

Preventive Medicine

Board Review 2021

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Preventive Medicine Overview

- Counseling
- Screening
- Immunizations
- Chemoprophylaxis

USPSTF Grade Definitions

- A: USPSTF recommends. High certainty that net benefit is substantial.
- B: USPSTF recommends. High certainty of moderate benefit or moderate certainty of substantial benefit.
- C: USPSTF recommends against routine use. May be considerations that support it in an individual patient. At least moderate certainty that benefit is small.
- D: USPSTF recommends against any use. Moderate-high certainty that no benefit or harms outweigh benefits.
- I: Insufficient evidence for a recommendation.

Statistics

Test Accuracy: Question

The sensitivity of a screening test for a certain disease is 90%. Which of the following statements is true?

- A. Patients with positive test results have a 90% chance of having the disease.
- B. Among patients without the disease, 10% have negative test results.
- C. Among patients with the disease, 90% have positive test results.
- D. Patients with negative test results have an 10% chance of not having the disease.

Test Interpretation

- Sensitivity = proportion of diseased population that tests positive
- Specificity = proportion of healthy population that tests negative
- Positive predictive value = proportion with positive tests that have the disease
- Negative predictive value = proportion with negative tests that are healthy

- PPV: $a/(a+b)$
- NPV: $d/(c+d)$

	Disease Present (+)	Disease Absent (-)
Test +	True Positive (a)	False Positive (b)
Test -	False Negative (c)	True Negative (d)

- Sensitivity: $a/(a+c)$
- Specificity: $d/(b+d)$

Question

A research study is conducted to determine the accuracy of procalcitonin testing to identify patients with bacteremia. In 16 patients, there was evidence of bacteremia by blood culture, and 12 of 16 patients had a procalcitonin level of more than 0.1 ng/mL; 4 had a low procalcitonin level. In 186 of 295 culture negative samples, procalcitonin values were less than 0.1 ng/mL; 109 had elevated procalcitonin levels. Based on these findings, what is the sensitivity of a procalcitonin level > 0.1 ng/ml for bacteremia?

- A. 40%
- B. 66%
- C. 75%
- D. 87%

- PPV: $a/(a+b)$
NPV: $d/(c+d)$

	Disease Present (+)	Disease Absent (-)
Test +		
Test -		

- Sensitivity: $a/(a+c)$
Specificity: $d/(b+d)$

- PPV: $a/(a+b)$: 10%
NPV: $d/(c+d)$: 98%

	Disease Present (+)	Disease Absent (-)
Test +	12	109
Test -	4	186

- Sensitivity: $a/(a+c)$: 75%
Specificity: $d/(b+d)$: 63%

Number Needed to Treat: Question

A randomized controlled trial is done to assess the efficacy of nupharmamide to prevent cardiovascular disease in type 2 diabetics with microalbuminuria. After a follow-up of 8 years, the incidence of major vascular events was 44% in the control group and 24% in the intervention group.

How many type 2 diabetics with microalbuminuria need to receive nupharmamide to prevent one major vascular event every 8 years?

- A. 5; B. 10; C. 20; D. 44; E. 100.

Number Needed to Treat

- Number of people who must be treated for a period of time to prevent one outcome
- $1 / \text{absolute risk reduction} = 1 / (\text{rate in control group} - \text{rate in intervention group})$
- Example:
 - control group 44%, intervention group 24%
 - $\text{NNT} = 1/(0.44 - 0.24) = 1/0.2 = 5$

Counseling

Counseling: Question

You are seeing a 54-year-old woman new to your clinic. She is diabetic, with a hemoglobin A1c of 9.4%, hypertensive, with a blood pressure of 160/95, and an active smoker, with a 50-pack-year history. Which change will have the biggest mortality benefit?

