



PREVENTION

Know and understand:

- Preventive services that are recommended for older adults based on their remaining life expectancy and cognitive status
- Additional preventive activities and services that are potentially beneficial for older adults
- Methods for optimizing delivery of preventive services

- Cancer Screening Tests
- Other Screening Tests
- Healthy Lifestyle Counseling
- Geriatric Health Issues
- Immunizations
- Chemoprophylaxis
- Counseling on Cancer Screening and Preventative Health

- Older adults should receive preventive health measures from which they are likely to benefit based on their health and remaining life expectancy
- Clinical condition can be categorized as those with:
 - ≥ 10 years of remaining life expectancy
 - 5-10 years of remaining life expectancy
 - Moderate Dementia: 2–10 years of remaining life expectancy
 - End of Life: < 2 years of remaining life expectancy

- Few older adults have been included in RCTs that evaluate screening measures, especially frail older adults; therefore, recommendations are often based on indirect evidence
- It is important to consider the effect of preventive health measures not only on quantity of life but also on quality of life, satisfaction with life, and in maintaining independence
- Preventive health recommendations for older adults need to be individualized based on patient health, function, risk of disease, and preferences

- Tools are available to help clinicians estimate remaining life expectancy and guide screening decisions (www.eprognosis.org)
- Discuss limitations and risks of screening with patients who have short life expectancy
 - Focus on preventive measures such as falls prevention and immunizations

SCREENING FOR BREAST CANCER (1 of 2)

- Discuss pros and cons of mammography every 2 years with patients (≥ 10 -year life expectancy)
- Perform clinical breast exam (CBE) periodically
- No clinical trials have evaluated CBE without mammography
- Unknown whether screening mammography results in survival benefit for women ≥ 75 years
- No evidence that breast self-examination reduces morbidity or mortality

SCREENING FOR BREAST CANCER (2 of 2)

- USPSTF = Insufficient evidence on whether to screen women ≥ 75 years old
- Choosing Wisely® = not to recommend breast cancer screening to older women without considering their life expectancy, because women with < 10 years of remaining life expectancy are exposed to immediate harms of screening with little chance of benefit

SCREENING FOR COLORECTAL CANCER (1 of 2)

- Screening Tests for Colorectal Cancer in those 50-75 years at average risk:
 - Stool based tests (every year: gFOBT, FIT, every 1 or 3 years: FIT-DNA)
 - Direct visualization tests (every 10 years: Colonoscopy, every 5 years: CT colonography, Flexible sigmoidoscopy; or Flexible sigmoidoscopy every 10 yr plus FIT every year)
- USPSTF: screening adults 76-85 yrs should be individualized taking into account patient health and screening history
- USPST does not recommend screening adults ≥ 85 yr old, because risks outweigh benefits

SCREENING FOR COLORECTAL CANCER (2 of 2)

- Increasing prevalence of colorectal cancer with age, but increasing harms of colonoscopy with age
- Important to consider life expectancy before recommending colorectal screening because those with < 10 years of remaining life expectancy have little benefit
- Decisions about first-time screening after age 75 need to be made in the context of patient health

SCREENING FOR CERVICAL CANCER (1 of 2)

- Pap smears are recommended every 3 years or every 5 years if combined with HPV testing
- Guidelines recommend stopping screening after age 65 for women who have had adequate prior screening regardless of sexual history or new sexual partners and are not otherwise at high risk of cervical cancer
- Adequate screening = Three consecutive negative cytology results or 2 consecutive negative HPV results within 10 years before cessation of screening, with the most recent test within 5 years
- Medicare covers Pap smear and pelvic exam every 2 yr

SCREENING FOR CERVICAL CANCER (2 of 2)

- Recommendations are based on evidence that shows that the incidence of high-grade cervical lesions significantly declines after middle age (SOE=A) and that the risk of false-positive tests resulting in invasive procedures is increased
- Older women who have undergone total hysterectomy with removal of the cervix and who do not have a history of cervical intraepithelial neoplasia grade 2 or 3 or cervical cancer should not be screened (SOE=A)

