Geriatric Screening and Preventative Care

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Objectives

• Review screening guidelines for patients > 75 years old for common conditions (breast cancer, cervical cancer, colon cancer, prostate cancer)

• Discuss the recommendations for vision and hearing screening in the elderly

• Understand the evidence regarding Vitamin D supplementation and fall prevention
Cervical Cancer Screening

- USPSTF: Screen women aged 21-65 (Grade A). No screening for cervical cancer in women older than 65 years who have had adequate prior screening and are not otherwise at night risk for cervical cancer (Grade D)
Cervical Cancer: When should I stop screening?

• Joint Guidelines from ACS, ASCCP, ASCP

• Age 65 years or older with adequate prior screening
  • 3 consecutive negative cytology results OR
  • 2 consecutive normal pap smears with HPV contesting in the last 10 years
  • With the most recent testing occurring within 5 years

• Hysterectomy with cervix removal for benign reasons

• If inadequate prior screening:
  • Consider screening as recommended for women 30-65 until age 70-75
  • Older women who have never been screened have the highest incidence of and mortality from cervical cancer
Cervical Cancer

• Once screening is discontinued, it should not resume for any reason

• Do NOT discontinue women > 65 years old with:
  • CIN2+ within the last 20 years
  • Immunocompromised
  • In utero DES exposure
  • Prior treatment of high-grade precancerous lesion

• Higher incidence and mortality from cervical cancer in African American, American Indian, and Hispanic women
An 80 year old woman with a past medical history of hypertension, hypothyroidism, diabetes, and acid reflux presents to you for her annual exam. She is doing well and has no new complaints today. Her home medications include lisinopril, levothyroxine, metformin, and omeprazole. Her vital signs today are all within normal limits, and her physical exam is unremarkable. Her last screening mammogram was one year ago. She asks you to order her next screening mammogram today. What would you do?

A. Order her mammogram, but advise her that given her age mammograms every two years would be appropriate
B. Order her mammogram with plan to continue them annually
C. Order a breast ultrasound instead given her age
D. Have a discussion about her life expectancy and risk factors, and consider discontinuation of mammograms
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Breast Cancer Societal Guidelines

• USPSTF: Biennial screening mammography for women aged 50-75 years (Grade B). Insufficient evidence for recommendation after age 75.

• ACOG: Annual vs biennial screening mammography for women 50-75. Continue until age 75. Beyond age 75, the decision to discontinue should be based on a shared decision-making process that includes a discussion of the woman’s health status and longevity.

• ACS: Annual mammography for women aged 40-55. Biennial for women 55+. Discontinue screening when life expectancy is less than 10 years.

• NCCN: Annual mammography starting at age 40. Discontinue screening when severe comorbidities limit life expectancy to 10 years or less.
Breast Cancer in the Geriatric Population

- Over one quarter of cases of breast cancer are diagnosed in women 75 years and older
- No RCT’s in this population
- Potential harms of screening occur soon, but potential benefit can take up to 10 years
- DCIS incidence increases with age, but it is unclear if treatment of DCIS affects mortality
- American Society of Nephrology recommends against breast CA screening in dialysis patients
- Cohort study of 2,011 women with no history of breast cancer ≥ 80 years old
- 51.4% screened with mammography since age 80
- Among women screened, eight diagnosed with DCIS, 16 with early stage disease, two with late stage disease, and one died due to breast cancer
- 110 women (11%) had a false-positive screening mammogram that led to 19 benign breast biopsies. Three women had a false-negative screening mammogram.
- 97 women were screened within two years of their death from other causes.
- No significant difference in the rate, stage, recurrence rate, or deaths due to breast cancer between the women screened and the women not screened.
Life Expectancy

A. Life Expectancy for Women

- Top 25th Percentile
- 50th Percentile
- Lowest 25th Percentile
Table 2. Number Needed to Screen (NNS) Over Remaining Lifetime to Prevent 1 Cancer-Specific Death for Women and Men at Selected Ages and Life Expectancy Quartiles*