- A. Reducing her blood pressure below 130/80
- B. Smoking cessation
- C. Improving glycemic control, goal A1c <7.0%
- D. Taking an 81 mg aspirin each day

Smoking Cessation Counseling

- USPSTF A (2021)
- Brief behavioral counseling (less than 3 minutes) and pharmacotherapy in primary care settings increase abstinence rates for 1 year.
- Smoking cessation reduces all-cause mortality by up to 50%.
- Pharmacotherapy in pregnant women: Grd I
- E-cigarettes: Grade I

Counseling: Question

Your next patient is a 45-year-old woman with hyperlipidemia, hypertension, and obesity (BMI 35). Her lipids and blood pressure are well-controlled by medications. She is a non-smoker. She is a self-described couch potato. What counseling should she receive?

- A. Intensive dietary counseling by the clinic nutritionist
- B. Specific written exercise prescription
- C. Both A and B
- D. No counseling is needed because it has not been shown to be effective

Obesity Screening & Counseling

- USPSTF B (2018)
- Intensive multicomponent counseling recommended for adult patients with BMI > 30
- Intensive counseling and behavioral interventions recommended to promote and sustain weight loss for obese adults

Counseling: Question

A 35-year-old woman transfers to you for primary care. She is married, working full time as an engineer, and has two children under the age of 5 at home. The nurse does the AUDIT-C during check-in. She scored 5 points, because she has 2-3 glasses of wine on most nights.

What is the definition of at-risk drinking?

- A. Failure to fulfill occupational, school or social obligations
- B. Continuing to drink despite negative health effects
- C. More than 14 drinks a week, or 4 on any one occasion, for men and more than 7 drinks a week or 3 on any one occasion for women
- D. Drinking more than your doctor

Alcohol Screening & Counseling

- USPSTF B (2018)
- Multiple studies have shown the effectiveness of brief, office-based interventions for at-risk drinking.
- At-risk drinking is defined by quantity of alcohol use, alcohol abuse indicates social or occupational problems associated with its use, and dependence indicates addiction and maladaptive social behavior.
- Brief interventions are not effective for alcohol abuse and dependence. Aggressive support is necessary.

Drug Screening & Counseling

- USPSTF B (2020)
- Multiple screening tools available, e.g. NIDA NMASSIST (<https://archives.drugabuse.gov/nmassist/>)
- Moderate net benefit when adequate treatment resources available

Skin Cancer Prevention

- USPSTF B (2018) recommendation in fair skinned youth and young adults (6m-24y)
- USPSTF C recommendation in adults over 24: evidence of efficacy mixed but consider in patients at high risk
- RCT: 5 years of broad-spectrum sunscreen yields 73% reduction in melanoma over 15 years of follow-up.

Skin Cancer Screening

- USPSTF I (2016) in all patients
- Data limited but mortality benefit appears minimal (NNT 100K)
- Risk of overdiagnosis is significant
- Self skin exam has similar issues

STI Prevention

- USPSTF B (2020) recommendation: behavioral counseling in all sexually active adolescents and for adults who are at increased risk for sexually transmitted infections (STIs)
- “Adequate” evidence that behavioral counseling interventions reduce STIs, increase condom use and other protective sexual practices.

Fall Prevention

- USPSTF B (2018) recommendation: exercise interventions (group classes best studied) to prevent falls in community-dwelling adults 65 and over who are at high risk.
- Multifactorial interventions: grade C
- Vitamin D supplementation to prevent falls: Grade D

Counseling

Counseling	USPSTF rating	Comments
Smoking cessation	A	
Diet/exercise	B	
Alcohol	B	
Skin cancer	B/C	Fair skin, up to 24 y/o
STI prevention	B	
Fall prevention	B (exercise)	Not vitamin D

“The man who asks a question is a fool for a minute, the man who does not ask is a fool for life.”

