

Prevención Cuaternaria Tamizaje de cáncer de mama

V CONGRESO PERUANO MEDICINA FAMILIAR Y COMUNITARIA

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Prevención Cuaternaria

Tamizaje de Cáncer de Mama

“one way to become sick is to
start looking for something
to be wrong”

H. Gilbert Welch

"Una forma de volverse enfermo es comenzar a
buscar algo que esté mal"

Un poco de historia

- * HIP (Health Insurance Plan) ´60 / 23 % menos de muertes en el grupo de intervención que en el control
- * Edimburg, Scotland 1979 / mostró debilidades en el proceso de aleatorización (centros no pacientes)
- * Suecia 280.000 mujeres / 24 % menos de muertes en el grupo que se realizaron mamografías

PERO

- * Canadian National Breast Screening Study / **NO** demostró reducción de mortalidad.

Peter Gøtzsche

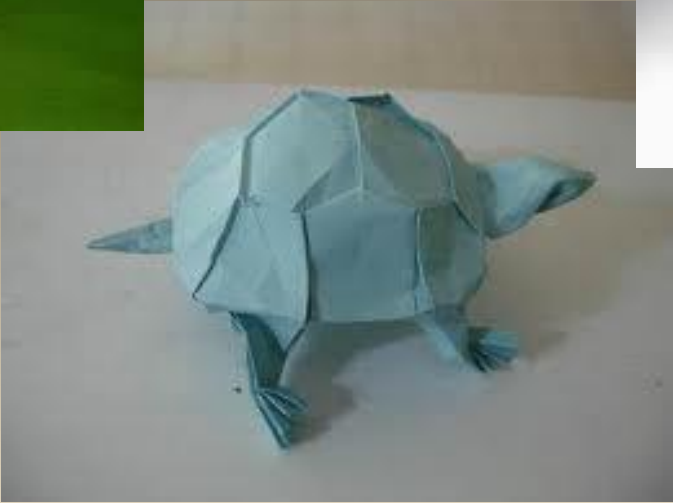
The Nordic Cochrane Centre

<http://www.cochrane.dk/>



Controversia internacional respecto a la pertinencia de los programas de detección precoz para cáncer de mama por medio de mamografía.

Gøtzsche P, Olsen O. Is screening for breast cancer with mammography justifiable? Lancet 2000; 355:129-34.



