Heavyweight

CintiChem Technetium 99m Generators Are The Heaviest You'll Find—On Purpose
Technetium 99m Generators from Cintichem, Inc. have 3.77 inches of lead surrounding the column for maximum radiation protection. The secondary shield adds 5/8” more lead to make our generators safer yet. And only MPI Generators offer depleted uranium shielding in higher calibrations, designed to maximize radiation protection, convenience and reduce costs. With 20 sizes and 2 calibration days, we can meet virtually every need.

Convenience is also designed INTO every MPI Generator. It is the only generator with rapid, easy horizontal elution via a shielded elution port. The simple, one-step elution reduces work time while eliminating direct eye exposure during the elution process. Eluate sterility is assured by the 0.22 micron filter on the terminal fluid line and an autoclaved column.

And all CintiChem Technetium 99m Generators from Medi-Physics incorporate the following important advantages:

- **A NEW STERILE NEEDLE** is utilized for each elution, reducing the chances of a septic or pyrogenic situation occurring in routine clinical usage.
- **5cc, 10cc AND 20cc EVACUATED ELUTION VIALS** are available, allowing you to optimize the elution concentration to meet your needs.
- **RIGID QUALITY CONTROL TESTING,** which includes an elution check on each Generator, assures that it meets our rigid internal specifications. The assurance that 20 years experience in nuclear medicine brings.
- **ACCESSIBLE CUSTOMER SERVICE** on toll free telephone numbers. Our service personnel have in depth backgrounds in research, development, technical and clinical applications in nuclear medicine.

We are concerned about your safety. That will be evident when you receive your first CintiChem generator from MPI.

CintiChem® Technetium Tc99m Generators are jointly manufactured by Union Carbide Corporation and Cintichem, Inc. a wholly owned subsidiary of Medi-Physics, Inc.
Ask Medical Data Systems' Spectra™ system for results and it produces.

With its built-in protocols, the MDS system can give you information rapidly, even with an inexperienced operator.

And, as you gain experience, it can go far beyond the protocols . . . to give you results in virtually any nuclear medicine procedure.

For details, call Richard Howell, (313) 769-9353. Or write us at 2311 Green Road, Ann Arbor, Michigan 48105.

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Get up to 256 Kb—more than any other system provides without paying extra.

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Store up to 10 megabytes of data in both matrix and list mode.

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Digital’s new Gamma-11 delivers five essential features you can get from our competitors.

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Digital’s new Gamma-11 offers by far the most complete imaging system available. And at a price no one else can touch.

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GAMMA II™ and 400T™ great names with great potential but it is Us who make it happen. Single Photon Emission Tomography and Pseudoholography.

You do not need a floating point processor, DRI™ interface or a "black box". You do not even need a physicist to figure it out how to use it.

Can anyone else offer that?

We interface directly to the NCVII™ and allow the data to be acquired as a regular dynamic study. The acquired data can be immediately displayed in a pseudoholographic form without additional processing. The data can also be reconstructed by a technique of filtered backprojection and re-formated to transaxial slices. The slices to be reconstructed are selected by the operator by means of a cursor. Adding of adjacent slices allows thickening of the slices and the program provides a choice of filters. The reconstructed data is analysable by the existing library of GAMMA II™ commands.

* Conventional Xray CT scan of liver showing numerous metastatic tumours.
  Note several artifacts in the spleen

* Single photon Emission tomography obtained by the above mentioned system. Cut through the liver for direct comparison with corresponding Xray CT cut.

DSA
Digital Systems & Applications Inc.
31 WOODLAWN AVE. EAST,
TORONTO, ONTARIO, CANADA M4T 1B9
(416) 964-2080

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*Conventional Xray CT scan of liver showing numerous metastatic tumours. Note several artifacts in the spleen*

*Single photon Emission tomography obtained by the above mentioned system. Cut through the liver for direct comparison with corresponding Xray CT cut.*

**DSA**

*Digital Systems & Applications Inc.*

31 WOODLAWN AVE. EAST,
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A message to our customers...

In this, our ninth year of operation, we would like to take this opportunity to thank you, our customers, for making Nuclear Pharmacy, Inc., the leading chain of nuclear “Pharmacy Service Centers” in the world.

Nuclear Pharmacy, Inc. wasn’t far behind the isotope. We created the first nuclear pharmacy service center to serve hospitals, doctors and patients who demanded the highest priority in quality products with rigid quality control, with emphasis on radiation safety and rapid service.

Today, Nuclear Pharmacy, Inc. has 44 “Pharmacy Service Centers” throughout the nation with 14 more to open soon.

You have made us No. 1 and our pledge to you is that we will continue to earn the right every day. Thank you for your continued support.

