



## JOURNAL OF NUCLEAR CARDIOLOGY NEWS UPDATE

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### **OPTIMISM IN THE WORLD OF CARDIOVASCULAR IMAGING: NUCLEAR CARDIOLOGY REMAINS THE CORNERSTONE OF RISK ASSESSMENT FOR ISCHEMIC HEART DISEASE**



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*“Optimism is essential to achievement and it is also the foundation of courage and true progress.”  
Nicholas Murray Butler. American philosopher, diplomat, and educator (1862–1947).*

It has been a great honor and privilege to serve as ASNC President in 2009. A lot has happened during the past year as health care reform has taken center stage in the United States. Cardiovascular imaging professionals continue to face intense scrutiny over the growth in volume of imaging tests. Insufficient data on the link between imaging and patient outcomes contribute to misperceptions about imaging utilization. The real solution to ensuring judicious use of cardiac imaging tests lies in the implementation of evidence-based appropriate use criteria for all testing. The ultimate beneficiary of this approach will be the patient, who will have access to and receive the best possible diagnostic testing and treatment in a timely manner.

As a key part of the imaging community, it is important that nuclear cardiology professionals focus on appropriate testing and protocols to ensure better outcomes for our patients. We must seize the opportunity to publicize and expand upon the large body of clinically relevant data that provides support for the diagnostic,

prognostic, and incremental value of SPECT MPI in the evaluation of patients with known or suspected ischemic heart disease. We must also collect the critical data needed to validate the role of nuclear cardiology studies in affecting patient outcomes.

At the beginning of 2009, I outlined a platform with a focus on patient outcomes, and I listed five components needed to accomplish the goal of choosing the appropriate test for optimal patient outcomes. During the past year, ASNC has worked diligently to address these five areas: (1) patient care, (2) responsible imaging, (3) patient advocacy, (4) clinical outcome-based research, and (5) collaboration with other societies and organizations.

### **PATIENT CARE**

Technology continues to push our field in new directions and open new pathways for providing optimal care to cardiovascular patients. New imaging agents, equipment, and software will provide us with new opportunities to improve current practices and to introduce new technology into our clinical protocols.

Also, new clinical studies continue to broaden the practice of nuclear cardiology and to establish the value of SPECT MPI in new areas of practice. For example, recent studies have shown the value of SPECT MPI for imaging women with known coronary artery disease, patients with heart failure, and the very early detection of Alzheimer's disease. In addition, for low-risk patients in the emergency department with suspected acute coronary syndrome, MPI has the potential to safely reduce the number of hospital admissions.

ASNC aims to facilitate adoption of new technology by incorporating new data into its published guidelines on a routine basis. Over the past year, 6 of the 8 chapters in the *Imaging Guidelines for Nuclear Cardiology Procedures* have been revised to include findings from published research. The *Imaging Guidelines* include recommendations to physicians and technologists on best practices in the field and provide a critical balance between rapidly evolving technology and evidence-based data.

The recent focus on radiation exposure is a call to action for us in the nuclear cardiology community to

continue to implement protocols and foster research that reduce the radiation exposure to our patients.<sup>1</sup> The concept of minimizing radiation exposure from diagnostic imaging studies to support the practice of ALARA (as low as reasonably achievable) is critical to the daily practice of nuclear cardiology. Estimates of cumulative radiation exposure and the extrapolation of data to translate this exposure into an increased risk of cancer must be interpreted in light of the large body of clinically relevant data on the diagnostic and prognostic utility of myocardial perfusion imaging studies. ASNC actively supports the development of imaging techniques that reduce radiation exposure. Emerging new camera technologies and processing protocols show potential to decrease radiation dose by as much as 50%.<sup>2</sup> In 2009, ASNC published clinical updates and information statements on radiation issues, including radiation dose estimates, protocols utilizing new technology, and stress-only imaging. All of these documents help provide roadmaps for imaging professionals to provide optimal care with current resources for our patients.

## **RESPONSIBLE IMAGING**

In 2005, ASNC and the American College of Cardiology published a seminal document in the evaluation of appropriate testing for single-photon emission computed tomography imaging. The Appropriateness Criteria for SPECT MPI was the first in a series of documents that outlined an imaging test as appropriate, inappropriate, or uncertain based on specific clinical scenarios. Recently revised as Appropriate Use Criteria for Cardiac Radionuclide Imaging, this document serves as a critical resource for comparing personal utilization practices with evidence-based recommendations.<sup>3</sup>

## **PATIENT ADVOCACY**

ASNC's core activities in education, advocacy, and quality assurance aim to improve the practice of its members. The indirect result of these efforts is improved access to and quality of nuclear cardiology care. Patients are the reason we practice. All the hours spent in continuing education sessions, all of the manuscripts read in imaging journals, and all of the calls and e-mails to Congress are to improve our ability to help our patients.

