



Fall 2006

## CCSNM Fall Educational Symposium to Feature Functional Nuclear Imaging

### Functional Nuclear Imaging: Changing Patient Management

October 7-8, 2006  
Grand Traverse Resort  
Traverse City, Michigan

Registration brochure and on-line registration now available at [www.ccsnm.org](http://www.ccsnm.org).

The Central Chapter of the Society of Nuclear Medicine and the Society of Nuclear Medicine are pleased to present the CCSNM 2006 Fall Educational Symposium, *Functional Nuclear Imaging: Changing Patient Management*. The symposium will be held October 7-8, 2006 at the Grand Traverse Resort and Spa in Traverse City, Michigan, at the height of the Fall colors.

Three developments are profoundly affecting research and practice in the field of nuclear medicine in the 21st century: The evolution of multimodality imaging technology and “fusion imaging,” progress in the area of radionuclide therapy for cancer, and improvements in provocative testing performed in conjunction with nuclear imaging studies. The CCSNM 2006 Fall Educational Symposium addresses the implications of these developments for practitioners and technicians in nuclear medicine and nuclear cardiology.

The schedule of topics and speakers is listed below. To download a brochure with complete information on the program, faculty and housing or to register online, visit the [Central Chapter's web site](#).

#### **Saturday, October 7, 2006**

**7:30 am - 8:00 am: Registration and Continental Breakfast in Exhibits**

**8:00 am –8:15 am: Welcome and Introductions; Rick V. Hay, PhD, MD & Karen Martin, CNMT**

**8:15 am - 9:00 am: *Functional Brain Imaging*; Rick V. Hay, PhD, MD**

**9:00 am – 9:45 am: *To SPECT or not to SPECT*; M. Karen Martin, CNMT**

**9:45 am - 10:15 am: Break in Exhibits**

**10:15 am – 11:00 am:** *Appropriate patient preparation for non-cardiac procedures;* TBD

**11:00 am – 12:00 pm:** *Multimodality Imaging and Fusion Techniques;* Milton D. Gross, MD

**12:00 pm – 1:30 pm:** LUNCH on your own

**1:30 pm – 2:30 pm:** *Appropriate Exam Selection and Sequencing for Effective Diagnosis and Cost Effectiveness;* M. Karen Martin, CNMT

**2:30 pm – 3:30 pm:** *Radioimmunotherapy—First Line Treatment for NHL;* Mark S. Kaminski, MD

**3:30 pm – 4:00 pm:** Break in Exhibits

**4:00 pm – 5:00 pm:** *Yttrium-90 Radioembolization for the Treatment of Hepatocellular Carcinoma and Metastatic Disease of the Liver;* Vanessa L. Gates, MS

**Sunday, October 8, 2006**

**7:30 am – 8:00 am:** Continental Breakfast in Exhibits

**8:00 am – 9:00 am:** *Expanded Utilization of Cardiac Imaging for Patient Management;* William H. Mallin, MD

**9:00 am – 10:00 am:** *Multi-slice CT and Cardiac MRI;* John E. Baumert, Jr., MD

**10:00 am – 10:15 am:** Break in Exhibits

**10:15 am – 11:15 am:** *Radiation Safety;* Michelle L. Kritzman, MS

**11:15 am – 12:15 pm:** *New Pharmacologic Stress Agents. What is Best for Your Patient?;* Robert Hendel, MD

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## Road Shows to Feature Infection Imaging

Plan to attend one of the five Road Shows hosted by the Central Chapter –Society of Nuclear Medicine. The four-hour course titled “The Role of Nuclear Medicine in Infection Imaging” will include four one-hour topics. They include:

- *Current Role of Imaging Agents for Infection*
- *F18 - FDG PET Imaging in the Detection and Monitoring of Infection and Inflammation*
- *Infection Control Practices to Limit Nosocomial Infections*

