

MAMMOGRAPHY AND BREAST CANCER SCREENING: THE NEW GUIDELINES

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THE BREAST CANCER SCREENING DEBATE



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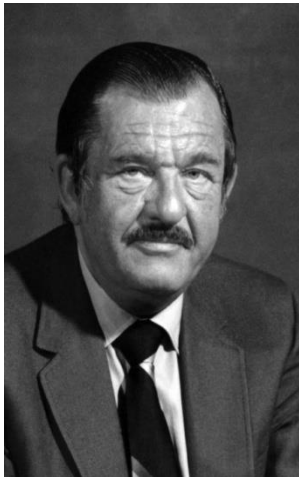


EXCEPTIONS TO THE RULE

- Lifetime risk of breast cancer > 20 to 25%
 - ❑ Known genetic predisposition (e.g. BRCA)
 - ❑ Strong family history
 - ❑ Early therapeutic chest irradiation
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NEW YORK HEALTH INSURANCE PLAN TRIAL

First RCT screening; 62,000 women ages 40-64



Michael Shimkin

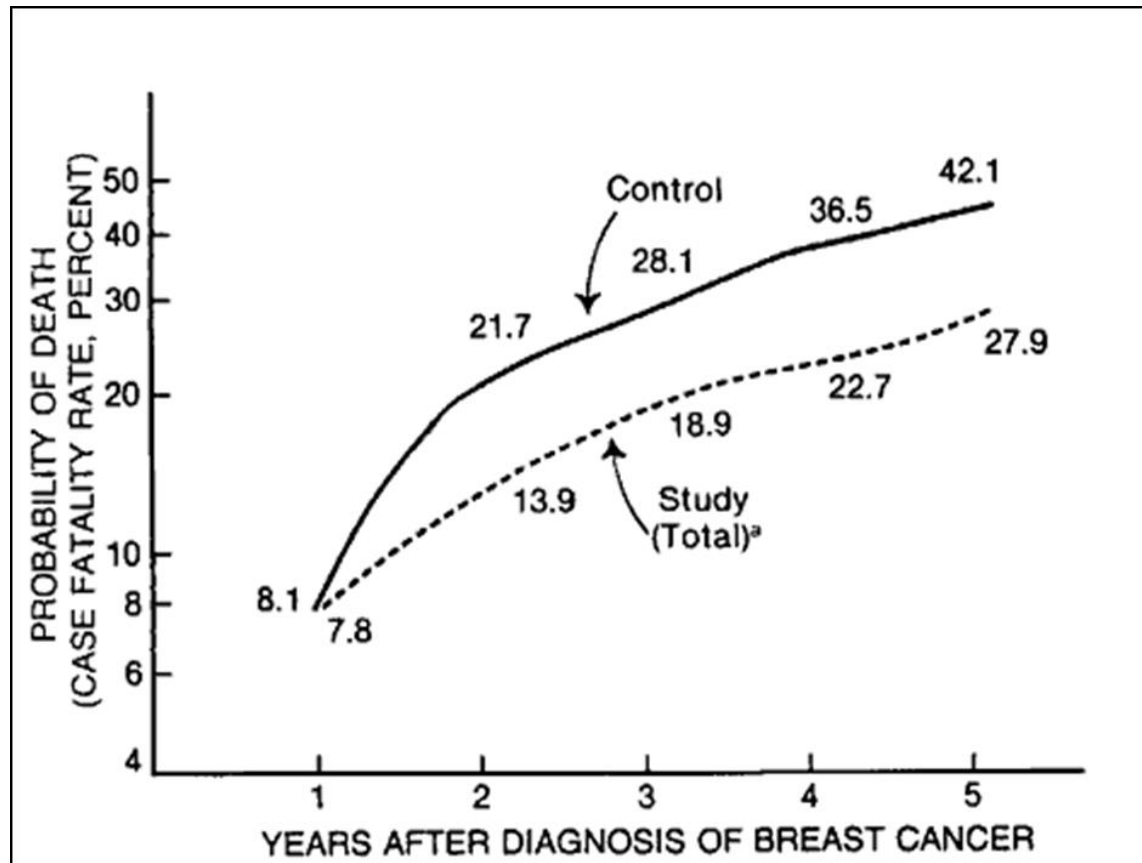


Samuel Shaprio



Phillip Strax

NEW YORK HIP TRIAL



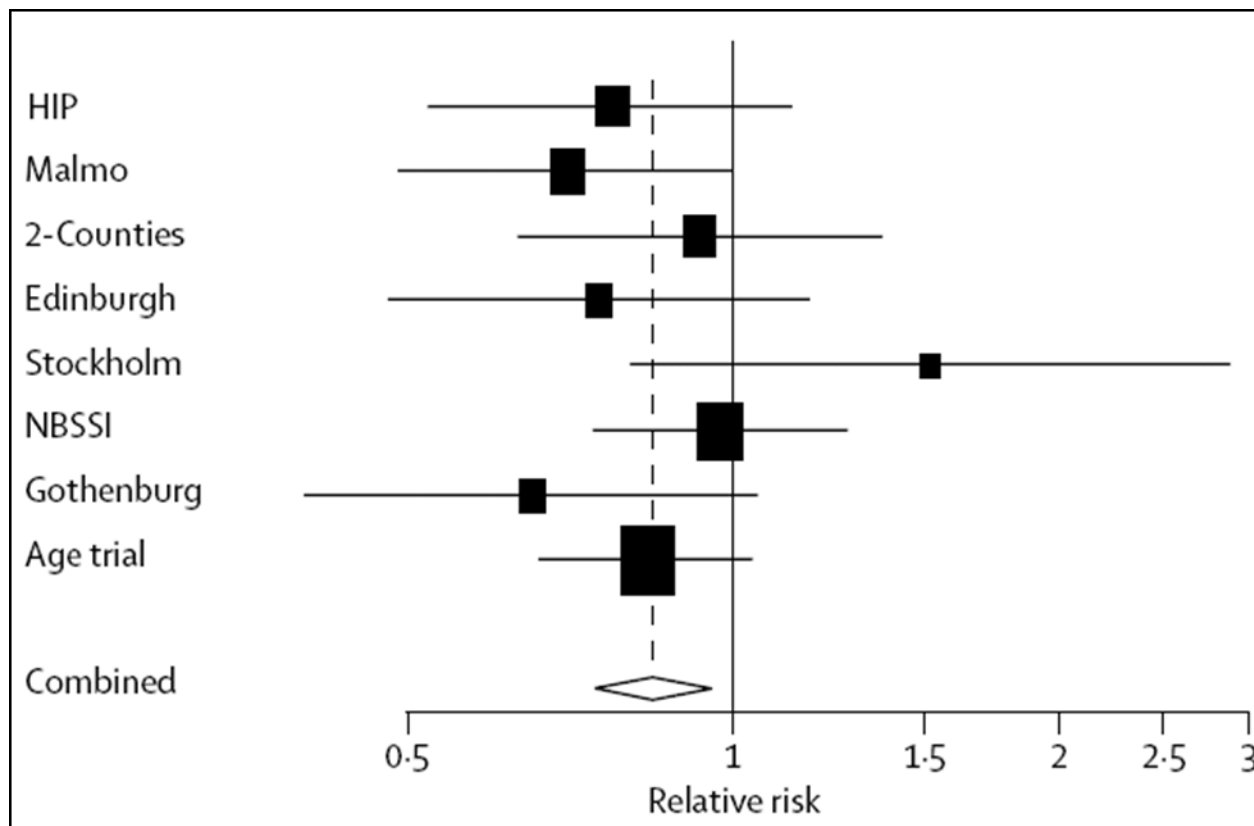
HISTORY OF MAMMOGRAPHY



BREAST CANCER SCREENING MOVEMENT

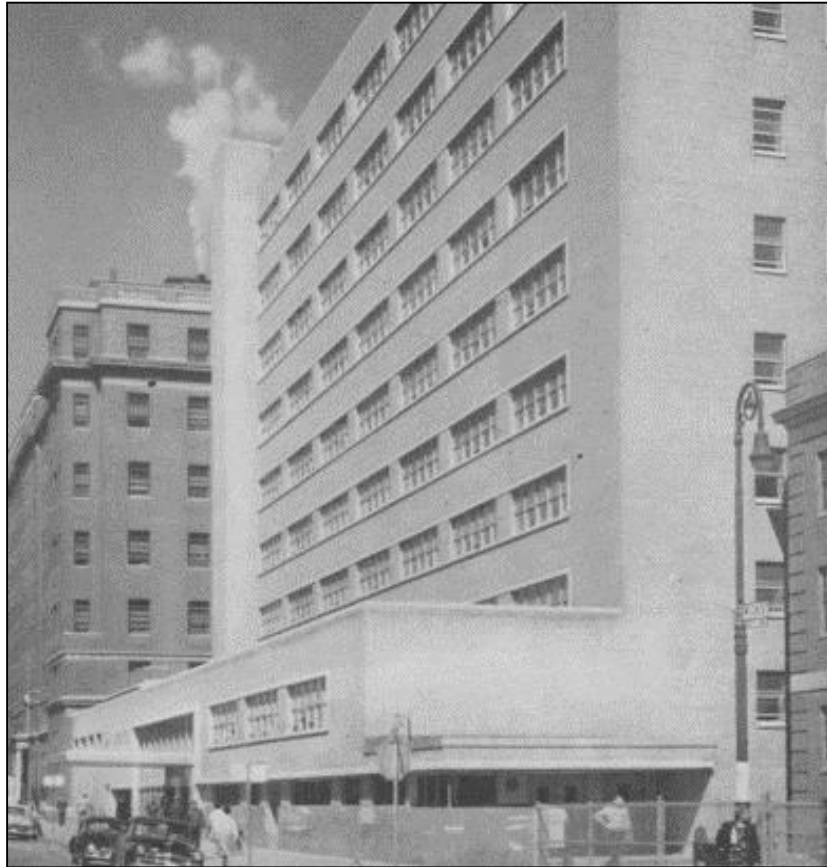


EFFECT OF MAMMOGRAPHY AGE 40-49



15-23% reduction in mortality; however, includes women continuing screening in their 50s