As medical professionals, we have clinical responsibilities to our patients—safe, timely, and judicious care based on evidence-based data and professional best practices. We also have an obligation to advocate on behalf of our patients when outside forces threaten our ability to fulfill those clinical responsibilities. ASNC

members have responded to the Society's call to action many times this year, and I thank each one of you for your efforts. Every individual who volunteered for a writing group, contacted a legislator, or attended a conference, spent their time and lent their expertise to the Society. Your contributions are appreciated and the impact you have is sizable; not only on your colleagues but on your patients as well.

## **CLINICAL OUTCOMES**

As the nation focuses on health care reform, investigators continue to explore the role of nuclear cardiology studies in affecting patient outcomes. Data linking the impact of imaging tests to patient outcomes is sparse. Specifically, our field lacks a large registry data specific to nuclear cardiology and comparative effectiveness research evaluating net improvement in outcomes. In addition, more evidence is needed to support appropriate use criteria, lab accreditation, and physician certification as factors in improved quality of care.

Recognizing the critical need for outcomes research, the ASNC Board of Directors tasked the Nuclear Cardiology Foundation with the responsibility of acquiring nuclear cardiology outcomes data. This decision stemmed from the Foundation's history as a platform for supporting research in the field. With a renewed focus on research initiatives, the Foundation will pursue grants from industry and government organizations that will allow investigators to focus on patient-centered outcomes and comparative effectiveness data for nuclear cardiology and complementary modalities.

## **COLLABORATION**

I have always found the team approach to be an important method of improving my own practice and building relationships with my colleagues when providing medical care. This approach translates well to our Society as a whole. ASNC is a strong and dedicated voice for our field, yet some of the Society's best work comes when we partner with national and international organizations with similar goals. Whether in the realm of education or health policy, working with our imaging colleagues, rather than competing with them, leads to extraordinary results.

ASNC continues to be a society of and for the global nuclear cardiology community and pursues worldwide initiatives via the work of the International Council, which represents the ASNC international membership and comprises representatives of 40 countries in Europe, Asia, Africa, Oceania, North America, and South America.

## CONCLUSION

As 2009 comes to a close, I am gratified by the strides ASNC has made in the past year. Under the auspices of ASNC, the nuclear cardiology community continues to progress toward better technology, better practices, and better cardiovascular care for our patients.

I am indebted to the expertise, guidance, and passion of the ASNC Executive Council and Board of Directors. I have relied on their wisdom many times over the past year and credit them with excellent leadership of the Society. Thank you to the membership and to all the committee members for their extraordinary support. I leave you in the capable hands of my successor, Dr. Mylan Cohen, and I look forward to his leadership and the contributions he will make to ASNC's proud history. I also extend a heartfelt "thank you" to ASNC Executive Director Steve Carter and the

ASNC staff who work tirelessly behind the scenes to serve the members and the nuclear cardiology community. It has been a pleasure and honor to serve as ASNC's President during the past year, and I look forward to working with my fellow ASNC members to further the success of the Society for many years to come. Thank you for the opportunity to serve.

## References

1. Lauer MS. Elements of danger—the case of medical imaging. *N Engl J Med* 2009;361:841-3.
2. Slomka P, et al. Advances in technical aspects of myocardial perfusion SPECT imaging. *J Nucl Cardiol* 2009;16:255-76.
3. Hendel RC, Berman DS, Di Carli MF, Heidenreich PA, et al. ACCF/ASNC/ACR/AHA/ASE/SCCT/SCMR/SNM 2009 appropriate use criteria for cardiac radionuclide imaging. *J Am Coll Cardiol* 2009;53:2201-29.

## CALENDAR

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Please note that the programs listed below are sponsored or cosponsored by the American Society of Nuclear Cardiology (ASNC). For more information, visit the ASNC Web site (<http://www.asnc.org/event.cfm>).

**November 13-14, 2009.** Nuclear Cardiology Physics Course. Baltimore, MD.

**February 9, 2010.** ASNC/Saudi Heart Association Joint Lunch Symposium. Riyadh, Saudi Arabia.