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# It's Time to Stop Crying and Do Something

In the May 1996 issue of *The Journal of Nuclear Medicine*, Dr. Stanley Goldsmith entitled his monthly column, "J' Accuse."

In this article, he spoke out against the apparent inability of the nuclear medicine community to act to protect the growth and interests of their specialty. I would like to add my voice to his in strong support of the issues he has enunciated and the need for a proactive approach to resolving these problems. There can be no question that the field of nuclear medicine, because of its youth and small number of practitioners, is seriously disadvantaged in this new age of managed care, restricted resources and for-profit medicine. At a meeting of the Academic Council in June 1996, several of the invited speakers and many members of the audience spent a large portion of the designated time, which was supposed to be devoted to a discussion of resolving problems with training in nuclear medicine, to lament about the difficulties encountered in our training programs. There was only limited discussion concerning possible solutions. What are these problems and why have we failed to resolve them?

In terms of training nuclear medicine physicians, I believe that the American Board of Nuclear Medicine (ABNM) erred by reducing the training requirements in nuclear medicine to a total of three years, including only one year for clinical practice. This change did nothing to resolve the dilemma that most individuals have concerning the best way to enter the field of nuclear medicine nor did it address the reported difficulty that nuclear medicine physicians have in finding jobs.

Most candidates are overwhelmed by the wide variety of choices for preparation in nuclear medicine training. In addition, the specialty has been downgraded by implying that less training, rather than more, is required. What is the solution to this problem? The ABNM should attempt to restore a minimum of four years of training prior to the Board examination. Even though it now appears that we are committed to the three-year requirement, which may not be rescinded in the present political climate, we will never know for sure if we do not try. I was pleased that during a retreat of the ABNM in December, the Board seemed to agree with these concerns and endorsed steps to deal with them.

There are several options that could be chosen by the climate depending on his/her interests. Those individuals who wish to devote their time solely to nuclear medicine might opt to take one year of clinical training followed by three years of nuclear medicine, with the third year devoted to improving their skills in other more specialized areas such as cardiovascular nuclear medicine, PET imaging, nuclear oncology, etc. This may be a risky course due to problems in the availability of jobs for individuals who can do only nuclear medicine. However, such jobs do and undoubtedly will continue to exist. This is especially true as the nuclear medicine physician pool ages and retires.

Those individuals who wish to maintain direct contact with patients, but also have a major commitment to nuclear imaging, can take two years of general internal medicine training followed by two years of nuclear medicine. This type of program can be set up in such a way the individual receives dual board certification. The Board is now negotiating to formalize this type of program.

Finally, for those individuals who are interested purely in the imaging aspect of nuclear medicine and have less interest in direct clinical care they should be allowed to take one year of training in nuclear medicine following a complete radiology residency, which has included a minimum of six months of training in nuclear medicine. Such a program would give them a total of 1.5 years of general nuclear medicine plus six months of related training. They would therefore be eligible to sit for both the American Board of Radiology and the ABNM exams.

The representatives of the ABNM should aggressively pursue recognition of the fact that nuclear medicine is one of those specialties which requires primary training and should be granted an exemption from the ruling that a residency program is not supported after the requirements for a primary board are achieved. Individuals who are eligible for primary boards in medicine and radiology should be allowed to continue into nuclear medicine. We would then have better trained practitioners with broader backgrounds. An exemption should be made to allow for full support of their training during those years.

Who should do this? The ABNM must take the lead, but the Society of Nuclear Medicine (SNM) and American College of Nuclear Physicians (ACNP) must also participate in the lobbying to achieve these goals. Perhaps there should be a special retreat for all the directors of nuclear medicine residency programs in the U.S. to gain a broad base of support. We should proceed with this proactive effort to clarify and improve the training and preparation of individuals for the practice of nuclear medicine.

What about the practice of nuclear medicine in general? When nuclear medicine split off from radiology as a separate academic department at the Albert Einstein College of Medicine, I had hoped that a number of other institutions would follow that example. Unfortunately, this did not occur. Several department directors who might have done otherwise chose to remain under the umbrella of diagnostic radiology.

