Positively Clinical PET

All the testimony suggests that the positive clinical advantages offered by Positron Emission Tomography are second to none. When combined with Siemens experience servicing the world’s largest installed PET base, the same positive clinical advantages can be yours.

Providing you with unequalled patient throughput, Siemens is your partner in PET from beginning to end. The positive clinical advantage is gained with:

♦ Complete and flexible product line able to meet any institution’s research and clinical demands
♦ Retractable septa for 3-D acquisition and increased sensitivity
♦ High speed reconstruction processing with Advanced Computational System (ACS)
♦ SUN® SPARCstation with software tools for qualitative and quantitative analysis
♦ Superior image quality with less than 5 mm equal resolution in all 3 dimensions
♦ High patient throughput resulting from system’s ease-of-use

For positive clinical advantages in PET Neurology, Cardiology and Oncology—look for Siemens from beginning to end.

“PET has the ability to measure biochemical responses to disease in the brain prior to gross changes in anatomy and, in some cases, prior to symptom onset resulting in early diagnosis and improved patient management.”

John C. Mazzotta, M.D., Ph.D.
President of Institute for Clinical PET (ICP)
Vice-Chairman of Neurology
Professor of Neurology and Radiology
UCLA School of Medicine

“PET is the only reliable technique currently available to assess myocardial viability. This information is often invaluable in making therapeutic decisions.”

Peter Alagona, Jr., M.D.
Associated Medical Director
St. Joseph’s Positron Center

Siemens... technology in caring hands
"PET provides unique non-invasive information on behavior, treatment response, and recurrence rate of solid tumors. Clinical PET promises to greatly impact the practice of oncology."

Mathis P. Frick, M.D.
Professor and Chairman
Department of Radiology
Creighton University School of Medicine

See us at the SNM Meeting in Los Angeles, CA
Island 421
For four days in June, booth #131 will be the in-place in L.A. to see the industry's brightest line-up of nuclear medicine products. That includes the CRC®-15R, the most advanced radioisotope calibrator, and the CAPRAC® Wipe Test Counter, true and accurate, measure for measure. You'll also find our two thyroid uptake systems, CAPTUS® 500 and System 1000. And having its world premiere, our newest CRC radioisotope calibrator with an extensive list of features, a star in the making. Only from Capintec. At booth #131. See you there.
NUCLEAR MEDICINE
Instruments and Accessories

- FOR QUALITY ASSURANCE
- PATIENT PROCEDURES
- RADIATION MONITORING AND PROTECTION

Programmable Test Pattern Generator

Miniaturized Test Pattern Generator

Dynamic Cardiac Phantom

Cardiovascular Stress System

PET/SPECT Phantom

Syringe & Vial Shields

Deluxe Wipe Test Counter

Multi-Purpose GM Survey Meter

WE CARRY A COMPLETE LINE OF NUCLEAR MEDICINE PRODUCTS

For more information on these and other Nuclear Medicine products, request Catalog M-35

NUCLEAR ASSOCIATES
Division of VICTOREEN, INC.
100 VOICE ROAD • P.O. BOX 349
CARLE PLACE, NY 11514-0349 U.S.A.
(516) 741-6360
FAX (516) 741-5414

See us at the SNM Meeting in Los Angeles, CA
Booths 232/233/234
A sequence of five evolving SPECT images: Note improvement of image quality, yielding final resolution of 7mm (tomographic brain phantom scan, courtesy of Dr. J. Abramovici, Ixelle, Belgium).
Events that changed the course of Nuclear Imaging:

1971—Elscint takes the lead in the 70’s by introducing the industry’s first image processing station, the VDP.

1981—Elscint sets the trend for the 80’s by introducing the first digital gamma camera, the APEX.

1991—Elscint introduces...
A new gold standard in Nuclear Imaging:

*Helix*™

The latest member of the APEX family

The first Slip-Ring Nuclear Imaging System, with the unprecedented imaging power of continuous, high-speed orbiting

A sequence of five evolving SPECT images: Note improvement of image quality, yielding final resolution of 7mm (tomographic brain phantom scan, courtesy of Dr. J. Abramovici, Ixelle, Belgium).

*Elscint*

The Intelligent Image
Events that changed the course of Nuclear Imaging:

1971—Elscint takes the lead in the 70’s by introducing the industry’s first image processing station, the VDP.

1981—Elscint sets the trend for the 80’s by introducing the first digital gamma camera, the APEX.

1991—Elscint introduces...
A new gold standard in Nuclear Imaging:

Helix™
The latest member of the APEX family

The first Slip-Ring Nuclear Imaging System, with the unprecedented imaging power of continuous, high-speed orbiting

A sequence of five evolving SPECT images: Note improvement of image quality, yielding final resolution of 7mm (tomographic brain phantom scan, courtesy of Dr. J. Abramovici, Ixelle, Belgium).

Elscint
The Intelligent Image
Dual-head SPECT: triple efficiency

You can perform Helix tomographic scans at up to 3.5 times the efficiency of conventional imagers, because Helix's jumbo-size detectors cover an area of 4320 square centimeters.

This means maximum SPECT detection efficiency, and makes unsurpassed 7mm system resolution images achievable.

And only Helix can span a 400mm-long segment in a single SPECT scan. Not to mention our unique Scatter-Free Imaging package built right into the system for much improved contrast and resolution.

SPECT and Whole-Body: the best of both worlds

Face it, most multi-head systems just can't do whole-body scans. Not so with Helix.

Helix gives you the best of SPECT, the best of Whole-Body, with no compromises, no trade-offs.

Two super-size rectangular detectors provide 3.5mm resolution* across the entire field. Plus, microcast collimators and Scatter-Free Imaging give you the highest lesion detectability available.

And Helix's pre-programmable, body contoured "smart" scans, with 1280 x 1024 display, give you what you're looking for—the best possible Whole-Body images.

No compromises, no trade-offs — no excuses.

Planar imaging: Scatter-Free and more

With Scatter-Free Imaging, the system "learns" the local scatter characteristics and makes corrections based on the measured energy spectrum, for

* HR configuration
Gated tomographic wall motion evaluation each pixel, for each image, for each patient.
Result: better image contrast, better spatial resolution, better lesion detectability.
For truly complete imaging, jumbo-size 400x540mm detectors with 3.5mm resolution* maintain image clarity all the way across the entire field.

A triumph of technology: for now and for the future
Helix represents a culmination of efforts, based on a solid R&D foundation and drawing from a decade of experience gained over the course of close to 2000 APEX installations worldwide.
Helix's Slip-Ring technology will carry it well into the 21st century, together with such features as: a 100 MHz infrared optronics communications link... an Intel™ i486 33 MHz computer platform... truly modular design... and advanced detector technology.

Clinical software: nobody comes even close to APEX. Nobody.
Elscint has – right now – the most complete range of nuclear imaging clinical software in the industry.
Helix draws on more than a decade of pioneering activity in digital nuclear imaging and over 20 years of medical image processing experience.
Built-in CLIP™ programs cover the widest spectrum of nuclear medicine processing protocols, each optimized for a specific task, and clinically validated over the last decade.
Simply put, when it comes to user-tested, user-available software, nobody comes close to APEX. Nobody.
Events that changed the course of Nuclear Imaging:

1971—Elscint takes the lead in the 70’s by introducing the industry’s first image processing station, the VDP.

1981—Elscint sets the trend for the 80’s by introducing the first digital gamma camera, the APEX®.

1991—Elscint introduces...
Helix:
The dual-head, multi-purpose nuclear imager featuring Slip-Rings.

Only from Elscint.

"I am easily satisfied with the very best."

Winston Churchill

Elscint
The Intelligent Image
touch. In every lean Imaging.

Helix workstation:
perfect harmony

Think of a workstation as a symphony orchestra with instruments like 32 MB RAM, 128 KB cache memory, i486 33 MHz CPU, 800 MB optical disk, 700 MB hard disk, 1280 x 1024 display, 19" color screen, IBM standard operating system and Ethernet™.

All world-class performers, to be sure. But only if they’re playing from the same sheet of music.

Our Helix symphony is a harmonious combination of raw computer power; Elscint’s industry-leading clinical software repertoire; real-time acquisition and reconstruction; IBM standard window management; full-simultaneity; multi-tasking; and the most powerful NM PACS in the industry.

Quite an ensemble. So you can give a virtuoso performance, every time.

Helix:
an ergonomic marvel

A solid, fixed gantry... a superbly balanced cantilevered patient handling system for precise scanning... programmable “home” positions for easy patient set-up and collimator exchange... Touch-Ruler™ for single-touch Whole-Body scans... low-attenuation, ultra-thin interchangeable pallets of carbon fiber composite for high-resolution Whole-Body and SPECT scans... compact gantry design... 2.7-inch “brain reach” for better brain SPECT.

We’ve addressed every last detail of design to give you the ultimate imaging system.
The well-connected imager: leader of the PACS

Decide on Helix, and you instantaneously become a member of the most advanced NM PACS in the industry – right from day one.

If you have other Elscint APEX systems, Helix connects right into data communication and into centralized data and archive management via ApexNet™ Elscint’s NM PACS.

Multi-system connectivity is facilitated with more than 90% of the cameras and processors produced by other vendors like General Electric, Siemens, ADAC and Picker, or computers by DEC, IBM and others.

Helix provides instant access to data. ApexNet lets you view and process patient studies from different departments simultaneously, and ApexView™ Elscint’s remote viewing station, puts you in the picture even at home.

Service à la MasterMind™: no time for down time

At Elscint we value your time. And Helix service support is among the world’s most advanced thanks to DigitalGuard, FieldWatch, and MasterMind™

DigitalGuard is a built-in optronic system for periodic automatic calibration of the gamma camera.

FieldWatch is a computerized, quick-response service network.

MasterMind is an artificial intelligence “expert” system, providing every on-site nuclear medicine field engineer with the constantly updated troubleshooting expertise of the company’s leading scientists and engineers.

The result: service done right the first time, every time.

**Helix: the intelligent investment**

When it comes to multi-detector systems, Helix could be the easiest, most logical product choice you ever made. You simply can’t go wrong.

With Helix you know that every referral can be imaged, every nuclear medicine procedure can be performed. No compromises, absolutely none.
Look at Elscint's new Helix, and you're looking at the future of nuclear imaging technology.

A whole new world of imaging brought to life by our RingMaster™ Slip-Ring System. Take Evolving-Images™ and RollBack,™ for example, two terms that are probably new to you.

With Evolving-Images you can now display and update SPECT images as you acquire them, not only after the job is done.

With RollBack, if a patient moves during a scan, you can recall the reconstructed image, as it was just prior to the movement, in order to assess its diagnostic value. Saves re-takes, saves time, saves money.

Helix's continuous-rotation Slip-Ring technology will open new horizons in nuclear imaging, such as Whole-Body SPECT spiral imaging, cardiac SPECT beat rejection and SPECT brain perfusion.

