



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

PEARLS in CLINICAL PREVENTIVE MEDICINE

CURRENT US PREVENTIVE SERVICES TASK FORCE AND
HEALTHY PEOPLE 2030 HIGHLIGHTS

1

Objectives

Describe the roles of the USPSTF and Healthy People 2030

Describe methods to access current recommendations

Review several common recommendations using case study examples, considering

- Epidemiology of condition, screening guidelines (past, current, updates), and other groups' recommendations

2

U.S. Preventive Services Task Force

Created in 1984

Sixteen volunteer members appointed by the Secretary of HHS

Preventive medicine, primary care, behavioral health, nursing

Convened by the Agency for Healthcare Research and Quality (AHRQ)

Provides yearly report to Congress

- Makes evidence-based recommendations for preventive services
- Identify evidence gaps and priority areas that require further examination

Assigns letter grade to each recommendation

3

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.

4

359 published recommendations

Type of preventive service

- Counseling
- Preventive medication
- Screening

Health condition

- Cancer, Injury Prevention, Mental health etc

Age group

- Adolescent, Adult, Pediatric, Senior

Sex/gender/pregnancy

5

Healthy People 2030

Healthy People initiative began in 1979- currently on 5th iteration

US Department of HHS, Office of Disease Prevention and Health Promotion

Set national goals on specific, measurable public health objectives

Developed by workgroups made up of subject matter experts

Objective categories

- 20 Health conditions
- 14 Health behaviors
- 10 Populations

<https://health.gov/healthypeople>

6



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

Healthy People 2030

Objectives and Data > Disease Objectives > Cancer > Increase the proportion of adults who get screened for colorectal cancer — C-07

Increase the proportion of adults who get screened for colorectal cancer — C-07

★ LHI ★ Reviewed

Objective Overview

Data

Data Methodology and Measurement

Evidence-Based Resources

Add to Custom List

See detailed data for this objective

Status: Baseline only

Learn more about our data release schedule

Most Recent Data: 58.7 percent (2021)*

Target: 68.3 percent ±*

Desired Direction: Increase desired

Baseline: 58.7 percent of adults aged 45 to 75 years received a colorectal cancer screening based on the most recent guidelines in 2021.*

*Age adjusted to the year 2000 standard population.

7

Tools

United States Preventive Services Taskforce (uspreventiveservicestaskforce.org)

Prevention TaskForce tools

The Prevention TaskForce (formerly ePSS) is an application designed to help primary care clinicians identify clinical preventive services that are appropriate for their patients. Use the tool to search and browse U.S. Preventive Services Task Force (USPSTF) recommendations on the web or your smartphone or tablet device.

See all Products

8

The Prevention TaskForce data is based on the current recommendations of the U.S. Preventive Services Task Force (USPSTF) and can be searched by specific patient characteristics, such as age, sex/gender, and selected behavioral risk factors.

When using this tool please read the specific recommendation to determine if the preventive service is appropriate for your patient. This tool is not meant to replace clinical judgment and individualized patient care.

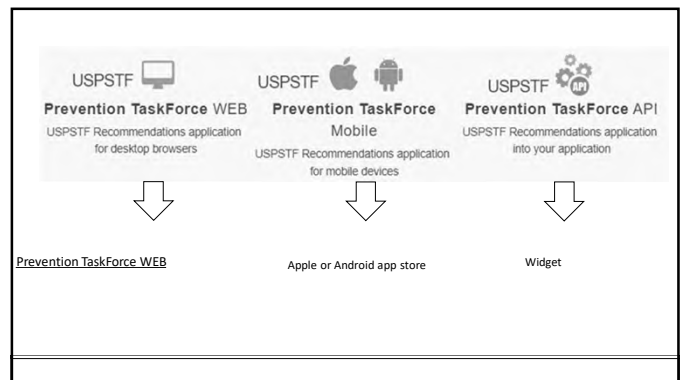
USPSTF Recommendations App for Web and Mobile Devices

USPSTF Prevention TaskForce WEB
USPSTF Recommendations application for desktop browsers

USPSTF Prevention TaskForce Mobile
USPSTF Recommendations application for mobile devices

USPSTF Prevention TaskForce API
USPSTF Recommendations application into your application

9



10

SEARCH

Age: 41

Weight: 180 lbs

Height: 5'4"

