

Cancer Screening and Preventive Medicine Recommendations/Guidelines

1. Osteoporosis screening

Recommendations for screening with a Bone Mass Density:

A Dexascan (bone mass density test) should be considered for:

1. Women 65 years of age and older
2. Men 70 years of age and older
3. Younger men and women with additional clinical risk factors (should be based on the primary care physician's recommendations for that person) – see discussion

Repeat Bone Mass Density testing is based on the results of the first screening and should be determined by the physician. Some people may need a repeat testing as early as 2 years if there is documented decreased bone density on the DEXA scan or ongoing risk factors. Others may not need repeat testing for at least 5 years.

Discussion:

Risk factors for osteoporosis:

- Age (men over age 70, women over age 65)
- Low body weight (body mass index <20)
- Weight loss
- Physical inactivity (does not participate in physical activity on a regular basis)
- The use of oral corticosteroids (such as prednisone) that are often prescribed for COPD, asthma, etc.
- Hypogonadism - low testosterone levels in men; premature menopause in women
- Cigarette smoking
- Low dietary intake of calcium
- History of fractures
- Rheumatoid arthritis
- Malabsorption and inflammatory bowel disease
- Hyperparathyroidism and hyperthyroidism

2. Breast cancer screening

Recommendations for screening mammograms:

1. Age 40 to 49: every 1 to 2 years (see discussion)
2. Age 50 to 75: yearly
3. Over age 75: discuss risks versus benefits with physician

Discussion:

For women in their 40's the risk of developing breast cancer within the next 5 years can vary substantially. Factors that increase risk include family history of breast cancer, age at the time of pregnancy, age at the time of first menses, history of breast abnormalities requiring biopsy in the past, and history of exposure to chest radiation. Every woman and her physician should determine the best plan for frequency of mammograms before age 50.

A regular clinical breast exam is recommended as some abnormalities that are not seen on mammogram can be detected in this manner.

Teaching/doing breast self-exam does not result in lower breast cancer mortality and is no longer recommended.

3. Cervical cancer screening

Recommendations for screening with Pap tests:

1. Ages 21 through 65: every three years if pap test is normal.
2. Stop screening at age 65 if the past three Pap tests have been normal and there has been no abnormal Pap test in the past 10 years.
3. Anyone with an abnormal Pap test should have an HPV test performed.
4. More frequent screening may be needed for anyone at high risk or for someone that has been treated for an abnormal Pap test or cervical cancer.
5. Anyone who has had a hysterectomy (which included removal of the cervix) for benign disease should discontinue cervical cancer screening. Benign disease includes such things as uterine fibroids or other non-cancer related reasons.
6. Anyone who had a hysterectomy for cervical cancer or had DES exposure may need ongoing screening. This will need to be determined by the physician.

Discussion:

- Pap tests can detect early changes of cervical cells that left untreated could lead to invasive cervical cancer
- The Pap test is used to detect abnormal cells and is often combined with HPV testing
- The HPV (Human papilloma virus) can cause genital warts as well as abnormalities on the Pap test indicative of infection
- There are 30 to 40 different HPV genotypes: eight of these are responsible for 95% of cervical cancers
- Most HPV infections are cleared within 8 to 24 months but persistent infection over many years will result in progression to cervical cancer
- Cigarette smoking increases the risk of cervical cancer

4. Prostate cancer screening

Recommendations for prostate cancer screening:

The PSA (prostate specific antigen) and digital rectal exam of the prostate are the two screening tests used for screening for prostate cancer. Any screening for prostate cancer must first involve a discussion of risks versus benefits with the physician.

1. Screening should not be done before age 50 or after age 70.
2. Screening should not be done on a male with a life expectancy of less than 10 to 15 years.
3. If screening is being done, it does not need to be done every year unless the PSA is mildly elevated (generally screening every 2 to 4 years is adequate).

Discussion:

Due to the limitations of currently available screening tests and unclear benefits of screening, prostate cancer screening remains controversial.

- The lifetime risk of developing prostate cancer for an American male is 16% but the risk of dying of prostate cancer is only 2.9%.
- Screening for prostate cancer can cause harm because of:
 - high false positive rates associated with the current screening tests
 - overdiagnosis (detecting cancer that would not have caused future morbidity or mortality)
 - unnecessary tests (biopsies that can lead to complications such as infections)
 - unnecessary treatments that can lead to urinary and gastrointestinal problems

5. Colon cancer screening

Recommendations for colon cancer screening:

1. Screening should begin at age 50 for average-risk individuals.
2. Screening is generally continued until age 75 to 85 years of age.
3. For those individuals at high risk, screening may begin earlier and occur more frequently:
 - a. Family history of colon cancer
 - b. Inflammatory bowel disease
 - c. History of colon polyps or colon cancer
4. Frequency of screening tests varies depending upon the results of the screening test:
 - a. Flexible sigmoidoscopies are recommended every 5 years if no lesions/abnormalities were seen
 - b. Colonoscopies are done every 10 years if results are normal, however they can be recommended every 1 to 5 years if abnormalities such as polyps were found
 - c. Guaiac-based fecal occult blood tests are often done every 1 to 2 years

Screening tests:

- Guaiac-based fecal occult blood test – have a low sensitivity for polyps and low specificity for significant disease which leads to a work-up for many false positive results.
- Flexible sigmoidoscopy – only looks at approximately the distal (last) one third of the large bowel therefore any abnormal findings may require colonoscopy to visualize the entire colon.
- Double-contrast barium enema – visualizes the entire large bowel but detects only half of large polyps (usually misses small polyps) and any abnormality detected must be followed by colonoscopy.
- Colonoscopy – requires sedation and vigorous bowel preparation and does carry a risk of perforation and bleeding. However, lesions and polyps can be removed during the procedure. It is more sensitive than the other tests.

Discussion:

- 90% of all colon cancer cases occur after age 50
- Removal of premalignant polyps or tumors can prevent cancer from developing
- Removal of localized cancer can prevent colon cancer related death
- Factors that are associated with an increased risk of colon cancer include:
 - Lack of physical activity
 - Consumption of red meat
 - Obesity
 - Cigarette smoking
 - Alcohol use
- Factors that are associated with a decreased risk of colon cancer include:
 - Multivitamins containing folic acid
 - Aspirin and NSAIDs
 - Postmenopausal hormone use
 - Calcium supplementation
 - Selenium
 - Consumption of vegetables, fruits, and fiber