Cancer Screening
Using Best Evidence to Guide Practice
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Selected Controversies

• Breast Cancer Screening
  – Who should be screened?
  – Digital Mammography
  – MRI

• Colorectal Cancer
  – What test and how often?
  – Are there new screening options?

• Lung Cancer
  – Does screening work?
  – Chest X-Ray?
  – Low dose CT?

• Prostate Cancer
  – Should we screen?

Estimated New Cancer Cases* in the US in 2013

*Excludes basal cell and squamous cell skin cancers and in situ carcinomas except cervical.

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Men</th>
<th>Women</th>
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</thead>
<tbody>
<tr>
<td>Prostate</td>
<td>28%</td>
<td>29%</td>
</tr>
<tr>
<td>Lung &amp; bronchus</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Colon &amp; rectum</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Urinary bladder</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Melanoma of skin</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis</td>
<td>5%</td>
<td>0%</td>
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<tr>
<td>Non-Hodgkin lymphoma</td>
<td>4%</td>
<td>4%</td>
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<tr>
<td>Lymphoma</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Ovarian cancer</td>
<td>3%</td>
<td>3%</td>
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<tr>
<td>Breast</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Cervical cancer</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Urine cancer</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>Pancreas</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>All Other Sites</td>
<td>20%</td>
<td>10%</td>
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</tbody>
</table>

Page 1
USPSTF

- Rigorous review of existing peer-reviewed evidence
  - Ratings reflect the strength of the evidence on the harms and benefits of a preventive service
    - Task Force does not consider the costs of providing service or make recommendations for coverage

USPSTF Grades

<table>
<thead>
<tr>
<th>Grade</th>
<th>Evidence</th>
<th>Recommendation</th>
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<tbody>
<tr>
<td>A</td>
<td>High certainty of substantial net benefit</td>
<td>Provide</td>
</tr>
<tr>
<td>B</td>
<td>High certainty of moderate net benefit  Moderate certainty of moderate/substantial net benefit</td>
<td>Provide</td>
</tr>
<tr>
<td>C</td>
<td>Moderate certainty that net benefit is small</td>
<td>Selectively offer/provide</td>
</tr>
<tr>
<td>D</td>
<td>No net benefit or harms outweigh benefits</td>
<td>Do not provide</td>
</tr>
<tr>
<td>I</td>
<td>Insufficient evidence regarding balance of benefits and harms</td>
<td></td>
</tr>
</tbody>
</table>

Breast Cancer Screening

- Breast cancer is the most common cancer in women and the second leading cause of cancer death
- Screening mammography reduces mortality from breast cancer
- Younger women have lower breast cancer risk
- Increased density of pre-menopausal breast tissue leads to decreased sensitivity

Harms Of Screening

- False positives
  - Anxiety
    - Additional tests including biopsies
    - One-third of total screening cost
- Over-diagnosis
  - Cancers diagnosed that never would cause symptoms: patients receive all the costs and harms of treatment
    - Estimates: 10% to 26% of invasive breast cancers and 34% of all breast cancers
- Radiation exposure
  - One breast cancer for 3000 women screened annually for 10 years

Jorgensen, BMJ, 2009
Case

- Stella Skeptic is a 58 year old woman who doesn’t believe in “conventional medicine.” She has previously declined all your preventive recommendations, including screening mammography and CRC screening. She comes in today wanting to know what you think about ‘that new study’ that shows that mammography really doesn’t work that well after all.”

Screening Mammography and Mortality

- Screening should lead to diagnosis of earlier stage cancers
- Early treatment of these detected cancers should lead to more benefit than treatment given at time of clinical presentation
- Effective screening programs should lead to a reduction in the diagnosis of late stage cancers

The News

- Effect of three decades of screening mammography on breast cancer incidence – Bleyer and Welch, NEJM 2012

- Aim: To quantify the expected increase in the incidence of early stage breast cancer and to determine the extent to which this has led to a corresponding decrease in the incidence of late stage cancer

Methods

- SEER data (1976 to 2008) to evaluate trends in incidence of early stage breast cancer (DCIS and localized disease) and late stage breast cancer (regional and distant disease) among women aged 40 and over
- NHIS data on proportion of women undergoing screening mammography
- Estimates adjusted for transient increase associated with hormone therapy use from 1990-2005
Results

