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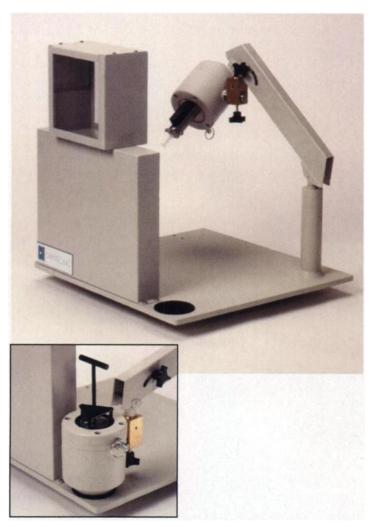
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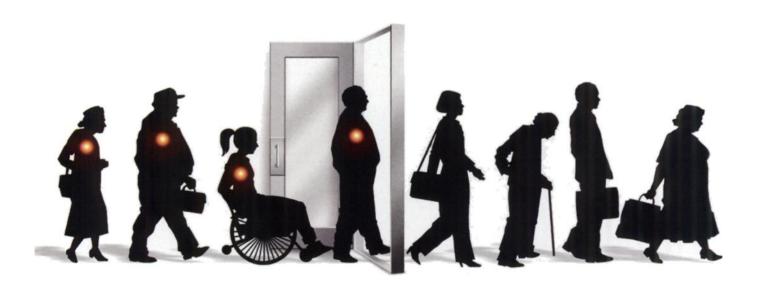
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# RAPID CLEARANCE IN CARDIAC NUCLEAR IMAGING





# Increase patient throughput—with rapid hepatic clearing, highly efficient MYOVIEW

Give your nuclear department "rapid clearance" capability with MYOVIEW. MYOVIEW clears quickly from the blood, liver, and lungs<sup>1-3</sup> for quality target-to-background ratios and timely imaging (as soon as 15 minutes or up to 4 hours post-injection). The clearance properties of MYOVIEW allow for highly flexible camera scheduling and enhanced patient management. Any way you look at it, you're cleared for efficiency with MYOVIEW.

In studying patients with known or suspected coronary artery disease, care should be taken to ensure continuous cardiac monitoring and the availability of emergency cardiac treatment.

Please see Brief Summary of Prescribing Information on adjacent page.

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References: 1. Sridhara BS, Braat S, Rigo P, et al. Comparison of myocardial perfusion imaging with technetium-99m tetrofosmin versus thallium-201 in coronary artery disease. Am J Cardial 1993;72[14]: 1015-1019. 2. Higley B, Smith FW, Smith T, et al. Technetium-99m-1,2-bis[bis[2-ethoxyethyl]phosphino]ethane: human biodistribution, dosimetry and safety of a new myocardial perfusion imaging agent. J Nucl Med. 1993;34[1]:30-38. 3. Kelly JD, Forster AM, Higley B, et al. Technetium-99m-tetrofosmin as a new radiopharmaceutical for myocardial perfusion imaging. J Nucl Med. 1993;34[1]:202-227.

MYOVIEW. The image of efficiency.

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Kit for the Preparation of Technetium Tc99m Tetrofosmin for injection Diagnostic Radiopharmaceutical for intravenous use only

#### R<sub>Y</sub> ONLY

Please consult full prescribing information before using. A summary follows:

#### DESCRIPTION

The Medi-Physics Myoview kit is supplied as a pack of five vials for use in the preparation of a technetium Tc99m tetrofosmin intravenous injection to be used for the scintigraphic delineation of regions of reversible myocardial ischemia in the presence or absence of infarcted myocardium. Each vial contains a predispensed, sterile, non-pyrogenic, lyophilized mixture of 0.23 mg tetrofosmin [6,9-bis(2-ethoxyethyl)-3,12-dioxa-6,9-diphosphatetradecane], 30 μg stannous chloride dihydrate (minimum stannous tin 5.0 μg; maximum total stannous and stannic tin 15.8 μg), 0.32 mg disodium sulphosalicylate and 1.0 mg sodium D-gluconate, and 1.8 mg sodium hydrogen carbonate. The lyophilized powder is sealed under a nitrogen atmosphere with a rubber closure. The product contains no antimicrobial preservative.

#### **CLINICAL PHARMACOLOGY**

#### General

When technetium Tc99m pertechnetate is added to tetrofosmin in the presence of stannous reductant, a lipophilic, cationic technetium Tc99m complex is formed, Tc99m tetrofosmin. This complex is the active ingredient in the reconstituted drug product, on whose biodistribution and pharmacokinetic properties the indications for use depend.

#### Clinical Trials

A total of 252 patients with ischemic heart disease or atypical chest pain who had a reason for exercise stress imaging were studied in two open-label, multi-center, clinical trials of Tc99m tetrofosmin (study a and study b). Of these 252 patients there were 212 (83%) males and 40 (17%) females with a mean age of 60.5 years (range 33.7 to 82.4 years). At peak exercise, maximum heart rate achieved and peak systolic blood pressure were comparable after Myoview and thallium-201 exercise studies.

All patients had exercise and rest planar imaging with Myoview and thallium-201; 191 (76%) patients also had SPECT imaging. The Myoview and thallium-201 images were separated by a mean of 5.1 days (1-14 days before or 2-14 days after Myoview). For Myoview imaging, each patient received 185-296 MBq (5-8 mCi) Tc99m tetrofosmin at peak exercise and 555-888 MBq (15-24 mCi) Tc99m tetrofosmin at reat approximately 4 hours later. For thallium-201 imaging, patients received thallium-201 55.5-74 MBq (1.5-2.0 mCi) at peak exercise.

The images were evaluated for the quality of the image (excellent, good or poor) and the diagnosis (with scores of 0 = normal, 1 = ischemia, 2 = infarct, 3 = mixed infarct and ischemia). The primary outcome variable was the percentage of correct diagnoses in comparison to the final clinical diagnosis. All planar images were blindly read; SPECT images were evaluated by the unblinded investigator. A subset of 181/252 (71%) patients had coronary angiography comparisons to the planar images of Myoview or thallium-201.

#### **INDICATIONS AND USAGE**

Myoview is indicated for scintigraphic imaging of the myocardium following separate administrations under exercise and resting conditions. It is useful in the delineation of regions of reversible myocardial ischemia in the presence or absence of infarcted myocardium.

#### CONTRAINDICATIONS

None known.

#### **WARNINGS**

In studying patients with known or suspected coronary artery disease, care should be taken to ensure continuous cardiac monitoring and the availability of emergency cardiac treatment.

#### **PRECAUTIONS**

#### General

To minimize radiation dose to the bladder, the patient should be encouraged to void when the examination is completed and as often thereafter as possible. Adequate hydration should be encouraged to permit frequent voiding.

The contents of the Myoview vial are intended only for use in the preparation of technetium Tc99m tetrofosmin injection and are NOT to be administered directly to the patient.

As with all injectable drug products, allergic reactions and anaphylaxis may occur.

Sometimes Tc99m labeled myocardial imaging agents may produce planar and SPECT images with different imaging information.

Technetium Tc99m tetrofosmin injection, like other radioactive drugs, must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Care should also be taken to minimize radiation exposure to the patient consistent with proper patient management.

Radiopharmaceuticals should be used by or under the control of physicians who are qualified by specific training and experience in the safe use and handling of radionuclides, and whose experience and training have been approved by the appropriate governmental agency authorized to license the use of radionuclides.

Drug Interactions: Drug interactions were not noted and were not studied in clinical studies in which Myoview was administered to patients receiving concomitant medication. Drugs such as beta blockers, calcium blockers and nitrates may influence myocardial function and blood flow. The effects of such drugs on imaging results are not known.

#### Carcinogenesis, Mutagenesis, Impairment of Fertility

Studies have not been conducted to evaluate carcinogenic potential or effects on fertility.

Tetrofosmin sulphosalicylate was not mutagenic in vitro in the Ames test, mouse lymphoma, or human lymphocyte tests, nor was it clastogenic in vivo in the mouse micronucleus test.

#### Pregnancy Category C

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

#### **Nursing Mothers**

Technetium Tc99m pertechnetate 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 pediatric patients have not been established.

#### **ADVERSE REACTIONS**

Adverse events were evaluated in clinical trials of 764 adults (511 men and 253 women) with a mean age of 58.7 years (range 29-94 years). The subjects received a mean dose of 7.67 mCi on the first injection and 22.4 mCi on the second injection of Myoview™.