- Kǒng Qiū (Confucius)

Screening

Screening: Question

You are seeing a new patient, a 22-year-old college student. She has been sexually active since age 17, has had 4 lifetime sexual partners. She has had all childhood immunizations including HPV. She should be screened for:

- A. Chlamydia and gonorrhea
- B. Chlamydia, gonorrhea, and syphilis
- C. Chlamydia, gonorrhea, and HSV
- D. Chlamydia, gonorrhea, and hepatitis C

Screening: chlamydia/gonorrhea

- Clinicians should screen all sexually active women age 24 and younger for chlamydia and gonorrhea (USPSTF B, 2014).
- Prevalence of GC and chlamydia peaks in late teens and early twenties among both men and women
- Rescreen and continue screening over age 24 based on ongoing risk exposure
- There is no evidence that screening men reduces long-term consequences in women: USPSTF I

Screening: Syphilis

- Clinicians should screen those at increased risk of syphilis and pregnant women (USPSTF A, 2016).
- Risk factors are men who have sex with men, commercial sex workers, persons who exchange sex for drugs, and those in adult correction facilities.
- 2013: 91% of new syphilis cases were in men, 75% in men who had sex with men

Screening: Herpes simplex

- Clinicians should NOT routinely screen asymptomatic patients for HSV (USPSTF D, 2016).
- Commercially available HSV testing is only 80-85% specific
- No treatment for asymptomatic disease
- Could screen long-term partners of symptomatic patients if considering suppressive therapy for + partner

Screening: Hepatitis C

- Birth cohort from 1945-1965 five fold more likely to be infected with hepatitis C
- CDC recommended birth cohort screening in May 2013
- USPSTF initially followed CDC recs, then in 2019 changed to universal screening from 18-79 y/o
- Limited data on repeat screening

Screening: Hepatitis B

- USPSTF B (2021) recommendation: screen if non-immune and prevalence > 2%
- Region of origin: Africa, Asia, Pacific Islands, parts of South America
- Other risk factors: HIV-positive persons, injection drug users, household contacts or sexual partners of persons with HBV infection, and men who have sex with men

Screening: question

A 34-year-old man returns to clinic for suture removal. His blood pressure today is 150/93. Last week when the sutures were placed it was 145/90. He reports he is healthy and takes no medications. "C'mon, doc, it's just high because I hate the doctor's office". Which of the following is true?

- A. He has white coat hypertension and no further intervention is needed.
- B. He has definite hypertension.
- C. His presumed hypertension should be confirmed with home readings.

Screening: high blood pressure

- USPSTF A (2021)
- All adults age 18 and older should be screened for high blood pressure.
- Those with abnormal readings should have BP confirmed outside of the clinical setting before starting treatment.

Screening: diabetes

- USPSTF B (2015)
- Adults aged 40 to 70 who are overweight or obese should be screened for diabetes.
- A1C \geq 6.5%, FPG \geq 126 mg/dL, or OGTT \geq 200 mg/dL are all acceptable.

Screening: lipid disorders

- USPSTF B (2016), age 40-75
- Recommended as part of risk assessment for statin use decision
- B recommendation is for *therapy* in high-risk patients, not screening per se

Screening: Question

Who should definitely be screened for AAA?

- A. 70 y/o non-smoking male
- B. 70 y/o non-smoking female
- C. 70 y/o male with a 50-pack-year history of smoking, who quit 25 years ago.
- D. 70 y/o female with a 50-pack-year history of smoking, who quit 25 years ago.
- E. Both C & D

Screening: AAA (2019)

- USPSTF B: male former smokers, 65-75 y/o
- USPSTF C: male never smokers, 65-75 y/o
- USPSTF I: female former smokers, 65-75 y/o
- USPSTF D: female never smokers, 65-75 y/o

Screening: question

Which patient **should** be screened according to National Osteoporosis Foundation guidelines but **not** USPSTF guidelines?

- A. A 65-year-old woman without risk factors.
- B. A 75-year-old man without risk factors.
- C. A 60-year-old woman with history of rheumatoid arthritis.
- D. A 60-year-old woman without risk factors.

Screening: Osteoporosis

- USPSTF B (2018) for women, I for men
- Women aged 65 and older and younger women with 10 year fracture risk > 9.3% on FRAX or similar tool
- NOF also recommends screening men over 70; ACP recommends individualized approach.