Large-bore Slip-Rings in the “heart” of the Helix gantry
DATA SPECTRUM PHANTOMS
3-DIMENSIONAL BRAIN

THE ORIGINAL ECT PHANTOM

UNIQUE FEATURES
1. Assures overall system performance
2. Evaluates systems multiple parameters:
   • Volume sensitivity (single slice and total)
   • Regional sensitivity variations (circular artifacts)
   • Accuracy of attenuation compensation algorithm
   • Spatial resolution variations
   • Lesion detectability
   • Image contrast, % RMS noise and S/N
3. On-axis, and off-axis transverse line spread function
4. All inserts are removeable and interchangeable

ADDITIONAL PHANTOMS and INSERTS: 3-Dimensional Brain • 1-Dimensional Brain • Cardiac • Hollow Spheres • Hot Spot • Slice Thickness • Line Fixture • 3-D Plate • Triple Line Source • Partial Volume • Elliptical Phantom • MRI Phantoms and Inserts

Data Spectrum Corporation is committed to maintaining high quality medical imaging, and will continue to develop new phantoms to meet the needs of the user.

Data Spectrum Corporation
P.O. Box 16115
Chapel Hill, North Carolina 27516-6115
Tel: (919) 732-6800
Fax: (919) 732-2260

See us at the SNM Meeting in Los Angeles, CA
Booths 513/515
The PENN-PET System...conceived, designed, and developed to provide the full spectrum of clinical PET applications. Emphasis is placed on image quality, ease of use, reliability, and serviceability. The camera is based on large-area position-sensitive detectors utilizing NaI(Tl) crystals. This design has resulted in a camera with an exceptionally large field of view, either 12.8cm or 23cm, high sensitivity through fully 3D septa-less data collection, user-friendly clinical software, and unequaled economy.

See us at the SNM Meeting in Los Angeles, CA
Island 307

UGM Medical Systems Inc.
3401 Market Street, Ste. 222, Philadelphia, Pa. 19104 Telephone: (215) 222-4999

Sales
USA: Accel Systems, 1536 Cole Boulevard, Bldg. 4/Suite 315, Golden, CO 80401 Telephone: (303) 233-2800
Europe: ADAC Laboratories BV, PO Box 1419, 3600 BK Maarssen, The Netherlands Telephone: (0) 30-412 142
"Leaders in Technology, Leaders Many Promise It, Some
in Service, Leaders in Quality”
Advertise It…

ADAC Delivers It!

Technology

Received “Radiology Today” magazine’s award as one of the Top Ten Product Innovations in all of diagnostic imaging for the DUAL HEAD GENESYS™ gamma camera, with PEGASYS™ — The most technologically advanced workstation in the industry.

Service

Named the #1 Service organization in Nuclear Medicine according to a leading independent survey conducted by IMS America, a subsidiary of Dun & Bradstreet Inc.

Quality

Malcolm Baldridge Guidelines embraced. First and foremost, ADAC Laboratories delivers quality.
Coming Soon! I-131 MIBG

Iodine, I-131 Meta-iodobenzylguanidine

CIS-US, Inc.

10 de angelo drive, bedford, ma 01730
(617) 275-7120 • 800-221-7554 • fax (617) 275-2634
Computers in Nuclear Medicine: A Practical Approach

Kai Lee, PhD

Computers have become an indispensable tool in nuclear medicine. This is the book for those who wish to acquire a basic understanding of how computers work and the processing techniques used to obtain diagnostic information from radionuclide images. The text gives a thorough description of the hardware components of a nuclear medicine computer system and explains the principles behind many common image processing techniques. The following topics are discussed in detail:

• Functions and components of a computer system
• Mass storage devices
• Input and output devices
• Computer software
• Nuclear medicine image acquisition methods
• Methods of qualitative image analysis
• Quantitative image analysis
• Nuclear cardiology
• Quantitative data analysis
• Single–photon emission computed tomography
• Selecting a computer for nuclear medicine

The book is illustrated throughout to help the reader conceptualize the topics as they are discussed.

290 pp, 6 x 9, softcover
$30 member (+ $2.50) Total $32.50
$45 nonmember (+ $2.50) Total $47.50

In Canada, add $5.00; elsewhere, add $20.00 for shipping and handling

To order, send payment to:
Bookmasters
State Rt. 42, RD11
Mansfield, OH 44903
1 (800) 247-6553
YOU
PUT YOUR
REPUTATION
ON THE LINE
EVERY DAY.

SO DO WE.

THAT'S WHY
WE GIVE YOU
MORE.

ACCURATE. REPRODUCIBLE.
EFFICIENT. INTUITIVE. COMPREHENSIVE.
THAT'S SOPHA'S NEW XT SOFTWARE:

UNIQUE REPRODUCIBILITY AND
ACCURACY

XT software features the first automatic
cardiac SPECT re-orientation program, and highly
advanced edge-detection techniques. More con-
sistent performance for maximum clinical
confidence.

A NEW MEASURE OF THROUGHPUT

Introducing the first simultaneous stress
and rest SPECT protocol, available only with XT
software. Producing total volume reconstruc-
tions, 3D, bullseye, and comparative displays,
and hard copies. All in a single step.

A NEW LEVEL OF SIMPLICITY AND
COMPREHENSIVENESS

sophia's focus on nuclear medicine is readily
apparent in the logical flow of XT protocols, mak-
ing your interaction more intuitive than learned.
And the range of XT applications in cardiology
and general procedures is unparalleled.

XT SOFTWARE. WE STAKE OUR
REPUTATION ON IT. SO CAN YOU.

sophia medical

At right: sophia single-page comprehensive cardiac display

sophia medical USA 410-290-0100
sophia medical France (worldwide headquarters) 33.1.30.84.91.00
## PUBLICATIONS

<table>
<thead>
<tr>
<th>Title</th>
<th>Member</th>
<th>Non-Member</th>
<th>Quantity</th>
<th>Sub-Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Computer Imaging: A Primer, 1992. Rowell, ed</td>
<td>$35.00</td>
<td>$ 50.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computers in Nuclear Medicine: A Practical Approach, 1992. Lee</td>
<td>$30.00</td>
<td>$ 45.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review of Nuclear Medicine Technology, 1992. Steves</td>
<td>$30.00</td>
<td>$ 45.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPECT: A Primer, 2nd Ed., 1990. English &amp; Brown.</td>
<td>$20.00</td>
<td>$ 25.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Assurance Resource Manual for Nuclear Medicine, 1990. Gilbert et al.</td>
<td>$18.00</td>
<td>$ 25.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIRD Radionuclide Data and Decay Schemes, 1989. Weber et al.</td>
<td>$45.00</td>
<td>$ 60.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear Medicine: Self-Study Program I, 1988. Siegel &amp; Kirchner, eds.</td>
<td>$90.00*</td>
<td>$115.00*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIRD Primer for Absorbed Dose Calculations, 1988. Loevinger et al.</td>
<td>$35.00</td>
<td>$ 50.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundamentals of Nuclear Medicine, 2nd Ed., 1988. Alazraki &amp; Mishkin.</td>
<td>$15.00</td>
<td>$ 15.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Bulk quantities of 10 or more.</td>
<td>@ $ 4.00*</td>
<td>@ $ 4.00*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-Level Radiation Effects: A Fact Book, 1982. (includes 1985 updates) Brill</td>
<td>$20.00</td>
<td>$ 20.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1985 Updates only.</td>
<td>$10.00</td>
<td>$ 10.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Items (not listed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Patient's Guide to Nuclear Medicine, 2nd Ed., (minimum order: 100 copies) plus $2.50 U.S. postage and handling</td>
<td></td>
<td></td>
<td></td>
<td>$35/copy</td>
</tr>
<tr>
<td>Guidelines for Patients Receiving Radioiodine Treatment (minimum order: 25 copies) plus $2.50 U.S. postage and handling</td>
<td></td>
<td></td>
<td></td>
<td>$30/copy</td>
</tr>
</tbody>
</table>

**Postage** $ __________

Contact SNM for bulk rates or overnight delivery charges

**Publications Total** $ __________

## AUDIOVISUALS

- □ Member □ Non-Member
- Please add $20.00 per program if not a member. Thus, a $65.00 program is non-member priced at $85.00.
- **FORMAT:**
  - □ Slide/tape □ VHS □ Beta □ ¾" U-matic
- For shipping: In U.S., please add $5.00 for one program; $7.50 for 2-5 programs; $10.00 for 6 or more programs. 
  Outside U.S., please add $10.00 per program.

**Postage** $ __________

**Audiovisual Total** $ __________

Rev. 8/90
New technology is a key element of the GE commitment to nuclear medicine. But it's just one part of our total plan.

We call it the GE Continuum,® a plan for equipment utilization. It enables you to combine new and existing technology, assigning clinical procedures to cameras in a way that will most benefit department productivity.

Take our new Optima™ system, a highly advanced nuclear imaging system featuring a unique 90° dual-detector design, which does the work of three detectors. Optimized for cardiac and SPECT imaging, it enables shorter scan times at less cost than a triple-detector system. And with important productivity features, such as easier quality control, patient set-up and collimator changing.

Just as impressive is the way Optima networks with existing imaging equipment, like GE Starcam™ systems. Hospitals currently networking these systems are achieving high levels of department productivity while maintaining high-quality patient care.

The plan hasn’t stopped with Optima either. Through upgrades and future introductions, you can take advantage of new technology, smoothly and economically. Particularly with flexible financing, GE applications training and toll-free answer line, and remote service diagnostics.

Technology will continue to change. But with GE, every change will be a productive one.
GE Medical Systems

We bring good things to life.
This year Nuclear Medicine Week (NMW) will take place in the Fall—October 4–10, 1992. The date was changed to give you a better opportunity to plan and take part in NMW, and in the hopes of increasing overseas participation.

Sponsored by The Society of Nuclear Medicine and Technologist Section, Nuclear Medicine Week was developed to educate the general public and health care professionals about the diagnostic and treatment capabilities of nuclear medicine.

Nuclear Medicine Week is the only time during the year that the entire nuclear medicine community unites to present its message. It is an excellent opportunity to reach out to those who could benefit from nuclear medicine; it is also a most opportune time to promote your facility to referring physicians and potential patients.

With the help of Du Pont Pharma, a new poster, button, and sticker have been designed to help you promote this worldwide event in your community. In addition, a set of guidelines with suggestions to increase participation is available from the Society. We encourage all those involved in nuclear medicine to join with us to increase the awareness and improve the perception of nuclear medicine.

To purchase posters, buttons, and stickers for your institution, and to receive a guidelines packet, visit the Nuclear Medicine Week booth located in the registration area of the Convention Center.
The following materials are available for promoting Nuclear Medicine Week in your area.

**Posters** — $5.00 each, 4 - 9 posters are $4.50 each, 10 or more $4.00 each.
I would like _______ posters × $ _______ $ __________

**Buttons** — $1.00 each
I would like to order _______ buttons $ __________

**Stickers** — $.25 each (same design as the button)
I would like to receive _______ stickers.
(Minimum order is 10 stickers) $ __________
Total $ __________

☐ I would like to order a free set of Guidelines for promoting Nuclear Medicine Week.

*Payment must be enclosed with your order. Payments must be made in U.S. dollars drawn on U.S. banks. No foreign funds will be accepted. Make checks payable to:*

**The Society of Nuclear Medicine**

Orders will be sent out by 1st class mail or UPS. Orders received after September 1, 1992 will be assessed a 15% surcharge, payable before shipment, to ensure timely delivery.