Deaths did not occur during the clinical study period of 2 days. Six cardiac deaths occurred 3 days to 6 months after injection and were thought to be related to the underlying disease or cardiac surgery. After Myoview injection, serious episodes of angina occurred in 3 patients.

Overall cardiac adverse events occurred in 5/764 (less than 1%) of patients after Myoview injection

The following events were noted in less than 1% of patients:

Cardiovascular: angina, hypertension, Torsades de Pointes

Gastrointestinal: vomiting, abdominal discomfort

Hypersensitivity: cutaneous allergy, hypotension, dyspnea

Special Senses: metallic taste, burning of the mouth, smelling something

There was a low incidence (less than 4%) of a transient and clinically insignificant rise in white blood cell counts following administration of the agent.

#### DOSAGE AND ADMINISTRATION

For exercise and rest imaging, Myoview is administered in two doses:

The first dose of 5-8 mCi (185-296 MBq) is given at peak exercise.

The second dose of 15-24 mCi (555-888 MBq) is given approximately 4 hours later, at rest. Imaging may begin 15 minutes following administration of the agent.

Dose adjustment has not been established in renally or liver impaired, pediatric or geriatric patients.

#### RADIATION DOSIMETRY

Based on human data, the absorbed radiation doses to an average human adult (70 kg) from intravenous injections of the agent under exercise and resting conditions are listed in the following table. The values are listed in descending order as rad/mCi and  $\mu$ Gy/MBq and assume urinary bladder emptying at 3.5 hours.

#### Estimated Absorbed Radiation Dose (Technetium Tc99m Tetrofosmin Injection)

|                       | Absorbed radiation dose |                  |         |                  |  |
|-----------------------|-------------------------|------------------|---------|------------------|--|
|                       | Exe                     | rcise            | Re      | est              |  |
| Target organ          | rad/mCi                 | μ <b>Gy/MB</b> q | rad/mCi | μ <b>Gy/MB</b> q |  |
| Gall bladder wall     | 0.123                   | 33.2             | 0.180   | 48.6             |  |
| Upper large intestine | 0.075                   | 20.1             | 0.113   | 30.4             |  |
| Bladder wail          | 0.058                   | 15.6             | 0.071   | 19.3             |  |
| Lower large intestine | 0.057                   | 15.3             | 0.082   | 22.2             |  |
| Small intestine       | 0.045                   | 12.1             | 0.063   | 17.0             |  |
| Kidney                | 0.039                   | 10.4             | 0.046   | 12.5             |  |
| Salivary glands       | 0.030                   | 8.04             | 0.043   | 11.6             |  |
| Ovaries               | 0.029                   | 7.88             | 0.035   | 9.55             |  |
| Uterus                | 0.027                   | 7.34             | 0.031   | 8.36             |  |
| Bone surface          | 0.023                   | 6.23             | 0.021   | 5.58             |  |
| Pancreas              | 0.019                   | 5.00             | 0.018   | 4.98             |  |
| Stomach               | 0.017                   | 4.60             | 0.017   | 4.63             |  |
| Thyroid               | 0.016                   | 4.34             | 0.022   | 5.83             |  |
| Adrenals              | 0.016                   | 4.32             | 0.015   | 4.11             |  |
| Heart wall            | 0.015                   | 4.14             | 0.015   | 3.93             |  |
| Red marrow            | 0.015                   | 4.14             | 0.015   | 3.97             |  |
| Spleen                | 0.015                   | 4.12             | 0.014   | 3.82             |  |
| Muscle                | 0.013                   | 3.52             | 0.012   | 3.32             |  |
| Testes                | 0.013                   | 3.41             | 0.011   | 3.05             |  |
| Liver                 | 0.012                   | 3.22             | 0.015   | 4.15             |  |
| Thymus                | 0.012                   | 3.11             | 0.009   | 2.54             |  |
| Brain                 | 0.010                   | 2.72             | 0.008   | 2.15             |  |
| Lungs                 | 0.008                   | 2.27             | 0.008   | 2.08             |  |
| Skin                  | 0.008                   | 2.22             | 0.007   | 1.91             |  |
| Breasts               | 0.008                   | 2.22             | 0.007   | 1.83             |  |

Dose calculations were performed using the standard MIRD method (MIRD Pamphlet No.1 (rev). Society of Nuclear Medicine, 1976). Effective dose equivalents (EDE) were calculated in accordance with ICRP 53 (Ann. ICRP 18 (1-4), 1988) and gave values of 8.61 x 10<sup>3</sup> mSV/MBq and 1.12 x 10<sup>3</sup> mSV/MBq after exercise and rest, respectively.

#### Manufactured by:

Nycomed Amersham plc Amersham United Kingdom

Patent No. 5,045,302 (r)

#### Distributed by:

Medi-Physics, Inc., Arlington Heights, IL 60004 1-800-633-4123 (Toll Free)

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Revised December 1998

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#### See your way clear

# Decisive information keeps you on course

# Guiding you to optimal intervention for neuroendocrine tumors

- Somatostatin receptor scintigraphy with OctreoScan detects and localizes primary tumors and metastatic spread often missed by conventional imaging (sensitivity varies 61%-100%, depending on tumor type).<sup>1</sup>
- Whole-body scanning can more definitively confirm the extent of disease.
- You are better able to
  - stage the patient
  - determine diagnostic work-up
  - avoid unnecessary procedures
  - select optimal treatment
  - assess surgical candidates
  - evaluate response to treatment
- Transient adverse effects including dizziness, fever, flush, headache, hypotension, changes in liver enzymes, joint pain, nausea, sweating, and weakness were observed in less than 1% of 538 patients during clinical trials.
- Please see the prescribing information for special considerations regarding patients receiving total parenteral nutrition or concurrent octreotide acetate therapy and patients with insulinoma or impaired renal function.

The accepted standard for GEP\* tumors

An emerging choice for small cell lung cancer

\*Gastroentero-pancreatic neuroendocrine tumors



**O**CTREO**S**CAN®

Kit for the Preparation of Indium In-111 Pentetreotide

Please see adjacent page for brief summary of prescribing information.



Kit for the Preparation of Indium In-III Pentetreotide

#### **BRIEF SUMMARY OF** PRESCRIBING INFORMATION

#### DESCRIPTION

OctreoScane is a kit for the preparation of indium In-111 pentetreotide, a diagnostic radio-pharmaceutical. It is a kit consisting of two

- 1) A 10-mL OctreoScan Reaction Vial which contains a lyophilized mixture of 10 µg pentetreotide
- 2) A 10-mL vial of Indium In-111 Chloride Sterile

Indium In-111 pentetreotide is prepared by combining the two kit components



#### INDICATIONS AND USAGE

Indium In-111 pentetreotide is an agent for the scintigraphic localization of primary and metastatic neuroendocrine tumors bearing somatostatin receptors.

#### CONTRAINDICATIONS

None known

#### WARNINGS

DO NOT ADMINISTER IN TOTAL PARENTERAL NUTRITION (TPN) ADMIXTURES OR INJECT INTO TPN INTRAVENOUS ADMINISTRATION LINES; IN THESE SOLUTIONS, A COMPLEX GLYCOSYL OCTREOTIDE

The sensitivity of scintigraphy with indium In-111 pentetreotide may be reduced in patients concurrently receiving therapeutic doses of octreotide acetate. Consideration should be given to temporarily suspending octreotide acetate therapy before the administration of indium In-111 pentetreotide and to monitoring the patient for any signs of withdrawing.