Screening: Osteoporosis

Patient	USPSTF	NOF
65 y/o ♀ no RF	Yes	Yes
75 y/o ♂ no RF	No (?)	Yes
60 y/o ♀ with RA	Yes	Yes
60 y/o ♀ no RF	No	No

Screening: Depression

- USPSTF B (2016)
- Screen adolescents and adults over age 12
- Re-screen pregnant and postpartum women
- No specific test or screening interval recommended
- Revised from 2009 to reflect better access to depression care in primary care settings

Screening: question

Which patient should definitely be screened for domestic violence, abuse, or neglect?

- A 88-year-old man living with his son.
- A 38-year-old woman living with her husband and daughter.
- A 26-year-old man with severe developmental delay living with his mother.
- All of the above.

Screening: Intimate Partner Violence

- USPSTF B (2018)
- Recommends screening women of reproductive age regardless of sx/signs
- Many available screening tools: HITS, HARK, WAST, OAS/OVAT
- Elderly/vulnerable adult screening is grade I

Screening

Condition	USPSTF rating	Comments
HTN	A	All adults; confirm outside the office
Lipids	B (sort of)	Adults 40-75
Diabetes	B	Adults 40-70 who are overweight or obese
AAA	B	Men age 65-75 who have ever smoked

Screening

Condition	USPSTF rating	Comments
Chlamydia	B	All sexually active women age 24 and younger, and others at increased risk.
Gonorrhea	B	All sexually active women at increased risk.
Syphilis	A	MSM and others at increased risk.
HIV	A	
Hepatitis C	B	Birth cohort: 1945-1965 & high risk

Screening

Condition	USPSTF rating	Comments
AAA	B	Men aged 65-75 with smoking history
Osteoporosis	B	Women age 65 and older and women 60 and older with risk factors
Depression	B	Adolescents, adults over 12 y/o
Intimate Partner Violence	B	Women of childbearing age

“New knowledge is the most valuable commodity on earth. The more truth we have to work with, the richer we become.

- Kurt Vonnegut

Cancer Screening

Cervical Cancer Screening

A 67-year-old woman presents to establish primary care. She had one prior Pap smear 20 years ago and believes the result was normal. She is married and sexually active, but reluctant to undergo a pelvic exam.

You advise her that the recommended cervical cancer screening strategy for a woman in her situation is:

- A. Co-test now; stop if results are normal.
- B. HPV testing only; stop if results low-risk.
- C. HPV testing now and again in 5 years; stop if results are low-risk.
- D. Pap smear not necessary after age 65.

Cervical Cancer Screening

- USPSTF A (2018): Screen with cytology (*not* HPV) every 3 years from age 21-29
- From 29-65 options are HrHPV testing *with or without* cytology every 5 years or cytology alone every 3 years
- No need to screen if:
 - Under age 21
 - Over age 65 **if adequate prior screening** (3 cytology or 2 HPV within 10 years, most recent within 5 years)
 - Hysterectomy for benign disease

Cervical Cancer Screening

- USPSTF 2018: Screen with HPV testing alone every 5 years in women aged 30-65
- Recommendation primarily based on trials that used *reflexive* cytology rather than contesting
- Self-sampling is included in recommendation statement as a “research gap”

Breast Cancer Screening

A 45-year-old woman expresses concern about her risk of breast cancer. Her mother died of the disease at 65; 3 sisters are healthy. She performs monthly breast self-exam, and her breast exam in clinic is normal. She requests mammography.

Which of the following statements about breast cancer screening is true?

- A. Women younger than age 50 should be encouraged to have mammograms.
- B. Breast self-exam did not reduce breast cancer mortality in clinical trials.
- C. Mammography is more accurate in younger women.
- D. Breast MRI is the preferred screening test for women younger than age 50.

Breast Cancer Screening USPSTF Recommends (2016):

- USPSTF B: Mammography every 2 years for women aged 50 to 74.
- USPSTF C: The decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient's values regarding specific benefits and harms.

