Cancer Screening Guidelines

VERONICA BROHM, DO
PROGRAM DIRECTOR, LVHN FAMILY MEDICINE RESIDENCY
POFPS - AUGUST 11, 2019

#POFPS44

Disclosures

None

#POFPS44

Objectives

Identify resources for cancer screening guidelines

Discuss the most up to date cancer screening guidelines through the United States Preventative Services Task Force as well as rationale behind them

To acknowledge similarities and differences between aforementioned guidelines vs patient advertisements

Recognize additional barriers to cancer screening completion

#POFPS44

Overview

Breast Cancer
BRCA testing
Cervical Cancer
Colorectal Cancer
Lung Cancer
Prostate Cancer
Skin Cancer
Other

#POFPS44

Why this lecture?

Healthy People 2020

#POFPS44

American Cancer Society
American Urological Association
ACOG The American College of Obstetricians and Gynecologists
AAD American Academy of Dermatology 1938
ASGE American Society for Gastrointestinal Endoscopy
U.S. Preventive Services Task Force
ACG American College of Gastroenterology

#POFPS44

USPSTF: United States Preventative Services Task Force

#POFPS44

USPSTF Grading System

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	Note: The following statement is undergoing revision. Clinicians may provide this service to selected patients depending on individual circumstances. However, for most individuals without signs or symptoms there is likely to be only a small benefit from this service.	Offer or provide this service only if other considerations support the offering or providing the service in an individual patient.
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.

#POFPS44

Breast Cancer: Mammography

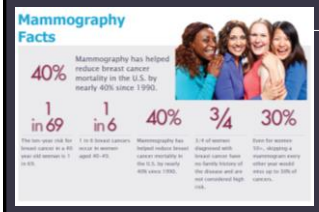
Women aged 50 to 74 years:
- The USPSTF recommends biennial screening mammography for women aged 50 to 74 years – Grade B

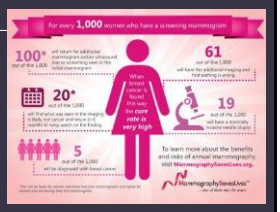
Women aged 40 to 49 years:
- The decision to start screening mammography in women prior to age 50 years should be an individual one. Women who place a higher value on the potential benefit than the potential harms may choose to begin biennial screening between the ages of 40 and 49 years – Grade C

Women, 75 Years and Older
- The USPSTF concludes that the current evidence is insufficient to assess the benefits and harms of screening mammography in women 75 years and older – I statement

Women with dense breasts
- The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of adjunctive screening for breast cancer using breast ultrasonography, magnetic resonance imaging, DBT, or other methods in women identified to have dense breasts on an otherwise negative screening mammogram – I statement

#POFPS44





#POFPS44

Breast Cancer: Mammography

Table 1. Breast Cancer Deaths Avoided (95% CI) per 10,000 Women Screened by Repeat Screening Mammography Over 10 Years: Data From Randomized, Controlled Trials*

	Ages 40–49 y	Ages 50–59 y	Ages 60–69 y	Ages 70–74 y
Breast cancer deaths avoided	3 (0–9)	8 (2–17)	21 (11–32)	13 (0–32)

* All women did not have 100% adherence to all rounds of screening offered in the randomized, controlled trials.

Table 4. Lifetime Benefits and Harms of Annual Versus Biennial Screening Mammography per 1000 Women Screened: Model Results Compared With No Screening*

Variable	Ages 50–74 y, Annual Screening	Ages 50–74 y, Biennial Screening
Fewer breast cancer deaths, n	9 (5–10)	7 (4–8)
Life-years gained, n	145 (104–180)	122 (75–154)
False-positive tests, n	1796 (1706–2465)	953 (830–1325)
Unnecessary breast biopsies, n	228 (219–317)	146 (121–205)
Overdiagnosed breast tumors, n	25 (12–68)	19 (11–34)

* Values reported are medians (ranges).