#### **PRECAUTIONS**

#### General

- Therapy with octreotide acetate can produce severe hypoglycemia in patients with insulinomas. Since pentetreotide is an analog of octreotide, an intravenous line is recommended in any patient suspected of having an insulinoma. An intravenous solution containing glucose should be administered just before and during administration of indium In-111 pentetreotide.
- 2. The contents of the two vials supplied with the kit are intended only for use in the preparation of indium In-111 pentetreotide and are NOT to be administered separately to the patient.
- 3. Since indium In-111 pentetreotide is eliminated primarily by renal excretion, use in patients with impaired renal function should be carefully considered.
- 4. To help reduce the radiation dose to the thyroid, kidneys, bladder, and other target organs, patients should be well hydrated before the administration of indium In-111 pentetreotide. They should increase fluid intake and void frequently for one day after administration of this drug. In addition, it is recommended that patients be given a mild laxative (e.g., bisacody) or laculuse) before and after administration of indium In-111 pentetreotide (see Dosage and Administration section).
- 5. Indium In-111 pentetreotide should be tested for labeling yield of radioactivity prior to administration. The product must be used within six hours of preparation.
- Components of the kit are sterile and nonpyrogenic. To maintain sterility, it is essential that directions are followed carefully. Aseptic technique must be used during the preparation and administration of indium In-111 pentetreotide.
- 7. Octreotide acetate and the natural somatostatin hormone may be associated with cholelithiasis, presumably by altering fat absorption and possibly by decreasing mobility of the gallbladder. A single dose of indium In-111 pentetreotide is not expected to cause cholelithiasis.
- As with any other radioactive material, appropriate shielding should be used to avoid unnecessary radiation exposure to the patient, occupational workers, and other persons.
- 9. 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 performed with indium In-111 pentetreotide to evaluate carcinogenic potential or effects on fertility. Pentetreotide was evaluated for mutagenic potential in an in vitro mouse lymphoma forward mutation assay and an in vivo mouse micronucleus assay; evidence of mutagenicity was not found.

#### Pregnancy Category C

Animal reproduction studies have not been conducted with indium In-111 pentetreotide. It is not known whether indium In-111 pentetreotide can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Therefore, indium In-111 pentetreotide should not be administered to a pregnant woman unless the potential benefit justifies the potential risk to the fetus

#### **Nursing Mothers**

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when indium In-111 pentetreotide is administered to a nursing woman.

#### Pediatric Use

Safety and effectiveness in children have not been established.

#### ADVERSE REACTIONS

The following adverse effects were observed in clinical trials at a frequency of less than 1% of 538 patients: dizziness, fever, flush, headache, hypotension, changes in liver enzymes, joint pain, nausea, sweating, and weakness. These adverse effects were transient. Also in clinical trials, there was one reported case of bradycardia and one case of decreased hematocrit and hemoglobin.

Pentetreotide is derived from octreotide which is used as a therapeutic agent to control symptoms from certain tumors. The usual dose for indium In-111 pentetreotide is approximately 5 to 20 times less than for octreotide and is subtherapeutic. The following adverse reactions have been associated with octreotide in 3% to 10% of patients: nausea, injection site pain, diarrhea, abdominal pain/discomfort, loose stools, and vomiting. Hypertension and hyper- and hypoglycemia have also been reported with the use of octreotide

#### DOSAGE AND ADMINISTRATION

Before administration, a patient should be well hydrated. After administration, the patient must be encouraged to drink fluids liberally. Elimination of extra fluid intake will help reduce the radiation dose by flushing out unbound, labelled pentetreotide by glomerular filtration. It is also recommended that a mild laxative (e.g., bisacodyl or lactulose) be given to the patient starting the evening before the radioactive drug is administered, and continuing

for 48 hours. Ample fluid uptake is necessary during this period as a support both to renal elimination and the bowel-cleansing process. In a patient with an insulinoma, bowel-cleansing should be undertaken only after consultation with an endocrinologist.

The recommended intravenous dose for <u>planar</u> imaging is 111 MBq (3.0 mCi) of indium In-111 pentetreotide prepared from an OctreoScan kit. The recommended intravenous dose for <u>SPECT</u> imaging is 222 MBq (6.0 mCi) of indium In-111 pentetreotide.

The dose should be confirmed by a suitably calibrated radioactivity ionization chamber immediately before

As with all intravenously administered products, OctreoScan 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 applicable regulations.

Aseptic techniques and effective shielding should be employed in withdrawing doses for administration to patients. Waterproof gloves should be worn during the administration procedure.

Do not administer OctreoScan in TPN solutions or through the same intravenous line.

#### Radiation Dosimetry

The estimated radiation doses' to the average adult (70 kg) from intravenous administration of 111 MBq (3 mCi) and 222 MBq (6 mCi) are presented below. These estimates were calculated by Oak Ridge Associated Universities using the data published by Krenning, et al.'

Estimated Absorbed Radiation Doses after Intravenous Administration of Indium In-111 Pentetreotide3 to a 70 kg patient

|   |       | NAR  | SF     | PECT     |
|---|-------|------|--------|----------|
| 12  |       |      |        |          |
| Kidneys                                   | 54.16 | 5.42 | 108.32 | 10.83    |
| Liver                                     | 12.15 | 1.22 | 24.31  | 2.43     |
| Spleen                                    | 73.86 | 7.39 | 147.73 | 14.77    |
| Uterus                                    | 6.34  | 0.63 | 12.67  | 1.27     |
| Ovaries                                   | 4.89  | 0.49 | 9.79   | 0.98     |
| Testes                                    | 2.90  | 0.29 | 5.80   | 0.58     |
| Red Marrow                                | 3.46  | 0.35 | 6.91   | 0.69     |
| Urinary<br>Bladder Wall                   | 30.42 | 3.04 | 60.48  | 6.05     |
| GI Tract                                  |       |      |        |          |
| Stomach Wall                              | 5.67  | 0.57 | 11.34  | 1.13     |
| Small Intestine                           | 4.78  | 0.48 | 9.56   | 0.96     |
| Upper Large<br>Intestine                  | 5.80  | 0.58 | 11.59  | 1.16     |
| Lower Large<br>Intestine                  | 7.73  | 0.77 | 15.46  | 1.55     |
| Adrenals                                  | 7.55  | 0.76 | 15.11  | 1.51     |
| Thyroid                                   | 7.43  | 0.74 | 14.86  | 1.49     |
| POR ENTER                                 |       |      |        | 874 7 77 |
| Effective Dose <sup>4</sup><br>Equivalent | 13.03 | 1.30 | 26.06  | 2.61     |

- 1. Values listed include a correction for a maximum of 0.1% indium In-114m radiocontaminant at calibration
- E.P. Krenning, W.H. Bakker, P.P.M. Kooji, W.A.P. Breeman, H.Y.Oei, M. de Jong, J.C. Reubi, T.J. Visser, C. Bruns, D.J. Kwekkeboom, A.E.M. Reijs, P.M. van Hagen, J.W. Koper, and S.W.J. Lamberts, "Somatostatin Receptor Scintigraphy with Indium-111-DTPA-D-Phe-1-Octreotide in Man: Metabolism, Dosimetry and Comparison with Iodine-123-Tyr-3-Octreotide," The Journal of Nuclear Medicine, Vol. 33, No. 5, May 1992, pp. 652-658.
- 3. Assumes 4.8 hour voiding interval and International Commission on Radiological Protection (ICRP) 30 model for the gastrointestinal tract calculations
- 4. Estimated according to ICRP Publication 53.

#### HOW SUPPLIED

The OctreoScan kit, NDC 0019-9050-40, is supplied with the following components:

- 1. A 10-mL OctreoScan Reaction Vial which contains a lyophilized mixture of:

  (i) 10 µg pentetreotide [N-(diethylenetriamine-N.N.N.N\*-tetraacetic acid-N\*-acetyl)-D-phemylalarnyl-L-hemicystyl-L-phemylalarnyl-L-hypophyl-L-hysyl-L-threonyl-L-hemicystyl-L-threoninol cyclic (2-7) disulfide], (also known as octreotide DTPA),

  (ii) 2.0 mg gentisic acid [2,5-dihydroxybenzoic acid].

  - (iv) 0.37 mg citric acid, anhydrous, and (v) 10.0 mg inositol.

Before Ivophilization, sodium hydroxide or hydrochloric acid may have been added for pH adjustment. The vial contents are sterile and nonpyrogenic. No bacteriostatic preservative is present.

