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F Thumb screw can be adjusted for right- or left-handed users.

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Please review the following abstracts that are published in this year’s Journal of Nuclear Medicine SNM abstract journal.

**CORRECTION OF PHOTON ATTENUATION IN SPECT MYOCARDIAL PERFUSION IMAGING: PRELIMINARY RESULTS OF A MULTICENTER TRIAL.**

R.C. Hendel, H. Kiat, W.P. Follansbee, G.V. Heller, S.I. Cullom, D.S. Berman

**COMPARISON OF SUPINE, PRONE AND ATTENUATION CORRECTED STRESS TC-99M SESTAMIBI MYOCARDIAL PERFUSION SPECT.**

H. Kiat, S. Reuter, K. Van Train, M. Patterson, J. Areeda, X. Kang, G. Germano, R.C. Hendel, M.D.*, J.D. Friedman, D.S. Berman

**COMPENSATION OF ATTENUATION MAP ERRORS FROM TC-99M-SESTAMIBI DOWNSCATTER WITH SIMULTANEOUS CdI-133 TRANSMISSION SCANNING.**

S.I. Cullom, L. Liu and M.L. White

**DIAGNOSTIC ACCURACY AND IMAGE QUALITY OF A SCATTER, ATTENUATION AND RESOLUTION COMPENSATION METHOD FOR TC-99M-SESTAMIBI CARDIAC SPECT: PRELIMINARY RESULTS.**

S.I. Cullom, R.C. Hendel*, L. Lin, E.V. Garcia, M.L. White, H. Kiat** and D.S. Berman**

**A MODIFIED WIEHE FILTER METHOD FOR NONSTATIONARY RESOLUTION RECOVERY WITH SCATTER AND ITERATIVE ATTENUATION CORRECTION FOR CARDIAC SPECT.**

L. Liu, S.I. Cullom, and M.L. White

**EVALUATION OF A SCANNING LINE SOURCE METHOD FOR ATTENUATION CORRECTION USING AN ANTHROPOMORPHIC PHANTOM.**


**PHOTON ATTENUATION CORRECTION USING A GADODIAMIDE-133 LINE SOURCE REDUCES REGIONAL MYOCARDIAL COUNT HETEROGENEITY IN NORMAL PATIENTS UNDERGOING TO-99M SESTAMIBI SINGLE PHOTON TOMOGRAPHY: IMPLICATIONS FOR QUANTITATIVE ANALYSIS.**

Z-X He, S. Gangolopady, G. Reyes, M.S. Verani and J.J. Mahmadi*  

*Developed by Emory University

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

Please see brief summary of prescribing information on adjacent page.
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 the evaluation of myocardial function and developing information for use in patient management. 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 undergoing the preparatory 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 nonradioactive. 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.

Radionuclides should be used only by those personnel 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 3%
- Cardiogenic, Mutenogen, Impairment of Fertility

In comparison with most other diagnostic technetium labeled radiopharmaceuticals, the radiation due to the ovaries (126rad/30mCi at rest, 1.2 rad/30mCi at exercise) is high. Minimal exposure (ALARA) is necessary in women of childbearing capacity. See (Dosimetry subsection in DOSAGE AND ADMINISTRATION section.)

The active intermediate, [Cu(MIB)2BF4], was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HPTRT and sister chromatid exchange tests (all in vivo). At cytoplasmic concentrations (25ug/mL), an increase in cells with chromosome aberrations was observed in the in vitro human lymphocyte assay. [Cu(MIB)2BF4] did not show genotoxic potential with the in vivo mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9mg/kg, > 400 x 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 paraesthesia and/or taste perversion (metallic or bitter taste) immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing, edema, injection site inflammation, dyspnea, rash, urticaria, dry mouth, fever, diarrhea, fatigue, dizziness, 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, asthma and vomiting within two hours after a second injection of Technetium Tc99m Sestamibi.

DOSEAGE AND ADMINISTRATION: The suggested dose range for IV 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 a 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) after 1110MBq (30mCi) of Technetium Tc99m Sestamibi injected intravenously are shown in Table 4.

### Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

<table>
<thead>
<tr>
<th>Estimated Radiation Absorbed Dose</th>
<th>REST</th>
<th>STRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.0 hour</td>
<td>4.8 hour</td>
</tr>
<tr>
<td></td>
<td>2.0 hour</td>
<td>4.8 hour</td>
</tr>
<tr>
<td>Organ</td>
<td>rad/30mCi</td>
<td>1110MBq</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast</td>
<td>0.2</td>
<td>2</td>
</tr>
<tr>
<td>Gallbladder Wall</td>
<td>2.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Stomach</td>
<td>3.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Upper Large Intestine Wall</td>
<td>5.4</td>
<td>55.5</td>
</tr>
<tr>
<td>Lower Large Intestine Wall</td>
<td>3.9</td>
<td>40.9</td>
</tr>
<tr>
<td>Stomach Wall</td>
<td>0.6</td>
<td>6.1</td>
</tr>
<tr>
<td>Heart Wall</td>
<td>0.5</td>
<td>5.1</td>
</tr>
<tr>
<td>Kidneys</td>
<td>2.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Liver</td>
<td>0.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Lung</td>
<td>0.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Bone Surfaces</td>
<td>0.7</td>
<td>6.8</td>
</tr>
<tr>
<td>Thyroid</td>
<td>0.7</td>
<td>7.0</td>
</tr>
<tr>
<td>Ovaries</td>
<td>1.5</td>
<td>15.5</td>
</tr>
<tr>
<td>Testis</td>
<td>0.3</td>
<td>3.4</td>
</tr>
<tr>
<td>Red Marrow</td>
<td>0.5</td>
<td>5.1</td>
</tr>
<tr>
<td>Urinary Bladder Wall</td>
<td>2.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Total Body</td>
<td>0.5</td>
<td>4.8</td>
</tr>
</tbody>
</table>

How Supplied: Du Pont Radiochemicals‘ 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 ivophylization the pH is between 5.3-5.9. The contents of the vials are ivophylized 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 35.200 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.

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Du Pont Radiochemical Division
The Du Pont Merck Pharmaceutical Co.
331 Trible Cove Road
Billerica, Massachusetts, USA 01821
For ordering Tel. Toll Free: 800-225-1572
All other business: 508-362-2668
(Fra Massachusetts and International, call 508-667-5631)

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Circle Reader Service Number 34
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Nuclear Skeletal Imaging
Pediatric Nuclear Medicine
Brain Imaging
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So flexible!
Brief Summary

MYOVIEW™
Kit for the Preparation of Technetium Tc99m Tetrofosmin for injection
Diagnostic radiopharmaceutical for intravenous use only
Code N186A

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 ischaemia in the presence or absence of infarcted myocardium. Each vial contains a pre-dispersed, sterile, non-pyrogenic, lyophilized mixture of 0.23 mg tetrofosmin (6.9-bis-(2-ethoxyethyl)-3,12-dioxo-6,9-diphenyl-tetradecane), 30 mg stannous chloride dihydrate (minimum standard is 5.0 mg), maximum total stannous and stannic tin 15.8 ug), 0.2 mg disodium aspartate and 1.0 mg sodium D-glucuronate, and 1.8 mg sodium hydroxide. The lyophilized powder is sealed under a nitrogen atmosphere with a rubber closure. The product contains no antimicrobial preservative.

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 asymptomatic chest pain who had a reason for exercise stress testing were studied in two open-label, multi-center, clinical trials of Tc99m tetrofosmin (study a and study b). Of these 252 patients there were 212 (83.6%) males and 40 (17.4%) females with a mean age of 60.5 years (range 33.7 to 82.4 years). At peak exercise, maximum heart rate achieved and peak systolic blood pressure were comparable after Myoview and thallium-201 exercise studies.

All patients had exercise and rest planar imaging with Myoview and thallium-201; 191 (76%) patients also had SPECT imaging. The Myoview and thallium-201 images were separated by a mean of 5.1 days (1-14 days before or 2-14 days after Myoview). For Myoview imaging, each patient received 185-286 MBq (5-8 mCi) Tc99m tetrofosmin at peak exercise and 555-888 MBq (15-24 mCi) Tc99m tetrofosmin at rest approximately 4 hours later. For thallium-201 imaging, patients received thallium-201 55.5-74 MBq (1.5-2.0 mCi) at peak exercise.

