

U.S. Preventive Services Task Force



New Recommendations on Screening
for Breast Cancer

Steven H. Woolf, MD, MPH

USPSTF



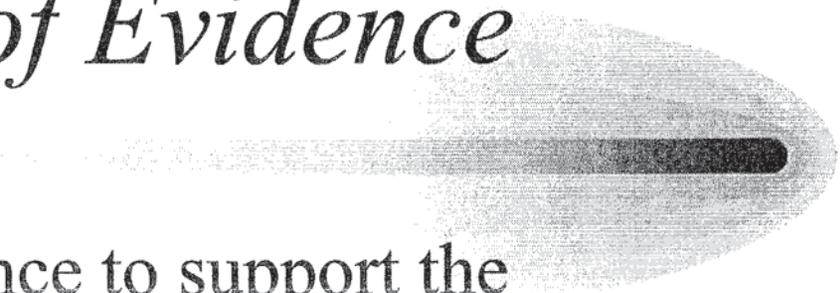
- Established in 1984 by PHS
- Publishes *Guide to Clinical Preventive Services*
- Develops evidence-based recommendations on hundreds of clinical preventive services
- Disciplined evidence-based methods
- Systematic reviews conducted by EPCs
- Panel composed of generalists with expertise in analytic sciences
- Extensive peer and partner review

Prior USPSTF Recommendations (1996)



- A** Mammography every 1-2 yrs age 50-69
- C** Mammography among women age 40-49 and age 70 and older
- C** Clinical breast examination alone
- C** Teaching breast self-examination

Old Rules of Evidence



- A** There is good evidence to support the recommendation that the condition be specifically considered in a periodic health examination
- B** There is fair evidence to support...
- C** There is insufficient evidence to recommend for or against the inclusion of the condition in a periodic health examination

New Rules of Evidence

Quality of Overall Evidence of Effectiveness	Estimate of Net Benefit (Benefit Minus Harms)			
	Substantial	Moderate	Small	Zero/Negative
Good	A	B	C	D
Fair	B	B	C	D
Poor	I – Insufficient Evidence			

For More Details

- *American Journal of Preventive Medicine* 2001;20(3S). (April 2001 issue)
- US Preventive Services Task Force website (www.ahcpr.gov/clinic/uspstfix.htm)

Methods article:

- Harris RP, Helfand M, Woolf SH, et al. Am J Prev Med 2001;20(3S):21-35.

Breast Cancer Screening



- Review initiated as update in 1999
- Systematic review and meta-analysis performed by Oregon Health and Sciences University (Linda Humphrey, Mark Helfand, et al.)

New Recommendations

- B** The USPSTF recommends screening mammography, with or without clinical breast examination (CBE), every 1-2 years for women aged 40 and older
- I** The USPSTF concludes that the evidence is insufficient to recommend for or against routine CBE alone
- I** The USPSTF concludes that the evidence is insufficient to recommend for or against teaching or performing routine breast self-examination

Science Base

- Across 8 trials, 2-32% reduction in breast cancer mortality
- Summary relative risk in our meta-analysis:
 - 0.77 (0.67-0.89) 7 trials with women \geq age 50
 - 0.75 (0.63-0.89) Eliminating Edinburgh and CNBSS
 - 0.74 (0.59-0.93) 4 trials of mammography alone
 - 0.83 (0.64-1.04) Women age 40-49 at entry (6 trials)
 - 0.74 (0.60-0.92) Age 40-49, Edinburgh and CNBSS-1 excluded

Inclusion of Women Age 40-49

- Five of 7 trials now show or suggest a benefit with longer follow-up
- Relative risk reduction similar
- Absolute risk reduction functions as continuum
- NNS (invited):
 - Overall 972 (95% CI = 686-2017)
 - Age 40-49 1,005 (95% CI = 630-2976) if CNBSS-1 excluded
1547 if CNBSS-1 included

Gotzsche and Olsen (Cochrane)

- Imperfections in trials
- Different criteria for “fatal” flaws
- USPSTF examined flaws and considered whether they would introduce biases of sufficient magnitude and duration to account for observed results
- Details in forthcoming paper

“Downgrading” to B Recommendation

Quality of Overall Evidence of Effectiveness	Estimate of Net Benefit (Benefit Minus Harms)			
	Substantial	Moderate	Small	Zero/Negative
Good	A	B	C	D
Fair	B	B	C	D
Poor	I – Insufficient Evidence			

Clinical Breast Examination

- Inadequate evidence evaluating CBE in isolation

Breast Self-Examination

- Three trials examined closely by USPSTF
- None shows benefit, but concerns about type II error if conclusion reached without longer follow-up
- Evidence of harms demonstrated by trials

Further Background on Recommendations

- www.ahrq.gov/clinic/3rduspstf/breastcancer/brcanrr.htm
- Forthcoming papers:
 - Systematic review of evidence: Humphrey et al.
 - Analysis of design flaws in trials