2. A 10-mL vial of Indium In-111 Chloride Sterile Solution, which contains 1.1 mL of 111 MBg/mL (3.0 mCi/mL) indium In-111 chloride in 0.02 N HCl at time of calibration. The vial also contains termic chloride at a concentration of 3.5 µg/mL (ferric ion, 1.2 µg/mL). The vial contents are sterile and nonpyrogenic. No bacteriostatic preservative

In addition, the kit also contains the following items: (1) a 25 G x 5/8" needle (B-D, Monoject) used to transfer Indium In-111 Chloride Sterile Solution to the OctreoScan Reaction Vial, (2) a pressure sensitive label, and (3) a



Mallinckrodt Inc. Mallinckrodt Nuclear Medicine Division P.O. Box 5840 St. Louis, MO 63134

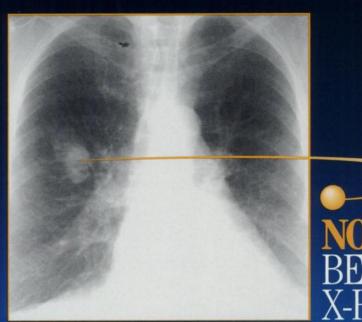
1. Termanini B. Gibril F. Reynolds IC. et al. Value of Somatostatin Receptor Scintigraphy: A Prospective Study in Gastrinoma of its Effect on Clinical Management. Gastroenterology 1997;112:335-337.

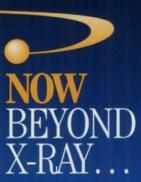
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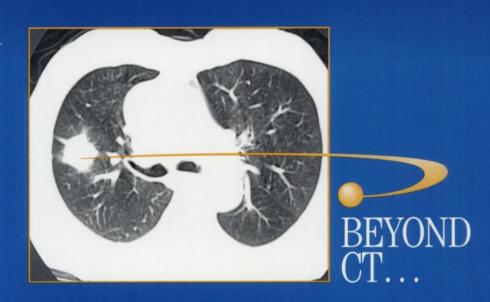
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### Upon suspicion of pulmonary malignancy



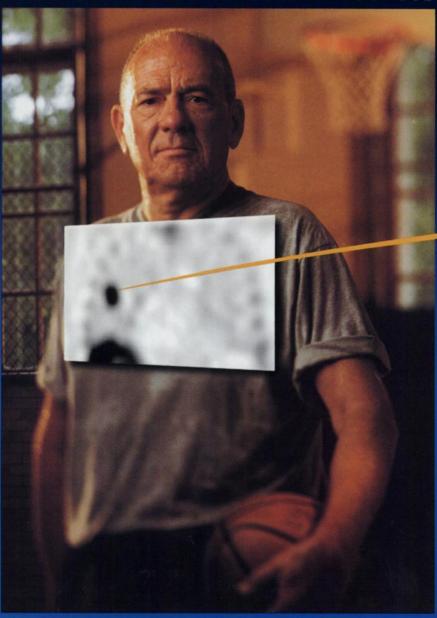




# Neo ecing

Kit for the Preparation of Technetium Tc 99m Depreotide Injection

### ...GO BEYOND WITH NEW NeoTect



BOUND TO SEE MORE

**Indicated to identify somatostatin receptor-bearing pulmonary masses** in patients who are known to have or are highly suspect for malignancy and have pulmonary lesions on CT and /or chest x-ray.<sup>1</sup>

#### Noninvasively Characterizes Pulmonary Masses

Normal SPECT image

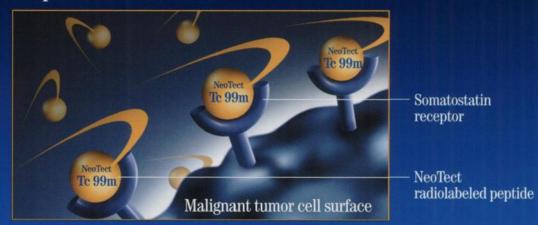




Positive SPECT image, malignancy confirmed by histology (adenocarcinoma)

- NeoTect<sup>™</sup>, a unique small synthetic peptide radiopharmaceutical, characterizes pulmonary masses as being rich in somatostatin receptors (SSTRs)<sup>1,2</sup>
  - Many malignant pulmonary masses and some inflammatory processes overexpress SSTRs¹

#### Unique mechanism of action



- NeoTect, which is radiolabeled with technetium Tc 99m, produces high contrast resolution single photon emission computed tomography (SPECT) images within 2 to 4 hours, with little generalized pulmonary uptake<sup>2</sup>
- Achieves high specificity and sensitivity values, reliable readings<sup>1,2</sup>
- Offers an excellent safety profile without the serious complications (eg, pneumothorax) associated with invasive procedures
  - Of 647 patients evaluated, one or more adverse events occurred in only 4.5% of all enrolled patients. The most commonly reported adverse events were headache (1.0%), dizziness (0.8%), nausea (0.6%), and flushing (0.5%).
  - NeoTect, as other small peptides, may induce hypersensitivity reactions or anaphylactic reactions. Adequate treatment provisions, including epinephrine, should be available for immediate use <sup>1</sup>

The clinical benefit of NeoTect as a population-based screening tool has not been studied. NeoTect is not an alternative to CT or biopsy.<sup>1</sup>

Please see brief summary of prescribing information on following page



#### **Brief Summary of Prescribing Information**

#### **DESCRIPTION**

NeoTect™ (Kit for the Preparation of Technetium Tc 99m Depreotide Injection) is intended for use in the preparation of Technetium Tc 99m Depreotide, a diagnostic radiopharmaceutical to be used by intravenous injection. Each vial contains a sterile, non-pyrogenic lyophilized mixture of 50 µg of Depreotide, 5 mg of sodium glucoheptonate dihydrate, 50 µg of stannous chloride dihydrate (with a minimum stannous tin content of 15 µg), 100 µg edetate disodium dihydrate, and sufficient sodium hydroxide or hydrochloric acid for adjustment to pH 7.4 prior to lyophilization. The lyophilizad powder is sealed under a nitrogen atmosphere with a rubber closure. The product contains no antimicrobial preservative.

When sterile, non-pyrogenic Sodium Pertechnetate Tc 99m Injection, in 0.9% Sodium Chloride Injection, U.S.P., is added to the vial, a Technetium Tc 99m complex of Deprectide is formed.

#### **INDICATIONS AND USAGE**

NeoTect™ is a scintigraphic imaging agent that identifies somatostatin receptor-bearing pulmonary masses in patients presenting with pulmonary lesions on computed tomography and/or chest x-ray who have known malignancy or who are highly suspect for malignancy.

#### **CONTRAINDICATIONS**

None known.

#### WARNINGS

None.

#### **PRECAUTIONS**

#### Genera

Therapy with somatostatin analogues can produce severe hypoglycemia in patients with insulinomas. Since Deprectide binds to somatostatin receptors, caution should be exercised when administering this drug to patients with insulinomas.

NeoTect™, as other small peptides, may induce hypersensitivity reactions or anaphylactic reactions. Adequate treatment provisions, including epinephrine, should be available for immediate use. In preliminary studies of 18 subjects, NeoTect™ did not produce increases in IgG or IgM production 3 weeks following injection. Other immune parameters such as eosinophils, other immunoglobulins, complement, lymphokines or cytokines were not studied.

Technetium Tc 99m Depreotide Injection, like other radioactive drugs, must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Care should also be taken to minimize radiation exposure to the patient consistent with proper patient management.

Radiopharmaceuticals should be used by or under the control of physicians who are qualified by specific training and experience in the safe use and handling of radionuclides, and whose experience and training have been approved by the appropriate governmental agency authorized to license the use of radionuclides.

Urinary excretion of radioactivity occurs primarily during the first 4 hours following injection. Studies have not been done to determine the amount of radioactivity that might be eliminated in the faces. (See Clinical Pharmacology Section.) Special precautions should be taken with incontinent patients to minimize the risk of radioactive contamination of clothing, bed linen, and the patient's anyironment

#### Information For Patients

To minimize radiation absorbed dose to the bladder, adequate hydration should be encouraged to permit frequent voiding during the first few hours after injection of NeoTect™. This may be achieved by having patients drink at least an 8 oz. glass of water prior to drug administration. To help protect themselves and others in their environment, patients should take the following precautions for 12 hours after injection: whenever possible a toilet should be used and should be flushed several times after each use and patients should wash their hands thoroughly after each voiding or fecal elimination. If blood, urine or feces soil the clothing, the clothing should be washed separately.

#### **Laboratory Tests**

There was a low incidence (1% or less) of transient and clinically insignificant changes in alanine aminotransferase (ALT), white blood cell count, and eosinophil count following administration of Technetium Tc 99m Depre

#### Drug Interaction

Drug interactions were not noted in clinical studies in which Technetium Tc 99m Depreotide Injection was administered to patients receiving concomitant medication.

