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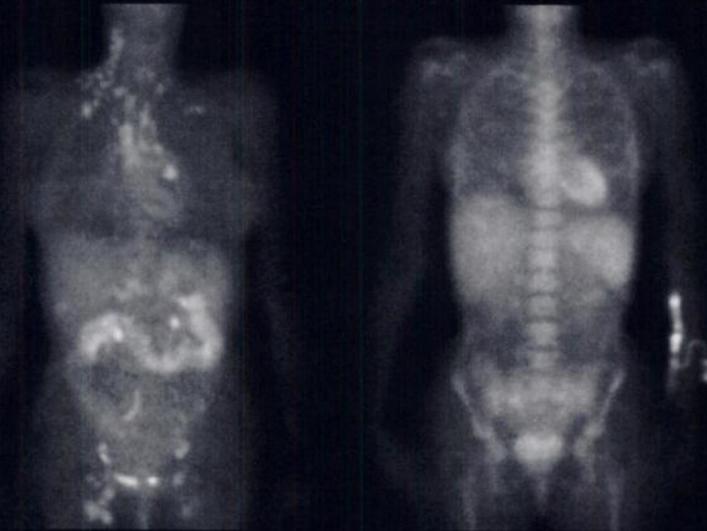
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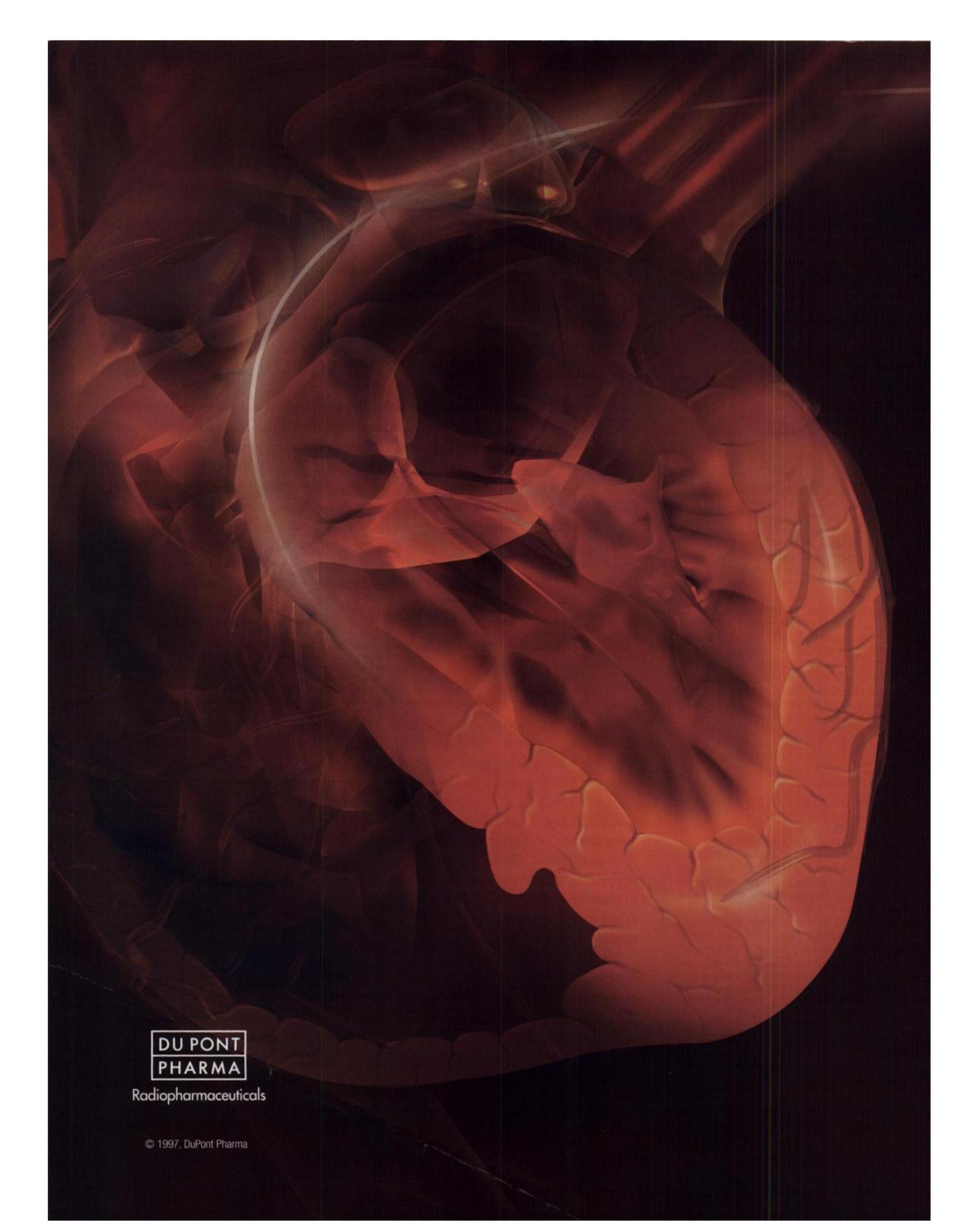
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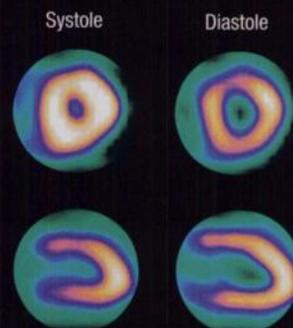
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There have been infrequent reports of signs and symptoms consistent with seizure and severe hypersensitivity after administration of Tc99m Sestamibi. Please see brief summary of prescribing information on adjacent page.

**Cardiolite®**  
Kit for the preparation of Technetium Tc99m Sestamibi

**The Confidence You Want—The Information You Need**

## Brief Summary

# Cardiolite®

Kit for the preparation of Technetium Tc99m Sestamibi

### FOR DIAGNOSTIC USE

**INDICATIONS AND USAGE:** CARDIOLITE®, Kit for the preparation of Technetium Tc99m Sestamibi, is a myocardial perfusion agent that is indicated for detecting coronary artery disease by localizing myocardial ischemia (reversible defects) and infarction (non-reversible defects), in evaluating myocardial function and developing information for use in patient management decisions. CARDIOLITE® evaluation of myocardial ischemia can be accomplished with rest and cardiovascular stress techniques (e.g., exercise or pharmacologic stress in accordance with the pharmacologic stress agent's labeling).

It is usually not possible to determine the age of a myocardial infarction or to differentiate a recent myocardial infarction from ischemia.

**CONTRAINDICATIONS:** None known.

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

Pharmacologic induction of cardiovascular stress may be associated with serious adverse events such as myocardial infarction, arrhythmias, hypotension, bronchoconstriction and cerebrovascular events. Caution should be used when pharmacologic stress is selected as an alternative to exercise; it should be used when indicated and in accordance with the pharmacologic stress agent's labeling.

**PRECAUTIONS:**

#### GENERAL

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

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

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

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

Technetium Tc99m labeling reactions involved depend on maintaining the stannous ion in the reduced state. Hence, Sodium Pertechnetate Tc99m Injection containing oxidants should not be used. Technetium Tc99m Sestamibi should not be used more than six hours after preparation.

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.

