



Society of Nuclear Medicine

CENTRAL



CHAPTER IN THE NEWS

February / March 2002

One of the interesting things about clubs and societies, such as the Central Chapter, is that people always assume that there is someone else taking care of their needs. In my other life, I'm president of a sports club (biking/skiing) and even though everyone in that club is a member because they are very interested in those sports,

Report from the Chapter President

it still seems to be very difficult to get people to voice an opinion or contribute more than a monosyllabic grunt when something is proposed. There are always the vocal minority who have no trouble expressing their views all the time, but often their views are at odds with those of the average "member." When the minority push through some new rule or direction for a club that is against the wishes of the majority, people complain, "how could this

happen." Well it happens because people are unwilling to get involved. Getting involved means getting into the politics of a club or society. For most people politics is a dirty word and something they would rather not be part of. With the sports club, I have to confess that I would rather ski 50 km in a blizzard than spend one hour in a committee meeting. It will be the same thing on April 11 when I and the other Chapter officers spend 10+ hours in committee meetings. That's a gruelling day by any standards and something I do not look forward to. However, it needs to be done. Going back to my sports club—before we formed the club, a number of us would



Michael O'Connor, Ph.D.

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Welcome to 2002. Did everyone enjoy 2001? I know I have been very busy. I am not sure I saw much of 2001—something I am sure everyone can relate to. You should be receiving your ballot soon. Please take the time to complete the ballot; your vote is important. I want to thank those on the ballot for volunteering to serve. Those elected will be installed at the Annual Spring Meeting in Chicago April 12–14, 2002. The Spring Meeting includes the business "stuff" of the Chapter. The officers and committee members meet on Thursday April 11 to do the planning for future programs like the Spring Meeting and the Road Show. Join us; this is a great opportunity to see what it is all about and get involved. We are always looking for Road Show coordinators, committee members and potential officers.

Report from the Technologist Section President

The Spring Meeting, entitled *Innovations in Nuclear*

Medicine Imaging, Therapy and Instrumentation, includes PET, Monoclonal Antibodies, Oncology, and Future Medical Imaging. I look forward to seeing many technologists in downtown Chicago. You can register online at www.ccsnm.org.

The SNM is continuing with the Chapter chartering process. Most of the chapters are or will soon be chartered with the new SNM structure. The ad hoc committee appointed by last year's president, Jennifer Bryniarski, to determine our best options for the Technologist Section will be reporting at the Annual Spring Meeting in Chicago.

I would like to say thank you to this year's executive council, Sharon Lafferty—President-Elect, Tanya Spillum—Treasurer, Anne Pierini—Secretary, and Lisa Hazen—National Council Delegate, committee members, and of course, Renae Henkin, Executive Director.



Derek Fuerbringer, CNMT

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President's Report

«p1 often meet with our local city officials about improving ski trails and bike trails with zero success. Our views carried no weight, and we were basically ignored. So we formed a club and went through all the necessary paperwork and process to become a bona fide organization and the SAME people go to the SAME officials and now we "represent" that sport in the eyes of the city and good things happen! It was a very interesting experience and taught me the value of a society or club in promoting a career or activity. It also made me realize that, like it or not, committees and the politics associated with them are an essential part of the process. Few of us like to sit in a room for hours discussing some minor issue in finances or society bylaws, but the alternative is a lot less attractive. No society means that when the world ignores your opinions as to how you should practice your profession, you have no recourse but to suck it up! Consider the chapter like a medical insurance policy—you ignore it most of the time and hope you never need it, but when something goes wrong, you expect it to support you and get you through your medical emergency. You pay money into it to ensure that it's there when you need it. Likewise with the Chapter—people need to pay in their time and effort to ensure that it is there—fit and strong—when they need it. One simple way you can do this is by filling out the survey on the back of this newsletter. We can be strong only if we have clear directions from the membership. Literally 5 minutes of your time can go a long way to making the Chapter a better organization. That's how long it will take you to fill out the survey and fax it back to Renae (well, maybe 6 minutes if the lines are busy!). Think about that before you put down this newsletter.

For those who like to procrastinate, this will be your last reminder about the Spring Meeting in Chicago. This meeting has something for everyone and Mark Groch and Monica Geyer have put an enormous amount of work into all aspects of this program to make it a success. The least you can do to show your appreciation is show up! Finally, as this is my last president's message, I'd like to use this opportunity to especially thank all my colleagues who will slave away with me in committee meetings come April 11. Without their willingness to do so, we would not have a chapter to represent your interests and meet your educational needs. Please thank them next time you see them (they are the ones with the silly ribbons stuck to their name badges!).

Central Chapter Society of Nuclear Medicine

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2003 Spring Meeting

Location: COBO Conference Center, Detroit, MI

Hotel: Crowne Plaza, 2 Washington Blvd., Detroit, MI.

Room Rates \$125.00 single/double, \$135.00/triple, \$145.00/quad

Dates: May 2-4, 2003

Program Chairs: John Freitas, MD (313) 926-4506, johnfreitas@sprintmail.com

Mary Yeomans, CNMT (248) 926-9500, maryy@medinuc.com

Sharon Lafferty, CNMT (810) 573-5125, sharon@provideamerica.com

Basic Nuclear Medicine—A New Way of Doing Old Things

Topics:

- Before You Begin—Camera QC, New NRC Regulations, New Radiopharmaceuticals
- Cardiology—What Type of Stress and How to Do It, 3D SPECT, Understanding Cardiac Processing: From Filters to Attenuation Correction
- Inflammatory and Disease Detection—Ga-67 Scanning for PCP, In-111 WBC vs. Ceretec, Lymphoscintigraphy
- Clinical Appropriateness: A Better Way?—I-123 vs. I-131 or Tc-99m for Thyroid Imaging, Hepatobiliary Imaging, VQ Perfusion Imaging

BUSINESS COMMUNICATIONS CCSNM

Business communications concerning advertising should be sent to Renae Henkin, Central Chapter of SNM, Inc., 875 E. 22nd Street, #202, Lombard, IL 60148-5025.

E-mail: ccsnm@mindspring.com,

Voice 630-686-6187

Fax 630-268-0612.

Advertising rates for the 2001/2002 calendar year are \$250/half-page and \$500/full-page advertisements.