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital/Company</td>
<td>City</td>
</tr>
<tr>
<td>Telephone</td>
<td>State</td>
</tr>
</tbody>
</table>

Please return this form to:
Nuclear Medicine Week  
The Society of Nuclear Medicine  
136 Madison Avenue,  
New York, NY 10016-6760
TOTALLY Dedicated to Nuclear Medicine

Trionix's Multi-Camera Systems revolutionized Nuclear Medicine. The national trend is to reduce health care cost. We want to do our part. Therefore, for a limited-time, we offer special pricing on our systems as follows:

Typical Price $495,000  Special Price $425,000
TRIAD SPECT SYSTEM
- Three-detector system
- 2 sets of 140 KeV collimators
- 1 set of 300 KeV collimators
- Fully integrated 32-bit Sun computer
- 32-bit Sun Physicians' Workstation
- 8" x 10" film formatter

Typical Price $490,000  Special Price $425,000
BIAD 24 SPECT/WHOLE BODY SYSTEM
- Two 24" wide, true rectangular detectors
- 2 sets of 140 KeV collimators
- 1 set of 300 KeV collimators
- Fully integrated 32-bit Sun computer
- 32-bit Sun Physicians' Workstation
- 8" x 10" film formatter

Typical Price $395,000  Special Price $350,000
BIAD 20 SPECT/WHOLE BODY SYSTEM
- Two 20" wide, true rectangular detectors
- 2 sets of 140 KeV collimators
- Fully integrated 32-bit Sun computer
- 8" x 10" film formatter

Typical Price $ 85,000  Special Price $ 65,000
AcquPRO
- Simultaneous acquisition and processing with 32-bit Sun computer.
- Fast acquisition with high accuracy and linearity.
- Pop-up menu user interface in a window environment.
- Open Network Computing allows multi-vendor file access through INTERFILE.
- Macro-like scriptor to easily create protocols.
- Clinically proven SPECT and Planar software packages as in our TRIAD and BIAD.

TRIONIX RESEARCH LABORATORY, INC.
8037 Bavaria Road • Twinsburg, Ohio 44087
Telephone: (800) 442-7017  (216) 425-8055  FAX: (216) 425-8059
Printed in U.S.A.

Visit us at the SNM-92 Meeting Booth No. 443
For all the thyroid uptake tests you need to handle quickly and accurately, there’s really only one system capable of being compared to our computer-based, Capintec System 1000. It’s our fast, accurate and economical CAPTUS® 500. Both feature on-screen prompts and spectrums, hard-copy printouts, and with the addition of a well detector let you do a variety of laboratory and wipe tests efficiently and easily. In fact, the only difficulty you’ll ever have is simply choosing the system best suited to your needs. For more information, please call (800) 631-3826 today.
CIS bio international and Nuclear Medicine

FOR YOU, we are advancing

IMPROVING the quality of our products and services to assist your clinical practice and for the benefit of your patients.

APPLYING the benefits of the latest developments in nuclear technology and biology to your diagnostic service.

DEDICATING close attention to your present and future needs.

Every day we progress and help others to progress in the exciting fields of Biomedical Imaging, Immunoanalysis and Radiotherapy.

See us at Booth 382/384
DELTAmanager is a powerful Macintosh® based viewing, image management and reporting system that can make a difference for your department.  

**Unparalleled viewing station features and flexibility**  
Extremely powerful, yet easy to learn and use, DELTAmanager offers a range of viewing capabilities that are unmatched in the industry. The mouse oriented graphical user interface gives physicians complete control without requiring them to learn different commands to view images from different systems.

**Centralize image and data management**  
To increase the productivity of your department, centralize the images and patient data from all of your nuclear medicine systems on DELTAmanager. It's the only system that can display and manage images from all major nuclear medicine computer systems on a single viewing workstation screen, while giving you fast, easy access to all patient studies and reports.

**Communicate more clearly and effectively**  
DELTAmanager helps physicians quickly and efficiently generate reports that genuinely reflect the quality of care they put into patient studies. Images and graphics enhance the accuracy of reports, which can even be FAXed to the referring physician.

**See the difference DELTAmanager can make**  
To learn more about DELTAmanager, contact Rick Zahler. We'll send a sample color report and complete information. Include your fax number and we'll fax a sample report directly from DELTAmanager.

**Call:** 313/665-5400 or **FAX:** 313/665-4115

-DELTAmanager is a trademark of Medimage, Inc. Other names are trademarks or registered trademarks of their respective owners. Medimage is an authorized Apple Value Added Reseller. © 1992 Medimage, Inc. MED1-110

See us at the SNM Meeting in Los Angeles, CA Island 575
Radionuclide Manager®
Model 4045
Radionuclide Calibrator
Model 4050
Custom Products

Custom Model 4050 Dose Calibrator
With Multiple Ion Chambers

Radcal Corporation
an mdh company

Rated Facility • High Activity Sources • Busy Lab
We Have The Dose Calibrator For You

Radcal Corporation
426 West Duarte Road Monrovia CA 91016
800-423-7169 818-357-7921 (in CA) Fax 818-357-8863 Telex #182910
See us at the SNM Meeting in Los Angeles, CA
Booths 222/224

Here is your Deal!

Nutronics Imaging Inc.
The Security Of Protecting Your Investment.

Nutronics Imaging is the Engineering company behind the product. We are specialists in equipping Nuclear Medicine Facilities and buying used equipment.

Nutronics is your source for:
* UPGRADES
  • Replacement of crystals.
  • Add computerized technology to your system.
  • Upgrade your camera performance by using the Engineering touch.
* RENOVATED GAMMA CAMERAS
  • Cardiac small FOV.
  • Stand alone LFOV.
  • Spect Cameras.
  • Excellent Mobile Cameras.
* We support: Siemens, General Electric, Picker, Elscint, ADAC and Matrix Imagers.

...AND THE BEST PART IS THE PRICE!!!
P.O Box 425 , Old Bethpage, NY 11804
(516)753-3001 FAX: (516)753-3002

We buy, sell, trade and lease at a competitive price.
IT'S TIME TO TAKE THE NEXT STEP ...

NUCLEAR MEDICINE INFORMATION SYSTEMS ©
(Software Package)

DATABASE

PURCHASING
RECEIVING - INVENTORY
RADIOACTIVE SHIPMENT RECEIPT REPORTS
INVENTORY PROFILE DATA
COLD KITS LIMITATION FACTORS
FILE CARDS
PATIENT SCHEDULING
INHOUSE RADIOPHARMACY
Q.C.
CALCULATION OF DECAY
PT INJECTIONS
STATISTICS
BUDGET ANALYSIS
EXAMS
UNIT DOSE
STANDING ORDER
REPORTS
DAILY WEEKLY MONTHLY YEARLY

MISC
KIT/SYRINGE LABELS
START-UP FILE
SYSTEM UTILITIES
REMEMBER FILE
TEACHING FILE
QUALITY CONTROL
ACCURACY TEST
CONSISTENCY TEST
QUALITY ASSURANCE PROGRAM
PROCEDURE MANUAL
THYROID UPTAKE
SCHILLING TEST
WIPE TEST
SURVEYS
DAILY MONITORING
MISC. INVENTORIES
SERVICE CALLS
SEALED SOURCES
BIOASSAYS
FILM BADGE READINGS
LINEARITY
GRAPHIC CAPABILITIES

This Program and a Personal Computer is the answer to meeting your management needs ...
... and much more.

NUCLEAR MEDICINE CONSULTING FIRM
P.O BOX 824, GREENVILLE, PA 16125

PHONE: 412/932-5840/5430 FAX: 412/932-3176
See us at the SNM Meeting in Los Angeles, CA
Booth 368
It comes down to superior clarity and the time you need to use it best

Superior image clarity of technetium
Slow washout and lack of significant redistribution let you image at any point up to 4 hours after injection
Highly accurate in detecting myocardial abnormalities

Cardiolite®
Kit for the preparation of Technetium Tc99m Sestamibi
Clarity that lasts

Please see reverse for brief summary of prescribing information.

© 1993, Du Pont Pharma
Brief Summary

Cardiolite® Kit for the preparation of Technetium Tc99m Sestamibi

For Diagnostic Use

DESCRIPTION: Each 5 mL vial contains a sterile, non-pyrogenic, lyophilized mixture of:
- Tetraakis (2-methoxy isobutyl isonitrile) Copper (I) tetrafluoroborate - 1 mg
- Sodium Citrate Dihydrate - 2.6 mg
- L-Cysteine Hydrochloride Monohydrate - 1.0 mg
- Mannitol - 20 mg
- Stannous Chloride, Dihydrate, minimum (SnCl2*2H2O) - 0.025 mg
- Stannous Chloride, Dihydrate, (SnCl2*2H2O) - 0.075 mg
- Tin Chloride (Stannous and Stannic) Dihydrate, maximum (as SnCl2*2H2O) - 0.086 mg

Prior to lyophilization the pH is 5.3 to 5.9. The contents of the vial are lyophilized and stored under nitrogen.

This drug is administered by intravenous injection for diagnostic use after reconstitution with sterile, non-pyrogenic, oxoid-free Sodium Percarbonate Tc99m Injection. The pH of the reconstituted product is 5.5 (5.0-6.0). No bacteriostatic preservative is present.

The precise structure of the technetium complex is Tc99m[MBI]2, where MBI is 2-methoxy isobutyl isonitrile.

INDICATIONS AND USAGE: CARDIOLITE® Kit for the preparation of Technetium Tc99m Sestamibi is a myocardial perfusion agent that is useful in distinguishing normal from abnormal myocardium, and in the localization of the abnormality, in patients with suspected myocardial infarction. It is also useful in the evaluation of myocardial function using the first-pass technique.

CONTRAINDICATIONS: None known.

WARNINGS: In studying patients in whom cardiac disease is known or suspected, take care to assure continuous monitoring and treatment in accordance with safe, accepted clinical procedure.

PRECAUTIONS:

GENERAL

The contents of the vial are intended only for use in the preparation of Technetium Tc99m Sestamibi and are not to be administered directly to the patient without first undergoing the preparative procedure (as outlined in the full prescribing information).

Radioactive drugs must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Also, care should be taken to minimize radiation exposure to the patients consistent with proper patient management.

Contents of the kit before preparation are not radioactive. However, after the Sodium Percarbonate Tc99m Injection is added, adequate shielding of the final preparation must be maintained.

The components of the kit are sterile and non-pyrogenic. It is essential to follow directions carefully and to adhere to strict aseptic procedures during preparation.

Technetium Tc99m labeling reactions involved depend on maintaining the stannous ion in the reduced state. Hence, Sodium Percarbonate Tc99m Injection containing oxidants should not be used.

Technetium Tc99m Sestamibi should not be used more than six hours after preparation.

Radio-pharmaceuticals should be used only by physicians who are qualified by training and experience in the safe use and handling of radiopharmaceuticals and whose experience and training have been approved by the appropriate government agency authorized to license the use of radiopharmaceuticals.

Carcinogenesis, Mutagenesis, Impairment of Fertility

In comparison with most other diagnostic technetium-labeled radiopharmaceuticals, the radiation dose to the ovaries (5.5 rads/30 mCi) is high. Minimal exposure (ALARA) is necessary in women of childbearing capability. (See Dosimetry subsection in DOSAGE AND ADMINISTRATION section.)

The active intermediate, Cu(MIBI)BF4, was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HPTT and sister chromatid exchange tests (in vitro). At cytotoxic concentrations (≥20 μM), an increase in cells with chromosome aberrations was observed in the in vitro human lymphocyte assay. Cu(MIBI)BF4 did not show genotoxic effects in the in vivo mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9 mg/kg, ≥600 × maximal human dose).