#### Carcinogenesis, Mutagenesis, Impairment of Fertility

Studies have not been conducted to evaluate carcinogenic potential or effects on fertility. The results of the following genotoxicity studies with decayed Technetium Tc 99m Depreotide Injection or with depreotide were negative: Salmonella/Escherichia coli reverse mutation assay, in vitro mouse lymphoma assay with and without metabolic activation, and in vivo mouse micronucleus assay.

#### Pregnancy

Pregnancy Category C. Animal reproduction studies have not been conducted with decayed Technetium Tc 99m Depreotide Injection. It is not known whether Technetium Tc 99m Depreotide Injection can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Technetium Tc 99m Depreotide Injection should be given to a pregnant woman only if clearly needed. Studies in pregnant women have not been conducted.

#### Nursing Mothers

Studies have not been conducted with deprectide to determine its excretion in human milk. Technetium Tc 99m Pertechnetate is excreted in human milk. It is not known whether Technetium Tc 99m Deprectide Injection is excreted in human milk. Caution should be exercised when Technetium Tc 99m Deprectide Injection is administered to a nursing woman. Wherever possible, infant formula should be substituted for breast milk until the technetium has been eliminated.

#### Pediatric Use

Safety and effectiveness of Depreotide in pediatric patients below the age of 16 years have not been established.

#### **ADVERSE REACTIONS**

Adverse events were evaluated in clinical studies of 647 adults who received 15.0 to 20.0 mCi Technetium Tc 99m labeled to approximately 50 µg of deprectide. Of these adults, 58% were men



and 42% women. The mean age was 59.0 years (18-86 years).

Deaths did not occur during the clinical study period. After Technetium Tc 99m Depreotide Injection, serious adverse events were not reported.

At least one adverse event occurred in 29/647 (4.5 %) patients after Technetium Tc 99m Depreotide Injection. Headache was the most commonly reported adverse event (1% of patients). Table 8 lists adverse events reported in 0.5% or more of patients who received Technetium Tc 99m Depreotide Injection.

|  | TABLE 8  ADVERSE EVENTS REPORTED IN ≥ 0.5% OF PATIENTS FOLLOWING  NeoTect™ INJECTION IN CLINICAL TRIALS |  |  |
|--|---|--|--|
| Number of Patients Exposed                         | 647   |  |  |
| Number of Patients with At Least One Adverse Event | 29 (4.5%)   |  |  |
| Nervous System                                     | 13 (2%)   |  |  |
| Headache   | 7 (1.0%)  |  |  |
| Dizziness  | 5 (0.8%)  |  |  |
| Gastrointestinal System                            | 7 (1.0%)  |  |  |
| Nausea   | 4 (0.6%)  |  |  |
| Vascular (extracardiac) Disorder                   | 3 (0.5%)  |  |  |
| Flushing   | 3 (0.5%)  |  |  |

Other adverse events which occurred in < 0.5% of patients following administration of NeoTect™ included: arthrosis, back pain, chest pain, diarrhea, fatigue, gait abnormality, glossitis, hemoptysis, hypoaesthesia, infection, leg cramps, lymphocytosis, malaise, pharyngitis, somnolence, taste

#### **DOSAGE AND ADMINISTRATION**

For imaging, NeoTect™ is administered as a peripheral intravenous injection at a single dose of 15 to 20 mCi containing approximately 50 µg of Technetium Tc 99m radiolabeled Depreotide peptide. Patients should drink at least an 8 oz. glass of water before drug administration.

The contents of Kit for the Preparation of Technetium Tc 99m Depreotide Injection are intended only for use in the preparation of Technetium Tc 99m Depreotide Injection and are not to be administered directly to the patient. Only one patient dose should be drawn from each reconstituted vial. (See Instructions for the Preparation Section.)

The potential need for dose adjustment has not been studied in patients with renal insufficiency, or in pediatric or geriatric patients, or in patients on therapeutic somatostatin analogues.

#### **IMAGING**

Planar and SPECT images of the chest should be obtained between 2-4 hours after NeoTect™ administration. SPECT images of the chest are required for optimal image interpretation.

#### **RADIATION DOSIMETRY**

Based on human data, the absorbed radiation dose to an average human adult (70 kg) from an intravenous injection of the agent are listed in Table 9. The values are listed in descending order as rad/mCi and mGy/MBq and assume urinary bladder emptying at 4.8 hours.

| Table 9 Estim         | ated Absorbed Radi | iation Dose |  |
|-----------------------|--------------------|-------------|--|
| Target Organ          | rad/mCi            | mGy/MBq     |  |
| Kidneys               | 0.33               | 0.090       |  |
| Spleen                | 0.16               | 0.042       |  |
| Testes                | 0.11               | 0.031       |  |
| Thyroid Gland         | 0.088              | 0.024       |  |
| Red Marrow            | 0.078              | 0.021       |  |
| Liver                 | 0.078              | 0.021       |  |
| Heart wall            | 0.054              | 0.014       |  |
| Bone surface          | 0.054              | 0.015       |  |
| Lungs                 | 0.053              | 0.014       |  |
| Adrenal glands        | 0.044              | 0.012       |  |
| Pancreas              | 0.037              | 0.010       |  |
| Urinary bladder       | 0.033              | 0.0089      |  |
| Uterus                | 0.031              | 0.0084      |  |
| Small Intestine       | 0.019              | 0.0050      |  |
| Upper Large Intestine | 0.019              | 0.0050      |  |
| Ovaries               | 0.016              | 0.0042      |  |
| Lower Large Intestine | 0.014              | 0.0038      |  |

Dose calculations were performed using the standard MIRD method (MIRD Pamphlet No. 1 rev., Soc. Nucl. Med., 1976). Effective dose equivalent was calculated in accordance with ICRP 53 (Ann. ICRP 18, 1-4, 1988) and gave a value of 0.023 mSv/MBq (0.084 rem/mCi).

#### **HOW SUPPLIED**

Each kit is comprised of one vial containing a sterile, non-pyrogenic, freeze-dried mixture of Depreotide, stannous chloride dihydrate, sodium glucoheptonate dihydrate and edetate disodium dihydrate. Kits are available as individual vials or as packs of five.

NDC 64570-511-10 - single vial

NDC 64570-511-05 - five vial pack

#### **STORAGE**

Store the kit at  $\le$  -10° C (  $\le$  14° F). Store the reconstituted injection solution at 20-25° C ( 68-77° F) using appropriate radiation shielding. Use within 5 hours of reconstitution.

The kit should be protected from light.

Rx Only

Distributed by:

Distributed by

9 Delta Drive

Londonderry, New Hampshire 03053

Revised August 1999

References: 1. NeoTect™ Prescribing Information. 2. Blum JE, Handmaker H, Rinne NA. The utility of a somatostatin-type receptor binding peptide radiopharmaceutical (P829) in the evaluation of solitary pulmonary nodules. Chest. 1999;115:224-232. 3. Kazerooni EA, Lim FT, Mikhail A, Martinez FJ. Risk of pneumothorax in CT-guided transthoracic needle aspiration biopsy of the lung. Radiology. 1996;198:371-375.

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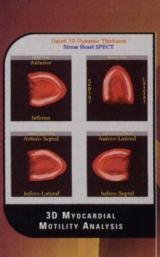
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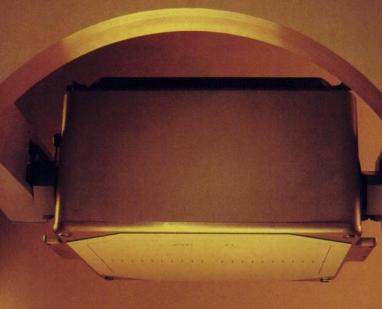
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SOCIETY OF NUCLEAR MEDICINE 920

# 2000-2001 Fellowship Program

# for Research in Women's Health

he Society of Nuclear Medicine, in partnership with the Medical Imaging Division of DuPont Pharmaceuticals Company, is offering a one year fellowship available July 1, 2000 in the amount of \$30,000 to support diagnostic, prognostic or outcomes research focused on the use of nuclear medicine or nuclear cardiology techniques that will assist clinicians and post-menopausal patients with respect to hormone replacement therapy. Primary research areas of the fellowship are known or suspected coronary artery disease, elevated serum cholesterol, breast cancer and/or osteoporosis.

