When To Stop Screening

Breast, Cervical and Colorectal Cancer

Stacey Robert, MD
WellSpan York Hospital Family Medicine Residency Program

I have no financial disclosures.

Objectives

- To review recommendations for when to stop screening for cervical cancer, breast cancer, and colon cancer in patients as they age
- To reconcile guidelines from various organizations
- To review some decision making tools to help guide our patients

Who are the players?

- USPSTF
- ACS
- ACOG
- ASG
- AGS

USPSTF Grading

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

Levels of Certainty Regarding Net Benefit

Level of Certainty*	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by such factors as: • The number, size, or quality of individual studies. • Inconsistency of findings across individual studies. • Limited generalizability of findings to routine primary care practice. • Lack of coherence in the chain of evidence. As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: • The limited number or size of studies. • Important flaws in study design or methods. • Inconsistency of findings across individual studies. • Gaps in the chain of evidence. • Findings not generalizable to routine primary care practice. • Lack of information on important health outcomes. More information may allow estimation of effects on health outcomes.

*The USPSTF defines certainty as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Screening in the US

- Healthy older patients are often under-screened.
- Older patients who are poor in health are often over-screened.
- In general, we should look for an individualized approach that takes into account life expectancy, benefit/harm of screening and patient preferences.

7

Life expectancy

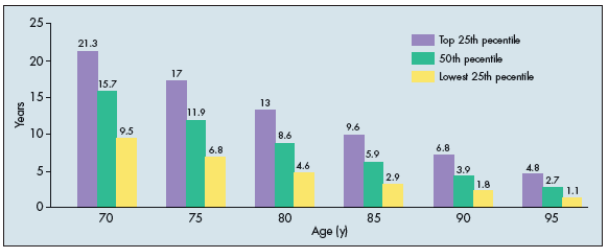


Figure – Upper, middle, and lower quartiles of life expectancy for women at selected ages are shown here.

(From Welter IC, Covinsky KE. JAMA. 2001.)

8

Cervical Cancer Screening

USPSTF

- Recommends against screening women over the age of 65 years who have adequate prior screening and are not otherwise at high risk for cervical cancer screening (no CIN 2 or 3)

9

Cervical cancer screening….

- What is “adequate prior screening”?
  - ACS/ASCCP/ASCP define this as 3 consecutive negative cytology results or 2 negative HPV results within 10 years before cessation of screening
  - With the most recent test occurring within 5 years

10

Cervical cancer screening…

- What if they have a history of a high grade pre-cancerous lesion though?
  - Routine screening should occur for at least 20 years after spontaneous regression or appropriate treatment of the lesion
  - EVEN if they are older than 65 years

11

Cervical cancer screening…

- What if the woman has a new partner after age 65?
  - Screening should not resume after cessation

12

Cervical cancer screening…

- Is there anyone else who should be screened after age 65 years?
  - Those who do not have accurately accessed or documented screening (other countries, minorities, limited access)
  - In utero DES exposure
  - Immunocompromised women

13

Case #1

- 60 yo female comes in for annual physical with all negative Paps and negative HPV and says:

But doc, I've been with the same man for 35 years, he has only been with me. Do I really need this again? I hate these pelvic exams.

14

What do you say?

1. Yes you do. (Perform screening.)
2. But you can celebrate – this is the last one!
3. If you liked these exams, I would refer you to a psychiatrist or call the local medical school so you can be paid for them and teach 2nd year students how to do them.

15

Case #2

- 67 yo female, last Pap 6 years ago, all have been negative

Screen

(and be done)

16

Case # 3

- 67 yo Cambodian female who has been in the US for 10 years. Last pap was in a clinic in Philadelphia around 4 years ago. No known history of CIN – “everything was normal”

Screen

And get records

17

Case #4

- 67yo treated for HGSIL 18 years ago, all results negative since then, last pap 3 years ago

Screen

- What if she had been treated 21 years ago?