Pregnancy Category C

Animal reproduction and teratology studies have not been conducted with Technetium Tc99m Sestamibi. It is also not known whether Technetium Tc99m Sestamibi can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. There have been no studies in pregnant women. Technetium Tc99m Sestamibi should be given to a pregnant woman only if clearly needed.

Ideally, examinations using radiopharmaceuticals, especially those elective in nature, of a woman of childbearing capability, should be performed during the first few (approximately 100 days following the onset of menses.

Nursing Mothers

Technetium Tc99m Percarbonate is excreted in human milk during lactation. It is not known whether Technetium Tc99m Sestamibi is excreted in human milk. Therefore, formula feedings should be substituted for breast feedings.

Pediatric Use

Safety and effectiveness in children below the age of 18 have not been established.

ADVERSE REACTIONS: During clinical trials, approximately 8% of patients experienced a transient metallic or bitter taste immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing and non-itching rash have also been attributed to administration of the agent. One patient demonstrated signs and symptoms consistent with seizure, 8 to 10 minutes after administration of the drug. No other adverse reactions specifically attributable to the use of Technetium Tc99m Sestamibi have been reported.

DOSAGE AND ADMINISTRATION: The suggested dose range for I.V. administration to be employed in the average patient (70 kg) is:

- 370 to 1100 MBq (10 to 30 mCi)

The dose administered should be the lowest required to provide an adequate study consistent with ALARA principles (See also PRECAUTIONS).

When used in the diagnosis of myocardial infarction, imaging should be completed within four hours after administration (see also CLINICAL PHARMACOLOGY section in full prescribing information).

The patient dose should be measured by a suitable radiotracier calibration system immediately prior to patient administration. Radiochemical purity should be checked prior to patient administration.

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration whenever solution and container permit.

Store at room temperature (15 to 30°C) before and after reconstitution.

RADIATION DOSIMETRY: Table 4 shows the radiation doses to organs and tissues of an average patient (70 kg) per 1100 MBq (30 mCi) of Technetium Tc99m Sestamibi injected intravenously.

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

Estimated Radiation Absorbed Dose

<table>
<thead>
<tr>
<th>Organ</th>
<th>2.0 hour void</th>
<th>4.8 hour void</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mGy/30 mCi</td>
<td>mGy/30 mCi</td>
</tr>
<tr>
<td></td>
<td>1110 MBq</td>
<td>1110 MBq</td>
</tr>
<tr>
<td>Breast</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Gallbladder Wall</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Upper Large Intestine Wall</td>
<td>5.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Lower Large Intestine Wall</td>
<td>3.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Stomach Wall</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Heart Wall</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Kidneys</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Liver</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Lungs</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Bone Surfaces</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Thyroid</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Ovaries</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Testes</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Red Marrow</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Urinary Bladder Wall</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Total Body</td>
<td>0.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>


HOW SUPPLIED: Du Pont's CARDIOLITE® Kit for the preparation of Technetium Tc99m Sestamibi is supplied as a 5 mL vial in kits of two (2), five (5) and thirty (30) vials, sterile and non-pyrogenic.

Prior to lyophilization the pH is between 5.3 and 5.9. The contents of the vials are lyophilized and stored under nitrogen. Store at room temperature (15 to 30°C) before and after reconstitution. Technetium Tc99m Sestamibi contains no preservatives. Included in each two (2) vial kit is one (1) package insert, five (5) vial shield labels and five (5) radiation warning labels. Included in each five (5) vial kit is one (1) package insert, five (5) vial shield labels and five (5) radiation warning labels. Included in each thirty (30) vial kit is one (1) package insert, thirty (30) vial shield labels and thirty (30) radiation warning labels.

The US Nuclear Regulatory Commission has approved this reagent kit for distribution to persons licensed to use byproduct material identified in 35.100 and 35.300 of 10 CFR Part 35, to persons who hold an equivalent license issued by an Agreement State, and, outside the United States, to persons authorized by the appropriate authority.

Marketed by

The Du Pont Merck Pharmaceutical Company
Radiopharmaceutical Division
333 Treble Cove Road
Billerica, Massachusetts USA 01821
Tel: TOLL FREE 800-225-1572
(For Massachusetts and International, call 617-482-9595)
AMR's AccuSync provides R-wave detection with precision and reliability. The finest R-wave Triggering device available for computerized gated cardiac studies.

**AccuSync-5L Features**
- Isolation Amplifier for Patient Safety
- Digital CRT Monitor
- ECG Strip Chart Recorder
- Heart Rate/R-R interval
- Trigger Pulse LED
- Trigger Control for Ease of Lead Placement and Precise Location of Trigger Pulse
- R-Trigger Output, Compatible with all Computers
- No Delay
- ECG Output
- Playback Mode (optional)
- Event Marker (optional)
- Audio Indicator

**MODEL**
- **AccuSync-6L**
- **AccuSync-1L**
- **AccuSync-3R**
- **AccuSync-4R**

**FEATURES**
- All AccuSync-5L features with the exception of the Strip Chart Recorder.
- All AccuSync-5L features with the exception of the Digital CRT Monitor.
- All AccuSync-1L features with the exception of the Strip Chart Recorder and Playback Mode.
- All AccuSync-3R features with the exception of the Heart Rate/R-R interval display.

See us at the SNM Meeting in Los Angeles, CA Booth 238
IN A FOG??

using aerosols to determine the patency of the pulmonary airway system? Use a gas (that's what the airway system is for), and Xenon (127 or 133) are gases which are safe, economical and easy to administer with the XENAMATIC™ 3000.

- Shielded for Xe 127 and Xe 133 (radiation profile available on request).
- World’s only system that allows you to study patients on Ventilators.
- Largest and most efficient Xenon trap with a built-in monitor alarm system.
- Built-in O₂ monitor with digital display and control.
- A rebreathing system that saves Xenon.
- Low breathing resistance so you can study sick patients.
- Semi-automatic operation.
- Remote Control Capability.

Get out of the FOG-making business, and call today for more information on putting gases where gases belong, with the XENAMATIC.

Also available, Model 2000.

For more information, please call or write,

DIVERSIFIED DIAGNOSTIC PRODUCTS, INC.
11603 Windfern
Houston, TX 77064
713-955-5323
For Better Image Quality

DON'T use a FOIL Collimator

USE a MICRO-CAST® Collimator

Get a MICRO-CAST® COLLIMATOR from NUCLEAR FIELDS, and see the difference!

- Higher quality image resolution or sensitivity
- Good collimator uniformity
- Very low septa penetration
- Very low background activity
- Less computer image corrections

For more information about NUCLEAR FIELDS MICRO-CAST® COLLIMATORS and our brochure, please fill out the coupon below.

### NUCLEAR FIELDS (USA) CORP.
Unit 5, 1645 S. River Road
Des Plaines, IL 60018
Tel: (800) 932-7203
Fax: (708) 299-8452

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you think the range of your collimators is adequate?  ☐ Yes  ☐ No

Please state what you would like to improve, on which camera:


<table>
<thead>
<tr>
<th>AUSTRALASIA</th>
<th>JAPAN</th>
<th>EUROPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone: 61 2 6734033</td>
<td>Phone: 81 3 57035238</td>
<td>Phone: 31 885573544</td>
</tr>
<tr>
<td>Fax 61 2 6734264</td>
<td>Fax 81 3 57032199</td>
<td>Fax 31 8855 20072</td>
</tr>
</tbody>
</table>

See us at the SNM Meeting in Los Angeles, CA
Island 404
High Performance Scintigraphy—at Substantial Economy of Cost and Space

Current Studies
• Thyroid Imaging
• High Resolution Imaging of other Anatomies
• Thyroid Uptake
• Bone Densitometry
• Cr-51 and Fe-59 Uptakes for Erythrokinetic Studies
• Additional Studies in Development

PolyScan®

• Spatial Resolution:
  - Low Energy Isotopes (Tc-99m, I-123): 3.7mm
  - Medium Energy Isotopes (I-131): 5 mm

• Imaging Efficiency with I-131: >95%
  (Where the Gamma Camera only Affords~45%)

• Life Size Images (Scale of 1:1)

• Rotating C-Arm Permits:
  - Oblique Thyroid Images
  - Lateral BMD Studies

• Two-Directional Anatomical Marking with Laser
  - Mark in the Image what You Palpate on the Patient
  - Mark on the Patient what You Detect in the Image

• BMD Precision: C.V.<1%

• Cost and Space Requirements: A fraction of what you need for a gamma camera plus a thyroid uptake unit plus a bone densitometer.
SPECT BRAIN IMAGING CLINICAL FELLOWSHIP
Department of Radiology
Section of Nuclear Medicine

BENEFIT:
This program is designed for nuclear medicine physicians, radiologists, technologists and referring physicians. It is intended to educate participants about the clinical utility of SPECT brain imaging with agents such as SPECTamine® and Ceretec®. Objectives include:
- Development of interpretation skills for brain images.
- Appreciation of clinical applications of SPECT brain imaging.
- Knowledge of image acquisition and reconstruction.
- Appreciation of factors that influence image quality.
- Knowledge of quality control techniques for SPECT.

SPONSORSHIP:
This program is sponsored by the Medical College of Wisconsin.

TUITION:
The tuition fee of $650 includes the course syllabus, handouts, breaks, breakfasts, lunches, and other amenities involved in making this a pleasant learning experience. Maximum enrollments have been established. Cancellations prior to the course will be refunded, less a $30 administrative fee.

CREDIT:
The Medical College of Wisconsin is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

Accordingly, the Medical College of Wisconsin designates this continuing medical education activity as meeting the criteria for 13.00 hours in Category I toward the Physician’s Recognition Award of the American Medical Association.

Nuclear Medicine Technologists who attend the SPECT Brain Imaging Clinical Fellowship are eligible for 1.0 VOICE credit.

Register me for the following dates: (Please indicate a second choice)

☐ May 11-12, 1992  ☐ September 14-15, 1992
☐ November 9-10, 1992

I will need hotel reservations for __________ Sunday and Monday night/
____________ only Monday night.
I will need a __________ single/ __________ double room.

A check in the amount of $650 should accompany this registration form
and be made payable to the Medical College of Wisconsin. Telephone
registrations must be confirmed by check within 10 days.

Name ________________________________
Address ______________________________
City/State/Zip __________________________
Office Phone (____-____) ________________
____________ work address _____________ home address

Registrations and payment should be sent to:
LisaAnn Trembath
SPECT Brain Imaging Fellowship Coordinator
Nuclear Medicine Division
Medical College of Wisconsin
8700 W. Wisconsin Avenue
Milwaukee, WI 53226 (414) 257-7867

---

GAMMA 600
Macintosh®-Based Nuclear Medicine Acquisition Workstation

The Strichman Medical GAMMA 600 is a Macintosh®-based Nuclear Medicine workstation with an extremely high performance to cost ratio, making state-of-the-art imaging available to even the smallest of departments.

The GAMMA 600 is a combination of an ADC box, a dedicated coprocessor card, and software for image display, analysis and acquisition (static, list, gated, dynamic, and SPECT modes).

The GAMMA 600 features the same reliability and ease-of-use found in our NEURO 900 high resolution dedicated brain tomograph system.

