THE GOOD NEWS
WE HAVE TWO BRAND NEW AMAZINGLY ADVANCED
THYROID UPTAKE SYSTEMS

THE BAD NEWS
YOU HAVE TO MAKE THE EXCRUCIATING CHOICE
OF ONE OVER THE OTHER

To help you with your decision, which we agree is not an easy one, please read the following carefully. Then give us a call and we’ll be pleased to discuss both systems with you further.

Faster than a speeding bullet... More powerful than a microprocessor... Able to test, measure & print with accuracy...
The CAPTUS® 2000 brings the power of the latest in computer technology to your facility. It is matched with a high level 1024 MCA and modern Windows software. Plus newly released, expanded applications software, and DeskJet 540 Printer.

Its compliment of tests include an advanced Thyroid program readily adaptable to several protocols, plus: Wipe Testing, using an automated peak search, Schilling, Diocap®, Blood Volume, RBC, and Bioessay.

If it doesn’t Count it, Store it, Display it, Print it, and Auto Decay-Correct it, it’s not the CAPTUS® 600 Thyroid System.

Designed from the ground up by Capintec’s talented engineers, the high-quality CAPTUS® 600 is truly cost-effective for performing Uptakes and Bioassays. With power to handle the heaviest workloads, the CAPTUS 600’s 256-channel MCA provides features not found on any other non-computer system. But that’s not all. Together with the optional dwell, you can use the system for Wipe Testing, Blood Volume, Schillings, RBC, Dally, and Chi-Square programs. The CAPTUS 600 features menu-driven operations with easy-to-follow prompts on its large backlit screen.

CAPTUS® 2000 Highlights
1) Computer featuring Intel 486 DX2-66 CPU, 8 MB RAM, 540 MB 11 MS Hard Drive, Quad-speed CD-ROM, plus many other features and upgrade options.
2) New CAPTUS Software Version 3.01, plus MS-DOS 6.22, WFW 3.11, MS Works 3.0 & Money, on CD's.
3) Includes an archiving & retrieval utility that has been upgraded offering greater functionality.
4) The ability to add pre-close measurements when patients have received previously administered doses.
5) Constancy button added, allowing Constancy Test to be performed by itself and recorded.
6) Allows user to measure an efficiency with any source and records for future use.
7) Compact unique Spring-Arm Floor Stand is ergonomically correct and offers great range of detector movement for ease of patient interaction and positioning.
8) On-Line telephone support for all users offers fast response to technical questions through our toll-free 800 numbers.
9) Free Cs-137 and Eu-152 Rod Sources provided.

Both the CAPTUS 600 and CAPTUS 2000 offer many configurations such as: Table Top and Wall Mounted Systems.

CALL FOR YOUR NEW CAPTUS CATALOG
1-800-ASK-4-CRC
FAX: 201-825-4829

NOT JUST QUALITY. CAPTUS QUALITY.

CAPTUS® 600 Highlights
1) Low cost Microprocessor with plenty of flexibility and muscle replaces the CAPTUS 600 system with a new look and many new features.
2) On-screen display of spectrum while counting of all tests.
3) No one wants to be just a number, the CAPTUS 600 allows the patient's name and demographics to be typed in through the keyboard.
4) Like its Big Brother, the CAPTUS 2000, the CAPTUS 600 has the ability to add pre-close measurements.
6) Expanded QC tests added to the system speeds user through the daily routine.

Ease of patient approach is provided by the perfectly balanced spring-arm system.

Flared collimator swivels 360 degrees on the detector arm and meets ANSI Standard N 44.3 for Thyroid Uptakes.

Speed and accuracy in radioscopc Quality Assurance, Quality Control, Wipe Tests, Lab Tests and other clinical uses are accomplished with the built-in well detector system.

Patient and user safety through the use of an isolated transformer to insure a grounded system.
Program speed is enhanced with the use of a track-ball addition to the keyboard.

Menu-driven applications programs perform Thyroid Uptake, Wipe Testing, Bioassay, Blood Volume (I-125 or Cr-51), RBC Survival, Schilling Test (standard and Dicopac®), MCA functions as well as Time Activity curves.

High-resolution 800 x 600 SVGA color graphics enhance displays of all programs, especially the full spectrum visible during all counting procedures.

The Captus 2000 Thyroid Uptake System

Immediate report printing on all procedures with the Hewlett Packard 540 DeskJet printer.

Blue (2.36" x 4.72") LCD Display with cold cathode lamp, backlit, and 128 x 256 pixel resolution features on-screen prompts and display of a full featured 256 channel MCA with presets, multiple ROIs and configuration archiving.

Convenient alpha/numeric keypad for inputting patient name, demographics, etc.

Immediate report printing on all procedures with a graphic, high-speed dot matrix, quality printer, easily displaying graphics and data for permanent records.

Patient and user safety through the use of an isolated transformer to insure a grounded system.

Stability and ease of maneuverability are provided by the design of the sturdy base and stand with swivel locking casters to maximize positioning.

Speed and accuracy in radioisotope Quality Assurance, Quality Control, Wipe Tests, Lab Tests and other clinical uses are accomplished with the optional well detector system.

Flared collimator swivels 360 degrees on the detector arm and meets ANSI Standard N 44.3 for Thyroid Uptakes.

The Captus 600 Thyroid Uptake System

Immediate report printing on all procedures with the Hewlett Packard 540 DeskJet printer.