The images were evaluated for the quality of the image (excellent, good or poor) and the diagnosis (with scores of 0 = normal; 1 = ischemia, 2 = infarct, 3 = mixed infarct and ischemia). The primary outcome variable was the percentage of correct diagnoses in comparison to the final clinical diagnosis. All planar images were blindly read; SPECT images were evaluated by the unblinded investigator. A subset of 181/250 (71%) patients had coronary angiography comparisons to the planar images of Myoview or thallium-201.

INDICATIONS AND USAGE
Myoview is indicated for scintigraphic imaging of the myocardium following separate administrations under exercise and resting conditions. It is useful in the delineation of regions of reversible myocardial ischaemia 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 clinic personnel. Care should also be taken to minimize radiation exposure to the patient consistent with proper patient management.

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

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

Carcinogenesis, Mutagenesis, Impairment of Fertility
Studies have not been conducted to evaluate carcinogenic potential or effects on fertility. Tetrofosmin disodium aspartate was not mutagenic in vitro in the Ames test, mouse lymphoma, or human lymphocyte tests, nor was it clastogenic in vivo in the mouse micronucleus test.

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

Nursing Mothers
Technetium Tc99m Pertechnetate can be excreted in human milk. Therefore, formula should be substituted for breast milk until the technetinum 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 784 adults (511 men and 253 women) with a mean age of 59.7 years (range 29-94 years). The subjects received a mean dose of 7.67 mCi on the first injection and 22.4 mCi on the second injection of Myoview.

Deaths did not occur during the clinical study period of 2 days. Six cardiac deaths occurred 3 days to 6 months after injection and were thought to be related to the underlying disease or cardiac surgery. After Myoview injection, serious episodes of angina occurred in 3 patients. Overall cardiac adverse events occurred in 576/4 (less than 1 %) of patients after Myoview injection.

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

DOSEAGE AND ADMINISTRATION

For exercise and rest imaging, Myoview is administered in two doses:
- The first dose of 5-8 mCi (185-286 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 renal or liver impaired, pediactric 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 mrad/MCi and μGy/MBq and assume urinary bladder emptying at 3.5 hours.

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

<table>
<thead>
<tr>
<th>Target Organ</th>
<th>Exercise</th>
<th>Rest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mrad/MCi</td>
<td>μGy/MBq</td>
</tr>
<tr>
<td>Gall bladder wall</td>
<td>0.123</td>
<td>33.2</td>
</tr>
<tr>
<td>Upper large intestine</td>
<td>0.075</td>
<td>20.1</td>
</tr>
<tr>
<td>Bladder wall</td>
<td>0.058</td>
<td>15.6</td>
</tr>
<tr>
<td>Lower large intestine</td>
<td>0.057</td>
<td>15.3</td>
</tr>
<tr>
<td>Small intestine</td>
<td>0.045</td>
<td>12.1</td>
</tr>
<tr>
<td>Kidney</td>
<td>0.039</td>
<td>10.4</td>
</tr>
<tr>
<td>Salivary glands</td>
<td>0.036</td>
<td>8.05</td>
</tr>
<tr>
<td>Ovaries</td>
<td>0.029</td>
<td>7.86</td>
</tr>
<tr>
<td>Uterus</td>
<td>0.027</td>
<td>7.34</td>
</tr>
<tr>
<td>Bone surface</td>
<td>0.023</td>
<td>6.23</td>
</tr>
<tr>
<td>Pancreas</td>
<td>0.019</td>
<td>5.00</td>
</tr>
<tr>
<td>Stomach</td>
<td>0.017</td>
<td>4.60</td>
</tr>
<tr>
<td>Thyroid</td>
<td>0.016</td>
<td>4.34</td>
</tr>
<tr>
<td>Adrenals</td>
<td>0.016</td>
<td>4.32</td>
</tr>
<tr>
<td>Heart wall</td>
<td>0.015</td>
<td>4.14</td>
</tr>
<tr>
<td>Kidney</td>
<td>0.015</td>
<td>4.14</td>
</tr>
<tr>
<td>Spleen</td>
<td>0.015</td>
<td>4.12</td>
</tr>
<tr>
<td>Muscle</td>
<td>0.013</td>
<td>3.52</td>
</tr>
<tr>
<td>Testes</td>
<td>0.013</td>
<td>3.41</td>
</tr>
<tr>
<td>Liver</td>
<td>0.012</td>
<td>3.22</td>
</tr>
<tr>
<td>Thymus</td>
<td>0.012</td>
<td>3.11</td>
</tr>
<tr>
<td>Brain</td>
<td>0.010</td>
<td>2.72</td>
</tr>
<tr>
<td>Lungs</td>
<td>0.008</td>
<td>2.27</td>
</tr>
<tr>
<td>Skin</td>
<td>0.008</td>
<td>2.22</td>
</tr>
<tr>
<td>Breasts</td>
<td>0.008</td>
<td>2.22</td>
</tr>
</tbody>
</table>