<table>
<thead>
<tr>
<th>Screening test</th>
<th>RRR (95% CI)</th>
<th>Age 50 y</th>
<th>Age 70 y</th>
<th>Age 75 y</th>
<th>Age 80 y</th>
<th>Age 85 y</th>
<th>Age 90 y</th>
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<tr>
<td>Mammography</td>
<td>0.26 (0.17-0.34)†</td>
<td>95</td>
<td>133</td>
<td>226</td>
<td>142</td>
<td>242</td>
<td>642</td>
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<tr>
<td>Papanicolaou smear</td>
<td>0.60‡</td>
<td>533</td>
<td>728</td>
<td>1140</td>
<td>934</td>
<td>1521</td>
<td>4070</td>
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<tr>
<td>Fecal occult blood</td>
<td>0.18 (0.01-0.32)§</td>
<td>145</td>
<td>263</td>
<td>577</td>
<td>178</td>
<td>340</td>
<td>1046</td>
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</tbody>
</table>
Prognostic Indices for Older Adults
A Systematic Review

• Searched for prognostic indices that predicted absolute risk of all-cause mortality in patients whose average age was ≥ 60
• Excluded indices with ICU, in-hospital, or disease specific mortality
• 16 unique indices found
• All developed using secondary analysis of existing data sets from US and Western Europe
• Most common predictors of mortality:
  • Functional status, comorbidities
• Authors describe each individual index:
  • Community dwelling patients, nursing home residents, hospitalized patients
Conclusions

• Found insufficient evidence to recommend widespread use of prognostic indices in clinic practice
• Several indices required collection of information not routinely assessed (i.e. ADL’s)
RESULTS

It is not clear that getting screened for breast cancer will help this person.

This person’s thoughts and feelings should be the major driver of the decision.

VIEW HARMs

VIEW BENEFITS
Of 1000 people like this person who got tested for breast cancer,

100 people will experience harm in the first year.

After 10 years, of 1000 people like this person who got tested for breast cancer,

1 will avoid death from breast cancer.

After 10 years, of the 1000 people like this person,

400 will die whether or not they got tested for breast cancer.
Colon Cancer Screening

• USPSTF: Screening recommended from ages 50-75 (Grade A). Decision to screen from age 76-85 is an individual decision taking into account the patient’s overall health and prior screening history. Adults who have never been screened are more likely benefit, and screening is most appropriate among adults who are healthy enough to undergo treatment if CRC is detected and do not have comorbid conditions which significantly limit their life expectancy. (Grade C)
CRC Screening

- Decision on whether to screen those over age 75 depends on health status and life expectancy
- Colonoscopy complications occurred in 0.3% of veterans aged 70-75 undergoing screening and in 0.5% of Medicare patients aged 70-74 and 1% of Medicare patients 75-79
- One time screening in older adults who have never been screened may be cost effective
Prostate Cancer

- USPSTF: Individual decision making from ages 55-69 (Grade C). Do not screen men over age 70 (Grade D).
- AAFP: No screening
- Canadian Task Force on Preventive Health Care: No screening
- ACP: Discuss benefits/harms in men 50-69 and only screen those with life expectancy > 10-15 years
- AUA: Shared decision making for men 55-69
- ACS: Shared decision making for men 50+
Prostate Cancer

• Small potential benefit of death reduction with screening
• However, many potential harms of screening including false-positives, overdiagnosis and overtreatment, treatment complications including incontinence and erectile dysfunction
• No screening recommended in men with less than 10 year life expectancy
• No conclusive clinical trial data from population > 70, but many models indicate conflicting results but trending toward harms with treatment in the elderly
Glaucoma Screening

- USPSTF: Current evidence is insufficient to assess the balance of benefits and harms of screening for primary open-angle glaucoma (POAG) in adults
- American Academy of Ophthalmology (AAO): Comprehensive eye exams recommended every 1-2 years in patients ≥ 65 years
- Screening detects increased IOP and early open-angle glaucoma
- Treatment reduces the development and progression of visual field defects
- BUT: unclear if screening reduces impairment in vision-related function or quality of life
Hearing

