

TECHNOLOGIST NEWS

■ Deep in the Heart of San Antonio

SNM Annual Meeting Preview

Preparations are almost complete for San Antonio to host the 44th Annual Meeting of the Society of Nuclear Medicine. Technologist Committee meetings will be held Thursday, May 29 and Friday, May 30, before the annual meeting kicks off, at the San Antonio Convention Center.

The annual meeting preregistration deadline is April 29 and offers reduced rates. Details of the Technologist Section abstract sessions will be published in the June issue of *JNMT*.

In response to popular demand, SNM again will offer two publications that compile materials from the annual meeting. The *Continuing Education Course Manual* will contain all the materials, submitted to the society by continuing education course speakers, in a convenient, bound volume. The second book, *Sunday Categorical Seminar Courses*, will have handouts from speakers for the categorical courses. Both books are excellent references for all nuclear medicine libraries.

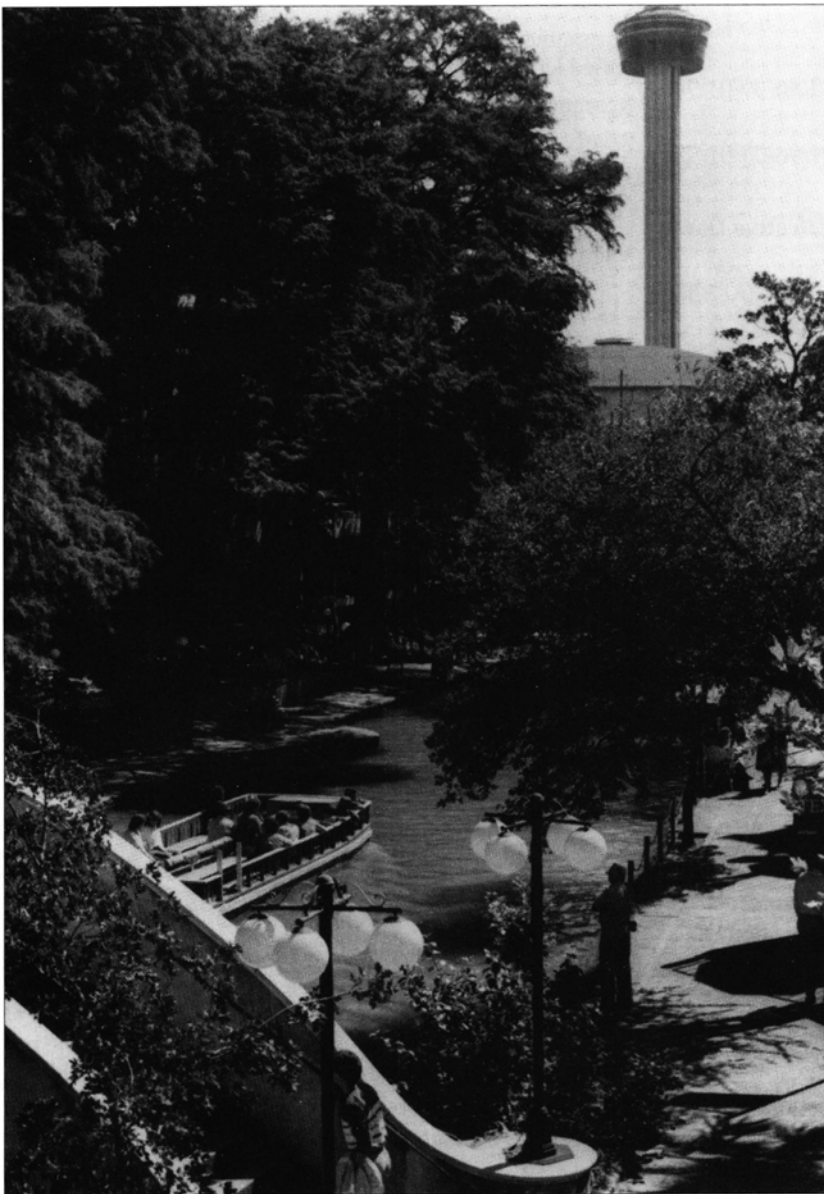


Photo courtesy San Antonio Convention and Visitors Bureau

The San Antonio River Walk, or Paseo del Rio, is located downtown along a 2.5-mile stretch of the San Antonio River. The River Walk offers shops, cafes and nightclubs that display the area's rich cultural heritage.