- ***Advanced Practice in Nuclear Medicine Technology***

The Road Shows are scheduled as follows:

- October 14, 2006 – Mayo Clinic, Rochester, Minnesota
- October 28, 2006 – Rush-Copley Medical Center, Aurora, Illinois
- October 28, 2006 – St. Vincent Hospital, Indianapolis, Indiana
- November 4, 2006 – Bay Park Community Hospital, Oregon, Ohio
- November 4, 2006 – Aurora St. Luke's Medical Center, Milwaukee, Wisconsin

A preliminary brochure and on-line registration is now available on the Central Chapter web site, [www.ccsnm.org](http://www.ccsnm.org)

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## **2007 Annual Spring Meeting Scheduled for March 9-11 in Chicago**

Mark your calendar for the 2007 Annual Spring Meeting of the Central Chapter scheduled for March 9-11, 2007 at the Feinberg Pavilion Conference Center at Northwestern Memorial Hospital in Chicago with hotel rooms at the Allerton Crowne Plaza. Preliminary program title is ***Transitioning from Nuclear Medicine to Molecular Imaging: Are we really ready?***

Nuclear Medicine is evolving, and new technological advances are driving this evolution. Development of new radiopharmaceuticals, camera technology, and computer software is transitioning nuclear medicine from a functional imaging modality to a molecular imaging modality. Fusion with other imaging modalities is providing the profession with much excitement and with that excitement, unlimited growth potential.

As the profession merges with these other imaging specialties, a host of practice issues have arisen, causing many to question whether our current standards, programs, methods and curricula, can adapt to keep up with such advancing technologies. Outdated and weak or non-existent state and federal standards are creating barriers to the growth of multi-modality imaging.

The 2007 Annual Spring Meeting is designed to share the trials and tribulations that the profession is facing as we experience this most exciting transition of nuclear medicine through molecular imaging. We will take you on a journey highlighting the past and present of nuclear medicine and introduce you to how nuclear medicine is transforming through the development of molecular medicine. This program is sure to provide physicians, technologists, pharmacists, and scientists alike with insight into these exciting technological advances, along with the barriers that are stunting the pace of this formidable transition. Learn how you can help prepare for this inevitable transition.

### **Learning Objectives:**

At the end of this meeting, the attendees will be able to:

- Understand that the profession of nuclear medicine is transitioning from a functional to a molecular imaging modality.
- Identify the barriers to this transition.
- Discuss the recent as well as the future advances in camera, radiopharmaceutical, and software technology.
- Describe the latest in SPECT/CT and PET/CT protocols and procedures.
- Evaluate PET/CT and SPECT/CT cases with the experts.
- Understand the components of a comprehensive contrast management program, including the pharmacology, contraindications, and protocols for contrast administration, as well as documentation and monitoring of extravasations, and reactions.
- Discuss the recent updates in Coding and Reimbursement of nuclear medicine procedures.
- Understand the initiatives of the SNM and CC, as explained by the leadership of both levels of the organization.
- Identify the potential of MIBG in nuclear cardiology.
- Understand how this transition is going to impact bread and butter nuclear medicine.

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## Message From the President

**Helena R. Balon, MD**  
**2006-2007 Central Chapter President**

### Practice Standards



I hope that all of you had a wonderful summer with lots of mental rest and relaxation. Now that those hot months are over, it's time to get back to our busy schedules and constant changes in our specialty.

As former chair and current member of the SNM **Committee on Guidelines**, I can tell you that we have kept busy over the summer. As you know, SNM has been publishing procedure guidelines for all commonly performed nuclear medicine studies since the mid-1990's. The Guidelines are intended to be "living documents", they need to be updated periodically to reflect changes in technology, radiopharmaceuticals and the evolving practice of nuclear medicine.