Sex/Gender: FEMALE

Pregnant: NO

Tobacco User - ever: NO

Sexually Active: YES

Recommendations By Grade

ALL	A	B	C
A - Recommended (14)			
Cervical Cancer: Screening — Women aged 21 to 65 years			
RECOMMENDATION			
SUMMARY			
Colorectal Cancer: Screening — Adults aged 50 to 75 years			
RECOMMENDATION			
SUMMARY			
Folic Acid Supplementation to Prevent Neural Tube Defects: Preventive Medication — Persons who plan to become pregnant			
RECOMMENDATION			
SUMMARY			
Hepatitis B Virus Infection in Pregnant Women: Screening — Pregnant women			
RECOMMENDATION			
SUMMARY			
Human Immunodeficiency Virus (HIV) Infection: Screening — Adolescents and adults aged 15 to 65 years			
RECOMMENDATION			
SUMMARY			
Human Immunodeficiency Virus (HIV) Infection: Screening — Pregnant persons			
RECOMMENDATION			
SUMMARY			
Hypertension in Adults: Screening — Adults 18 years or older without known hypertension			
RECOMMENDATION			
SUMMARY			
Ocular Prophylaxis for Gonococcal Ophthalmia Neonatorum: Preventive Medication — Neonates			
RECOMMENDATION			
SUMMARY			

11

Case #1

41 year old female accountant

Married, sexually active, monogamous, not pregnant

Never tobacco user

No significant past medical history

Family history positive

Height 5'4" and weight 180 lbs

[Prevention TaskForce WEB](#)

12



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

Search: 41 yrs, 180 lb, 5'4", Female, Sexually Active, BMI (30.9 Obese)

ALL A B C D E

A - Recommended (6)

Cervical Cancer: Screening -- Women aged 21 to 65 years

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Human Immunodeficiency Virus (HIV) Infection: Screening -- Adolescents and adults aged 15 to 65 years

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Hypertension in Adults: Screening -- Adults 18 years or older without known hypertension

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Prevention of Acquisition of HIV: Preexposure Prophylaxis -- Adolescents and adults at increased risk of HIV

RECOMMENDATION SUMMARY RISK FACTOR

Syphilis Infection in Nonpregnant Adolescents and Adults: Screening -- Asymptomatic, nonpregnant adolescents and adults who are at increased risk for syphilis infection

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Tobacco Smoking Cessation in Adults, Including Pregnant Persons: Interventions -- Nonpregnant adults

RECOMMENDATION SUMMARY

13

B - Recommended (20)

Anxiety Disorders in Adults: Screening -- Adults 64 years or younger, including pregnant and postpartum persons

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

BRCA-Related Cancer: Risk Assessment, Genetic Counseling, and Genetic Testing -- Women with a personal or family history of breast, ovarian, tubal, or peritoneal cancer or an ancestry associated with BRCA1/2 gene mutation

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Breast Cancer: Medication Use to Reduce Risk -- Women at increased risk for breast cancer aged 35 years or older

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Breastfeeding: Primary Care Interventions -- Pregnant women, new mothers, and their children

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Chlamydia and Gonorrhea: Screening -- Sexually active women, including pregnant persons

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Chlamydia and Gonorrhea: Screening -- Sexually active women, including pregnant persons

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Depression and Suicide Risk in Adults: Screening -- Adults, including pregnant and postpartum persons, and older adults (85 years or older)

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults With Cardiovascular Risk Factors: Behavioral Counseling Interventions -- Adults with cardiovascular disease risk factors

RECOMMENDATION SUMMARY RISK FACTOR

Hepatitis B Virus Infection in Adolescents and Adults: Screening -- Adolescents and adults at increased risk for infection

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

14

Hepatitis C Virus Infection in Adolescents and Adults: Screening -- Adults aged 18 to 79 years

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Intimate Partner Violence, Elder Abuse, and Abuse of Vulnerable Adults: Screening -- Women of reproductive age

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Latent Tuberculosis Infection in Adults: Screening -- Asymptomatic adults at increased risk of latent tuberculosis infection (LTBI)

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Osteoporosis to Prevent Fractures: Screening -- Postmenopausal women younger than 65 years at increased risk of osteoporosis

RECOMMENDATION SUMMARY RISK FACTOR

Perinatal Depression: Preventive Interventions -- Pregnant and postpartum persons

RECOMMENDATION SUMMARY RISK FACTOR

Prediabetes and Type 2 Diabetes: Screening -- Asymptomatic adults aged 35 to 70 years who have overweight or obesity