Don’t screen

18

Case #5

- 65yo with a history of TAH for DUB

  Question: Did they remove the cervix?

  If so, then no screening

19

Case #6

- 67yo HIV + with low viral load and normal CD4 count, no history of abnormal pap smears

Screen

20

How about the HPV vaccination?

- For now, keep screening. We don't have enough long-term data to tell us when to stop screening.

21

Breast Cancer Screening

- USPSTF
  - Insufficient evidence for screening for breast cancer in women age 75 or older

22

Breast Cancer Screening

- ACS
  - Stop when life expectancy is less than 10 years
    - Qualified recommendation
- American Geriatric Society
  - Consider screening women under age 85 with at least 5 years + life expectancy
  - If over 85, screen if they have excellent functional status or who feel strongly about benefits

23

Breast Cancer Screening

- ACOG Practice Bulletin 2017
  - Screen up to age 75 for average risk women, shared decision making after age 75 taking into account a woman's health status and longevity
  - Don't screen women who would not seek further evaluation or treatment
  - Consider screening those who have a greater than 50% probability of living 10 years or more

24

Why?

- None of the major RCT's involving breast cancer screening included women over the age of 75, few enrolled even 70-74 yo's
- Of course, there are some benefits of screening for breast cancer based on observational studies.

25

Benefits

- There is lower breast cancer mortality over the age of 75 but the reduction wasn't statistically significant after the age of 85 and none for those with severe comorbidity.
- There is detection at earlier stages which may result in reduced morbidity from advanced disease.
- There are less false-positives in older women.
- Reassurance for the patient.

26

But…

- Benefits of screening occur only several years after the actual screening test – whereas the % of who survive long enough after to benefit decreases with age
- Women of older age are at greater risk for dying of other conditions

27

Harms

- There are harms associated with screening:
  - Detecting a cancer that won't shorten her life
    - But over diagnosis can lead to over treatment that may be harmful
  - Detecting a tumor that may not become clinically relevant or important in her lifespan

28

Why?

- Breast cancer biology changes in older women
  - Interval between detection and clinically evident breast cancer
    - Age 50 – 2 years
    - Age 80-84 – 9 years
  - Less aggressive tumors and metastatic spread is slower
    - Only 28-39% of DCIS cases are thought to develop into invasive breast cancer in a 10-15 yr follow up

29

Why?

- Life expectancy

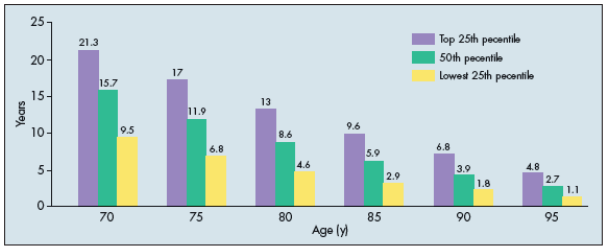


Figure – Upper, middle, and lower quartiles of life expectancy for women at selected ages are shown here.

(From Wolfer JC, Covinsky KE. JAMA. 2001.)

30

Why?

- Competing risks
  - Women with 3 or more comorbidities are 20x more likely to die of a cause of other than breast cancer within 3 years

  (HTN, DM, MI, CVA, respiratory disease, other cancers)
  - Only 2% of females over age 80 die of breast cancer

31

Why?

- Benefits of treatment are unknown
  - Greater morbidity
  - Increased toxicity (chemo related mortality - 1.5% over the age of 65 vs 0.2% in 50 yo)
  - QOL from side effects of chemo, tamoxifen, aromatase inhibitors – these include cognitive decline, fatigue, breast pain, bone pain, arthritis, etc)

32

Any studies?