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

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

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

#### Carcinogenesis, Mutagenesis, Impairment of Fertility

In comparison with most other diagnostic technetium labeled radiopharmaceuticals, the radiation dose to the ovaries (1.5 rads/30mCi at rest, 1.2 rads/30mCi at exercise) is high. Minimal exposure (ALARA) is necessary in women of childbearing capability. (See Dosimetry subsection in DOSAGE AND ADMINISTRATION section.)

The active intermediate, [Cu(MIBI)<sub>4</sub>]BF<sub>4</sub>, was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HPRT and sister chromatid exchange tests (all *in vitro*). At cytotoxic concentrations (≥ 20 μg/ml), an increase in cells with chromosome aberrations was observed in the *in vitro* human lymphocyte assay. [Cu(MIBI)<sub>4</sub>]BF<sub>4</sub> did not show genotoxic effects in the *in vivo* mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9mg/kg, > 600 × maximal human dose).

#### Pregnancy Category C

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

#### Nursing Mothers

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

#### Pediatric Use

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

**ADVERSE REACTIONS:** During clinical trials, approximately 8% of patients experienced a transient parosmia and/or taste perversion (metallic or bitter taste) immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing, edema, injection site inflammation, dyspepsia, nausea, vomiting, pruritus, rash, urticaria, dry mouth, fever, dizziness, fatigue, dyspnea, and hypotension also have been attributed to administration of the agent. Cases of angina, chest pain, and death have occurred (see WARNINGS and PRECAUTIONS). The following adverse reactions have been rarely reported: signs and symptoms consistent with seizure occurring shortly after administration of the agent; transient arthritis in a wrist joint; and severe hypersensitivity, which was characterized by dyspnea, hypotension, bradycardia, asthenia and vomiting within two hours after a second injection of Technetium Tc99m Sestamibi.

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

370-1110MBq (10-30mCi)

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

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

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

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

Store at 15-25°C before and after reconstitution.

**RADIATION DOSIMETRY:** The radiation doses to organs and tissues of an average patient (70kg) per 1110MBq (30mCi) of Technetium Tc99m Sestamibi injected intravenously are shown in Table 4.

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

Organ	Estimated Radiation Absorbed Dose			
	REST			
	2.0 hour void		4.8 hour void	
	rads/ 30mCi	mGy/ 1110MBq	rads/ 30mCi	mGy/ 1110MBq
Breasts	0.2	2.0	0.2	1.9
Gallbladder Wall	2.0	20.0	2.0	20.0
Small Intestine	3.0	30.0	3.0	30.0
Upper Large Intestine Wall	5.4	55.5	5.4	55.5
Lower Large Intestine Wall	3.9	40.0	4.2	41.1
Stomach Wall	0.6	6.1	0.6	5.8
Heart Wall	0.5	5.1	0.5	4.9
Kidneys	2.0	20.0	2.0	20.0
Liver	0.6	5.8	0.6	5.7
Lungs	0.3	2.8	0.3	2.7
Bone Surfaces	0.7	6.8	0.7	6.4
Thyroid	0.7	7.0	0.7	6.8
Ovaries	1.5	15.5	1.6	15.5
Testes	0.3	3.4	0.4	3.9
Red Marrow	0.5	5.1	0.5	5.0
Urinary Bladder Wall	2.0	20.0	4.2	41.1
Total Body	0.5	4.8	0.5	4.8

Organ	STRESS			
	2.0 hour void		4.8 hour void	
	rads/ 30mCi	mGy/ 1110MBq	rads/ 30mCi	mGy/ 1110MBq
Breasts	0.2	2.0	0.2	1.8
Gallbladder Wall	2.8	28.9	2.8	27.8
Small Intestine	2.4	24.4	2.4	24.4
Upper Large Intestine Wall	4.5	44.4	4.5	44.4
Lower Large Intestine Wall	3.3	32.2	3.3	32.2
Stomach Wall	0.5	5.3	0.5	5.2
Heart Wall	0.5	5.6	0.5	5.3
Kidneys	1.7	16.7	1.7	16.7
Liver	0.4	4.2	0.4	4.1
Lungs	0.3	2.6	0.2	2.4
Bone Surfaces	0.6	6.2	0.6	6.0
Thyroid	0.3	2.7	0.2	2.4
Ovaries	1.2	12.2	1.3	13.3
Testes	0.3	3.1	0.3	3.4
Red Marrow	0.5	4.6	0.5	4.4
Urinary Bladder Wall	1.5	15.5	3.0	30.0
Total Body	0.4	4.2	0.4	4.2

Radiopharmaceutical Internal Dose Information Center, July, 1990, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831, (615) 576-3449.

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

Prior to lyophilization the pH is between 5.3-5.9. The contents of the vials are lyophilized and stored under nitrogen. Store at 15-25°C before and after reconstitution. Technetium Tc99m Sestamibi contains no preservatives. Included in each two (2) vial kit are one (1) package insert, six (6) vial shield labels and six (6) radiation warning labels. Included in each five (5) vial kit are one (1) package insert, six (6) vial shield labels and six (6) radiation warning labels. Included in each thirty (30) vial kit are one (1) package insert, thirty (30) vial shield labels and thirty (30) radiation warning labels.

The U.S. Nuclear Regulatory Commission has approved this reagent kit for distribution to persons licensed to use byproduct material pursuant to section 35.11 and section 35.200 of Title 10 CFR Part 35, to persons who hold an equivalent license issued by an Agreement State, and, outside the United States, to persons authorized by the appropriate authority.



#### Radiopharmaceuticals

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2/96

**REFERENCES:** 1. Nichols K, DePuey EG, Rozanski A. Automation of gated tomographic left ventricular ejection fraction. *J Nucl Cardiol.* 1996;3:475-482. 2. Chua T, Kiat H, Germano G, et al. Gated technetium-99m sestamibi for simultaneous assessment of stress myocardial perfusion, post-exercise regional ventricular function and myocardial viability. *J Am Coll Cardiol.* 1994;23:1107-1114. 3. Stratmann HG, Williams GA, Wittry MD, et al. Exercise technetium-99m sestamibi tomography for cardiac risk stratification of patients with stable chest pain. *Circulation.* 1994;89:615-622. 4. Berman DS, Hachamovitch R, Kiat H, et al. Incremental value of prognostic testing in patients with known or suspected ischemic heart disease: a basis for optimal utilization of exercise technetium-99m sestamibi myocardial perfusion single-photon emission computed tomography. *J Am Coll Cardiol.* 1995;26:639-647. 5. Hachamovitch R, Berman DS, Kiat H, et al. Exercise myocardial perfusion SPECT in patients without known coronary artery disease. *Circulation.* 1996;93:905-914.

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# A view from the heart.

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## Technetium Tc99m Tetrofosmin For Injection

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- Rapid GI clearance

### A convenient view.

- Room temperature preparation, and 8 hour reconstituted shelf-life
- No redistribution
- Available in unit dose

### An efficient view.

- Flexible scheduling
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### A patient's view.

- Low radiation exposure compared to other myocardial perfusion agents
- Less than 1% of patients experienced side effects in clinical trials of 764 adults
- Myoview is not indicated for use with pharmacologic stress agents

Please see brief summary of prescribing information on following page.

**SERVICES  
PRODUCTS  
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Brief Summary



Kit for the Preparation of Technetium Tc99m Tetrofosmin for Injection

Diagnostic radiopharmaceutical For intravenous use only
Code N166A

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.

Caution: Federal (USA) law prohibits dispensing without a prescription

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).