Please note that the Central Chapter Office has moved. The new address is 875 E. 22nd Street, #202, Lombard, IL 60148-5025.

MORE STUDENTS IN RADIOLOGIC SCIENCE PROGRAMS !

There finally is a rare bright spot among all the bleak news about the shortage of radiologic technologists. According to the results of a recent survey by the American Society of Radiologic Technologists, the number of people entering radiologic science programs has increased during the past three years.

The survey asked directors of every accredited radiologic science program in the United States—590 radiography programs, 110 nuclear medicine programs and 86 radiation therapy programs—to report student enrollment figures for their freshman classes during each of the past three years. Response rate varied by program type, with 75 percent of radiography program directors responding, 62 percent of nuclear medicine program directors responding, and

The Bureau of Labor Statistics predicts that the country will need...4,000 more nuclear medicine technologists ...by 2008.

60 percent of radiation therapy program directors responding. The enrollment figures reported by respondents were extrapolated to estimate the entire population of students entering radiologic science programs in 1999, 2000, and 2001.

“The results give us a good snapshot of the supply side of the supply-demand balance in radiologic technology,” said Sal Martino, ASRT executive vice president and chief academic officer.

Survey results showed that enrollments increased for all three types of programs. The freshman class of radiography students was estimated to total 12,529 in 2001, up 12.3 percent from an estimated 11,160 students in 2000 and up from 10,582 students in 1999. The number of students entering U.S. nuclear medicine programs increased 29.1 percent in 2001 to an estimated total of 1,252, up from 970 students in 2000 and from 922 students in 1999. Students entering radiation therapy programs in 2001 were estimated at 860, a 22.3 percent increase from 701 students in 2000 and up from 556 students in 1999.

“This is good news for the profession and for its patients,” said ASRT President Allen Terrell, M.S., R.T.(R)(MR). “I hope this growth correlates with recent efforts by the ASRT and the Summit on Radiologic Sciences and Sonography to interest students in careers in radiologic technology and to help schools recruit more people into their programs.” The ASRT has conducted an extensive media campaign to inform the public about job opportunities in the field, and the Summit recently produced a videotape about careers in radiologic technology.

Many health professions are experiencing shortages, including nurses and laboratory technologists. However, recent reports indicate that shortages are deepest among pharmacists and radiologic technologists. The Bureau of Labor Statistics predicts that the country will need 55,000 more radiographers, 4,000 more nuclear medicine technologists, and 4,000 more radiation therapists by 2008. Based on those figures, Mr. Terrell warned that the profession is not out of the woods yet. “To avoid a severe personnel crisis, we must continue promoting the field to young people and keep these enrollment figures up,” he said.

The ASRT survey also questioned program directors about their plans for future program growth. Only 1.3 percent of respondents said they planned to decrease enrollments, while 64.3 percent planned to stay at about the same enrollment level and 34.4 percent said they plan to increase enrollments. “About 50 percent of the programs indicated that they are not at full enrollment, so there is room for continued expansion,” said Dr. Martino.

In addition, 93.6 percent of the program directors who responded to the survey said that their programs “will definitely continue to operate” during the next few years, while 5.2 percent reported that there is a possibility of their program closing and 1.3 percent said that they will close or have already closed.

Radiography programs had the highest student attrition rate, according to the survey. Directors reported that during the past few years, 21.7 percent of students enrolled in radiography programs dropped out before graduating. The attrition rate for radiation therapy programs was 18.1 percent, and the rate for nuclear medicine programs was 11.8 percent.

“Attrition continues to be a problem,” said Dr. Martino, who suggested that programs become more flexible to meet the needs of their students. “Offering night and weekend classes or distance-learning programs may be one way to stem the loss of students,” he said.

The enrollment trends survey is available at the ASRT website, www.asrt.org. For further information, contact: Ceela McElveny, 800-444-2778, Ext. 1239.

Nuclear Cardiology Specialty Exam

The NMTCB is again offering this specialty exam in Nuclear Cardiology Technology in June 2002 during the Annual Society of Nuclear Medicine Meeting in Los Angeles and in their Atlanta office.



Eligibility Requirements:

A candidate for examination must show documented evidence of the following:

1. Active NMTCB, ARRT(N), and/or CAMRT nuclear medicine membership
2. Clinical Experience in Nuclear Medicine Technology for a minimum of two years full-time (4,000 hours)

Cost \$150.00. Date: June 15th. For more information, refer to the NMTCB web page: www.nmtcb.org

For an application, please contact:

Jennifer Gaffey at the NMTCB Office
2970 Clairmont Road, Suite #935
Atlanta, GA 30329
Phone : (404) 315-1739
Fax : (404) 315-6502
E-mail : jgaffey@nmtcb.org

RSNA/AAPM 2001 Meeting, Chicago

Robert Zimmerman, Medical Physicist
Department of Radiology
Harvard Medical School, Boston, MA

This article is a slightly condensed version of his recent report from the last RSNA meeting that is available from the website <http://www.med.harvard.edu/JPNM/physics/NotesfromRSNA2001.html>.

Please note that this report is not intended to be all encompassing and reflects his personal view of the meeting.

I was last at an RSNA in 1997. I expected a bigger meeting this year. In fact attendance was down by at least 13% compared to 2000. This was very noticeable as the halls and corridors were much more open than in past years.

My primary purpose in attending the RSNA was to participate in the AAPM Board meetings on Wednesday afternoon and Thursday morning. Of course, Chicago is a great city to visit, so some opera and fine dining were definitely going to happen. Missed the highly recommended exhibition at The Art Institute of Chicago on **Van Gogh and Gauguin—The Studio of the South**, <http://www.artic.edu/aic/exhibitions/vangogh.html>. I brought too much work with me and had to give up something. Maybe I should have given up some time at the RSNA?

RSNA lived up to my expectations of a tremendously useful educational resource and a weak science resource. It was enlightening to wander the Exhibition Halls looking for things relevant to nuclear medicine.

DICOM was not so much in your face this year as in 1997. The new hype was for the IHE—Integrated Health Enterprise. More on this below.

Saturday

Arrive in the morning and found subway into the city and to my hotel. Started on that work I brought. Went to complete registration. Nothing happening at McCormick yet. Worked late into the night.