Funds can be used to support the research and/or salary of the investigator. Grants are limited to research performed in the United States or Canada. Eligible applicants are those who are: (a) currently serving as Residents or Fellows in accredited Nuclear Medicine, Cardiology, Gynecology, Oncology or Radiology training programs, or have just recently completed training; or (b) have completed at least one year of an accredited residency or fellowship training program.





Deadline for receipt of applications and all supporting materials is February 1, 2000.

#### For further information

and to obtain application materials, contact the Society of Nuclear Medicine, Attn: Committee on Awards, 1850 Samuel Morse Drive, Reston, VA 20190. Phone: (703) 708-9000, ext. 1246. Fax: (703) 708-9020. Downloadable application materials are also available on the Society's homepage at www.snm.org.

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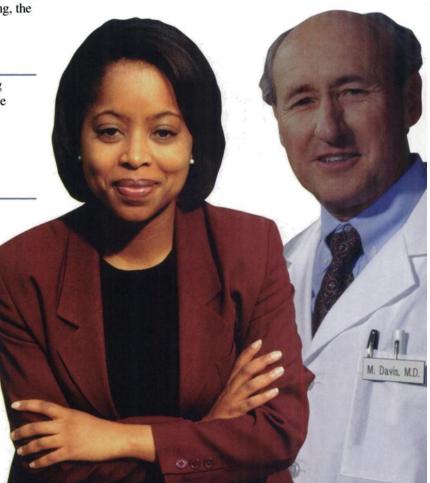
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# Updates in Nuclear Medicine: Quantitative Cardiac Imaging and New Innovations in Instrumentation

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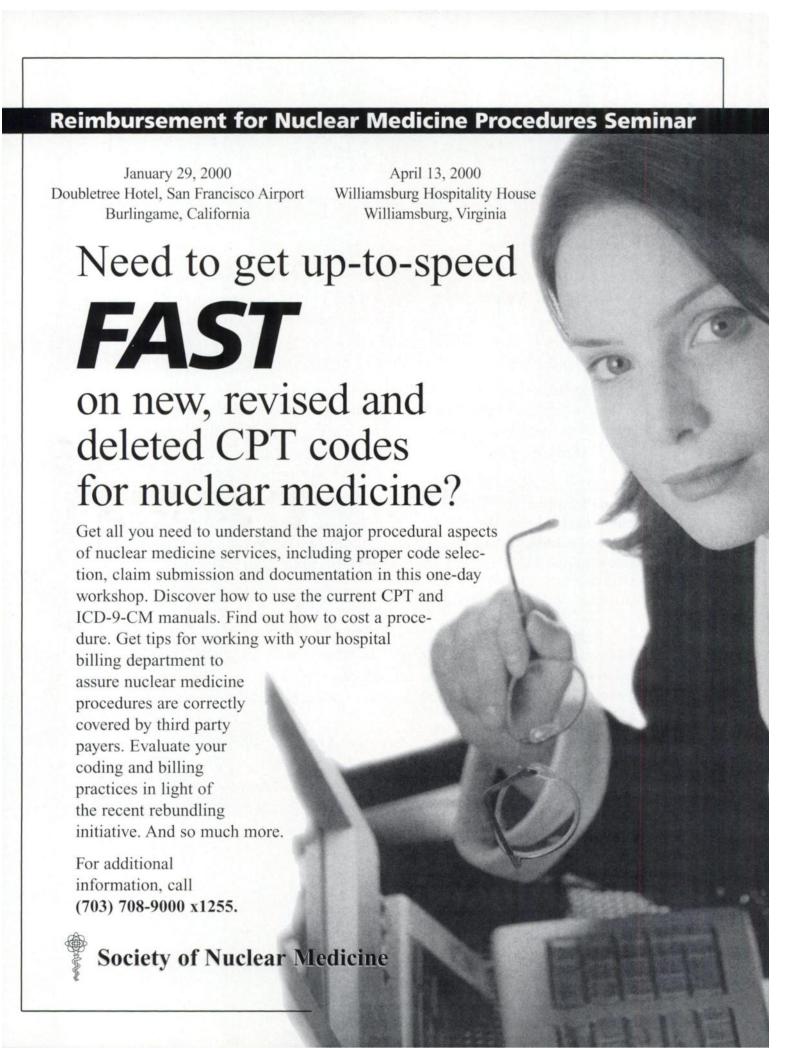
The field of nuclear cardiology has experienced tremendous growth in the past decade as evidenced by the increased use of myocardial perfusion studies. Using today's instrumentation, we can greatly improve the speed and accuracy of coronary artery disease diagnosis.

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# Paul C. Aebersold Award

Applications are invited for the 2000 Paul C. Aebersold Award for outstanding achievement in basic science applied to Nuclear Medicine. This award commemorates the contributions of Dr. Paul Clarence Aebersold to the applications of nuclear physics to Nuclear Medicine and radiation biology, as well as his contributions to the Society of Nuclear Medicine (SNM). Dr. Aebersold contributed greatly to the emergence of Nuclear Medicine as a discipline by his energetic leadership in the provision of cyclotron-generated and reactor-produced radionuclides, and by his numerous publications and lectures. In giving this award, the Society thus symbolically signifies its appreciation of the warm and vital person who became the Society's first Honorary Member.

Nominations should be supported by the nominee's curriculum vitae and at least two letters supporting the nomination. These letters should briefly describe the contributions in basic science for which the nominee is proposed. The nominee does not need to be a SNM member.

Nominations deadline: December 31, 1999. Please submit nominations and supporting documents to William J. MacIntyre, Ph.D., c/o Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, Virginia 20190-5316.



# ANNOUNCING

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**Examination** 

# in conjunction with the 47th Annual Meeting of the The 2000 examination will be given Sunday, **June 4, 2000 in St. Louis, MO** Society of Nuclear Medicine.

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Part One (3.5 hours) assesses knowledge of basic aspects of Nuclear Medicine Science.

predetermined subspecialty area of the candidate's choice including: Part Two (2.5 hours) examines in depth the knowledge of a

- Nuclear Medicine Physics and Instrumentation
- Nuclear Pharmaceutical Science and Radiochemistry
- Radiation Protection

The examination fee is \$650 (\$550 refundable if you do not qualify). Completed Applications must be postmarked by March 10, 2000.

For applications and more information, please contact:

**ABSNM Exam Coordinator** 

American Board of Science in Nuclear Medicine c/o The Society of Nuclear Medicine 1850 Samuel Morse Drive, Reston, Virginia 20190-5316

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#### **Positions Wanted**

Nuclear Medicine physician with background in IM and Pathology seeks position in Nuclear Medicine or Nuclear Cardiology. E-mail: MarCrMD1@aol.com.

#### Nuclear Medicine Physician

ABNM certified nuclear medicine physician with 20 years experience. Available for FT/PT position. Strongly prefer NJ or NY. Contact Society of Nuclear Medicine, Box #1299, 1850 Samuel Morse Dr., Reston, VA 20190 or e-mail brianbrenn@aol.com.

#### Nuclear Medicine Physician

Nuclear Medicine Physician, ABNM, ABR, with 15 years experience wishes to relocate to Washtenaw, eastern Jackson or southern Livingston County, MI, but will consider all inquiries from vicinity. Available immediately for F/T, P/T, vacation fill-in or locum tenem position. Please respond to the Society of Nuclear Medicine, Box #1199, 1850 Samuel Morse Dr., Reston, VA 20190-5316.

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ACGME Accredited Nuclear Radiology Fellowship One year program is available beginning July 1, 2000. Strong emphasis on cardiology and clinical PET. Apply to Donald R. Neumann, MD, PHD, Cleveland Clinic Foundation (Gb3), 9500 Euclid Avenue, Cleveland, OH 44195.

#### **Interventional Radiologist**

Progressive subspecialized large private practice radiology group is seeking an Interventional Radiologist. The practice is affiliated with a medical school and residency program, thereby offering the benefits of both private practice and the pursuit of academic interests. The practice is located in coastal Virginia with a mild climate and many recreational activities available with the Chesapeake Bay and Atlantic Ocean nearby.
Applicant needs training in PET scanning and be a board certified radiologist. Interested persons should send a CV or contact Stephen Carr, MD, Director of Recruiting, Medical Center Radiologists, 6330 North Center Drive, Building 13, Suite 220, Norfolk, VA 23502. Phone: (757) 466-0089. Fax (757) 466-8017.