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).

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).

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.

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.

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.

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 26-94 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.

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 Table 1. The values are listed in descending order as rad/mCi and µGy/MBq and assume urinary bladder emptying at 3.5 hours.

Table 1
Estimated Absorbed Radiation Dose (Technetium Tc99m Tetrofosmin Injection)

Table with 5 columns: Target Organ, Exercise rad/mCi, Exercise µGy/MBq, Rest rad/mCi, Rest µGy/MBq. Lists organs like Gall bladder wall, Upper large intestine, Bladder wall, etc.

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 10³ mSv/MBq and 1.12 x 10² mSv/MBq after exercise and rest respectively.

Manufactured by Amersham International plc - Amersham, United Kingdom
Patent No. 5,045,302 (r)

Distributed by: Medi-Physics, Inc., Amersham Healthcare
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February, 1996
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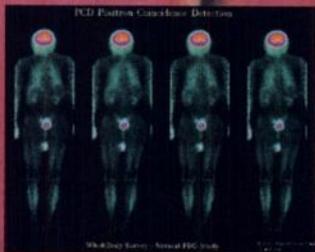
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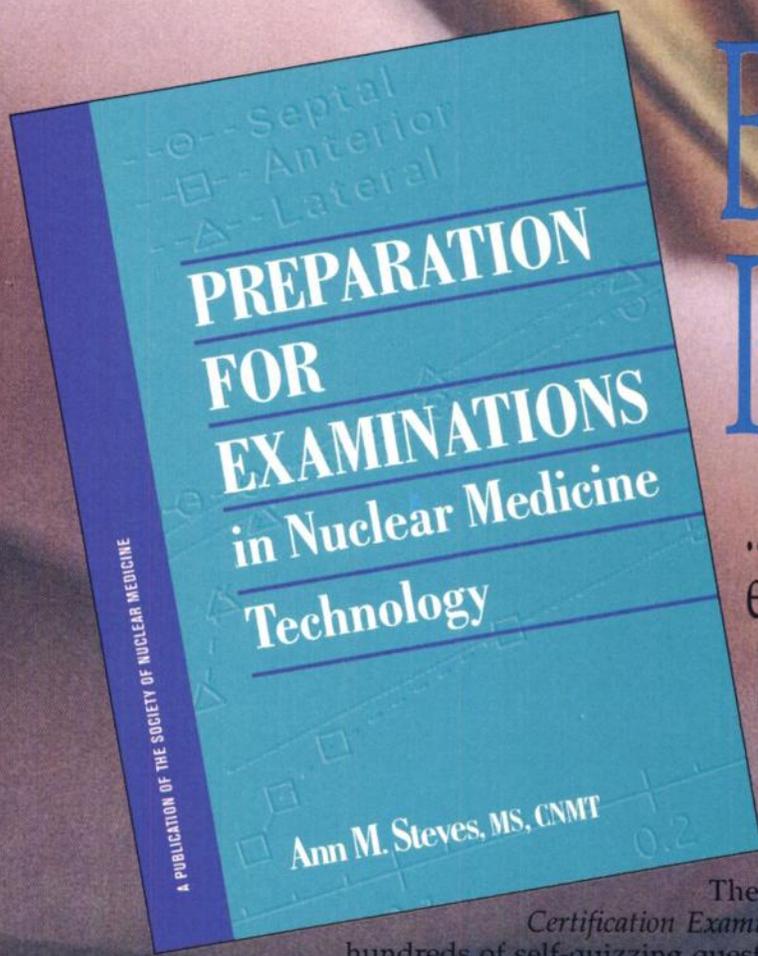


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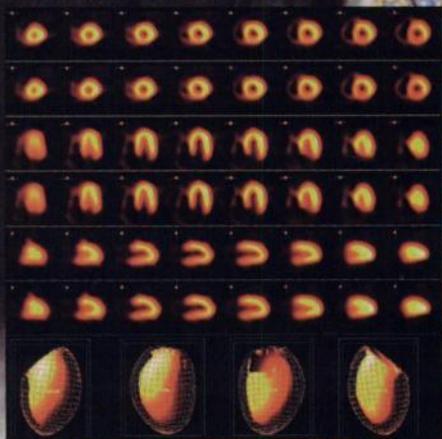
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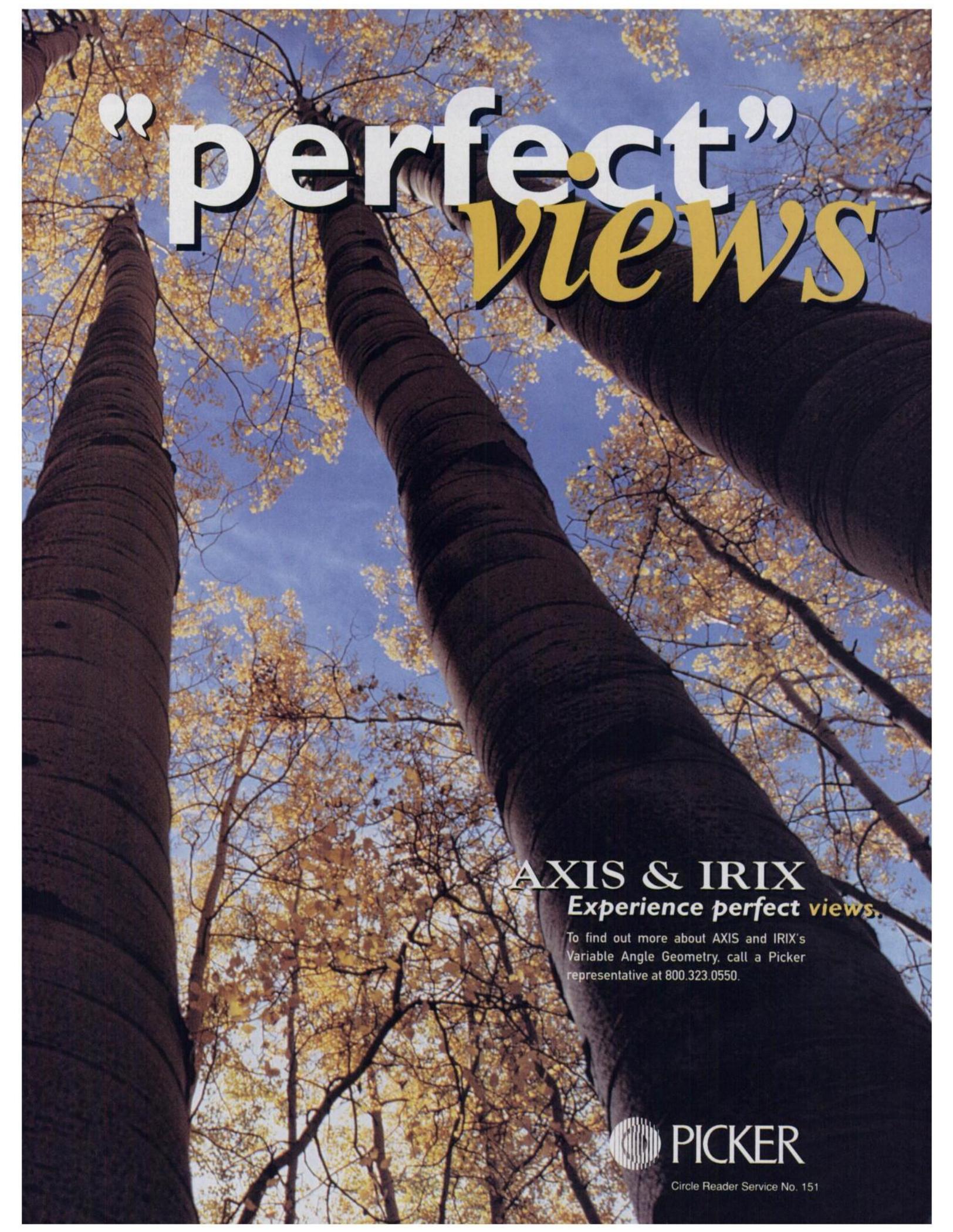
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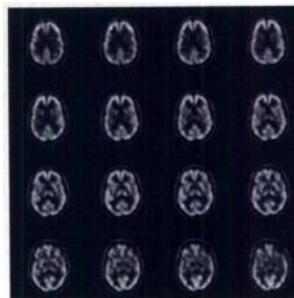
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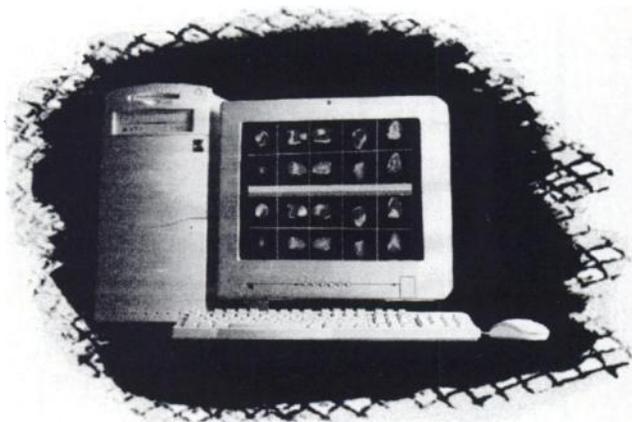
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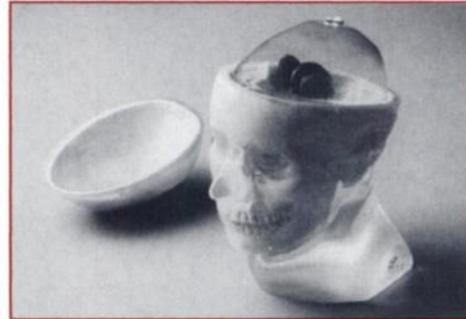
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**VALID REFERENCE STANDARDS REQUIRE FULLY ANTHROPOMORPHIC AND ANATOMICALLY CORRECT PHANTOMS WITH TISSUE EQUIVALENT MUSCLE, LUNG, AND BONE.**