- Smith-Bindman did a retrospective look at 690K Medicare beneficiaries in California (ages 66-79), screened and not screened
  - 43% reduction in risk of metastatic disease in the screened group
- Mandelblatt – small benefit to screening over the age of 69 which diminished as they neared age 80, but that benefit was halved in the presence of major comorbidity

33

- Kerlikowske did a cost effectiveness analysis when taking into account other health factors
  - Small benefit in those with a higher BMD, no benefit in those with a lower BMD
- Observational and cost-effectiveness studies have helped guide multidisciplinary decision-making teams

34

Is there anything that can help us decide with a patient?

- Yes
  - ePrognosis
  - https://eprognosis.ucsf.edu/
  - Series of questions asking about general health, other comorbidities and risk factors, functional status

35

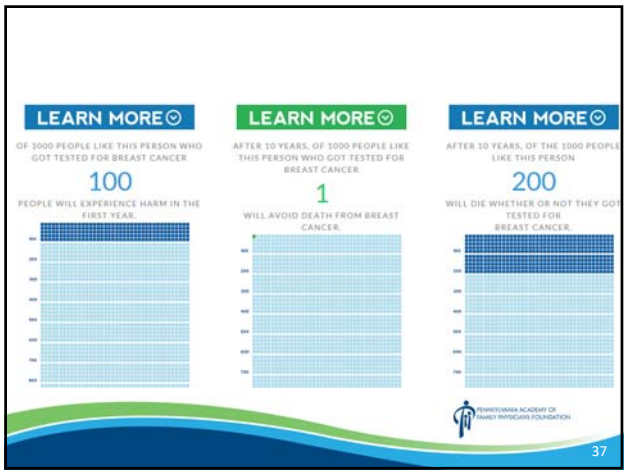
RESULTS

SCREENING FOR BREAST CANCER IS MORE LIKELY TO HELP THIS PERSON THAN TO HARM THEM.

THUS, SCREENING WOULD GENERALLY BE RECOMMENDED.

VIEW HARMS VIEW BENEFITS

36



Colon Cancer Screening

- USPSTF
  - Age 76-85 for average risk patient: if previously screened regularly, recommends against routine screening; there may be considerations for individual screening (Grade C)
  - >85: recommends against screening (Grade D)
  - Remember - insufficient evidence for CT colonography and fecal DNA testing

38

Colon Cancer Screening

- ACS
  - Individualize for age 76-85 – based on patient preference, life expectancy, health status and prior history (qualified recommendation)
  - Discourage in those older than 85

39

Colon Cancer Screening

- American Gastroenterology Society
  - Recommends discontinuation when persons who are UTD with screening with prior negative screening (esp colonoscopy) reach the age of 75 or have < 10 years of life expectancy
  - Persons without prior screening should be considered for screening up to age 85, depending on comorbidities

