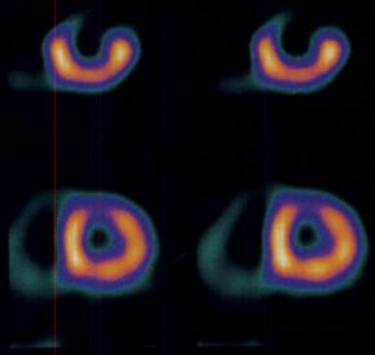
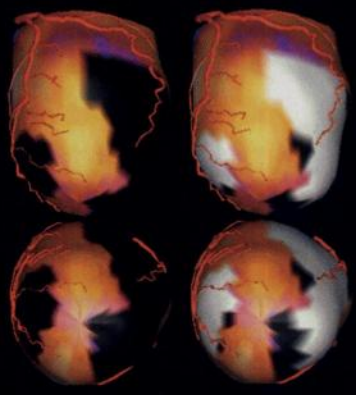
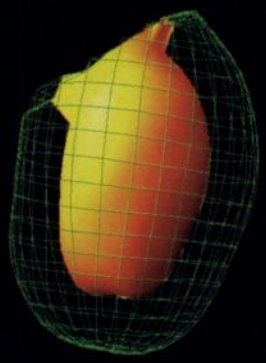


Profile Attenuation Correction



Emory Cardiac Toolbox



Cedars Gated SPECT Quantification

ology

Siemens **medical**
Solutions that help

CAPRAC®-R

WELL COUNTER ...
NOT JUST FOR WIPE TESTING

The ***CAPRAC-R Well Counting System*** offers:

- Speed
- Accuracy
- Economy
- PLUS an abundance of performance-boosting features.

Menu-driven software programs offer:

- Schilling
- Dicopac•
- Blood Volume (Cr-51 & I-125)
- Wipe Tests
- Leak Testing

Using the General Counting Section, the ***CAPRAC-R*** can replace older systems for any type of gamma counting that performs RIA's or other lab procedures.

WIPE TEST COUNTING

The ***CAPRAC-R*** monitors ultra-low levels of activity in as little as 6 seconds using NaI detector for 1 nCi while giving preliminary isotope identification through gamma spectroscopy.

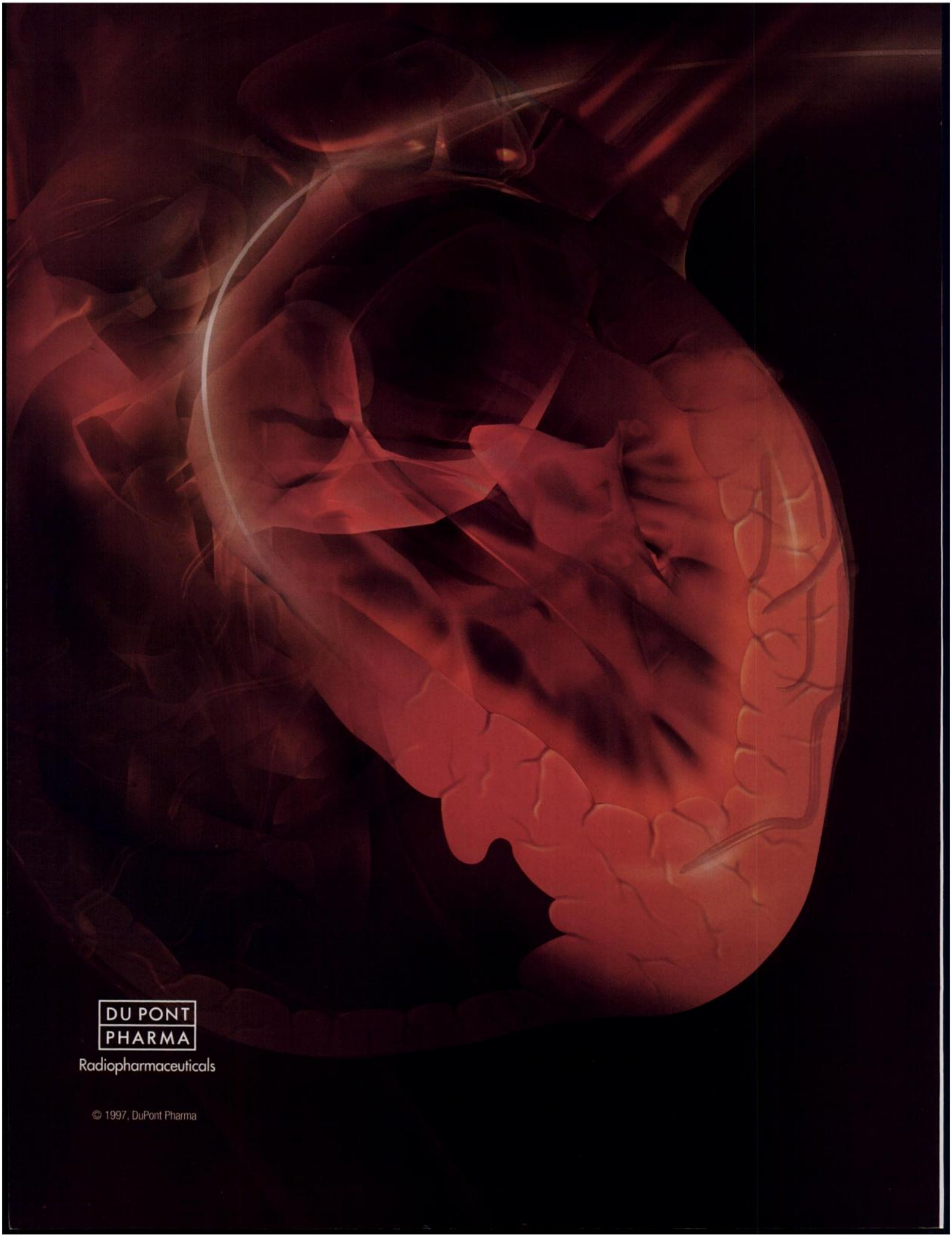
An Epson printer is optional. A choice of detectors are also available: the standard 1-1/2" NaI detector or a 2" x 2" NaI crystal with 1" shielding.

Phone or fax us today!
Delivery from stock ... the ***CAPRAC-R***.

CAPINTEC, INC.
6 Arrow Rd., Ramsey, N.J. USA 07446
Toll Free (800) 631-3826/(201) 825-9500
FAX: (201) 825-4829, www.capintec.com

Xian Liya Electronic Instruments Co., Ltd.
No. 11, East Xiao Zhai Rd.
Xian, Shaanxi Province
Peoples Republic of China

SNM Annual Meeting Booth #258.

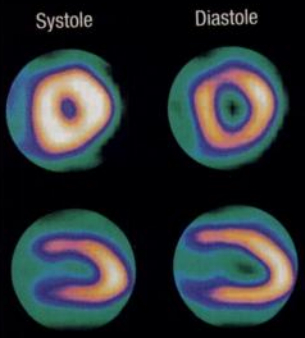


Inside Information.

Perfusion and function in one test: clinically relevant information.

Cardiolite® provides:

- **Both** stress perfusion and resting function **(wall motion, wall thickening, a quantifiable and reproducible measure of ejection fraction)**[1,2]
- Enhanced diagnostic confidence with a high negative predictive value: **A normal stress test correlates with a <1% annualized cardiac event rate**[3-5]
- Clinically relevant information in a range of situations– such as **risk assessment, evaluation post-MI, and for chest pain management**



LVEF=51%

Gated SPECT images with CARDIOLITE®

For more information, contact DuPont Pharma at 1-800-362-2668 or www.radiopharm.com

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.

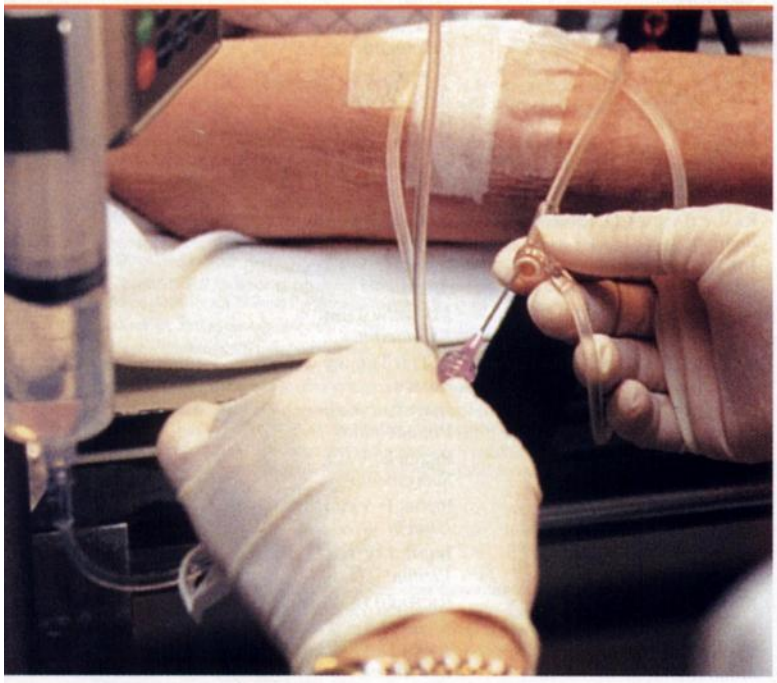
Cardiolite®

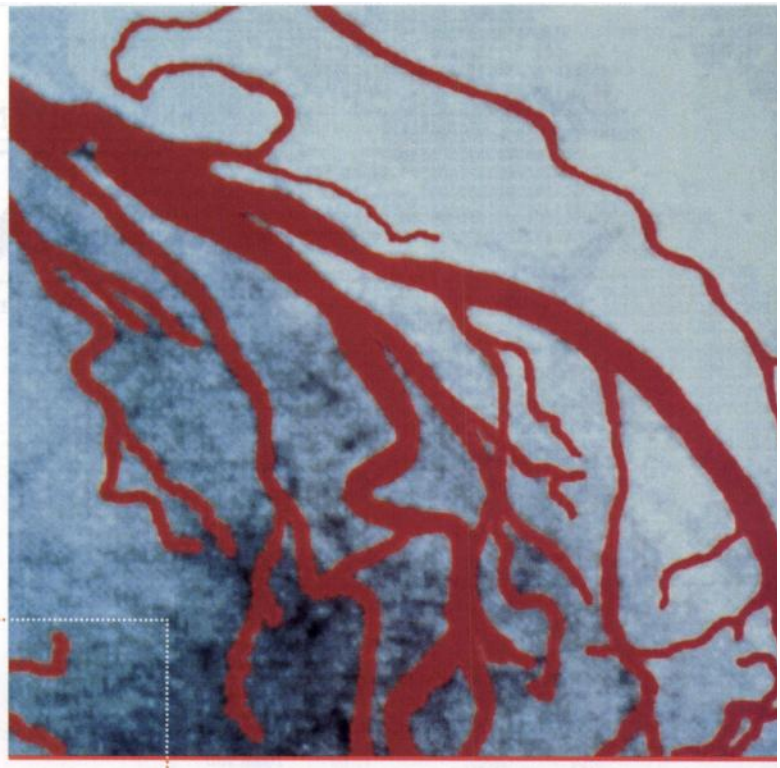
Kit for the preparation of Technetium Tc99m Sestamibi

The Confidence You Want–The Information You Need

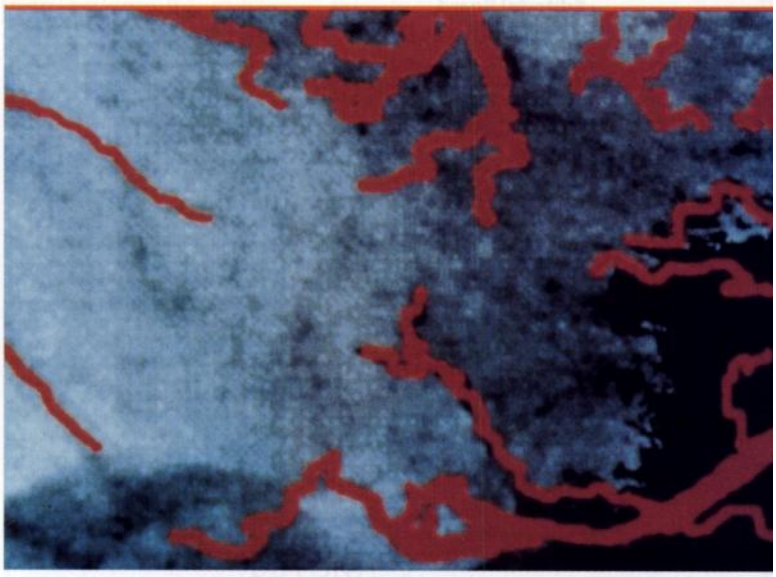
SNM Annual Meeting Booth #328.

fast START





wide OPEN



Where pharm stress should be

from start to finish

FAST START

- Onset of action is rapid and predictable.
- Maximum coronary hyperemia within 2-3 minutes in most cases.