Sunday

Work. Went to AAPM committee meetings. The nuclear medicine committee has Task Group #11 trying to get comparative performance data on gamma camera PET machines. It has become difficult and expensive to carry out this work at institutions that do not have on-site cyclotrons. We need an angel. More work in hotel.

Course 130: Categorical Course in Diagnostic Radiology: Thoracic Imaging—Chest and Cardiac: Lung Cancer—Screening. NL Mueller, Vancouver, TM Grist, Madison

- A. ELCAPE Experience: Screening Technique. CI Henschke, New York
- B. ACRIN Experience: Diagnostic Strategies. DR Aberle, Los Angeles
- C. Mayo Clinic Experience: Ancillary Findings. SJ Swenson, Rochester
- D. Moffitt Experience: Cost Effectiveness. RA Clark, Tampa
- E. Conclusions. NL Muller, Vancouver

All throughout the meeting there was talk of screening with CT. Doses, technique, whether it is efficacious, etc. This was a good set of presentations by the ones who have been advocating and researching the issues. Conclusions—Still gathering data.

Monday

Course 229: Tumor Angiogenesis: Basic Pathophysiology and Molecular Probes. AA Bogdanov, Boston, Moderator

- A. Microcirculation in Tumors. F Yuan, Durham
- B. Targeted Echogenic Probes for Angiogenesis Imaging. AL Klibanov, Charlottesville
- C. MR Imaging of Angiogenesis. ZM Bujwalla, Baltimore

This was a nice exposition of some of the things that Folkman alluded to in his featured lecture in the afternoon.

Angiogenesis-Dependent Imaging. Judah Folkman, Boston
Eugene P. Pendergrass New Horizons Lecture

A very good talk pointing out the ubiquitous nature of angiogenesis—the development of new vessels, in many phases of health and disease. His take-home message: When you drain the Pacific Ocean, don't be surprised that the islands are connected.

Special Focus Session F02: Digital Imaging /Informatics: Current Status. RL Arenson, Moderator

PACS in the Enterprise (Outside of Radiology). KJ Dryer, Boston, P Skaruls, Chicago (subbing for JP Glaser, Boston). Dryer pointed out that DICOM does not hold up when there are 1000s of users to be serviced, e.g., in a modern hospital of any significant size where information (images and text) are to be delivered to the enterprise. Something better is needed. He sees the future based around Web distribution using compression of up to 20:1. He sees a move to tighten the integration of Web-based services with the Radiology Department PACS system. Skaruls pointed out the move toward canned software and the move away from home-grown software as a strong trend. The institution has to provide the network, help desk, and public machines.

Workflow in Radiology (Department Efficiency/Hospital Efficiency). DS Channin, Chicago, Eliot L. Siegel, Baltimore. Siegel used his time to extol the vision of the seamlessly integrated health enterprise. He gave a dramatic example of cutting a request and delivery of an X-ray exam from 59 steps to 9 steps. Dramatic monetary savings and improved delivery of services can result from this integration. The VA system will be easy, he says, because of its relative simplicity and uniformity. Channin pointed out that in a general hospital such an effort will require a lot of planning and education. Hence, the IHE program fostered by RSNA and others. IHE is not a standard but an initiative and movement to foster improved efficiency by responsible integration. Fine—just so we don't end up with another DICOM fiasco.

Computer-Aided Diagnosis (CAD) (Radiologist Being Replaced by Computer). DE Arvin, San Francisco, DP Harrington, Stony Brook Harrington pointed out that radiology is in a state of crisis. Complexity is increasing, radiologists are decreasing, turnaround is decreasing, volumes are increasing, funding is decreasing, and turf battles abound. The need for more productivity is obvious. We need help, he said. Arvin pointed out that computer-aided diagnosis (CAD) is ready to help. More work is needed but it is ALMOST HERE.

Tuesday

Course No. 330: Categorical Course in Diagnostic Radiology: Thoracic Imaging—Chest and Cardiac: Pulmonary Embolism. NL Mueller, Vancouver, TM Grist, Madison. What amazes me so much is that when radiologists talk with each other about PE, they can talk for hours without ever mentioning nuclear medicine perfusion/ventilation scans. Still used at our hospital.

- A. Acute Pulmonary Embolism: Spiral CT. JR Mayo, Vancouver
CT is now at 1–2 mm slice thickness, 120 KVP, and 200–300 mAs. Must review on a workstation because there are too much data for film. Studies of efficacy are flawed but sensitivity lies between 53–100%. Later studies with better equipment have higher sensitivity. Latest 85–90% sensitivity with 90–95% specificity for segmental with subsegmental lower. He thinks that the pulmonary angiogram as the gold standard is flawed.
- B. Chronic Pulmonary Embolism: CTMJ. Remy-Jardin, Lille
Remy-Jardin advocated CT over angio in cases of chronic PE and selection of candidates for surgery.

Continued on Page 9



**Central Chapter of the
Society of Nuclear Medicine
and
Northwestern Memorial Hospital
Department of Nuclear Medicine**

present

**Innovations in Nuclear Medicine
Imaging, Therapy, and Instrumentation**

- **PET in the Year 2002**
- **Monoclonal Antibodies and Receptor Imaging**
- **State-of-the-Art Methods in Nuclear Oncology**
- **Future of Medical Imaging**

April 12–14, 2002

**Northwestern Memorial Hospital
3rd Floor Conference Center
251 E. Huron
Chicago, Illinois**

18.25 hours of Category 1 AMA credit and 17.0 VOICE CEHs

DESCRIPTION

This meeting is presented by the Central Chapter of the SNM. Its organizers, Mark W. Groch, PhD, and Monica C. Geyer, CNMT, have designed a program that provides for the educational needs of the practicing nuclear medicine physicians, scientists, and technologists with regard to the latest techniques in imaging, diagnosis, and therapy.

OBJECTIVES

- At the end of this meeting, attendees will be able to
- Discuss the role of monoclonal antibodies and receptor imaging in diagnosis and treatment.
 - Evaluate the clinical utility of dedicated PET and of gamma camera coincidence imaging.
 - Assess the future of nuclear medicine imaging devices.
 - Review current and future clinical applications of nuclear medicine.