Breast Cancer Screening (2016)

- Other USPSTF recommendations:
 - Teaching breast self-examination: Grade I
 - Teaching breast self-examination: Grade I what? "USPSTF supports all patients being aware of changes in their bodies and discussing these changes with clinicians"
 - Screening mammography in women 75 years or older: Grade I
 - Use of 3D tomosynthesis instead of 2D mammography: Grade I
 - Use of additional modalities in women with dense breasts: Grade I

Screening for BRCA

Your patient is a healthy 34-year-old woman with a family history of breast cancer asking about genetic testing. Her mother had breast cancer at 55 y/o, and her grandmother had ovarian cancer at 62. What do you recommend?

- A. Genetic testing for BRCA 1 & 2
- B. Refer for genetic counseling
- C. Assess risk using a standardized tool and do genetic testing/counseling if high risk
- D. Perform mammogram and breast MRI

Screening for BRCA

- USPSTF B (2019) recommendation in high risk women ($\geq 10\%$ probability of carrying mutation)
- If family hx or ethnicity/ancestry associated with increased BRCA risk, use a standardized risk assessment tool
- <http://www.breastcancergenescreen.org/>
- USPSTF recommends against (Grade D) routine genetic testing or counseling

Colorectal Cancer Screening USPSTF Recommends:

- USPSTF A (2021) Do **something** to screen for colorectal cancer in adults age 50-75
- USPSTF B: **45-49 y/o**
- USPSTF C: 76-85 y/o
- FOBT, FIT, FIT-DNA, sigmoidoscopy, CT colography, colonoscopy all acceptable
- Review of pros/cons on USPSTF web site

Colorectal Cancer Screening

- Favor colonoscopy for higher risk patients
 - Family history
 - History of adenoma
- CT Colography every 5 yr is an alternative but requires prep, radiation exposure; also risk of incidentalomas
- Fecal DNA testing every 1-3 years is more sensitive than FIT but also generates more colonoscopies

Lung Cancer Screening

A 72-year-old new patient comes to your office for a routine physical examination. He has a forty pack-year smoking history but is delighted to report that he quit smoking last year. He is wondering if he still needs his annual chest x-ray for lung cancer screening.

Which of the following is the most appropriate next step?

- A. Recommend CT but advise pt that 5% of patients may have a false positive study.
- B. Recommend CT but advise pt that 20% of patients may have a false positive study.
- C. Recommend CXR because CT has no additional benefit.
- D. Recommend against screening.

Lung Cancer Screening

- USPSTF B (2021)
- Annual screening of adults **50-80** years who have a **20** pack-year smoking history and have smoked within the past 15 years
- Stop screening when comorbidities exceed benefit or pt unwilling/unable to have surgery

Lung Cancer Screening

- NLST 2011: 3 annual CTs reduced mortality but 24% were positive, 96% false positives
- NEJM 2013 (Kovalchik) prediction model:

Quintile	False + per death prev.	# needed to screen
All	108	302
Lowest	1648	5276
Med-low	181	531
Med	147	415
Med-high	64	171
Highest	65	161

Prostate Cancer Screening

- USPSTF D->C (2018) age 55-69
- USPSTF changed 2012 "D" recommendation to "C" for this age group citing new data:
- Improved data on reductions in mortality (1-2/1000 screened) and metastasis (3/1000)
- Too controversial for exam: right answer would be informed decision making

"Knowledge will give you power, but character respect."

- Bruce Lee

Routine Adult Immunization

Question

An 18-year-old woman comes in for a pre-college examination. According to her pediatric immunization record, she received primary vaccinations for DTP, Hep B, Hib, varicella and OPV. She received a single dose of MMR at age 15 months.

She requires which of the following vaccinations?