Continuing Education Opportunities

SNM's 44th Annual Meeting offers technologists more than 150 continuing education hours of credit through the VOICE system. This complete nuclear medicine program features more than 1200 scientific papers, posters and exhibits on cardiovascular nuclear medicine, SPECT, PET, computers, pediatric nuclear medicine, neurology, hematology, radiopharmaceuticals and oncology.

The Technologist Section continuing education courses once again will start on Saturday, instead of Monday, to make better use of technologists' time. Courses will run from Saturday, May 31 through Wednesday, June 4. Three topics will be offered as categorical courses: *Advanced Cardiac Life Support Provider Initial Training (ACLS)*, *Quality Control of Scintillation Detectors Road Show* and *Skills for the Nuclear Cardiology Technologist*.

Skills for the Nuclear Cardiology Technologist will include an interactive session that allows technologists to assess their skills. This audience response system was highly rated by last year's attendees and will be expanded at this year's annual meeting. Nine SNM-sponsored continuing education courses are designated as "Read with the Experts" sessions that incorporate this audience interaction with the speakers.

Exhibits, Exhibits, Exhibits!

This year's annual meeting provides the opportunity for technologists to visit more than 100 major manufacturers of nuclear medicine equipment, supplies and services. Attendees will see demonstrations of the latest nuclear medicine technologies. Product exhibitions will include computers, laboratory equipment, gamma cameras, film and processing equipment, image formatters, dosage calibrators, publications, radiation safety products and radiopharmaceuticals. Exhibit hall hours will be Monday, June 2 from 10:30 am to 5:00 pm, Tuesday and Wednesday, June 3-4 from 10:00 am to 5:00 pm and Thursday, June 5 from 8:00 am to noon.

Special Events

Mark your calendars for two important social events. Meet with your colleagues and visit with distant friends at the Opening Reception on Sunday, June 1 from 7:30 pm to 9:30 pm at the San Antonio Marriott Rivercenter Hotel. On Wednes-

day, June 4 from 8:00 pm until midnight, you won't want to miss the technologist party at the San Antonio Marriott Rivercenter Hotel. *Fiesta del Nuclear*, this year's technologist event, promises to be another smashing success.

A complete program of trips and tours has been planned for guests and attendees. Tour participants will be entertained and educated by activities that appeal to a wide range of interests. Explore historic sites in town, such as the Alamo, or drive out to countryside destinations. You can even take a trip to the border and browse shops in Laredo. Join friends and associates for a complimentary continental breakfast in the Companion's Lounge in the San Antonio Convention Center, open Monday and Wednesday from 8:30 am to 11:00 am.

Housing and Transportation

The San Antonio Marriott Rivercenter Hotel is SNM's official headquarters hotel and is located conveniently on the famous San Antonio River Walk and one block from the convention center. Twelve other hotels are located downtown or on the River Walk, all within close proximity to the San Antonio Convention Center. Shuttle buses will be available to all SNM hotels. See the annual meeting preview brochure for details on the amenities and rates offered by specific hotels.

United Airlines and Delta Air Lines are the official carriers for the SNM 44th Annual Meeting. Both airlines are offering discounts from their regular super-saver fares, as well as from their standard fares. Both 21-day-advance reservations and ticketing are required. To take advantage of these attendee discounts, call United at 800-521-4041 and refer to ID number 511 MT, or call Delta at 800-241-6760 and refer to ID number T0115. Or call Melinda Newton of Mark Moseley Travel at 800-826-5613 or 703-860-3033 and mention that you are an SNM annual meeting traveler.

The San Antonio International Airport is 13 miles or 20 minutes from downtown. The airport shuttle service is located on the baggage level. Shuttle bus fares are \$6 one way to SNM hotels. Cabs are available on the baggage claim level and fares are approximately \$12 one way to SNM hotels.

For further information and preregistration and housing materials, call SNM's Meeting Services Department at 703-708-9000, ext. 229.

■ Have Booth, Will Travel

*Contributed by
Joni Herbst, CNMT*

The Society of Nuclear Medicine and the Technologist Section have two traveling booths available for members to use. The large booth is 10 ft X 10 ft and the newest booth is a tabletop model. Any chapter or individual member may request a booth to use at their local meetings, health fairs, career days or hospital expositions.