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Sexually Transmitted Infections: Behavioral Counseling -- Sexually active adolescents and adults at increased risk

RECOMMENDATION SUMMARY RISK FACTOR

Statin Use for the Primary Prevention of Cardiovascular Disease in Adults: Preventive Medication -- Adults aged 40 to 75 years who have 1 or more cardiovascular risk factors and an estimated 10-year cardiovascular disease (CVD) risk of 10% or greater

RECOMMENDATION SUMMARY

Unhealthy Alcohol Use in Adolescents and Adults: Screening and Behavioral Counseling Interventions -- Adults 18 years or older, including pregnant women

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Unhealthy Drug Use: Screening -- Adults age 18 years or older

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Weight Loss to Prevent Obesity-Related Morbidity and Mortality in Adults: Behavioral Interventions -- Adults

RECOMMENDATION SUMMARY RISK FACTOR

15

C - Selectively Recommended (5)

Aspirin Use to Prevent Cardiovascular Disease: Preventive Medication -- Adults aged 40 to 59 years with a 10% or greater 10-year cardiovascular disease (CVD) risk

RECOMMENDATION SUMMARY RISK FACTOR

Breast Cancer: Screening -- Women aged 40 to 49 years

RECOMMENDATION SUMMARY RISK FACTOR FREQ. OF SERVICE

Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults Without Cardiovascular Disease Risk Factors: Behavioral Counseling Interventions -- Adults 18 years or older without known cardiovascular disease risk factors

RECOMMENDATION SUMMARY

Skin Cancer Prevention: Behavioral Counseling -- Adults older than 24 years with fair skin types

RECOMMENDATION SUMMARY RISK FACTOR

Statin Use for the Primary Prevention of Cardiovascular Disease in Adults: Preventive Medication -- Adults aged 40 to 75 years who have 1 or more cardiovascular risk factors and an estimated 10-year CVD risk of 7.5% to less than 10%

RECOMMENDATION SUMMARY

16

Cervical cancer

Epidemiology in US

- Incidence 13,960 new cases
- 4,310 deaths

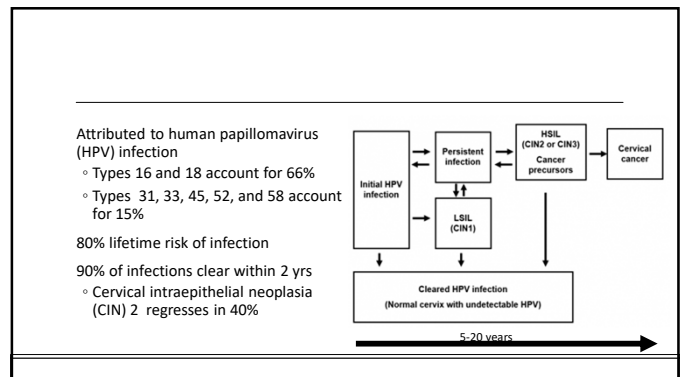
Screening methods

- 1920's* Cervical cytology
- 1996 Liquid based cytology
- Cytology + HPV and other STIs

Better understanding of cervical cancer has driven updated screening recommendations

Year	Deaths per 100,000 women
1975	5.5
1977	5.2
1979	4.8
1981	4.5
1983	4.2
1985	4.0
1987	3.8
1989	3.6
1991	3.4
1993	3.2
1995	3.0
1997	2.8
1999	2.6
2001	2.4
2003	2.2
2005	2.0

17

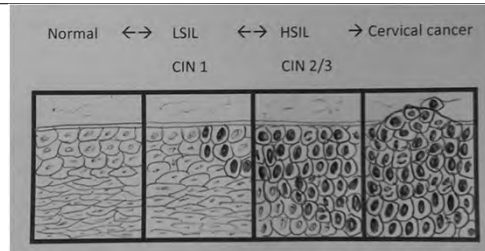


18



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

Progression of cervical dysplasia



19

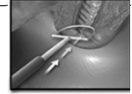
Risks of screening

Overdiagnosis

- Additional diagnostic procedures
- Colposcopy
- Biopsy

Overtreatment of early cervical changes

- Premature rupture of the membranes
- Preterm delivery
- Low birth weight



Lieb et al. Pregnancy outcome and risk of recurrence after tissue-preserving loop electrosurgical excision procedure (LEEP) Arch Gynecol Obstet 2023;307(4):1137-1143