Convenient alpha/numeric keypad for inputting patient name, demographics, etc.

Immediate report printing on all procedures with a graphic, high-speed dot matrix, quality printer, easily displaying graphics and data for permanent records.

Patient and user safety through the use of an isolated transformer to insure a grounded system.

Stability and ease of maneuverability are provided by the design of the sturdy base and stand with swivel locking casters to maximize positioning.

Speed and accuracy in radioisotope Quality Assurance, Quality Control, Wipe Tests, Lab Tests and other clinical uses are accomplished with the optional well detector system.

Flared collimator swivels 360 degrees on the detector arm and meets ANSI Standard N 44.3 for Thyroid Uptakes.

High-resolution 800 x 600 SVGA color graphics enhance displays of all programs, especially the full spectrum visible during all counting procedures.

Menu-driven applications programs perform Thyroid Uptake, Wipe Testing, Bioassay, Blood Volume (I-125 or Cr-51), RBC Survival, Schilling Test (standard and Dicopac®), MCA functions as well as Time Activity curves.

The Captus 2000 Thyroid Uptake System

Immediate report printing on all procedures with the Hewlett Packard 540 DeskJet printer.

Blue (2.36" x 4.72") LCD Display with cold cathode lamp, backlit, and 128 x 256 pixel resolution features on-screen prompts and display of a full featured 256 channel MCA with presets, multiple ROIs and configuration archiving.

Convenient alpha/numeric keypad for inputting patient name, demographics, etc.

Immediate report printing on all procedures with a graphic, high-speed dot matrix, quality printer, easily displaying graphics and data for permanent records.

Patient and user safety through the use of an isolated transformer to insure a grounded system.

Stability and ease of maneuverability are provided by the design of the sturdy base and stand with swivel locking casters to maximize positioning.

Speed and accuracy in radioisotope Quality Assurance, Quality Control, Wipe Tests, Lab Tests and other clinical uses are accomplished with the optional well detector system.

Flared collimator swivels 360 degrees on the detector arm and meets ANSI Standard N 44.3 for Thyroid Uptakes.
How to recognize a candidate for Cardiolite*

The shape of your patients may help you recognize the potential for soft-tissue attenuation, especially in fleshy figures.

For female and large-chested or obese male patients, Cardiolite comes through with higher photon energy (140 keV) to provide images with greater anatomical detail. Clear images can enhance interpretive confidence—which may reduce false-positives and equivocal cases.

Cardiolite also offers the unique advantage of direct measurement of both myocardial perfusion and ventricular function from one study.

So the next time you're faced with imaging female and large-chested or obese male patients, use Cardiolite and reduce soft-tissue attenuation.

Cardiolite
Kit for the preparation of Technetium Tc99m Sestamibi

To reduce soft-tissue attenuation
Cardiolite comes through

DU PONT PHARMA
Radionuclides

Stress testing should be performed only under the supervision of a qualified physician in a laboratory equipped with appropriate resuscitation and support apparatus. There have been infrequent reports of signs and symptoms consistent with seizure and severe hypersensitivity after administration of Tc99m Sestamibi.

Please see brief summary of prescribing information on adjacent page. © 1994, DuPont Pharma
Cardiolite
Kit for the preparation of Technetium Tc99m Sestamibi

FOR DIAGNOSTIC USE

DESCRIPTION: Each 5ml vial contains a sterile, non-pyrogenic, lyophilized mixture of: Tetrakis (2-methoxyisobutyl isonitrile) Copper (I) (trifluoroacetate) - 1.0mg Sodium Citrate Dihydrate - 2.6mg L-Cysteine Hydrochloride Monohydrate - 1.0mg Mannitol - 30mg Stannous Chloride, Dihydrate, minimum (SnCl2•2H2O) - 0.025mg Stannous Chloride, Dihydrate, (SnCl2•2H2O) - 0.075mg Tin Chloride (Stannous and Stannic) as (SnCl2•2H2O) - 0.099mg

Prior to reconstitution, the pH is 5.3-5.9. 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, oxidant-free Sodium Perchlorate Injection. The pH of the reconstituted product is 5.0-5.8. No bacteriostatic preservative is present.

The precise structure of the technetium complex is Tc99mMBI, where MB is 2-mercaptoethanol.

INDICATIONS AND USAGE: CARDIOLITE Kit for the Preparation of Technetium Tc99m Sestamibi is a myocardial perfusion agent that is useful in the evaluation of ischemic heart disease.

CARDIOLITE Kit for the Preparation of Technetium Tc99m Sestamibi is useful in distinguishing normal from abnormal myocardium and in the localization of the abnormality, in patients with suspected myocardial infarction, ischemic heart disease or coronary artery disease. Evaluation of ischemic heart disease or coronary artery disease is accomplished using rest and stress techniques.

CARDIOLITE Kit, for the Preparation of Technetium Tc99m Sestamibi is also useful in the evaluation of myocardial function using the first pass technique.

Rest-exercise imaging with Tc99m Sestamibi in conjunction with other diagnostic information may be used to evaluate ischemic heart disease and its localization.

In clinical trials, using a template consisting of the anterior wall, inferior-posterior wall and isolated apex, localization in the anterior or inferior-posterior wall in patients with suspected angina pectoris or coronary artery disease, by dipyridamole stress was shown. Disease localization isolated to the apex has not been established. Tc99m Sestamibi has not been studied or evaluated in other cardiac diseases.