WIDE OPEN

- Consistently produces maximal vasodilation.
- Blood flow increases 3- to 4-fold over baseline.[1]

RAPID RETURN

- <10-second half-life.
- Side effects usually resolve quickly and spontaneously.*

STRONG FINISH

- Imaging comparable to exercise.
- Lower cost-per-case than dipyridamole.[2]

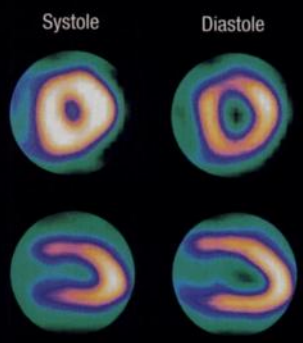
SNM Annual Meeting Booth #274.

Inside Information.

Perfusion and function in one test: clinically relevant information.

Cardiolite® provides:

- **Both** stress perfusion and resting function **(wall motion, wall thickening, a quantifiable and reproducible measure of ejection fraction)**[1,2]
- Enhanced diagnostic confidence with a high negative predictive value: **A normal stress test correlates with a <1% annualized cardiac event rate**[3-5]
- Clinically relevant information in a range of situations—such as **risk assessment, evaluation post-MI, and for chest pain management**



LVEF=51%

Gated SPECT images with CARDIOLITE®

For more information, contact DuPont Pharma at 1-800-362-2668 or www.radiopharm.com

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

SNM Annual Meeting Booth #328.

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 (1.5rads/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, $[Cu(MIBI)_4]BF_4$, 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 (≥ 20μg/ml), an increase in cells with chromosome aberrations was observed in the *in vitro* human lymphocyte assay. $[Cu(MIBD_4]BF_4$ 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

	Estimated Radiation Absorbed Dose			
	REST			
	2.0 hour void		4.8 hour void	
Organ	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
	STRESS			
	2.0 hour void		4.8 hour void	
Organ	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.

DU PONT PHARMA

Radiopharmaceuticals

Marketed by

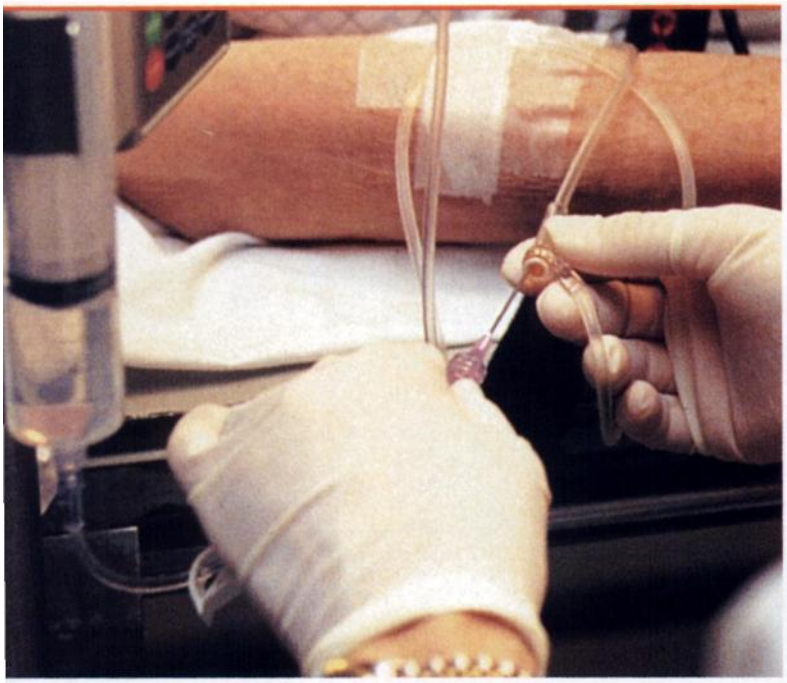
DuPont Radiopharmaceutical Division
The DuPont Merck Pharmaceutical Co.
331 Treble Cove Road
Billerica, Massachusetts, USA 01862
For ordering Tel. Toll Free: 800-225-1572
All other business: 800-362-2668
(For Massachusetts and International, call 508-667-9531)

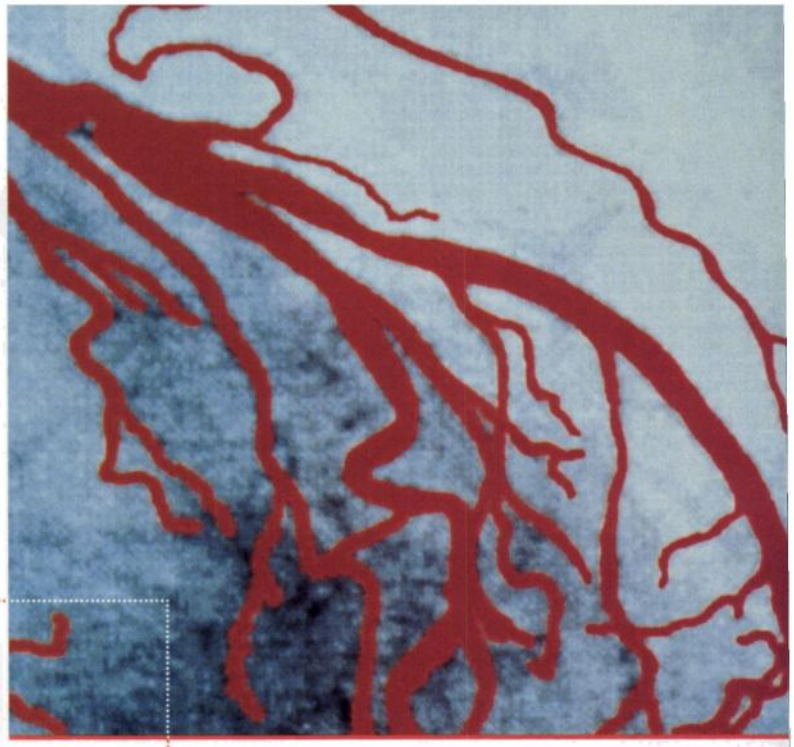
513121-0296 2/96

Printed in U.S.A.

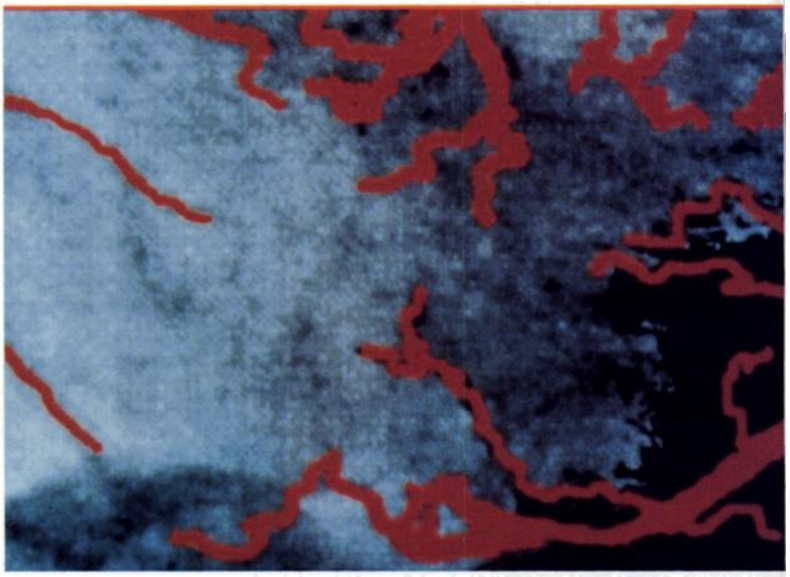
REFERENCES: 1. Nichols K, DePuey EG, Rozanski A. Automation of gated tomographic left ventricular ejection fraction. *J Nucl Cardiol.* 1996;3:475-482. 2. Chua T, Kiat H, Germano G, et al. Gated technetium-99m sestamibi for simultaneous assessment of stress myocardial perfusion, post-exercise regional 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.

fast START





wide OPEN



Where pharm stress should be

from start to finish

FAST START

- Onset of action is rapid and predictable.
- Maximum coronary hyperemia within 2-3 minutes in most cases.

WIDE OPEN

- Consistently produces maximal vasodilation.
- Blood flow increases 3- to 4-fold over baseline.[1]

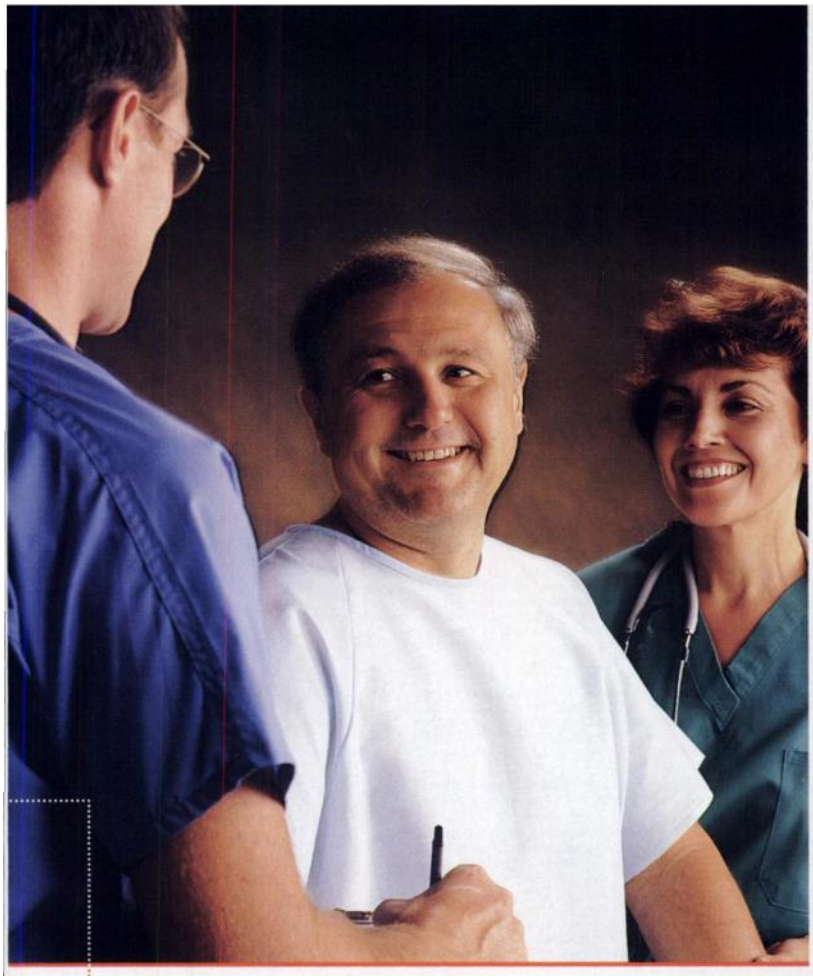
RAPID RETURN

- <10-second half-life.
- Side effects usually resolve quickly and spontaneously.*