Visit us in Los Angeles at SNM Booth #201.

Strichman Medical Equipment, Inc.
93 West Street
Medfield MA 02052
Phone: (508) 359-5312
Fax: (508) 359-5320
Each description of the products below was condensed from information supplied by the manufacturer. The reviews are published as a service to the professionals working in the field of nuclear medicine and their inclusion herein does not in any way imply an endorsement by the Editorial Board of The Journal of Nuclear Medicine or by The Society of Nuclear Medicine. To receive product information, see page 57A.

**Image Management System**

Agfa Corporation introduces Agfa IMPAX Medical Image Management and Archiving System, which provides image management, communication, and archiving for various medical imaging modalities. The system imposes no changes on image recording procedures, equipment or workflow, and film continues to be the primary medium for diagnosis. More image data is stored in less space and at lower cost than conventional film archives, while review of images and data are achieved with a previously unattainable combination of speed, reliability, and efficiency. For image data retention, the system uses an optical jukebox drive, so named because it can hold and manage eleven removable optical discs at once. WORM (Write Once, Read Many) type discs are used to prevent alteration of the image data after it has been archived. Although the system occupies only one cubic foot, the optical jukebox drive has a capacity of 10 Gbytes (Ten billion bytes), which is the equivalent of 33,000 medical images complete with patient data. When any of the eleven discs become full, it can be easily removed from the drive and replaced with a new disc. In one cubic foot off-line, 132 optical discs can be stored. This is enough to store 390,000 images complete with reports. To hold that many images conventionally would require 65,000 films and more than 270 feet of steel shelving. Workstations are provided for archiving control and for rapid access to images. Each installation includes a high-resolution display, a user-friendly graphic interface and mouse-activated menus. At the click of a mouse, radiologists and technologists can not only review, edit, and print images, but they can also communicate with the Radiology Information System for retrieving patient data and reports. Agfa Medical Gateways are used to acquire images and data in a manner suitable for transmission over local area networks. The Medical Gateways interconnect scanners with hardcopy video and laser printers. They can network different modalities on a departmental level, or they can unite departments with each other for archival management on a hospital-wide basis. Using remote workstations, any image review or hardcopy requirements can be performed at any location on the network. Accepting as many as six on-line inputs plus input from MATRIX RDS removable disc cartridges, Agfa Medical Gateways are available for different modalities and combinations of modalities. Agfa Technical Imaging Group, 100 Challenger Road, Ridgefield Park, NJ 07660. (201) 641-9566

**Uninterruptible Power System**

Sola's new Advanced Network UPS is an uninterruptible power system (UPS) featuring Sola's UPS Communicator Interface. The interface allows UPS to LAN or RS232 communications in plain English. You get full UPS front panel view, diagnostic and alarm messages displayed in English as well as UPS control capability from any LAN terminal. Unnecessary battery depletion caused by extended brownouts is eliminated by Sola's Battery Save feature. The Sola Advanced Network UPS offers the ultimate in economical protection for file servers, CAD/CAM workstations, telecommunications, minicomputers, UNIX/XENIX CPUs and other data sensitive equipment. Sola, 1777 Busse Rd., Elk Grove Village, IL 60007. (708) 439-2800.

**PC Spectroscopy System**

Canberra Nuclear announces Genie-PC, a personal computer spectroscopy system. The unit is designed to incorporate fully independent support of multiple detectors and comprehensive network support. With Genie-PC, multiple detectors can be operated independently and simultaneously, through complete counting and analysis procedures, without fear of collisions or slow downs. Count room operators can access data on demand, at any time, from any place—regardless of where and when it was generated. The system's software accommodates Canberra acquisition boards or the networked Acquisition Interface Module for complete flexibility in locating and configuring detectors. A variety of gamma analysis algorithms are available, which let you choose the right approach for the individual sample. Genie-PC may be operated from an automatic jobstream environment or in an interactive mode—or a combination of both. Canberra Industries Inc., One State Street, Meriden, CT 06450. (203) 238-2351.

**Color Remote-Head CCD Cameras**

Cohu, Inc. introduces its new 8290 Series and 8390 Series High Performance Color Remote-Head CCD cameras featuring minimum resolution of 460 TV lines and sensitivity of 1.1 lux (80% video, AgC on). These cameras use a high performance hole accumulation diode (HAD) imager. The small, lightweight remote head can be placed up to five feet from the compact camera control unit, which contains controls for the adjustment of electronic shutter speed, integration time periods, AGC, and white balance. The 8290 Series cameras are available in NTSC/Y-C or RGB models, with 768 x 493 active picture elements and a choice of 12-volt ac/dc or 15-volt ac, 60 Hz input power; the 8390 Series comes in PAL/Y-C or RGB models, with 752 x 585 active picture elements and a choice of 12-volt ac/dc or 230-volt ac, 50 Hz ac power. Cohu, Inc., Electronics Division, P.O. Box 85623, San Diego, CA 92186. (619) 277-6700.
GE Medical Systems introduces the Optima dual-detector nuclear medicine system optimized for cardiac and SPECT imaging. The GE Optima's dual-detector design is fixed in a rigid 90-degree angle that maximizes the collection of photon emissions. This multi-head design significantly cuts SPECT scanning times over single-detector systems—from 30 minutes down to 15 minutes—improving throughput up to 25%. The system also maximizes gamma camera efficiency over triple-head systems in 180 degree SPECT cardiac studies. That is because the information gathered by the third head is not used in 180 degree reconstructions. Unlike competitive designs that have independent rotating heads, the GE detector heads are housed in a single, rigid “L” shaped unit, so the camera is precisely aligned and optimized for the requirements of cardiac studies. This eliminates image quality problems associated with possible misalignment and decreases quality control procedure time. From the Optima camera, data is acquired into a GE Star 4000 processor system, which features the full range of GE's advanced cardiac software packages for tomographic processing. This includes a variety of proprietary reconstruction and quantitative packages developed by GE's in-house software engineers in collaboration with prominent academic institutions. In addition to being optimized for cardiac studies, the Optima system gantry allows the camera to cover 360 degrees, making the system versatile enough to do other SPECT applications such as brain studies. The Optima system is also capable of simultaneous bi-plane multi-gated and First Pass acquisitions.

Quantex Corp. now distributes a line of laser protective goggles, glasses, and curtains that reduce the danger of IR radiation resulting from stray, misdirected, or reflected IR laser beams. Eye protection ranges from full goggles with a proprietary phosphor coating to simple clip-on lenses for those who wear standard glasses. The addition of a phosphor coating alerts the user to stray IR beams by converting the IR into visible light on the lens. This visible warning allows the wearer to take evasive action. The laser protection curtains can be utilized as a screening material for production or laboratory protection. The PVC material allows a filtered view of work areas and is easily applied to glass or plastic windows. Several of the goggles and curtains have DIN standard approvals. Although no goggles, glasses or curtains eliminate all danger from IR radiation, the new protection line from Quantex does enhance established and proven safety practices.

X-Ray Diagnostic Instrument

John Fluke Mfg. Co., Inc. introduces the pM 2618/323 mAs Digital Multimeter, which is specifically configured with the milliamp second (mAs) measurement function to measure the product of current and time, plus full DMM capabilities. The unit offers direct milliampere/second (mAs) reading with single switch selection of mA, mAs measure or mAs zero; measurement of pulses from 0.5ms to 1s in the range 10 mAs to 20 As ensuring compatibility with both current and future x-ray systems and scanners; relative dB, logic, and frequency measurements: 0.07% basic accuracy; and a 4+ digit, backlit LCD display with high-resolution analog bargraph. The unit is portable and compact and can be used in the laboratory or field. John Fluke Mfg. Co., Inc., P.O. Box 9090, Everett, WA 98206. (206) 347-6100.

Short Path Thermal Desorption System

Scientific Instrument Services, Inc. announces the Microprocessor Controlled Model 2 Short Path Thermal Desorption System for the identification and quantitative determination of volatile and semi-volatile samples in complex matrices such as foods, beverages, cosmetics, pharmaceuticals, building materials and natural products. An interactive system including software, keypad and a fluorescent display permits the user to set system parameters and operate the system either manually or automatically. The system is mounted on top of the GC injection port and is not permanently mounted into the GC. The GLT desorption tube and short transfer line provides for an individual flow path for each sample thereby eliminating "memory effects" and providing for optimum sensitivity and analysis. Applications include forensic science, indoor and outdoor air pollution monitoring and the analysis of toxic compounds in soils, sludges and other complex matrices. Scientific Instrument Services, Inc., 1027 Old York Road, Ringoes, NJ 08551. (908) 788-5550.
High Performance Scintigraphy—at Substantial Economy of Cost and Space

Current Studies
- Thyroid Imaging
- High Resolution Imaging of other Anatomies
- Thyroid Uptake
- Bone Densitometry
- Cr-51 and Fe-59 Uptakes for Erythrokinetic Studies
- Additional Studies in Development

Spatial Resolution:
- Low Energy Isotopes (Tc-99m, I-123): 3.7mm
- Medium Energy Isotopes (I-131): 5 mm

Imaging Efficiency with I-131: >95% (Where the Gamma Camera only Affords~45%)

Life Size Images (Scale of 1:1)

Rotating C-Arm Permits:
- Oblique Thyroid Images
- Lateral BMD Studies

Two-Directional Anatomical Marking with Laser
- Mark in the Image what You Palpate on the Patient
- Mark on the Patient what You Detect in the Image

BMD Precision: C.V.<1%

Cost and Space Requirements: A fraction of what you need for a gamma camera plus a thyroid uptake unit plus a bone densitometer.

M&SE 56 Union Avenue, Sudbury, MA 01776, (508) 443-8822, Fax: (508) 443-6523, Telex 325321MSEUS • In Europe: MSE Medizintechnik, Paul Ehrlichstrasse 16-20, Geb. A-11, D-6074 Roedermark, Germany, Tel. 49-6074-97402, Fax: 49-6074-94352
Policy — The Journal of Nuclear Medicine accepts classified advertisements from medical institutions, groups, suppliers, and qualified specialists in nuclear medicine. Acceptance is at the discretion of the editor. A minimum charge of $100 per line or fraction of line (50 characters per line, including spaces). Please allow 28 characters for the first line which will appear in capital letters. Special rates for SNMP members in nuclear medicine. Non-SNMP members: $100 per line. Note: Box numbers are available for the cost of the 2 lines required.

Rates for Classified Listings — $91.00 per line or fraction of line (50 characters per line, including spaces). Please allow 28 characters for the first line which will appear in capital letters. Special rates for SNMP members in nuclear medicine. Only 1/16th line minimum. Box numbers are available for the cost of the 2 lines required.

Rates for Display Ads — Agency commissions are offered on display ads only. Full page $1400 Quarter page $550 Half page $25 Eighth page $450

Publisher-Set Charges — Page $100; half page $75; quarter page $40; eight page $25.

Terms — Payment must accompany order. Make checks payable in U.S. dollars to only, The Society of Nuclear Medicine.

Deadline — First of the month preceding the publication date (January 1 for February issue). Please submit classified listings typed double spaced. No telephone orders.