Dose calculations were performed using the standard MIRD method (MIRD Pamphlet No.1 (rev). Society for Nuclear Medicine, 1976). Effective dose equivalents (EDE) were calculated in accordance with ICRP 53 (Ann. ICRP 18 (1-4), 1988) and gave values of 5.61 ±10^-2 mSv/MBq and 1.12 ±10^-2 mSv/MBq after exercise and rest respectively.

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A tumor-targeted road map to monitor and stage cancer

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- Helps define the prognosis related to the stage of disease
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CYTOGEN
Human antimurine antibody

ONCOSCINT® CR/OV
Satumomab Pendetide (1 mg/2 mL)

Please see brief summary of prescribing information on adjacent page.
OncoScint® CR/OV Kit
(satumomab pendetide)

Kit for the Preparation of Indium In 111 satumomab pendetide
For Intravenous Use Only

Brief Summary of Prescribing Information

INDICATIONS AND USAGE
OncoScint® CR/OV (indium In 111 satumomab pendetide) is a diagnostic imaging agent that is indicated for determining the extent and location of extrapulmonary malignant disease in patients with known colorectal or ovarian cancer. Clinical studies suggest that this imaging agent can be used to complete the standard diagnostic tests when additional information regarding disease extent could aid in patient management. The diagnostic images acquired with OncoScint® CR/OV should be interpreted in conjunction with a review of information obtained from other appropriate tests.

OncoScint® CR/OV is also indicated for re-administration to HAMA-negative patients who are at risk of recurrence. Ordering physicians should be aware that HAMA-positive patients may have alterations in the biodistribution of the radiopharmaceutical and in the quality of imaging. Therefore it is vital that before any repeat use of OncoScint® CR/OV-HAMA levels should be determined in pre-injection sera. The results should be evaluated with respect to the individual patient's clinical status before being followed. Repeat OncoScint® CR/OV should not be given to persons whose HAMA level is > 400 ng/ml because of the possibility of insufficient reactions, and usually altered biodistribution and poor quality images. In general, if HAMA values are < 20 ng/ml, most subjects will image normally. Altered biodistribution may occur in 3-4% (3/80 samples) of cases for unknown reasons unrelated to HAMA level. If HAMA values are between 20 and 400 ng/ml, there is a higher incidence of subjects who will show altered biodistribution (7/133 samples) and uninformative imaging; in this range the frequency of HAMA interference with imaging has yet to be determined.

OncoScint® CR/OV is not indicated as a screening test for ovarian or colorectal cancer. Administration of OncoScint® CR/OV may result in falsely elevated values from in vitro immunoreactivity, including tests for carcinomembranous antigen (CEA) and CA 125. Because this interference may persist for months, the clinical laboratory should investigate the interference in patients who develop elevated CEA or CA 125 subsequent to imaging with OncoScint® CR/OV (see Drug/Laboratory Test Interactions).

CONTRAINDICATIONS
OncoScint® CR/OV (indium In 111 satumomab pendetide) should not be used in patients who are hypersensitive to this or any other product of murine origin or to indium in 111 chloride.

WARNINGS
Allergic reactions, including anaphylaxis, can occur in patients who receive murine antibodies. Although serious reactions of this type have not been observed in clinical trials after OncoScint® CR/OV-in (indium In 111 satumomab pendetide) administration, administrations for the treatment of hypersensitivity reactions should be available during administration of this agent.