It is usually not possible to differentiate recent from old myocardial infarction or to differentiate recent myocardial infarction from ischemia.

CONTRAINdications: None known.

WARNINGS: In studying patients in whom cardiac disease is known or suspected, care should be taken to assure continuous monitoring and treatment in accordance with safety, accepted clinical procedures and experience, which has occurred in 4 to 24 hours after Tc99m Sestamibi use and is usually associated with exercise stress testing (See Precautions).

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.

Radioactive drugs must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Administered radionuclides may cause injury to skin and mucous membranes. For this reason, all personnel should be protected from exposure to radioactivity. In addition, each vial is under the control of the Food and Drug Administration as a radioactive drug in accordance with the regulations of the Nuclear Regulatory Commission. In the event of a radiation emergency, the patient and personnel should be protected.

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

Technetium Tc99m labeling reactions involved in maintaining the stannous ion in the reduced state. Hence, Sodium Perchlorate Tc99m Sestamibi 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 use of radioactive materials and who have been approved by the appropriate government agency authorized to license the use of radio nuclides.

Stress testing should be performed only under the supervision of a qualified physician and in a laboratory equipped with appropriate reconstitution and support apparatus.

The most frequent exercise stress test endpoints, which resulted in termination of the test during controlled Tc99m Sestamibi studies (two-thirds were cardiac patients) were:

Fatigue 35%
Dyspnea 17%
Chest Pain 16%
ST-depression 7%
Arrhythmia 1%

Carcinogenesis, Mutagenesis, Impairment of Fertility

In comparison with most other diagnostic technetium labeled radiopharmaceuticals, the radiation dose to the embryo/fetus is low and of short duration. (Lieberman 1977, at rest, 1.3 mrem/1uCi at exercise) as high. Minimal exposure (ALARA) is necessary in women of childbearing capability. (See Dosimetry subsection in DOSAGE AND ADMINISTRATION section.)

The active intermediate, [Cu(MBII)BF4], was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HGPRT and sister chromatid exchange tests (all in silico). At cytotoxic concentrations (~20ug/ml), an increase in cells with chromosome aberrations was observed in the in vivo human lymphocytes assay. [Cu(MBII)BF4], did not show genotoxic effects in the in vivo mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9mg/kg, > 60 × maximal human dose).

Pregnancy Category C

Animal reproduction and teratogenicity 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 pregnant women and 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.

Nursing Mothers

Technetium Tc99m Sestamibi 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 paraesthesia and/or taste perversion (metallic or bitter taste) immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing, edema, injection site inflammation, dyspnea, nausea, vomiting, pruritus, rash, urticaria, dry mouth, fever, dizziness, fatigue, dyspnea, and hypertension also have been attributed to administration of the agent. Cases of angina, chest pain, and death have occurred (see Warnings and Precautions). The following adverse reactions have been rarely reported: symptoms and signs consistent with those occurring shortly after administration of the agent; transient arthritis in a wrist joint; and severe hypersensitivity, which was characterized by dyspnea, hypotension, bradycardia, anoxia and vomition within two hours after a second injection of Technetium Tc99m Sestamibi.

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

<table>
<thead>
<tr>
<th>Organ</th>
<th>mCi/30mCi</th>
<th>mCi/110mCi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breasts</td>
<td>2.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Gallbladder Wall</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Sestamibi</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>1.6</td>
</tr>
<tr>
<td>Testes</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Red Marrow</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Urinary Bladder Wall</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Total Body</td>
<td>0.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>

RADIATION DOSIMETRY: The radiation dose to organs and tissues of an average patient (70kg) per 110mCi (33mCi) of Technetium Tc99m Sestamibi injected intravenously are shown in Table 4.

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

<table>
<thead>
<tr>
<th>Organ</th>
<th>mCi/30mCi</th>
<th>mCi/110mCi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breasts</td>
<td>2.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Gallbladder Wall</td>
<td>2.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Sestamibi</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Upper Large Intestine Wall</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Lower Large Intestine Wall</td>
<td>3.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Stomach Wall</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Heart Wall</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Kidneys</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Liver</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Lungs</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Bone Surfaces</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Thyroid</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Ovaries</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Testes</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Red Marrow</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Urinary Bladder Wall</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Total Body</td>
<td>0.4</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Drug Interactions: The safety and effectiveness of Technetium Tc99m Sestamibi has not been studied in the presence of other pharmaceuticals.

RADIOPHARMACEUTICALS: Marketed by Du Pont Radiopharmaceuticals Division The DuPont Company Pharmaceuticals 331 Treble Cove Road Billerica, Massachusetts, USA 01821

513121-9094
Brief Summary

3/94 Printed in U.S.A.