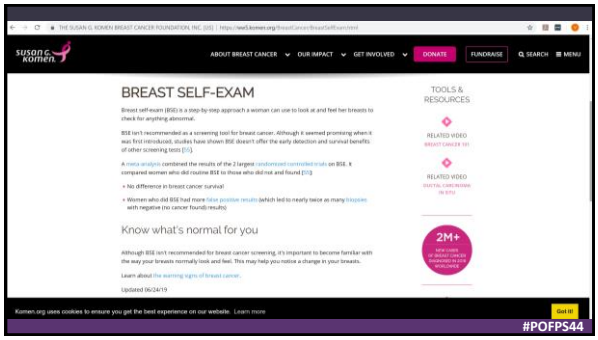
#POFPS44

Breast Cancer: Self Breast Exams & Clinical Breast Exams

All Women
- The USPSTF recommends against teaching breast self-examination (BSE) – Grade D

Women, 40 Years and Older
- The USPSTF concludes that the current evidence is insufficient to assess the balance benefits and harms of clinical breast examination (CBE) beyond screening mammography in women 40 years or older – I statement

#POFPS44



BRCA Screening

Women who have Family Members with Breast, Ovarian, Tubal, or Peritoneal Cancer

- The USPSTF recommends that primary care providers screen women who have family members with breast, ovarian, tubal, or peritoneal cancer with 1 of several screening tools designed to identify a family history that may be associated with an increased risk for potentially harmful mutations in breast cancer susceptibility genes (*BRCA1* or *BRCA2*). Women with positive screening results should receive genetic counseling and, if indicated after counseling, BRCA testing - Grade B

#POFPS44

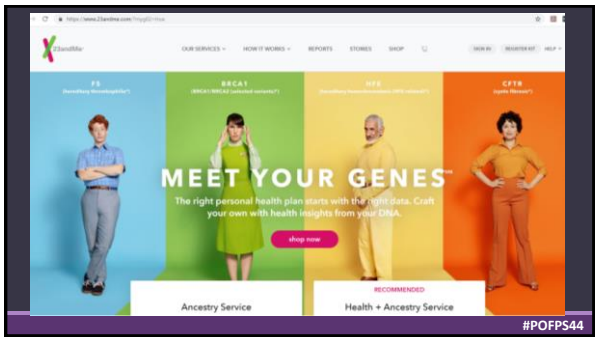
BRCA Screening – FHS 7

Table 5. FHS-7*

Did any of your first-degree relatives have breast or ovarian cancer?
Did any of your relatives have bilateral breast cancer?
Did any man in your family have breast cancer?
Did any woman in your family have breast and ovarian cancer?
Did any woman in your family have breast cancer before age 50 y?
Do you have 2 or more relatives with breast and/orovarian cancer?
Do you have 2 or more relatives with breast and/or bowel cancer?

* From reference [78]. One positive response initiates referral.

#POFPS44



#POFPS44

Cervical Cancer

Women 21 to 65

- The USPSTF recommends screening for cervical cancer every 3 years with cervical cytology alone in women aged 21 to 29 years. For women aged 30 to 65 years, the USPSTF recommends screening every 3 years with cervical cytology alone, every 5 years with high-risk human papillomavirus (hrHPV) testing alone, or every 5 years with hrHPV testing in combination with cytology (cotesting) – Grade A

Women older than 65 years

- The USPSTF recommends against screening for cervical cancer in women older than 65 years who have had adequate prior screening and are not otherwise at high risk for cervical cancer.– Grade D

Women younger than 21

- The USPSTF recommends against screening for cervical cancer in women younger than age 21 years – Grade D

#POFPS44

Cervical Cancer

Women who have had a hysterectomy

- The USPSTF recommends against screening for cervical cancer in women who have had a hysterectomy with removal of the cervix and who do not have a history of a high-grade precancerous lesion (cervical intraepithelial neoplasia [CIN] grade 2 or 3) or cervical cancer– Grade D