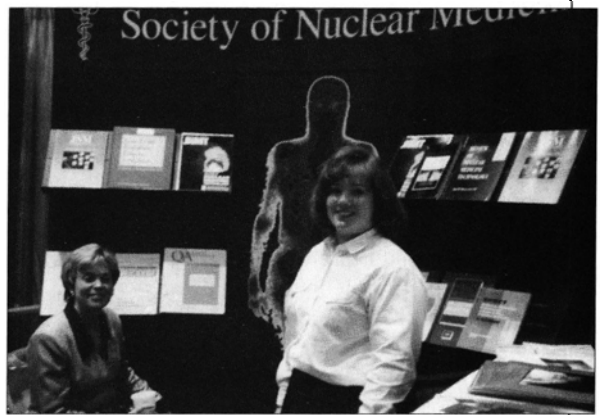
Pictured are the booths on the road and in action. Featured is the Technologist Section of the New England Chapter and how they used the large booth. An international traveler, the booth went to EANM in Copenhagen, Denmark. Designed to increase awareness of nuclear medicine among other medical specialties, the 10 ft X 10 ft booth was recently exhibited at the American Society of Therapeutic Radiology and Oncology (ASTRO) and at the Radiological Society of North America (RSNA) meetings. It will also be displayed at the spring 1997 American College of Cardiology and American Society of Clinical Oncology Meetings.

For those who use a booth, SNM will send a box filled with sample issues of the *Journal of Nuclear Medicine Technology* and the *Journal of Nuclear Medicine*, membership applications, SNM annual meeting information, audiovisual brochures, patient pamphlets, sample books, book brochures and an instructional guide to promoting and selling SNM products and services. In all, an impressive display certain to draw a crowd.

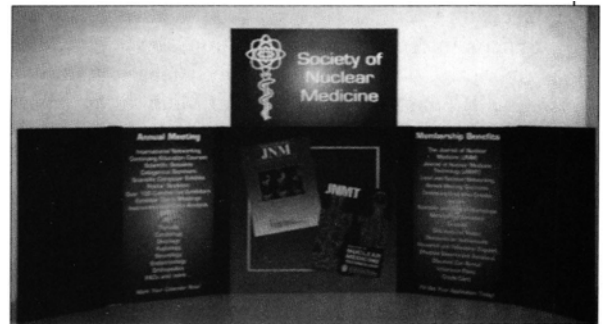
For more information and to request a booth, please contact Jessica McLane Petit at the SNM headquarters office at 703-708-9000, ext. 226 or fax 703-708-9015. When you use a booth, send a photo of your group and the booth to Jessica and tell us how and where you used



Members of the New England Chapter of the SNM-TS gather at the SNM traveling booth for their annual spring symposium in 1994. This well-worn booth has been replaced by two new booths.



SNM staff, Jessica McLane Petit (R) and Jane Day, show off the new full-sized traveling booth.



The new tabletop booth allows members to easily transport a small display.

the booth. We'll show off your efforts in future issues of *Uptake*.

■ SNM/ACNP Government Relations Update

*Contributed by David Nichols
Associate Director
SNM/ACNP Government Relations Office*

Pew Commission

In December 1995, the Pew Commission Taskforce on Health Care Workforce Regulation issued a set of princi-

ples, recommendations and policy options for reform to improve the state-based system of health professions regulation. The recommendations included standardizing regulatory terms and entry to practice requirements, redesigning the board structure, informing the public about practitioner information, improved data collection and evaluating regulatory effectiveness. The report, according to the Pew Commission, has received national attention and has been successful as a vehicle to stimulate and encourage debate and discussion of the issues that were identified. In order to further that discussion, the Pew Commission is seeking comments on the initial report in order to produce a follow-up report in the fall of 1997.

The SNM-TS reviewed the 10 recommendations regarding work force regulation and submitted comments to the Pew Commission. These comments focused on the need for multiskilling and lowering the current barriers that prevent this from happening, reducing the regulatory burden on health care workers, and creating a uniform system that would be applicable in all 50 states. The comments concluded by urging flexible, effective and efficient regulation to best serve the interests of the public and professional communities.