BruceBlais, CC BY-SA 4.0
<<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons

20

Cervical cancer- Current vs previous recommendations- 2018 (A)

Women aged 21-65 years

Age 21-29 years

- cervical cytology every three years

Age 30-65 years

- Every 3 years with cytology alone or
- Every 5 years with high risk human papillomavirus (hrHPV) testing alone or
- Every 5 years co-testing (hrHPV plus cytology)

Discontinue at age 65 in women who have had adequate prior screening and are not at high risk

Previous recommendations

- 1996: "regular" Pap tests (at least every three years) for all women who have been sexually active and who have a cervix
- 2003: Screening can be delayed until 3 years after onset of sexual activity or age 21
- 2012: begin screening at age 21

USPSTF update in progress

21

Cervical cancer- applicable populations

Does not apply to individuals at high risk for cervical cancer

- Previous diagnosis of high-grade precancerous cervical lesion* or cervical cancer
- In utero exposure to diethylstilbestrol
- Compromised immune system including HIV infection

Guidelines apply regardless of sexual history or HPV vaccination status

Screening not indicated in women who have had a hysterectomy with removal of the cervix and no history of high-grade precancerous lesion* or cervical cancer

* cervical intraepithelial neoplasia [CIN] grade 2 or 3

22

Future considerations

Adherence to cervical cancer screening does not meet recommendations

- 72.4% of eligible women 21-65 up to date*
- Healthy People 2030 target 84.3%

2021 72.4% women 21-65 UTD

Most cases of cervical cancer are in women who were not adequately screened/treated

Incidence of precancerous lesions and cervical cancer is declining since advent of HPV vaccine

*National Health Interview Survey, 2021

HPV vaccine study finds zero cases of cervical cancer among women vaccinated before age 14



Statnews, accessed February 5, 2024

23

Cervical cancer- Other recommendations

American Cancer Society

- Cervical cancer testing (screening) should begin at age 25.
- Aged 25 to 65 should have a primary HPV test* every 5 years (preferred) or co-testing with HPV assay plus cytology every 5 years or cytology alone every 3 years.
- Discontinue screening at age 65 in women who have had regular screening in the past 10 years with normal results and no history of CIN2 or more serious diagnosis within the past 25 years
- Screening is not indicated after total hysterectomy unless the hysterectomy was done as a treatment for cervical cancer or serious pre-cancer

American Society for Colposcopy and Cervical Pathology (ASCCP)

- Endorses the 2018 USPSTF Statement and supports the ACS cervical cancer screening guidelines

American College of Obstetricians and Gynecologists

- Endorses the 2018 USPSTF and the 2012 ASCCP guidelines

24



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

Knowledge check

A 22 year old asymptomatic woman asks you about getting tested for cervical cancer (she has never been screened before). You inform her that the USPSTF currently (2018) recommends:

- A. No screening if she has never had sexual intercourse
- B. Screening with cervical cytology every three years
- C. Screening with cervical cytology annually
- D. No screening if she is up to date with the HPV vaccine

25

Knowledge check

A 22 year old asymptomatic woman asks you about getting tested for cervical cancer (she has never been screened before). You inform her that the USPSTF currently (2018) recommends:

- A. No screening if she has never had sexual intercourse
- B. Screening with cervical cytology every three years**
- C. Screening with cervical cytology annually
- D. No screening if she is up to date with the HPV vaccine

26

Breast cancer- burden

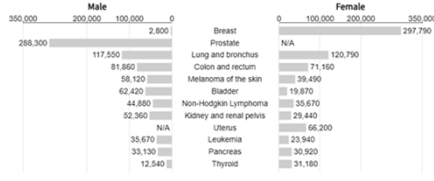
Most frequently diagnosed non-skin cancer in US

About 300,000 new cases/year in US

- 99% in women

2023 estimated 43,170 deaths

- 7.1% of all cancer deaths



Source: Cancer Facts & Figures 2023, American Cancer Society (ACS), Atlanta, Georgia, 2023.