**PET/SPECT IMAGE OPTIMIZATION TECHNIQUES CANNOT BE BASED ON GEOMETRIC PHANTOMS**

A Journal Paper (reference on request) states:  
"The errors in relative quantification caused by an attenuation correction that assumes the head to be a uniformly attenuating medium were found to be up to 20%, which is larger than regional blood flow deficits often reported in patients with dementia."

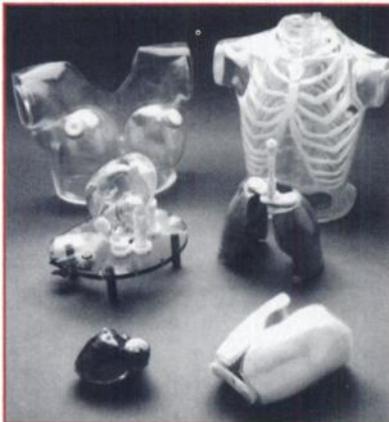


**STRIATAL PHANTOM**

Brain Shell in Skull with Independently-Fillable Right and Left Nucleus Caudate and Right and Left Putamen.



**HEART/THORAX PHANTOM**



**DISASSEMBLED PHANTOM**

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Fax: (310) 518-0806  
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## Notice to Authors Submitting Materials to *The Journal of Nuclear Medicine*

As of July 1, 1998, the address for articles submitted to *JNM* will change. Please mail all manuscripts that may reach the *JNM* office by that date to the following address:

Editor  
*JNM* Office  
Society of Nuclear Medicine  
1850 Samuel Morse Drive  
Reston, VA 20190-5316.

Please also note that the *JNM* "Instructions for Authors" will soon contain significant revisions. Watch for the revised "Instructions for Authors," which will be appearing this summer in the "Publications" section of the SNM web site ([www.snm.org](http://www.snm.org)) and in the pages of *JNM*.

**Positions Available**

**Board Certified Radiologist (subspecializing in nuclear medicine)**

Puget Sound based Radia Medical Imaging, a 32 member radiologist practice serving five hospitals, one large multispecialty clinic and various outpatient radiology sites, is seeking a board certified general radiologist subspecializing in nuclear medicine with board certification. Practice at a progressive 200-bed community hospital with state-of-the-art equipment. Practice involves developing and promoting nuclear medicine, working in other areas, sharing evening and night work rotation. Live in an environment that allows access to a multitude of metropolitan and outdoor activities, good schools and cultural diversity. Please forward your CV to: Sanjiv Parikh, MD, c/o Cheryl West, Radia Medical Imaging, 3822 Colby Avenue, Everett, WA 98201.

**Director of Nuclear Medicine**

Applications are being sought for the Director of Nuclear Medicine, Veterans Administration Medical Center, Salt Lake City, UT. The position includes an academic appointment in the Department of Radiology, University of Utah School of Medicine. Equipment at the three imaging facilities includes ten cameras with four dual-head SPECT scanners, two triple head SPECT scanners and coincidence imaging capabilities. Responsibilities include all aspects of diagnostic and therapeutic nuclear medicine as well as research. Part-time diagnostic radiology coverage also available. Please forward CV, a letter describing background and interests, and the names and addresses of references to Dr. Sonia Valdivia, Acting Chief of Nuclear Medicine, Department of Radiology, 1A71, School of Medicine, University of Utah, Salt Lake City, UT 84132. Phone: (801) 581-2369, Fax: (801) 585-2403. The University of Utah is an equal opportunity/affirmative action employer and encourages applications from women and minorities.

**Faculty Chemist**

A chemist with interest and experience in synthesizing PET/SPECT compounds for cancer research. A working skill in iodination and chelation is desirable. Excellent facilities and resources are available for productive and interdisciplinary research activities. Appointment at Assistant to Associate Professor level depending on qualifications. Qualified candidates should contact Dr. Abass Alavi, Chief of the Division of Nuclear Medicine, Dept. of Radiology, Hospital of the University of Pennsylvania, Rm 117-Donner Building., 3400 Spruce St., Phila., PA 19104. AA/EOE.

**Faculty Staff Physician**

Nuclear Medicine Staff Position: Candidate with strong interest in an academic career to join an active and well-equipped laboratory. Excellent research and clinical facilities are available and include all modern imaging modalities. Appointment will be at the rank of Assistant or Associate Professor in the clinician track depending on the years of experience and other qualifications. Candidates must be board eligible or certified in nuclear medicine. For further information, please contact: Abass Alavi, MD, Chief, Division of Nuclear Medicine, Hospital of the University of Pennsylvania, 3400 Spruce St., Philadelphia, PA 19104. AA/EOE.