- Screening mammography associated with a doubling in the number of cases of early stage breast cancer found annually
  - 112 to 234 cases/100,000 women
- Rate of presentation with late stage breast cancer has decreased by 8%
  - 102 to 94 cases per 100,000 women
- Assuming constant underlying disease burden, 8 of the additional 122 cancers detected expected to progress to advanced disease

Results: Over-diagnosis

- Over-diagnosis: tumors detected by screening that would never have led to clinical symptoms
- Adjusting for trends in breast cancer incidence, estimate for over-diagnosis
  - In 2008 over 70,000 women (31% of all breast cancers diagnosed)

Take Home Message

- Screening mammography has led to a substantial increase in the diagnosis of early stage breast cancers, with only a small reduction in the rate of late stage breast cancer
- The reduction in mortality from screening appears to be smaller and the risk of over-diagnosis higher, than previously believed.
USPSTF Guidelines

Mammography
- Age 50-74: screening mammography every 2 years
- Age 40-49: individualize decision to begin biennial screening according to patient’s context and values
- Age ≥75: no recommendation (insufficient evidence)

Breast Exam
- Clinical breast examination alone – insufficient evidence
- Recommend against teaching women to perform routine breast self-examination
  - No mortality benefit
  - Higher rates of benign breast biopsies

Age and Mammography


<table>
<thead>
<tr>
<th>Age  (yr)</th>
<th>Trials Initiated, n</th>
<th>RR for Breast Cancer Mortality (95% CI)</th>
<th>NRI to Prevent 1 Breast Cancer Death (95% CI)</th>
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<tbody>
<tr>
<td>39-49</td>
<td>8*</td>
<td>0.85 (0.75-0.96)</td>
<td>1904 (529-6278)</td>
</tr>
<tr>
<td>50-59</td>
<td>61</td>
<td>0.86 (0.75-0.99)</td>
<td>1329 (52.2-1408)</td>
</tr>
<tr>
<td>60-69</td>
<td>24</td>
<td>0.80 (0.54-1.37)</td>
<td>377 (210-1650)</td>
</tr>
<tr>
<td>70-74</td>
<td>16</td>
<td>1.02 (0.73-1.43)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Mammography and Age

“Mammography screening at any age is a tradeoff of a continuum of benefits and harms. The ages at which this tradeoff becomes acceptable to individuals and society are not clearly resolved by the available evidence.”

USPSTF

Frequency of Mammography

- Similar reduction in mortality with screening every one or two years
- Every two years (compared to annually) maximizes benefits of screening & minimizing harms

Mandelblatt, Annals IM, 2009
### Probability of False Positives

- Cohort study of 169,456 women who underwent first screening at age 40-59 and 4,492 women with incident invasive breast cancer
- After 10 years, over half of women will have at least one false positive recall and 7-9% will have false positive biopsy recommendation
  - Biennial screening decreases cumulative probability of false positives but may be associated with a small absolute increase in probability of late stage cancer diagnosis

> Hubbard, Annals Int Med, 2011

### ACS Recommendations: Average Risk Women

- Begin mammography at age 40
- Clinical breast exam
  - At least every three years for women in their 20s and 30s
  - Annually for women age 40 and over
- Women should be informed about the benefits and limitations of breast self examination (BSE)
  - Prompt reporting of any breast symptoms
  - Technique may reviewed, but it is acceptable not to do it
- Women should become informed about benefits, limitations and potential harms of routine screening

### Newer Technologies

- Digital Mammography
- Breast MRI
- Ultrasound and Mammography

### Digital mammography

- Higher sensitivity, same specificity in women < 50 years old
  - Sensitivity 82% versus 76% film
  - Specificity 88%
- Cancer detection rates overall similar between film and digital mammography
- Test characteristics better for women aged 40-49, dense breasts and estrogen receptor negative tumors

> Kerlikowske, Ann Intern Med, 2011
MRI Screening

- Does MRI have a role for screening in high risk women?
  - MRI is a very sensitive method of breast imaging and has been used as a diagnostic tool in women with breast cancer
  - Not influenced by breast density
  - Specificity is variable
  - Expensive

Mammography plus Ultrasound

- Screening ultrasound may detect small cancers not seen on mammography
- 2809 high risk women underwent mammography and ultrasound
- Mammography alone compared to mammography plus ultrasound
- Adding an ultrasound will find 1.1 to 7.2 more cancers per 1,000 but with a significant increase in false positives
  - Berg et al JAMA 2008