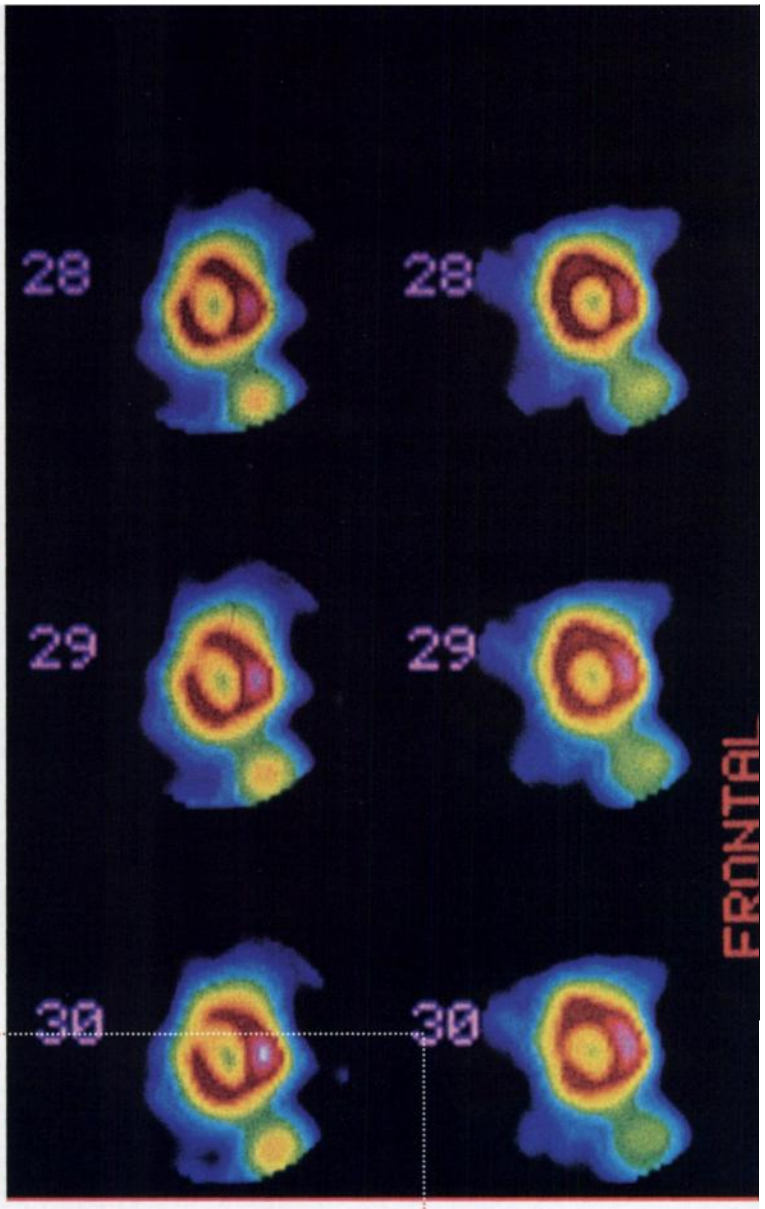
STRONG FINISH

- Imaging comparable to exercise.
- Lower cost-per-case than dipyridamole.[2]

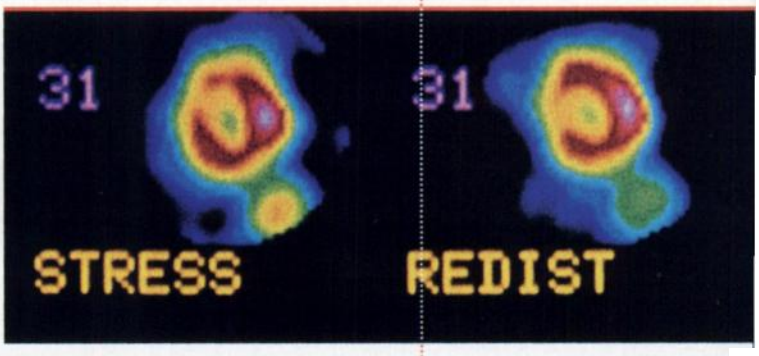
SNM Annual Meeting Booth #274.



rapid RETURN



strong FINISH



* Despite the short half-life, 10.6% of the side effects occurred not with the infusion of Adenoscan but several hours after infusion. Also, 8.4% of the side effects that began coincident with infusion persisted for up to 24 hours after infusion was completed. In many cases, it is not possible to know whether these late adverse events are the result of Adenoscan infusion.

ADENOSCAN®

adenosine

Please see the brief summary of prescribing information on the following page.

1. Wilson RF, Wyche K, Christensen BV, et al. Effects of adenosine on human coronary arterial circulation. *Circulation*. 1990;82:1595-1606.
2. Hilleman DE, Lucas BD, Mohiuddin SM, et al. Cost-minimization analysis of intravenous adenosine and dipyridamole in thallous chloride Tl 201 SPECT myocardial perfusion imaging. *Ann Pharmacother*. 1997;31:974-979.

BRIEF SUMMARY

ADENOSCAN®
adenosine

For Intravenous Infusion Only

DESCRIPTION

Adenosine is an endogenous nucleoside occurring in all cells of the body. It is chemically 6-amino-9-beta-D-ribofuranosyl-9-H-purine.

Adenosine is a white crystalline powder. It is soluble in water and practically insoluble in alcohol. Solubility increases by warming and lowering the pH of the solution.

Each Adenoscan vial contains a sterile, non-pyrogenic solution of adenosine 3 mg/mL and sodium chloride 9 mg/mL in Water for Injection, q.s. The pH of the solution is between 4.5 and 7.5.

INDICATIONS AND USAGE:

Intravenous Adenoscan is indicated as an adjunct to thallium-201 myocardial perfusion scintigraphy in patients unable to exercise adequately. (See **WARNINGS**).

CONTRAINDICATIONS:

Intravenous Adenoscan (adenosine) should not be administered to individuals with:

1. Second- or third-degree AV block (except in patients with a functioning artificial pacemaker).
2. Sinus node disease, such as sick sinus syndrome or symptomatic bradycardia (except in patients with a functioning artificial pacemaker).
3. Known or suspected bronchoconstrictive or bronchospastic lung disease (e.g., asthma).
4. Known hypersensitivity to adenosine.

WARNINGS:

Fatal Cardiac Arrest, Life Threatening Ventricular Arrhythmias, and Myocardial Infarction.

Fatal cardiac arrest, sustained ventricular tachycardia (requiring resuscitation), and nonfatal myocardial infarction have been reported coincident with Adenoscan infusion. Patients with unstable angina may be at greater risk.

Sinoatrial and Atrioventricular Nodal Block

Adenoscan (adenosine) exerts a direct depressant effect on the SA and AV nodes and has the potential to cause first-, second- or third-degree AV block, or sinus bradycardia. Approximately 6.3% of patients develop AV block with Adenoscan, including first-degree (2.9%), second-degree (2.6%) and third-degree (0.8%) heart block. All episodes of AV block have been asymptomatic, transient, and did not require intervention. Adenoscan can cause sinus bradycardia. Adenoscan should be used with caution in patients with pre-existing first-degree AV block or bundle branch block and should be avoided in patients with high-grade AV block or sinus node dysfunction (except in patients with a functioning artificial pacemaker). Adenoscan should be discontinued in any patient who develops persistent or symptomatic high-grade AV block. Sinus pause has been rarely observed with adenosine infusions.

Hypotension

Adenoscan (adenosine) is a potent peripheral vasodilator and can cause significant hypotension. Patients with an intact baroreceptor reflux mechanism are able to maintain blood pressure and tissue perfusion in response to Adenoscan by increasing heart rate and cardiac output. However, Adenoscan should be used with caution in patients with autonomic dysfunction, stenotic valvular heart disease, pericarditis or pericardial effusions, stenotic carotid artery disease with cerebrovascular insufficiency, or uncorrected hypovolemia, due to the risk of hypotensive complications in these patients. Adenoscan should be discontinued in any patient who develops persistent or symptomatic hypotension.

Hypertension

Increases in systolic and diastolic pressure have been observed (as great as 140 mm Hg systolic in one case) concomitant with Adenoscan infusion; most increases resolved spontaneously within several minutes, but in some cases, hypertension lasted for several hours.

Bronchoconstriction

Adenoscan (adenosine) is a respiratory stimulant (probably through activation of carotid body chemoreceptors) and intravenous administration in man has been shown to increase minute ventilation (Ve) and reduce arterial PCO_2 causing respiratory alkalosis. Approximately 26% of patients experience breathlessness (dyspnea) or an urge to breathe deeply with Adenoscan. These respiratory complaints are transient and only rarely require intervention.

Adenosine administered by inhalation has been reported to cause bronchoconstriction in asthmatic patients, presumably due to mast cell degranulation and histamine release. These effects have not been observed in normal subjects. Adenoscan has been administered to a limited number of patients with asthma and mild to moderate exacerbation of their symptoms has been reported. Respiratory compromise has occurred during adenosine infusion in patients with obstructive pulmonary disease. Adenoscan should be used with caution in patients with obstructive lung disease not associated with bronchoconstriction (e.g., emphysema, bronchitis, etc.) and should be avoided in patients with bronchoconstriction or bronchospasm (e.g., asthma). Adenoscan should be discontinued in any patient who develops severe respiratory difficulties.

PRECAUTIONS:

Drug Interactions

Intravenous Adenoscan (adenosine) has been given with other cardioactive drugs (such as beta adrenergic blocking agents, cardiac glycosides, and calcium channel blockers) without apparent adverse interactions, but its effectiveness with these agents has not been systematically evaluated. Because of the potential for additive or synergistic depressant effects on the SA and AV nodes, however, Adenoscan should be used with caution in the presence of these agents. The vasoactive effects of Adenoscan are inhibited by adenosine receptor antagonists, such as alkylxanthines (e.g., caffeine and theophylline). The safety and efficacy of Adenoscan in the presence of these agents has not been systematically evaluated. The vasoactive effects of Adenoscan are potentiated by nucleoside transport inhibitors, such as dipyridamole. The safety and efficacy of Adenoscan in the presence of dipyridamole has not been systematically evaluated. Whenever possible, drugs that might inhibit or augment the effects of adenosine should be withheld for at least five half-lives prior to the use of Adenoscan.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Studies in animals have not been performed to evaluate the carcinogenic potential of Adenoscan (adenosine). Adenosine was negative for genotoxic potential in the Salmonella (Ames Test) and Mammalian Microsome Assay.

Adenosine, however, like other nucleosides at millimolar concentrations present for several doubling times of cells in culture, is known to produce a variety of chromosomal alterations. In rats and mice, adenosine administered intraperitoneally once a day for five days at 50, 100, and 150 mg/kg [10-30 (rats) and 5-15 (mice) times human dosage on a mg/M^2 basis] caused decreased spermatogenesis and increased numbers of abnormal sperm, a reflection of the ability of adenosine to produce chromosomal damage.

Pregnancy Category C

Animal reproduction studies have not been conducted with adenosine; nor have studies been performed in pregnant women. Because it is not known whether Adenoscan can cause fetal harm when administered to pregnant women, Adenoscan should be used during pregnancy only if clearly needed.

Pediatric Use

The safety and effectiveness of Adenoscan in patients less than 18 years of age have not been established.