PRECAUTIONS
General
The components of the kit are sterile and pyrogen free and contain no preservative. OncoScint® CR/OV (indium In 111 satumomab pendetide) should be used within 8 hours after radiolabeling. It is essential to follow the directions for preparation carefully and to adhere to strict aseptic procedures during preparation of the radiolabeled product. Each OncoScint® CR/OV kit is a unit of use package. The contents of the kit are to be used only to prepare one OncoScint® CR/OV-in, unlabeled OncoScint® CR/OV should NOT be administered in a single injection. After preparation to the patient, the OncoScint® CR/OV-in dose must be administered to the patient for which it was prescribed. Reducing the dose of either component may adversely impact imaging results, and, therefore, is not recommended.

The contents of the kit are not radioactive. However, after the indium in 111 chloride is added, administration of the kit should be performed by a trained radiologic personnel to minimize radiation exposure to patients and medical personnel, consistent with proper hospital and patient management procedures.

Indium In 111, radiocytotoxic, should be used only by physicians and other professionals who are qualified by training and experience in the safe use and handling of radionuclides.

Information for Patients
Murine monoclonal antibodies are foreign proteins, and their administration can induce human anti-murine antibodies (HAMA). While limited data exist concerning the clinical significance of HAMA, the presence of HAMA may interfere with murine-antibody based immunocassays, could compromise the efficacy of diagnostic or therapeutic murine antibody-based agents, and may increase the risk of adverse reactions. For these reasons, patients should be informed that the use of this product could affect the future use of other murine-based products, including OncoScint® CR/OV, and should be advised to discuss prior use of murine-antibody based products with their physicians.

OncoScint® CR/OV has been shown to induce HAMA in murine (12) after single administration in about 55% of patients in tumor imaging trials. HAMA levels became negative in one-third of such patients by 6 months after injection. While limited data exist concerning the clinical significance of HAMA, it is known that patients who develop persistently elevated serum HAMA levels have altered clearance and tissue biodistribution of MAbs. The efficacy of diagnostic or therapeutic murine antibody-based agents may be compromised in these patients.

When considering the administration of OncoScint® CR/OV to patients who have previously received murine antibody-based products, physicians should be aware of the potential for HAMA to alter clearance and biodistribution. The quality or sensitivity of the imaging study may be compromised. Therefore, prior to administration of murine antibodies, including OncoScint® CR/OV, physicians should review the patient history to determine whether the patient has previously received such products.

Prior to administration of OncoScint® CR/OV, patients who have previously received this or other murine antibody-based products should be tested for HAMA using approved methodology. Specialty Laboratories, Inc. (Santa Monica, California) has CYTOGEN approved methodology that measures HAMA by its ability to bridge between solid-phase murine antibody and soluble, radiolabeled murine antibody.

Clinical trials which utilize this methodology demonstrated that if serum HAMA levels are less than 25 mg/ml, there is a high probability of high quality images associated with normal biodistribution of OncoScint® CR/OV. If HAMA levels are between 50 and 400 ng/ml, the biodistribution of the agent is likely to be abnormal. If the serum HAMA level is greater than 400 ng/ml, repeat imaging should only be performed. Instructions regarding the preparation and shipment of serum samples for HAMA testing can be obtained by contacting Specialty Laboratories 1-800-421-7110 (Fax 912-828-6634).

Drug/Laboratory Test Interactions
The presence of HAMA in serum may interfere with two-site antibody-based immunocassays, including assays for carcinomembranous antigen (CEA) and CA 125. When present, this interference generally results in falsely high values. If HAMA is known or suspected to be present, the clinical laboratory should be notified and appropriate measures taken to avoid this. These measures include the use of non-murine immunocassays, or HAMA removal by adsorption, blocking, or heat inactivation.

Carotinopenesis, Megalobesia, Impairment of Fertility
Long term animal studies have not been performed to evaluate the carcinogenic or mutagenic potential of OncoScint® CR/OV or to evaluate its effect on fertility in males or females.

Hormone Category
Animal reproduction studies have not been conducted with OncoScint® CR/OV. It is not known whether OncoScint® CR/OV can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. OncoScint® CR/OV should not be administered to a pregnant woman unless, in the opinion of the physician, the potential benefit to the mother outweighs the potential risk. In such cases, formula feedings should be substituted for breast feedings.

