Breast cancer; screening or overdiagnosis? Questioning of a family doctor

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Aim

The authors have tried to update their knowledge of breast cancer screening by a review of the scientific literature, the recommendations made by various national health institutions as well as expert advices.

How to answer?

I received this letter summoning me for a mammogram as two years ago. Should I do it?
Methods

The current literature has been reviewed, as well as books on the issues of screening, the work of some experts helps to clarify the following points:

- The potential benefit of routine screening of women aged 50 to 69 years
- The risks and potential side effects of breast cancer screening by mammography.
- Informing women invited to screening
Breast Cancer: Epidemiology

Most common invasive tumors in women Belgium (2006)

Belgium cancer registry ; Liesbet Van heyken, Mars 2010
Incidence constantly increasing with a stable mortality


Aurélien Belot, estimation nationale de l’incidence et de la mortalité par cancer en France entre 1980 et 2005, INVS
Incidence constantly increasing with a stable mortality

- two hypotheses

  - Effectiveness of screening facing an epidemic of fatal cancers

  OR

  - very important cancers overdiagnosis
Studies validating the screening are heterogeneous.
Cochrane (2009)

- 7 RCT studied total of 600,000 women
  - If we consider the 3 good quality trials
    - No decrease 10-year specific mortality
    - No reduction in global mortality at 13 years
  - If we consider these 7 RCT (with their bias) a decrease in mortality of 15% was obtained
    - NNS 2000 for 10 years
      - 200 (10%) False Positive
      - 10 (0.5%) over-diagnosed and treated unnecessarily
Independent UK panel on Breast Cancer Screening.
The benefits and harms of breast cancer screening: an independent review.
Lancet 2012 Nov 17
Heterogeneity of diseases

- Size of lethal cancer
- Size of symptomatic cancer
- Cellular anomalies

Axes:
- Size
- Temp

Legend:
- Quick
- Slow
- Very slow
- Not progressive
- Other causes of death
Different growing speed

Quick or slow growth

Cellular anomaly

Begining of the symptoms

Screening 2

Screening 1

Temp

Courtezy
Armando Norman, Brazil
And what about our patients?

- Two studies have attempted to assess women's knowledge about mammography screening
  - 92% don’t know the risks of overtreatment
  - 68% believe that screening reduces the risk of getting cancer
  - 60% believe that being screened decreases by more than 50% mortality

Gotzsche, the fact or may be not; BMJ 2009

Schwartz LM, US women’s attitudes to false positive mammography results; BMJ 2000
Role of the family doctor

- Information Manager for the benefit of our patients for:
  - A clear and accurate information, free from ambiguity
  - Allow patients to decide their choice knowingly
  - Combat false beliefs
    - Each tumor detected is not a fatal cancer
    - Screening don’t reduces the number of aggressive treatment
    - Screening don’t prevents the occurrence of cancer
  - Explain The risk of false positive & The risk of false negative
SCREENING FOR BREAST CANCER
WITH MAMMOGRAPHY

What are the benefits and harms of attending a screening programme?

How many will benefit from being screened, and how many will be harmed?

What is the scientific evidence for this?

Screening for breast cancer with mammography


The Nordic Cochrane Centre

Mammography screening leaflet

Available in 15 languages

http://www.cochrane.dk/
Take home message

• Effectiveness of screening remains debatable (NNS 2000)
• Reality side effects of mass screening
  • Overdiagnosis, overtreatment, false negative ect.
• Most women uninformed about the advantages / disadvantages of screening
• Family doctor privileged interlocutor for clear information and combat false beliefs.

Bibliography on Mendeley.com

http://tinyurl.com/lassoued