ADVERSE REACTIONS:

The following reactions with an incidence of at least 1% were reported with intravenous Adenoscan among 1421 patients enrolled in controlled and uncontrolled U.S. clinical trials. Despite the short half-life of adenosine, 10.6% of the side effects occurred not with the infusion of Adenoscan but several hours after the infusion terminated. Also, 8.4% of the side effects that began coincident with the infusion persisted for up to 24 hours after the infusion was complete. In many cases, it is not possible to know whether these late adverse events are the result of Adenoscan infusion.

Flushing	44%	Gastrointestinal discomfort	13%	Second-degree AV block	3%
Chest discomfort	40%	Lightheadedness/dizziness	12%	Paresthesia	2%
Dyspnea or urge to breathe deeply	28%	Upper extremity discomfort	4%	Hypotension	2%
Headache	18%	ST segment depression	3%	Nervousness	2%
Throat, neck or jaw discomfort	15%	First-degree AV block	3%	Arrhythmias	1%

Adverse experiences of any severity reported in less than 1% of patients include:

Body as a Whole: back discomfort; lower extremity discomfort; weakness.

Cardiovascular System: nonfatal myocardial infarction; life-threatening ventricular arrhythmia; third-degree AV block; bradycardia; palpitation; sinus exit block; sinus pause; sweating; T-wave changes, hypertension (systolic blood pressure > 200 mm Hg).

Central Nervous System: drowsiness; emotional instability; tremors.

Genital/Urinary System: vaginal pressure; urgency.

Respiratory System: cough.

Special Senses: blurred vision; dry mouth; ear discomfort; metallic taste; nasal congestion; scotomas; tongue discomfort.

OVERDOSAGE:

The half-life of Adenosine is less than 10 seconds and side effects of Adenoscan (when they occur) usually resolve quickly when the infusion is discontinued, although delayed or persistent effects have been observed. Methylxanthines, such as caffeine and theophylline, are competitive adenosine receptor antagonists and theophylline has been used to effectively terminate persistent side effects. In controlled U.S. clinical trials, theophylline (50-125 mg slow intravenous injection) was needed to abort Adenoscan side effects in less than 2% of patients.

DOSAGE AND ADMINISTRATION:

For intravenous infusion only.

Adenoscan should be given as a continuous peripheral intravenous infusion.

The recommended intravenous dose for adults is 140 mcg/kg/min infused for six minutes (total dose of 0.84 mg/kg).

The required dose of thallium-201 should be injected at the midpoint of the Adenoscan infusion (i.e., after the first three minutes of Adenoscan). Thallium-201 is physically compatible with Adenoscan and may be injected directly into the Adenoscan infusion set.

The injection should be as close to the venous access as possible to prevent an inadvertent increase in the dose of Adenoscan (the contents of the IV tubing) being administered. There are no data on the safety or efficacy of alternative Adenoscan infusion protocols.

The safety and efficacy of Adenoscan administered by the intracoronary route have not been established.

Note: Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration.

CAUTION: Federal law prohibits dispensing without prescription.

Fujisawa USA, Inc.
Deerfield, IL 60015
Under license from Medco Research, Inc.
Research Triangle Park, NC 27709

PET image of
metastatic lung cancer

MODERATORS:
RUTH TESAR AND
PETER VALK, M.D.

INSTITUTE FOR CLINICAL PET

UP-TO-THE MINUTE REPORT...
Clinical PET

An ICP/SNM Symposium

Tuesday, June 9th, 1998
5:00 p.m.–8:00 p.m.

The Royal York Hotel
100 Front Street West
Toronto, Canada

Course Outline

Reimbursement advances have moved PET into the realm of mainstream clinical practice. Much has changed over the last year in the field of PET.....***come learn about it!*** In this session, you will develop a full understanding of the current practice of clinical PET. As a "PET intensive" course, attendees will develop an understanding for the types of PET imaging equipment that are available and the options for securing access to PET isotopes. The various approaches to providing PET services will be contrasted, highlighting the relative strengths/weaknesses of each approach. The current **clinical** applications of PET in oncology will be covered as well as an orientation to the applications that will emerge in the coming years. The session will conclude with an up-to-the-minute report on the current issues facing PET centers, including Medicare Reimbursement and FDA Reform.

Program

5:00 - 5:05 p.m.	**Welcome**	Ruth Tesar
5:05 - 5:35 p.m.	**Setting Up PET Services**	
	PET Imaging Equipment	R. Edward Coleman, M.D.
	PET Isotope Production	Brad Holmgren, R.Ph.
5:35 - 6:10	**What are the Current "Clinical Applications of PET"?**	
	Lung Cancer	Peter Valk, M.D.
	Colon Cancer and Melanoma	George Segall, M.D.
6:10 - 6:25	**Break**	
6:25 - 7:20	**Current Clinical Applications of PET (cont.)**	
	Head/Neck and Lymphoma	Val Lowe, M.D.
	Cost Effectiveness of PET	Peter Valk, M.D.
	Discussion	
7:20 - 7:40	**Emerging Applications of PET**	Richard Wahl, M.D.
	Therapy Monitoring	
	Infection	
7:40 - 8:00	**Up-to-the-Minute Report: The Issues**	Ruth Tesar & Peter Valk
	Reimbursement	
	FDA	
	Other ICP Activities	

VariCam CoDe™

Positron Imaging is Evolving...

Come see our

Evolving Positron Imaging

at the SNM '98 Meeting, Booth #178

Elscint

The Intelligent Image

Circle Reader Service No. 42

ADAC
Elscint
GE
Picker
SMV
Siemens
Toshiba
Dicom & more...

One display, simple, efficient

One printer, one archive...

DELTAmanager® Nuclear Display

MedImage
734-665-5400
www.medimage.com
Circle Reader Service No. 122

SNM
Booth #300

Dramatically reduce image acquisition time.

Process images with a single touch of a button.

Review real-time patient data remotely on a standard PC.

ADAC raises the standard.

The leader in nuclear medicine introduces innovative technology to help increase your productivity. Come share the future at SNM booth #368.

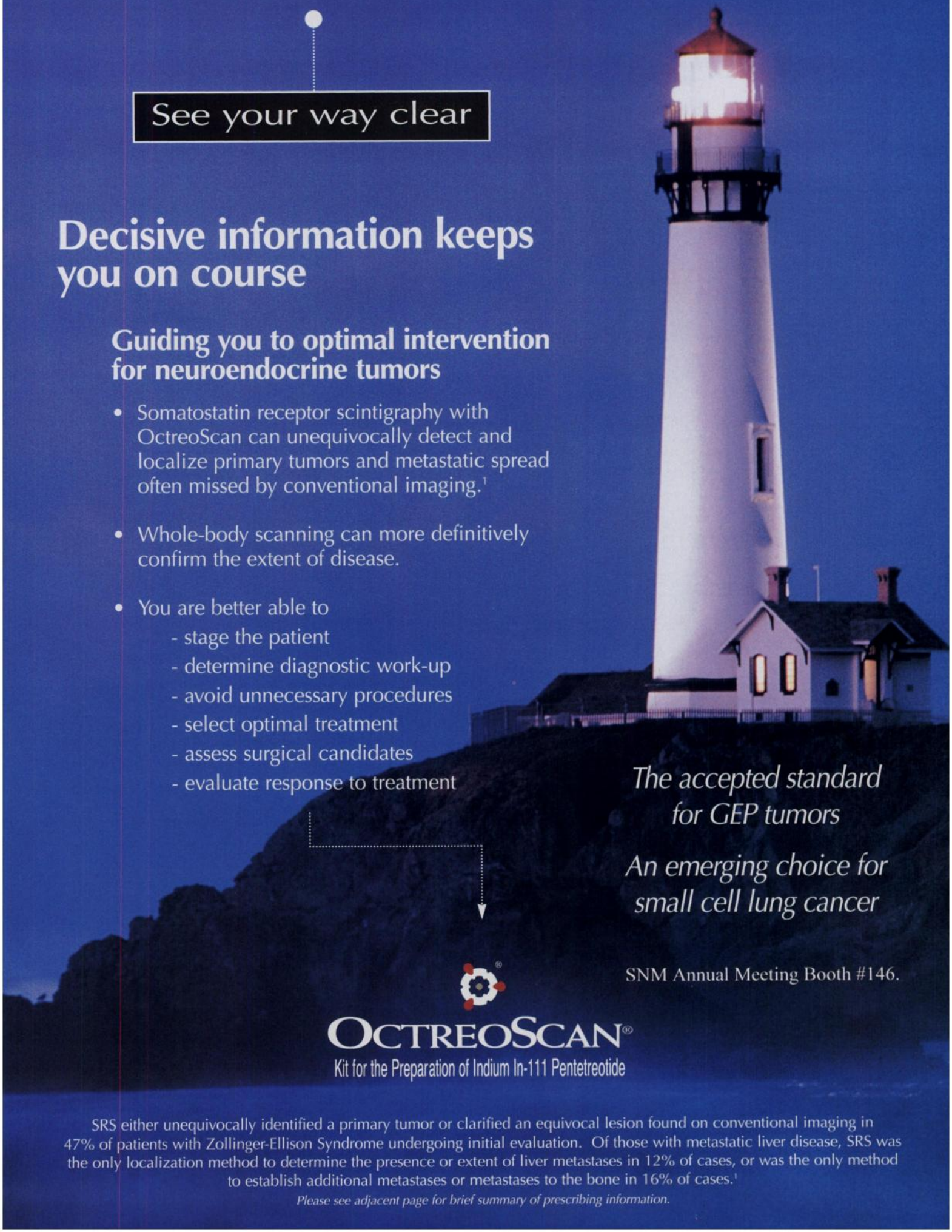
ADAC

ADAC Laboratories

FOR MORE INFORMATION,
CONTACT US AT 1.800.538.8531
OR VISIT OUR WEB SITE AT
WWW.ADACLABS.COM

Circle Reader Service No. 1


Time and again.


See your way clear
Decisive information keeps you on course
Guiding you to optimal intervention for neuroendocrine tumors
• Somatostatin receptor scintigraphy with OctreoScan can unequivocally detect and localize primary tumors and metastatic spread often missed by conventional imaging.[1]
• 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
The accepted standard for GEP tumors
An emerging choice for small cell lung cancer
SNM Annual Meeting Booth #146.
OCTREOSCAN®
Kit for the Preparation of Indium In-111 Pentetreotide
SRS either unequivocally identified a primary tumor or clarified an equivocal lesion found on conventional imaging in 47% of patients with Zollinger-Ellison Syndrome undergoing initial evaluation. Of those with metastatic liver disease, SRS was the only localization method to determine the presence or extent of liver metastases in 12% of cases, or was the only method to establish additional metastases or metastases to the bone in 16% of cases.[1]
Please see adjacent page for brief summary of prescribing information.

OCTREOSCAN®

Kit for the Preparation of Indium In-111 Pentetreotide

BRIEF SUMMARY OF PRESCRIBING INFORMATION

DESCRIPTION

OctreoScan® is a kit for the preparation of indium In-111 pentetreotide, a diagnostic radiopharmaceutical. It is a kit consisting of two components:

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 Solution.

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 CONJUGATE MAY FORM.

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 withdrawal.

PRECAUTIONS

General

1. 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., bisacodyl or lactulose) 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.

6. 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 motility of the gallbladder. A single dose of indium In-111 pentetreotide is not expected to cause cholelithiasis.

8. 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 planar imaging is 111 MBq (3.0 mCi) of indium In-111 pentetreotide prepared from an OctreoScan kit. The recommended intravenous dose for SPECT 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 administration.

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[1] 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.[2]

Estimated Absorbed Radiation Doses after Intravenous Administration of Indium In-111 Pentetreotide[3] to a 70 kg patient

	PLANAR		SPECT	
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 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 Intestine	5.80	0.58	11.59	1.16
Lower Large 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
Effective Dose[4] 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.

