

Session 3: Strategies to Engage Referring Physicians and Increase Utilization of Clinical Molecular Imaging

After a period of rapid growth following the introduction of PET/CT in 2002, the rate of growth has slowed because of high start-up costs, decreased reimbursement, need for additional professional training, and concern about patient radiation exposure. The molecular imaging community is challenged to find ways to educate and inform referring physicians about the growing range of patient benefits available through PET, PET/CT, and other modalities. Identifying strategies to engage referring physicians and increase utilization was the focus of this session at the Molecular Imaging Summit.

Session Participants

The panel and discussants brought diverse perspectives and fresh ideas to this task. In both formal presentations and discussions, the presenters identified common themes as well as differences that characterize the potential medical audiences for the molecular imaging message. Specificity was repeatedly emphasized at other sessions in the summit as an important criterion for strategies to advance acceptance and utilization of molecular imaging. To stimulate discussion and to advance a specific strategy that could also carry significant economies of time and effort as well as advantages in patient safety, I opened the session with a suggestion for a new paradigm in PET/CT imaging (see next Newline contributed article).

Our next presenter was Sue Minerich, BS, CNMT, who is the Western Region sales manager for PETNET Solutions (Seattle, WA), a Siemens company that operates the largest PET radiopharmacy network in the United States, with more than 44 radiopharmacies and distribution centers that produce and distribute radiopharmaceuticals to hospitals, clinics, and research facilities for PET imaging. Her remarks focused on experience-based strategies for nurturing and developing key referring physician relationships and targeted specialty information. She also emphasized the importance of the interpreting physician as a PET/CT consultant and champion.

Michael S. Kipper, MD, from the University of California, San Diego, provided advice on moving molecular imaging to the clinic, based on his years of experience in community hospitals, private practice, and clinical research.

He pointed to a number of promising strategies for outreach, including stronger alliances with the radiation oncology community.

Albert J. Sinusas, MD, a professor of medicine and diagnostic radiology at Yale University School of Medicine (New Haven, CT), provided insight on the different kinds of outreach needed to connect with the cardiovascular community. Using case studies from his own group's research, he identified areas of promising development as well as challenges. His viewpoint was particularly useful in highlighting the fact that molecular imaging outreach must go beyond those concerned with malignant disease to the growing range of applications in which these techniques are likely to play a key role in the future.

Scott F. Schubert, from GE Healthcare (Waukesha, WI), provided industry perspective on increasing utilization of PET and PET/CT and looked at ways that industry, health care providers, and professional societies can work together to advance the profile of molecular imaging.

Richard L. Wahl, MD, is a professor, director of nuclear medicine, and vice chair of new technology and business development in the Russell H. Morgan Department of Radiology and Radiological Science, as well as a professor of oncology, at the Johns Hopkins University Hospital (Baltimore, MD). His presentation described the role of molecular imaging in "risk adaptive" therapies; that is, treatment based on 1 or more characteristics of an individual patient and not on averages for a given population.

We were fortunate to be joined in our discussions by Moyeen Khaleeli, MD, a private practice oncologist and hematologist from Torrance, CA. His informal remarks on patient experiences with molecular therapies provided a potent reminder of the difficult decisions associated with quality of life issues in cancer treatment. His insights from the perspective of the practitioners to whom we want to communicate our message were especially helpful.

Recommendations

After presentations and a lively discussion session, presenters and attendees prepared 8 recommendations for review by the entire summit audience and for the SNM and

larger molecular imaging community. Specific strategies, many derived from points made in the formal presentations, were included for following through on each of the recommendations and appear here as bulleted items after each recommendation.

- (1) Increase education and marketing efforts directed to patients and advocacy groups.
 - Identify a well-known spokesperson.
 - Create a speakers bureau of imaging experts and physicians with expertise in PET/CT.
 - Identify key advocacy groups and provide information for inclusion in their Web sites.
 - Encourage interest in newsworthy stories, such as the negative impact of Centers for Medicare and Medicaid Services (CMS) decisions on the availability of health care.
 - Advertise and explore opportunities for product placement in the popular media.
 - Encourage production of programming on scientific networks, such as National Geographic and the Discovery Channel.
- (2) Increase awareness of practice and procedure guidelines among imaging experts and referring physicians.
 - Educate referring physicians about practice guidelines.
 - Educate imaging experts about procedure and reporting guidelines.
 - Participate in review and development of practice guidelines by other professional organizations.
 - Develop appropriateness criteria to encourage proper utilization of PET/CT.
 - Perform a needs assessment survey of referring physicians.
 - Engage other professional organizations in an intersocietal dialog on the value of molecular imaging, identify shared goals, and develop coordinated action plans.
- (3) Develop individually tailored PET/CT procedure guidelines to minimize radiation dose and improve image quality.
 - Provide education and cross training for physicians and technologists.
 - Educate referring physicians about the advantages of new paradigms.
- (4) Perform economic analyses of high-impact applications.
 - Example: Therapy monitoring in lymphoma.
- (5) Lobby CMS to provide appropriate reimbursement, including the following examples:
 - Radioimmunotherapy.
 - Unpackaging of PET tracers and technical reimbursement.
 - Reimbursement based on cost-to-charge ratio or average wholesale price + 5% + delivery.
- (6) Review and update information used to support PET/CT certificate of need applications.
 - The SNM Government Relations Committee should address individual state issues.
- (7) Identify potential high-impact areas of clinical and translational research.
 - Develop a prioritized list of important areas.
 - Identify National Institutes of Health funding opportunities and align research with programmatic goals.
 - Provide organizational support for research studies.
- (8) Educate medical students about the value of molecular imaging.
 - Invite local students to attend SNM Annual and Mid-Winter meetings.
 - Produce and distribute case-based educational DVDs.

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A New Paradigm to Increase Utilization of PET/CT

The fastest-growing clinical application of molecular imaging is the evaluation of tumor metabolism using ¹⁸F-FDG. The National Comprehensive Cancer Network (NCCN) includes PET or PET/CT in 18 of its 31 practice guidelines. This reflects the large escalation we saw in the applications and capabilities of PET after the introduction of hybrid scanners in 2000 and 2001. Whereas the annual number

of CT procedures in the United States has risen to 60 million or more, only about 2 million PET/CT procedures are performed each year—significantly less than 5% of the total.

Challenges to Increased Utilization

The first question is: why? One explanation is that the technology itself faces several challenges. We have little