screening with mammography versus no screening, Outcome 21 Number of cancers.

Review: Screening for breast cancer with mammography

Comparison: 1 Screening with mammography versus no screening

Outcome: 21 Number of cancers





A: Excess cancers as a proportion of cancers diagnosed over long-term follow-up.

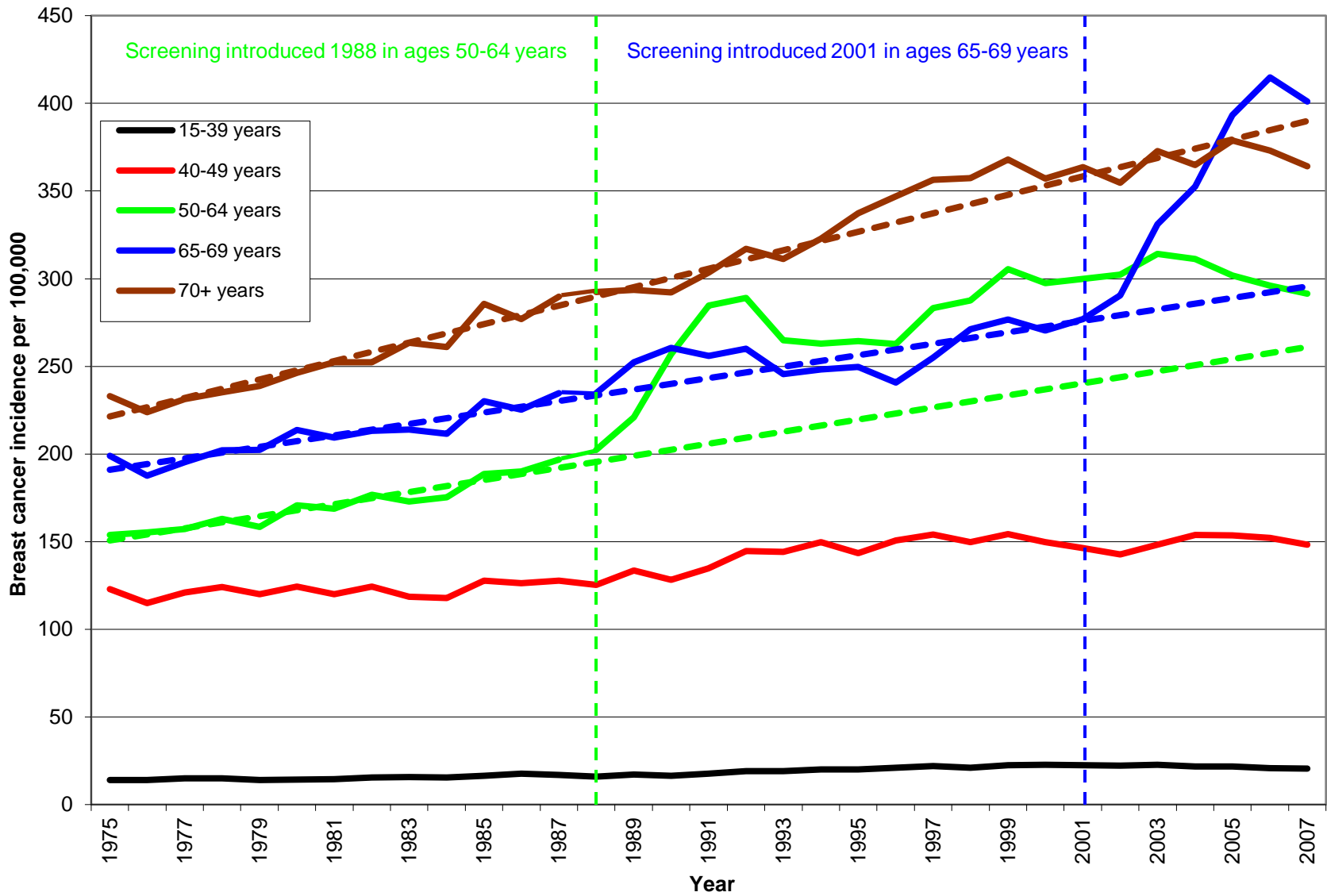
B: Excess cancers as a proportion of cancers diagnosed during the screening period.

How was overdiagnosis estimated?

50-69 years: 23,297 invasive, 3,931 CIS.¹

19% ODX:

$(23,297 + 3,931) \times 0,19 = \mathbf{5,173}$ cases per year in the UK.