27

Benefits vs risks of screening mammography

Benefit of screening

- Detect early-stage breast cancer
- More aggressive tumors more common in younger women
- Incidence in women age 40-50 is increasing

Potential harms/pitfalls

- False positive results
- Additional imaging or surgeries, anxiety
- Dense breast tissue more common in younger women
- Radiation exposure

28

Breast cancer- Current recommendations

Breast cancer screening (2016)

- Biennial mammogram age 50-74 (B)
- Age 40-49(C)
- Draft recommendation published May 2023
- **Begin screening at age 40**



29

Breast cancer- applicable populations

Asymptomatic women aged 40 years or older who do not have preexisting breast cancer or a previously diagnosed high-risk lesion

Not at high risk due to BRCA (BRCA-related cancer) or other genetic mutations

- Breast cancer: medications to decrease risk (2019, Update in progress)
- BRCA-related cancer: risk assessment, genetic counseling, and genetic testing (2019)

30



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

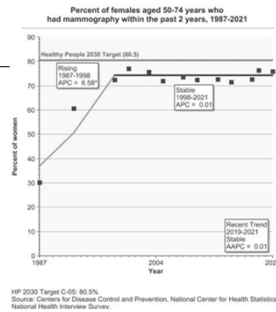
Breast cancer- screening rates

HP 2030

Women aged 50-74 years
who have a screening
mammogram every other
year

2021- 75.6%

Target 80.3%



31

Breast cancer- Other recommendations

American Cancer Society

- Women age 45-54 years yearly mammogram
- Option to begin screening at age 40
- At age 55 and up may elect screening every other year
- High risk women age 30 and over
- Mammogram and MRI every year
- Risk assessment – *BRCA1* or *BRCA2*, family history, history of chest radiation therapy

32

Case #2

46 year old male corrections officer

Unmarried, sexually active, multiple partners of both sexes

Smoking history 1 pack per day for 20 years

No significant past medical history

No significant family history

Height 5'10" and weight 165 lbs

[Prevention TaskForce WEB](#)

33

Recommendations By Grade

Search: 46 yrs, 165 lb, 5'10", Male, Tobacco User - ever, BMI (23.7 Normal)

ALL	A	B	C	D	I
A - Recommended (5)					
Human Immunodeficiency Virus (HIV) Infection: Screening -- Adolescents and adults aged 15 to 65 years					
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE		
Hypertension in Adults: Screening -- Adults 18 years or older without known hypertension					
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE		
Prevention of Acquisition of HIV: Preexposure Prophylaxis -- Adolescents and adults at increased risk of HIV					
RECOMMENDATION	SUMMARY	RISK FACTOR			
Syphilis Infection in Nonpregnant Adolescents and Adults: Screening -- Asymptomatic, nonpregnant adolescents and adults who are at increased risk for syphilis infection					
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE		
Tobacco Smoking Cessation in Adults, Including Pregnant Persons: Interventions -- Nonpregnant adults					
RECOMMENDATION	SUMMARY				

34



B - Recommended (11)			
Anxiety Disorders in Adults: Screening -- Adults 65 years or younger, including pregnant and postpartum persons			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Colorectal Cancer Screening -- Adults aged 45 to 49 years			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Depression and Suicide Risk in Adults: Screening -- Adults, including pregnant and postpartum persons, and older adults (65 years or older)			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults With Cardiovascular Risk Factors: Behavioral Counseling Interventions -- Adults with cardiovascular disease risk factors			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Hepatitis B Virus Infection in Adolescents and Adults: Screening -- Adolescents and adults at increased risk for infection			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Hepatitis C Virus Infection in Adolescents and Adults: Screening -- Adults aged 18 to 79 years			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Latent Tuberculosis Infection in Adults: Screening -- Asymptomatic adults at increased risk of latent tuberculosis infection (LTBI)			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Sexually Transmitted Infection: Behavioral Counseling -- Sexually active adolescents and adults at increased risk			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Statins Use for the Primary Prevention of Cardiovascular Disease in Adults: Preventive Medication -- Adults aged 40 to 75 years who have 1 or more cardiovascular risk factors and an estimated 10-year cardiovascular disease (CVD) of 10% or greater			
RECOMMENDATION	SUMMARY		
Unhealthy Alcohol Use in Adolescents and Adults: Screening and Behavioral Counseling Interventions -- Adults 18 years or older, including pregnant women			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE
Unhealthy Drug Use: Screening -- Adults age 10 years or older			
RECOMMENDATION	SUMMARY	RISK FACTOR	FREQ. OF SERVICE

35

Colorectal cancer- epidemiology

Second leading cause of cancer deaths in US

Incidence

- About 106,590 new cases of colon cancer (54,210 in men and 52,380 in women)
- About 46,220 new cases of rectal cancer (27,330 in men and 18,890 in women)
- 10.5% occur < age 50
- Incidence at age 40 to 49 years has increased by almost 15% from 2000-2016