2. E.P. Krenning, W.H. Bakker, P.P.M. Kooij, 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-phenylalanyl-L-hemicystyl-L-phenylalanyl-D-tryptophyl-L-lysyl-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],
   (iii) 4.9 mg trisodium citrate, anhydrous,
   (iv) 0.37 mg citric acid, anhydrous, and
   (v) 10.0 mg inositol.

Before lyophilization, 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 MBq/mL (3.0 mCi/mL) indium In-111 chloride in 0.02 N HCl at time of calibration. The vial also contains ferric 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 is present.

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 package insert.

MALLINCKRODT

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

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

 MI22701 12/97

Circle Reader Service No. 110

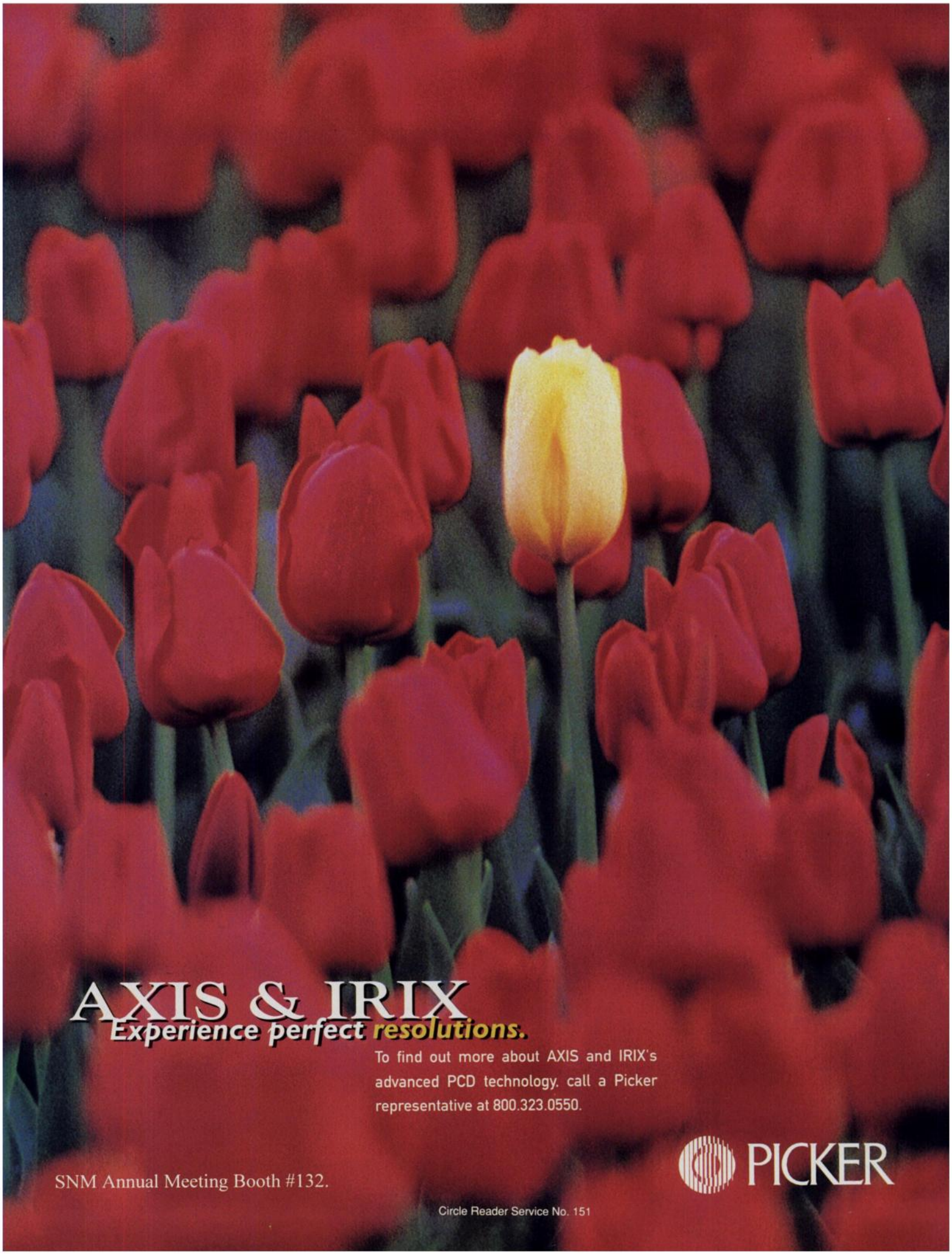
"perfect" resolutions

How do you ensure standout results?

AXIS and IRIX's innovative Positron Coincidence Detection option features positron imaging that delivers improved accuracy and early detection over other imaging modalities.

Imagine a combination of unique system features such as thick crystal, axial filtering, and whole body survey that provides maximum image quality and unprecedented versatility.

The result? Early detection and treatment. Better patient care.


AXIS & IRIX
Experience perfect resolutions.
To find out more about AXIS and IRIX's advanced PCD technology, call a Picker representative at 800.323.0550.
PICKER
SNM Annual Meeting Booth #132.
Circle Reader Service No. 151

Catch the Wave of the 21ST Century

NUA SM CDR SM

With the
*SPECTRA*Digital™ *V*250DSP
Nuclear Imaging System

The next generation ***today*** in digital detection technology with *true variable position*, slip-ring gantry design! Forecast your imaging requirements for the **21ST** Century and meet them ***today*** in a totally software driven and up-dateable system. From Non-Uniform Attenuation to Coincidence Detection developments, leading edge performance begins with Hitachi, the pioneer in digital nuclear imaging systems.

HITACHI

Hitachi Medical Corporation of America
Nuclear Medicine Products Division
9177 Dutton Drive, Twinsburg, OH 44087
Call toll-free: 888-524-0790 Fax: 330-405-3222
Visit our site at http://www.hit.hitachi.com/hmca

Visit us at Booth 120
SNM Show, Toronto

Circle Reader Service No. 72

GET REAL!

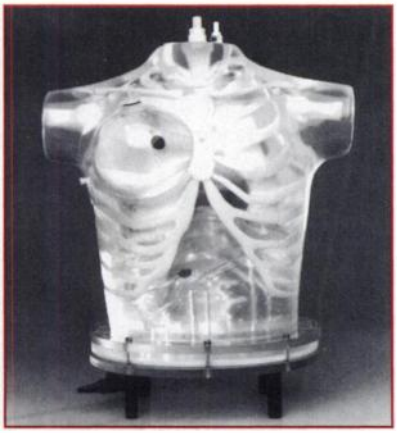
VALID REFERENCE STANDARDS REQUIRE FULLY ANTHROPOMORPHIC AND ANATOMICALLY CORRECT PHANTOMS WITH TISSUE EQUIVALENT MUSCLE, LUNG, AND BONE.

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

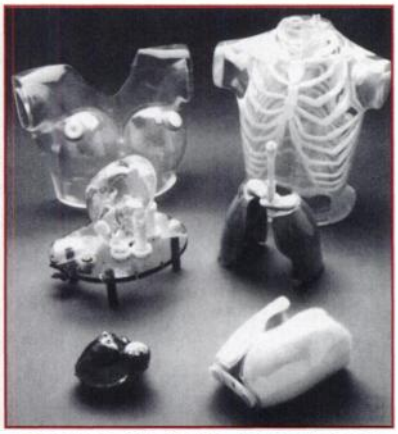
A Journal Paper (reference on request) states: "The errors in relative quantification caused by an attenuation correction that assumes the head to be a uniformly attenuating medium were found to be up to 20%, which is larger than regional blood flow deficits often reported in patients with dementia."

STRIATAL PHANTOM

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



HEART/THORAX PHANTOM



DISASSEMBLED PHANTOM

- Heart with Three Fillable Standard or Custom Defects
- Breasts with Fillable Tumors with or without Chest Overlay
- Reference Standards for Mammoscintigraphy
- Perfusable Lungs with Fillable Tumors
- Liver with Fillable Tumors

Radiology Support Devices, Inc.
1904 E. Dominguez St.
Long Beach, CA 90810
Phone: (800) 221-0527; (310) 518-0527
Fax: (310) 518-0806
E-Mail: rsd@inreach.com

Ask About Special Phantoms For Your Research Programs

Please see us at the SNM Annual Meeting, Booth 630

Circle Reader Service No. 169

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) and in the pages of *JNM*.

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.

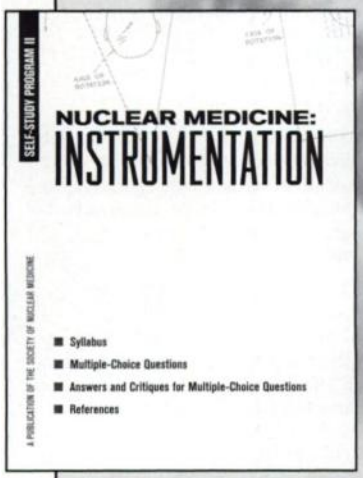
The new *SPECT Primer* features an enhanced section on Clinical Applications, incorporating the latest and most widely accepted fundamental knowledge in the field, with, three all-new chapters on Acquisition Devices, Processing Devices, and Clinical Indications. And in every chapter, you'll find expanded 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.

INTRODUCING THE MOST UP-TO-DATE SELF-ASSESSMENT PROGRAM ON INSTRUMENTATION



Nuclear Medicine Self-Study Program II: Instrumentation is the most current and comprehensive self-assessment program on this vital topic available today. With more than 35 pages devoted to questions, answers and critiques, this program is an essential tool for reviewing and upgrading your skills or preparing for board certification.

Topics Include—

- Nonimaging Instrumentation
- Anger Scintillation Cameras
- Multiple-Element Scintillation Camera
- Effect of Camera Performance on Clinical Imaging
- Quality Control for Anger Cameras
- Emission Computed Tomographic Imaging
- Nuclear Medicine Computers, Acquisition and Processing Software and System Management

Self-Study Program II is the second book in the series from SNM. *Self-Study Program III: Cardiovascular Nuclear Medicine* available spring 1997. Watch for *Self-Study Program VI: Oncology* topic booklets coming soon.

For more information on SNM books, visit our web site at http:// www. snm.org

Call toll-free to order your copy today! $45.00 SNM members / $63.00 nonmembers.
Matthews Medical Books 800-633-2665 (outside U.S. 314-432-1401)

Psst! Got a minute?

Are you interested in monitoring national and regional trends on nuclear medicine procedures performed on a quarterly basis?

Do you know how your workload compares to similar institutions?

Would you like to compare the number of procedures performed per technologist compared to other institutions in your region or nationwide?

If you responded yes to just one of these questions, we encourage you to subscribe to the
SNM UTILIZATION ANALYSIS DATABASE PROJECT.

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?