Over the summer, we have been revising and updating several guidelines (e.g., Thyroid scintigraphy, Thyroid uptake, Scintigraphy for differentiated thyroid cancer, Diuretic scintigraphy in children). These, as all new and revised guidelines, have to be approved by the SNM Board of Directors at their regular meetings, before they can be posted on the web. (For those of you interested or in need of a quick reference, the guidelines can be found on SNM's home page under: Practice Management >> Procedure Guidelines; a bound format is also sold by SNM).

Because these guidelines were initially intended to be solely *procedure* guidelines, not *practice* guidelines, they only list some examples of the indications/uses of a particular procedure. However, with the emphasis on practicing cost-effective and evidence-based medicine, third party payors (mainly CMS) are increasingly requiring and looking at *clinical practice* guidelines when determining reimbursement for imaging procedures. The AMA is involved in creating standards for P4P (Pay for Performance); this effort requires practice guidelines from various specialty societies.

Therefore, in the Spring of 2006, a new SNM committee was established by then SNM President Peter Conti, MD, PhD, called **Practice Standards Committee**. It met for the first time at the June meeting in San Diego. This committee is chaired by Leonie Gordon, MD, from MUSC in Charleston, SC. Dr Gordon took a huge task upon herself, because determining how our nuclear medicine procedures compare with other imaging modalities and how they fit into the overall management of the patient is not a simple matter.

During our committee's August conference call it became clear that we as practitioners of nuclear medicine need to collaborate with multiple other clinical medical societies to establish and agree upon the best uses for our diagnostic and therapeutic procedures and to make ourselves visible. Without our input we face the potential danger of clinical practice guidelines (some already developed by other societies) not even considering radionuclide imaging or therapy in overall patient management. Thus we have a mountain of difficult work ahead of us; the development of these practice guidelines will be a lengthy, tedious and potentially costly project. Stay tuned...

Another issue we have been busy with at the SNM Practice Standards Committee over the summer is the joint formulation (with ACNP) of credentialing criteria for physicians supervising and interpreting cardiac PET and cardiac CT. As you probably know, training and qualification criteria for PET/CT and SPECT/CT for physicians, technologists and physicists have been already jointly formulated by several organizations and published in the SNM PET/CT and SPECT/CT Procedure Guidelines (JNM, May and July 2006, respectively, as well as on SNM web). These credentialing issues have emerged recently with the widespread proliferation of hybrid imaging technologies.

Our specialty is clearly moving ahead with many changes on the horizon. I sincerely hope that you can attend the upcoming CCSNM Fall Meeting in Traverse City, MI to learn more and to let us know how we as your Chapter can help you achieve your educational goals.

***Helena Balon, MD***

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## Paresh Mahajan, MD Becomes Physician Editor of Newsletter

*By Helena R. Balon, MD  
President  
Central Chapter*



**Paresh Mahajan, MD**

I am pleased to introduce to you the new Editor of our Central Chapter Newsletter, Paresh Mahajan, MD. Doctor Mahajan graduated from the Albert Einstein College of Medicine, in New York. He completed a residency in Nuclear Medicine at Northwestern University, Chicago, IL.

He has been on staff in the Department of Nuclear Medicine, William Beaumont Hospital, Troy, Michigan since April 2003. Doctor Mahajan's professional interests include PET & musculoskeletal (SPECT-CT) imaging, and he tremendously enjoys interacting with residents and technologists. He has been an SNM member since 2001, and in addition to being our Newsletter editor, he is currently serving as CCSNM CME Coordinator.

He is a proud father of his 2-year-old daughter Rhea (rhymes with Kia), and 5-month-old son Nikhil.

*Welcome, Doctor Mahajan!*

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## Emerging Technology to Emerging Leaders

*By Paul J. Reaume  
President-Elect  
Central Chapter Technologist Section*

We are all aware of the emerging technologies around us, from positron emission tomography to dual imaging modalities of PET-CT, SPECT-CT and soon to be PET- MRI. The number of imaging devices has grown and so have the number of studies. In a recent study from CMS the 2004 number of nuclear procedures was a record 20 million and in 2005 that number jumped to 22 million, a 10% increase in one year. The growing population and their desire to stay healthier longer are a few of the reasons for the increase in the number of procedures.