ACNP and SNM Appeal Syncor Decision

Syncor International Corporation, the American College of Nuclear Physicians (ACNP), the Society of Nuclear Medicine (SNM) and the American Pharmaceutical Association (APhA) have asked the U.S. Court of Appeals for the District of Columbia Circuit Court to overturn the District Court decision that upheld the legality of the Food and Drug Administration's (FDA) new regulatory scheme for PET. The PET regulations were upheld in an October 18, 1996 decision by U.S. District Court Judge Emmet G. Sullivan.

The appellants challenged the FDA's PET regulatory scheme, announced in February 1995, on the grounds that it was adopted in violation of the Administrative Procedure Act, that it exceeded the FDA's statutory authority and that, in regulating the practices of medicine and pharmacy, it violated the Tenth Amendment to the U.S. Constitution. The appeal, filed on December 13, 1996, argues that Judge Sullivan wrongly decided the

case. A schedule for filing of briefs has not yet been established. A decision from the Court of Appeals should not be expected before September.

ACNP and SNM Discuss Fast-Tracking Cancer Diagnostics with FDA

On December 9, 1996, representatives of the Council on Radionuclides and Radiopharmaceuticals (CORAR), Institute for Clinical PET (ICP), SNM and ACNP met with Janet Woodcock, Director of the Center for Drug Evaluation and Research (CDER), Murry Lumpkin, MD, Deputy Director, Robert Temple, Deputy Director, and other FDA staff to urge that the FDA use accelerated approval for drugs that diagnose cancer. The FDA currently has a policy in place to fast-track therapeutic drugs for the treatment of cancer.

In the proposal, the group recommended that accelerated approval be made available for imaging agents that are used to diagnose or provide other information that contributes to detection, treatment or monitoring of cancer. The proposal included reducing clinical trials from two to one, as well as using clinical endpoints other than effectiveness in diagnosing a particular disease. Following approval, the sponsor could be required to confirm the effectiveness of the agent by conducting studies of its effectiveness in: (a) detecting and localizing additional tumors in patients for whom marker lesions were detected in pre-approval studies; or (b) diagnosing tumors in patients who have not been previously diagnosed with the disease.

The group also proposed that the accelerated procedures presented to the FDA also be available not only for original applications but also for supplemental applications for new indications. This policy, the group contended, would encourage the submission of supplements so that the label of a diagnostic imaging agent accurately conveys information corresponding to the actual uses of the agent in clinical practice. Finally, the group proposed that the FDA implement, with regard to diagnostic imaging agents, a program similar to the one recently established to expand access to therapeutic cancer drugs. Where a diagnostic imaging agent under study in the U.S. for the detection, diagnosis or monitoring of cancer has been approved in a foreign country and there is no compa-

table drug or procedure commercially available in the U.S., the FDA would approve expanded access protocols regardless of the length of time the product has been studied in the U.S. The FDA was receptive to the proposal and will continue to work with the professional organizations to develop such a plan.

EPA and NRC Agree on Regulation of Radionuclide Air Emissions

On October 31, 1989, the Environmental Protection Agency (EPA) promulgated National Emission Standards for Hazardous Air Pollutants (NESHAPs) under Section 112 of the Clean Air Act to control radionuclide emissions to the ambient air from a number of different source categories. Subpart I of 40 CFR Part 61 covers facilities licensed and regulated by the Nuclear Regulatory Commission (NRC) and individual Agreement States. It limits radionuclide emissions to the ambient air to that amount which would cause any member of the public to receive in any year an effective dose equivalent (EDE) no greater than 10 mrem, of which no more than 3 mrem EDE may be from radioiodine.

When Subpart I was originally promulgated in December 1989, the EPA simultaneously granted reconsideration of the subpart based on information received late in the rulemaking on the subject of duplicative regulation by the NRC and the EPA on this issue. While collecting information on this topic, the EPA granted a stay from the regulations, but this order was overturned in court. As a result, the EPA implemented Subpart I regulations on November 16, 1992. In the Clean Air Act of 1990, however, there was a provision for the administrator of the EPA to rescind regulations if a determination was made that the NRC's program adequately protected public health and safety. The delay in rescission resulted in the NRC having a 50-mrem standard that was higher than the 10 mrem set by the EPA.