Robert Lee Sánchez, R. Ph.
Chairman of the Board, President and Chief Executive Officer

Nunzio DeSantis, R. Ph.
Executive Vice President

Art Solomon, R. Ph.
Vice President, Professional Affairs
Technetium Tc 99m Pentetate Kit

For kidney imaging, brain imaging, to assess renal perfusion, and to estimate glomerular filtration rate

Does not accumulate in choroid plexus
Rapid clearance rate of DTPA allows:
• brain imaging in less time than with sodium pertechnetate Tc 99m
• delayed brain imaging in 30-40 minutes, as compared with 3-4 hours with technetium Tc 99m pertechnetate
Easy two-step procedure

Kit contains 10 multidose reaction vials.

For further information, call Technical Customer Service, 609-921-4100.

See next page for brief summary.
**DESCRIPTION:** The kit consists of 10 multidose reaction vials, each containing a sterile, pyrogen-free lyophilized mixture of 10 mg pentetate calcium trisodium, 0.50 mg stannous chloride under a nitrogen atmosphere. When sterile, pyrogen-free sodium pertechnetate Tc 99m in isotonic saline is added to the vial, a chelated technetium Tc 99m pentetate is formed. The product as supplied is sterile and pyrogen-free.

**INDICATIONS AND USAGE:** Technetium Tc 99m pentetate may be used to perform kidney imaging, brain imaging, to assess renal perfusion, and to estimate glomerular filtration rate.

**CONTRAINDICATIONS:** None known.

**WARNINGS:** None known.

**PRECAUTIONS:** Contents of the vial are intended only for use in the preparation of technetium Tc 99m pentetate and are not to be administered directly to the patient except after the addition of sodium pertechnetate Tc 99m. The contents of the kit are not radioactive. However, after the reaction is complete, the technetium Tc 99m pentetate as well as other radioactive drugs, must be handled with care, and appropriate safety measures should be used to minimize radiation exposure to the patient. Prior to preparing the technetium Tc 99m pentetate solution, a complete medical history should be obtained of the patient.

To minimize radiation dose to the bladder, the patients should be encouraged to drink fluids and to void immediately before the examination, and for the next 4 to 6 hours thereafter, as often as possible. Technetium Tc 99m pentetate should be formulated within 6 hours prior to clinical use for brain and kidney imaging, and for assessing renal perfusion. For estimating glomerular filtration rates Tc 99m pentetate should be used within 1 hour of formulation.

The components of the Technetium Tc 99m Pentetate Kit (Chelate) are supplied sterile and non-pyrogenic. Aseptic procedures normally employed in handling radioactive solutions should be used during addition of pertechnetate solution and the withdrawal of doses for patient administration. The labeling reactions involved in preparing the agent depend on maintaining the tin in the reduced state. Any oxidant present in the sodium pertechnetate Tc 99m supply may thus adversely affect the quality of the prepared agent.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** No long-term animal studies have been performed to evaluate carcinogenic potential or whether technetium Tc 99m pentetate affects fertility in males or females.

**Pregnancy Category C:** Animal reproductive studies have not been conducted with technetium Tc 99m pentetate. It is also not known whether technetium Tc 99m pentetate can cause fetal harm or affect reproduction capacity when administered to a pregnant woman. Technetium Tc 99m pentetate should be given to a pregnant woman only if clearly needed. Ideally, examinations using radiopharmaceuticals, especially those electively in nature, of a woman of childbearing capability should be performed during the first few (approx. 10) days following the onset of menses.

**Nursing Mothers:** Since Tc 99m is excreted in human milk during lactation, formula feedings should be substituted for breast feedings.

**Pediatric Use:** Safety and effectiveness in children below the age of 18 have not been established.

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

**ADVERSE REACTIONS:** None specifically attributable to the use of technetium Tc 99m pentetate have been reported.

**Drug Abuse and Dependence:** There is no report of any drug abuse or dependence with this diagnostic agent.

**Overdosage:** Increased radiation exposure would be expected if an overdosage of the diagnostic agent occurred. For complete prescribing information, consult package insert.

**HOW SUPPLIED:** Technoplex (Technetium Tc 99m Pentetate Kit) is supplied as a sterile, pyrogen-free kit containing 10 sterile multidose reaction vials and 20 pressure-sensitive labels.

**CONVENIENCE... HI-D lead glass syringe and vial shields.**

The Nuclear Regulatory Commission now requires their Medical Licensees to use protective syringe and vial shields.