Send Copy to:
Classification Advertising
The Society of Nuclear Medicine
136 Madison Avenue
New York, NY 10016-4760
(212) 899-0717
FAX: (212) 545-0221

Positions Available
Cyclotron Operator
CYCLOTRON OPERATOR. The VA Medical Center/University of Washington program is seeking an operator for its Scanditronix MC40 cyclotron. Principal responsibilities will be to provide cyclotron operations and first line maintenance support for a research-oriented PET group. Requirements for the position include a BS in engineering, nuclear physics, or equivalent cyclotron operation experience. A 1-month on-site training will be provided. Send resume with the names, addresses, and telephone numbers of three references to: David A. Rotenberg, M.D., Director, PET Imaging Service (IPP), VA Medical Center, One Veterans Drive, Minneapolis, MN 55417.

Faculty
Eberhard-Karls-Universität Tubingen: The Radiological Physics and the Faculty of Clinical Medicine are announcing a vacant post for a PROFESSOR (C4) in NUCLEAR MEDICINE (in succession of Prof. Dr. med. U. Siedel) to take effect at 1st of April 1993. The appointment is subject to the approval of the Senate. The successful applicant will be responsible for teaching and research in the Department, and for all diagnostic and therapeutic applications of radionuclides to patients (inpatients and outpatients), and concerning research and teaching nuclear medicine. A ward with 10 beds for radioisotope therapy is available. A section of radiopharmacy was founded in 1989 within the department. A PET center with a cyclotron is currently under construction. Applicants should therefore have experience in PET. The Radiological Clinic is divided into five departments (Radiological Diagnostics, Radiation Therapy, Neuro-Radiology, Nuclear Medicine, and Medical Physics), The managing director of the Clinic is elected for 4-year periods among the chairman of the five departments. The university of Tubingen intends to increase the percentage of women in research and teaching. Qualified female researchers are therefore kindly requested to apply. Applications with the usual documents (curriculum vitae, photographs, professional experience, teaching experience, certificates, etc.) should be sent within one month after the publication of this announcement to: Dekanat der Medizinischen Fakultät (Klinische Medizin) der Universität Tübingen, Geissweig 5, D-74000 Tübingen, Germany.

FACULTY POSITION IN RADIODIAGNOSTIC- \nNuclear Medicine (PET, PET/CT) at the Accelerator Research Center of the Department of Neurology at the University of Pennsylvania has an opening at the level of Research Assistant Professor. The position will involve active participation in an existing research program in PET radio-tracer development. Candidates should hold a PhD degree in Medicinal or Organic Chemistry and have a minimum of one year's postdoctoral experience in radiopharmacology. Experience in C11 and F-18 radionuclide research is recommended but not required. Send curriculum vitae to Dr. Robert Mach, University of Pennsylvania, 4270 Spruce Street, Philadelphia, PA 19104-6603. An EEO/AA employer.

Temple University Hospital and School of Medicine is seeking a board certified nuclear physician at the ASSISTANT/ASSOCIATE PROFESSOR rank. This position involves outpatient nuclear medicine as well as resident and medical student teaching. In addition, the candidate should have an established research grant support. Applicants should contact Francis J. Shea, MD, Deputy Chairperson, Department of Diagnostic Imaging, Temple University Hospital, School of Medicine, 3401 N. Broad Street, Philadelphia, PA 19140-5889. Temple University is an Affirmative Action/Equal Opportunity Employer.

Physician
MEDICAL DIRECTOR. Department of Nuclear Radiology, Merida Hospital in the southeastern United States. Limited full-time position in the nuclear medicine department. Candidates should be board certified in nuclear medicine or radiology. The position involves outpatient nuclear medicine as well as resident and medical student teaching. In addition, the candidate should have an established research grant support. Applicants should contact Francis J. Shea, MD, Deputy Chairperson, Department of Diagnostic Imaging, Temple University Hospital, School of Medicine, 3401 N. Broad Street, Philadelphia, PA 19140-5889. Temple University is an Affirmative Action/Equal Opportunity Employer.

Nuclear Radiologist — Immediate opening for Director of Nuclear Medicine in large private hospital in Charlotte, NC. Applicants must have performed PET, SPECT, and single photon emission computed tomography (SPECT) procedures. Must be board eligible in nuclear medicine or radiology. To: Henry T. Adkins, P.O. Box 21249, Charlotte, NC 28222.

Nuclear Medicine Physician. The University of Oklahoma Health Sciences Center is seeking an ABNM certified or eligible nuclear medicine physician for a full-time faculty position in the section of nuclear medicine of the department of radiological sciences. The individual filling the position will have primary responsibilities for teaching and research, and will become the director of the Nuclear Medicine Service. The position is available beginning September I, 1993. Review of applications begins immediately. Send curriculum vitae and names of three references to: James W. Coones, MD, Director, Nuclear Medicine, University of Oklahoma Health Sciences Center, PO Box 26901, Oklahoma City, OK 73190. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer.

Technologist
NUCLEAR MEDICINE TECHNOLOGIST. The Mal- linckrodt Institute of Radiology at Washington University Medical School, St. Louis, MO is seeking an experienced technologist for a fixed term position for F/T registry eligible technologist. Progressive department with excellent benefit package. Interested candidates should contact Kathleen Johnson-Brondum at (314) 362-2808. Affirmative Action/Equal Opportunity Employer. M/F/H/V.

Nuclear Medicine Coordinator. Opportunity awaits you in Boise, Idaho. Med Express, a unique and exciting opportunity provides us as the 4th best location in the U.S. to live! Enjoy yourself with a hassle-free quality lifestyle that offers metro-politan convenience, temperate year-round weather, cultural activities, natural attractions, historical sites, and a good climate. St. Luke's Regional Medical Center, a 300-bed acute care facility with a regional stroke and trauma center has an ideal opportunity for an experienced Nuclear Medicine Technologist with ARRT(N) or NMTCB registration and at least one year of supervisory experience—Excellent challenge to facilitate the development of a growing department. We offer competitive salaries and benefits as well as a comprehensive interview and relocation assistance package. For consideration, send resume and names of three references to: St. Luke's Regional Medical Center, 190 E. Bannock, Boise, ID 83712, Attn: Professional Employment.

Technical Supervisor — Nuclear Medicine. Hoag Hospital, a financially secure 417-bed non-profit medical center nestled on the scenic southern California coast between Los Angeles and San Diego, has an exceptional opportunity for a Nuclear Medicine Technical Supervisor.
in our nuclear medicine department. Requires NMTCB, CA license, and two years supervisory experience in
nuclear medicine. Will supervise seven FTEs. State-of-
the-art equipment includes: Toshiba triple head SPECT
camera and Toshiba 901 gamma camera. Hoag offers
competitive salaries and excellent benefits for full-time
employees including 28 paid days off per year, a 40(h)
plan, tuition reimbursement and an on-site child care
center. Relocation assistance is available. Send resume
to Teresa LeBeau, Human Resources, 301 Newport Blvd.,
Box Y, Dept. JNM, Newport Beach, CA 92658-8902.
(747) 760-5863. EOE.

NUCLEAR MEDICAL TECHNOLOGIST with
bachelor's degree in physical sciences. Must be certified
in Texas as a medical Radiologic Technologist. $27,750
hour 40-hour week. Prepare, administer and measure ra-
dioactive isotopes in therapeutic, diagnostic, and tracer
studies. Prepare stock solutions of radioactive materials
and calculate doses to be administered. Measure glan-
dular activity, trace radioactive doses and calculate
amount of radiation. Calibrate and maintain quality con-
trol of equipment. Apply at the Texas Employment Com-
mision, Houston, Texas, or send resume to the Texas
Employment Commission, TEC Building, Austin, Texas
78779. JOB6342875. Ad paid by An Equal Employment
Opportunity Employer.

NUCLEAR CARDIOLOGY TECHNOLOGIST—
Leading nuclear cardiology laboratory seeks full-time
technologist for clinical and research imaging and com-
puter processing. Opportunity for motivated individual
to work in a challenging environment with the experts
utilizing the newest imaging and technology. Will
train committed CNMT. Excellent benefits and negotiable
salary. EOE. Send CV or call Rocco Lapenta, Yale-New
Haven Hospital, Recruitment and Staffing-Dana 1, 20
York St., New Haven, CT 06504. (203) 783-5083.

NUCLEAR MEDICINE TECHNOLOGIST. Discover
the Golden Opportunities in northern California. Mar-
shall Hospital, is a 310-bed acute care facility
with state-of-the-art services and the most current
medical technology. We're seeking an NMT for our full-
service Medical Imaging Dept. with 2 years in Nuclear
Medicine performing diagnostic tests. Experience work-
ning with computers is required. Current California cert.
national preferred. Our location in the beautiful Sierra
foothills, just outside of Sacramento, offers a variety of
year round activities. Fish the local lakes, snow and water
ski, hike the canyons and foothills, and shoot the rapids.
Visit nearby Lake Tahoe, the Wine Country, or the streets
of San Francisco. Competitive salary and benefits. Reloca-
tion expenses negotiable. Contact Yvette Clerici, at: Mar-
shall Hospital, Marshall Way, Placerville, CA 95667.
EOE. M/F/H/V.

NUCLEAR MEDICINE TECHNOLOGIST--The
Nuclear Medicine department of Salem Hospital, a 454-
bed acute care regional medical center, seeks a full-time
Nuclear Med. Tech. Position is full time, day shift, Mon-
day through Friday with call every 4th weekend. Must
be registered with NMTCB and ARRT or ASCT. State-
of-the-art nuclear medicine equipment including 4 gam-
ma cameras (#2 Spect) with an integrated computer net-
work. We offer an excellent salary and benefits package.
Interview and relocation assistance available. Excellent
lifestyle for outdoor enthusiasts and families alike. Just
an hour from majestic mountains, soaring surf, and bust-
ling downtown, 40 minutes from subalpine, ski resort,
resort or marlence Mairs, Employment Assistant,
1-800-825-5199, 8 A.M. to 4 P.M., Monday through Fri-
day. EOE.

Positions Wanted
ABNM CERTIFIED CARDIOLOGIST, with expertise
in Nuclear Cardiology and SPECT, seeking full-time
nuclear cardiology position. Write Box 501, The Society
of Nuclear Medicine, 136 Madison Avenue, New York,
NY 10016-6760.

ABNM eligible (in June 1992) M.D., graduating from
highly prestigious medical school with varied Nuclear
Medicine experience, including Nuclear Cardiology and
SPECT, seeking full time teaching position. Call
(212) 361-0878 or write: Box 503. The Society of Nuclear
Medicine, 136 Madison Avenue, New York, NY 10016-
6760.

RADIOLOGIST/NUCLEAR PHYSICIAN seeking
position with high nuclear volume. Desire 50% -75%
nuclear medicine, remainder non-invasive radiology. 
to Box 503, The Society of Nuclear Medicine, 136 Madi-
son Avenue, New York, NY 10016.

Fellowships In
Diagnostic Radiological Research

The Diagnostic Radiology
Research Program of the National
Institutes of Health is accepting
applications for two-year fellowship
positions beginning in July 1992 and
July 1993. This program provides an
excellent opportunity for individu-
als who plan a research career in
radiological sciences.