For several years, the ACNP and the SNM worked with both the EPA and the NRC to develop a dose limit that would satisfy both agencies. The EPA, however, insisted on the 10-mrem level originally set. Eventually, the NRC made changes to their regulations including lowering the level to 10 mrem and published a final rule effective January 1, 1997. Based on the implementation of these new regulations, the EPA has also

published a final rule rescinding Subpart I of 40 CFR Part 61. This means that, as of December 30, 1996, NRC licensees will have to comply only with the NRC regulations and not with both the EPA and the NRC in this area.

For more information on these and any other government relations issues, contact David Nichols, Associate Director, SNM/ACNP Government Relations Office at 703-708-9773 or at e-mail address dnichols@snm.org.

■ ACNP News

The ACNP Proficiency Testing Program

*Contributed by Sharon Surrel, CNMT
ACNP Program Manager*

The American College of Nuclear Physicians' (ACNP) Nuclear Medicine Imaging Committee (NMIC) designed the 1996 IM-B Emission Imaging Simulator (EIS) to allow participants to measure the ability of their camera systems and acquisition/processing protocols to detect and measure cold lesions of varying dimensions located within a phantom that simulates two kidneys that are located at different depths from an anterior-posterior perspective. The study is made more challenging by immersing the EIS in a water bath that produces significant attenuation.

The EIS is constructed to permit subscribers to acquire images using both SPECT and planar techniques. For each set of images obtained, participants were asked to identify the locations of any lesions visualized and to indicate the clinical interpretation that would be most consistent with the lesions visualized and the symptoms reported by a hypothetical patient. Participants were also asked to measure the size of the largest lesion. In addition, since it is often of clinical interest to evaluate comparative function of the two kidneys by measuring their relative uptake, the exercise provides the opportunity to determine activity ratios using different SPECT and planar techniques.

Findings and Recommendations

The 1996 IM-B study provided interesting data about several important aspects of subscriber SPECT imaging performance.

Multiple-Detector Cameras

Half of the 1996 fall subscribers now use one or more multiple-detector cameras. While obtaining an equivalent number of

total counts with a single-detector camera is feasible for exercises such as this one, albeit over a longer period of acquisition time, it may not be possible to do so consistently in a clinical setting. Given the twin constraints of the maximum appropriate length of time for which an individual patient can be imaged and the demands of the overall facility patient case load, multiple-detector cameras appear to offer an important vehicle to ensure acquisition of an adequate (or better) number of total counts for clinical studies. *Total counts remain the most important single determinant of subscriber performance across the entire series of ACNP imaging proficiency studies.*

Collimators

As was the case in both the 1995 spring and fall exercises, access to a LEHR or LEUHR (high-resolution) collimator emerged as an important determinant of successful performance. While individual facilities that do not have access to these collimators have been able to achieve adequate results, the probability that any given subscriber can correctly visualize lesions of relatively small size is greatly enhanced by access to a high-resolution collimator.

Matrix Size

The renal SPECT phantom was designed, in part, to highlight the importance of making appropriate choices of collimator, matrix size and filter selection. The use of a 128 X 128 matrix to acquire and reconstruct SPECT images was an important determinant of two important aspects of subscriber performance—visualizing the smaller lesions and obtaining correct or approximately correct measurements of lesion size.

Pixel Size

Subscriber performance in reporting credible values for pixel size was somewhat disappointing. Many participants reported pixel sizes that are not consistent with their responses of the field-of-view dimensions and matrix size questions. This is troubling because knowledge of pixel size is essential for measurement of any feature appearing on the displayed image.

As the NMIC recommended in previous exercises, the preferred method of determining pixel size is to image two point sources of activity that are located a known distance from each other and to count the pixels between the two points.

Alternatively, the participant may be able to obtain pixel measurement methods from their individual computer system vendors. The NMIC also suggests to participants in the exercise final critique a useful checking method for obtaining the correct pixel size measurement to help eliminate large errors.

Use of Filters

The 1995 and 1996 fall exercises have both highlighted the prominent role that filter selection and image display parameters play in obtaining superior quality images. In the 1996 fall exercise, participants who selected filter protocols that provided a relatively high degree of image smoothing did somewhat better on average than those who did not. This was not expected, since the majority of study participants acquired a relatively high number of counts for the renal SPECT study. In the view of the NMIC, these results do not demonstrate that a specific filtering protocol is preferable to others but, rather, underscore the importance of evaluating the use of different types of filters and display parameters for each clinical routine performed by the facility. It is only through testing that subscribers can either confirm the adequacy of their present protocol or determine that an alternative procedure produces better results.