CREDIT

Continuing education credits for technologists and physicians have been requested.

HOTEL ACCOMMODATIONS

Reservations can be made directly by calling the Allerton Crowne Plaza—Chicago at (312) 440-1500. All reservations must be guaranteed for late arrival with a credit card. Please mention the **Central Chapter of the Society of Nuclear Medicine** when making your reservation. Check-in time is 3:00 p.m. Checkout time is 12:00 noon. The room rate is \$129.00 single/double (one bed) \$159.00 double/double (two beds)—limited availability, and \$169.00 suite—limited availability. The hotel tax is 14.9%. Please make your reservations by **Friday, March 15, 2002**, to take advantage of the SNM rate. Hotel rooms are subject to applicable tax. Please contact the Allerton 48 hours prior to arrival date if you need to cancel. Should an early departure occur after check-in, a \$75.00 fee will be placed on the individual's guestroom folio.

CHICAGO

Chicago has attractions and activities for a family on vacation, someone visiting for business, or a couple searching for romance. Museums, shopping, fine dining, and educational attractions including the Hancock Observatory, the Shedd Aquarium, and the Chicago Academy of Science are here to entertain. That is just the beginning. Bring the family and join us.

FRIDAY April 12, 2002

7:00-8:00 **REGISTRATION**

8:00-8:15 **WELCOME AND OVERVIEW**

Michael K. O'Connor, PhD, President, CCSNM
Derek E. Fuerbringer, CNMT, President, CCSNM-TS
Mark W. Groch, PhD, Scientific Program Chair
Monica C. Geyer, BA, CNMT, Program Chair

SESSION 1 STATE-OF-THE ART METHODS IN NUCLEAR ONCOLOGY

Moderators: William G. Spies, MD, Monica C. Geyer, CNMT

8:15-9:15 **James L. Quinn Memorial Lecture**
Current State of the Art in Positron Computed Tomography

Stewart M. Spies, MD

9:15-10:00 Nuclear Oncology from the Perspective of a Medical Oncologist

Steven Rosen, MD

10:00-10:15 **Coffee Break**

10:15-10:45 Technical Considerations for Imaging Oncologic Agents

Anne M. Pierini, CNMT

10:45-11:30 Update on Prostate Cancer Imaging

Anthony M. Passalacqua, MD

11:30-12:00 Skeletal Target Radionuclide Therapy

Peter Cutera, CNMT

12:00-1:30 **LUNCH**

SESSION 2 MONOCLONAL ANTIBODY AND RECEPTOR IMAGING

Moderators: Michael K. O'Connor, PhD, Lynn Melhberg, CNMT

1:30-2:30 **FEATURED KEYNOTE SPEAKER**

Monoclonal Antibody and Receptors: The Complementary Role of Imaging and Therapy

Gerald L. DeNardo, MD

2:30-3:00 Monoclonal Antibody/Receptor Imaging: An Overview from a Clinical Oncologist

Leo M. Gordon, MD

3:00-3:15 **Coffee/Soda Break**

3:15-3:45 Monoclonal Antibody Imaging/Dosimetry Technical Imaging Considerations

Peter Cutera, CNMT

3:45-4:15 **GUEST SPEAKER**

Dosimetric Methods in Radionuclide Imaging and Therapy

William D. Erwin, MS

4:15-4:45 Nuclear/CT/MRI Image Fusion in Oncology

Dennis Nelson, PhD

4:45-5:15 **PROFFERED PAPERS**

5:15 TOUR OUR NORTHWESTERN MEMORIAL HOSPITAL AND NUCLEAR MEDICINE/PET FACILITY
SOCIAL EVENT OR EVENING PROGRAM TBA

SATURDAY April 13, 2002

SESSION 3 PET IN THE YEAR 2002

Moderator: Malcolm D. Cooper, MD, Susan C. Weiss, CNMT

8:00-8:30 **PROFFERED PAPERS**

8:30-9:30 **FEATURED KEYNOTE SPEAKER**

PET Scanning Current and Future: A Practical Review

R. Edward Coleman, MD

9:30-10:00 Performing PET Studies

Darla B. Helmer, ARRT

10:00-10:15 **Coffee Break**

10:15-11:00 The Role of PET to Assess Myocardial Perfusion and Viability

Jesus A. Bianco, MD

11:00-12:00 PET Imaging of the Brain: Current Status, Future Direction

Malcolm D. Cooper, MD

12:00-1:30 **LUNCHEON**

SESSION 4 PET IN THE YEAR 2002 II

Moderator: Jesus A. Bianco, MD, Nancy McDonald, CNMT

1:30-2:00 PET Oncology I: Hybrid PET Systems
Robert E. Henkin, MD

2:00-2:30 PET Oncology II: Full Ring PET Systems
James K. O'Donnell, MD

2:30-3:15 PET Oncology III: Correlation with CT
William G. Spies, MD

3:15-3:30 **Coffee/Soda Break**

3:30-4:15 PET Oncology IV: Correlation with MRI
David A. Turner, MD

4:15-4:45 Quality Control for PET
Brad J. Kemp, PhD

4:45-5:15 The Economics of a PET Center
Monica C. Geyer, CNMT

5:15 SOCIAL EVENT OR EVENING PROGRAM TBA

SUNDAY April 14, 2002

SESSION 5 THE FUTURE OF MEDICAL IMAGING INSTRUMENTATION

Moderators: Mark W. Groch, PhD, James R. Halama, PhD

8:00-8:30 New Imaging Devices for Dedicated PET:
LSO/GSO—Overview
Ron Nutt, PhD

8:30-9:00 Clinical Imaging Considerations
James R. Halama, PhD

9:00-9:30 New Hybrid Imaging Systems for PET, SPECT,
and CT—Overview
Mark W. Groch, PhD

9:30-10:00 Clinical Imaging Considerations
Paul Moesbach, ARRT

10:00-10:15 **Coffee Break**

10:15-10:45 New Single Photon Imaging Systems CZT, CsI—
Overview
John C. Engdahl, PhD