The fellowship training pro-
gram emphasizes basic research in
all aspects of imaging and image
processing. Fellows will have no
lab responsibilities unless they
are related to their project. The
imaging laboratories of the Diagnos-
tic Radiology Research Program
include: state-of-the-art 0.5 and
1.5 Tesla MR units; a newly devel-
oped image analysis program with
hardware support; ultrafast CT; and
an experimental angiography suite.
The facilities in the In Vito NMR
Research Center, the PET and
monoclonal antibody programs of
the Nuclear Medicine Department,
and other laboratories on the NIH
Campus will be made available to the
fellow, providing an opportunity to
develop expertise in areas related to
imaging research. Basic research in
functional or metabolic imaging,
contrast agents, biochemistry, biol-
ogy, chemistry, immunology, physics
and physiology will be encouraged.
Laboratories are being developed
which will include "hot" and "cold"
wet labs and tissue culture facili-
ties. Collaboration with other
scientists on the NIH campus will
be encouraged.

Applicants should hold the
MD or PhD degree and should have
completed clinical training in diag-
nostic radiology or nuclear medicine.
Applications from individuals cur-
rently in US residency programs may
also be considered for research fel-
lowship positions. US citizenship
or permanent residency is required for
this full-time appointment.

Candidates should submit a
Curriculum Vitae, at least two letters
of reference and a preliminary state-
cment concerning their area of research inter-
est to Dr. Joseph A. Frank, Acting Director.

National InstituteS Of Health
Diagnostic Radiology Research Program
900 Rockville Pike, Building 10, Room IC660, Bethesda, MD 20892 • FAX 301-496-9933
Equal Opportunity Employer

Fellowships In
Diagnostic Radiological Research

The Diagnostic Radiology
Research Program of the National
Institutes of Health is accepting
applications for two-year fellowship
positions beginning in July 1992 and
July 1993. This program provides an
excellent opportunity for individu-
als who plan a research career in
radiological sciences.

The fellowship training pro-
gram emphasizes basic research in
all aspects of imaging and image
processing. Fellows will have no
lab responsibilities unless they
are related to their project. The
imaging laboratories of the Diagnos-
tic Radiology Research Program
include: state-of-the-art 0.5 and
1.5 Tesla MR units; a newly devel-
oped image analysis program with
hardware support; ultrafast CT; and
an experimental angiography suite.
The facilities in the In Vito NMR
Research Center, the PET and
monoclonal antibody programs of
the Nuclear Medicine Department,
and other laboratories on the NIH
Campus will be made available to the
fellow, providing an opportunity to
develop expertise in areas related to
imaging research. Basic research in
functional or metabolic imaging,
contrast agents, biochemistry, biol-
ogy, chemistry, immunology, physics
and physiology will be encouraged.
Laboratories are being developed
which will include "hot" and "cold"
wet labs and tissue culture facili-
ties. Collaboration with other
scientists on the NIH campus will
be encouraged.

Applicants should hold the
MD or PhD degree and should have
completed clinical training in diag-
nostic radiology or nuclear medicine.
Applications from individuals cur-
rently in US residency programs may
also be considered for research fel-
lowship positions. US citizenship
or permanent residency is required for
this full-time appointment.

Candidates should submit a
Curriculum Vitae, at least two letters
of reference and a preliminary state-
cment concerning their area of research inter-
est to Dr. Joseph A. Frank, Acting Director.

National InstituteS Of Health
Diagnostic Radiology Research Program
900 Rockville Pike, Building 10, Room IC660, Bethesda, MD 20892 • FAX 301-496-9933
Equal Opportunity Employer

50A The Journal of Nuclear Medicine • Vol. 33 • No. 5 • May 1992
Reducing stress in pharmacologic stress testing

Patient safety and tolerability: the stress factors
Consider the pharmacologic stress population. Old patients. Frail patients. Submaximally stressed patients. The obese. In these often vulnerable or compromised patient types, safety and tolerability are particularly important. The more certain an agent’s safety and tolerability record, the more potential for patient comfort and physician confidence. Use of an agent with a proven tolerability and safety record can reduce the overall stress to the patient, while easing the emotional stress to the physician.

A safety record that spans more than a decade
I.V. Persantine® (dipyridamole USP) has a safety profile established in over a decade of clinical testing.1,2 And, based on information from over 250,000 patient studies, I.V. Persantine is generally well tolerated.3 Such an established record in pharmacologic stress creates a standard by which to compare other agents.

Generally well-tolerated stress begins with smooth, gradual onset of effect
Pharmacologic stress with I.V. Persantine takes effect smoothly with a 4-minute infusion, followed within 5 minutes with the appropriate thallium dose. This allows the patient to become accustomed to the “stressing” process more gradually; there is no “sudden impact.” Additionally, the time is short enough to allow an expedient, relatively uncomplicated imaging procedure.

Convenient, easy-to-follow protocol minimizes procedural frustrations
The procedural logistics of pharmacologic stress can be another source of emotional stress to the physician or staff. With I.V. Persantine, there’s a flexible, easy-to-follow protocol. No infusion pump needed. No need for site-specific injection. And no extra I.V. line for the imaging agent.

When you stress more assured, you can rest more assured
Based on its proven safety profile and generally well-tolerated effect, I.V. Persantine sets a solid foundation to help reduce the stress that can sometimes be associated with pharmacologic stress.

Stress the facts in pharmacologic stress...call the Du Pont Radiopharmaceuticals Nuclear Cardiology Hotline at 1-800-343-7851 for further information and discussion about the proven safety profile of I.V. Persantine.

*Severe adverse events have occurred infrequently (<0.5%) in a study of 3,911 patients. Patients with a history of unstable angina may be at a greater risk for severe myocardial ischemia. Patients with a history of asthma may be at a greater risk for bronchospasm.
In the same study, the most frequent adverse events (>2%) were chest pain/angina pectoris, electrocardiographic changes (most commonly, ST-T changes), headache, and dizziness.

Please see brief summary of prescribing information on reverse for contraindications, warnings, and adverse reactions.

© 1992 Du Pont Pharma
**Adverse Reactions** Adverse reaction information concerning intravenous Persantine® (dipyridamole USP) is derived from a study of 3911 patients in which intravenous Persantine was used as an adjunct to thallium myocardial perfusion imaging and from spontaneous reports of adverse reactions and the published literature.

Serious adverse events (fatal and non-fatal myocardial infarction, severe ventricular arrhythmias, and serious CNS abnormalities) are described previously (see WARNINGS).

In the study of 3911 patients, the most frequent adverse reactions were: chest pain/angina pectoris (19.7%), electrocardiographic changes (most commonly ST-T changes) (15.9%), headache (12.2%), and dizziness (11.9%).

Adverse reactions occurring in greater than 1% of the patients in the study are shown in the following table:

<table>
<thead>
<tr>
<th>Incidence (%) of Drug-Related Adverse Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest Pain/Angina Pectoris</td>
</tr>
<tr>
<td>Headache</td>
</tr>
<tr>
<td>Dizziness</td>
</tr>
<tr>
<td>Electrocardiographic Abnormalities/ST-T Changes</td>
</tr>
<tr>
<td>Electrocardiographic Abnormalities/Extrastoles</td>
</tr>
<tr>
<td>Hypertension</td>
</tr>
<tr>
<td>Nausea</td>
</tr>
<tr>
<td>Flushing</td>
</tr>
<tr>
<td>Electrocardiographic Abnormalities/Tachycardia</td>
</tr>
<tr>
<td>Dyspnea</td>
</tr>
<tr>
<td>Pain Unspecified</td>
</tr>
<tr>
<td>Blood Pressure Lability</td>
</tr>
<tr>
<td>Hypertension</td>
</tr>
<tr>
<td>Paresthesia</td>
</tr>
<tr>
<td>Fatigue</td>
</tr>
<tr>
<td>Less common adverse reactions occurring in 1% or less of the patients within the study included:</td>
</tr>
<tr>
<td>Cardiovascular System: Electrocardiographic abnormalities unspecified (0.6%), arhythmia unspecified (0.6%), palpitation (0.3%), ventricular tachycardia (0.2% see WARNINGS), bradycardia (0.2%), myocardial infarction (0.1% see WARNINGS), AV block (0.1%), syncope (0.1%), orthostatic hypotension (0.1%), atrial fibrillation (0.1%), supraventricular tachycardia (0.1%), ventricular arrhythmia unspecified (0.03% see WARNINGS), heart block unspecified (0.03%), cardiomyopathy (0.03%), edema (0.03%).</td>
</tr>
<tr>
<td>Central and Peripheral Nervous System: Hypotension (0.5%), hypotonia (0.3%), nervousness/anger (0.2%), tremor (0.1%), abnormal coordination (0.3%), somnolence (0.03%), dysphonia (0.03%), migraine (0.03%), vertigo (0.03%).</td>
</tr>
<tr>
<td>Gastrointestinal System: Dyspepsia (1.0%), dry mouth (0.8%), abdominal pain (0.7%), lassitude (0.6%), vomiting (0.4%), eructation (0.1%), dysphagia (0.03%), tenesmus (0.03%), appetite increased (0.03%).</td>
</tr>
<tr>
<td>Respiratory System: Pharyngitis (0.3%), bronchospasm (0.2% see WARNINGS), hyperventilation (0.1%), rhinorrhea (0.1%), coughing (0.02%), pleural pain (0.03%).</td>
</tr>
</tbody>
</table>

Other: Myopia (0.0%) back pain (0.6%), injection site reaction unspecified (0.4%), diaphoresis (0.4%), asthma (0.3%), malaise (0.3%), arthralgia (0.3%), injection site pain (0.1%), rigor (0.1%), tachyarrhythmia (0.1%), tinnitus (0.1%), vision abnormalities unspecified (0.1%), dysuria (0.1%), thirst (0.03%), depersonalization (0.03%), eye pain (0.03%), renal pain (0.03%), perineal pain (0.03%), breast pain (0.03%), intermittent claudication (0.03%), leg cramping (0.03%).

**OVERDOSAGE** No cases of overdose in humans have been reported. No specific treatment is required because of the nature of use (i.e., single intravenous administration in controlled settings). See WARNINGS. Caution: Federal law prohibits dispensing without prescription.

---

"I'm doing everything from processing, to problem solving, to consulting with doctors. It's always interesting."

GRANT COLLINS
Nuclear Medicine Technologist
Kaiser Oakland

"It's the opportunity to work in an environment which features an open door management style, welcomes the exchange of ideas and encourages progress. Surrounded by the latest technology, you couldn't ask for a better professional setting."

Our growing Northern California patient base provides a wealth of ongoing challenges in nuclear medicine. There is always room to enhance your current area of expertise, or you can advance in new directions.

You work with cutting edge technology supported by full-time systems analysis. And, you have the opportunity to participate in active clinical research and the newest procedures.

Now consider the stability of one of California's largest health care providers. A wide-open career path. Complex and changing assignments. Unparalleled benefits. Generous vacation. Time and support for your continuing education. And then you'll understand why Kaiser Permanente is your best choice.

To learn more about our opportunities, benefits, and highly competitive salaries, please call Pamela Woods at:

1-800-522-0045

Or write her at: Kaiser Permanente Medical Care Program, Regional Recruitment Services, 1814 Franklin, 5th Floor, Oakland, CA 94612. We are an EEO/AA employer. Minorities, women, disabled and veterans are encouraged to apply.

Kaiser Permanente
Good People. Good Medicine.

See us at the SNM Meeting in Los Angeles, CA Booth 401
**Take A Closer Look**

**At Mercy Healthcare Sacramento**

If you're a Nuclear Medicine Technologist looking to advance in your career, then take a closer look at Mercy Healthcare Sacramento. As a leading healthcare provider in Northern California, Mercy provides comprehensive diagnostic and therapeutic services throughout its four-hospital regional network.