• USPSTF: Current evidence is insufficient to assess the balance of benefits and harms of screening for hearing loss in asymptomatic adults aged ≥ 50 years
• 80% of adults over 80 have hearing loss
• Presbycusis can be misdiagnosed as cognitive dysfunction
• Many possible screening tests: whispered voice test, finger rub test, hearing loss questionnaire, hand-held audiometry: Refer those with positive test on to formal audiologic testing
• Hearing aids require motivation for effective use
• In 2015, average price of a single hearing aid was $2300
Cardiovascular Disease

• With increased age, increased CV risk
• Likely minimal benefit in those with noncardiovascular conditions and life expectancy < 5 years
• Some recommendations to not initiate statin in patients > 85 years
Osteoporosis

• USPSTF: Screen women ≥ 65 years with bone measurement testing (Grade B). Screen women < 65 years with increased risk (Grade B). Current evidence insufficient to assess the benefits and harms of screening in men.

• National Osteoporosis Foundation: Recommends BMD testing in women > 65 and men > 70

• AAFP Choosing Wisely: Avoid screening women < 65 and men < 70 with no risk factors
Osteoporosis in Men

• Lower prevalence (4.3% vs 15.4%)
• Higher fracture related morbidity and mortality than women
• 1 in 3 men who experience a hip fracture will die within a year
• Around age 80, prevalence of osteoporosis in white men reaches that of white women at age 65
A 72 year woman with a past medical history of hypertension on lisinopril presents for her annual exam. She has started to feel a little more unsteady on her feet, and asks you if she should be taking Vitamin D to prevent her from falling. How do you respond?
Vitamin D

- USPSTF: Recommends against daily supplementation with 400 IU or less of vitamin D and 1000mg or less of calcium for the primary prevention of fractures in community-dwelling, postmenopausal women (Grade D). Evidence is insufficient to assess the benefits and harms of supplementation with doses greater than 400 IU of vitamin D or 1000mg of calcium in primary prevention in postmenopausal women. Evidence is insufficient for any supplementation for primary prevention in men and premenopausal women.

- USPSTF: Recommends against vitamin D supplementation to prevent falls (Grade D)

- American Geriatric Society: Serum Vitamin D level of 30 should be a minimum goal in older adults
• 36,000 postmenopausal women ages 50-75 in the WHI
• Randomized to 1000mg calcium carbonate + 400 IU D3
• Very small (1%) improvement in hip bone density, but no significant reduction in hip fracture, and increased risk of kidney stones
• Reviewed multiple studies regarding fall reduction
• Seven RCT’s examining effectiveness of Vitamin D supplementation on falls, fall-related injuries, or both at 9-60 months of follow-up
• Mean age 71-77 years
• 5 of the 7 studies were in postmenopausal women
• One trial with annual dose of 500,000 IU cholecalciferol showed increased risk of falls and injury
• One trial with calcitriol showed reduction in falls
• Five remaining trials showed no statistically significant difference in falls or injury
Other interventions

• Multifactorial: 26 trials.
  • Reduction in falls (RR 0.79) but no reduction in fall related morbidity or mortality

• Exercise: 21 trials
  • Reduction in falls (RR 0.89) but no reduction in mortality
Vitamin D Supplementation

• Higher doses at less frequent intervals may increase the risk of falls
• Effect on falls unclear with even low dose supplementation
• Most expert societies recommend supplementation of 800-1000 IU daily due to risk of low Vitamin D levels
A 72 year woman with a past medical history of hypertension on lisinopril presents for her annual exam. She has started to feel a little more unsteady on her feet, and asks you if she should be taking Vitamin D to prevent her from falling. How do you respond?

There is no evidence that Vitamin D will help with falls. But, if she is at risk of Vitamin D deficiency, then you could advise her to take 1000 IU of cholecalciferol daily, but the benefit is unclear.