- USPSTF = Recommends against PSA-based screening for prostate cancer regardless of a man's age (SOE=A)
- ACS and AUA recommend discussing potential benefits and possible harms of screening with men ≥ 50 years who have >10 -15 year life expectancy

- The American Cancer Society and the USPSTF recommend annual screening for lung cancer with low-dose computed tomography (LDCT) in adults 55–74 years old or 55–80 years old who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years is now recommended (SOE=A)
- Screening should stop when a patient has not smoked for 15 years or life expectancy has declined such that curative lung surgery would not be performed.

SCREENING TESTS NOT RECOMMENDED BY USPSTF

USPSTF recommends against screening an asymptomatic adult for:	With these tests:
Asymptomatic bacteriuria	Urinalysis
Coronary artery disease in adults with few or no risk factors	ECG, exercise treadmill test, or electron-beam CT
Carotid artery stenosis	Duplex ultrasonography
Cervical cancer in women ≥ 65 years old who have had adequate prior screening or among women who have had a hysterectomy with removal of the cervix for benign disease	Pap smear
Colon cancer in adults ≥ 86 years old (Screening may be modestly beneficial in adults 76–85 years old with long remaining life expectancy and no or few comorbidities.)	Stool based tests/ sigmoidoscopy/ colonoscopy
COPD	Spirometry
Ovarian cancer	Transvaginal ultrasonography, CA-125, or pelvic examination
Pancreatic cancer	Ultrasonography, abdominal palpation, or serologic markers
Prostate cancer	PSA and/or digital rectal examination

TESTS FOR WHICH USPSTF FINDS INSUFFICIENT EVIDENCE

USPSTF states the evidence is insufficient to assess the balance of benefits and harms of screening an asymptomatic adult for:	With these tests:
Bladder cancer	Urinalysis, bladder tumor antigen measurement, NMP22 urinary enzyme immunoassay, or urine cytology
Breast cancer in women ≥ 75 years old	Mammography
Chronic kidney disease	Creatinine-derived estimates of glomerular filtration rate, urine testing for albumin
Oral cancer	Systematic clinical examination of the oral cavity
Peripheral arterial disease	Ankle-brachial index
Skin cancer	Whole-body skin examination
Coronary artery disease in adults at intermediate or high risk	ECG or exercise treadmill test
Thyroid cancer	Palpation
Thyroid disease	Thyroid stimulating hormone
Type 2 diabetes in normal weight adults	Fasting plasma glucose, 2-hour postload plasma, hemoglobin A _{1c}

OTHER SCREENING TESTS

Procedure	≥10 years remaining life expectancy	5 to <10 years remaining life expectancy	Moderate dementia	Near end of life	SOE	Cost-effective?
DEXA screening for osteoporosis	At least once after age 65, or age 60 if high risk	Consider if not done previously	NR	NR	A	Yes
Blood glucose	Screen obese or overweight adults up to age 70	NR	NR	NR	C	Uncertain
Cholesterol screening	Screen those with additional risk factors ^f	NR	NR	NR	C	Uncertain
Ultrasonography for abdominal aortic aneurysm	Once for men 65–75 years old who ever smoked	Consider	NR	NR	A	Yes
Thyrotropin	Every 2–5 years	Every 2–5 years	Every 3 years	Consider	C	Uncertain
HIV	Consider for those at high risk	Consider for those at high risk	Consider for those at high risk	NR	A	Yes
Hepatitis C	One time for those born between 1945–1965	One time for those born between 1945–1965	One time for those born between 1945–1965	NR	B	Yes
Blood pressure	Consider each visit	Consider each visit	Consider each visit	Consider each visit	A	Uncertain
Height	Once a year	Once a year	Consider	Consider	C	Uncertain
Weight	Each visit	Each visit	Each visit	Each visit	C	Uncertain

