

Nuclear Medicine

Five Things Physicians and Patients Should Question

by

Canadian Association of Nuclear Medicine

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1 **Don't perform stress cardiac imaging or coronary angiography in patients without cardiac symptoms unless high-risk markers are present.**

Asymptomatic, low-risk patients account for up to 45% of inappropriate stress testing. Testing in these asymptomatic patients should be performed only when the following findings are present: diabetes in patients older than 40 years of age, peripheral arterial disease, and greater than 2% yearly coronary heart disease event rate.

2 **Don't use nuclear medicine thyroid scans to evaluate thyroid nodules in patients with normal thyroid gland function.**

Nuclear medicine thyroid scanning does not conclusively determine whether thyroid nodules are benign or malignant; cold nodules on thyroid scans will still require biopsy. Nuclear medicine thyroid scans are useful to evaluate the functional status of thyroid nodules in patients who are hyperthyroid.

3 **Don't use a computed tomography angiogram (CTA) to diagnose pulmonary embolism in young patients, particularly women, with a normal chest radiograph; consider a radionuclide lung study ("V/Q study") instead.**

When the clinical question is whether or not pulmonary emboli are present, a V/Q study can provide the answer with lower overall radiation dose than can CTA. The dose to the breast in women from a nuclear medicine lung scan is much less than the dose from CT performed with a breast shield. Imaging may not be required in patients with a low clinical likelihood of pulmonary emboli and a negative high-sensitivity D-Dimer.

4 **Don't do routine bone scans in men with low-risk prostate cancer.**

Patients who are at low risk of metastatic disease, defined by criteria based on prostate-specific antigen (PSA) and Gleason score, do not need a bone scan for staging. Bone scans may be useful if there are findings in the patient's history or physical examination, which raise the suspicion of bony involvement.

5 **Don't repeat DEXA scans more often than every two years in the absence of high risk or new risk factors.**

Various factors limit the utility of repeat DEXA scans more often than every two years, particularly in stable patients. These include the expected rate of bone loss, which is unlikely to be detected at smaller intervals, and measurement error, which may make repeat measures unreliable. This may be compounded if different DEXA machines are used. In stable patients, the interval between scans may be prolonged, or a repeat may not be necessary.

How the list was created

The Canadian Association of Nuclear Medicine (CANM) established its Choosing Wisely Canada Top 5 recommendations by first having its newly created Choosing Wisely Campaign Working Group review the Society of Nuclear Medicine and Molecular Imaging (SNMMI) and the American Society of Nuclear Cardiology (ASNC) Choosing Wisely® lists. As the American lists reflected the same issues encountered in Canada, the CANM Working Group approved the lists in principle, selected the most appropriate procedures to be questioned and added two recommendations of its own. The list created was then circulated to the CANM Board of Directors and to the general membership for feedback. Item 1 was adopted with permission from the Five Things Physicians and Patients Should Question, ©2012 American Society of Nuclear Cardiology. Items 2 and 4 were adopted with permission from the Five Things Physicians and Patients Should Question, ©2013 Society of Nuclear Medicine and Molecular Imaging.

Sources

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The Canadian Association of Nuclear Medicine

The Canadian Association of Nuclear Medicine (CANM) is a proud partner of the Choosing Wisely Canada campaign. The CANM strives for excellence in the practice of diagnostic and therapeutic nuclear medicine by promoting the continued professional competence of nuclear medicine specialists, establishing guidelines of clinical practice, and encouraging biomedical research. We work with all professionals in nuclear medicine to ensure that Canadians have access to the highest quality nuclear medicine services.



About Choosing Wisely Canada

Choosing Wisely Canada is the national voice for reducing unnecessary tests and treatments in health care. One of its important functions is to help clinicians and patients engage in conversations that lead to smart and effective care choices.

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