Impact For Clinical Practice

- MRI may be useful in screening high risk women
- The effect of MRI screening on mortality is not known
- MRI is not currently recommended for screening average risk women
- Ultrasound adds little to mammography

Mammography plus Annual Ultrasound or Single MRI

- 2,809 high risk women with dense breasts
  - Annual ultrasound and mammography for 3 years
  - 612 of 703 women who had MRI had complete data
- Adding MRI will find 14.7 more cancers per 1,000 but with many false positives
- Number of screens to detect one cancer
  - Mammography 127
  - Supplemental US 234
  - Adding MRI* 68
  - "After mammogram and ultrasound negative"
    - Berg, JAMA 2011

- Berg, JAMA 2011
Bottom line

- 40-49 informed consent
- 50-74 screen every 2 years
- 75+ informed consent - don’t if life expectancy less than 10 years
- Don’t promote SBE
- Digital mammography for women < 50
- BRCA equivalent: MRI

Lung Cancer Screening

Question?

- Mr. Nico Teen is a 69 year old man with a 50 pack-year history of smoking and COPD. You have previously been unsuccessful in encouraging him to quit smoking. He comes in for a check-up, is worried about developing lung cancer and wants to know what test you think he should have. What do you recommend?
  - Chest X ray
  - Sputum cytology
  - Spiral CT
  - None of these tests

Lung Cancer Screening: Systematic Review of Chest X-rays

- 7 trials of lung cancer screening
- Frequent screening with chest x-rays was associated with an increase in mortality
  - RR 1.11 (95% C.I. 1.00-1.23)
- No difference in chest X-ray plus cytology versus chest X-ray alone

Manser, Thorax, 2003
PLCO: Lung Cancer Screening

- PCLO randomly assigned 154,901 adults aged 55 through 74 to annual CXR for 4 years vs. usual care
- Followed for 13 years
- Cumulative lung cancer mortality
  - 14.0/10,000 py screening group vs. 14.2/10,000 py control group
  - Rate ratio: 0.99 (95% CI 0.87-1.22)

Oken MM. JAMA 2011;306:1865

Low Dose Spiral Computed Tomography

- Scans lung in < 20 seconds (single breath)
- No IV contrast
- More radiation exposure than CXR but less than conventional CT
- Can detect much smaller lesions than chest X-ray

The National Lung Screening Trial (NLST)

53,454 participants randomized to CT or CXR
- Current or former heavy smokers: ≥ 30 pack-years
- Ages 55 to 74
- Annual CT scans x 3 years. 6.5 years follow-up

<table>
<thead>
<tr>
<th>LDCT</th>
<th>CXR</th>
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<tbody>
<tr>
<td>N</td>
<td>RR (95% CI)</td>
</tr>
<tr>
<td>Lung Cancer Deaths</td>
<td>356</td>
</tr>
<tr>
<td>Any death</td>
<td>1877</td>
</tr>
</tbody>
</table>

Number needed to invite to screen

- NNI to prevent one lung cancer death in 6.5 years = 320
- NNI to prevent one death from any cause in 6.5 years = 218
Balanced by…

- 75,000 CT scans
- 18,146 positive tests
- 17,066 false positive tests
- 673 thoracotomy / mediastinoscopy
- 303 broncoscopies
- 99 needle biopsies
- To prevent 62 deaths from lung cancer

NLST Harms

- False positives
  - At least 1 positive test in 39% CT
  - False positive results in 96% CT
- Possible over diagnosis
  - Higher cancer incidence with CT
    - 1060 vs. 941 cancers
    - Rate ratio 1.13 (95% CI 1.03-1.23)
- Radiation exposure
- Incidental findings

Concern: Control = Chest x-ray

- Screening with CXR was ineffective in 30,341 subjects in the PLCO meeting NSLT criteria
  - 30+ pack year, smoked within past 15 years
  - Cumulative lung cancer mortality was 36.1/10,000 py screening group vs. 38.3/10,000 py controls
    - Rate ratio: 0.94 (0.85-1.03)
- Reasonable to conclude that CT screening is more effective than usual care
Health Policy not yet established

- ~ 94 million current or former smokers in the U.S.
- ~ 7 million meet NLST criteria
- Implementation issues
  - Multidisciplinary teams
  - Trained radiologist
- Expensive... $ $ $

Guidelines and recommendations

- Recommend for those meeting NLST entry criteria at specialized centers
  - ACCP / ASCP / ATS
  - ACS
  - ALA
  - NCCN
  - AATS