NR = not recommended; SOE = strength of evidence

Considering clinical condition and personal habits, counsel older adults about:

- **Physical activity**— at least annually
- **Nutrition** – obtain weight at each visit and height annually to calculate BMI
- **Alcohol misuse**—initially, then if symptomatic
- **Smoking cessation**—every visit
- **Sexual dysfunction and sexually transmitted infections**—routinely

- Emphasize advantages: Reduces morbidity and mortality, promotes mobility, reduces rates of CAD, osteoporosis, many other diseases and disorders, improves psychological health, promotes functional independence, and prevents falls
- Recommend a program that balances exercise for:
 - Flexibility (eg, stretching)
 - Endurance (eg, walking, cycling)
 - Strength (eg, weight training)
 - Balance (eg, Tai Chi, dance)

- Weight of older adults should be obtained at each visit, and height measured annually and BMI (in kg/m²) calculated
- USPSTF recommends that obese (BMI ≥30) adults be offered intensive counseling and behavioral interventions to promote sustained weight loss
 - Ideal BMI may be higher for older adults than middle-aged adults
 - BMIs between 25–29 are associated with the lowest mortality risk for adults ≥70 years old, which may be because of benefits from greater nutritional reserve
- Weight loss, especially when combined with exercise, may improve physical function and ameliorate frailty among obese older adults (SOE=A)
- Malnutrition and undernutrition are common yet frequently unidentified problems in the geriatric population; 15% of older outpatients are malnourished

- Light to moderate alcohol consumption in middle-aged to older adults has been associated with some health benefits, such as reduced risk of coronary heart disease
 - Moderate drinking is defined as 1 drink or less per day for adults > 65 years old
- Ask all older adults ≥ 65 years old annually about their alcohol use
- Use Alcohol Use Disorders Identification Test (AUDIT) or a single screening question, “How many times in the past year have you had 4 or more drinks in a day?” (SOE=A)

- Ask all adults about tobacco use
- Emphasize that cessation at any age reduces rates of COPD, many cancers, CAD
- Designate quit date, discuss therapies to aid cessation, and provide close medical follow-up (in person or by phone within 3-7 days of the quit date and monthly for 3 months)

- USPSTF recommends routine screening of adults up to age 65, and screening of adults > 65 years old who are at increased risk
- Provide high-intensity behavioral counseling (multiple sessions) to prevent STI for older adults at high risk

SCREENING FOR GERIATRIC HEALTH ISSUES (1 of 4)

- Assessing for Geriatric Health Issues is an essential component of Medicare's wellness exams
- Comprehensive Geriatric Assessment has been associated with improvements in general well-being, life satisfaction, instrumental activities of daily living, and fewer clinic visits (SOE=A)

SCREENING FOR GERIATRIC HEALTH ISSUES (2 of 4)

- Assessing for Geriatric Health Issues is an essential component of Medicare's wellness exams
- Comprehensive Geriatric Assessment has been associated with improvements in general well-being, life satisfaction, instrumental activities of daily living, and fewer clinic visits (SOE = A)

SCREENING FOR GERIATRIC HEALTH ISSUES (3 of 4)

Issue	Screening recommendation
Falls	Annually
Incontinence	Annually
Cognitive status	If symptomatic
Depression	Annually
Vision	Annually
Hearing	Annually
Nutrition	Obtain weight each visit and height annually; calculate BMI

SCREENING FOR GERIATRIC HEALTH ISSUES (4 of 4)

Issue	Screening recommendation
Mistreatment of older adults	Question with clinical suspicion
Safety and preventing injury	Check smoke detectors and carbon monoxide detectors, check water heater temperature, use sun protection, assess driving skills, wear seat belts, complete advance directives and determine health care proxy

The following should be a routine part of preventive health care for all older adults:

- **Influenza vaccine annually**
- **Tetanus–diphtheria booster** every 10 years
 - All patients should receive 1 dose of Tdap (tetanus, diphtheria, acellular pertussis)
- **Herpes zoster vaccine** once after age 60