Nuclear Pacific products give you more than safe protection; they give you 360 degrees of visibility. The optical clarity and lead content of Hi-D* glass is unsurpassed in the industry. The importance of shielding has recently been re-emphasized by NRC studies that find failure to use protective shields can result in radiation dose rates to fingers and hands of 100 mrad to one rad per minute, or a projected lifetime dose of 4,000 to 100,000 rads.

Visibility allows efficient handling of radiopharmaceuticals, reducing exposure time. For 99mTc exposure, radiation protection from 10 to 40 HVL is offered in eight different models of the vial shield. Shields are available for all leading generator brands. Each shield loads with a twist and centers the vial for easy needle access to the rubber septum. Removable twist lock caps enable ease of cleaning and needle insertion.

Remember, for 30 years Nuclear Pacific, Inc., has set the standard for visibility and protection in the radiation shielding industry.

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Radcal Corporation announces the introduction of

The Model 4045
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at the 29th Annual Meeting of the Society of Nuclear Medicine in Miami Beach.

To see the prototype and discuss the many features of this microprocessor-based instrument, stop at BOOTH 1008
(next to the concession stand)
the instrument of choice for nuclear cardiology

and the only computerized multicrystal camera for first-pass studies at rest and with exercise stress: System Seventy-Seven.

Complete Data
Get all the cardiac pump parameters and images: ejection fraction, left ventricular volumes, stroke volume, cardiac output, REFI, cines (two displayed simultaneously for rest/exercise comparisons), and wall motion displayed with reference end-diastolic perimeters for easy detection of hypokinetic or akinetic segments.

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Get complete cardiac data on the upright exercising patient, routinely, in 10 seconds at the patient’s maximum exercise level. There is no need to perform long acquisitions at sub-maximum levels of exercise to avoid complete data loss.

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Get complete hardware and software for nuclear cardiology in one system. Training is arranged for physicians and technologists in the factory classroom and/or on-site. A quality control program monitors ongoing data reduction accuracy.

For excellence in clinical nuclear cardiology, you should be talking to Baird Corporation, 125 Middlesex Turnpike, Bedford, MA 01730, Telephone 1-800-225-1487, Extension 6500. Telex 923491. Cable BAIRDCOBFRD.

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Baird
Toward certainty in cardiac diagnostics
The most beautiful thing about our Dyna Camera Series 5 is the way it performs.

We're proud of the way our new Dyna™ Camera system looks. We think it's the industry's most attractive gamma camera system package. But we're far prouder of just how well Dyna Camera Series 5 works.

A beautiful design. Our central workstation, for instance, is stylish. But it was designed to meet your needs for efficiency, comfort and patient throughput. And, unlike its complicated and cluttered competitors, our control console has been fashioned to facilitate the performance of all the many manipulations necessary in the practice of modern nuclear medicine.

A beautiful image. Picker International continues to supply you with the leading edge in gamma camera technology in its Dyna Camera Series 5 system. Your choice of high performance detectors, exclusive Micro Z ACE™ Imaging for unequaled contrast enhancement, built-in Dyna Dot photographic camera system for high resolution films, and a host of other accessories insure top performance in all nuclear medicine modalities.

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Precision performance. Sophisticated styling. The new Dyna Camera Series 5 has it all. And it all works beautifully. For you. Contact Picker International, Nuclear and Ultrasound, P.O. Box 99, 12 Clintonville Road, Northford, CT 06472.

PICKER INTERNATIONAL

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Dyna Scan with Micro Z and ACE™ Imaging for increased contrast and resolution.

Now, you can attain superior three dimensional ACE images. The Dyna Scan system provides rock-solid rotation and body contouring for clearer, sharper images. Yet this system preserves the positioning flexibility required for routine spot-view imaging, while adding the capacity for single or multi-pass whole body scanning. The Dyna Scan system is compatible with Dyna Cameras 4, 4C and Series 5. And unlike other ECT manufacturers, we didn’t compromise on our shielding which remains at 500 KeV.

Easily interfaces with all computers. Our microprocessor-based gantry allows trouble free interface with your present computer. You can also purchase the system with a complete turnkey work station with computer.

See the Dyna Scan difference in image quality. Call your local representative, or write Picker International, Nuclear and Ultrasound, 12 Clintonville Road, P.O. Box 99, Northford, CT 06472.

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PICKER INTERNATIONAL
We were first to make ECT practical...
By working closely with clinicians, we were able to introduce the MaxiCamera™ 400T as the first nuclear diagnostic system with tomographic capability. It effectively meets real clinical needs, such as better contrast enhancement with more sensitive transaxial images in liver and soft tissue studies, and positive identification of cardiac infarcts. And for greater productivity, it can perform the whole range of routine and specialized nuclear procedures, including single pass, whole body studies.

MaxiCamera 400A makes spatial distortion corrections practical.

