

HOW TO MAKE PET COST EFFECTIVE



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POSITION EMISSION TOMOGRAPHY (PET) is nuclear medicine's high energy hope for the future. Its full potential won't be realized, however, until we fully embrace:

- High-Energy Collimation
- Coincidence Circuitry
- Low Cost PET Scanners
- Radioisotope Distribution Centers.

Over the last twenty years, PET has moved from the research lab into the clinical environment. Today, PET is utilized at many institutions as a clinically relevant diagnostic modality. There are 60 PET facilities in North America, 45 in Europe, 20 in Japan and 9 in other countries, including 3 in Australia. Regrettably, none operate at a profit.

In 1988, PET was hailed as the heart and mind of nuclear medicine's future. Unfortunately that vision was supported by only a few passionate PET advocates in industry and academia. The rest of nuclear medicine, fearing turf battles over its control and threat to their established SPECT business, fled from the responsibility to embrace its potential and thus provided little documentation for its clinical promise.

The window of opportunity is crashing down upon us. As nuclear medicine defines its primary role amongst other imaging modalities, PET must discern its place in the new age of biochemical medicine. PET's "brand" of high-energy imaging blends into the nuclear medicine arsenal as the focus of diagnostic medicine shifts from structural abnormality to molecular dysfunction.

PET must become a part of the total diagnostic energy spectrum, which requires the cooperation of nuclear medicine professionals. There needs to be a partnership and action on the part of all involved, including the ACNP, SNM, clinical and research providers, and instrument and isotope suppliers.

We must make PET available to a broader base—physician and patient alike. We must increase research and development funding for high energy collimation and coincidence systems for traditional gamma cameras. Stand-alone PET centers should evolve into full spectrum nuclear medicine facilities that utilize every weapon we have for the benefit of patient and payer.

Just as the compact PC-operated cyclotron brought PET from the research lab to the patient bed, a national isotope delivery infrastructure could bring cyclotrons to more hospitals by taking advantage of strategic positioning. In fact, 50% of all U.S. hospitals are located within 100 miles of a cyclotron.

How can we bring PET into more clinical settings? Our colleagues in the pharmaceutical industry must take a leadership role in the further development of a regional isotope distribution center. As nuclear medicine professionals, we must make PET more affordable with continued production of lower cost scanners. We must intensify our legislative efforts to ensure full

reimbursement by all payers. We must expand reimbursement categories by substantiation through continued PET cost-effectiveness studies. And we must move rapidly to create a new market niche for ourselves in nuclear oncology. The number of different types of cancer that high-energy imaging can diagnose, the management information that it could supply and the therapy that it could monitor is growing daily.

By President Clinton's own admission during his recent State of the Union address, support for large-scale government involvement in health care has fallen apart. Managed competition advocates are still on board, but others, such as economists, have jumped off the bandwagon. However, something positive has sprung from all the debate concerning health care issues. Public awareness and political interest have put the medical industry in the spotlight. This gives nuclear medicine an opportunity to reflect on the way we think about ourselves and our future.

To avoid being victims of change, we must instead be its agents. We must lead reform, change ourselves and express our ideas intelligently and persuasively. Informing each distinct customer group about the important role that nuclear medicine can play is the only way we can ensure that our unique procedures will be recognized by all health care practitioners. If the public does not demand nuclear medicine procedures, they will not get them.

The road to reform will be difficult as hospitals and physicians grow even more competitive. Thus, the value and implementation of our procedures must be marketed to all groups of purchasers. It is our job to let them know how helpful nuclear medicine can be in achieving desirable outcomes, so that patients will demand and get the procedures they need.

It will be crucial for us to show health care system managers how full energy spectrum nuclear medicine procedures will help them make more competitive provider service bids. Increased understanding of both intra- and intercellular communication will direct the future practice of nuclear medicine. Diagnoses and treatment will be molecular, as will the response to treatment. While many of our customers know that nuclear medicine procedures are helpful in diagnosis, we need to show them that our studies can also be vital for prognosis in order to plan and monitor treatment.

Ignorance increases cost; well-used knowledge reduces it. Nuclear medicine must metamorphosize into an autonomous specialty based on the concept that disease can be characterized by underlying molecular abnormalities. The contribution of other specialties must be recognized and united by nuclear medicine, the most integrated of the biomedical specialties. PET imaging has been the bridge to unification. It is the vanguard weapon in nuclear medicine's high-energy arsenal, providing focus for our vision of twenty-first century medicine.

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