Five-year survival rates for colon cancer

- Localized 91%
- Regional 73%
- Distant 13%

*American Cancer Society

36



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

Colorectal cancer- Current recommendations (2021)

Adults aged 50 to 75 years (A recommendation)

Adults aged 45 to 49 years (B recommendation)

Selectively offer screening for colorectal cancer in adults aged 76 to 85 years (C recommendation)

Tests:

- gFOBT yearly
- FIT yearly
- FIT-DNA every 1-3 years
- Flexible sigmoidoscopy every 5 y
- Flexible sigmoidoscopy with FIT every 10 y plus FIT yearly
- Colonoscopy every 10 y
- CT colonography every 5 y

Replaces 2016 recommendation to screen from age 50 to 75 (A recommendation)

37

Colorectal cancer- applicable populations

Asymptomatic adults aged 45 and over at average risk

Does not apply to people at increased risk

- Prior diagnosis of CRC or adenomatous polyps
- Diagnosis of inflammatory bowel disease (ulcerative colitis, Crohn's disease)
- Personal or family history of genetic disorders such as Lynch syndrome or familial adenomatous polyposis

Starting and stopping age- rationale

- Incidence 40-49 years 20.0 new cases/100,000
- 50-59 years 47.8 new cases/100,000
- 60 years and older 105.2 new cases/100,000

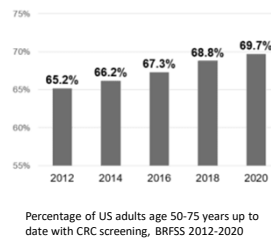
38

Colorectal cancer- screening rates

69.7% of adults aged 50-75 (Behavioral Risk Factor Surveillance System)

58.7% of adults aged 45-75 years in 2021 (National Cancer Institute, National Health Interview Survey)

HP 2030 Target 68.3%



39

Colorectal cancer- Other recommendations

American Cancer Society

- people at average risk* of colorectal cancer **start regular screening at age 45**.
- For people **ages 76 through 85**, the decision to be screened should be based on a person's preferences, life expectancy, overall health, and prior screening history

U.S. Multi-Society Task Force of Colorectal Cancer (MSTF)

- Panel representing American College of Gastroenterology, the American Gastroenterological Association, and the American Society for Gastrointestinal Endoscopy
- Tiered approach
- 2021 update endorses CRC screening at age 45
- *American Journal of Gastroenterology* 112(7):p 1016-1030, July 2017, | DOI: 10.1038/ajg.2017.174 Accessed January 24, 2024

40

Knowledge check

Which of the following statements is true regarding a 35 year old otherwise asymptomatic patient recently diagnosed with Crohn's disease, according to USPSTF guidelines?

- A. Screening for colorectal cancer should begin at age 50
- B. Screening for colorectal cancer should begin at age 45 with any approved modality
- C. Screening for colorectal cancer should begin at age 45 with colonoscopy preferred
- D. USPSTF routine screening guidelines do not apply to this patient

41

Knowledge check

Which of the following statements is true regarding a 35 year old otherwise asymptomatic patient recently diagnosed with Crohn's disease, according to USPSTF guidelines?

- A. Screening for colorectal cancer should begin at age 50
- B. Screening for colorectal cancer should begin at age 45 with any approved modality
- C. Screening for colorectal cancer should begin at age 45 with colonoscopy preferred
- D. USPSTF routine screening guidelines do not apply to this patient

42



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

Case #2*

56 year old male corrections officer
Unmarried, sexually active, multiple partners of both sexes
Smoking history 1 pack per day for 20 years
No significant past medical history
No significant family history
Height 5'10" and weight 165 lbs
[Prevention TaskForce WEB](#)

43

Prostate cancer

Most commonly diagnosed non-skin cancer in men in the US
About 11% (1 in 8) men will be diagnosed with prostate cancer during their lifetime
About 299,010 new cases
About 35,250 deaths

44

Prostate cancer 5-year survival

These numbers are based on men diagnosed with prostate cancer between 2013 and 2019.