**Nuclear Medicine Clinical Coordinator & Nuclear Medicine Technologist**

The Radiology Department is recruiting for a Nuclear Medicine Clinical Coordinator and Nuclear Medicine Technologist in the Nuclear Medicine Section. Applicants must be either certified (CNMT) or registered (ARRT). Prefer that the Clinical Coordinator have at least

5 years of experience with at least one-year supervisory experience. The Nuclear Medicine Technologist must have at least two years of experience. Excellent benefits package and competitive salaries. Please submit completed MUSC application or resume to: Department of Human Resources Management, Medical University of South Carolina, Charleston, South Carolina, 19 Hagwood Ave., Charleston, SC 29425. <http://www.musc.edu>. EOE/M/F/V/H.

**Radiochemist**

The Brain Imaging Division, Department of Psychiatry, Columbia University, College of Physicians and Surgeons, has a full-time position for a Ph.D. Radiochemist at the Assistant or Associate Professor level (depending on experience, academic achievements and track record in attracting funding). This is a research position, involving the development of radiotracers (including precursor synthesis) and radiolabeling procedures for neuroreceptors ligands with 11C, 18F or 123I. Previous experience with PET or SPECT radiopharmaceuticals or ligand development a plus. Send resume to: Marc Laruelle, MD, Director, Brain Imaging Division, New York State Psychiatric Institute, Unit 28, 722 West 168th Street, New York, NY 10032. Columbia University is an Affirmative Action/Equal Opportunity employer.

**Position Wanted**

ABNM certified physician experiences in all aspects of Nuclear Medicine seeks a F/T position academic/clinical. Please respond by mail, fax or e-mail to: Society of Nuclear Medicine, Box #601-98, 1850 Samuel Morse Drive, Reston, VA 20190. Fax: 703-708-9018. E-mail: [ssilver@snm.org](mailto:ssilver@snm.org).

**Nuclear Medicine**

Marshfield Clinic, one of the nation's most respected and recognized integrated health care systems is seeking to replace a retiring nuclear medicine physician.

We desire a BC/BE radiologist, fellowship trained in nuclear medicine. The successful candidate will practice at the main campus in Marshfield and at the adjacent 524-bed hospital.

As a 540 physician multispecialty group, Marshfield Clinic is at the forefront of today's medical practice and offers physician specialists a stimulating opportunity for clinical practice, teaching and research. Family focus lifestyle, four-season recreational activities and an excellent compensation package further enhance this outstanding opportunity.

Interested candidates may send their curriculum vitae and three letters of reference to Timothy L. Swan, M.D., Chairman, Department of Radiology, Marshfield Clinic, 1000 North Oak Avenue, Marshfield, WI 54449. Telephone: 1-800-782-8581, extension 93474. Fax: (715) 387-5240.



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**Technologist**

**NUCLEAR MEDICINE TECHNOLOGIST**

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We are accepting applications for a Nuclear Medicine

Technologist. Full time, flexible day shift, on call requirements with occasional weekend coverage. Must be ARRT or CNMT with current Florida license.

For immediate consideration, send/fax resume to:



**Attn: J. Souza  
P.O. Box 95448  
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## EDUCATIONAL COORDINATOR For Nuclear Medicine Technology

### *Radiation Sciences*

Virginia Commonwealth University, a comprehensive urban university, seeks a full-time, 12-month faculty member for the Department of Radiation Sciences, located on the Medical College of Virginia Campus. The Department of Radiation Sciences offers a Bachelor of Science Degree in Clinical Radiation Sciences for programs in Radiation Therapy, Radiography and Nuclear Medicine Technology. The Educational Coordinator will supervise and coordinate the academic and clinical phases of the Nuclear Medicine Technology Program. This faculty member will have didactic and clinical responsibilities in the nuclear medicine technology program. Didactic responsibilities will also include the core curriculum for the baccalaureate degree in Clinical Radiation Sciences. Applicant should possess a Baccalaureate Degree, certification in nuclear medicine (ARRT and/or NMTCB) and have a minimum of 3 years clinical experience. Preference will be given to applicants with a Master's degree, teaching experience in an accredited Nuclear Medicine Technology Program, demonstrated potential in research/scholarship or an additional certification in radiation or radiography.

The position will be available August 1, 1998. Applications are accepted until the position is filled. Academic rank and salary commensurate with qualifications. Send curriculum vitae and three current letters of reference to:

Elizabeth Meixner, M.Ed., R.T. (R)(MR)  
Chair, Search Committee  
Department of Radiation Sciences  
Virginia Commonwealth University  
Post Office Box 980495  
Richmond, VA 23298-0495

Virginia Commonwealth University is an equal opportunity/affirmative action employer.  
Women, minorities and persons with disabilities are encouraged to apply.

## **Nuclear Medicine Residency**

An unexpected opening is available starting July 1, 1998 in our nuclear medicine residency program. The nuclear medicine residency program at the University of Wisconsin Hospitals and Clinics is a two-year program, which is accredited by the ACGME. The 24-month residency provides training and experience in all areas of nuclear medicine including the therapeutic applications of radioactive materials, general nuclear medicine imaging and Positron Emission Tomography. The department currently performs more than 6,600 examinations per year. Department equipment includes multiple SPECT systems, an x-ray bone densitometer and a current generation PET scanner. Residents are encouraged to participate in research.

Contact:

Scott B. Perlman, MD  
Director, Nuclear Medicine  
Residency Program  
University of Wisconsin Hospitals & Clinics  
RM E3/311 600 Highland Ave.  
Madison, WI 53792-3252  
Phone: (608) 263-5306 • Fax: (608) 262-0907

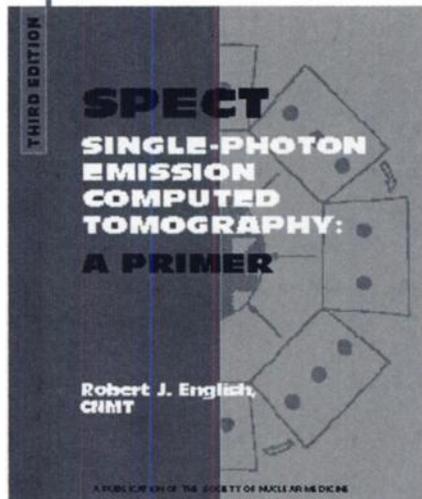
# It's Here!

*The new, third edition of the widely popular SPECT: A Primer is now available from Matthews Medical Books at the toll-free number below.*

Substantially updated and expanded throughout, the third edition includes even more basic information essential to the technologist working in day-to-day clinical settings.

The new *SPECT Primer* features an enhanced section on Clinical Applications, incorporating the latest and most widely accepted fundamental knowledge in the field, with, three all-new chapters on Acquisition Devices, Processing Devices, and Clinical Indications. And in every chapter, you'll find expanded material to help nuclear medicine professionals who use SPECT perform at peak.

Whether you're a working technologist, teacher, or student, the new edition of *SPECT: A Primer* is a must for your clinical library. No other text available brings together—clearly and authoritatively—the essential information you need to understand and use Single Photon Emission Computerized Tomography.