Now you can achieve even better resolution, linearity and uniformity with the advanced MaxiCamera 400A with Autotune ZS. This camera automatically retunes each photomultiplier tube many times each second to provide the stable detector response necessary to make real-time spatial distortion and energy corrections practical for an analog system. With no delays in your system’s operation, and no decrease in sensitivity.

Star computer provides automatic ECT data acquisition and analysis.

By adding the Star™ data acquisition system and tomographic software to your MaxiCamera 400T system, you can have comprehensive ECT capability, with touch-button convenience. Camera movement and data acquisition are automatically controlled according to your specifications. And you can display reconstructions as transaxial, sagittal, coronal and oblique angle projections. The Star system also features a full range of automatic programs for routine and specialized liver and cardiac studies, which dramatically increase diagnostic information while saving you precious time.

For greater investment value, GE nuclear systems are designed for upgradeability. And backed by our worldwide service network and parts availability. With practical, proven nuclear imaging systems from a single source, your choice could be practically automatic.

Liver data shown in a transaxial, sagittal and coronal view projection. Fully automatic cardiac analysis with the P.A.G.E. software program.

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GENERAL ELECTRIC

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The Novo Cerebrograph quantifies data on various functional and hemodynamic changes within the brain through measurement of regional Cerebral Blood Flow (rCBF). This multidetector system yields results frequently unobtainable by other methods. The rCBF technique is used to study a broad range of pathological conditions, including cerebrovascular disease, head trauma, and dementia states. It is also used in neuropsychology to quantify changes in cortical activation during higher mental functions.

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There are 32 reasons why Apex Processors are better


elscint
There are 32 reasons why Apex Processors are better than any other Nuclear Medicine Data Systems. This is reason Number 1.

When you work with an apex display you don’t manipulate a computer terminal. You study a diagnostic report.

Elscint has prepared a full-color booklet detailing all 32 reasons. Contact us today for your personal copy.
The non-interpolated 512x256 Apex matrix results in an "analog quality" image. Presented in 256 user-programmable hues or gray shades, the display is divisible into independently controlled quadrants—each with contrast enhancement and cinematic speed continuously variable.

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Apex Processors: 32 Ways Better!

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“Sometimes, an ADAC Nuclear Medicine System gives you only part of the picture. The good part.”

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"Most systems can't discriminate between normal and ectopic beats during gated cardiac studies. So they can't give you accurate data on patients with abnormal rhythms.

But the ADAC system can. It analyzes 100% of the R-R interval for every beat.

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You won't find this Bad Beat Rejection capability on any system but ours."

CHARLES W. CANTONI, PRESIDENT

Bad Beat Rejection for ADAC Nuclear Medicine Systems.

ADAC's Bad Beat Rejection gives you many options never before possible with cyclic gated acquisition.

This new development - part hardware, part software - is designed specifically for ADAC Nuclear Medicine Systems that have an ADAC Arithmetic Processing Unit (APU).

For the first time in nuclear medicine, it enables you to separate or delete bad beats and save every good beat without time-consuming reconstruction.

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In addition, you can preselect windows for rest and stress heart rates, or normal and ectopic beat studies.

Bad Beat Rejection significantly reduces acquisition time for patients with abnormal rhythms. It may also reduce the number of cases requiring catheterization.

And because it allows analysis of the entire R-R interval - including the P-wave - valuable information about atrial contractions may be obtained for the first time.

For more information about Bad Beat Rejection and ADAC Nuclear Medicine Systems, please write or call ADAC Laboratories, 255 San Geronimo Way, Sunnyvale, CA 94086. (800) 538-8531. In California, call collect (408) 736-1101.TWX: 910-339-9393.
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For technical assistance call 800-325-8181 toll-free
(In Missouri, 314-895-2405 collect)

See us at the SNM Show in Miami Beach at Island 18

See brief summary on adjacent page.
THALLIOUS CHLORIDE
TI 201 INJECTION

Diagnostic—For Intravenous Use
Brief Summary—for full prescribing information consult package insert.

DESCRIPTION
Thallium Chloride TI 201 injection is supplied in isotonic solution as a sterile, nonpyrogenic diagnostic radiopharmaceutical for intravenous administration. Each ml contains 1 mCi Thallium Chloride TI 201 at calibration time made isotonic with 9 mg sodium chloride and preserved with 0.9% (w/v) benzyl alcohol. The pH is adjusted to between 4.5-7.0 with hydrochloric acid and/or sodium hydroxide. Thallium TI 201 is opalescent produced. It is essentially carrier-free and contains no more than 0.1% Thallium TI 200 and no more than 1.0% Thallium TI 202.