The final frontier is moving from emerging technologies to emerging leaders or it should be developing leaders. First we need to support each other in sharpening our own leadership and mentoring skills, and then by helping the up and coming leaders. We all must be stepping up and volunteering for leadership roles at whatever the next level is for you. These leadership roles can be at our local institution or at your community level, or the Central Chapter level or maybe even at the national level.

We must all be aware that the direction of the future is in our own hands and we need to

direct it both personally and with the strength of the Society of Nuclear Medicine. To do this we all must develop our own passion, commitment and a deep resonance for our work and then to convey that to other leaders of today in order to have great leaders for tomorrow.

If you already have a good to great mentoring leadership program, that's terrific, get all the insights, knowledge and guidance you possible can. However, if you do not have a good or great mentoring program then the Central Chapter has a great opportunity for you. We can offer you a personal development process with a mentor and a way to help you practice and perfect your leadership skills.

Please contact me or Rebecca Sajdak CNMT, Immediate Past President, Central Chapter Technologist Section, with your willingness to volunteer and develop your own personal leadership skills. Your future and the future of our imaging community are dependent on you and your ability to prepare yourself for the future.

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## Technologist Section Continues Outreach Program

*By Rebecca Sajdak, CNMT  
Immediate Past President*



**We are about to begin another school year!** Many high school students in the US have little opportunity to learn about the job market, especially in the basic sciences. High school “job fairs” and “career days” go a long way toward helping to solve this problem. Historically, members of the local scientific community have volunteered their time to make short, directed presentations in their area of expertise to these high school students, giving them insight into the exciting opportunities available to them after they graduate from high school or college.

Nuclear Medicine is very appealing to those people entering the work force who are technically inclined. Coupled with the scientific challenges presented in the field and the prestige of being a Nuclear Medicine Technologist, Nuclear Medicine offers one of the highest levels of remuneration among all scientific and medical technical positions.

To increase interest in the field of Nuclear Medicine as well as the number of people entering the field, the CCSNM-TS has established an urban outreach program designed to inform high-school students of the educational and job opportunities available in the health sciences, in general, and Nuclear Medicine, in particular. The program is designed to have experts in the field give brief AV presentations to Junior and Senior high school students on their scheduled career days.

Included will be an overview of the various Nuclear Medicine job positions that exist in the US as well a brief description of the job responsibilities. In addition, a short video presentation will include a few Nuclear Medicine images to give the attendees a sense of some of the technical aspects of our field as well as the various diseases that it is possible to diagnose.

Hospitals can also hold a “career day” and invite area high schools to attend. This way, all of the health sciences can participate and offer students an insight into their particular field.

This is the opportune time to educate and inform students who are in the process of deciding what to do with their future. If you would like more information or to include nuclear medicine technology in your local career day, please contact the Chapter office at [info@ccsnm.org](mailto:info@ccsnm.org).

### **Objectives:**

1. Bring awareness to the community about nuclear medicine technology
2. Communicate the career opportunities available in nuclear medicine technology and the exciting challenges available.
3. Give high school students information on the location and length of nuclear medicine technologist programs in their area, where registration information is available, and each school’s history in placing graduates in jobs.
4. Communicate information concerning scholarships, grants, and loans available for college students.

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## **Technologist Tips: Technical Factors Affecting the Standardized Uptake Value (SUV) Calculation for F-18 FDG PET**

*By Rebecca Sajdak, BA, CNMT  
Loyola University Medical Center*

SUV is defined as the mean selected region activity (mCi/ml) divided by injected dose/body weight (mCi/kg). There are factors that are patient related (patient hydration status, biological uptake of tracer, plasma glucose level, patient motion, body weight/lean body weight), equipment-related (calibration, spatial resolution/partial volume effect, correction for attenuation, scatter, dead time, randoms, reconstruction algorithm) and factors over which the technologist who collects the data has control (total dose administered, patient instruction/ preparation, ROI size, PET scanner sensitivity calibration, recording of correct body weight, uptake time). Under certain circumstances, the technologist can create inconsistencies and errors affecting the calculation.