Circle Reader Service No. 34
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,
Circle Reader Service No. 32

DIVERSIFIED DIAGNOSTIC PRODUCTS, INC.
11603 Windfern
Houston, TX 77064
713-955-5323
**The Next Generation**

**TRIAD XLT 20 Whole BodySPECT**

Superior Clinical Imaging

---

**Best Image Resolution**
- PROXIMA Real-time Auto Body-Contouring
- Center-of-Rotation and Axial Alignment accuracy guaranteed to 0.1mm rms
- Angular accuracy guaranteed to 0.1° rms
- Patented linearity and X-Y shift correction

**New Imaging Applications in Nuclear Medicine**
- Whole BodySPECT multiple FOV SPECT
- 511 keV F-18 FDG SPECT
- Gated Cardiac SPECT/ Ejection Fraction

**Best Clinical Throughput**
- Entire torso SPECT in one rotation
- Entire torso three planar views
- Six-view WholeBody Scan in 22 minutes
- Whole BodySPECT up to 6 ft. 4 in.
- Optimized for Oncology Applications

**Patient Comfort**
- 36 in. Open Access Gantry
- Elegant "Whisper-Quiet" Operation
- Extra-wide Patient Table

**Imaging Complete Patient Population**
- Industry-best 20 in. axial FOV
- Industry-best 30 in. patient imaging aperture
- 500 lb. patient weight capacity
- 6 ft. 4 in. patient height imaging capacity

**Efficient Clinical Operation**
- QuickVIEW Swing Arm P-scope
- Automated Pre-Scan System Setup
- Simple Protocol-based Scan Setup
- State-of-the-art Sun computing speed
TRIONIX

TRIAD XLT Products

- Triple Crown Results -

- Excellent Image Resolution:
- High Clinical Throughput:
- Elegant Whisper-Quiet Operation:

- Benefits -

Better Diagnostic Detection
Better Clinical Revenue
Better Patient Acceptance

Plus

- F-18 FDG SPECT (11 mm FWHM Resolution): Metabolic Imaging Reality

Innovation Adoption Track Record

TRIAD XLT 20", Whole Body SPECT

<table>
<thead>
<tr>
<th>Installation Sites</th>
<th>Adoptors</th>
<th>Delivery Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Luc, UCL, Brussels, Belgium</td>
<td>Dr. Beickers, Dr. Pauwels</td>
<td>May 1994</td>
</tr>
<tr>
<td>Hospital of St. Raphael, New Haven, Connecticut</td>
<td>Dr. Caride</td>
<td>July 1994</td>
</tr>
<tr>
<td>ASAN Medical Center, Seoul, Korea</td>
<td>Dr. Moon, Dr. Lee</td>
<td>July 1994</td>
</tr>
<tr>
<td>Mt. Godinne, UCL, Yvoir, Belgium</td>
<td>Dr. DeCoste</td>
<td>September 1994</td>
</tr>
<tr>
<td>Centennial, Nashville, Tennessee</td>
<td>Dr. Bell</td>
<td>November 1994</td>
</tr>
<tr>
<td>VA Indianapolis &amp; University of Indiana</td>
<td>Dr. Witt, Dr. Burt</td>
<td>January 1995</td>
</tr>
<tr>
<td>Roswell Park Cancer Institute, Buffalo, New York</td>
<td>Dr. Grossman, Dr. Bakshi</td>
<td>May 1995</td>
</tr>
<tr>
<td>National Institute of Health, Bethesda, Maryland</td>
<td>Dr. Carrasquillo, Dr. Bacharach</td>
<td>July 1995</td>
</tr>
<tr>
<td>Advanced Metabolic Imaging, Dallas, Texas</td>
<td>Dr. Hickey, Dr. Simon</td>
<td>July 1995</td>
</tr>
</tbody>
</table>

TRIAD XLT 9", Cardiac/Organ SPECT

<table>
<thead>
<tr>
<th>Installation Sites</th>
<th>Adoptors</th>
<th>Delivery Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johns Hopkins, Baltimore, Maryland (two systems)</td>
<td>Dr. Natarajan</td>
<td>February, June 1993</td>
</tr>
<tr>
<td>VA San Francisco, UC, San Francisco, California</td>
<td>Dr. Gerard</td>
<td>February 1993</td>
</tr>
<tr>
<td>Duke, Durham, North Carolina (two systems)</td>
<td>Dr. Coleman, Dr. Jaszcak</td>
<td>June 1993, August 1994</td>
</tr>
<tr>
<td>University of Virginia, Charlottesville, Virginia</td>
<td>Dr. Teats, Dr. Croft</td>
<td>June 1993</td>
</tr>
<tr>
<td>Memorial Mission, Asheville, North Carolina</td>
<td>Dr. Peterson</td>
<td>July 1993</td>
</tr>
<tr>
<td>Austin, Heidelberg, Australia</td>
<td>Dr. McKay</td>
<td>September 1993</td>
</tr>
<tr>
<td>Pontiac Osteopathic, Pontiac, Michigan</td>
<td>Dr. Koltzarov</td>
<td>October 1993</td>
</tr>
<tr>
<td>Royal Prince Alfred, Sidney, Australia</td>
<td>Dr. Eberl</td>
<td>November 1993</td>
</tr>
<tr>
<td>KUL, Leuven, Belgium</td>
<td>Dr. DeRoo, Dr. Mortelmans</td>
<td>December 1993</td>
</tr>
<tr>
<td>Karolinska, Stockholm, Sweden</td>
<td>Dr. Larsson</td>
<td>February 1994</td>
</tr>
<tr>
<td>Samsung Medical Center, Seoul, Korea</td>
<td>Dr. Kim</td>
<td>March 1994</td>
</tr>
<tr>
<td>Cleveland Clinic Foundation, Cleveland, Ohio</td>
<td>Dr. Go, Dr. McIntyre</td>
<td>October 1994</td>
</tr>
</tbody>
</table>

A Company Driven by Quality, Business Ethics, and Long-Term Clinical Innovation

TRIONIX

RESEARCH LABORATORY, INC.