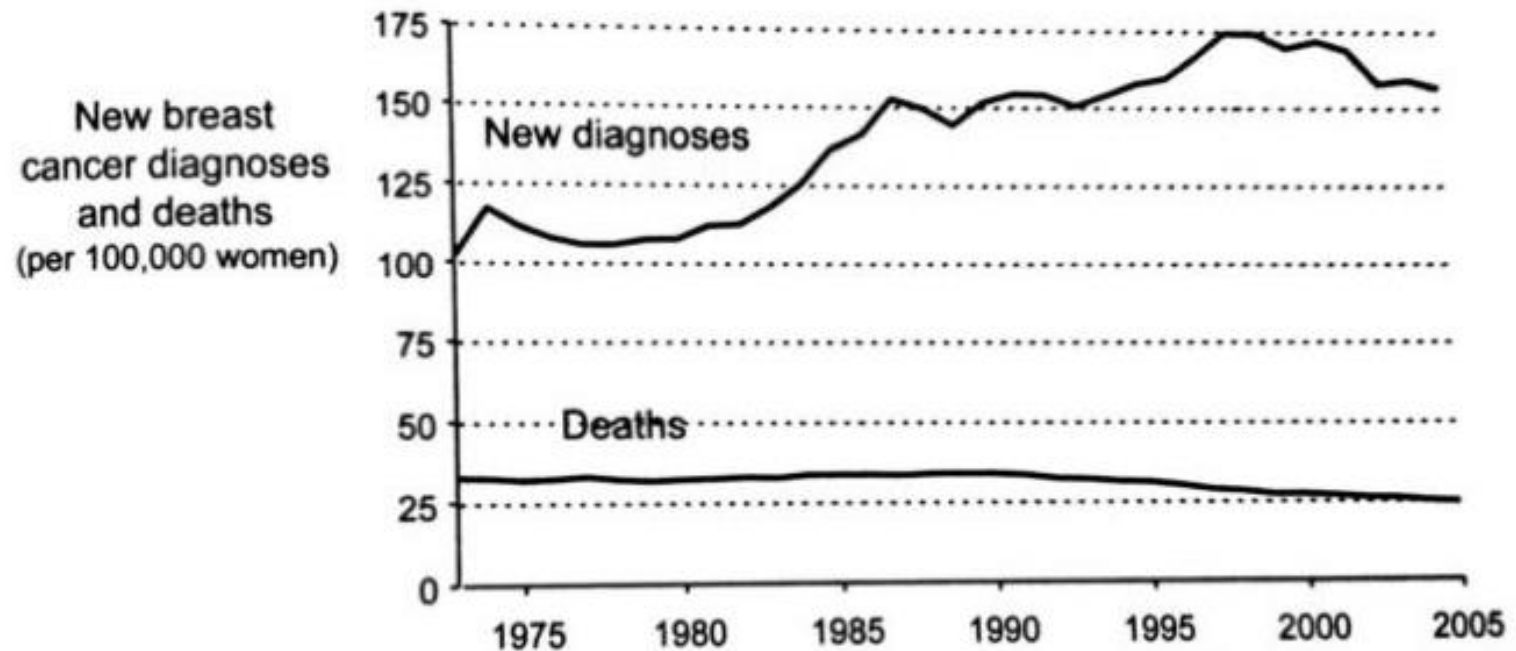
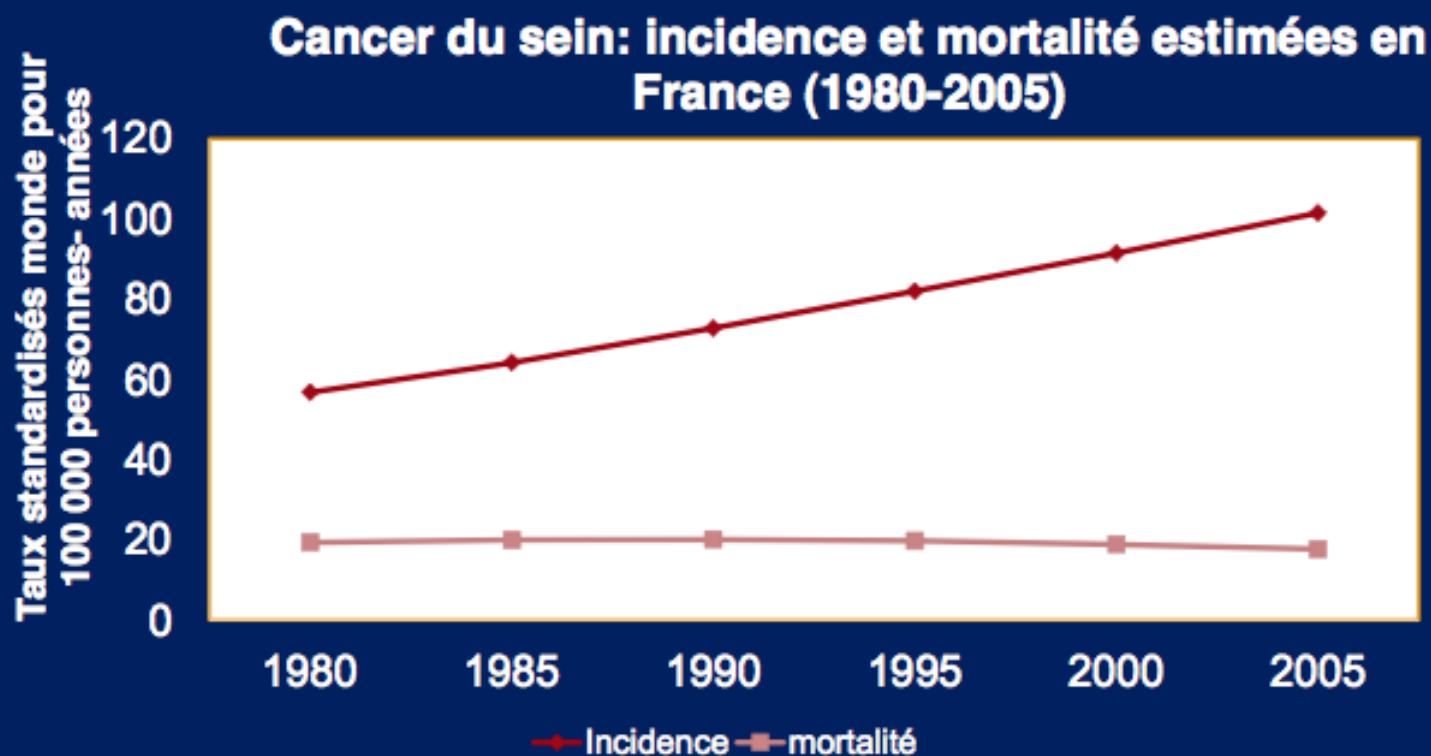


FIGURE 6.2 *New Diagnoses and Deaths from Breast Cancer in the United States, 1973-2005*

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

Is Mammographic Screening Justifiable Considering Its Substantial Overdiagnosis Rate and Minor Effect on Mortality?

