

motivations—the main determinants of progress and adaptation in every human activity.

## REFERENCES

1. Maynard CD. Medical imaging in the nineties: new directions for nuclear medicine. *J Nucl Med* 1993;34:157-164.
2. Wagner NJ. The new molecular medicine. *J Nucl Med* 1993;34:165-166.
3. Holman BL. We are training our future. *J Nucl Med* 1993;34:167-168.
4. Ell PJ. The future of nuclear medicine: a perspective from Europe. *J Nucl Med* 1993;34:169-170.

Philippe Tellier  
Centre de Médecine Nucléaire de l'Artois  
Clinique Sainte Catherine  
Sainte Catherine Les Arras, France

## No More Edsel Mechanics Needed in Nuclear Medicine

**TO THE EDITOR:** Technology and human nature are conspiring to accelerate competition and nuclear medicine is losing ground because it is not satisfying the customers' needs as well as the alternatives. Focusing on recruitment of medical school neophytes is treating the symptom and not the disease.

We live amid complexity. Patients receive services that physicians sell and insurers pay for based on DRGs mandated by Congress. Just who is the customer? Physicians deal in service, and the recipient of the service—the patient—is the customer, regardless of who *appears* to pay the bill or set the price. Nuclear medicine is not satisfying the customer as well as MRI, CT and US. The reasons are technological. Recruiting more nuclear medicine physicians now is like recruiting Edsel mechanics.

We must change the service to one that better satisfies the customer and is beyond the capacity of the competition to deliver. Nuclear medicine should rely on the strength of the tracer technique to distance it from more anatomically precise modalities.

I share Dr. Wagner's vision of nuclear medicine ranks burgeoning with youth as molecular medicine grows, but growth will not begin until chemists make tracers that patients need, and many academic chemists are currently busy using old nuclear medicine principles to make new MRI agents. We should do our first-line recruiting in graduate schools rather than in medical schools.

Michael F. Tweedle  
Bristol-Myers Squibb Pharmaceutical Research Institute  
New Brunswick, New Jersey

## Nuclear Medicine in Israel: Independent, Alive and Well

**TO THE EDITOR:** In many respects, Israel is a combination of the United States, Europe and the underdeveloped world. It combines very successful high technology industries, world-renowned universities and scientific institutions with a population mix containing emigres from underdeveloped third world countries and former communist regimes. In some regions of the country where nuclear medicine is well developed, it is very successful, clinically and scientifically. Our best and brightest medical students apply for residency positions in nuclear medicine and look forward to a growing and exciting specialty. One of the key reasons for its

success is that nuclear medicine is an independent academic and administrative department.

For nuclear medicine to progress, leadership is essential. An attempt at one time to force nuclear medicine to be part of radiology was strongly rejected by the Israeli Society of Nuclear Medicine. As part of radiology, nuclear medicine would have been severely undermined in Israel. As Dr. Ell (1) commented, nobody needs a big brother looking over his shoulder. One needs to develop his or her own field and be proud of it. If a physician is reading black dots on an x-ray film and calling this nuclear medicine after 3 or 6 mo in nuclear medicine during a radiology residency, this is comparable to a Russian feldscher of the past attempting to practice modern medicine. Nuclear medicine must be independent if it is to survive and prosper. We agree with Dr. Holman (2) that different people are suited to practice different specialties. Nuclear medicine physicians should explore the great potential of tracer techniques in independent departments of nuclear medicine and in cooperation with cardiologists, oncologists and neurologists who practice their own specialties. Nuclear medicine has as much in common with these specialties as with radiology. Like Dr. Wagner (3), we believe that nuclear medicine is a great, dynamic profession with a vast potential. Such a vision is in contrast to the role which Dr. Maynard assigns to our specialty (4).

## REFERENCES

1. Ell PJ. The future of nuclear medicine: a perspective from Europe. *J Nucl Med* 1993;34:169-170.
2. Holman BL. We are training our future. *J Nucl Med* 1993;34:165-166.
3. Wagner HN. The new molecular medicine. *J Nucl Med* 1993;34:165-166.
4. Maynard CD. Medical imaging in the nineties: new directions for nuclear medicine. *J Nucl Med* 1993;34:157-164.

Dov Front  
Ora Israel  
Rambam Medical Center  
Haifa, Israel

## Cultivating Subspecialists for Nuclear Medicine

**TO THE EDITOR:** I read with great interest the editorials of Maynard, Wagner, Holman, and Ell (1-4) regarding the future of nuclear medicine. None of the authors mentioned clinicians initially trained in the subspecialties of internal medicine who have contributed to nuclear medicine. For example, Gerald Pohost, George Beller and Robert Bonow among others have made major contributions in nuclear cardiology. Likely, many future advances in nuclear medicine, particularly with positron emission tomography, will be made by physicians with backgrounds in neurology and oncology. Nuclear medicine can help meet its manpower shortage by recruiting physicians who have completed their clinical training in internal medicine subspecialties and offering them training in nuclear medicine. Wagner (2) points out the need for developing basic scientists by recruiting medical students. Although I concur with him that basic scientists need to be trained for the future, basic scientists alone will not be able to meet the increasing demands of clinical practice. By training subspecialty physicians, in addition to radiologists and basic scientists, nuclear medicine can continue to thrive and expand.

In the past, many of the pioneers of nuclear medicine began in internal medicine, and hopefully in the future, subspecialists will be encouraged to pursue nuclear medicine through rotations and