8037 Bavaria Road • Twinsburg, Ohio 44087 USA • Telephone: (216) 425-9055 • Fax: (216) 425-9059
e-mail: sales@trionix.com

© 1996 TRIONIX Research Laboratory, Inc. All trademarks are the property of their respective companies. TR5615 Rev. B August 1996
New from DuPont Radiopharmaceuticals:
High Quality and Extended Stability
in a SPECT Brain Perfusion Agent

JUST WHAT YOU’RE LOOKING FOR...
Technetium Tc99m Bicisate should be used with caution in patients with renal or hepatic impairment since it is eliminated primarily by renal excretion. Adverse reactions are rare (≤1%). For details, see Adverse Reactions section of the prescribing information. In clinical trials, at least one of three readers of Neurolite® images (blinded to all other clinical information) correctly diagnosed stroke for 85% of the subjects with stroke while unblinded interpretation of CT/MRI images resulted in the correct diagnosis of stroke in 88% of subjects with stroke. There were 11 false positive and 34 false negative interpretations of Neurolite images and 0 false positive and 31 false negative interpretations of CT/MRI results.

Normal images, using Neurolite, of a 36-year-old female.
—Courtesy of Thomas C. Hill, MD, Deaconess Hospital, Boston, Mass
Just what you're looking for...
HIGH-QUALITY IMAGES...
EXTENDED STABILITY...

High-Definition Perfusion Images
Well-defined lesions
- Clear definition of perfusion defects as determined by visual analysis
High brain-to-background activity
- Clear delineation between brain and background structures early after injection

Extended In Vitro Stability
The SPECT brain agent with 6-hour stability after preparation
- Allows for more flexible patient scheduling
- Useful in the acute setting since doses can be prepared beforehand
- Enables SPECT brain imaging to be used with agitated or uncooperative patients where study delays are often encountered
- Allows for convenience of unit dosing

Please see brief summary of prescribing information at the end of this advertisement.
Introducing Neurolite®

JUST WHAT YOU’RE LOOKING FOR...

Desirable pharmacokinetics/dosimetry

♦ Accumulates rapidly in the brain.\(^1,2\)
♦ Localizes as a function of regional brain perfusion, cellular uptake, and metabolism within the cells
♦ Rapid blood clearance—(<10% remains in the blood after 1 minute, <5% after 60 minutes)
♦ A dosing range of 10-30 mCi of Neurolite provides the flexibility to achieve improved image quality and/or reduced imaging time\(^3\)

Simple room-temperature preparation
One-step quality control procedure

NEUROLITE®
KIT FOR THE PREPARATION OF TECHNETIUM Tc99m BICISATE INJECTION
Quality you expect. Stability you need.
**FOR DIAGNOSTIC USE**

The following is a brief summary. For more information please see complete prescribing information.

**INDICATIONS**

Neurolite single photon emission computerized tomography (SPECT) is indicated as an adjunct to conventional CT or MRI imaging in the localization of stroke in patients in whom stroke has already been diagnosed.

Neurolite is not indicated for assessment of functional viability of brain tissue. Also, Neurolite is not indicated for distinguishing between stroke and other brain lesions.

**CONTRAINDICATIONS**

None known.

**WARNINGS**

None known.

**PRECAUTIONS**

General

USE WITH CAUTION IN PATIENTS WITH RENAL OR HEPATIC IMPAIRMENT. TECHNETIUM Tc99m BICISATE IS ELIMINATED PRIMARILY BY RENAL EXCRETION. WHAT IS KNOWN ABOUT Tc99m BICISATE IS THAT IT HAS BEEN USED IN PATIENTS WITH RENAL OR HEPATIC IMPAIRMENT BUT NOT STUDIED.

Patients should be encouraged to drink fluids and to void frequently during the 2-6 hours immediately after injection to minimize radiation dose to the bladder and other target organs.

Contents of the vials are intended only for use in the preparation of Technetium Tc99m Bicisate and are not to be administered directly to the patient without first undergoing the preparation procedure.

The contents of each vial are sterile and nonpyrogenic. To maintain sterility, aseptic technique must be used during all operations in the manipulation and administration of Neurolite.

Technetium Tc99m Bicisate should be used within six hours of the time of preparation.

As with any other radioactive material, appropriate shielding should be used to avoid unnecessary radiation exposure to the patient, occupational workers, and other people.

Radiopharmaceuticals should be used only by physicians who are qualified by specific training in the safe use and handling of radionuclides.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**

Studies have not been conducted to evaluate carcinogenic potential or effects on fertility. When tested in vitro, Neurolite prepared with decayed generator eluate induced unshedded DNA synthesis in rat hepatocytes and caused an increased frequency of sister chromatid exchanges in CHO cells; but, it did not induce chromosome aberrations in human lymphocytes or cause gene mutations in the Ames test or in a CHO/HGPRT test. Unreacted bicisate dihydrochlonde increased the apparent rate of gene mutation of the TA 97 strain of S. typhimurium in the Ames test, but, it did not demonstrate clastogenic activity in an in vivo micronuclear assay in mice.