Technical factors affecting this value include the following:

1. Daily and monthly quality control testing to ensure that calibrations from the camera are currently correct
2. Physical size of ROI drawn around lesion
3. Uptake time post injection

4. Maintaining blood glucose levels in ideal range (60-130 mg/dl)
5. Using the maximum value of the SUV rather than the average.

The denominator of the equation is the injected activity divided by the patient weight (mCi/kg). Technical factors affecting this value include the following:

1. Accurate recording of the activity and time of injection, which should ideally to be done immediately prior to injection
2. Correction for residual activity in the syringe after injection
3. Synchronization of the time on the PET acquisition terminal with the PET injection time
4. Measurement of patient weight from the scale prior to injection.

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## **SNM Committee on Chapters Strives to Move Society Forward**

*By Paul J. Reaume President-Elect Central Chapter Technologist Section*

It was my pleasure to serve you as President-Elect Technologist Section by attending the SNM meeting on Chapters. The meeting was held on Saturday, August 26, 2006 in Chicago at the Sheraton Hotel. The SNM wanted to bring representatives from all 13 Chapters together from around the USA and Canada. The new Chief Operating Officer Michael Nelson and past President SNM Technologist Section Nanci Burchell co-facilitated the meeting.

The goals of the meeting were to:

1. Improve the communications between the Chapters and the Headquarters of SNM.
2. Strengthen the leadership at the Chapter level
3. To get feedback from the Chapters on what they/we need from the SNM to do a better job.

Michael Nelson started the meeting by saying "Our strength is at the Chapter level in order to grow the SNM inc. and we are dependent on you as you are dependent on us." I felt a great sense of relief and understanding that we were starting on the same page. Then Nanci Burchell asked us to introduce ourselves and what our experiences have been at the Chapter level and what can the SNM Headquarters do to help. I was surprised to hear how the other Chapters were running their Chapters and the areas they needed help in.

When it was my turn I was proud to say that Merle Hedland is our Executive Director and he is doing a great job from what I and Central Chapter Technologist Section President, James Kritzman, can see. He and his office staff do all the back office work and therefore frees up

the officers to do the detailed work, presentations and attend the meetings.

We then discussed the [SNM web site](#), forms that have been helpful in the past and ways to increase the communications between the Chapter committee members and the membership of our Chapters.

We concluded with a discussion of a working handbook for all Chapter Presidents that will be compiled and sent out in November 2006. We also discussed a date and place for next years meeting. We decided to set the meeting for August 18, 2007 in Chicago. The meeting was then adjourned.

After the meeting I felt much relief and a sense that the Headquarter of the SNM was listening to us at the Chapter Technologist Section level. I also got a strong appreciation of the support that Merle Hedland and his team gives to all of us. I look forward to opening the lines of communications between the Headquarters of the SNM and all of the members of the Central Chapter.

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## **Society of Nuclear Medicine Technologist Section National Council Delegate Report**

***By Lyn Mehlberg, BS, CNMT, FSNMTS***

The SNM celebrated its 53rd annual meeting in San Diego, California in June 2006. As always, this year's SNM educational program rivaled the best educational programs in medicine; providing many networking opportunities along beautiful southern California beaches, exquisite dining and entertainment establishments in the Gas Lamp district and, of course, at the convention center itself.

As with every annual meeting, the leadership of the SNMTS and SNM meet prior to the kick off of the educational sessions to accomplish the business of the Society. The SNMTS Committee Leadership meets prior to the SNMTS Executive Board, which meets prior to the SNMTS National Council of Representatives, which meets prior to the SNM Committees and then the SNM Board of Directors meets. This all happens before the meeting attendees converge upon the city for the educational sessions.