Call toll-free to order your copy today—\$30.00 members/\$40.00 nonmembers.  
Matthews Medical Books • 800-633-2665 • (Non-U.S., call 314-432-1401)

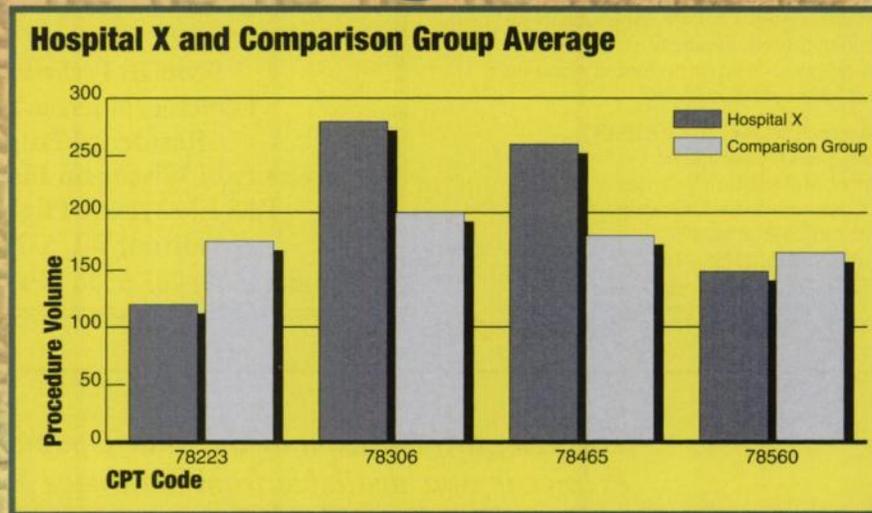
The *new SPECT Primer* and the *new Review of Nuclear Medicine Technology* will be on sale at the SNM Publications Booth during the Annual Meeting in Denver.

# UTILIZATION



# ANALYSIS

## What you put into it is what you get out of it!



### WHAT IS THE UA DATA BASE?

- ◆ The Commission on Health Care Policy and Practice in conjunction with the SNM Technologist Task Force on Utilization Data, has developed a quarterly survey on SNM's website. Participants enter data quarterly.
- ◆ The website's data entry form will collect information from nuclear medicine practitioners to compile a utilization analysis database.
- ◆ The database contains information on:
  - Facility type and location
  - Active general medicine and surgical beds
  - Outpatient encounters (visits)
  - Physician, technologist and clerical FTEs
  - Planar, SPECT, PET Hybrid gamma cameras and PET scanners
  - Inpatient and outpatient procedures for a selected set of commonly used nuclear medicine CPT-4 codes

### WHY SHOULD YOU PARTICIPATE?

- ◆ Participants receive standard reports on utilization by procedure, place of service, type of patient, etc.
- ◆ Participants will be able to compare their facility data with others in the region and with the national (global) averages.
- ◆ Subscribers may query reports on-line or receive printed reports quarterly via mail.
- ◆ This is a free service. As long as you input your data quarterly, you will be able to obtain data and reports.

**All information is confidential.**

For more information or to participate in this program, contact Pat Mahoney at (703) 708-9000 x255 or via e-mail at pmahoney@snm.org.



**SOCIETY OF  
NUCLEAR  
MEDICINE**

# DO WHAT YOU DO BEST.

## INTERPRET NUCLEAR MEDICINE IMAGES FOR CME

The **SNM Physician Evaluation Program** is a self-assessment program for physicians. Each **organ specific** CD-ROM contains patient histories and nuclear medicine **images**. Program participants review clinical information, interpret images and submit **written reports** of their findings.

- Based on actual clinical cases that contain patient images and clinical information.
- Receive educational feedback to improve your practice skills.
- Compare your case reports with the peer-reviewed model reports.
- Complete all case reports and receive category 1 AMA/PRA credit.
- Simulates a real practice environment.
- No travel required, complete the module at your own pace.

### BONE IMAGING

#### MODULE NOW AVAILABLE

Complete 15 bone case reports and receive up to **10 hours** of CME.

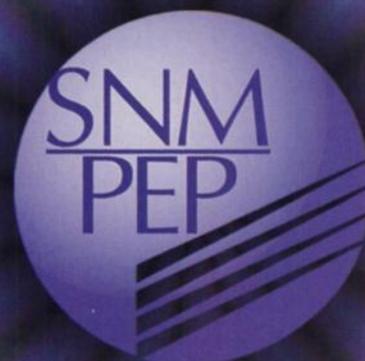


For more information or to purchase the Bone Module CD-ROM, please contact Pat Mahoney at (703) 708-9000 ext. 255.

SNM PEP is sponsored by an educational grant from

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*See you in*

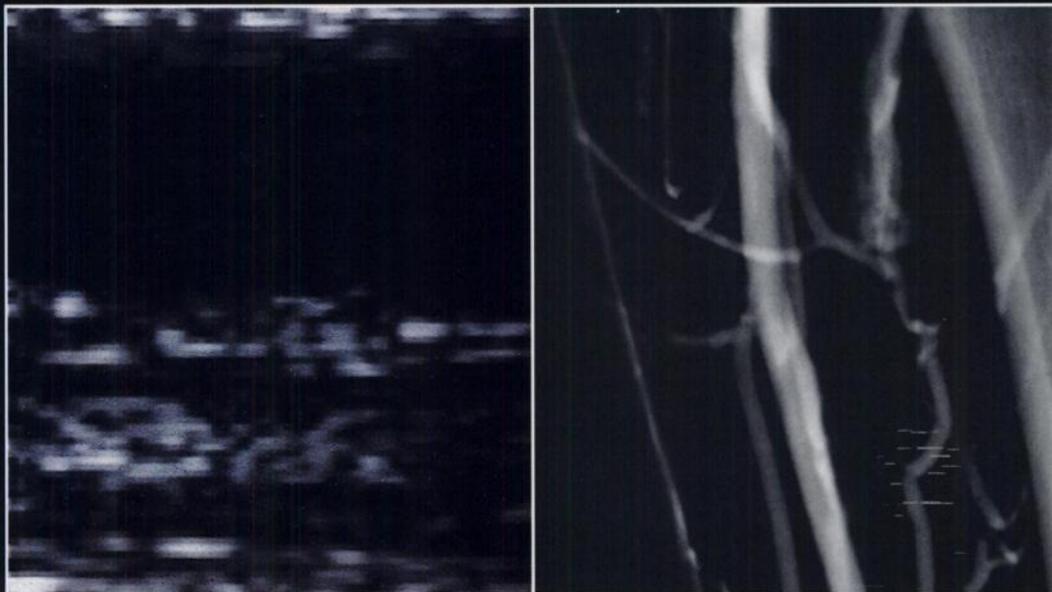
# LOS ANGELES

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June 6-10, 1999*





# ACUTE



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FROM **EQUIVOCATION**  
TO **CONFIRMATION**