IMPACT OF SCREENING



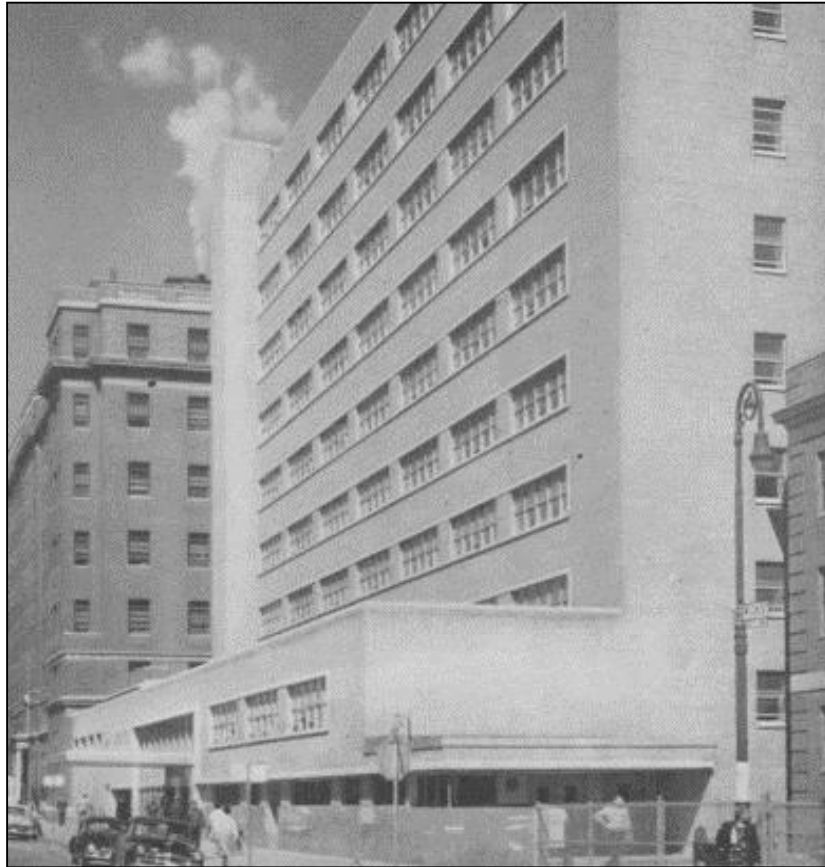
Harlem Hospital, 1959

1964-1986: 5YS Breast Cancer

- Harlem Hospital: 39%
- SEER White: 73%
- SEER Black: 69%

Large majority presented with advanced stage disease

IMPACT OF SCREENING



Harlem Hospital, 1959

1964–1986

Stage	n (437)	%
0	0	0
I	27	6
II	195	45
III	171	39
IV	44	10

- Five-year survival: 39%

IMPACT OF SCREENING