#### General Radiologist

Progressive subspecialized large private practice radiology group is seeking a qualified body imaging radiologist comfortable with all modalities of

diagnostic radiology except angiography and interventional. The practice is affiliated with a medical school and residency program, thereby offering the benefits of both private practice and the pursuit of academic interests. The practice is located on the Atlantic coastline with a mild climate and all water sports available. Applicant needs training in PET scanning and be a board certified radiologist. Interested persons should send a CV or contact Stephen Carr, MD, Director of Recruiting, Medical Center Radiologists, 6330 North Center Drive, Building 13, Suite 220, Norfolk, VA 23502. Phone: (757) 466-0089. Fax: (757) 466-8017.

#### Nuclear Medicine

Progressive subspecialized large private practice radiology group is seeking individual fellowship trained in nuclear medicine. The practice is affiliated with a medical school and residency program, thereby offering the benefits of both private practice and the pursuit of academic interests. Position will include eventual directorship of Nuclear Medicine Department. The practice is located on the Atlantic coastline with a mild climate and all water sports available. Applicant needs training in PET scanning and be a board certified radiologist. Interested ersons should send a CV or contact Stephen Carr, MD, Director of Recruiting, Medical Center Radiologists, 6330 North Center Drive, Building 13, Suite 220, Norfolk, VA 23502. Phone: (757) 466-0089. Fax: (757) 466-8017.

#### Musculoskeletal Radiologist

Progressive subspecialized large private practice radiology group is seeking individual with subspecialty training in musculoskeletal MR.

The practice is affiliated with a medical school and residency program, thereby offering the benefits of both private practice and the pursuit of academic interests. The practice is located in coastal Virginia with a mild climate and many recreational activities available with the Chesapeake Bay and Atlantic Ocean nearby. Applicant needs training in PET scanning and be a board certified radiologist. Interested persons should send a CV or contact Stephen Carr, MD, Director of Recruiting, Medical Center Radiologists, 6330 North Center Drive, Building 13, Suite 220, Norfolk, VA 23502. Phone: (757) 466-0089. Fax: (757) 466-8017.

#### Fellowship in Nuclear Medicine

The Nuclear Medicine/Diagnostic Radiology Department at Mayo Clinic has an opening for a one-year fellowship in General Nuclear Medicine beginning July 1, 2000. The department performs approximately 25,000 studies per year utilizing 23

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#### Nuclear Medicine Chief

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#### Postdoctoral Research Associate

Yale University/VA PET center is seeking a radiochemist for the research and development of positron emitting radiotracers. Applicant must have a strong background in both radiochemistry and synthetic organic chemistry. If interested, please send a copy of your resume and list of three references to: Pradeep K. Garg, PhD, Director, PET Radiochemistry, Yale University/ VA PET Center (115A), 950 Campbell Avenue, West Haven, CT 06516. Fax: (203) 937-4509. E-mail: garg@biomed.med.yale.edu. EOE.

#### Nuclear Medicine

Ochsner Clinic in New Orleans seeks a Board Certified Section Head for Nuclear Medicine to join our sixteen physician Department of Radiology. This section does approximately
550-600 exams per month. The candidate must also
be qualified to teach in our freestanding residency program. Candidates should have completed an accredited training program. Fellowship training in PET is desirable. Ochsner is a physician owned and directed multi-specialty group practice, which includes more than 400 physicians in 27 locations across Southeast Louisiana. We offer an excellent across Southeast Louisiana. We offer an excellent salary, fringe benefit package and paid vacation. Interested physicians should send CV and contact: Edward I. Bluth, MD, Chairman, Department of Radiology, Ochsner Clinic, 1514 Jefferson Highway, New Orleans, LA 70121. Phone: (504) 842-3470. E-mail: ebluth@ochsner.org.

#### **Nuclear Medicine Technologist VA North Texas Health Care System Dalles. TX**

A full-time career opportunity exists at the VA North Texas Health Care System, VA Medical Center, Dellas, Texas. Incumbent will serve as a technologist for a large Nuclear Medicine Service. Qualifications: Must be certified in nuclear medicine by the NMTCB or the ARRT. Applicants must be a U.S. citizen and meet the physical requirements of the position. Subject to drug testing. Excellent benefits package.

Send resume and salary history to:

Androw Jackson, Human Resources Management 4500 S. Lancaster Rd., Balles, TX 75216 Phone: (214) 857-1685

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#### Nuclear Medicine Supervisor

The Department of Nuclear Medicine at Altru Health System is currently seeking a full-time Nuclear Medicine Supervisor. The qualified candidate will have a current valid ARRT-R and/or NMTCB certification with 3 years experience as a staff tech beyond training and completion of a formalized management training course with experience in procedure/policy development and a thorough understanding of concepts of health physics. Grand Forks is located on the eastern border of North Dakota about 3 hours South of Winnipeg, Canada. Grand Forks is home to the University of North Dakota which offers the residents of Grand Forks a variety of educational, cultural and sporting opportunities to supplement the already outstanding quality of life available in North Dakota. We offer a competitive salary and benefit package. To apply, send resume to:

Kathy/Kerri, Human Resources Altru Health System P.O. Box 6002 Grand Forks, ND 58206 Phone: (800) 732-4277, ext. 6542

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#### Nuclear Medicine Radiologist Assistant/Associate Professor West Virginia University

The Department of Radiology at West Virginia University, School of Medicine is recruiting for a Nuclear Medicine Radiologist at the Assistant or Associate Professor level. This opportunity is available for a qualified Radiologist who is certified by the American Board of Radiology and fellowship trained in Nuclear Medicine. In addition to the clinical responsibilities, the successful candidate will be expected to initiate an active research program. West Virginia University-Radiology Department has a state-of-the-art PET facility that has been in operation for four years with a dedicated focus on teaching and research. Areas of interest include Nuclear Oncology and Neurology. West Virginia University offers a competitive salary and benefits. Position will remain open until filled.

Application, CV and three reference names and addresses/phone numbers should be sent to:

Mathis Frick, MD, Chairman Robert C. Byrd Health Sciences Center Department of Radiology P.O. Box 9235 Morgantown, WV 26506 Fax: (304) 293-3899

West Virginia University is an Affirmative Action/Equal Opportunity Employer

# Supervisory Nuclear Medicine Technologist VA North Texas Health Care System Dallas, TX

A full-time career opportunity exists at the VA North Texas Health Care System, Dallas, TX. This Health Care System is affiliated with the UTHSC at Dallas. Incumbent will serve as chief Technologist for a large Nuclear Medicine Service.

Qualifications: Must be certified in nuclear medicine by the NMTCB or the ARRT; at least two years of clinical nuclear medicine technology experience; demonstrated supervisory skills; applicants must be a U.S. citizen and meet the physical requirements of the position. Subject to drug testing. Excellent benefits package.

Send resume and salary history to:

Andrew Jackson Human Resources Management Service 4500 S. Lancaster Rd. Dallas, TX 75216 Phone: (214) 857-1685

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# Associate Director for Radiology & Imaging Sciences Warren 6. Magnuson Clinical Center National Institutes of Health

The Warren G. Magnuson Clinical Center (CC) of the National Institutes of Health is seeking a Radiologist with extensive clinical, research and management experience for the position of Chair, Department of Radiology and the CC Associate Director for Imaging. The successful candidate will oversee a 27-million dollar budget that includes the clinical and research activities of the departments of diagnostic radiology, nuclear medicine and positron emission tomography, and the laboratory of diagnostic radiology research. Substantial opportunities exist for both independent and collaborative research.

Basic Requirements: Doctor of Medicine or Doctor of Osteopathy from an accredited and approved medical school in the United States or Canada, or graduation from a foreign medical school in which a United States equivalency from an authorized source has been obtained (ECFMG Certification) is required. Position requires a full, unrestricted license to practice medicine in a State, the District of Columbia, the Commonwealth of Puerto Rico or a territory of the United States.

**Qualifications:** Board Certification in Diagnostic Radiology or Nuclear Medicine is required. Salary is commensurate with experience and level of accomplishments and will range up to \$200,000. A Recruitment Bonus of up to 25% of base pay or a Relocation Bonus of up to 25% of base pay may also be available.