The importance of our relationship with diagnostic radiology cannot be underestimated. However, although surgical specialties such as otolaryngology, ophthalmology and urology continue to be very much closely linked to general surgery, their independence has given them greater strength and freedom to grow. Nuclear medicine is closely related to radiology, but it also is closely related to medicine. I think most of us would now accept the view that despite our previous relationship to pathology, changes in technology have moved us away from that area and made our role in in vitro laboratory testing of much

smaller consequence.

In these times of constricted resources, it is unlikely that other departments will follow the example that has been set at the Albert Einstein College of Medicine and a few other medical centers. However, the directors of nuclear medicine must impress upon their radiology or medicine chairpersons, or whatever academic department they relate to, the importance of the specialty and the need for financial and moral support and growth.

Even more important is the need for us to overcome the endless question that arises whenever we meet someone socially (or even at medical functions) who asks us what we do and we respond, "we are nuclear medicine physicians." The reaction varies from "what is that" to "oh, you are a radiologist" or even "oh, you mean you treat cancer." The public must be made aware of who we are, what we do and how important it is. This means spending money. I realize that the ACNP and the SNM are facing financial problems, but we all have financial problems. Therefore, it is time to set priorities. I believe that the single most important

priority any organization in the field has is to make people aware of its existence and importance. This can only be done with an influx of a large amount of capital and with experienced direction through a professional public relations firms.

It is time to stop crying and time to stand up and fight for a field which we believe to be vital to the progress of medicine and of the advancement of our ability to diagnose and treat illness. Let us clarify and solidify the pathways into nuclear medicine as required by the ABNM. Let us make the public aware of our existence and our importance. Let's stop the surveys that list all of the board-certified medical specialties that invariably do not bother to mention nuclear medicine.

If we do not stop crying, we are going to drown in our tears.

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### **Cancer Staging**

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tumors, and many patients experience complications. For instance in the *JAMA* study, 40% of patients experienced lymphedema, 5% had chronic lymphedema, 40% had paresthesia of the arm and 10% had a seroma formation. In addition, lymph node removal can raise the risk of postoperative complications. "In Stage I cancers, where only 10% to 15% of patients have positive nodes, you're subjecting an unacceptably large number of women to unnecessary surgery," said Kuhn.

#### **A Lack of a Standard Method**

Until the NCI trial is completed early next year, the sentinel node technique will remain in the hands of researchers or in limited clinical settings. "So far, the preliminary studies have yielded good results," said Kuhn. "The rate of skip metastases is on the order of about 2%, and most oncologists would consider this an acceptable amount." (Skip metastases occur when the first node in the chain does not contain metastatic disease, but more distal lymph nodes do.)

Sentinel node detection, with all its ease and simplicity, has many nuances that have researchers debating about the best way to perform the technique. Previous research has documented the superiority of the gamma probe over the blue dye, a conclusion that researchers agree upon. A point of debate is whether the gamma probe is sufficient on its own or whether it needs to be combined with the blue dye. "The *JAMA* study didn't compare the two techniques with each other. It combined both techniques,

and I don't agree that this is necessary," said Krag. Commenting on the *JAMA* study which she co-authored, Berman pointed out that "there definitely is an advantage to the combined technique since previous research has shown that the gamma probe alone detects the sentinel node in 71% of cases, while the blue dye alone detects the node in 65% of cases." In the *JAMA* study, the combined technique successfully identified the sentinel node in 92% of patients.

Another point of contention is whether lymphoscintigraphy before surgery is necessary in breast cancer patients. Berman said she "strongly advocates" doing the imaging procedure because "a lymphoscintigram will indicate whether drainage is in the axillary lymph node chain or internal mammary chain. It will also tell the surgeon what to expect during surgery and provide information to the radiation oncologist to help determine the necessity or extent of radiation treatments." Krag, on the other hand, said that he "hasn't found imaging to be of benefit" in his research experience. He feels the probe is precise enough on its own to adequately locate the sentinel node.

The researchers' divergent views will probably come closer together once larger studies are published on sentinel node mapping in breast cancer patients. Some nuclear physicians could experience an increase in volume if lymphoscintigraphy is adopted as part of the mapping technique. In this era of medical cost reductions, however, health care managers may be reluctant to pay for lymphoscintigraphy—unless someone is willing to perform a study to show that it is "cost-effective."

Deborah Kotz