CLINICAL PHARMACOLOGY
Current use of Thallium Chloride TI 201 has been found to accumulate in viable myocardium in a manner analogous to potassium. Experiments employing labeled microspheres in human volunteers have shown that the myocardial distribution of Thallium Chloride TI 201 correlates well with regional perfusion.

In clinical studies, thallium images show areas of infarction as “cold” or nonfilled regions which are confirmed by electrocardiographic and enzyme changes. Regions of transient myocardial ischemia corresponding to areas perfused by coronary arteries with partial stenoses have been visualized as cold spots when thallium was administered in conjunction with an exercise stress test.

After intravenous administration, Thallium Chloride TI 201 clears rapidly from the blood with maximal concentration by normal myocardium occurring at about ten minutes. Five minutes after intravenous administration only 5.6 percent of injected activity remained in the blood. A hyperboloidal disappearance curve was obtained, with 0.5 percent of the blood radioactivity disappearing with a 1/2 life of about 5 minutes. The remainder had a T1/2 of about 40 hours. Approximately 4 to 8 percent of the injected dose was in the blood at the first 24 hours. The whole body disappearance half-time was 9.8 ± 2.5 days. Kidney concentration was found to be about 3 percent of the injected activity and the testicular content was 0.15 percent. Net thyroid activity was determined to be only 0.2 percent of the injected dose, and the activity disappeared in 24 hours. From anterior and posterior whole-body scans, it was determined that about 45 percent of the injected dose was in the large tissue and contiguous structure (liver, kidneys, adenoidal mucosa).


INDICATIONS AND USAGE
Thallium Chloride TI 201 may be used in myocardial perfusion imaging and for the diagnosis and localization of myocardial infarction. It may also be used in conjunction with exercise stress testing as an adjunct in the diagnosis of ischemic heart disease (atherosclerotic coronary artery disease).

It is usually not possible to differentiate recent from old myocardial infarction, or to differentiate exactly between recent myocardial infarction and ischemia.

CONTRAINDICATIONS
None known.

WARNINGS
When studying patients suspected or known to have myocardial infarction or ischemia, care should be taken to assure continuous clinical monitoring and treatment in accordance with proper, accepted procedure. Exercise stress testing should be performed only under the supervision of a qualified physician and in a laboratory equipped with appropriate resuscitation and support apparatus.

PREGNANCY CATEGORY C
Adequate reproduction studies have not been performed in animals to determine whether this drug affects fertility in males or females, has teratogenic potential, or has other adverse effects on the fetus.

Thallium Chloride TI 201 should not be used in pregnant women except when benefits clearly outweigh the potential risks.

PRECAUTIONS
Ideal studies using radiopharmaceutical drug products, especially those elective in nature—women of childbearing capability should be performed during the first ten days following the onset of menaces.

NURSING MOTHERS
It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, a general rule nursing should not be undertaken when a patient is administered radioactive material.

Safety and effectiveness in children have not been established.

CARCINOGENESIS
No long-term animal studies have been performed to evaluate carcinogenic potential.

Data are not available concerning the effect on the quality of Thallium TI 201 scans of marked alterations in blood glucose, insulin or diet (such as is found in diabetes mellitus). Attention is directed to the fact that thallium is a potassium analog, and since the transport of potassium is affected by these factors, the possibility exists that thallium may likewise be affected.

As in the use of any radioactive material, care should be taken to minimize radiation exposure to the patient consistent with proper management and to assure minimum radiation exposure to occupational workers.

Radiopharmaceuticals should be used only by physicians who are qualified by training and experience in the safe use and handling of radioisotopes and who are trained and qualified to handle the apparatus.

This material should be used only under the direction of a qualified physician and in a laboratory equipped with appropriate resuscitation and support apparatus.

ADVERSE REACTIONS
Adverse reactions related to use of this agent have not been reported to date.

HOW SUPPLIED
Thallium Chloride TI 201 injection is supplied in a sterile, nonpyrogenic solution for intravenous administration. Each ml contains 1 mCi Thallium TI 201 at calibration time, 9 mg sodium chloride and 0.9 percent (v/v) benzyl alcohol. The pH is adjusted to between 4.5-7.0 with hydrochloric acid and/or sodium hydroxide solution. Vials are available in the following quantities of radioactivity: 2.0, and 4.0 milliequivalents of Thallium TI 201.

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Scan data:
The two scans above are of a 56-year-old female patient with breast cancer. Scan: abnormal activity in right ischial ramus. Instrument: General Electric MaxiCamera™ 535; total counts: 2000K; dose: 20.8 mCi; 5'5", 175 lb; dose-to-image time: 2.25 hours
Notice excellent bone delineation in this obese patient.