Keywords: screening; lead time; overdiagnosis

Overestimated lead times in cancer screening has led to substantial underestimation of overdiagnosis

P-H Zahl^{*1}, K J Jørgensen² and P C Gøtzsche²

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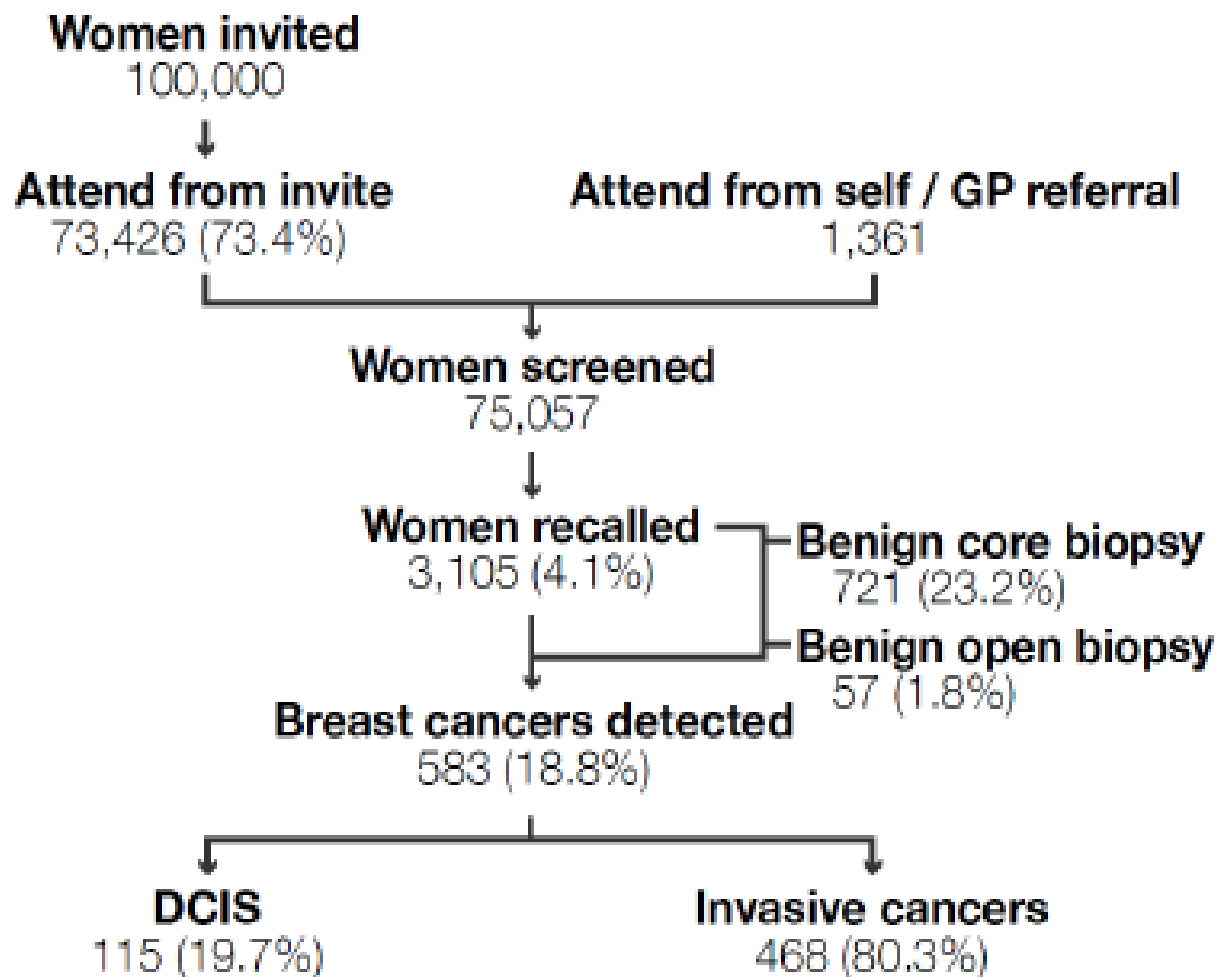
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proof

Why estimates differ (0-75%) in observational studies

- Lead-time models *versus* excess incidence models
- Overdiagnosis in the screening period *versus* lifetime



2.7 million women invited in 2009¹.

- False positives: 65,094
- Benign core biopsies: 19,467
- Benign open biopsies: 1,539
- False negatives: ~33% of cases in a screened population were not detected
- Direct cost: £ 96 million