

EXPLORING DESKTOP COMPUTING IN NUCLEAR MEDICINE

At the Mid-Winter Meeting in Atlanta, a symposium co-sponsored by The Society of Nuclear Medicine and the Computer & Instrumentation Council will focus on the uses of increasingly powerful personal computers.

DESKTOP COMPUTERS NOW command enough memory and processing power to easily handle tasks that until recently were the exclusive domain of mainframes and workstations. Exploring the power and resources of desk top computing for nuclear medicine is the subject of a two-day symposium at the twelfth annual Mid-Winter Meeting of The Society of Nuclear Medicine next month in Atlanta, Georgia.

"What a nuclear physician can do at his or her desk is growing by leaps and bounds," says the symposium's program chairman, Tom K. Lewellen, PhD, at the University of Washington Hospital in Seattle. "Anything you did on a mainframe you can now do on your desktop computer."

Besides such typical tasks as word processing, data base maintenance, and spread sheet analysis, desktop machines now enable physicians to conduct full-blown scientific research, display scintigraphic images, fuse PET and SPECT scans with CT or MRI images, and confer with colleagues a continent away. Desktop computers can run expert systems and self-paced teaching programs. While assuming the capabilities of mainframes, desktop computers offer considerable cost savings, especially in software. Proprietary software packages written for Unix workstations carry a much steeper price than desktop versions.

For the symposium, speakers were asked to present problems that they have confronted as clinicians or investigators, and to describe a solution that takes advantage of desktop computing – with practical advice on how to carry

out solutions using either a Macintosh computer or an IBM pc.

"We planned a pragmatic, nuts-and-bolts kind of meeting, covering a wide range of bases," says Dr. Lewellen, president of the Society's Computer and Instrumentation Council. The symposium, presented by the Computer Council, begins Monday morning, February 8, at the Atlanta Airport Hilton.

Glimpsing the Future

The interactive programs for teaching nuclear medicine techniques to be presented at the symposium have attracted great interest, Dr. Lewellen says. Three talks are scheduled, including one that will explain how to use Macintosh's HyperCard software to design custom teaching programs.

Desktop computers increasingly are used to analyze tomographic and other imaging data. Symposium talks cover the use of desk top computers for clinical and research number-crunching, including analysis of PET data, Simind-Monte Carlo simulations, and kinetic modeling. One speaker promises to show how it is possible to use public domain or inexpensive proprietary software to put together an image registration system for a desktop computer.

While expert systems haven't come into their own in nuclear medicine, the symposium offers a glimpse of the state of the art. Applications to be discussed at the meeting include programs for quality control and augmenting a clinician's medical decisions.

Sketching one company's vision of the future of personal computing will be a yet to be named representative of

Apple Computer. Readers might recall a similar talk two years ago at the Mid-Winter Meeting.

Apple's Macintosh computers figure prominently in many of the presentations, largely because they make it easy to manipulate text and images and communicate easily with Unix workstations, the standard platforms connected to gamma cameras. But most of the approaches to problem-solving discussed will work just as well on IBM machines, according to Dr. Lewellen, and appropriate software is available for both.

The symposium, co-sponsored by SNM, offers 9.25 credit hours for continuing medical education (Category I of the physician's recognition award of the American Medical Association).

In something of a tour de force, the Computer & Instrumentation Council has lined up speakers for the symposium this year without mailing a scrap of paper, relying entirely on electronic mail and computer networks, Dr. Lewellen says. In a similar spirit, all speakers will eschew slides in favor of electronic media, including animated or interactive computer graphics displays.

Preceding the scientific symposium, SNM and Technologist Section committees meet on Thursday through Tuesday, February 4-9, at the Atlanta Airport Hilton. The SNM Board of Trustees meets Sunday, February 7, starting at 9 a.m.

For more information about the Mid-Winter Meeting contact The Society of Nuclear Medicine, Meetings Services, 136 Madison Avenue, New York, NY 10016, phone: 212-889-0717, fax: 212-545-0221.