10:45-11:15 Clinical Imaging Considerations
Michael K. O'Connor, PhD

11:15-12:15 Structured Panel Discussion
Future of Tomographic Imaging

Wei Chang, PhD
James Colsher, PhD
John C. Engdahl, PhD
William D. Erwin, MS
Mark W. Groch, PhD
James R. Halama, PhD
Horace Hines, PhD
Brad J. Kemp, PhD
Ron Nutt, PhD
Michael K. O'Connor, PhD

12:15 **ADJOURN**

GUEST FACULTY

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Professor and Chair, Nuclear Medicine, Duke University, Chapel Hill, NC

Gerald L. DeNardo, MD
Professor of Medicine, University of California—Davis, Sacramento, CA

John C. Engdahl, PhD
Director of Research, Siemens Medical Systems, Hoffman Estates, IL

William D. Erwin, MS
Physicist, MD Anderson Cancer Hospital, Houston, TX

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Anthony M. Passalacqua, MD
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Medicine, Cleveland, OH

Anne M. Pierini, CNMT
Technologist, William Beaumont Hospital, Royal Oak, MI

Stewart M. Spies, MD
Clinical Professor of Radiology, Northwestern University, Chicago, IL

William G. Spies, MD
Associate Clinical Professor of Radiology, Northwestern University, Chicago, IL

David A. Turner, MD
Professor of Radiology, Director, Section of MRI, Rush University, Chicago, IL

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Fax (630) 268-0612

Come join us in Chicago. An exciting venue of activities and fine restaurants awaits you and your family!

PHOTOCOPY AND PASS ON TO A FRIEND

SNM Membership # _____

Name _____ BS CNMT MD MS PhD

Institution _____

Address _____

City _____ State _____ Zip Code _____ - _____

Telephone () _____ Fax () _____

E-Mail Address _____

Check or Money Order Discover MasterCard Visa

REGISTER ONLINE: www.ccsnm.org

Card # _____ Expiration Date _____

Name on Credit Card _____

Address _____

City _____ State _____ Zip Code _____ - _____

	<u>Pre-Registration</u>	<u>On-Site</u>	<u>Costs</u>
MD, PhD, etc., SNM Member	\$ 125.00	\$ 140.00	\$ _____
MD, PhD, etc., Nonmember	\$ 150.00	\$ 165.00	\$ _____
Technologist, SNM Member	\$ 75.00	\$ 90.00	\$ _____
Technologist, Nonmember	\$ 85.00	\$ 100.00	\$ _____
Resident, SNM Member	\$ 40.00	\$ 50.00	\$ _____
Resident, Nonmember	\$ 55.00	\$ 65.00	\$ _____
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Continued from Page 4

C. Pulmonary Embolism: MR Imaging. WB Gefer Philadelphia
William B. Gefer told us that MRA is the coming thing for PE with 2-3 mm slice thickness, performed in a breath hold with Gd contrast. Sens and Spec get better every year. Both in the 80s in 1999. The technique fails for small vessels, he says. There are Gd aerosols coming out. Soon there will be blood pool agents. Clearly all the modalities are moving forward on PE.

Course No. 417A: PET and US Techniques in the Evaluation of Tumor angiogenesis. RL Wahl, Baltimore, PL Carson, Ann Arbor
That PET can image angiogenesis may not be so surprising but using US? Yes. There are contrast agents soon to be available that will contribute to the imaging of angiogenesis.

TECHNICAL EXHIBITS

The commercial exhibits took up north and south halls and a good piece of the *infoRAD* space. *infoRAD* was only a bit less commercial than the North and South halls. I have very narrow interests compared to the scope of the meeting; I decided to walk around the floor and compare nuclear medicine floor space in the various booths. The winner was Trionix who had a large amount of floor space totally devoted to NM and with their whole product line being shown. The loser was GE, who barely had an NM showing. Something about PET but no other NM hardware on the floor.

Philips had a lot of nuclear medicine space but it was fractionated between the ADAC corner and the Marconi (Picker) corner. They were definitely trying hard to impress with the seriousness of their return to NM. It was impressive and I was positively impressed. The Allegro is a PET (GSO) with a top-of-the-line Marconi CT. I was sure that it was a Philips CT in June. Maybe this product is in flux. Or maybe I just get confused with the marketing words. I have since confirmed that GEMINI is the name of the combined PET/CT and Allegro is the name for the new PET alone.

Siemens was certainly present with an NM showing but there was little emphasis relative to the rest of their display. The only new item was a PET workstation as a works-in-progress.

Smaller booths that I spent time at:

ETIAM

Have various DIOCM software packages that run under Windows. www.etiam.com. DICOM Valet DICOM Izer—a type of DICOM gateway that puts various image files and captured images to a storage device or to a print device. ~\$2500. DICOM Eye—the Swiss Army Knife for DICOM. Acquires, reads, browses, displays, processes, converts, prints, stores, and digitizes your every desire. DICOM Toaster—burns CDs.

Nuclear Fields

Cast collimators for your gamma camera. Fanbeam 350 for brain SPECT on an e.cam?

Thinking Systems Corporation

Represented by Mid-Atlantic Imaging, Columbia, MD. NuGateway takes proprietary files from your camera and sends them to a PACS. \$5000, not \$10,000 to \$20,000 that we have seen from the big guys. NuWEB puts your nuc med data on the Web so you do not have to come into the office to read.

DOME Imaging Systems and image SYSTEMS Corporation.

These two were teamed up in *infoRAD*. www.dome.com and www.imagesystemscorp.com. CRT displays and flat panel displays. I was surprised at the really bright LCD screens on view. Some impressive QC software for displays was being demoed, too.

Sensor Systems

Has MEDx software, an all-purpose brain visualization and analysis software package for UNIX systems. www.medx.sensor.com.

TomoTherapy Inc.

A linear accelerator for helical treatments. Came out of U Wisconsin projects, I think.

RMD Instruments, LLC

Lots of detectors, currently featuring structured CsI

Nuclear Diagnostics Ltd.

Featuring Hermes Medical Solutions. Workstations for quantitation, especially nuc med. www.hermesvision.com.

Voxar, Inc.

3D software plug-ins for PACS workstations.

POSTERS

There was 482 posters but a significant fraction of the them were no-shows. Here are the ones that caught my eye.