#POFPS44

Colorectal Cancer

Adults aged 50 to 75 years

- The USPSTF recommends screening for colorectal cancer starting at age 50 years and continuing until age 75 years. The risks and benefits of different screening methods vary – Grade A

Adults aged 76 to 85 years

- The decision to screen for colorectal cancer in adults aged 76 to 85 years should be an individual one, taking into account the patient's overall health and prior screening history – Grade C
  - Adults in this age group who have never been screened for colorectal cancer are more likely to benefit.
  - Screening would be most appropriate among adults who 1) are healthy enough to undergo treatment if colorectal cancer is detected and 2) do not have comorbid conditions that would significantly limit their life expectancy.

#POFPS44

Colorectal Cancer

Table. Characteristics of Colorectal Cancer Screening Strategies[a]

Screening Method	Frequency[b]	Evidence of Efficacy	Other Considerations
Stool-Based Tests			
gFOBT	Every year	RCTs with mortality end points: High-sensitivity versions (eg, Hemoccult SENSA) have superior test performance characteristics than older tests (eg, Hemoccult II)	Does not require bowel preparation, anesthesia, or transportation to and from the screening examination (test is performed at home)
FIT[c]	Every year	Test characteristic studies: Improved accuracy compared with gFOBT Can be done with a single specimen	Does not require bowel preparation, anesthesia, or transportation to and from the screening examination (test is performed at home)
FIT-DNA	Every 1 or 3 y[d]	Test characteristic studies: Higher sensitivity than FIT, resulting in more false-positive results, more diagnostic colonoscopies, and more associated adverse events per screening test Improved sensitivity compared with FIT per single screening test	There is insufficient evidence about appropriate surveillance intervals and outcomes of screening after a negative diagnostic colonoscopy; may potentially lead to overly intensive surveillance due to provider and patient concerns over the genetic component of the test
Direct Visualization Tests			
Colonoscopy[e]	Every 10 y	Prospective cohort study with mortality end point	Requires less frequent screening Screening and diagnostic follow-up of positive findings can be performed during the same examination
CT colonography[e]	Every 5 y	Test characteristic studies	There is insufficient evidence about the potential harms of associated extracolonic findings, which are common
Flexible sigmoidoscopy	Every 5 y	RCTs with mortality end points: Modeling suggests it provides less benefit than when combined with FIT or compared with other strategies	Test availability has declined in the United States
Flexible sigmoidoscopy with FIT[f]	Flexible sigmoidoscopy every 10 y plus FIT every year	RCT with mortality end point (subgroup analysis)	Test availability has declined in the United States Potentially attractive option for patients who want endoscopic screening but want to limit exposure to colonoscopy

#POFPS44

Colorectal Cancer

#POFPS44

Lung Cancer

Adults Aged 55-80, with a History of Smoking

- The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery – Grade B

**Note: USPSTF update in progress

#POFPS44

Prostate Cancer

Men aged 55 to 69 years

- For men aged 55 to 69 years, the decision to undergo periodic prostate-specific antigen (PSA)–based screening for prostate cancer should be an individual one – Grade C

Men 70 years and older

- The USPSTF recommends against PSA-based screening for prostate cancer in men 70 years and older - Grade D

#POFPS44

#POFPS44

Prostate Cancer: Additional Considerations

African American Males
- In the United States, African American men are more likely to develop prostate cancer than white men (203.5 vs 121.9 cases per 100,000 men)
- African American men are also more than twice as likely as white men to die of prostate cancer (44.1 vs 19.1 deaths per 100,000 men)

Men with a family history of prostate cancer
- It is generally accepted that men with a family history of prostate cancer are more likely to develop prostate cancer
- Men who have a first-degree relative who had advanced prostate cancer at diagnosis, developed metastatic prostate cancer, or died of prostate cancer are probably the most likely to benefit from screening