References:

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Osteoscan-HDP offers a high tumor-to-normal bone ratio. This results in high resolution scans capable of demonstrating subtle skeletal metastases and fractures with no sacrifice in overall image quality.

**Scan data:**
The two scans above are of a 79-year-old male patient with adenocarcinoma-prostate. Scan: multiple lesions. Instrument: Picker 4/15 Gamma Camera; information density: 3000; dose: 15 mCi; dose-to-image time: 3 hours. IVP revealed mass in right kidney causing retention.

Please see the following page for a brief summary of prescribing information.
INDICATIONS AND USAGE
OSTEOSCAN-HDP (Technetium Tc99m Oxidronate Kit) is a diagnostic skeletal imaging agent used to demonstrate areas of altered osteogenesis.

CLINICAL PHARMACOLOGY
During the 24 hours following injection, Technetium Tc99m Oxidronate and are NOT to be administered directly to the patient. Technetium Tc99m Oxidronate should be formulated within eight (8) hours prior to clinical use. Optimal imaging results are obtained one to four hours after administration.

Oxidronate as well as other radioactive drugs, must be handled with care, and appropriate safety measures should be used to minimize radiation exposure to the patients consistent with proper patient management. Radiopharmaceuticals should be used only by physicians who are qualified by specific training in the safe use and handling of radionuclides and whose experience and training have been approved by the appropriate government agencies. Physicians who fail to demonstrate the use of radiopharmaceuticals to minimize radiation dose to the bladder, patients should be encouraged to drink fluids and to void immediately before the examination and as often thereafter as possible for the next few hours.

Carcinogenesis, Mutagenesis, Impairment of Fertility
No long-term animal studies have been performed to evaluate carcinogenic potential or whether Technetium Tc99m Oxidronate affects fertility in males and females.

Pregnancy — Category C
Animal reproduction studies have not been conducted with Technetium Tc99m Oxidronate. It is also not known whether Technetium Tc99m Oxidronate can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Technetium Tc99m Oxidronate 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 10) days following the onset of menses.

Nursing Mothers
Technetium Tc99m is excreted in human milk during lactation, therefore formula feedings should be substituted for breast feedings.

Pediatric Use
Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Although adverse reactions have not been reported that are specifically attributable to the use of Technetium Tc99m Oxidronate, allergic dermatological manifestations (erythema) have been infrequently reported with similar agents.

DOSAGE AND ADMINISTRATION
General Instructions
The recommended adult dose of Technetium Tc99m-labeled OSTEOSCAN-HDP is 15 mCi with a range of 10 to 20 mCi. The activity of each dose should be measured by a suitable radiation calibration system just prior to administration. The dose should be given intravenously by slow injection. For optimal results imaging should be done 1-4 hours post-injection.

HOW SUPPLIED
OSTEOSCAN-HDP is supplied as a lyophilized powder packaged in vials. Each vial contains 3.0 mg oxidronate sodium and 0.24 mg stannous chloride as active ingredients, and 0.84 mg gentisic acid as a stabilizer. Kits containing 5 or 30 vials are available. The NDC number for this product is NDC:37000-407-01. The drug can be stored at room temperature both prior to and following reconstitution with ADDITIVE-FREE sodium pertechnetate Tc99m.

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Volume 23, Number 5

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CONTRAINDICATIONS: None known.

WARNINGS: This class of compound is known to complex cations such as calcium. Particular caution should be used with patients who have, or may be predisposed to, hypocalcemia (e.g., alkalosis).

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Technetium Tc 99m Medronate should be formulated within six (6) hours prior to clinical use.

Carcinogenesis, Mutagenesis, Impairment of Fertility. No long-term animal studies have been performed to evaluate carcinogenic potential or whether Technetium Tc 99m Medronate affects fertility in males or females.

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POSITIONS WANTED

NUCLEAR MEDICINE PHYSICIAN. Board certified Ph.D. M.D., over 60 publications, strong hematology background, clinical, teaching, and research experience present dept. head, seeks challenging position with some research opportunities. Reply: Box 504, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.

INTERNIST COMPLETING NUCLEAR MEDICINE Residency 6/82 (emphasis on Nuclear Cardiology) desires association with imaging group. Training has included 5 months Ultrasound. Contact: Jon Koeller, University Hospital RC-70, Seattle, Washington 98195.

Nuclear Radiology Physician
Large private practice radiology group in Southwest seeks full Associate with Board certification in Diagnostic and Nuclear Radiology to be Nuclear Medicine Section Chief in 1,000-bed, university affiliated, well-equipped hospital with both adult and pediatric practice. Must be willing to do general diagnostic radiology. Excellent practice and benefits.

Please provide curriculum vitae. Reply Box 500, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.