222HS-p A Fault-Tolerant 300 GB RAID-server and 2 TB Tape Jukebox PACS Archive for \$20k. GJ Wendt, PG Nagy, WW Pepler, C Kahn, K Ehlers, Madison. No, they do not really use it for PACS, but for a teaching file. It goes to show how overpriced the commercial PACS systems are.

237HS-p Acute Cerebral Infarction: Effect of JPEG Compression on Detection at CT. Y. Ohgiya, T Gokan, H Fujisawa, K. Hamamizu, K Tanno, H Munechika, Tokyo. They found that 10:1 and 20:1 were tolerated. But their data showed that at 20:1 ROC curve was worse. Not significant, they say.

243PH-p The Use of Erbium Filtration for Routine Diagnostic X-ray Investigations. LA Rainford, JP Stack, PC Brennan, Dublin. They found decreased doses and increased or same image quality with erbium as opposed to aluminum filters.

247PH-p Consistency of Image Quality Measurements of Computed Radiography Systems with Implications for a Quality Control Program. KA Fetterly, TM Peterson, TR Daly, BA Schueler, Rochester, MN. They followed several CR systems for 15 mos. QC program took 1 hr to perform, which could be automated to be accomplished in less time. Small changes in performance can be detected. A formal QC program will be initiated as image quality measurements are a good thing.

255PH-p Hand Images: Comparison of a Flat Panel Digital Detector to Screen-Film and Computed Radiography Detectors. H Pauls, T Pollak, R Friedberg, U Gunl, A Kogel, K Kohler, Dresden. Authors found that 200 im pixel DR (GE) gave best image quality compared to CR (Agfa) and SF (Agfa), which were about the same.

257PH-p Comparison of Computed Radiography and Film/Screen Combination Using a Contrast-Detail Phantom. Z Lu, EL Nickoloff, JC So, AK Dutta, New York. Authors wanted to minimize patient dose, optimize technique using a contrast-detail phantom as criteria. CR seems to want a higher kVp setting and more filtration to reduce patient dose and maintain image quality as measured with the contrast-detail phantom.

261PH-p Spreadsheets for Automated Data Collection, Analysis, and Report Generation for Diagnostic Medical Physics. SG Langer, KM Kanal, Seattle. Authors have tried to automate record keeping with spreadsheets. Designed with 1 day/sheet. Provides for time savings in collection and distribution. Langer shares and you can see more at <http://radweb.mcis.washington.edu/~sglanger/>.

264PH-p CT Lung Nodule Size: Effects of Scanners and Reconstruction Filters. PF Judy, FL Jacobson, B Zaho, DA Israel, C Del Frate, Boston. Using a lung nodule phantom authors measured visual and computer size measurements from 2 scanners and 4 different reconstruction filters. Above 4 mm no effect was seen with filters. Scanners had essentially the same performance.

270PH-p

Comparison of Time Requirements in 2D vs 3D Radiotherapy Planning. A Kuten, S Lippa, R Bar Dermona, E Gez, S Dijkhuis, D Gaitini, Haifa. An industrial management engineer studied planning of 2D vs 3D. 2D takes 2X longer to plan and physics staffing has to be increased.

277PH

DICOM Can Be Extended by Defining an Otology Incorporating Dynamic Behavior Such as Involved in Medical Image Processing. F Aubry, AE Todd-Pokropek, London. Authors want to extend DICOM to include categories, allowing for more versatility in sharing and distributing more complex images.

286PH-p

Linearity of Recovery Coefficients in PET. L Geworski, BO Knoop, WH Knapp, DL Munz, Berlin. The authors' premise was that if scatter and attenuation were accurate, then recovery coefficients would be the same for hot and cold sources. Tested for Exact 922 in 2D and 3D mode. Evaluated using IEC procedures and found support for their premise. They propose this as a test of linearity and correction accuracy. This work was with spheres. Would other shapes be the same?

287PH-p

Absolute Calibration of Positron Emission Tomographs: A Multicenter Comparative Evaluation. L Geworski, V Ivancevic, M de Wit, R Bares, DL Munz, Berlin. Authors checked dose calibrators and PET scanner calibration. 23 tomographs were tested. 65% were within 5% of the mean, 85% within 10%. Rest were far out. Absolute calibration cannot be trusted without investigation.

289PH-p

Setup and Calibrations of Color Cathode Ray Tube Displays for the Purpose of Board Examinations. H Roehrig, WH Hartmann, RJ Rovenelli, MP Capp, MG Evanoff, EA Krupinski, Tucson. Authors demonstrated that they successfully controlled 88 CRTs for purposes of pathology and radiology exams. More work is required on objective color accuracy calibration.

SCIENTIFIC PAPERS

There were 1670 abstract in the program. There were plenty of productive things to do in Chicago so the "obligation" I felt to go to the weak nuclear medicine physics papers was easy to avoid. However, I did struggle to find SOMETHING of utility. The following caught my attention.

287 Functional Mapping of Regional Liver Asialoglycoprotein Receptor Amount from Single Blood Sample and SPECT. N Shuke, A Okizaki, J Sato, Y Ishikawa, K Takahashi, T Aburano et al, Asahikawa, Japan. GSA albumin is an approved agent in Japan. Dynamic SPECT results in low-count high-noise numbers so authors attempted to validate a static SPECT method using a 2-compartment model. They were able to validate the approach and provide a quantitative receptor image with a static SPECT acquisition.

288 Revolutionary Nuclear Medicine Diagnostic Images Through Pixon Post-Processing: Enhanced Contrast, Resolution, and Order of Magnitude Increase in Signal-to-Noise Ratio. DL Gilday, A Yahil, R Puetter, PS Babyn, R McFadden, Toronto. I am not sure how revolutionary this image processing is but it caused some interest in the members of the audience. You can maybe judge for yourself by checking out <http://www.pixon.com>. It was described to us as deriving from astrophysics work and based on some sort of adaptive smoothing. They were not revealing much.

289 Efficacy of Triple Energy Window (TES) Method in the Simultaneous Acquisition of Ga-67 and Tc-99m. I Fukunaga, N Yamazaki, K Ishikawa, Y Ozaki, Y Sumi, Urayasa, Japan. A phantom study to try to test the efficacy of simultaneous bone scan and Ga-67 scan. Not convincing.