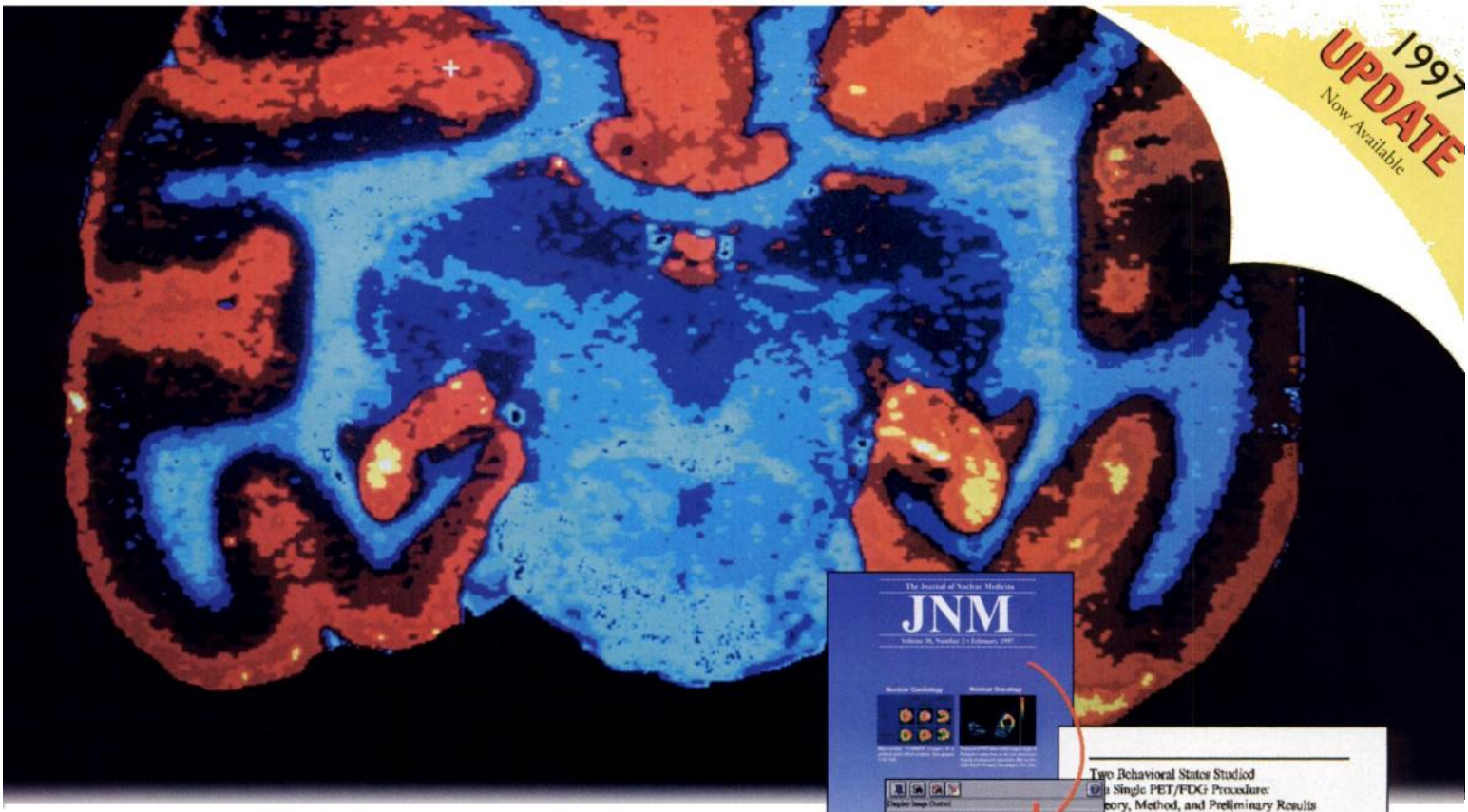
- Participants receive standard reports on utilization by procedure, place of service, type of patient, etc.
- Participants will be able to compare their facility data with others in the region and with the national (global) averages.
- Subscribers may query reports on-line or receive printed reports 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.

UTILIZATION ANALYSIS

For more information or to participate in this program, contact Wendy Smith at (703) 708-9000 x242 or via e-mail at wsmith@snm.org.

SOCIETY OF NUCLEAR MEDICINE



The complete SNM Journals

library *at your* fingertips.

Now, you can have a complete CD library of the SNM Journals on your own computer. Powerful search software lets you enter a single word and read all the articles where that topic appears, from last year or from a decade ago. Not only do you have the library, but you have the librarian to find the information for you.

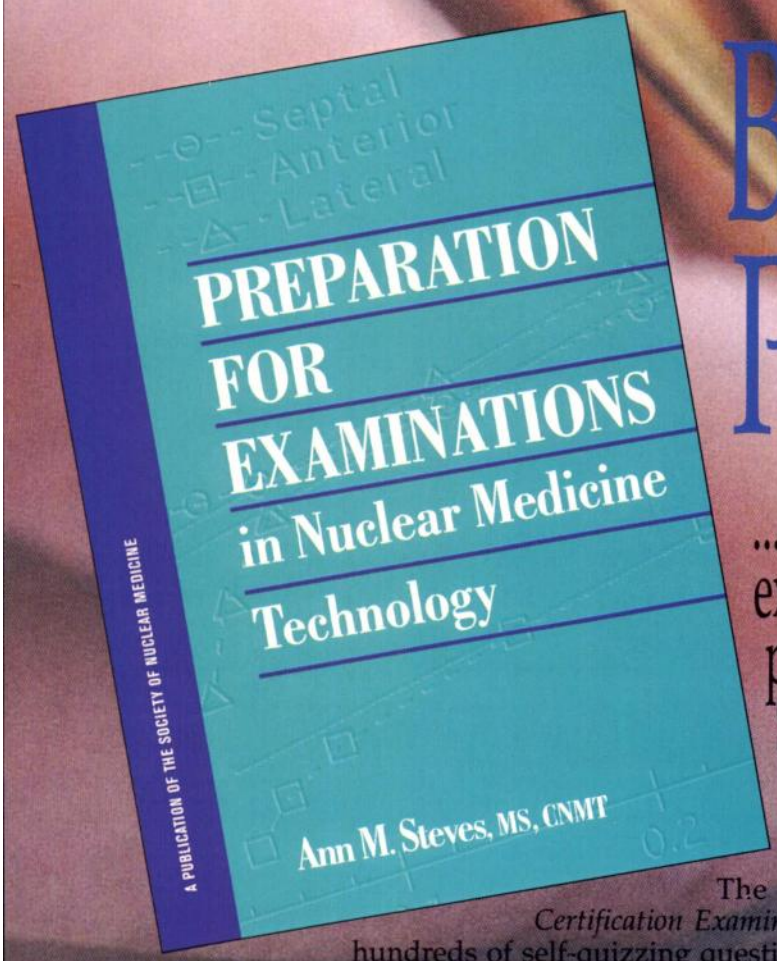
Your collection will contain every journal produced over the last decade. In one step, you acquire the premier source of information on nuclear medicine and research. This library is the most complete reference package available in the medical sciences today, and you as a nuclear professional will have it.

Never before has it been so cost effective and space liberating to have this information at your fingertips.

1-888-DIGIPUB
1-703-925-0300

DIGITAL PUBLISHING, INC

For those without CD capability, we have made the index available for purchase: You can then use your own journals for reference. Special rates for students. Minimum System Requirements: Windows 3.1, '95, or NT; 486/33 processor; 11mb hard disk space and 8mb memory; 2X CD-ROM; color monitor displaying at 600x800 with 16 colors (a higher resolution and greater color capability will improve image quality).



Boost Your Performance...

... on national certification examinations, with two new exam preparation texts from the Society of Nuclear Medicine Technologist Section—

The brand-new, illustrated *Preparation for Certification Examinations in Nuclear Medicine Technology* contains hundreds of self-quizzing questions and answers to help you perform at your peak. Mirroring the structure of those on national certification exams, these multiple-choice questions cover–

Radiopharmacy • Radiation Safety • Instrumentation • Patient Care • Clinical Procedures

Each answer is accompanied with thorough, easy-to-understand explanations and source references for more information.

And if your library doesn't include the recently updated *The Review of Nuclear Medicine Technology*, you're missing the single most effective exam study text you can own. New material includes the latest information on NRC regulations, recently introduced radiopharmaceuticals, and an expanded section on the rapidly growing field of nuclear cardiology.

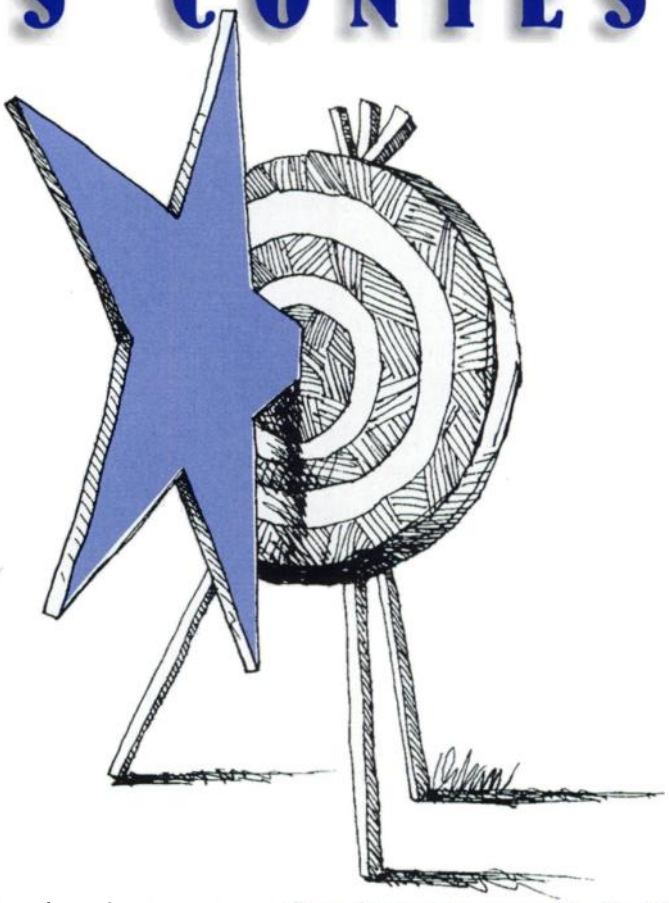
And if you buy BOTH "Preparation" and the "Review," you'll save $5.00 off the "Preparation" cover price.

It's easy to order. Simply call the SNM's distributor, Matthews Medical Books, at their toll-free number–

1-800-633-2665 (non-U.S. 314-432-1401, or Fax: 314-432-7044).

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 from) 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

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

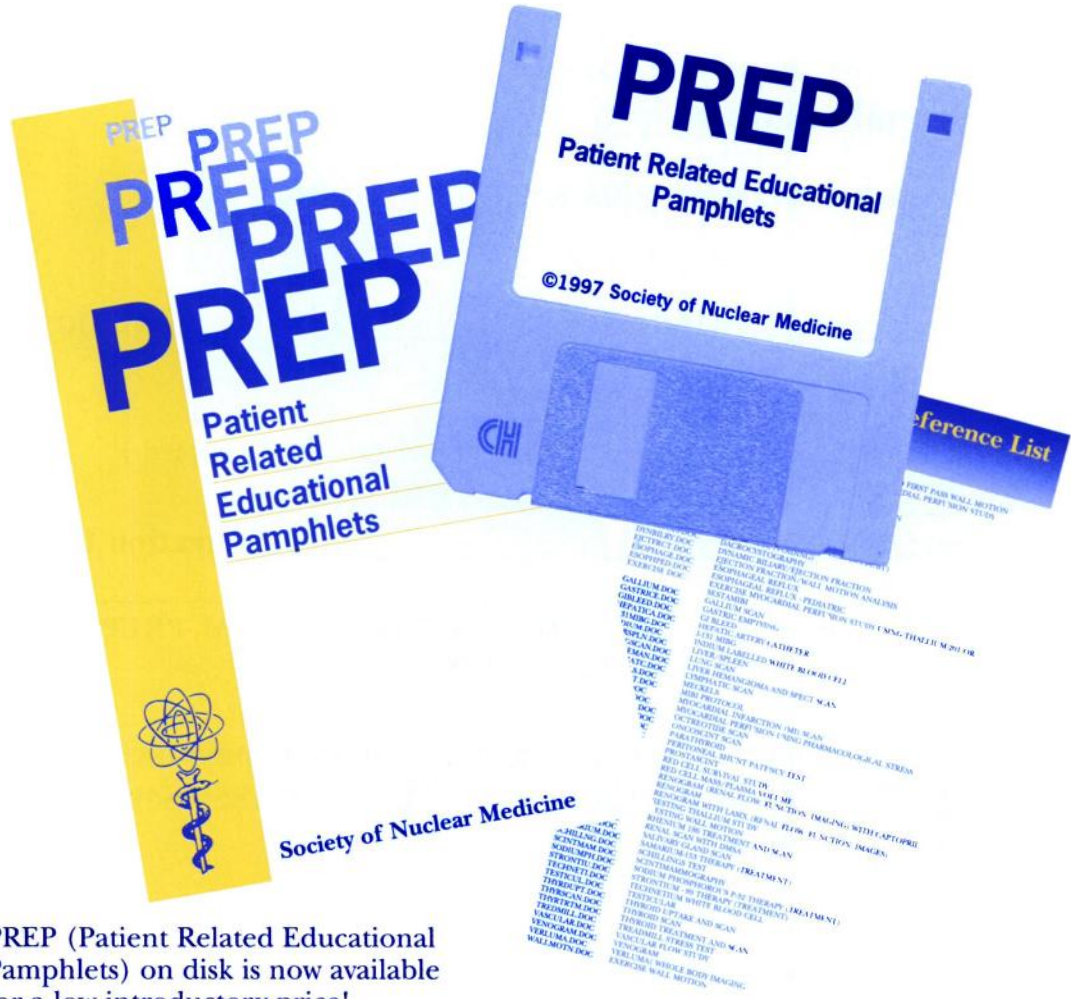
Thank you for your entry! Good Luck!

