



Taking Care of Business

SNM takes care of its members. Every future direction set, every educational course offered, every message delivered to legislators and regulators, every product and service developed is thoughtfully and intentionally provided to serve you, advance your value, and improve the quality of patient care.

Members of our board of directors and House of Delegates tackled some of the bread-and-butter practice issues affecting the profession during the midwinter governance meetings last month. While specific details from those meetings will be relayed later, I want to detail briefly some recent actions designed to benefit you and your practice today.

In Credentialing: With the American College of Nuclear Physicians, SNM initiated minimum standards for the credentialing in nuclear medicine of those interpreting PET, PET or SPECT with CT, and cardiovascular CT images. Suggested training criteria include number of images read under supervision of a qualified physician, amount of training, and evidence of continuing competence. Soon, SNM will offer 150 PET/CT and 500 interactive, diagnostic CT cases that can be used to gain experience as set out in suggested on-the-job guidelines from SNM, the American College of Radiology, and the Society of Computed Body Tomography and Magnetic Resonance. In addition, the society published the first procedure guideline for tumor imaging using PET/CT with FDG that identifies those elements most important in obtaining high-quality PET/CT images and interpretation; covers patient preparation, image acquisition, interpretation criteria, and quality control; stresses the importance of establishing qualifications for doctors, technologists, and medical physicists; and summarizes PET/CT on-the-job training requirements for interpreting images.

In Residency Training: As part of new Accreditation Council for Graduate Medical Education (ACGME) requirements—and beginning in July—residents must complete a 3-year training program that allows an extra year to learn cross-sectional imaging. The American Board of Nuclear Medicine (ABNM) changed its formal requirements for entry to its certifying exam to match ACGME, and candidates for both certification and recertification can expect an increasing emphasis on morphologic—especially cross-sectional—imaging studies and therapeutic medicine. PET/CT is an integral part of today's nuclear medicine and as much as 200 hours of continuing medical education in didactic and 500 hours of supervised clinical experience are needed for CT credentialing. SNM takes seriously its job of supporting and training nuclear

medicine residents and fellows and offers comprehensive educational programs to meet ACGME and ABNM requirements, a network of personal contacts, a job bank, and inclusion in our many committees.

In Education: Maintenance of certification (MOC) is a reality, and SNM's Lifelong Learning and Self-Assessment Program fulfills part 2 of the American Board of Medical Specialties requirements. With our program, nuclear medicine health care professionals are able to assess their medical knowledge and competency in patient care, practice-based learning and improvement, and systems-based practices. ABNM MOC requirements are now in effect, and that body strongly encourages its diplomates to participate in such MOC programs. SNM's strenuous program in continuing education ensures that members remain abreast of rapidly occurring advances, best practices in patient care, and proven practice-management techniques. A newly created task force, headed by Conrad E. Nagle, MD, is beginning to address performance in practice evaluation (part 4 requirements).

In Technologist Programs: With an eye on continued growth and change, the Technologist Section advocates strongly to provide opportunities for those interested in extending their professional education to the graduate level and to upgrade minimum educational requirements for nuclear medicine technology certification to a bachelor's degree at entry level. Emphasis remains on promoting standardized, legislated legal scope of practice; augmenting the knowledge base and skill sets to include fusion imaging with the latest technologies; and tracking closely the work of scientists and industry on new imaging technologies and adjusting educational programs as needed. MOC's reach may eventually extend to technologists, and SNM offers educational programs that ease the way for nuclear medicine professionals to continue their lifelong learning.

In Research: Members receive the latest clinical and scientific research—that helps identify and facilitate new directions in medicine—through *The Journal of Nuclear Medicine* and *Journal of Nuclear Medicine Technology*. *JNM's* recent supplement, "PET/CT in Cancer Patient Management," explored the role of ¹⁸F-FDG PET/CT imaging in patient screening, cancer diagnosis, initial treatment planning,



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to visualize early changes in aortic valvular cell functions in vivo and to assess the utility of the resulting data in predicting future risk and identifying therapeutic targets for prevention of valvular stenosis. The authors used a panel of near-infrared fluorescence imaging agents to map endothelial cells, macrophages, proteolysis, and osteogenesis in vivo in the aortic valves of hypercholesterolemic apolipoprotein E-deficient mice. They found that the valves of apolipoprotein E-deficient mice contained macrophages, were thicker than those in wild-type mice,

and showed early dysfunction detected by MR imaging in vivo. Fluorescence imaging detected uptake of macrophage-targeted magnetofluorescent nanoparticles in apolipoprotein E-deficient valves but not in controls. Protease-activatable near-infrared fluorescence probes showed proteolytic activity in valvular macrophages, and ex vivo MR imaging enhanced with vascular cell adhesion molecule-1-targeted nanoparticles detected endothelial activation in the regions of highest mechanical stress in the valves. Osteogenic near-infrared fluorescence signals indicated ongoing

active processes of osteogenesis in inflamed valves in areas in which no calcium deposits were visibly evident. Quantitative image analysis correlated near-infrared fluorescence signals with immunoreactive vascular cell adhesion molecule-1, macrophages, and cathepsin-B. The authors concluded that this array of molecular imaging approaches can combine to “detect in vivo the key cellular events in early aortic valve disease, including endothelial cell and macrophage activation, proteolytic activity, and osteogenesis.”

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treatment monitoring, and detection of early recurrence. In the coming months, the journal will emphasize molecular imaging through a planned supplement, continuing education articles, Newsline’s literature briefs, and a monthly Newsline column (that debuted last month).

These actions—along with defining, delivering, and promoting positions on legislative and regulatory issues on

your behalf; fostering the collaborative nature of doctors, technologists, and scientists; and monitoring changes in federal and state rules and regulations that affect how you get paid—attest to how ably SNM takes care of the business at hand.

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