- **Pneumococcal vaccination** once after age 65
 - PCV 13 and PPSV 23 in series
 - ❖ Adults ≥ 65 who have never received PPSV 23 should first receive PCV 13 followed 12 months later by PPSV 23
 - ❖ Adults ≥ 65 who have been previously vaccinated with PPSV 23 should receive PCV 13 at least 1 year after their most recent dose of PPSV 23
 - ❖ For those who received their first dose of PPSV 23 before the age of 65 and who will require a second dose, PPSV 23 should be administered 12 months after PCV 13 is given and at least 5 years after the most recent PPSV 23

Aspirin: Prophylaxis based on 10-year risk of coronary heart disease, age, life expectancy, not at increased risk of bleeding, and willingness to take aspirin for 10 years.

USPSTF recommends aspirin prophylaxis:

- Adults 50-59 with $\geq 10\%$ 10-year CVD risk
- Adults 60-69 with $\geq 10\%$ 10-year CVD risk: the decision should be individualized

Calcium and Vitamin D:

- USPSTF:
 - Recommends against daily supplementation with ≤ 400 IU of vitamin D₃ and $\leq 1,000$ mg of calcium for primary prevention of fractures, because supplementation at these levels does not prevent incident fractures and increases the incidence of renal stones (NNH=273 over 7 years; SOE=A)
 - Insufficient evidence to recommend combined vitamin D (>400 IU) and calcium supplementation ($>1,000$ mg) for the primary prevention of fractures or other diseases
- In a meta-analysis published after the USPSTF review, high-dose supplementation of vitamin D (≥ 800 IU daily) was associated with prevention of hip and nonvertebral fractures in adults ≥ 65 years old (SOE=A)

Calcium and Vitamin D:

- Institute of Medicine (IOM) states:
 - Assuming minimal sun exposure, the recommended daily allowance to meet or exceed the vitamin D needs for 97.5% of the population is daily dietary intake of 600 IU in adults 50–70 years old and 800 IU in adults >70 years old
 - Most adults can reach these targets through sun exposure or dietary intake (such as fatty fish, cod liver oil, dairy products, fortified beverages and foods); however, the targets may be difficult for some adults ≥ 70 years old, and vitamin D supplementation should be considered
- Dietary intake of 1,200 mg/d of calcium in women >50 years old and men >70 years old, and 1,000 mg/d for men 51–70 years old

Multivitamins:

- USPSTF concludes there is insufficient evidence to recommend a multivitamin for prevention of cardiovascular disease or cancer
- The 2010 Dietary Guidelines for Americans suggest that nutrients should come primarily from eating a diet rich in fruits, vegetables, whole grains, fat-free and low-fat dairy products, and seafood

Hormone Therapy: Not recommended

FRAMEWORK FOR DISCUSSING STOPPING SCREENING

- Initiate and reinitiate discussions about stopping screening
- Estimate patient life expectancy and its impact on benefits/harms of screening
- Clarify patient's goals and values
- Focus on measures that benefit patients within their estimated life expectancy

- Several tools are available to help clinicians estimate patients' remaining life expectancy to guide screening decisions
 - www.eprognosis.org
- When discussing cancer or other screening tests with older adults, clinicians should:
 - Indicate whether any data suggest that the screening test improves older adults' quality or quantity of life
 - Discuss the risks of screening, including discomfort from undergoing the test itself, anxiety, potential complications from diagnostic procedures resulting from a false-positive test, false reassurance from a false-negative test, and overdiagnosis/ diagnosis of tumors that are of no threat and that may result in overtreatment

- Older adults should be asked how they view the potential benefits and harms of different screening tests, so that their values and preferences are considered in screening decisions
- Health maintenance discussions among older adults with limited remaining life expectancies should focus on measures that have benefits likely to be achieved in a short time frame (eg, counseling on home safety, falls prevention, immunizations)

CHOOSING WISELY®

(1 of 2)

- Do not use PET/CT for cancer screening in healthy individuals.
- Do not recommend screening for breast, colorectal, or prostate cancer (with the PSA test) without considering life expectancy and the risks of testing, overdiagnosis, and overtreatment.
- Measurement of PSA is controversial but should not be measured if remaining life expectancy is <10 years.

