



## Five Things Physicians and Patients Should Question

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 percent of inappropriate stress testing. Testing should be performed only when the following findings are present: diabetes in patients older than 40 years old, peripheral arterial disease, and greater than 2 percent yearly coronary heart disease event rate.

2

### Don't perform cardiac imaging for patients who are at low risk.

Chest pain patients at low risk of cardiac death and myocardial infarction (based on history, physical exam, electrocardiograms and cardiac biomarkers) do not merit stress radionuclide myocardial perfusion imaging or stress echocardiography as an initial testing strategy if they have a normal electrocardiogram (without baseline ST-abnormalities, left ventricular hypertrophy, pre-excitation, bundle branch block, intra-ventricular conduction delay, paced rhythm or on digoxin therapy) and are able to exercise.

3

### Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients.

Performing stress radionuclide imaging in patients without symptoms on a serial or scheduled pattern (e.g., every one to two years or at a heart procedure anniversary) rarely results in any meaningful change in patient management. This practice may lead to unnecessary invasive procedures and excess radiation exposure without any proven impact on patients' outcomes. An exception to this rule would be for patients more than five years after a bypass operation.

4

### Don't perform cardiac imaging as a pre-operative assessment in patients scheduled to undergo low- or intermediate-risk non-cardiac surgery.

Non-invasive testing is not useful for patients undergoing low-risk non-cardiac surgery or with no cardiac symptoms or clinical risk factors undergoing intermediate-risk non-cardiac surgery. These types of testing do not change the patient's clinical management or outcomes and will result in increased costs. Therefore, it is not appropriate to perform cardiac imaging procedures for non-cardiac surgery risk assessment in patients with no cardiac symptoms, clinical risk factors or who have moderate to good functional capacity.

5

### Use methods to reduce radiation exposure in cardiac imaging, whenever possible, including not performing such tests when limited benefits are likely.

The key step to reduce or eliminate radiation exposure is appropriate selection of any test or procedure for a specific person, in keeping with medical society recommendations, such as appropriate use criteria. Health care providers should incorporate new methodologies in cardiac imaging to reduce patient exposure to radiation while maintaining high-quality test results.

# How This List Was Created

The American Society of Nuclear Cardiology (ASNC) appointed a writing group of content experts to identify five areas in which to make recommendations. Areas were selected for the evidence-based data available to direct provider decision-making and the potential for improving patient selection and care by eliminating inappropriate testing. Specific recommendations were drafted for each subject area, accompanied by peer-reviewed literature citations. These recommendations were reviewed by the ASNC Quality Assurance Committee and Board of Directors prior to submission to the *Choosing Wisely* campaign. ASNC's disclosure and conflict of interest policy can be found at [www.asnc.org](http://www.asnc.org).

## Sources

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### About the ABIM Foundation:

The mission of the ABIM Foundation is to advance medical professionalism to improve the health care system. We achieve this by collaborating with physicians and physician leaders, medical trainees, health care delivery systems, payers, policymakers, consumer organizations and patients to foster a shared understanding of professionalism and how they can adopt the tenets of professionalism in practice.



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### About the American Society of Nuclear Cardiology:

The American Society of Nuclear Cardiology (ASNC) is the voice of more than 4,500 physicians, technologists and scientists dedicated to the science and practice of nuclear cardiology. Since 1993, ASNC has been establishing the standard for excellence in cardiovascular imaging through the development of clinical guidelines, professional education and research development.



For more information or questions, please visit [www.asnc.org](http://www.asnc.org).

For more information or to see other lists of Five Things Physicians and Patients Should Question, visit [www.choosingwisely.org](http://www.choosingwisely.org).