1027 Lesion Detection and Classification for ENT- and GI Tumors with PET-CT Fusion in an In-line System Compared to PET Alone. TF Hany, GW Goerres, A Kaim, K Mosna-Firlejezyk, KD Stumpe, GK Von Schulthess, Zurich. The author's presentation prompted a spirited discussion. They are true believers that CT and PET should be on the same gantry. Some in the audience did not fully agree.

1028 Comparison of Diagnostic Accuracy between CT and FDG-PET in the Evaluation of Primary Tumor and Nodal Metastases in Patients with Surgically Resected Esophageal Cancer: A Prospective Study. KS Lee, YC Yoon, Y Shim, T Kim, K Kim, B Kim et al, Seoul. In 48 patients PET significantly better for staging and nodal involvement, less so for primary evaluation. Comment from audience: PET-CT would be even better!

1029 Evaluation of Parotid Tumors with FDG-PET. S Hamaguchi, N Oriuchi, T Inoue, N Satou, J Aoki, K Endo, Maebashi, Japan. FDG images not definitive in most parotid tumors.

1030 Dual-Phase Whole Body PET FDG Imaging: A Novel Way to Improve Specificity and Sensitivity in Oncology. LM Lamki, NA Mullani, BJ Barron, E Kim, Houston. In 100 patients early phase images at 2 min/body position starting 2 min after injection then delayed phase within ½ hr at 6 min/body position. They found the early phase images reduced false positives and negatives.

1032 The Accuracy of 18FDG-PET vs 67Ga SPECT for Detecting Splenic Involvement in Hodgkin's Disease. JN Rini, E Manalili, MB Tomas, I Melder, G Karayalcin, CJ Palestro. New Hyde Park, NY. Using gamma camera PET they found FDG best.

1033 Insights into Explaining Apparent Discrepancies between PET and CT Findings. RB Hoffman, M Parver, Torrance, CA. Used Exact 47 and Lightspeed. Most likely causes are improved PET contrast and delay between the two scans in aggressive disease.

EDUCATION EXHIBITS

There were 1107 such exhibits. These are posters. Some are very good. Others are so bad they should not be there at all.

051CEMS-e New Software for Management of Radiological Images: Medical Images Organizer (MIO). V Panebianco, V Campanella, C Catalano, A Laghi, I Sansoni, R Passariello, Rome. Uses 4D engine in a DB for teaching.

073CEPH-e Computer-Based Image Quality Evaluation of Digital Radiography Systems. L Wang, KA Fetterly, TM Peterson, Rochester, MN. Good teaching content on MTF, noise power function.

0402NM-e Breast Lymphoscintigraphy: Promise and Controversy. MT Chou, R Powsner, E Levin, Boston. Good description of the process and technique.

0406NM-e Pictorial Review of Gamma Camera Coincidence Imaging of Lung Nodules with FDG. AJ Minotti, LM Shah, Cleveland. Good intro to the subject and controversies.

0408NM-e Radioimmunotherapy (RIT) of Leptomeningeal (LM) Neoplasm with Intraventricular (Ivent) 131-I-3F8: Patient Imaging and Dosimetry. K Kramer, NV Cheung, JL Humm, R Finn, SD Yeh, SM Larson et al, New York. Some progress is being made in RIT.

0410NM-e User Requirements and Benefits of Tele-medicine for Use in Nuclear Medicine in Particular in Developing Countries: A Solution Looking for a Problem? R Chanachai, AE Todd-Pokropek, London. Trials in Thailand and Morocco were used to illustrate issues specific to developing countries. It can be made to work but?

0412NM-e PET/CT and PET/MR Image Fusion: Updated 3D Registration and Visualization Techniques for Primary Tumor Staging. GS Lin, I Habboush, M Thomas, SJ Swerdloff, Fremont CA. A brief review of registration, with emphasis on IMRT and RTP.

0415NM-e Evaluation of Cerebral Radiation Necrosis vs Tumor Recurrence with [18F] FDG Using a Hybrid Dual-Detector PET/SPECT Camera. AF Fernandez-Abril, GN Stakiankis, Miami. Sens=100%, Spec=83% with 15 pts.

0420NM-e Thallium Scintigraphy in Bone and Soft-Tissue Tumors: Usefulness, Pitfalls, and Additional Value of Dynamic Scan in Differentiating Malignant from Benign Tumors. Y Sugawara, T Kikuchi, T Mochizuki, S Nakata, J Ikezoe, Onsen, Japan. They found high sensitivity but significant uptake in benign tumors. There is probably no serious role for Tl-201 in this application.

0566PP-e A Multidisciplinary Approach to the Development of User-Centered Interfaces of Radiological Workstations Used for Navigation through Large Imaging Data Sets. MH Verschoor, M Van der Geer, PO Passenier, HA Vrooman, PM Pattynama, Rotterdam. This was pretty good. Discussed the factors from cognitive viewpoint. But are the companies listening?

0574MS-e Practical Use of a New Watermarking Technique for Medical Image Communication and Archive. T Umeda, H Tachibana, T Ikeda, Y Yuminaka, H Harauchi, K Inamura, Sagami-hara, Japan. Why watermarks on digital images? I think it is for authentication. Is this important? Maybe to some it is?

0578MS-e High-Resolution Computed Tomography of Unique Miniature Sculptures: Antique Japanese Netsuke. SA Sarr, M Bernstein, C Stephenson, Minneapolis. Netsuke is the wooden adornment on a woman's kimono sash. A way to verify and study these art objects.

0644PH-e PACS Simulator: A Stand-Alone Educational Tool. HK Hunag, F Cao, BJ Liu, MZ Zhou, J Zhang, GT Mogel, Los Angeles. But is it needed?

0646PH-e Equalization Processing for Digital Chest Radiographs. MJ Flynn, WR Eyley, M Couwenhoven, RM Slone, E Samei, BR Whiting et al, Detroit. This was very rich in educational material. I wish I had time to digest it or take it home to read and study.

0647PH-e Scale-Based Maximum Intensity Projection (MIP) Rendering. PK Saha, JK Udupa, T Lei, JM Abrahams, Philadelphia. With MR images. Filtering to remove noise before MIP is very helpful.

0648PH-e A Framework for Evaluating Image Segmentation Algorithms. JK Udapa, Philadelphia. In MR.

