

## The State of Nuclear Medicine, 2010

### From the Newsline Editor and Consulting Editor

A review of 2009, as follows in these pages and in the March issue of Newsline, is highlighted by remarkable advances in medicine and medical research afforded by molecular investigations and led by nuclear medicine. These advances must be juxtaposed against U.S. and international events and circumstances that are challenging and as yet without decisive outcomes. As the year drew to a close, we found ourselves asking, along with others in molecular medicine: Where are the U.S. and world economies headed after the recent great recession—toward a second dip or toward recovery? What will our health care system look like after the implementation of still unclear reforms? Will the  $^{99}\text{Mo}$  shortages end in 2010 and be supplemented in the future with domestic supplies of radionuclides? How will our field transition from nuclear medicine to molecular medicine—what professional “turf” will we gain and what may we lose? A summary of the ultimate impact of 2009 and what we can expect from 2010 is premature. Instead, we refer readers to both the Magic Eight-Ball—“Answer hazy; ask again later”—and Bette Davis in *All About Eve*—“fasten your seatbelts, it’s going to be a bumpy night!”

### News from the Nation and World

The year 2009 began with the worst recession since the depression and the historic inauguration of the first African-American U.S. president. One element in the U.S. response to economic challenges brought a new phrase into the national vocabulary—“stimulus funding.” This funding had and continues to have dramatic effects in medicine, with extraordinarily broad and wide-reaching research support from the National Institutes of Health (NIH) and other Health and Human Services agencies. The long-term effects of this funding remain to be evaluated, but many hospitals, institutions, and investigators have begun new and promising studies with this unprecedented support.

At NIH the importance of molecular medicine was emphasized on August 7 when Francis S. Collins, MD, PhD, was confirmed by the U.S. Senate as NIH director. Collins is a physician–geneticist noted for his landmark discoveries of disease genes and his leadership of the Human Genome Project. He is continuing a number of programs with direct relevance to molecular medicine initiated under the NIH directorship of Elias Zerhouni, MD, such as the Imaging Probe Development Center at the National Heart, Lung, and Blood Institute. With the

addition of stimulus funding, Collins has implemented new research funding programs, making high-risk projects and innovation primary goals.

A leading indicator of advances in medical care in the United States was the announcement by the Centers for Disease Control on August 19 that life expectancy in the country is at an all-time high of 78 y (80.4 y for women; 75.3 y for men). At the same time, our national health faces new and unexpected challenges. The spread of the H1N1 virus caused both lawmakers and citizens to ask hard questions about our preparedness for pandemics as well as personal responses to widespread contagious disease: Where and when would vaccine be available? Who should receive the vaccine and why? Should affected schools close or remain open? What viral or other outbreak is unseen, just around the corner.

The year closed with preliminary passage of health care reform as well as what seems to be an annual round of threatened cuts to nuclear medicine reimbursement. As noted, it remains to be seen how these will be implemented and what the effects will be on practitioners, health care institutions, and, most important, our patients.

### From JNM and SNM

The *Journal of Nuclear Medicine (JNM)*, with Heinrich Schelbert, MD, PhD, now in his fifth year as editor-in-chief, implemented 4-color publication and provided open access to the journal at 6 mo after issue dates. In June, Schelbert announced that the Thomson Reuters *Journal Citations Report* had named *JNM* as the most influential of all 87 peer-reviewed medical imaging publications.

In Newsline, we continue to provide monthly selections of literature briefs on molecular imaging from a wide array of journals outside the standard canon of imaging publications. Reviewing these briefs for the relatively short timespan of a year indicates the tremendous inroads that PET/CT and other hybrid imaging approaches have made into routine practice and the increasing integration of what were once “nuclear medicine only” techniques into other areas of practice.

As evident in the contributions that appear on the following pages, 2009 was a year of forward-looking activity for SNM and its councils, committees, staff, and members. SNM initiated its Clinical Trials Network and obtained an Investigational New Drug approval for  $^{18}\text{F}$ -fluorothymidine. The society remained at the forefront of activities to establish a reliable domestic supply of radionuclides, ensure

adequate and appropriate reimbursement for nuclear medicine procedures, and advance efforts to accelerate research. SNM leadership focused on the long-term goal of unifying and advancing molecular imaging and therapy.

The pages of Newsline also document the passing of time. In an announcement that marked the end of a grand tradition, Henry N. Wagner, Jr., MD, wrote in Newsline in December that his 33rd Highlights Lecture, delivered at the 2009 SNM Annual Meeting in Toronto, Canada, had been his last.

One of the most difficult tasks for the Newsline editor and consulting editor is the continuing challenge of adequately paying final tributes to respected colleagues and innovators in our field. This year was unfortunately no exception, with the untimely passing of physicians, technologists, and scientists who have been major contributors to the field of nuclear medicine. Perhaps the greatest tribute many of them can receive is to have their work in

nuclear medicine continue to be integral to clinical and research advances in medicine.

We move into 2010 with a mix of optimism—fueled by the great strides made in our field over the past few years—and caution—engendered by the uncertainties that surround us. Whatever the new year brings, we can be sure that surprises, advances, and setbacks will be included. We will continue to enjoy the challenge of providing summaries of and perspectives in the pages of Newsline and welcome the input and support of Newsline readers—for whom we wish the best for 2010!

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## Education, Reimbursement, Research: Tenets of SNM's Success

**W**hen I began my term as president of SNM in June, my vision for the society revolved around 3 main goals—to protect and expand reimbursement for nuclear medicine procedures, to provide high-quality member service by offering essential education, and to preserve and expand available funding to support nuclear medicine research and development. These goals are aligned with SNM's main mission to be the leader in unifying and advancing molecular imaging and therapy. Over the past 8 mo, SNM has made significant progress through initiatives designed to elevate the profile of molecular imaging among referring physicians, policymakers, the media, patient groups, and other stakeholders.

First, there is a pressing need to ensure that nuclear medicine physicians, scientists, and technologists receive standardized and continuing education so that their skills keep pace with the field. SNM is striving to raise the standards of education to new levels by working with the American College of Radiology and other organizations to create guidelines for training nuclear medicine physicians.

Second, with the pending legislation on health care reform, SNM remains a strong voice in advocating for the Centers for Medicare & Medicaid Services to protect coverage of crucial diagnostic imaging tests for all patients. SNM also continues to demonstrate nuclear medicine's many benefits through the planning of cost effectiveness studies. This effort is expanding significantly in that we are organizing a workshop in comparative effectiveness research in molecular imaging in oncology and are actively

looking for funding opportunities to expand nuclear medicine research in this area.

Finally, research plays a critically important role in bridging from the present to the future. A prime example of SNM's commitment to moving molecular imaging and nuclear medicine forward is the development of the Clinical Trials Network. The network will ensure the standardization of imaging in clinical trials and lead to an expansion of our methodology in assessing response to therapy, particularly in early-phase clinical trials. It should also help speed approval of new radiopharmaceuticals, a process that has continued to be remarkably slow and remains a critical need for patients and other members of the molecular imaging community.

SNM as a whole is exploring the vast possibilities of molecular imaging, with the ultimate goal of expanding the ability of researchers and physicians to deliver on the promise of personalized medicine. It is important to recognize that every effort SNM makes toward advancing the field will help physicians, scientists, and technologists deliver better care to patients. By pursuing the goals of education, reimbursement, and research, SNM is poised to propel the profession to new heights.

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