Pediatric Use
Safety and effectiveness of OncoScint® CR/OV in children have not been established.

ADVERSE REACTIONS
After administration of 1118 I.v. doses of OncoScint® CR/OV-in (indium In 111 satumomab pendetide) to 1041 patients in clinical trials, adverse reactions were observed in approximately 4% of patients. No deaths attributable to OncoScint® CR/OV-in administration were reported. The most common adverse reaction was fever, which occurred in approximately 1% of patients. Other adverse reactions, each of which occurred in less than 1% of patients, are listed in order of decreasing frequency: hypertension, hyperesthesia, nausea, chills, rash, injection site reactions, pruritus, allergic reactions, sweating, abdominal pain, chest pain, headache, hypokalemia, pain, bradycardia, vasodilatation, diarrhea, arthralgia, confusion, dizziness, nervousness, crying, and angioedema. Although causality was not determined, an isolated occurrence of reversible thrombocytopenia was observed in a patient who received OncoScint® CR/OV-in clinical trials. The overall incidence of adverse reactions reported for repeat administration of OncoScint® CR/OV-in (4%) is similar to that observed after administration of single, initial doses. Of the adverse reactions listed above, two fevers, one report of abdominal pain, and two readily reversible hypersensitivity reactions characterized primarily by flank pain have been reported after repeat doses of OncoScint® CR/OV-in. The latter two patients had positive preinjection HAMA titers and a history of allergies.

OVERDOSAGE
The amount of OncoScint® CR/OV-in (indium In 111 satumomab pendetide) that can be safely administered has not been determined. In clinical trials, single doses of 20 mg of OncoScint® CR/OV-in were administered to 64 patients with various types of epithelial carcinomas; the type and frequency of adverse reactions at this dose were similar to those observed with lower doses.

DOSEAGE AND ADMINISTRATION
The dose of OncoScint® CR/OV (satumomab pendetide) is 1 mg radiolabeled with 5 mc of indium In 111 chloride. Each dose is administered intravenously over 1 minute, and should not be mixed with any other medication during its administration. The patient dose of the radiolabeled kit should be measured in a dose calibrator prior to administration. Each OncoScint® CR/OV-in kit is a unit dose package. After radiolabeling with indium-111, the entire OncoScint® CR/OV-in dose should be administered to the patients. Reducing the dose of either component may adversely impact imaging results, and, therefore, is not recommended.

HOW SUPPLIED
The OncoScint® CR/OV kit (NDC No. 57902-640-01) for the preparation of indium labeled 111I OncoScint® CR/OV includes one vial containing 1 mg of satumomab pendetide per 2 mL of indium chloride solution and one 2 mL vial containing 111I I 0.5 mCi. These solutions are sterile and pyrogen free and contain no preservative. Each kit also includes one sterile 0.22 mm filter Millipore GV filter, prescribing information, and two identification labels.

Revised 8/95

Manufactured by:
CYTOGEN Corporation
Princeton, NJ

CYTOGEN

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010242/96

SNN Annual Meeting Booth 143
Circle Reader Service Number 286

References:

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Manufactured and distributed by:
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Princeton, New Jersey 08540
Abdominal MRI indicated evidence of recurrent disease...

Abdominal MRI indicating evidence of hepatic tumor.
Patient History

This middle-aged male underwent resection of a pancreatic carcinoid tumor four years ago. Subsequent 3 and 4 year CT scans presented evidence of recurrent disease. The patient was referred for OctreoScan imaging.

OctreoScan Scintigraphy

Five hepatic tumors and two periaortic nodal lesions were clearly visible on the whole-body planar images. OctreoScan imaging enabled differentiation between a non-receptor-expressing cavernous hemangioma and receptor-positive carcinoid metastases.

Clinical Course

Correlative MRI indicated disease, but some lesions would likely have been missed without the benefit of OctreoScan scintigraphy. The patient underwent surgery to freeze all five hepatic lesions identified by OctreoScan. Follow-up MRI and OctreoScan studies were planned to assess post-operative status.

Decisive Clinical Information

In patients who have a known or suspected neuroendocrine tumor, OctreoScan imaging often can be the difference between cautious uncertainty and decisive clinical intervention. Contact your nuclear medicine specialist for more information.