The NLST Setting

- 76% of sites were NCI designated cancer centers
- 82% were large academic medical centers
- All likely to have specialized thoracic radiologists and board certified thoracic surgeons on site
- CT scanners extensive quality control
- Nodule management algorithm but not mandated

Guidelines and recommendations

- USPSTF recommendations
  - Smoking cessation counseling: “A” (2009)
  - 85% of cancers among smokers attributed to smoking
Primary Prevention Of Lung Cancer

• Smoking cessation
• Smoking cessation
• Smoking cessation
• Smoking cessation
• Smoking cessation
• Smoking cessation
• Smoking cessation!!!!!

Implications

• Smoking cessation
• Strict adherence to NLST entry criteria
  – 55-74 years, 30+ pack years
• Use experienced centers / demonstration projects to ensure quality and effectiveness

Colorectal Cancer

Question

• What do you most commonly recommend for colorectal cancer screening?
  – Fecal occult blood test (FOBT)
  – Sigmoidoscopy
  – Colonoscopy
  – Air contrast barium enema
  – Virtual Colonoscopy
  – Fecal DNA
  – Fecal immunochemical Test (FIT)
Joint Guideline: ACS, ACR,…

- FOBT annually
- Fecal immunochemical test annually
- Flexible sigmoidoscopy every 5 years
- DCBE every 5 years
- CT colonography every 5 years
- Colonoscopy every 10 years
- Stool DNA testing (interval uncertain)

Levin, Gastroenterology, 2008

Joint Guideline Recommendation

- Clinicians should make patients aware of the full range of screening options
- Offer patients a choice between a screening test that is effective at both early cancer detection and cancer prevention through the detection and removal of polyps and a test that is primarily effective at cancer detection
- CRC prevention should be the primary goal of screening

USPSTF

  - Routine screening from age 50 until 75
    - Individualized decisions from 76 to 85
    - No screening after 85

USPSTF (continued)

  - Acceptable modalities
    - Colonoscopy
    - Fecal blood test
      - Fecal immunochemical test, high-sensitivity hemoccult
      - Flexible sigmoidoscopy
  - Insufficient evidence for CT colonography, fecal DNA
Colonoscopy

- American College of Gastroenterology guidelines for colorectal cancer screening
  (Rex DK. Am J Gastroenterol 2009;104:739)
  - Colonoscopy remains the preferred CRC screening strategy

Colonoscopy: RCTs in progress

- VA
  - Colonoscopy versus fecal immunochemical test in reducing mortality from colorectal cancer
- Spain
  - Colorectal cancer screening in average-risk population: immunochemical fecal occult blood testing versus colonoscopy
- Netherlands
  - Colonoscopy or colonoscopy for screening

Flexible Sigmoidoscopy

- Reduced CRC incidence
  - Relative risk: 0.79 (95% CI 0.72-0.85)
  - Absolute risk reduction: 3.3/10,000 person years
  - Number needed to invite to screening (NNI): 215 (95% CI 210-427)

Sigmoidoscopy: New Evidence

- PLCO Trial
- 154,890 average risk men and women aged 55-74 assigned to screening with FS with repeat at 3-5 years vs usual care
- 11.9 year follow up
- Outcomes: CRC incidence and mortality

Flexible Sigmoidoscopy
Flexible Sigmoidoscopy

- Reduced CRC mortality
  - Relative risk: 0.74 (95% CI 0.63-0.87)
  - Absolute risk reduction: 1.0/10,000 person years
    • NNI: 871 (95% CI 567-1874)
  - Mortality reduction limited to distal cancers

- United Kingdom study showed one-time flex sig reduced CRC incidence by 23% and mortality by 31% (Atkin WS. Lancet 2010;375:1624)
  - 78% (2000) to 26% (2007)

Flexible Sigmoidoscopy

Newer Tests

- Virtual Colonoscopy
- Stool-based molecular testing
  - Fecal DNA
- Fecal immunochemical tests
Computed Tomographic Colonography (Virtual Colonoscopy)

- Non-invasive radiological technique
  - Radiation dose similar to barium enema
- Bowel preparation similar to colonoscopy
  - Prep-less technique is being evaluated
- Does not require sedation
- Colon distended with carbon dioxide or air
- Breath holding for 20-50 seconds
- Colonoscopy to remove polyps