**Pregnancy: Teratogenic Effects**

**Pregnancy Category C**

Animal reproduction studies have not been conducted with Technetium Tc99m Bicisate. It is also not known whether Technetium Tc99m Bicisate can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Therefore, Technetium Tc99m Bicisate should not be administered to a pregnant woman unless the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers**

Technetium Tc99m Bicisate can be excreted in human milk. Therefore, formula should be substituted for breast milk until the technetium has cleared from the body of the nursing woman.

**Pediatric Use**

Safety and effectiveness in children have not been established.

**ADVERSE REACTIONS**

In clinical trials, Neurolite has been administered to 1022 subjects (282 normals, 760 patients). Of these, 548 (54%) were men and 473 (46%) were women. The mean age was 58 years (range 17 to 92 years). In the 760 patients who had experienced neurologic events, there were 11 (1.4%) deaths, none of which were clearly attributed to Neurolite. A total of 60 subjects experienced adverse reactions; the adverse reaction rates were comparable in the <65 year and the >85 year age groups.

The following adverse effects were observed in <1% of the subjects: headache, dizziness, seizure, agitation/anxiety, malaise/somnolence, parosmia, hallucinations, rash, nausea, syncope, cardiac failure, hypertension, angina, and apnea/cyanosis.

In clinical trials of 197 patients, there were inconsistent changes in the serum calcium and phosphate levels. The cause of the changes has not been identified and their frequency and magnitude have not been clearly characterized. None of the changes required medical intervention.

**DOSEAGE AND ADMINISTRATION**

Before administration, a patient should be well hydrated. After administration, the patient should be encouraged to drink fluids liberally and to void frequently.

The recommended dose range for intravenous administration for a 70 kg patient is 370 - 1110 MBq (10-30 mCi). The dose adjustments for age, weight, gender, or renal or hepatic impairment have not been studied.

The dose for the patient should be measured by a suitable radioactivity calibration system immediately before administration to the patient. Radiochemical purity should be checked before administration to the patient.

Neurolite, like other parenteral drug products, should be inspected visually for particulate matter and discoloration prior to administration whenever solution and container permit. Preparations containing particulate matter or discoloration should not be administered. They should be disposed of in a safe manner, in compliance with all applicable regulations.

Prior to reconstitution, vial A and vial B are stored at 15°-25°C. Protect vial A from light.

Store at room temperature (15°-30°C) after preparation. Aseptic techniques and effective shielding should be employed in withdrawing doses for administration to patients. Waterproof gloves and effective shielding should be worn when handling the product.

**RADIATION DOSIMETRY**

The radiation dose to organs and tissues of an average patient (70 kg) for Technetium Tc99m Bicisate injected intravenously for 370 MBq (10 mCi) is shown in Table 4 and for 1110 MBq (30 mCi) are shown in Table 5.

<table>
<thead>
<tr>
<th>Organ</th>
<th>2.0 Hr. Void</th>
<th>4.8 Hr. Void</th>
</tr>
</thead>
<tbody>
<tr>
<td>mCi/ MBq</td>
<td>MBq/ MBq</td>
<td>MBq/ MBq</td>
</tr>
<tr>
<td>mCi/ MBq</td>
<td>MBq/ MBq</td>
<td>MBq/ MBq</td>
</tr>
<tr>
<td>Organ</td>
<td>2.0 Hr. Void</td>
<td>4.8 Hr. Void</td>
</tr>
<tr>
<td>Brain</td>
<td>1.26</td>
<td>1.41</td>
</tr>
<tr>
<td>Gallbladder Wall</td>
<td>2.04</td>
<td>2.04</td>
</tr>
<tr>
<td>Intestine Wall (Lower)</td>
<td>2.95</td>
<td>2.95</td>
</tr>
<tr>
<td>Intestine Small</td>
<td>3.48</td>
<td>3.73</td>
</tr>
<tr>
<td>Intestine Wall (Upper)</td>
<td>5.92</td>
<td>6.29</td>
</tr>
<tr>
<td>Kidneys</td>
<td>2.70</td>
<td>2.74</td>
</tr>
<tr>
<td>Liver</td>
<td>1.96</td>
<td>2.00</td>
</tr>
<tr>
<td>Lungs</td>
<td>0.74</td>
<td>0.74</td>
</tr>
<tr>
<td>Nerves</td>
<td>2.00</td>
<td>2.96</td>
</tr>
<tr>
<td>Red Mawore</td>
<td>0.89</td>
<td>1.00</td>
</tr>
<tr>
<td>Tests</td>
<td>0.81</td>
<td>1.33</td>
</tr>
<tr>
<td>Throidy</td>
<td>1.30</td>
<td>1.30</td>
</tr>
<tr>
<td>Urinary Bladder Wall</td>
<td>11.10</td>
<td>27.01</td>
</tr>
<tr>
<td>Total Body</td>
<td>0.89</td>
<td>1.07</td>
</tr>
</tbody>
</table>

| Organ                  | 2.0 Hr. Void | 4.8 Hr. Void |
| mCi/ MBq               | MBq/ MBq     | MBq/ MBq     |
| mCi/ MBq               | MBq/ MBq     | MBq/ MBq     |
| Organ                  | 2.0 Hr. Void | 4.8 Hr. Void |
| Bone Surfaces          | 3.77         | 4.22         |
| Brain                  | 6.11         | 6.11         |
| Gallbladder Wall       | 27.75        | 27.75        |
| Intestine Wall (Lower) | 14.43        | 16.65        |
| Intestine Small        | 10.43        | 11.10        |
| Intestine Wall (Upper) | 17.76        | 18.87        |
| Kidneys                | 8.10         | 8.21         |
| Liver                  | 5.88         | 5.92         |
| Lungs                  | 2.22         | 2.22         |
| Ovaries                | 5.99         | 6.88         |
| Red Mawore             | 2.66         | 3.29         |
| Tests                  | 2.44         | 4.00         |
| Throidy                | 3.89         | 3.89         |
| Urinary Bladder Wall   | 33.43        | 81.03        |
| Total Body             | 2.66         | 3.22         |

Dosimetry calculated using the MIRD software program at Oak Ridge Associated Universities, P.O. Box 117, Oakridge, TN 29 July 1988.