**COMING SOON...**  
**TO NUCLEAR IMAGING**

**The difference is acute.**

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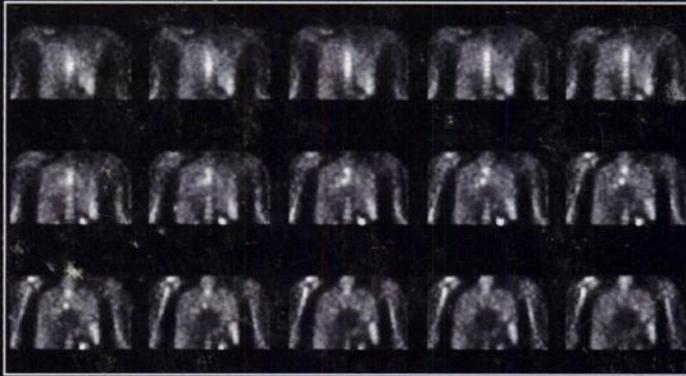
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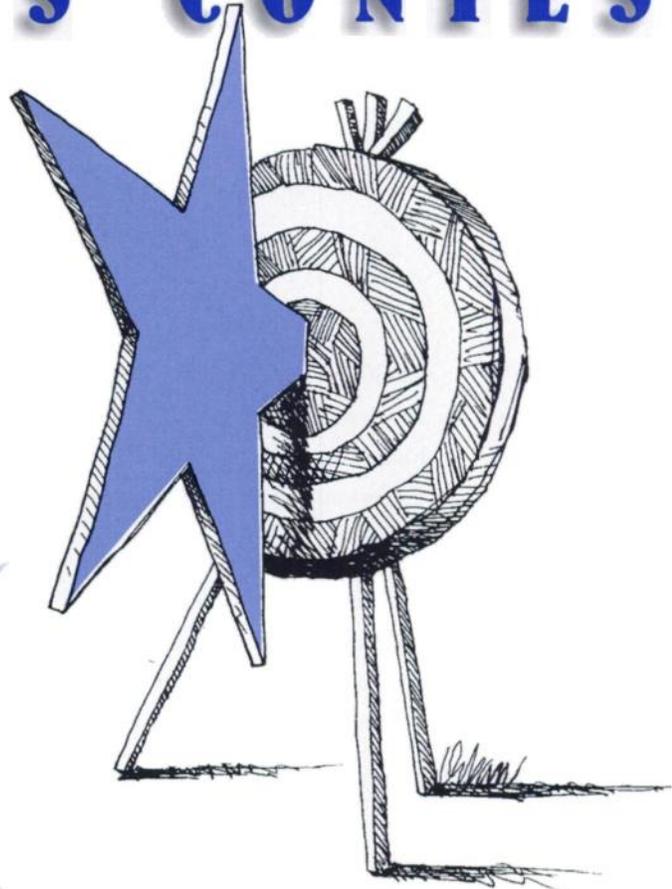
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The Society of Nuclear Medicine (SNM) has made every effort to insure that the information contained on the PREP diskette is complete and accurate. However, since some testing techniques vary, each user should take steps to assure that the information is applicable to its tests. Nothing contained on the PREP diskette should be construed as either a standard of care of SNM or as a recommendation for patient care by SNM. SNM disclaims any responsibility or liability of whatsoever nature or kind for any use made of the materials provided herein. User should advise patients that this information is provided for information purposes only and is not intended as a substitute for discussion between patient and physician.

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# PR-STARS CONTEST

One of the goals of the Society of Nuclear Medicine Technologist Section (SNM-TS) has been to take an active role in educating the public and the medical community about nuclear medicine procedures and the benefits of this functional imaging modality.



This is the official entry form for the 1998 PR Stars Contest Sponsored by the SNM-TS and Capintec, Inc. Please fill out the entry form and complete the requested information on the reverse side. Based on the information you provide, a panel of judges will evaluate the entries using the point system outlined on the next page and select a winner. All entrants must be a Nuclear Medicine Technologist and a staff member of a hospital or nuclear medicine facility. Entries must be post-marked by December 1, 1998.

## NEW PRIZES

*Thanks to the generous support of the 1998 PR Stars corporate sponsor, Capintec, Inc.*

**1st Place:** \$800 for the individual and \$600 for the institution. Up to \$650 in airfare to the 1999 SNM Annual Meeting in Los Angeles to receive your prize! Payment of your pre-registration fee to attend the 1999 SNM Annual Meeting. Your SNM-TS membership dues paid for one year.

**2nd Place:** \$600 for the individual and \$400 for the institution. Up to \$650 in airfare to the 1999 SNM Annual Meeting in Los Angeles to receive your prize! Payment of your pre-registration fee to attend the 1999 SNM Annual Meeting. Your SNM-TS membership dues paid for one year.

**3rd Place:** \$350 for the individual and \$250 for the institution. Up to \$650 in airfare to the 1999 SNM Annual Meeting in Los Angeles to receive your prize! Payment of your pre-registration fee to attend the 1999 SNM Annual Meeting. Your SNM-TS membership dues paid for one year.

**4th-10th Place:** Your SNM-TS membership dues paid for one year.

### ENTRY FORM

Your Name \_\_\_\_\_

Hospital/Facility \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

Mail your entry information (including this completed form) by **December 1, 1998 to:**

Society of Nuclear Medicine  
**1998 PR Stars Contest**  
1850 Samuel Morse Drive  
Reston, VA 20190  
Fax: 703-708-9018  
Telephone: 703-708-9000

Please complete reverse side



# PR - STARS CONTEST

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Please describe and document your promotional activities and results. The following point system will be used for judging.

**Eligibility:**

- ★ Nuclear Medicine Technologist
- ★ Staff member of a hospital or nuclear medicine facility
- ★ Entry postmarked by December 1, 1998
- ★ All of the following questions answered in full



1. Please compose a detailed description, including the goals and objectives, of your nuclear medicine PR activities. (7 points)



2. Did the goals and objectives you set reflect those of the PR Stars Contest to:

- a. Reinforce nuclear medicine to referring physicians? (10 points)
- b. Promote nuclear medicine to healthcare workers? (5 points)
- c. Increase community awareness? (5 points)
- d. Encourage career paths? (5 points)



3. How effective were you in reaching the goals of the PR Stars Contest?

- a. Increasing physician referrals? (10 point)
- b. Increasing awareness among healthcare workers? (5 points)
- c. Increasing community awareness? (5 points)
- d. Encouraging career paths? (5 points)
- e. Showing pride in your profession. (5 points)



4. What resources did you have available to you and how effectively did you use them? (budget, manpower, media, etc...) (13 points)



5. Can your program be used easily by others? Please explain (5 points)



6. Was your program cost effective? Please explain (5 points)



7. When did your nuclear medicine PR activity take place? (no points) \_\_\_\_\_

Please provide a detailed time-line of the planning and implementation of your program. (10 points)

For example:    March 10                    Strategic planning session with staff technologists  
                         May 1                                    Drafted nuclear medicine article for facility newsletter



9. Are you currently an active member of the SNM-TS? (5 points)

- Yes                     No

*Thank you for your entry! Good Luck!*

**Val Cronin, CNMT**  
1997 - 1998 Nuclear  
Medicine Week Chairperson

**Susan Gavel, CNMT**  
1998 - 1999 Nuclear  
Medicine Week Chairperson

# Celebrate Nuclear Medicine Week

**OCTOBER 4-10, 1998**

**Spotlight your facility  
and demonstrate your  
enthusiasm, devotion and  
pride in your profession.**

Nuclear Medicine Week gives you the opportunity to educate potential patients, referring physicians and your community about the history, value and safety of nuclear medicine.

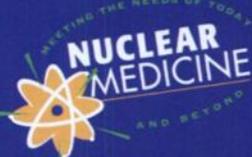
Keep the celebration alive all year long! Promoting nuclear medicine does not need to be limited to Nuclear Medicine Week. Take advantage of every opportunity throughout the year to increase the understanding and utilization of nuclear medicine.

*Don't forget the 1998 PR Stars Contest sponsored by the SNM-TS and Capintec, Inc. Look for details, prize information and entry forms in JNM and JNMT.*

Nuclear Medicine may have benefited you or a loved one. Discover how many ways Nuclear Medicine makes a difference.