Laxative-Free CT Colonography

- Low fiber diet, orally ingested contrast material and specialized processing software “electronic cleansing”
- 605 adults underwent CTC and OC
- CTC was more accurate in detecting adenomas 10 mm or larger and less so for smaller lesions
  - 91% sensitivity vs 70% for adenoma 8 mm or larger
- Patients preferred it

Potential Harms

- Radiation Exposure
  - 1/1000 could develop solid cancer or leukemia
- Procedure related harms
  - Perforation rate low
- Extra-colonic findings

Extra-colonic Findings

- Extra-colonic findings common: 27 – 69%
- “High” clinical significance require surgical or medical treatment or intervention or further investigation
  - 5 - 11%
- 7-16% of individuals need additional evaluation for extra-colonic findings, but very few abnormalities ultimately required definitive treatment
Fecal DNA Testing

• PCR test for DNA mutations in the stool
• Potential advantages
  – Non-invasive
  – No preparation
  – Detection along entire length of the colon

Fecal DNA Testing

• Screening test in multi-center study
• Fecal DNA test (23 mutations), FOBT, and colonoscopy
• 4482 average risk adults
• Fecal DNA detects more neoplasms than FOBT, but with more false positive results
• Expensive: $400 to $800 versus $3 to $40 for FOBT

Ahlquist, 2008

Fecal Immunochemical Testing (FIT)

• Uses labeled antibodies that attach to antigens of any human globin present in the stool
• Globin does not survive passage of the upper GI tract
• No dietary restrictions (easier than FOBT)

Fecal Immunochemical Testing

• FIT is more sensitive in detecting CRC and large adenomas (>1 cm) than FOBT
• FIT is a little less specific than FOBT
Colorectal Cancer Screening

- Randomized screening trial in Spain of biennial FIT vs. one-time colonoscopy
  53,302 subjects ages 50 to 69
- Primary outcome is CRC mortality after 10 years
- Interim report on participation rates and diagnostic findings
  (Quintero E. NEJM 2012;366:697)

Screening Outcomes

Screening Outcomes

Colorectal Cancer Screening: Choices

- Randomized trial offering colonoscopy, FOBT, or choice of colonoscopy/FOBT
- 997 subjects ages 50 to 79
- 12-month follow-up
  (Inadomi JM. Arch Intern Med 2012;172:575)
- Recommending only colonoscopy led to lower adherence

Screening Completion

Screening Completion

Quintero E. NEJM 2012;366:697

Inadomi JM. Arch Intern Med 2012;172:575
How Are We Doing?

<table>
<thead>
<tr>
<th>Year</th>
<th>FOBT in past year or ever scope in 10?</th>
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<tbody>
<tr>
<td>2002</td>
<td>54%</td>
</tr>
<tr>
<td>2004</td>
<td>57%</td>
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<td>2006</td>
<td>61%</td>
</tr>
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<td>2008</td>
<td>64%</td>
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Colorectal Cancer Screening: Conclusions

• Any screening is better than no screening for reducing colorectal cancer mortality
• Increase awareness of the importance of colorectal cancer screening
• Virtual colonoscopy and fecal DNA testing are included as options in the new joint guidelines but not in USPSTF guidelines

Implications for Practice

• Offer screening
• Testing modalities
  • Fecal immunochemical tests more acceptable and accurate than Hemoccult II
  • Flex sig no longer routinely performed
  • Colonoscopy RCT ongoing
  • CT colonography not reimbursed by Medicare

• Recognize importance of patient preferences
  • “The best test is the one that gets done”
• Positive fecal blood tests must be evaluated with diagnostic colonoscopy
QUESTION

• What is your usual practice for PSA screening for men aged 50-70?
  – Usually order PSA
  – Sometimes order PSA
  – Rarely order PSA
  – Never order PSA

Prostate Cancer: Should We Screen?

• Disease has high prevalence
  – 10% lifetime risk
  – 30% of men have prostate cancer at autopsy
• Disease has serious consequences
  – Sometimes but may be a benign disease for many men
• Detectable preclinical phase: ?? PSA
• Treatment for preclinical disease is more effective?
  – Complications of prostate cancer treatment
    • 8.4% incontinence
    • 60% impotence
  «Prostate Cancer Outcomes Study 24 month follow up Screening
• Screening reduces cancer mortality?