Karsten Juhl Jørgensen, MD
John D. Keen, MD, MBA
Peter C. Gotzsche, MD

Proponents of mammographic screening generally say that the benefit is large and established beyond doubt, that there is little overdiagnosis, and that screening leads to less invasive treatment (1-3). The truth is that the benefit is doubtful, that overdiagnosis is substantial and certain, and that screening increases the number of mastectomies performed.

Breast Cancer Mortality

All health care interventions can cause harm. Most also have benefits, and their justification relies on the balance between these harms and benefits. This value judgment has no "correct" answer in scientific terms, but the relationship between overdiagnosis and lives prolonged is crucial in the mammographic screening debate.

Screening advocates often claim that mammographic screening reduces the relative risk of breast cancer mortality

There have been substantial advances in treatment since most of the trials were performed, and these advances must have reduced the effect of screening. Antihormone therapy and polychemotherapy are also effective when the cancer has metastasized (7), and the declines in breast cancer mortality we have seen have occurred rather uniformly across prognostic groups (8).

Daniel Kopans has stated that "one might expect to see a reduction in the number of late-stage cases if a screening intervention was effective" (9). We agree, but this has not happened. There has been a large increase in ductal carcinoma in situ (DCIS) and localized invasive breast cancers in the United States but a very small decrease in cancers with metastases (Figs 1, 2) (10,11). Similarly, a systematic review of several countries found that, on average, the rate of cancers larger than 20 mm was not affected by screening (12). If screening does not reduce the incidence of ad-

Is Mammographic Screening Justifiable Considering Its Substantial Overdiagnosis Rate and Minor Effect on Mortality ?

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Radiology 2011

Disponibile en: <http://radiology.rsna.org/content/260/3/621.full.pdf+html>

Se incrementó de forma importante la detección del carcinoma ductal in situ y del cáncer invasivo localizado pero muy leve disminución del cáncer invasivo con metástasis.

Daniel Kopans has stated that "one might expect to see a reduction in the number of late-stage cases if a screening intervention was effective" (9). We agree, but this has not happened. There has been a large increase in ductal carcinoma in situ (DCIS) and localized invasive breast cancers in the United States but a very small decrease in cancers with metastases (Figs 1, 2) (10,11).

Fuente: Is Mammographic Screening Justifiable Considering Its Substantial Overdiagnosis Rate and Minor Effect on Mortality ?

“the more times you are
screened the more likely you
are to have false positive
exam”

H. Gilbert Welch

“Cuantas mas veces sea sometida a screening,
mayor probabilidad de tener un falso positivo”

ejemplo

Supongamos que el promedio de falso positivo para un test es 10%

La chance de NO tener falso + es 90%

Luego de 2 test consecutivos es:

$$90 \% \times 90 \% = 81 \%$$

19% de tener falso +

¿pero si aplicamos 10 años de
screening?

90x90x90x90x90x90x90x90x90x90

35 %

la chance de tener un falso + luego de 10
años es $100 - 35 = 65\%$

Risco cumulativo de um ou mais testes falsos positivos em um programa de rastreio de 10 anos

	Chance de ter um falso positivo pelo menos ao longo de dez anos de rastreamento		
taxa de falsos positivos	cada ano	bienalmente	cada três anos
1%	10%	5%	3%
2%	18%	10%	6%
3%	26%	14%	9%
5%	40%	23%	14%
10%	65%	41%	27%

Falsos Positivos

Si se hacen cinco mamografías consecutivas en un programa de cribado cada 2 años, hasta la mitad (50%) de las mujeres pueden tener un falso positivo.

Fuente: Gervas J, Pérez Fernández M. Sano y salvo (y libre de intervenciones médicas innecesarias)

Falsos negativos

2 de cada 1000 mujeres que se realizan mamografías de cribado tienen cáncer de mama y no son diagnosticadas.

Harding Center for Risk Literacy

Breast Cancer Early Detection



by mammography screening

Numbers for women aged 50 years or older who participated in screening for 10 years

	2,000 women without screening	2,000 women with screening
Benefits		
How many women died from breast cancer?	8	7*
How many women died from all types of cancer?	43	43
Harms		
How frequent were false diagnoses, often associated with months of waiting for all-clear?	—	200
How many women were additionally diagnosed and operated** for breast cancer?	—	10

* This means that about 7 out of 2,000 women (50+ years of age) with screening died from breast cancer within 10 years – one less than without screening.