Val Cronin, CNMT
1997 - 1998 Nuclear
Medicine Week Chairperson

Susan Gavel, CNMT
1998 - 1999 Nuclear
Medicine Week Chairperson

Introducing PREP

Patient Related Educational Pamphlets



PREP (Patient Related Educational Pamphlets) on disk is now available for a low introductory price!

PREP provides patient information on diagnostic and therapeutic nuclear medicine procedures on a diskette in Microsoft WORD that you can reformat and customize to meet the needs of your institution. The PREP package includes: (1) a diskette of procedures (2) a printed reference page with all file names and (3) samples of how the PREP information can be used.

PREP will enable you to easily provide important information to your patients — promoting confidence and an understanding of their nuclear medicine procedure. Help to establish nuclear medicine as an integral part of patient care by giving referring physicians the PREP information.

PREP meets JCAHO standards for patient education and helps you adhere to accreditation compliance requirements.

The cost is only $55 for SNM Members and $65 for non-members.

To order, please use the form on the following page.

Society of Nuclear Medicine
1850 Samuel Morse Drive • Reston, Virginia • 20190-5316 • (703)708-9000 • www.snm.org

PREP ORDER FORM

Yes! Send me the PREP disk!

☐ **$55 for SNM members plus $3 shipping/handling.**
SNM membership #_____

☐ **$65 for non-members plus $3 shipping/handling.**

Disk Format: _____DOS (windows) _____Macintosh (windows)

Payment Information: (Pre-payment required. No purchase orders accepted.)

Charge my _____VISA or _____MASTERCARD
Card Number:_____Expiration Date:_____
Signature:_____
Mail of fax this form and completed credit card information to: SNM, PREP, 1850 Samuel Morse Drive, Reston, VA 20190. Fax: 703-708-9018

_____My check made out in the full amount and made payable to SNM is enclosed. (Mail form and check to: SNM, PREP, 1850 Samuel Morse Drive, Reston, VA 20190.)

Shipping Information: (No P.O. boxes)

Yes, I have read and will comply with the copyright, duplication and disclaimer information listed below.

Ship my PREP disk to:_____

_____

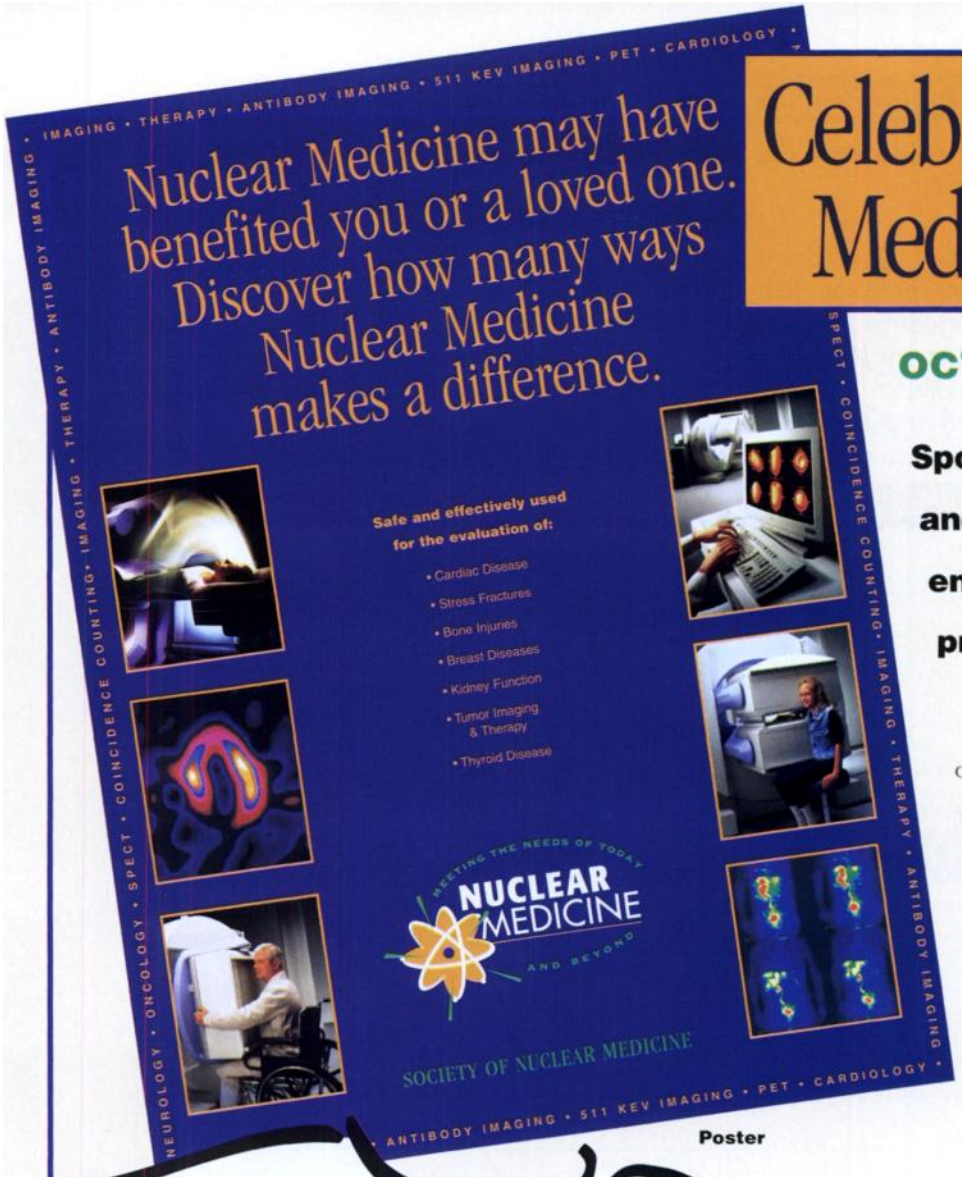
_____

Phone:_____Fax: _____

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.

License agreement terms and conditions will appear on the shipping package.

Celebrate Nuclear Medicine Week



Poster

OCTOBER 4-10, 1998

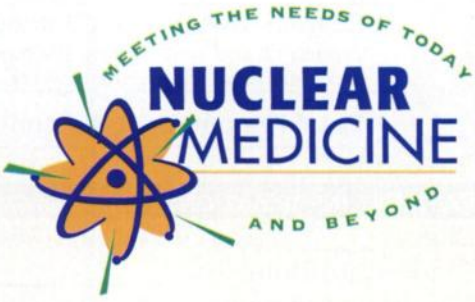
Spotlight your facility and demonstrate your enthusiasm, devotion and pride in your profession.

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.*

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.

CELEBRATE NUCLEAR MEDICINE WEEK! OCTOBER 4 - 10, 1998

T-shirt: White 100% cotton t-shirt with the Nuclear Medicine Week logo featured on the front. Sizes: L and XL (quantities limited)

Poster: Display the poster prominently in your medical facility, use it as a teaching tool or give it to referring physicians to promote nuclear medicine.

Buttons & Stickers: Get the nuclear medicine message out by wearing the buttons or using the stickers on all your correspondence. A perfect and inexpensive give-away.

Patient Pamphlets: Use the SNM Patient Pamphlets to educate your patients, the public and referring physicians about nuclear medicine. Use this form to order the *Benefits of Nuclear Medicine* or call Matthews Medical Books at 1-800-633-2665 to request this or other pamphlets in the series. (Liver, Bone, Renal, Brian, Ovarian & Colorectal, Breast, Prostate, Cardiac Stress-Rest Test and Radioiodine)

ORDERING INFORMATION: Pre-payment via check, VISA or Mastercard required for all orders.

FAX:
CREDIT CARD ORDERS
913-362-7401

MAIL:
CHECK & CREDIT CARD ORDERS
Society of Nuclear Medicine
c/o MidPoint National
P.O. Box 411037
Kansas City, MO 64141-1037

Faxed orders are accepted if submitted using this form and includes the completed credit card information required below.
Mailed orders are accepted if submitted using this order form and includes pre-payment via check, VISA or Mastercard.

Nuclear Medicine Week product availability hotline. 703-708-9000 (x256)

Item	QUANTITY	PRICE	TOTAL
T-shirt (size: L)		$10.00 each	
T-shirt (size: XL)		$10.00 each	
Poster		$5.00 each	
Stickers		$.25 each	
Buttons		$1.00 each	
SNM Patient Pamphlet: Benefits of Nuclear Medicine		$20.00 for pack of 50	
Guidelines for Promoting Nuclear Medicine		FREE	FREE

MERCHANDISE TOTAL	$
Tax: In VA - 4.5%. In KS - 6.9%	$
Shipping: (allow 2 -4 weeks for delivery) **If your merchandise total is:** $10 or less add: $3.00 $10.01-$20.00 add: $5.00 $20.01-$30.00 add: $7.00 $30.00 or more add: $10.00	$
Express Delivery and Foreign Orders: $25 Express charge in addition to the regular shipping rates. Express: allow 3-5 days for delivery. Foreign: allow 2-4 weeks for delivery.	$
Total Pre-payment Amount Due:	$

PAYMENT INFORMATION: Pre payment via check, VISA or Mastercard required for all orders.

Check:_____ (payable to the Society of Nuclear Medicine) VISA:_____ Mastercard: _____
Credit Card Number: _____ Expiration Date: _____
Card Holder's name: _____
Card Holder's signature: _____

SHIPPING INFORMATION: Express orders can not be shipped to a P.O. box.

Name: _____ Phone: _____
Institution:_____
Address: _____
City: _____ State:_____ Zip: _____ Country: _____

Professional Pride

#NMI02

#NMI03

Promote your profession with classic elegance. These SNM gold finished pins are perfect on a lapel or as a tie tack. ¾" round or rectangle.

#NMI04

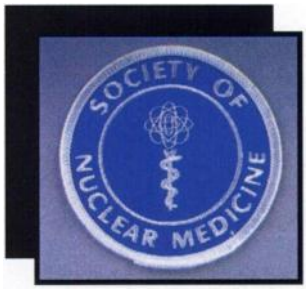
Grace your desk with this 3" diameter ebony marble paperweight with silver SNM medallion plate. A keepsake you'll treasure for years to come.

#NM202

Perfect on the golf course or off, this polo-style shirt combines the quality of Fruit-of-the-Loom® with the SNM embroidered emblem.
Available in White, Cardinal Red & Royal Blue
Sizes: M, L, XL, 2X*

#NMI00

This distinguished 13 oz. presidential collection clear glass mug is tastefully accented with a gold rim and SNM embossed gold logo.
Microwavable!!!!



