

# De Computer Helpt bij Borstkankerscreening

(Computer assisting in Breast Cancer Screening)

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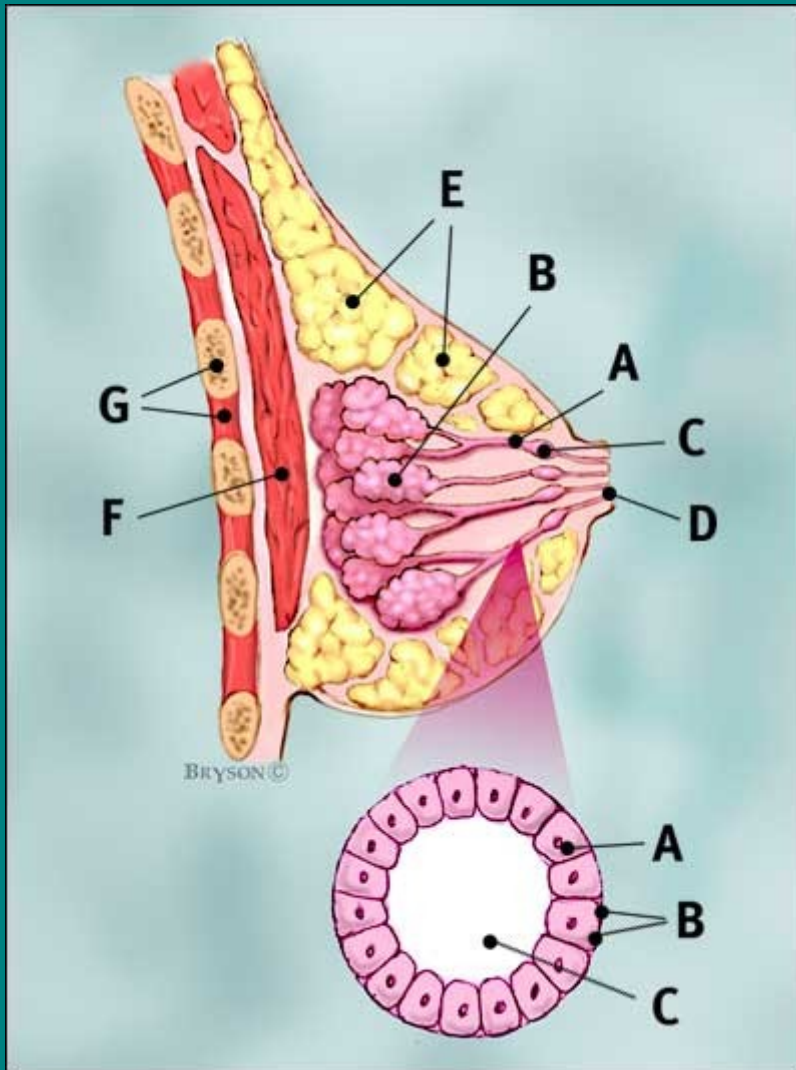
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# Breast Cancer

- Facts and figures (in The Netherlands)
  - Most common form of cancer in women
  - **1** out of **9** women develops breast cancer
  - The second leading cause of cancer death in women
  - Every year 11.000 women are diagnosed

# Breast Anatomy



## Breast structure:

- A: Ducts
- B: Lobules
- C: Dilated duct section
- D: Nipple
- E: Fat
- F: Muscle
- G: Chest wall

## Enlargement:

- A: Normal duct cell
- B: Membrane
- C: Duct center

Breast cancer is a result of uncontrolled growth of breast cells.

# Breast Cancer and Mammography



A mammogram is an x-ray picture of the breasts. It is used to distinguish between non-cancerous and cancerous diseases.

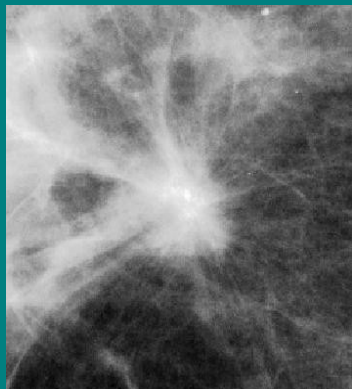
# Screening Program in The Netherlands

Goal: Tests and exams used for early breast cancer detection in women who do not have any symptoms

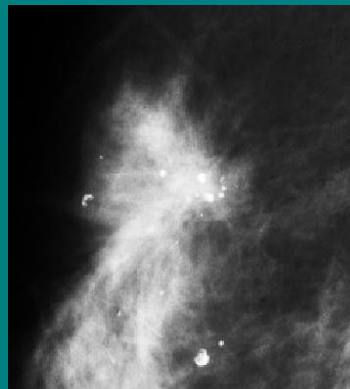
Target Population (50-75 year-old)	2,180,000
Invitations / yr	1,060,000
Exams	830,000
Screening interval (years)	2
Referral (%)	1.3
Detection (%)	0.50

# Computer aided diagnosis in mammography

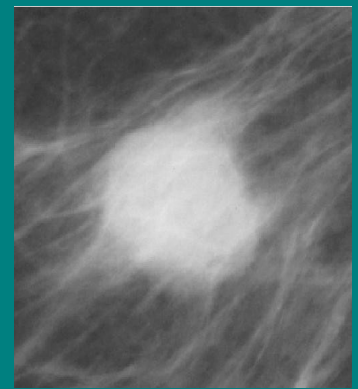
- Purpose
  - Early diagnosis increases the chances of cure.
  - Computer-aided systems can improve identification and interpretation of breast abnormalities.
  - Potentially decreasing the need of multiple readings or missed lesions.
- Typical findings:



Architectural Distortion



Microcalcifications



Mass

# B-Screen Project

- Aim
  - Further development of computer-aided diagnosis technology in order to address interpretation failures.
- How
  - Through improvements in the existing system for better identification and diagnosis of abnormalities.