Offering a broad scope of imaging procedures with a special focus on Cardiology, Orthopedics and Oncology, our departments feature advanced equipment, including SPECT (ADAC, Siemens, G.E.). In addition to our highly advanced technical environments, our Northern California location offers the perfect recreational environment for your year-round enjoyment.

Mercy is also proud to furnish an attractive salary and comprehensive benefits package, which includes transfer mobility privileges to over 100 Mercy system hospitals nationwide. To learn more, send your resume or call us today: Mercy Healthcare Sacramento, 2710 Gateway Oaks Drive, Suite 230N, Sacramento, CA 95833, (800) 688-3834. An equal opportunity employer.

---

**NUCLEAR MEDICINE TECHNOLOGIST $1,000.00 SIGN-ON BONUS**

Jewish Hospital, a 500-bed tertiary care teaching facility has challenging opportunities for professionals to join our progressive and expanding Radiology Department. Discover why we say "Skill, Tenderly Applied, Works Wonders."

**NUCLEAR MEDICINE TECHNOLOGIST**

Full-Time (Day), ARRT or NMTCB Certified

We offer a competitive salary and excellent benefits package including:

- Health/Dental/Group Life Insurance
- 3 weeks vacation/8 paid holidays
- Long Term Disability
- Excellent Pension Plan (5 year vestment)
- Annual Merit Reviews
- TSA (Tax Sheltered Annuities)
- Excellent on-call/weekend differential
- Upfront tuition reimbursement
- Superlor on-site Day Care Center
- Employee Recruitment Bonus
- Perfect Attendance Bonus
- Free Parking

If you are a dedicated, professional technologist, Jewish Hospital would like you to become part of our team. For immediate consideration, please call (800) 832-9009 or send resume to:

Shirley Wilks, Staffing Center/NMT
Jewish Hospital–St. Louis
216 S. Kingshighway Blvd., St. Louis, Missouri 63110
EOE M/F/H/V
CHIEF CARDIAC NUCLEAR MEDICINE TECHNOLOGIST

Full-time position available for a registered nuclear medicine technologist with experience and skills. The successful candidate will supervise and direct a team of nuclear medicine technologists. ROANOKE is a friendly, family-oriented community of 225,000 offering easy access to the numerous recreational attractions of the Blue Ridge Mountains. Cultural activities abound in the area. The successful candidate can look forward to a competitive starting salary based on experience and skills, with a comprehensive benefits package. For prompt consideration, please forward your resume to or call: Jack S. Slowikowski, M.D., VALLEY MEDICAL ASSOCIATES, INC., P.O. Box 12846, Roanoke, VA 24029. (703) 342-7941. EOE

CELEBRATE NUCLEAR MEDICINE WEEK

October 4 – 10

NUCLEAR MEDICINE TECHNOLOGIST

Friendly, progressive, autonomous nuclear medicine department seeks motivated, career-minded individual to round out our excellent staff. Great working conditions, benefits and hours. Beautiful resort community located right on the Gulf of Mexico. Come to work where your input is encouraged and appreciated. Department of Veterans Affairs is an equal opportunity employer. For more information contact:

Francine Wolpe, MD
Biloxi VA Medical Center
400 Veterans Boulevard, Biloxi, MS 39531
(601)-388-5541 Ext 5491

Nuclear Medicine Technology Program Director

Position available for Program Director for Nuclear Medicine Technology Education program. The individual recruited for this position will be responsible for the overall program, administration and general effectiveness of a quality educational program in Nuclear Medicine Technology. The program is one of four programs in the Division of Radiation Science Technology Education at the University of Nebraska Medical Center in Omaha, Nebraska.

The successful candidate must have current national nuclear medicine technology certification; a masters degree or equivalent in years of teaching and service; a minimum of three years teaching experience; and demonstrated leadership and administrative skills. Salary and faculty appointment commensurate with experience and qualifications.

Interested candidates should send a letter of application, curriculum vitae and three letters of reference to: Beba A. Benschoter, PhD, Associate Dean, School of Allied Health Professions, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-5150

An Equal Opportunity/Affirmative Action Employer
Minorities and Women are Encouraged to Apply

A great place for a healthy relationship.

If you'd like a relaxing, healthy lifestyle along with an exciting, professionally challenging place to work, come to DCH Regional Medical Center. We're a 658 bed teaching hospital with some of the most advanced medical technology in the country. We're progressive, technically sophisticated, and we offer a great opportunity for the right people.

Our busy Radiology Services Department is looking for technologists (Rad Tech and Nuclear Medicine). We perform 120,000 procedures annually. Here, you can work in Nuclear Medicine, Ultrasound, Color Doppler, CT, GE Signa MR System, Mammography, special and sub-special procedures, and a full range of general diagnostic procedures.

We also offer an AMA-JRRC approved school of Radiologic Technology for a level of 24 students.

For an outstanding benefits package and a competitive starting salary, contact Pamela Brunson, Assistant Director of Human Resources, DCH Regional Medical Center, 809 University Blvd. East, Tuscaloosa, AL 35401 or call us at 1-800-521-3857 or collect at (205)759-7102. An Equal Opportunity Employer M/F/H.

We can give you a whole new outlook.
REVIEW OF NUCLEAR MEDICINE TECHNOLOGY
Ann M. Steves, CNMT

This book provides an overview of the latest techniques used in nuclear medicine technology practice. It is an excellent study guide for those who are preparing for the nuclear medicine technologist certification examination. Four appendices address preparation for:

- A certification exam
- Test-taking techniques
- Sample questions and answers
- NRC regulations

Illustrated chapters discuss the following systems: cardiovascular, skeletal, endocrine, gastrointestinal, genitourinary, respiratory, and the central nervous system. The authors also discuss radiation protection and its relation to instrumentation quality control and give the reader an introduction to SPECT.

176 pp, 8½ x 11, Softcover
$30 member, $45 nonmember
add $2.50 for shipping & handling.
In Canada, add $5.00; elsewhere, add $20.00

To order, call or write
Book Masters
1444 State Rt 42; RD 11
Mansfield, OH 44903
(800) 247-6553 (toll free)
(419) 281-6883 (fax)
FOR FASTER BOOK ORDERING

The Society of Nuclear Medicine has made it easier and faster for you to order books and pamphlets.

Orders can now be placed with BookMasters, our fulfillment center.

Your orders will be delivered faster, by two or three days, because of this change. And the Society will be streamlining its operations by this move.

Mail your SNM book and pamphlet orders directly to:

The Society of Nuclear Medicine
Book Order Department
BookMasters, Inc.
1444 State Rt. 42, RD 11
Mansfield, Ohio 44903

Or place your orders by phone using BookMasters’ toll-free telephone 1-800-247-6553 or send by telefax at 1-419-281-6883.

Orders need to be accompanied by check, traveller’s check, VISA or MasterCard, or, for North American Members, an institutional Purchase Order.
NEW STATE OF THE ART
HexArray™ COLLIMATORS
Nu Tech offers a wide range of low, medium and high-energy collimators for all makes of gamma cameras...over 21 different configurations to meet every clinical application...all at unbeatable prices

- Parallel hole • Diverging
- Converging • Flip focus
- Bi-lateral slants • Fan beam
- Rotating precision slant holes
- Medium/high-energy
- Pinholes • Single axis/whole body

Custom designs and new tooling can be generated via Nu Tech's own patented CAD collimator software.

RECORES/REPAIRS
Nu Tech can recore/repair any damaged collimator with immediate turn-around time.

FAST DELIVERY
We warehouse a large selection of new cores. Depending upon your flange requirements, Nu Tech can build your collimator in 30 days...often less!

NU TECH
Nuclear Technologies Medical Systems, Inc.
290 Dodge Avenue, East Haven, CT 06512

Interested? Call NuTech today...
(203) 787-3985
1-800-33 NUTECH
(Outside Connecticut)
TO GET SOFTWARE THIS GOOD,

Cedars - Sinai PTQ™ Program

3-D Perfusion/Motion Map™

Oblique cardiac slices at stress and redistribution

MGA+ (multi-gated analysis) Program

3-D Post-Reconstruction Filter Program

Dual Isotope 3-D images and slices

Renogram analysis time activity curves

Anterior and posterior dual - intensity whole - body study
YOU HAVE TO GO ON AN ODYSSEY.™

ODYSSEY software, running on the ODYSSEY Supercomputer - a PRISM Series standard - provides a complete range of nuclear imaging programs. This powerful software collection includes protocols like 3-D Perfusion/Motion Map,™ a unique program for cardiac SPECT studies. ODYSSEY programs not only deliver exquisite images, but also a wealth of clinical information.

Once you go on an ODYSSEY, no other imaging system will give you the same easy operation. Because no other imaging system can run software this good.

For more information on the PRISM Series, call us at 1-800-323-0550. Or write Picker International, Inc., 595 Miner Road, Dept. CC, Cleveland, OH 44143.

Advances in $^{99m}$Tc-Teboroxime Myocardial Perfusion Imaging

Monday, June 8, 1992

3:00 pm Reception/Registration • 3:30 pm - 5:45 pm Scientific Program
Westin Bonaventure Hotel, Santa Barbara Room A/B/C

Scientific Program

Co-Moderators:

Robert Bonow, MD
Goldberg Professor of Medicine
Northwestern University Medical School
Chief of Cardiology
Northwestern Memorial Hospital
Chicago, Illinois

Jamshid Maddahi, MD
Associate Professor of Medicine
Director, Clinical Positron Emission Tomography Center
UCLA School of Medicine
Los Angeles, California

Introduction to Myocardial Perfusion Imaging with $^{99m}$Tc-Teboroxime

Robert Bonow, MD

Overview of $^{99m}$Tc-Teboroxime Clinical Studies

Robert Hendel, MD
Assistant Professor of Medicine
Northwestern University Medical School
Associate Director, Medical Intensive Care
Northwestern Memorial Hospital
Chicago, Illinois

Optimizing SPECT Acquisition and Processing for $^{99m}$Tc-Teboroxime

Jonathan Links, PhD
Associate Professor of Environmental Health Sciences and Radiology
The Johns Hopkins University School of Hygiene and Public Health
Chief Physicist
The Johns Hopkins Hospital
Baltimore, Maryland

$^{99m}$Tc-Teboroxime Myocardial Perfusion Imaging: Detection of Coronary Artery Disease with Single Detector SPECT: Rapid Acquisition

Milena Henzlova, MD
Assistant Professor of Medicine
Mount Sinai Medical Center
New York, New York

$^{99m}$Tc-Teboroxime Myocardial Perfusion Imaging: Detection of Coronary Artery Disease with Multi-Detector SPECT

Daniel Berman, MD
Professor of Medicine
UCLA School of Medicine
Co-Chairman, Department of Imaging
Cedars-Sinai Medical Center

$^{99m}$Tc-Teboroxime Myocardial Perfusion Imaging: A Clinical and Economic Perspective

Robert Carretta, MD
Director, Department of Nuclear Medicine
Roseville Hospital
Roseville, California

To register by phone, please call toll free 1-800-848-5328

Sponsored by an educational grant from

Squibb Diagnostics

See us at the SNM Meeting in Los Angeles, CA
Island 533