#NMI01

This handsome blue and white embroidered SNM patch is the perfect accompaniment to any garment. Celebrate your profession by purchasing one for each member of your staff.

#NM204

Versatile SNM extra large duffel bag features durable Denier fabric with strap handles, outside pocket and adjustable shoulder strap.

#NMI07

Show your SNM team spirit by wearing this natural cotton twill cap. One size fits all, your choice of visor colors:
Black, Dark Green, or Royal Blue

#NM200

Like your favorite sweater, this heavyweight taslan nylon jacket with trail fleece lining and embroidered SNM logo will be irreplaceable.
Available in Royal Blue, Navy or Black
Sizes: S, M, L, XL, 2X*, 3X*

Please See Ordering Information on next page.

The Society of Nuclear Medicine

c/o Award Crafters Inc.

4449 Brookfield Corporate Drive
Chantilly, Virginia 20151-1681

QUESTIONS????
1-800-772-2701
CALL US!

Order Form

Qty.	Item#	Item Description	Size	Color	Price each	Total Price
	NM100	**Glass Mug**			$10.45	
	NM101	**Society Patch**			$2.50	
	NM102	**Round Lapel Pin**			$7.50	
	NM103	**Rectangular Lapel Pin**			$7.50	
	NM104	**Marble Paperweight**			$12.50	
	NM107	**Baseball Cap**			$9.50	
	NM200	**Jacket**-*(Please add $3.00 for 2X, $5.00 for 3X)*			$60.00*	
	NM202	**Golf Shirt**-*(Please add $3.00 for 2X)*			$18.00*	
	NM204	**Duffel Bag**			$18.50	

Subtotal	
Virginia Residents add 4.5% sales tax	
Shipping & Handling	
TOTAL	

CALL IN YOUR ORDER:
1-800-772-2701

WASHINGTON DC AREA: 703-818-0500

OR FAX: 703-818-2157

OR MAIL TO: **Award Crafters**
4449 Brookfield Corporate Drive
Chantilly, Virginia 21051-1681

Shipping & Handling
(Cont. USA only; others please call)

$ 00.01 to $ 10.00	add $ 3.00
$ 10.01 to $ 25.00	add $ 4.00
$ 25.01 to $ 50.00	add $ 6.00
$ 50.01 to $100.00	add $ 8.00
$100.01 to $200.00	add $12.00

Method of Payment:

❒ Check Enclosed (Make checks payable to Award Crafters, Inc.)

❒ Mastercard ❒ Visa ❒ American Express

Card # _____

Cardholder Name _____

Exp. Date _____ Signature _____

Ship to: *(No PO Boxes, Please)*

Name _____

Company _____

Street _____

City _____ State___ Zip _____

Daytime Phone: _____

★★★ We're specialists in custom and standard awards and executive gifts, Just give us a call! 1-800-772-2701 ★★★

NM APPLICATION SPECIALIST

Toshiba America Medical Systems, Inc. a world leader in diagnostic imaging, is seeking a NM Application Specialist to become part of the sales team.

Candidates will be responsible for working with the sales force in demonstrating products and training customers. Qualified candidate will have a minimum of 5 years experience in NM. Must be registered in ARRT or CNMT. Candidates must be open to extensive traveling (90%) and may need to relocate.

Please send resume and salary history to: Toshiba America Medical Systems, Inc., Attn: HR, 2441 Michelle Dr., Tustin, CA 92780, or e-mail: resume@tams.com or fax to: (714)573-0306. EOE, M/F/D/V.

In touch with Tomorrow

TOSHIBA

GLOBAL IMAGING MEDICAL SYSTEMS

S&W SCOTT & WHITE

NUCLEAR MEDICINE TECHNOLOGIST

Current ARRT or NMTCB.

Certification/registration as a Nuclear Medicine Technologist. We offer outstanding career opportunities, excellent benefits and competitive salaries. Interested candidates should contact Scott and White Human Resources, 2401 S. 31st Street, Temple, TX 76508; Fax (254) 724-1631 or call (800) 527-JOBS.

http://www.sw.org
Equal Opportunity Employer

NUCLEAR MEDICINE PHYSICIAN

ABNM (dual boards desirable) *entry level* position for outpatient imaging center in Boca Raton, Florida. Instrumentation includes Siemens 951R PET, Pegasys/GE nuclear, Lunar DPX-L Bone Density. Ongoing clinical research revolves around applications using monoclonal antibodies. Send resume to: P.O. Box 11697, Ft. Lauderdale, Florida 3339-1697. E-mail: jkotler@pol.net.

RADIATION PHYSICIST
ARH REGIONAL MEDICAL CENTER
HAZARD, KY

Appalachian Regional Healthcare is seeking candidates for a Radiation Physicist opportunity available at the 308 bed ARH Regional Medical Center complex located in Hazard, KY.

This position is responsible for providing physics services in various areas of Radiology directed toward the safe, accurate operation of all radiation producing equipment and the appropriate administration of radiation dosages to patients.

Requirements for this position include Masters Degree in Medical Physics or related field with at least two years of clinical experience in equipment calibration, clinical dosimetry, quality control and related areas preferred, along with KY certification (or working toward certification) consistent with State or other regulatory requirements.

An outstanding compensation package will be offered including a very attractive salary range and benefits which include fully paid family plan health insurance, paid vacation, holiday and sick leaves, etc. Interview expenses are assumed by ARH and a relocation allowance is available. For additional information, please forward resume to or contact: **Marilyn Hamblin, ARH Corporate Personnel Division, PO Box 8086, Lexington, KY 40533; FAX: 606-226-2586; call 1-800-888-7045 Ext. 532 or e-mail to: mhamblin@arh.org** EOE

VISIT ARH ON THE WEB AT: www.arh.org

APPALACHIAN REGIONAL HEALTHCARE

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.

MARSHFIELD CLINIC

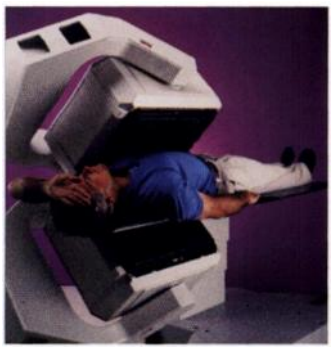
SORRY, NOT A HEALTH PROFESSIONAL SHORTAGE AREA.
An Equal Opportunity/Affirmative Action Employer m/f/h/v

The test of time.




When we introduced the unique variable detector camera design to nuclear medicine in 1991, no one imagined how popular and enduring it would become.

Today, imitations abound. Still, none match the refined blend of scanning versatility, digital imaging capabilities and reliability inherent in the DST-XL. Or, its totally unique *Open gantry design* for greater patient acceptance and access.



DST-XL ..... Unique. Enduring.

SNM Annual Meeting Booth #348.

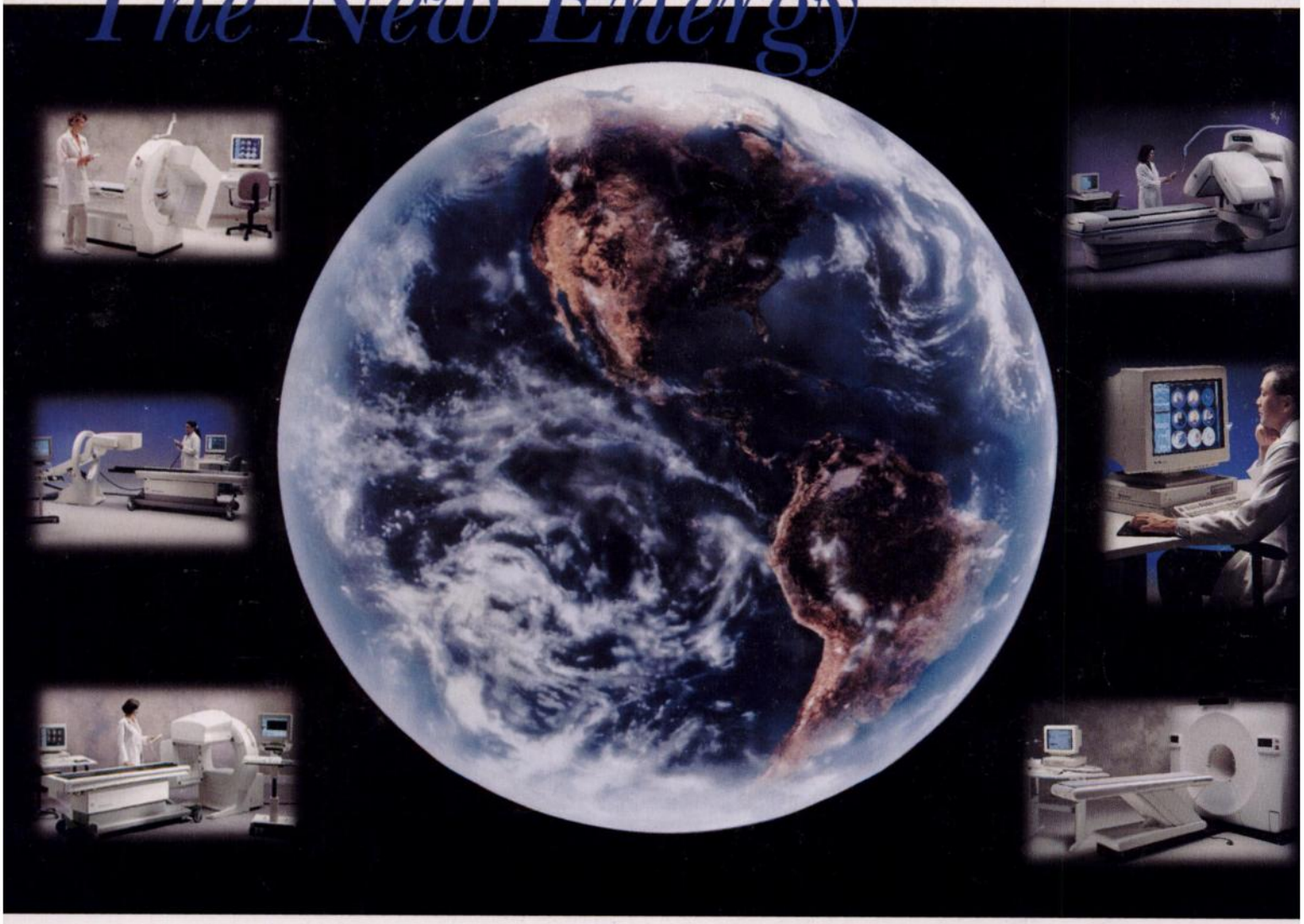
SMV

For more information please visit our web site at http://www.smvnet.com or contact:
SMVAmerica • 8380 Darrow Road • Twinsburg • Ohio 44087 • USA • Tel: 800.664.0844 • 330.425.1340 • Fax: 330.405.7680
SMVInternational • 41 rue Fourny • Z1 BP 112 • 78534 Buc FRANCE • Tel: 33.1.30.84.91.00 • Fax: 33.1.30.84.91.05

Expanding the power of nuclear 25 medicine for more than 25 years

the new energy

The New Energy



Complete Solutions. A Single Source. A Solid Future.

SNM Annual Meeting Booth #100.

This year GE Medical Systems celebrates its 25th year of dedication to Nuclear Medicine. With this rich history GE remains the leader with the largest installed base of SPECT cameras in the world.

GE continues that commitment by offering the newest and broadest product line in the industry with everything from single-detector gamma cameras to high-end PET systems.

With this solid foundation of products and services, GE Medical Systems continues to be firmly positioned to provide quality solutions for today, and into the next Millennium. Just what you'd expect from a leader.

Call your GE representative or 1-800-643-6439 today to experience the new energy at GE Nuclear Medicine & PET.

GE Medical Systems
We bring good things to life.

Circle Reader Service No. 62