- A. Td booster
- B. MMR
- C. Meningococcal
- D. All of the above

Routine Immunizations for Adolescents & Young Adults

- Complete all childhood primary immunizations
- Td booster, Influenza
- MMR
 - If no previous second dose
 - If no documented immunity to measles or rubella
- Varicella - if susceptible
- Meningococcal – quadrivalent if < 18 y/o; consider serogroup B if 16-23 y/o
- HPV vaccine (only 4 or 9-valent for both male/female) for 9-26 y/o

Routine Adult Immunization

Age	Recommended Schedule
Any	One-time dose of TdAP, then Td booster every 10 years Annual influenza
50+ y/o	Zoster (RZV)
65+ y/o	Pneumococcal vaccine: PCV-13 followed by PPSV-23 12 months later

Special indications

- PCV 13: asplenia (including sickle cell), CSF leak, cochlear implant, immunosuppression (including ESRD)
- PPSV 23 recommended in above groups and chronic heart/lung/liver disease, diabetes, alcoholism, smoking
- Add meningococcal, HiB in asplenic patients
- Hep A/B in IVDU, chronic liver disease, high-risk sexual activity; just B in diabetes, ESRD, HIV

Tetanus Prevention: Question

A 43-year-old man falls while rummaging for auto parts in a junk yard and seeks care for a left arm laceration. The wound requires repeated irrigation to remove dirt.

Vaccination history: Full 5-dose DPT series in childhood followed by Td boosters every 10 years (most recent booster 7 years ago).

Recommended management for tetanus prophylaxis is:

- A. Td booster
- B. Tetanus immune globulin
- C. Td booster plus tetanus immune globulin
- D. No prophylaxis necessary

Tetanus vaccine and Tetanus Immune Globulin

Vaccine hx	Clean & minor wound		Dirty or major wound	
	Td	TIG	Td	TIG
Unknown or < 3	Yes	No	Yes	Yes
3 or more	If > 10 yr	No	If > 5 yr	No

Source: cdc.gov

Hepatitis B Exposure: Question

A 36-year-old physician stabs himself in the finger while recapping a needle used to perform phlebotomy. The source patient is HBsAg+. The physician was immunized against hepatitis B 10 years ago during medical school. Best post-exposure management would be:

- A. HBIG, 0.06 ml/kg IM, now and in 1 month.
- B. HBIG, 0.06 ml/kg IM, and initiate revaccination.
- C. Test physician for HBsAb. Give HBIG x1 and vaccine booster if titer < 10 mIU/ml.
- D. No treatment necessary.

Hepatitis B Post Exposure Prophylaxis

- Seven day window to give HBIG
- If immunized but unknown response:
 - Test anti-HBs titer
 - If < 10 give one dose HBIG and reimmunize
- If known non-responder after 2 series:
 - Two doses HBIG one month apart

Hepatitis B Vaccine Indications for Adults

- Household and sexual contacts of HBsAg carriers
- IVDU
- Greater than 1 sexual partner in 6 months
- Health care, public safety, institution/prison staff
- Travelers to endemic regions who anticipate sexual contact
- Chronic renal or liver disease
- HIV infection

Hepatitis B Post-vaccine titer

- Recommended for:
 - Age > 30 years
 - Health care workers
- Testing done 1-6 months after 3rd dose
- Non-responders (HBsAb < 10 mIU/ml) should receive one dose then retest in 1-2 months; complete series if no response

HPV Vaccine

- 9-valent vaccine protects against 85-90% of cervical cancers and 90% genital warts; recommended for all patients.
- Quadrivalent vaccine reduces coverage to 70% of cervical cancers and 90% genital warts; suboptimal but ok if it's all that's available
- Bivalent vaccine only protects against 16, 18; still effective against cancer but not against warts; only recommended for patients with a cervix

“The end of all knowledge should be service to others.”

- Cesar Chavez

Chemoprophylaxis

Question

A dentist asks for your recommendation regarding bacterial endocarditis prophylaxis. A 79-year-old man s/p TAVR is scheduled for a tooth extraction. The patient has no drug allergies.