Harlem Hospital Today

1995–2000

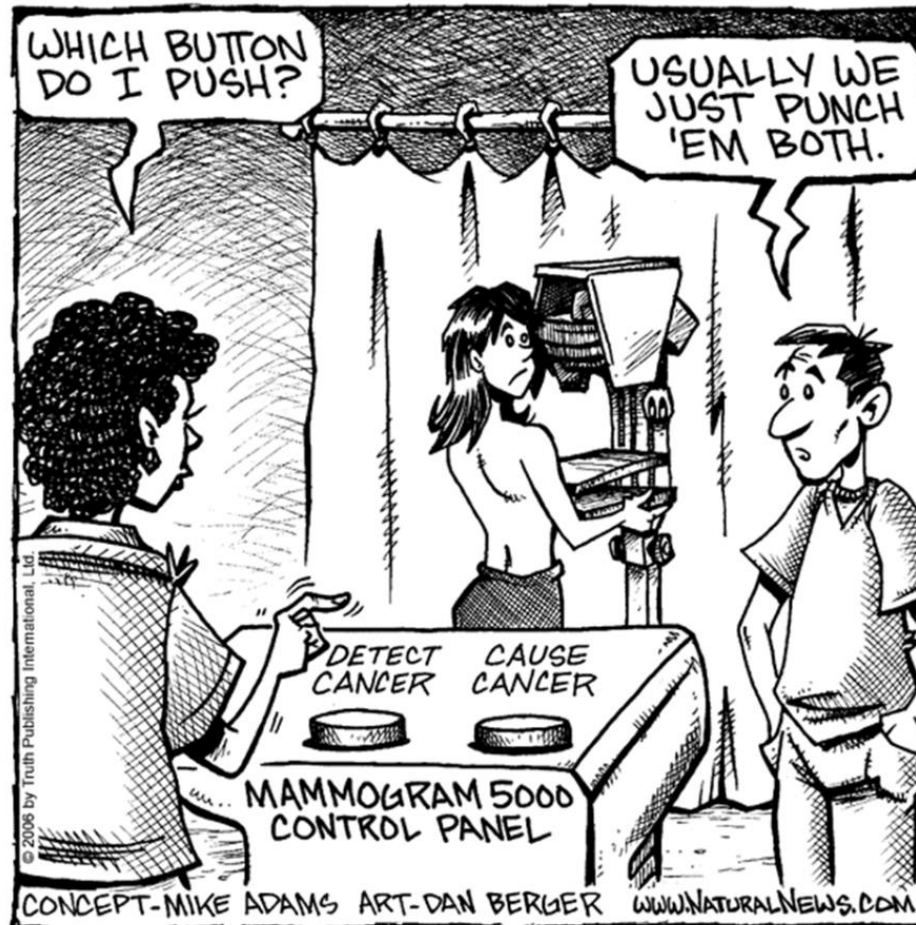
Stage	n (305)	%
0	36	12
I	87	29
II	116	38
III	44	14
IV	22	7

- Five-year survival: 70%

ADVANCES IN SCREENING



RADIATION RISKS?



RISK OF RADIATION

- Annual screening 40-55 and then biennial to age 74
- Estimated risk of causing cancer is 86 per 100,000 (0.086%)
- Estimated risk of death 11 per 100,000 (0.011%)