SCREENING TESTS: PSA

• PSA testing has increased dramatically since 1988
• Observational studies have had conflicting findings about the benefits of screening
• Two large randomized controlled trials of PSA screening and mortality

PLCO Cancer Screening Trial

• 76,693 men randomized to annual PSA for 6 years plus rectal examination for four years vs usual care
• High rates of screening in the control group
• No significant difference in death between the two groups at 7 year follow-up
  – 2.0 deaths per 10,000 person years in the screening group
  – 1.7 deaths per 10,000 person years in the controls
• Similar results after 10 years
  «Andriole, NEJM 2009

Page 20
European Randomized Study of Screening for Prostate Cancer (ERSPC)

- 182,160 men aged 50-74 in eight European countries
- PSA screening at least once every four years vs no screening
- During 9 year follow up, incidence was higher in the screened group
  - 8.2% vs 4.8%
- Mortality lower in the screened group
  - 7 fewer prostate cancers per 10,000 screened men
- To prevent one prostate cancer death at 11 year follow up
  - 1,410 men needed to be screened
  - 48 additional prostate cancers treated

PSA SCREENING: CONCLUSIONS

- PSA screening may lead to a modest reduction in mortality
- To achieve this mortality reduction, there is a substantial amount of over-diagnosis and over-treatment

USPSTF RECOMMENDATIONS 2012

- Recommends against PSA based screening for prostate cancer
  - PSA can detect early prostate cancer, but inconclusive evidence about whether early detection improves health outcomes.
  - Harms include frequent false positives and unnecessary anxiety, biopsies and potential complications of treatment of some cases of cancer that may never have affected a patient’s health.
  - Grade "D" recommendation
- USPSTF 2012

American Cancer Society

- Men with at least a 10 year life expectancy should have an opportunity to make an informed decision with their health care provider about whether to be screened
- Screening should not occur without an informed decision making process
- Men at average risk should receive the information beginning at age 50
- Information should be provided at age 45 for men at higher risk
  - Age 40 for very high risk
- American Cancer Society, 2010
American Cancer Society

- For men unable to decide, the decision can be left to the discretion of the health care provider
- Men with less than a 10 year life expectancy should not be offered screening
  - At age 75, only half of men have a life expectancy of 10 years or more
- Men without access to regular care should be tested only if high quality informed decision making is available through community based programs
  - Follow-up and counseling
  - ACS 2010

American Cancer Society

- For those who choose to be screened
  - PSA with or without DRE
  - Screening yearly for men whose PSA is 2.5 ng/ml or greater
  - If PSA <2.5 ng/ml, screening can be extended to every 2 years
  - PSA of 4.0 ng/ml or greater- referral
  - PSA of 2.5-4.0 ng/ml individualized risk assessment
  - Age, African American, family history, previous negative biopsy
  - ACS, 2010

American Urological Association Guidelines

- May, 2012 News Release “AUA outraged at USPSTF’s failure to amend guidelines”
- Men who choose to be screened should have both DRE and PSA
- The decision to use PSA testing should be individualized
  - Inform men of the potential benefits and risks
- Early detection and risk assessment for prostate cancer should be offered to all men aged 40 and older who wish to be screened and who have an estimated life expectancy of more than 10 years
  - American Urological Association, 2009

ACP Guidance Statement

- Derived from an appraisal of available guidelines
  - ACPM, ACS, AUA, USPSTF
- Inform men aged 50-69 about limited potential benefits and substantial harms of screening for PSA
  - Base decision on risk for prostate CA, discussion of benefits and harms, health and life expectancy and preferences
  - Do not screen in those who do not have a clear preference for screening
ACP Guidance Statement

• Do not screen average risk men under age 50, over age 69 or with a life expectancy of less than 10-15 years

Prostate Cancer Screening: Summary

• PSA testing may reduce prostate cancer mortality but is not recommended by USPSTF
• Risks of early detection and treatment
• Shared decision making is key

Summary Of Recommendations

• Women aged 50 to 74 should undergo mammography every 2 years
• Screening decisions for women in their forties and for women and for women aged 75 and older should be individualized
• MRI screening for breast cancer may be useful in high risk women
• All men and women aged 50 -75 should be screened for colorectal cancer
  – Any screening is better than no screening

Summary Of Recommendations

• Screening for lung cancer with low-dose CT reduces mortality
  – Policy recommendations are still evolving
• Screening for prostate cancer may reduce mortality but there are significant risks and harms to early detection and treatment
Thank you!

Questions?