NUCLEAR PHYSICIAN, INTERNIST. ABNM. Assistant Professor. Seeks hospital teaching, or private practice. Part-time internal medicine or emergency medicine acceptable. Available 7/82. Reply: Box 404, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.

FOR SALE

OHIO NUCLEAR ULTIMAT II FOR imaging Nuclear Medicine procedures. 5 x 7 and 8 x 10 capability with dual intensity and multi-format capability including whole body. Good operating condition. $3,000.00 plus shipping. Ohio Nuclear Series 75 data storage-retrieval system. 75-01 Histogram capability-75-02 persistence scope. Excellent working condition. $4,500.00 plus shipping. Brattle physiological gating-system-split-screen option. Strip chart recorder. Good functioning order. $2,500.00 plus shipping. Matrix-1 multi-imager for ultrasound or Nuclear Medicine imaging. 8 x 10 capability. Good operating condition. $2,500.00 plus shipping. Contact: Stephen Bruyn, M.D., at area code (209)222-3357, Fresno, California.

Nuclear Medicine Technologist
Immediate day shift opening for a Nuclear Medicine Technologist to work with professional staff of 500-bed teaching hospital. Will be actively involved with progressive investigative tests in our computerized nuclear medicine department. Must be registered under ARRT nuclear medicine or NMTCB. Experienced candidates preferred.

We offer excellent salary commensurate with experience and comprehensive paid benefits. For further information call: Chuck DiStaulo, Personnel Representative, The Mt. Sinai Medical Center, University Circle, Cleveland, Ohio 44106; (216)421-4559.

An Equal Opportunity Employer M/F/H.

St. Francis Hospital of Wichita, Inc.

NUCLEAR MEDICINE TECHNICIANS
In Wichita, you will find a neighborly city of 300,000 that is alive and thriving. A city that combines a well-developed park system and clean, crystal blue skies with an urban diversity that includes 3 universities, major sports attractions, and a symphony orchestra. More than 6 major lakes are within easy drive.

At St. Francis, you will find an 886-bed, acute-care, general teaching hospital with over 90 years of tradition behind our commitment to patient care, education, research, and the community.

We have a full complement of modern imaging equipment, consisting of five gamma camera systems with computer interface and full body imaging capabilities. Several positions are available for registered or registry-eligible Nuclear Medicine Technologists. We offer an excellent salary and benefits package.

Learn more about St. Francis and Wichita. Send your resume or call collect:

Dean Cero
(316)268-5191
EMPLOYMENT CENTER
P.O. Box 1358
Wichita, KS 67201

An Equal Opportunity Employer M/F.
NUCLEAR MEDICINE TECHNOLOGIST

South County Hospital has an immediate opening for a Nuclear Medicine Technologist, registered or registry-eligible, in our modern and progressive 100-bed community hospital.

Duties include radiopharmaceutical preparation and general imaging, with participation in nuclear cardiology. The Nuclear Medicine Laboratory is equipped with a new Siemens ZLC gamma camera with Scintiview system.

Department geared toward continuing education.

South County Hospital overlooks sandy beaches and large marinas on southern shores of Rhode Island across the bay from Newport.

Salary is negotiable with excellent fringe benefits. Please submit resume to:
South County Hospital
Personnel Director
95 Kenyon Avenue
Wakefield, RI 02879
(401)783-3361

MEDICAL PHYSICIST

The University of Minnesota Radiology Department has a faculty opening for a Medical Physicist. Responsibilities include teaching, research, and clinical duties in Nuclear Medicine. Primary clinical duties and research opportunities involve emission computed tomography. Participation in diagnostic radiology research is encouraged.

A Master's degree in medical physics and one year experience is necessary. Promotion rank is contingent upon successful completion of the Doctoral degree. Computer experience is mandatory.

Salary and academic rank will be commensurate with qualifications.

Send curriculum vitae and three letters of reference from persons familiar with your work.

The University of Minnesota is an Equal Opportunity/Affirmative Action employer.

Contact: Richard L. Morin, Ph.D.
Department of Radiology
University of Minnesota
Box 292 Mayo
Minneapolis, MN 55455

UNIVERSITY OF CALIFORNIA
SAN FRANCISCO
SCHOOL OF MEDICINE

A Nuclear Medicine resident position is available beginning July 1, 1982 for a two-year program at San Francisco General Hospital Medical Center.

The program, approved by the ACGME and satisfying the requirements of the American Board of Nuclear Medicine, includes didactic instruction in radiological physics and mathematics, electronics, radiation safety, dosimetry, and nuclear medicine instrumentation.