0649PH-e Choosing the Optimal Monitor for PACS and Teleradiology: The Importance of the Phosphor. EA Krupinski, H Roehrig, Tucson. Phosphor should be critical. P45 and P104 showed very slight differences in performance, however.

0650PH-e Image Quality Characterization of Medical Imaging Monochrome Active-Matrix Liquid Crystal Displays. A Bandano, S Martin, J Kanicki, Rockville. Good research on comparing suitability of LCD displays. Looks like they have arrived.

0651PH-e Radiation Risks from Lung Cancer Screening Using CT. PF Judy, FL Jacobson, VJ Rodrigues, RD Nawfel, Boston. Comprehensive.

0655PH-e Design and Construction of a Liver Phantom for CT Imaging and Interventions That Simulate Liver Motion Seen During Respiration. F Banovac, KR Cleary, EB Levy, DJ Lindisch, S Onda, D Tanaka, Washington, DC. They used a rather standard liver phantom, added movement and a tracking device. Could this be used in evaluation of new PET/CT machines?

0658PH-e Evaluation of Diagnostic Information Yield Obtained from Tuned-Aperture Computed Tomography and Conventional Dento-alveolar Imaging Modalities for Assessing Impacted Teeth. K Yamamoto, H Sekiguchi, Y Kousuge, T Mori, Y Hayakawa, AG Farman et al, China. TACT slightly improved the dental x-rays.

0661PH-e Quality Control of Digital Radiography in Comparison to Conventional Film Radiography. F Van Der Meer, JF Veenland, JL Grashuis, Rotterdam. Came with a handout. Very nice work with lots of detail. More in the books? <http://www.arabesk.nl/HTML/boeken/books.html>

0663PH-e Quantitative Evaluation Method for Image Display Technologies. MR Bruesewitz, KA Fetterly, NJ Hangiandreou, JP Taubel, Rochester, MN. As an example they applied this to two films: their current film and a new one. Seems elaborate. Do they really do this?

0665PH-e Understanding Mach Bands: Physical Principles and Clinical Examples. MS Rzeszotarski, LM Shah, AJ Minotti, Cleveland. A very instructive poster.

0681PH-e Building a Teaching Server Out of the PACS. MY Law, FH Tang, F Cao, Kowloon, HK. There were several of these types of projects. This one pulled interesting cases from PACS to a Web server. Seemed overly complex.

0683PH-e Establishing a Small-Animal Phase-Contrast Radiography Imaging System. EF Donnelly, RR Price, DR Pickens, Nashville. Sensitive to soft tissue with inherent edge enhancement. Applications?

infoRAD EXHIBITS

These exhibits were hands-on workstation-based educational exhibits. Some were very well done.

926ED-i Digital Archiving of Lectures: An Overview of Techniques. EP Tamm, RB Iyer, KW McEnery, Houston. This was both good and useful. I wish I could take it home with me. Very practical advice on how to save and distribute voice/graphics.

9401IMA-i Remote Image Processing through the Internet: Hands-on Demonstration of the EU Project Novice. E Neri, D Caramella, A Jackson, N John, A Sadarjoeen, C Bartolozzi, Pisa. This is worth a follow-up. This describes an Internet resource for image processing. <http://mvc.man.ac.uk/projects/NOVICE/and http://dot.mvc.mcc.ac.uk:2077/ari-cgi/pablo.cgi>.

9402IMA-i How to Create a Movie from Serial 2D Medical Images Conveniently: A Step-by-Step Tutorial on the PC. J Liou, Y Sun, R Lee, MM Teng, W Guo, C Chang, Taipei. I wish this exhibit had been working. I could have learned something, I think.

9603PACS-i DicomWorks: A DICOM Converter, Archiving and Transfer Software. PA Puech, L Bousset, FE Cotton, PC Douek, Lyon. I would really like to spend more time with this one. <http://www.inviweb.com>. It sounds too good to be true. And it's FREE!

9606PACS-i A Detailed Evaluation of 20 Different DICOM Viewers That are Available on the Internet: Free Trials or Free Licenses. M Chang, Y Sun, AJ Liou, C Wu, MM Teng, C Chang, Taipei. This was always busy. I finally got on and it is a very useful compilation. Try mychang@vghtpe.gov.tw.

9609PACS-i PACSPULSE: A Web-based DICOM Network Traffic Monitor and Analysis Tool. PG Nagy, CE Kahn, K Ehlers, J Rehm, GJ Wendt, Milwaukee. This sounds like a useful tool.

9614PACS-i Image Quality Control and Image Quality Measurements for Display Systems. H Roehrig, H Blume, BM Hemminger, J Fan, M Arthur, Tucson. ACR/NEMA Working Group 11: Display Function Standard. A tutorial and hands-on demo of tools.

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**** **MEMBERSHIP SURVEY** ****

WE NEED YOUR FEEDBACK!

On Thursday, April 11, 2002, the Central Chapter SNM will be conducting Committee Meetings during its Annual Meeting. Our committees need to hear from you, our membership at large; therefore, can you please take a moment to complete this questionnaire and fax it back to the Central Chapter office. The fax number is (630) 268-0612 or (630) 686-6187.

Continuing Education

1. Would you rather have the Road Shows in the
 Spring Fall
2. Would you consider holding a Road Show at your institution?
 Yes No
3. Topics for future Road Shows should be:
a. _____
b. _____
c. _____
4. Would you consider becoming a member of the Continuing Education Committee?
 Yes No

Membership

1. What benefits do you expect as Chapter Member?
a. _____
b. _____
c. _____

2. Would you consider becoming a member of the Membership Committee?
 Yes No
3. Should the SNM change its name?
 Yes No

Program

1. Do you plan to attend the Annual Meeting at Northwestern April 12-14, 2002?
 Yes—why? _____
 No—why? _____
2. Would you like to be a Local Program Chair for the 2004 Annual Meeting?
 Yes No

Publication

1. What kind of feature would you like to see in the CCSNM Newsletter?
a. _____
b. _____
c. _____
2. Would you like to write a feature for the CCSNM Newsletter?
 Yes No
3. Would you like to be a member of the CCSNM Publications Committee?
 Yes No

If you answered YES to any of the above questions, please give your name and contact information below

Name: _____
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