Safe and effectively used for the evaluation of:

- Cardiac Disease
- Stress Fractures
- Bone Injuries
- Breast Diseases
- Kidney Function
- Tumor Imaging & Therapy
- Thyroid Disease



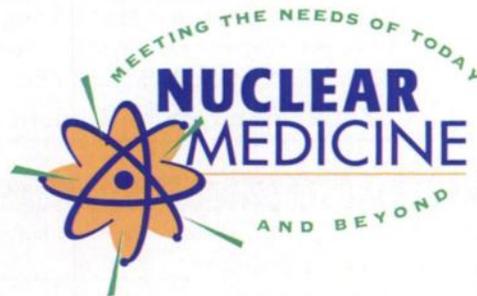
SOCIETY OF NUCLEAR MEDICINE

Poster

T-Shirt



Button & Sticker



**Order Form on the  
Following Page!**

Featured on this page is the 1998 Nuclear Medicine Week merchandise entitled, "Nuclear Medicine: Meeting the Needs of Today and Beyond" designed by the Society of Nuclear Medicine Technologist Section (SNM-TS).

*Nuclear Medicine Week is sponsored by the SNM-TS.*



# NEW PAPERS IN NEPHROUROLOGY

## Radionuclides in Nephrourology

This collection of articles provides a comprehensive review of the latest nuclear medicine procedures used to evaluate patients with kidney and urinary tract disease. Includes authoritative Consensus Reports that ensure techniques meet basic standards and enhance the utility of tests. The Consensus Reports are a valuable resource helping practitioners to better:

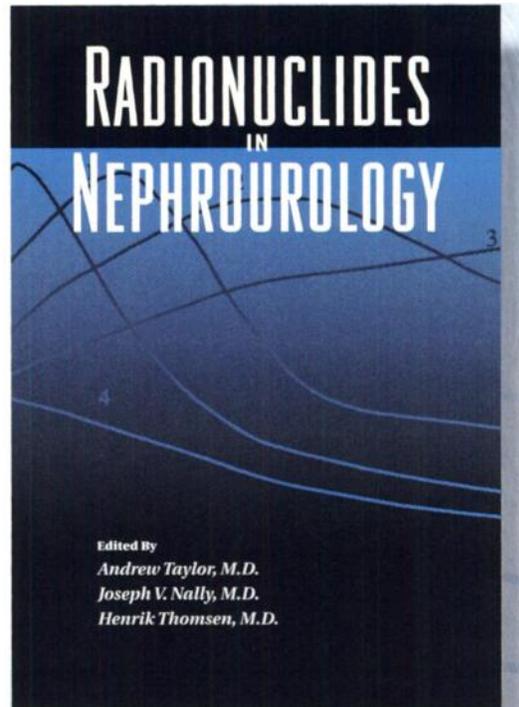
- Analyze test results
- Identify problem areas
- Detect renovascular hypertension
- Measure renal clearances
- Detect obstructive uropathy

## HIGHLIGHTING

### State-of-the-Art Applications in Nuclear Medicine Nephrourology and Urology

In addition to these timely Consensus Reports, *Radionuclides in Nephrourology* also includes thirty-nine current articles contributed from leading research institutions throughout the world.

Nephrourologists, urologists and internists will find that *Radionuclides in Nephrourology* is an essential addition to their imaging libraries.



### Consensus Reports Cover:

- ACE Inhibitor Renography for Detecting Renovascular Hypertension
- Renal Clearance
- Diuresis Renography for Investigating Dilated Upper Urinary Tract

### Other Topics Include:

- Simultaneous OIH and DTPA Renography in Essential Hypertension
- Noninvasive Quantification of Individual Renal Function
- Renal SPECT with Dynamic Tracers
- Prostate Cancer Radioimmunosintigraphy

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<http://www.snm.org>

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at their toll free number: Non-U.S. 314-432-1401 or FAX 314-432-7044

# ★ MAKE SENSE OF NRC REGS ★

## The Nuclear Medicine Handbook for Achieving Compliance with NRC Regulations

This new handbook explains how a nuclear medicine facility can best meet Nuclear Regulatory Commission (NRC) rulings. A valuable addition to any department's reference library even when staff have only an occasional question about a specific regulation. This guide has nearly everything needed to interpret and implement NRC regulations and license conditions as they apply to nuclear medicine.\*

### NRC-Related Topics Cover:

- License/Amendments
- Release of Patients
- Patient Post-Therapy Room Survey
- Dose Calibrators
- Record-Keeping
- Declared Pregnant Workers
- Written Directives
- Quality Management Program
- NRC Inspections
- ALARA Program
- Authorized User Training

Helpful appendices include information on record retention, nuclide data and NRC contacts. The book also includes an extensive set of NRC-related forms easily adapted for your facility.

To order, simply contact the SNM's book distributor, Matthews Medical Books, at their toll-free number

(800) 633-2665 (non-U.S. (314) 432-1401, or Fax: (314) 432-7044).

\*The Handbook is not a substitute for any regulation or license condition and is not endorsed by the NRC.

ISBN 0-932004-50-4

### THE NUCLEAR MEDICINE Handbook FOR ACHIEVING COMPLIANCE WITH NRC REGULATIONS

Jeffrey S. Mason  
Katherine M. Elliott  
Alisha C. Mitro

A PUBLICATION OF THE SOCIETY OF NUCLEAR MEDICINE

REGULA  
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Application f  
License amen  
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10CFR35.18 License issua  
10CFR35.19 Specific exem  
10CFR35.32 Quality mana  
SUMMAR  
10CFR35.11: To manufactur  
one license m  
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# NEW AND NOTABLE FROM THE SOCIETY OF NUCLEAR MEDICINE MIRD COMMITTEE...

The Society of Nuclear Medicine's Medical Internal Radiation Dose Committee serves as the international clearinghouse for data concerning the use of radionuclides in humans. Like the *MIRD Primer* and *Radionuclide Data and Decay Schemes*, the new *MIRD Cellular S Values* promises to become a standard reference publication within all diagnostic imaging centers.

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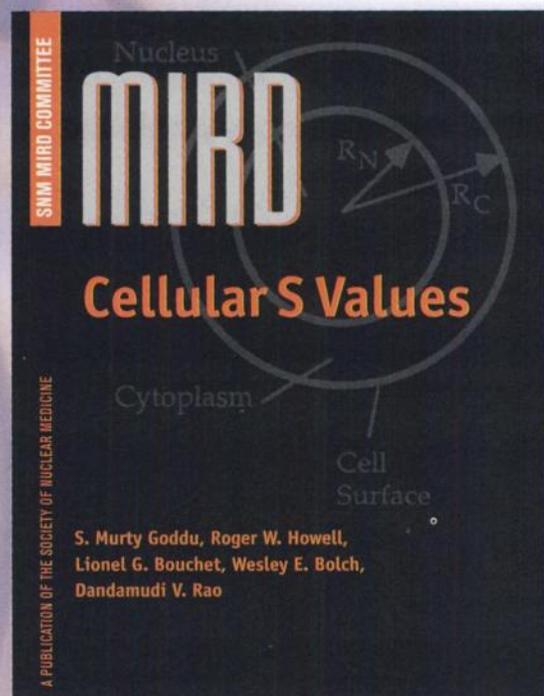
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