Practical experience is provided in performance and interpretation of static and dynamic imaging, computer techniques, radioimmunoassay and other in vitro tests, radiopharmacy, and therapy with radionuclides. Residents participate fully in the integration of these modalities into patient care.

Prerequisite: Prior training in an ACGME-approved program in pathology, radiology, internal medicine, or pediatrics.

The University of California is an equal opportunity, affirmative action employer.

Requests for further information (include CV) should be directed to:
Myron Pollycove, M.D.
Chief, Nuclear Medicine
San Francisco General Hospital
Medical Center
San Francisco, CA 94110

NUCLEAR MEDICAL TECHNOSTOLOGISTS

Don't Choose One... Choose Three.

Located on Florida's Gold Coast, our hospitals are expanding their Nuclear Medicine Departments.

Day positions for registry or registry eligible technologists, experience in nuclear imaging and R.I.A. preferred. Nuclear cardiology experience a plus.

Excellent salary and benefits including new flexible personal leave program, 100% tuition reimbursement, etc. Send resume to:

District Personnel
NORTH BROWARD HOSPITAL DISTRICT
1625 Southeast Third Ave.
Ft. Lauderdale, FL 33316

An Equal Opportunity Employer M/F
NUCLEAR MEDICINE REVIEW SYLLABUS
Peter T. Kirchner, MD, Editor

Now Into Its Second Printing!

The rapid growth of clinical nuclear medicine poses a formidable challenge to the physician who wants to maintain a high level of competence in all areas of nuclear medicine. To help the physician meet this challenge, the Society of Nuclear Medicine has prepared the NUCLEAR MEDICINE REVIEW SYLLABUS, a comprehensive review of the major scientific and clinical advances that have occurred since the early 1970s.

The 619-page NUCLEAR MEDICINE REVIEW SYLLABUS offers a detailed overview of 12 major topic areas in nuclear medicine: Radiopharmacology; Instrumentation; Radiation Effects and Radiation Protection; Cardiovascular; Central Nervous System; Endocrinology; Gastroenterology; Genito-Urinary System; Hematology-Oncology; Pulmonary; Radioassay; Skeletal System.

With each chapter there is a clear, timely review of the subject and a substantial bibliography locating additional information. A 32-page index makes all of the volume's data instantly accessible. This highly readable guide to current practice was prepared by more than 50 recognized authorities, with each chapter written by acknowledged experts in the field.

The NUCLEAR MEDICINE REVIEW SYLLABUS will prove valuable to the practicing physician who wants to keep in touch with current clinical practice in all aspects of nuclear medicine. Those seeking certification will find the SYLLABUS extremely useful as a tool for final review.

NOTE: Since we have included some revisions in the second printing, an erratum page is available to purchasers of the first edition. To obtain a copy, please send a self-addressed, stamped envelope to the Society of Nuclear Medicine at the address listed below.

Mall to: Book Order Dept., Society of Nuclear Medicine, 475 Park Avenue South, New York, NY 10016. Make all checks payable to: Society of Nuclear Medicine, Inc. All orders must be prepaid, in U.S. dollars only, or accompanied by a purchase order.

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This volume, sponsored by the Computer and Instrumentation Councils, contains 25 papers and is divided into five sections covering important areas of computer software development in nuclear medicine, such as functional mapping and imaging of organ systems and the cardiac system.

Other important aspects of computer development and use—background subtraction, computed tomography, and image display techniques—are also included, making this attractive and comprehensive book indispensable to a wide audience of physicians, medical research scientists, and computer specialists.

Also of related interest are two other titles sponsored by the Computer Council: Nuclear Cardiology: Selected Computer Aspects ($12.50) and Single Photon Emission Computed Tomography and Other Selected Computer Topics ($18.00 member; $27.00 non-member).

ORDER FUNCTIONAL MAPPING NOW!

$19.00 for SNM members; $28.00 for non-members; plus $2.50 postage and handling for each book ordered. Prepayment required. Order from: Book Order Department, Society of Nuclear Medicine, 475 Park Avenue South, New York, New York 10016.
Who was the second man to break the 4-minute mile?

Until Roger Bannister broke the 4-minute mile, very few runners seriously considered the possibility. Yet, less than 2 months after Bannister proved it could be done, the record was broken again.

Who was the second man to break that mark?
Or the second company to provide thallium-201 for routine use?

There's an important difference between being second to break a track record and being second to bring a new product to the medical profession: The second sub-4-minute miler ran just as hard, and as far and as fast as Bannister. The second company to introduce a radiopharmaceutical has a lot easier course to run than the first.

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One can only wonder which—if any—of the companies who are traditionally second, third or fourth with products that NEN pioneered would have been first to commit its resources without a guarantee of success. After the leader does it first, the followers make it look easy.
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