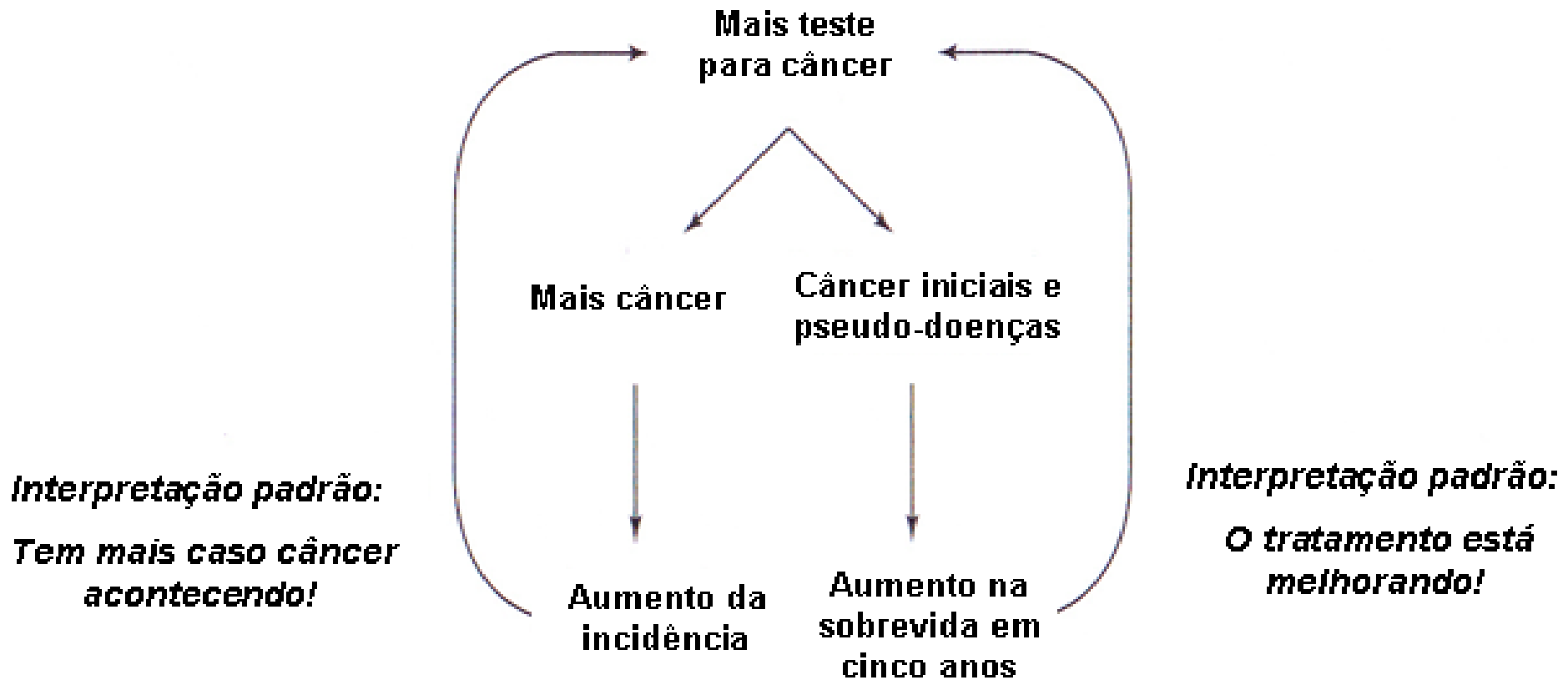
** Complete or partial breast removal

Source: Gøtzsche, PC, Nielsen, M (2011). *Cochrane database of systematic reviews* (1): CD001877.

Where no data for women above 50 years of age are available, numbers refer to women above 40 years of age.

Fuente: <http://www.harding-center.com/index.php/en/what-you-should-know/facts-boxes/mammography>

Efeito dos Vieses



La sobrevivida a 5 años

Observemos con un poco mas de detalle...

Sobrevida a 5 años



$$\text{Sobrevida a los 5 años} = 400/1000 = 40\%$$

Sobrevida a 5 años luego de screening



Sobrevida a los 5 años = $1400 / 2000 = 70\%$

La agenda preventiva
conspira contra la agenda
curativa ocupando y
consumiendo recursos.

Hart JT. The Inverse Care Law. Lancet 1971

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