**DU PONT MARKETED BY**

DuPont Radiopharmaceutical Division
The DuPont Merck Pharmaceutical Company
331 Treble Cove Road
Billerica, Massachusetts 01821
800-225-1572

All other business: 800-362-2968
(For Massachusetts and international, call 508-667-9531)

References:
CardiaL®

one camera for all nuclear cardiology needs

Elscint
Double Imaging Performance

Double-efficiency SPECT is just the start. CardiaL features all bi-plane imaging modes - from upright exercise to supine ventriculography. CardiaL provides the highest count-rate First-Pass studies... the finest resolution... and ultimate diagnostic precision with simultaneous Transmission/Emission* attenuation corrected SPECT.

Half the Setup Time

Sets up easier than a single head camera, yet CardiaL is the only system that shifts from supine to upright studies. And single-key-activation of automatic protocols ensures operational simplicity.

Designed for Times like These

CardiaL cuts both set-up and scan time in half, making it extremely cost-effective. What's more, CardiaL can perform two reimbursable studies in a single imaging procedure: both function and perfusion. And it runs non-cardiac applications equally well.

You'll be pleasantly surprised by the price... about the same as a single head system - a lot less than any other dual-head camera.

CardiaL®

It costs much less because it does much more

Elscint

The Intelligent Image

Elscint/U.S.A.: (201) 342-2020, 1-800-ELSCINT.

Elscint/Belgium: (2) 720.92.46  Elscint/Brazil: (11) 869-4644  Elscint/Canada: (416) 474-1229  Elscint/Central & Eastern Europe, Austria: (1) 9058-661

Elscint/Canada: (416) 474-1229  Elscint/Canada: (416) 474-1229  Elscint/Central & Eastern Europe, Austria: (1) 9058-661

Elscint/France: (1) 48-57-08-18  Elscint/Germany: (61) 22-7070  Elscint/Hong Kong: (5) 292231  Elscint/Israel: (04) 310310  Elscint/Italy: (2) 39320603

**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 Ceretec® and Neurolite®.

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)

- September 11-12, 1995
- November 13-14, 1995

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

Phone: (414) 777-3756 • Fax: (414) 771-3460
To keep current in a scientifically and technologically challenging field, nuclear medicine practitioners need to be up to date on the tools they need to perform at peak.

But do you have the tools you'll need to remain competitive among a range of diagnostic specialties competing for referrals?

The Society of Nuclear Medicine's "Pocket Lecture Series" can help you put Nuclear Medicine at the top of the list when referring physicians seek diagnostic imaging. This series provides concise, accurate, visually memorable presentations on a range of key nuclear medicine procedures.

When your referring physician colleagues are well-informed about nuclear medicine diagnostic tests, they'll be more likely to use them. The Pocket Lecture Series is targeted to improve YOUR referral rates.

Four lectures are available to new subscribers and other valuable presentations will appear in 1995. Each package comprises exactly what you need for an informative and informal talk to referring physicians and residents:

- 14 instructional slides, plus title and references slides
- A booklet summarizing and explaining each slide

And remember: Pocket Lecture Series slides are now the ONLY professional slides now being offered through the Society of Nuclear Medicine's Audiovisual Program.
Volume 1: "Captropil Renography," Salil D. Sarkar, MD, SUNY Health Science Center, Brooklyn, NY.

Highlights today's nuclear medicine approach for the diagnosis of patients with renovascular hypertension. With today's high-resolution quantitative scintigraphy and ACE-inhibiting drugs, nuclear medicine provides an exceptional test to identify that fortunate patient with potentially surgically reversible hypertension. Lecture clarifies principles of ACE-inhibition scintigraphy, teaches how to utilize an efficient protocol for performing and interpreting captropil renography.

Volume 2: "Double-Phase Tc-99m Sestamibi Parathyroid Scintigraphy," Raymond Taillefer, MD, FRCP (C), Hotel Dieu Hospital, Montreal, Quebec.

Clearly demonstrates the diagnostic advantages of a new and simpler scintigraphic method for noninvasive localization of hyperfunctional parathyroid tissue. Dr. Taillefer's presentation includes topics such as the clinical presentation and etiology of hyperparathyroidism, standardized acquisition and processing protocol, interpretation of typical case findings, and more.

Volume 3: "Comprehensive Gastric Motility Studies," Alan H. Maurer, MD, Temple University Hospital, Philadelphia, PA.

Provides a distillation of decades of development in clinical gastrointestinal scintigraphy from Temple University Hospital, a center renowned for its contributions to the subject. This pocket lecture will enable you and your colleagues to better understand this area, including clinical presentation of GI motility disorders, preparation of standardized gastric emptying acquisition protocol, processing of standardized gastric emptying studies, and more.