CHOOSING WISELY®

(2 of 2)

- Do not repeat colorectal cancer screening (by any method) for 10 years after a high-quality colonoscopy is negative in average-risk individuals.
- Do not perform routine cancer screening for dialysis patients with limited life expectancies without signs or symptoms.

- Health care providers provide preventive information and care that help older patients maintain functional independence
- Recommendations about appropriate screening, counseling, and immunizations are available to guide health care providers
- Consider a patient's remaining life expectancy, cognitive status, goals of care and preferences for treatment when deciding which preventive health measures to offer

- A 70-year-old woman comes in for a routine visit.
- History: degenerative joint disease, hypertension, urinary incontinence, hypercholesterolemia
- Medications: metoprolol, acetaminophen
- She is not sexually active and never had children.
- She has had no surgeries, and never had a Pap test.

Which one of the following is the most appropriate screening recommendation for cervical cancer for this patient?

- A. Screen once.
- B. No screening is necessary.
- C. Screen twice over the next 5 years.
- D. Screen only if she becomes sexually active.

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- A. Screen once.
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- C. Screen twice over the next 5 years.
- D. Screen only if she becomes sexually active.

- An 84-year-old woman comes in for routine follow-up.
- History: hypertension, diabetes mellitus, degenerative joint disease, hypothyroidism
- Medications: metoprolol 50 mg/d, metformin 1,000 mg/d, levothyroxine 50 mcg/d, acetaminophen 650 mg three times daily as needed for pain

- Examination
 - Blood pressure 150/70 mmHg
 - Heart rate 72 bpm, regular with no murmurs
 - BMI 34 kg/m²
 - No dependent edema
- Laboratory findings:
 - Hemoglobin 11.9 mg/dL
 - Hematocrit 37.4%
 - Glomerular filtration rate >60 mL/min
 - Hemoglobin A1c 7.4%
 - Thyrotropin 3.4 mIU/L

Which one of the following would be the most important intervention for this patient?

- A. Limiting salt intake to $<1,500$ mg/d
- B. Weight loss and exercise
- C. Calcium and vitamin D supplementation
- D. Management of hyperglycemia
- E. Balance training and stretching exercises

Which one of the following would be the most important intervention for this patient?

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- B. Weight loss and exercise**
- C. Calcium and vitamin D supplementation
- D. Management of hyperglycemia
- E. Balance training and stretching exercises

- A 62-year-old white woman comes to the office to establish care.
- History: degenerative joint disease in both knees, breast cancer (diagnosed at age 41)
 - Bilateral mastectomy and prophylactic oophorectomy (family history of ovarian cancer)
 - After surgery, 6-month course of chemotherapy with doxorubicin and cyclophosphamide, followed by tamoxifen for 2 years (discontinued because of side effects)
 - No recurrent disease or further treatment
- Medication: none
- She does not smoke, and drinks alcohol only socially (never >8 oz of wine at one sitting).
- Physical activity: 40–100 minutes of moderate-level weight-bearing exercise daily (walking and running on a treadmill)
- Vegetarian diet, including animal by-products (1 hardboiled egg and 3 oz of cheese daily)
- Height: 147 cm (4 ft 10 in.)
- Weight: 40.8 kg (90 lb)

Which one of the following is the most appropriate recommendation regarding bone density testing for this patient?

- A. Begin at age 65.
- B. Begin testing now.
- C. Begin at age 75.
- D. Begin testing after a fracture occurs.

Which one of the following is the most appropriate recommendation regarding bone density testing for this patient?

- A. Begin at age 65.
- B. **Begin testing now.**
- C. Begin at age 75.
- D. Begin testing after a fracture occurs.

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