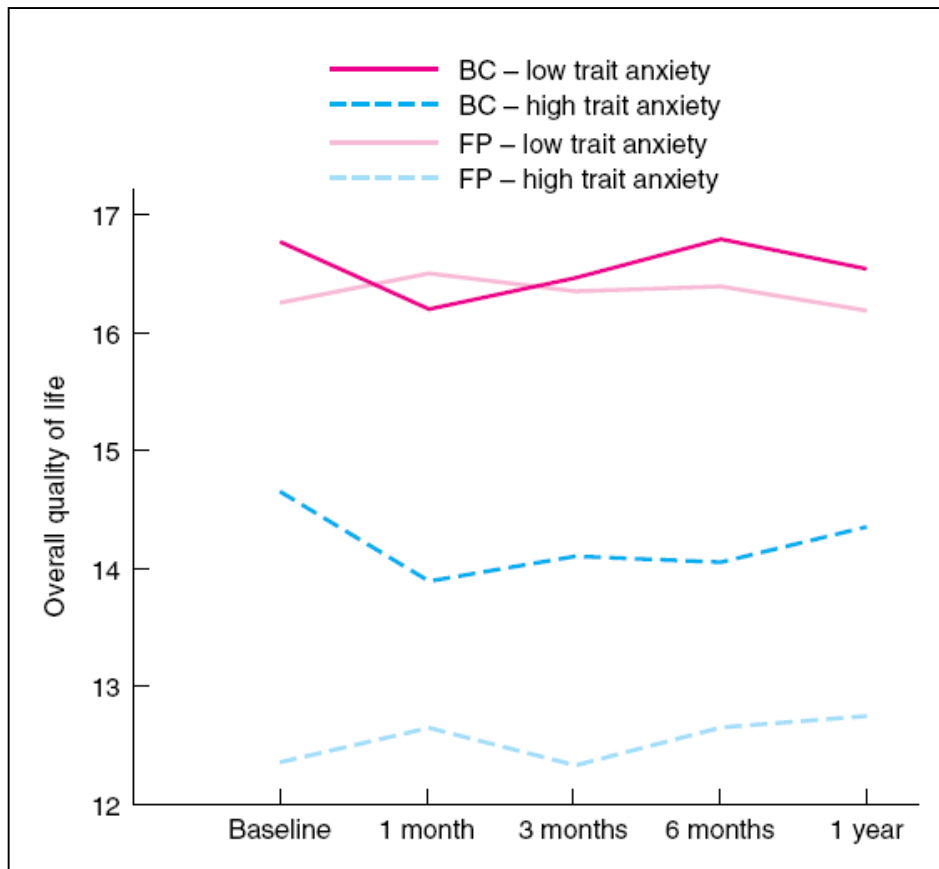
Ratio of benefit to risk

- 4.5-to-1 for lives saved
- 9.5-to-1 for life-years saved

RISKS OF SCREENING

- **Stress** and **Anxiety** from call backs
 - Biopsy and interventions for **False Positive** findings
 - **Over treatment** of “indolent” cancers
 - **Limitations** of mammography in **younger women**
-

STRESS AND ANXIETY



OVER DIAGNOSIS

- Cochrane Review
- For every 2000 women screened over a 10 years
 - ❑ 1 life prolonged
 - ❑ 10 healthy women treated unnecessarily
 - ❑ 200+ women psychological distress false positive

IMPACT OF SCREENING ON OUTCOMES

TABLE IV. Age- and Year-Adjusted Odds Ratios for Adverse Tumor Characteristics According to Screening Participation (1996–2012) AGES 40–49

	Odds ratios ^a (95% confidence interval)		
	Screened	Non-screened	<i>P</i> -value
Invasive (vs. in situ)	1.00 (Ref)	4.85 (3.40, 6.91)	<0.0001
Late stage	1.00 (Ref)	2.77 (2.20, 3.48)	<0.0001
Large size	1.00 (Ref)	3.70 (2.90, 4.73)	<0.0001
High grade (vs. low/intermediate)	1.00 (Ref)	1.33 (1.04–1.69)	0.02
ER negative	1.00 (Ref)	1.50 (1.11, 2.03)	0.01
Any nodes removed	1.00 (Ref)	1.89 (1.44, 2.48)	<0.0001
Regional nodes removed	1.00 (Ref)	1.94 (1.54–2.44)	<0.0001
Nodes positive	1.00 (Ref)	2.48 (1.97, 3.13)	<0.0001
Mastectomy	1.00 (Ref)	1.28 (1.00, 1.62)	0.05

^aAll analysis adjusted for year and age.

SUMMARY: SCREENING MAMMOGRAPHY

- Reduced mortality ✓
- Extent of lives saved ?
- Harms of screening X
- Impact on quality of life ?



OVERVIEW OF THE ACS RECOMMENDATION



New Breast Cancer Screening Guideline *for women with average risk*



AGE 40

Talk with your doctor about when to begin screening. **Women should have the opportunity to begin screening** if they choose.



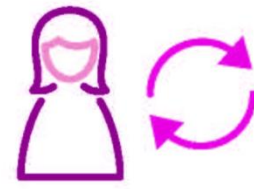
AGE 45

Begin **yearly mammograms** by age 45.



AGE 55

Transition to mammograms **every other year** at age 55 or continue with annual mammography, depending on your preferences.



AGE 55 +

Continue to have regular mammograms for as long as you're in good health.

ACS AND USPSTF 2015 BREAST CANCER SCREENING GUIDELINES

Mammography Screening Parameter	ACS	USPSTF
Starting age (y)	45	50
Screening frequency	Annually to age 54 y, then biennially	Biennially, beginning at age 50 y
Stopping age (y)	As long as in good health and a life expectancy of at least 10 y	75
Total lifetime mammograms if screening continued to age 74 y (n)	20	13
Lifetime risk of dying of breast cancer (%)	1.8-1.9	2.0

Lifetime risk of dying of breast cancer with no screening is 2.7%.

CLINICAL BREAST EXAM



THANK YOU

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