SEER* Stage	5-year Relative Survival Rate
Localized	>99%
Regional	>99%
Distant	34%
All SEER stages combined	97%

American Cancer Society/National Cancer Institute

45

Prostate cancer screening

Published, 2018- Update in progress
Men aged 55-69 years
◦ Grade C
◦ The decision to be screened for prostate cancer should be an individual one.
Men 70 y and older
◦ Grade D
◦ Screening not recommended
Updated 2012 (D), 2008 (I/D), 2002(I), 1996 (D)

46

PSA- Prostate Specific Antigen

FDA- 1986 (monitoring progression of prostate cancer)
◦ 1994 approved in for use in conjunction with DRE
Limitations
◦ Tends to fluctuate
◦ Normal varies by age
◦ Low specificity
◦ 25% of men with elevated PSA who have a prostate biopsy are diagnosed with prostate cancer

47

Randomized Clinical Trials

PLCO: Prostate, Lung, Colorectal, and Ovarian Cancer
ERPSC: European Randomized Study of Screening for Prostate Cancer
Göteborg-1
Göteborg-2

48

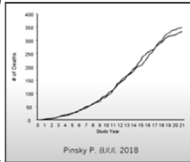


The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

PLCO

Mortality Results from a Randomized Prostate-Cancer Screening Trial (*NEJM*, 2009)

- 76,693 men in US enrolled 1993-2001; annual screening vs “usual care”
- Screening: annual PSA x 6 years and DRE for 4 years
- Usual care included screening in some cases
- **After 7 to 10 years of follow-up, PC mortality rate was very low and did not differ significantly between the two study groups.**

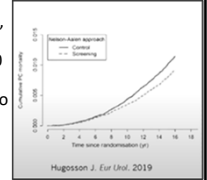


49

ERPSC

Screening and prostate-cancer mortality in a randomized European study (*NEJM*, 2009)

- 182,000 men aged 50-74 years, PSA vs no screening, 9 year follow up
- Rate ratio for death from PC in screening group 0.80 (0.65-0.98)
- 1410 men screened an 48 additional cases treated to prevent one death from PC
- **Conclusion: “PSA-based screening reduced the rate of death from prostate cancer by 20% but was associated with a high risk of overdiagnosis”**
- **Benefit increased with longer follow up**

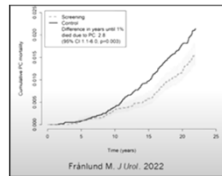


50

Göteborg-1 and Göteborg-2

Göteborg-1

- 20,000 men aged 50-64
- Enrolled 1995-2014
- Randomized to screening with biennial PSA or control
- At 18 years, RR reduction of 12% (5-26%)
- “Organized screening reduces PC mortality but is associated with overdiagnosis”
- At 22 years follow up, RR of PC mortality was 0.59
- Benefit was greater in younger age groups



Göteborg-2

- Enrollment beginning September 2015
- Testing group:
 - Normal PSA- rescreen after 1,2,4, or 8 years depending on PSA
 - Elevated PSA- Prostate MRI, with further randomization to standard or targeted biopsies

51

Risks vs benefits

Benefits

- Reassurance
- Early detection
 - Reduced risk of prostate cancer metastasis
 - Reduced risk of prostate cancer death

Risks

- False positives
- Overdiagnosis
- Most men with modestly elevated PSA do not have cancer on biopsy
- Overtreatment
 - Sexual function
 - Urinary function
 - Bowel function

52

Rationale for or against routine screening

Against

- Low specificity of serum PSA
- Harms of diagnostic procedures
- High prevalence of small, low-grade lesions
- 50% of men age 60 and over
- Number needed to screen to prevent one death

For

- Longer follow up in RCTs resulted in lower number needed to screen
- Evidence in some RCTs that screening reduces prostate cancer mortality
- Risk of complication of diagnostic and therapeutic interventions varies
- Intention-to- screen (PLCO)
 - Many in the control group were also screened
- ERPSC did show ↓ mortality

53

Other groups' recommendations

American Cancer Society

- Informed clinical decision
- Age 50 for men at average risk and are expected to live at least 10 more years
- Age 45 for men at high risk (African American men, men with a first-degree relative diagnosed with prostate cancer at an early age (younger than age 65).
- Age 40 for men at even higher risk (> one first-degree relative who had prostate cancer at an early age)

American Urological Association

- Shared clinical decision-making
- Baseline/begin screening with PSA between age 45-50 years
- Age 40 for men at increased risk
- Early Detection of Prostate Cancer: AUA/SUO Guideline (2023) - American Urological Association (auanet.org)