#POFPS44

Skin Cancer

Asymptomatic adults
- The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of visual skin examination by a clinician to screen for skin cancer in adults – I Statement

Counseling

Young adults, adolescents, children, and parents of young children
- The USPSTF recommends counseling young adults, adolescents, children, and parents of young children about minimizing exposure to ultraviolet (UV) radiation for persons aged 6 months to 24 years with fair skin types to reduce their risk of skin cancer – Grade B

Adults older than 24 years with fair skin types
- The USPSTF recommends that clinicians selectively offer counseling to adults older than 24 years with fair skin types about minimizing their exposure to UV radiation to reduce risk of skin cancer – Grade C

#POFPS44

Other

Bladder Cancer
- The USPSTF concludes the current evidence is insufficient to assess the balance of benefits and harms of screening for bladder cancer in asymptomatic adults – I statement

Oral Cancer
- The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for oral cancer in asymptomatic adults – I statement

#POFPS44

Other

Ovarian Cancer
- The USPSTF recommends against screening for ovarian cancer in asymptomatic women. This recommendation applies to asymptomatic women who are not known to have a high-risk hereditary cancer syndrome – Grade D

Pancreatic Cancer
- The USPSTF recommends against routine screening for pancreatic cancer in asymptomatic adults using abdominal palpation, ultrasonography, or serologic markers – Grade D

Testicular Cancer
- The USPSTF recommends against screening for testicular cancer in adolescent or adult men – Grade D

Thyroid Cancer
- The USPSTF recommends against screening for thyroid cancer in asymptomatic adults – Grade D

#POFPS44

Barriers to Completion

"I know a person who…"

Lack of regular follow up with a physician
- Including not being seen for 1 year

Lack of patient education

Lack of physician education

Uninsured

#POFPS44

Questions?

#POFPS44

Thank You!

#POFPS44

Resources

"BRCA Mutations: Cancer Risk and Genetic Testing Fact Sheet." *National Cancer Institute*, 30 Jan. 2018, www.cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet.

"Final Update Summary: Bladder Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, Aug. 2011, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/bladder-cancer-in-adults-screening

"Final Update Summary: Breast Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, Jan. 2016, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/breast-cancer-screening1

"Final Update Summary: BRCA related cancer risk assessment- US Preventive Services Task Force." *US Preventive Services Task Force*, Dec. 2013, https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/brca-related-cancer-risk-assessment-genetic-counseling-and-genetic-testing

"Final Update Summary: Cervical Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, Aug. 2018, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/cervical-cancer-screening2

"Final Update Summary: Colorectal Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, June 2016, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/colorectal-cancer-screening2

"Final Update Summary: Lung Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, Dec. 2013, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lung-cancer-screening

"Final Update Summary: Oral Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, Nov. 2013, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/oral-cancer-screening1

#POFPS44

Resources

"Final Update Summary: Ovarian Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, Feb. 2018, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/ovarian-cancer-screening1

"Final Update Summary: Pancreatic Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, Feb. 2004, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/pancreatic-cancer-screening

"Final Update Summary: Prostate Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, May 2018, https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/prostate-cancer-screening1

"Final Update Summary: Testicular Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, Apr. 2011, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/testicular-cancer-screening

"Final Update Summary: Thyroid Cancer: Screening - US Preventive Services Task Force." *US Preventive Services Task Force*, May 2017, https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/thyroid-cancer-screening1

Force, US Preventive Services Task. "USPSTF Recommendation Statement- Screening for Colorectal Cancer." *JAMA*, American Medical Association, 21 June 2016, jamanetwork.com/journals/jama/fullarticle/2529486.

Hall, Ingrid J, et al. "Patterns and Trends in Cancer Screening in the United States." *Preventing Chronic Disease*, Centers for Disease Control and Prevention, 26 July 2018, www.ncbi.nlm.nih.gov/pmc/articles/PMC6093265/.

#POFPS44