#### Specific application procedures apply:

Interested persons should send a curriculum vitae to Alice Owens at aowens@mail.cc.nih.gov by 12/20/99. Additional information about the position and the department is available at http://www.cc.nih.gov/drd/.

Informal inquiries may be directed to Dr. David Henderson, Deputy Director for Clinical Care at (301) 496-3515.

Notice to displaced and surplus Federal employees; you must submit specific information as proof of eligibility for special selection priority. Call (301) 496-6924 for more information.

NIH is an Equal Opportunity Employer

### Nuclear Medicine/ Research Technologist

Seattle, WA

Children's Hospital and Regional Medical Center has a position available for an ARRT (N) or CNMT registered person to work with our Nuclear Medicine team. CHRMC is beginning to use radiolabeled antibodies to treat cancer in children and desires an individual that could perform clinical studies and research duties. This is a challenging position that involves clinical duties, staff education and follow-up inservices. This motivated individual should have 2-3 years experience in Nuclear Medicine with a strong radiation safety background and antibody research experience. Pediatric expertise is highly preferred. Good communication and interpersonal skills are necessary for this highly participative position. Relocation assistance is available.

If you're interested in improving the lives of children on a daily basis in an area consistently rated one of the best in the country to live, forward your resume to: Children's Hospital, CL-31, HR, 4800 Sand Point Way NE, Seattle, WA 98105. Fax: (206) 368-4820. For more information, visit us at www.seattlechildrens.org EOE.



#### **Tenure-Track Faculty Positions**

The Purdue University Department of Medicinal Chemistry and Molecular Pharmacology invites outstanding scientists to apply for faculty positions at any level. We seek scientists with research interests at the interface of chemistry/biology/ medicine who use molecular approaches to understand mechanisms or treatment of human disease. Areas of specific interest include, but are not limited to: biophysical/bioanalytical sciences, bioorganic or synthetic medical chemistry, computational chemistry/biology, and diagnostic imaging or targeted radiotherapy. A successful candidate is expected to establish and/or maintain a strong research program with extramural funding. Commitment to excellence in teaching at the undergraduate and graduate levels will be required. The Department offers a vigorous and growing research environment with first-rate instrumentation; numerous opportunities exist to participate in interdepartmental programs such as the Purdue Cancer Center, Purdue University Neuroscience, and related graduate programs. Candidates must hold a PhD; junior level applicants are expected to have at least two years of postdoctoral training. Minority and women scientists are especially encouraged to apply. Applicants should submit a curriculum vitae, a detailed description of research plans, and names and addresses of three references to:

Purdue University
Chair, CB Faculty Search Committee
Department of Medicinal Chemistry
and Molecular Pharmacology
1333 Robert Heine Pharmacy Building
West Lafayette, Indiana 47907-1333

Review of the candidates will begin on January 3, 2000 and continue until the positions are filled.

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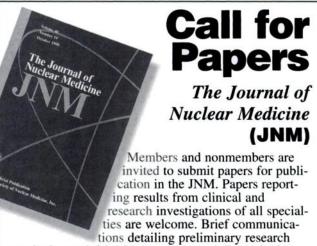
# Assistant/Associate Professor University of Virginia Department of Radiology

The University of Virginia Department of Radiology is seeking an Assistant/Associate Professor to head its Division of Nuclear Medicine. Applicants can be either boardcertified radiologist capable of cross covering in other imaging areas or dedicated Nuclear Medicine physicians. The successful applicant will develop new Nuclear Medicine applications, increase utilization, and approve efficiency of operations. The University of Virginia Health System includes the University of Virginia Hospital, a 600-bed tertiary care Academic Health Center located in Charlottesville, Virginia. The equipment in the Division of Nuclear Medicine is state-of-the-art including coincident PET scanning and the division participates in Nuclear Cardiology. There is a Nuclear Medicine research laboratory and a federally funded PhD scientist interested in Nuclear Medicine detective of research. Rank and salary are commensurate with experience and accomplishments. Interested applicants should send a letter of interest accompanied with a curriculum vitae to the attention of:

Bruce J. Hillman, MD
Department of Radiology
Box 170
University of Virginia Health System
Charlottesville, VA 22908

An e-mail can also be directed to: bjh8a@virginia.edu.

The University of Virginia is an equal opportunity/ affirmative action employer.



results in an abridged paper are especially desired. JNM is indexed in *Index Medicus* and on MEDLINE.

Information for authors is available at: www.snm.org/pdf/infoauth\_999.pdf

#### Please forward submissions to:

Martin P. Sandler, MD
The Journal of Nuclear Medicine
Society of Nuclear Medicine
1850 Samuel Morse Drive
Reston, VA 20190-5316



SOCIETY OF NUCLEAR MEDICINE



#### MICROPET IMAGING FACILITY

#### **Department of Molecular and Medical Pharmacology Crump Institute for Biological Imaging UCLA School of Medicine, Los Angeles, California**



The microPET facility houses two state-of-the-art small animal PET scanners, with a third system currently under development. The facility is used by many different laboratories at UCLA for in vivo imaging studies in cancer, the nervous system, the immune system and the cardiovascular system. It has become a focus for cutting-edge, multidisciplinary research involving molecular biology, genetics, drug discovery and the imaging sciences. The facility currently performs more than 750 studies/year, anticipated to grow to over 2000 studies/year as full capacity is reached. Two new positions have been created within the facility for which applications are invited:

#### **MICROPET FACILITY DIRECTOR**

The Director will have overall responsibility for the management of the microPET facility and personnel. Duties include implementing, adapting or developing methods related to data collection, data correction, image reconstruction, data analysis, quantification and quality control with the goal of improving the accuracy, quality or efficiency of microPET imaging. Position requires an M.S. or Ph.D. in the physical or engineering sciences, and excellent computer skills (C or C++, IDL and UNIX at a minimum). Previous experience in nuclear medicine imaging is highly desirable. Management experience a plus. Must be willing to work in a multidisciplinary environment.

#### **DATA MODELING SCIENTIST**

This position is primarily responsible for helping investigators from different fields to design microPET protocols, quantify microPET images and to perform statistical analyses and tracer kinetic modeling. It involves interaction with multidisciplinary groups of scientists and with the facility Director, and implementing, adapting or developing software to optimize the accuracy and efficiency of microPET data analysis. The position requires a M.S. or Ph.D. in an appropriate field, excellent computer skills (C or C++, IDL and UNIX at a minimum) and good communication skills. Previous experience in nuclear medicine imaging is highly desirable.

Level of appointment and salary will be commensurate with experience. To apply, send your CV, the names of three references and a brief statement outlining why you are a good candidate, to: Simon Cherry, PhD, Crump Institute for Biological Imaging, Box 951770, UCLA, Los Angeles, CA 90095-1770. More detailed information about the positions can be found at: www.crump.ucla.edu. Applications will be considered until positions are filled. The University of California is an Equal Opportunity Employer committed to excellence through diversity.

# Mark Your Calendar for the Society of Nuclear Medicine's 47th Annual Meeting

June 3-7, 2000 • America's Center • St. Louis, Missouri

- Do you find it difficult to keep on top of all of the new nuclear medicine procedures out there today?
- Are you in a position to decide what equipment your department should purchase?
- Do you want to build a network of your peers in nuclear medicine?
- Are you frustrated with trying to locate information on nuclear regulations and outcomes procedures?

If you have answered yes to any of these questions, then you should attend the SNM's 47th Annual Meeting.

> and meet the vendors whose products offer solutions to even your most pressing challenges. Witness firsthand how the SNM shares and distributes new ways nuclear medicine can be used to diagnose and

treat illness.

To obtain more information visit our website at www.snm.org. call our Fax-on-Demand Service at (888) 398-7662 or call the SNM Meeting Department at (703) 708-9000, ext. 1229.

We look forward to seeing you in St. Louis.



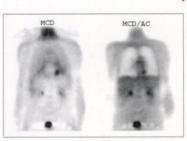
SOCIETY OF NUCLEAR MEDICINE

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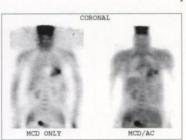
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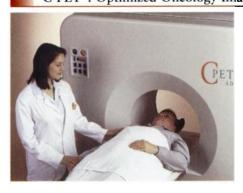
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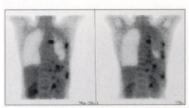




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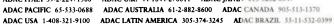
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\*1 Ranking



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