You recommend:

- A. Amoxicillin 2 g PO one hour prior to the procedure
- B. Amoxicillin 1 g PO one hour prior to the procedure then 1 g PO six hours after the procedure
- C. Chlorhexidine mouth rinse on the day of procedure
- D. No prophylaxis

2007 AHA Recommendations

- Cardiac conditions for which prophylaxis IS recommended
 - Prosthetic cardiac valve
 - Previous infective endocarditis
 - Congenital heart disease
 - Unrepaired cyanotic congenital heart disease
 - Completely repaired congenital heart disease with prosthetic material or device during the first six months after the procedure
 - Repaired congenital heart disease with residual shunt at or near the site of a prosthetic patch

Conditions for which Endocarditis Prophylaxis is NO LONGER Recommended

- Mitral valve prolapse
- Rheumatic heart disease
- Bicuspid valve disease
- Calcified aortic stenosis
- Congenital heart conditions
 - Ventricular septal defect
 - Atrial septal defect
 - Hypertrophic cardiomyopathy

What about joint replacements?

- AAOS-ADA 2012: "The practitioner might consider discontinuing the practice of routinely prescribing prophylactic antibiotics for patients with hip and knee prosthetic joint implants undergoing dental procedures."
- ...but: "patient preference should have a substantial influencing role."
- ADA 2015: Not recommended

Question: Breast Cancer

A healthy 48 y/o premenopausal woman with a family history of breast cancer wants to minimize her risk. She is s/p hysterectomy for fibroids, otherwise healthy. Her estimated 5 year risk of breast cancer is 3.2%. What do you suggest?

- A. Continue routine screening
- B. Genetic testing for BRCA 1 & 2
- C. Offer tamoxifen or raloxifene for prophylaxis

Breast cancer chemoprevention

- USPSTF B (2019)
- Recommends that clinicians offer prophylaxis to women at high risk of BRCA but low risk of complications
- Cutoff is vague: 5 year risk of 3% is generally accepted
- <http://www.cancer.gov/bcrisktool>

Question: Aspirin

A 52 year-old man with hypertension comes in for a preventive visit. BP 118/74, HR 68. Total cholesterol 207, HDL 54, LDL 133. A1C 5.4%.

Meds: Lisinopril 20 mg daily.

He wonders: should he take aspirin daily?

- Yes, recommend daily aspirin
- Compute 10-year CV risk and recommend aspirin if $\geq 10\%$
- No, recommend against aspirin

Aspirin for the Primary Prevention of CV events and Colorectal Cancer (2016)

- Adults aged 50-59 with $\geq 10\%$ 10-yr CVD risk: USPSTF B
- Adults aged 60-69 with $\geq 10\%$ 10-yr CVD risk: USPSTF C
- Age < 50 or ≥ 70 : USPSTF I.
- No recommendation on low-risk 50-69 year-olds
- No recommendation on family hx of CRC

PrEP for HIV

- USPSTF recommends pre-exposure prophylaxis (PrEP) for anyone at high risk of acquiring HIV infection: Grade A (2019)
- Major risk factors:
 - Serodiscordant partner
 - Inconsistent use of condoms with high-risk partners
 - Syphilis, gonorrhea, chlamydia in last 6 mo

Statins for the Primary Prevention of CV events (2016)

- Adults aged 40-75 with at least 1 risk factor and $\geq 10\%$ 10-yr CVD risk: USPSTF B
- Adults aged 40-75 with at least 1 risk factor and 7.5-10% 10-yr CVD risk: USPSTF C
- Age > 75 : USPSTF I.

2020-21 USPSTF Grade D/I

- Cognitive impairment (I)
- E-cigarettes for smoking cessation (I)
- Asymptomatic carotid stenosis (D, 2014)
- Vitamin D deficiency (I, 2014)
- Hearing loss (I)

Recommendations in draft

- Atrial fibrillation (I)
- Screening for gonorrhea & chlamydia in women (B) and men (I)
- Screening for prediabetes (B in overweight adults 35-70 y/o)
- Vitamin supplementation (D for beta-carotene and vitamin E, I for other supplements)

“Knowledge of what is does not open the door directly to what should be.”

- *Albert Einstein*