54



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

Research needs and gaps

Comparing different screening strategies and different screening intervals

Developing longer-term follow-up of screening and diagnostic techniques, including risk stratification tools, use of baseline PSA level as a risk factor, and use of non-PSA-based adjunctive tests

Screening for and treatment of prostate cancer in African American men, including understanding the potential benefits and harms of different starting ages and screening intervals and the use of active surveillance

How to better inform men with a family history of prostate cancer about the benefits and harms of PSA-based screening for prostate cancer

Refining active prostate cancer treatments to minimize harms

55

Suggestions

Shared clinical decision making

Don't screen men who won't benefit

Don't biopsy without compelling reason

Don't treat low-risk disease

If treatment is indicated, refer to high-volume provider

*Memorial Sloan Kettering Cancer Center Grand Rounds in Urology, Feb 1, 2019. [The USPSTF Prostate Cancer Screening Recommendation: A Swinging Pendulum](#) (youtube.com)

56

Lung cancer- epidemiology

Second most common non-skin cancer in men and women in the US

About 90% of cases attributed to smoking

About 234,580 new cases of lung cancer (116,310 in men and 118,270 in women)*

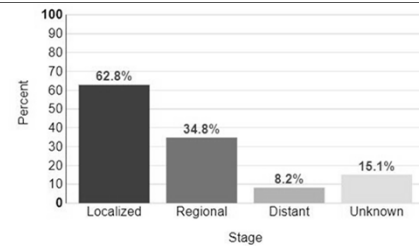
About 125,070 deaths from lung cancer (65,790 in men and 59,280 in women)

Leading cause of cancer death in the US, accounting for about 1 in 5 of all cancer deaths

*American Cancer Society, 2024 estimate

57

5-year survival, lung cancer, by stage



58

Lung cancer screening (B)

Current recommendation (2021)

- Annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years
- Discontinue 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

Previous recommendations

- 1996: Routine screening of asymptomatic persons for lung cancer with chest radiography or sputum cytology is not recommended (D)
- 2004: evidence is insufficient to recommend for or against screening (I)
- 2013: annual screening at age 55-80 years with 30 PY smoking history, currently smoke or quit <15 y (B)

59

Lung cancer screening

Low-dose computed tomography (low-dose CT)

Two RCTs

- Netherlands-Leuven Longkanker Screenings Onderzoek (NELSON)
- National Lung Screening Trial (NLST)

Decrease in cancer-related mortality of 20%

Limitations:

- Sensitivity of 93.8% and a specificity of 73.4%
- False positives may lead to invasive procedures



60



The American Osteopathic College of Occupational and Preventive Medicine 2024 Midyear Educational Conference

Lung cancer screening

Compliance with recommended screening

4.5% (2015)

- National Health Interview Study

5.8% (2022)

- American Lung Association

Healthy People 2030 goal 7.5%

Barriers to implementation

- Lack of knowledge
- Lack of documentation of smoking history
- Health insurance coverage
- Perceived harm of screening



61

Lung cancer-Other recommendations

ACS

- Annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or used to smoke

American Association for Thoracic Surgery

- Annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 79 years who have a 30 pack-year smoking history

- Screening should be offered starting at age 50 years with a 20 pack-year history if there is an additional cumulative risk of developing lung cancer of 5% or greater over the following 5 years (e.g. environmental/occupational exposures, family history, comorbid conditions)

American College of Chest Physicians

- Annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 77 years who have a 30 pack-year smoking history and currently smoke or have quit in the last 15 years

62

Knowledge check

For which of the following individuals would annual lung cancer screening be recommended, according to current (2021) USPSTF guidelines?

- A. A 75 year old with a 30 pack year smoking history who quit 30 years ago
- B. A 49 year old current smoker with a 20 pack year smoking history
- C. A 65 year old current smoker with a 20 pack year smoking history
- D. A 69 year old with a 30 pack year smoking history who quit 5 years ago, complaining of unintended weight loss and hemoptysis

63

Knowledge check

For which of the following individuals would annual lung cancer screening be recommended, according to current (2021) USPSTF guidelines?

- A. A 75 year old with a 30 pack year smoking history who quit 30 years ago
- B. A 49 year old current smoker with a 20 pack year smoking history
- C. A 65 year old current smoker with a 20 pack year smoking history**
- D. A 69 year old with a 30 pack year smoking history who quit 5 years ago, complaining of unintended weight loss and hemoptysis

64