

Molecular Imaging Symposium Encourages Interdisciplinary Cooperation

The Multimodality Cardiovascular Molecular Imaging Symposium sponsored by the SNM Molecular Imaging Center of Excellence (MICoE) April 30–May 1 at the National Institutes of Health in Bethesda, MD, brought together a highly interdisciplinary group of scientists. But unlike at many such meetings, no discussions focused on which modality is best. Instead, we concentrated on the targets of the imaging process and on defining the synergistic effect that MI can have on the clinical management of patients.

Researchers are developing a consensus that bringing the different modalities together adds incremental value, and this is particularly true when it comes to imaging the heart. Although we have benefited from many techniques developed for imaging tumors, the heart is a working organ and thus a combination of morphologic and functional imaging is required to assess its efficiency and viability.

Speakers at the symposium presented cutting-edge research and discussed the process of translating that research into clinical practice. This process involves identification of clinical needs, validation of diagnostic and prognostic techniques, acceptance of the new techniques by regulatory bodies, and reimbursement by the various payers. Then, for true clinical acceptance, professional groups must cooperate in the training and dissemination of the information to clinical providers.

We looked at research being conducted in all the stages of this process. For example, there is a critical clinical need for early diagnosis and risk assessment in coronary artery

disease. We examined some of the latest research on quantitative flow reserve, vascular imaging, and a combination of in vivo/in vitro markers.

One particularly interesting area of translational research is the process of imaging stem cell transplantation. I think most cardiovascular researchers believe that this is a very important area of research; however, so far the clinical experience has been less promising than the preclinical data led us to expect. We need to understand why some of these approaches work in animal models but not in humans. The main question concerns the survival of the cell and incorporation of the cell in the myocardial tissue. Molecular imaging is absolutely vital to understanding the process of cell therapy and where it is going astray.

This 2-d symposium demonstrated that although cardiovascular molecular imaging is poised to dominate clinical practice, it also holds special promise in the experimental arena. Interdisciplinary training and communication are the keys to translating these innovative approaches into effective patient care.



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