In response to participant inquiries and questions submitted on the participant result forms, a more detailed discussion of the purpose and use of filters is provided by the NMIC in the 1996 fall final critique. An excellent explanation of filters and what each type of filter actually does is provided for the participant's continuing education and skill development. Since the phantom is retained by the participant, the NMIC encourages further study of the parameters employed in this exercise in greater detail. Refining and maintaining skills required to achieve an acceptable level of performance are a necessary component of developing true proficiency in nuclear medicine imaging technique and diagnostic performance.

The 1997 Program Offerings

The 1997 program is well underway with two exercises that will appeal to a wide variety of participants in the nuclear medicine community. The spring exercise is an EIS that simulates an organ with abnormalities that would typically be seen in the clinical setting. The

fall exercise is intended to assess the skill level of participants who are performing medium-energy imaging with greater frequency than in the past.

1997 Skeletal Study

The 1997 Skeletal Study is designed to test the subscriber's ability to detect, localize and measure simulated skeletal abnormalities. The exercise also will include a patient history, that subscribers will use in determining the clinical significance of the findings. Imaging of the skeletal phantom may be performed using SPECT and/or planar imaging. Subscribers will be able to evaluate their ability to identify and quantify defects using alternative acquisition and processing protocols. Subscribers will be provided with detailed information relating to the use of image reconstruction filters and the quantitative measurement of defects. The 1997 spring exercise is scheduled to be shipped April 15, 1997.

1997 Medium-Energy SPECT Exercise

The 1997 Medium-Energy SPECT phantom is designed to test the performance characteristics of subscribers' systems when obtaining SPECT images with medium-energy radionuclides, such as ^{67}Ga and ^{111}In . Because SPECT imaging with these radionuclides is becoming more frequent, it is important for subscribers to be able to evaluate the performance characteristics of their systems and acquisition protocols using medi-

um-energy sources. Many quality control procedures are currently performed, however, using low-energy, single-photon sources, such as ^{57}Co or $^{99\text{m}}\text{Tc}$, that may not produce the same system response.

The medium-energy SPECT phantom will allow subscribers to determine the ability of their systems to localize and resolve unknown targets of varying sizes. The exercise will also allow subscribers to test uniformity of spatial resolution and evaluate reconstructed flood field uniformity using medium-energy radionuclides. Subscribers will perform this study using a low-energy, single-photon source for comparison. This phantom is designed for imaging either by SPECT or planar technique. The 1997 fall exercise is scheduled to be shipped September 16, 1997.

After the results have been submitted and evaluated, subscribers will receive an individual report for each set of results submitted. Subscribers will also be provided with a final critique that summarizes the results obtained by all participating facilities across the country. The critique also contains the ACNP NMIC's discussion of the exercise and recommendations for future practice. The imaging simulators are retained by subscribers for future quality assurance testing.

The 1997 program, like all previous programs, can assess the proficiency of one or more technologist technical skills, physician interpretative skills and cam-

era system performance. Many participants use this program as a tool that can demonstrate to agencies, such as JCAHO and the NRC, their efforts to document quality assurance activities through participation in an interlaboratory comparison program.

Joining the program is easy. The ACNP can accept purchase orders or credit cards for all 1997 program orders. Contact the ACNP office for more information at 202-857-1135. You can also ask questions or provide comments through e-mail: Sharon_Surrel@sba.com. Your comments and suggestions are always appreciated.

■ Thanks from the NCRP

Scientific Committee 1-6 of the National Council on Radiation Protection and Measurements (NCRP) thanks the scientific community for their response to its request for scientific information on linearity of dose response at low dose for mutagenic and carcinogenic effects of ionizing radiation in humans. Scientific Committee 1-6 is evaluating evidence that may elucidate the shape of the dose response for these effects in humans exposed to low-dose ionizing radiation.

The committee would be pleased to receive additional written material. Please send material, to be received before June 30, 1997, to: Arthur C. Upton, Chairman, NCRP Scientific Committee 1-6, 7910 Woodmont Ave., Suite 800, Bethesda, MD 20814.