40

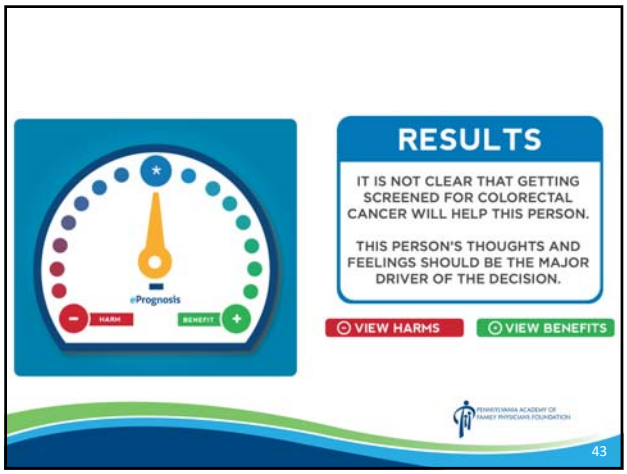
Risks of screening the elderly

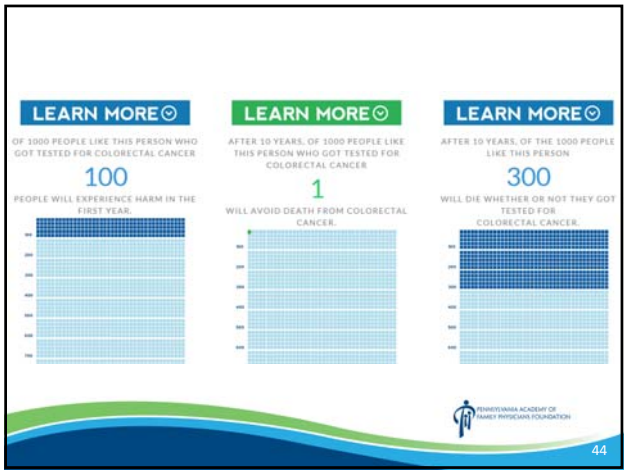
- Prep for colonoscopy – electrolyte imbalances, frequent toileting and falls
- Sedation (benzo's esp) – slow to clear; aspiration
- Perforation – more likely esp in women
- Bleeding – less tolerated

41

- ePrognosis for colon cancer as well

42





Lung Cancer Screening

- Stop at age 80

45

Prostate Cancer

- USPSTF – Recommends against PSA-based screening in all men regardless of age
- American Urologic Society – shared decision making age 55-69 and no screening in men aged 70+ or in those who have a life expectancy less than 15 years.

46

BEST PRACTICES IN PREVENTIVE MEDICINE: RECOMMENDATIONS FROM THE CHOOSING WISELY CAMPAIGN

RECOMMENDATION	*SPONSORING ORGANIZATION*
Do not recommend cancer screening in adults with a life expectancy of less than 10 years.	Society of General Internal Medicine
Do not recommend screening for breast, colorectal, or prostate cancer if life expectancy is estimated to be less than 10 years.	Society for Post-Acute and Long-Term Care Medicine
Do not screen women older than 65 years for cervical cancer who have had adequate prior screening and are not otherwise at high risk of cervical cancer.	American Academy of Family Physicians
Do not perform screening for cervical cancer in low-risk women 65 years or older and in women who have had a total hysterectomy for benign disease.	American College of Preventive Medicine
Avoid colorectal cancer screening tests in asymptomatic patients with a life expectancy of less than 10 years and no family or personal history of colorectal neoplasia.	American College of Surgeons
Do not perform prostate-specific antigen testing for prostate cancer screening in men with no symptoms of the disease when they are expected to live less than 10 years.	American Society of Clinical Oncology

47

Talking points about stopping screening

- Time to start, time to stop
- There is a risk of screening, esp in patients with other comorbidities
- Remind of short term preventative measures for things that are more likely to cause decreased QOL – recommend exercise, screening for incontinence, depression screening, fall prevention, polypharmacy

48

Summary

- In general, we should take into account life expectancy, risk of screening, and patient preference
- Cervical cancer – until age 65
- Breast Cancer – until age 75, possibly after that
- Colon Cancer – until age 75, possibly between 75-85, not after 85
- Use decision making tools with your patients to review benefits and harms

49

References

- USPSTF Clinical Guidelines
- American Cancer Society Guidelines
- American College of Obstetrics and Gynecology Practice Bulletins
- American Gastroenterology Society Guidelines
- American Geriatric Society Guidelines
- American Academy of Family Physicians Guidelines
- Kotwal, et al. Cancer Screening in the Elderly: A Review of Breast, Colorectal, Lung and Prostate Screening. Cancer J. 2017, July-Aug; 23(4): 246-253.
- Salzman, B et al. Cancer Screening in Older Patients. AFP. 2016, Apr; 93(8): 659-667.
- Schonberg, M. Breast Cancer Screening: At What Age to Stop? Consultant: May 2010; 50(5).
- Braithwaite, D et al. Optimal Breast Cancer Screening Strategies for Older Women: Current Perspectives. Clin Interv Aging. 2016; 11:111-125

50

Questions?

51