You can read about the educational sessions provided at this meeting in recent editions of the JNM, JNMT, and Uptake. I wish to share with you an update of the discussions, decisions, and progress the leadership is making to drive the profession.

Here are the leadership highlights announced at the annual meeting in San Diego.

- Additional work had been forged on the development of the Nuclear Medicine Practitioner concept. The SNM web site now hosts a background paper and competencies for this new master level position currently under development. The 2006 CCSNM Fall Road shows will give an update to this emerging concept.
- A Healthcare Policy and Practice Committee was initiated to give guidance to the

Executive Board in external policy decisions that impact the profession.

- David Gilmore, CNMT from the Massachusetts College of Pharmacy was elected as President-Elect of the SNMITS.
- Frances Neagley, CNMT, FSNMITS has been named the new editor of the JNMT, replacing fellow Central Chapter member Beth Harkness, CNMT. I'd like to take this time to acknowledge the time and dedication that Beth has given our profession in serving that role for 6 years. Thanks Beth.
- Attendance Verification Requirements as recently reiterated and reinforced to maintain the VOICE program's status as a RCEEM, which allows the SNMITS to verify continuing education programs and allocate continuing education credits, was discussed at length at the NCOR Meeting. As the SNM continues to provide credits under these enhanced guidelines, the SNMITS will share "best practice" tips on to those that are struggling with these stricter guidelines.
- The SNMITS offered \$500.00 student travel awards through the Professional Development and Education Fund to 10 students who presented abstracts at the meeting. Students from the Central Chapter swept these travel awards, as three students from Northwestern University in Chicago, IL, a student from St. Joseph's Hospital in Marshfield, WI and one from Mayo Clinic in Rochester, MN were awarded these travel awards. Congratulations! The full listing of those who were recognized with awards at the meeting can be found in the July/August issue of *Uptake*, which can be found on the SNM web site at [www.snm.org](http://www.snm.org).
- Discussion concerning USP 797, federal pharmacy standards and its potential impact on the practice of nuclear medicine were discussed at multiple levels. I had the pleasure of representing NMTs as the SNM drafted a response to the open comment period concerning USP 797. As we better understand the impact of this set of regulations, information will be provided by the SNM.
- The SNM Public Affairs Department is pleased to share that the SNM relationship with the FDA is solid, as FDA representatives attended the annual meeting and even moderated several sessions with our meeting attendees, providing a unique opportunity for our meeting attendees to interact with regulators and policy folks that impact the profession.
- The SNMITS endorses mandatory accreditation through the American College of Radiology (ACR) or Intersocietal Commission on the Accreditation of Nuclear Medicine Laboratories (ICANL). An article further discussing this resolution can be found in the July/August 2006 issue of *Uptake*, available on the [SNM web site](#).

As your National Council Delegate, my role is to represent you and your interests within the NCOR. If you have an issue or question regarding the SNM or your practice as a NMT, please feel free to contact me at [lyn.mehlberg@aurora.org](mailto:lyn.mehlberg@aurora.org) or 414-649-6919. During the past few years, I had focused my attention and energy on the national roles that I had served. Now that I am once again serving the role of Central Chapter NCD, it feels as if I have returned home. Thank you for the opportunity to continue serving the SNMITS.

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## CC News Info

### CCSNM Mission Statement

Central Chapter of the Society of Nuclear Medicine is an organization dedicated to promote continued education in the art and science of nuclear medicine. Through regular meetings and scientific sessions, members from Minnesota, Wisconsin, Illinois, Michigan, Indiana and a portion of Ohio are provided the opportunity to not only review existing technology and methodologies, but also become familiar with newer techniques, equipment and radiopharma-ceuticals. In this manner, the members are kept apprised of current changes in technology, its application and appropriate use.

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