Volume 4: "Quantitative Cholescintigraphy," Gerbail T. Krishnamurthy, MD, FACP, VA Medical Center, Tucson, AZ.

Dr. Krishnamurthy demonstrates optimal hepatobiliary scintigraphy technique by supplementing diagnostic images with accurate quantization of liver and gall bladder function. Shows how nuclear medicine physicians can now provide referring physicians a reproducible measure of gall bladder contractile function, which can uniquely answer many clinical questions.

FORTHCOMING IN 1995

Volume 5: "Combined Functional Perfusion Myocardial Perfusion Imaging," Mark D. Wittry, MD, St. Louis University Hospital, St. Louis, MO.

Volume 6: "Thallium and Sestamibi Breast Scintigraphy," Alan D. Waxman, MD, Cedars-Sinai Medical Center, Los Angeles, CA.

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

Orders can now be placed with Matthews Medical Books, our new fulfillment center. If you order by phone with any major credit card, your books will be on their way within 48 hours.


Matthews Medical Books will be happy to send you an order form if you prefer to order by mail. Be sure to let your Matthews order-taker know if you're an SNM member.
NOMINATIONS SOUGHT FOR

Benedict Cassen Prize

$25,000 Award

To a scientist or physician-scientist whose work has led to a major advance in basic or clinical nuclear medicine science.

Deadline: November 15, 1995

For more information, contact: Education & Research Foundation, The Society of Nuclear Medicine, 1850 Samuel Morse Dr., Reston, VA 22090; or Sue Weiss, C.N.M.T., Administrative Director (312) 880-4416.

Now Available

Bound Volumes of The Journal of Nuclear Medicine

The Society of Nuclear Medicine announces a new service to readers who need to make sure that every recent issue of JNM is right at hand.

Now you can order full sets of “library quality” bound volumes of The Journal of Nuclear Medicine for 1993 (Volume 34) and 1994 (Volume 35). The cost is $195.00 including shipping and handling—little more than the same issues purchased separately as back copies.

Simply call Steve Klein at 703-708-9000, extension 213, to order.

Your new bound volumes—stamped with the Journal’s name, volume, and date—will be delivered in six to eight weeks.
Position Available

Nuclear Radiologist

Nuclear Radiologist Board Certified in Radiology and BC/BE in Nuclear Medicine/Nuclear Radiology to share responsibilities in Diagnostic Radiology and Nuclear Medicine. We are a private teaching hospital practice with radiology residents covering two hospitals with 1600 total beds. We perform 18,000 nuclear medicine procedures annually, with 35%-55% nuclear cardiology procedures. Modern equipment including dual head SPECT cameras at both hospitals and a networked computer system. Staff includes 3 radiologists including 4 in nuclear medicine. Mail or fax CV inquiries to: M. Moinuddin, MD, Mid-South Imaging & Therapeutics, PA, 910 Madison, Suite 704, Memphis, TN 38103. Fax: 901-526-8707.

PET Radio-Chemist

The University Hospital in Geneva has created a Position.

Position Wanted

Azerbaijani Nuclear Medicine physician, now resident in Iran, with eleven years experience in the field. Wishes temporary position in U.S institution. Since 1993, Assistant Professor in the Nuclear Medicine Department of the Medical Sciences University of Tabriz (Iran). Has experience with clinical work, research and teaching. Please contact: Rustam N. Samedov, MD, Asst. Professor; Dept. of Nuclear Medicine; Imam Khomeini Hospital; Medical Sciences University of Tabriz; Tabriz, Iran.
Now Available

REVIEW OF
NUCLEAR MEDICINE
TECHNOLOGY

Ann Steves, MS, CNMT

Build a solid foundation as you prepare for national certification examinations.

Increase the effectiveness of your study time.

SNM's Review of Nuclear Medicine Technology is the best single study aid you can own as you prepare for certification exams. Current, authoritative, thorough – the Review is a valuable addition to the libraries of students and specialists alike. Practical appendices cover –

- Test-taking techniques
- Sample questions and answers
- Pertinent NRC regulations

TO ORDER, CALL TOLL-FREE, MATTHEWS MEDICAL BOOKS,
1-800-633-2665
(Outside the U.S. 314-432-1401)
OptiCEL self-tuning digital detectors keep your nuclear systems out of the shop.

NEW OPTICEL™ DIGITAL DETECTORS. Sports cars aren’t the only high-performance machines that need constant tuning. To get optimal image quality consistently, your digital gammacamera will need ongoing adjustment as well. The question is, “Will you have to sacrifice uptime to get it?” Not with OptiCEL digital detectors from Toshiba. OptiCEL digital detectors feature Optotune™, an exclusive self-tuning technology that automatically adjusts the digital detector. That means that your Toshiba gammacamera will stay up and running, not up on the rack.

Available on Toshiba’s nuclear gammacamera systems, Optotune tunes the digital detector up to 512 times per second. That equates to super-crisp image quality every time, but of equal importance, it translates to exceptional reliability and maximum uptime. Digital detectors without Optotune may require service every two months to get similar tuning. And service time is downtime.

New OptiCEL digital detectors: powerful, self-tuned nuclear diagnostics designed to stay in service... and out of the shop. For more information call: 1-800-421-1968

In Touch with Tomorrow
TOSHIBA

GLOBAL IMAGING • MEDICAL SYSTEMS