Please see adjacent page for brief summary of prescribing information.
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) AMOXICYLINES OR INJECT INTO TPN INTRAVENOUS ADMINISTRATION LINES; IN THESE SOLUTIONS, A COMPLEX GLYCOSYLATED 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 administered 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 nongyrogenic. 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 analog hormone may be associated with cholelithiasis, presumably by altering lipid 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 reproductive 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, hypertension, 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 hemocrit 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.

DOSE AND ADMINISTRATION
Before administration, the 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 intake is necessary during this period as a support both to renal elimination and the bowel-clearing process. A patient with an insulinoma, bowel-clearing 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 dose 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 Kreining, et al.8

Estimated Absorbed Radiation Doses after Intravenous Administration of Indium in-111 Pentetreotide® to a 70 kg patient

<table>
<thead>
<tr>
<th>PLANAR</th>
<th>SPECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidneys</td>
<td>54.16</td>
</tr>
<tr>
<td>Liver</td>
<td>12.15</td>
</tr>
<tr>
<td>Spleen</td>
<td>73.86</td>
</tr>
<tr>
<td>Uterus</td>
<td>6.34</td>
</tr>
<tr>
<td>Ovaries</td>
<td>4.89</td>
</tr>
<tr>
<td>Testes</td>
<td>2.90</td>
</tr>
<tr>
<td>Rect</td>
<td>3.46</td>
</tr>
<tr>
<td>Urethra</td>
<td>30.42</td>
</tr>
<tr>
<td>Gd Tract</td>
<td>5.67</td>
</tr>
<tr>
<td>Stomach Wall</td>
<td>4.78</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>5.80</td>
</tr>
<tr>
<td>Large Intestine</td>
<td>7.73</td>
</tr>
<tr>
<td>Adrenals</td>
<td>7.55</td>
</tr>
<tr>
<td>Thyroid</td>
<td>7.43</td>
</tr>
</tbody>
</table>

1. Values listed include a correction for a maximum of 0.1% indium In-111m radioactive at contamination.
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 0019-9005-40, is supplied with the following components:
1. A 10-mL OctreoScan Reaction Vial which contains a lyophilized mixture of:
   (ii) 2.0 mg gentamicin (2.5-hydrazinecarboxylic acid)
   (iii) 4.5 mg sodium citrate, anhydrous
   (iv) 0.37 mg citric acid, anhydrous
   (v) 0.10 mg methyl

Befo re lyophilization, sodium hydroxide or hydrochloric acid may have been added for pH adjustment. The vial contents are sterile and nongyrogenic. No bacteriostatic preservative is present.
2. A 20-mL, vial of Indium In-111 Chloride Sterile Solution, which contains 1.1 mL of 111 MBqI (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 nongyrogenic. No bacteriostatic preservative is present.

In addition, the kit also contains the following items: (i) 1.25 g of 586° (unsterile) Monopel used to transfer Indium In-111 Chloride Sterile Solution to the OctreoScan Reaction Vial, (ii) a pressure sensitive label, and (iii) a package insert.
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All-Digital, High-Energy Imaging
- Designed for Volumetric Coincidence Detection*
- Leading in High-Energy Imaging
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Robotic Design, Convertible Geometry
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- OptiTrack™: Real-time fully automatic body-contoured scanning
- Evolving-Images™ with Slip-Ring technology

Evolving-Images™
- with Slip-Ring technology

Double-efficiency
- Whole-Body scan, featuring superior lesion detectability with OptiTrack real-time body contouring.

Double double-efficiency
- right-angle cardiac tomography: simultaneous dual-isotope FDG/MIBI SPECT. (Not for sale in U.S.)
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Maximal Vasodilation
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Imaging comparable to maximal exercise

- Interpretable images obtained in 98.7% of patients
- Maximal coronary hyperemia achieved in 2-3 minutes
- No supplemental exercise necessary

Rapid onset, short duration

- <10-second half-life minimizes post-infusion monitoring time
- Side effects usually resolve quickly

Please see brief summary of prescribing information on adjacent page for warnings, precautions and contraindications.

*Adenoscan*®

adenosine

BRIEF SUMMARY

For Intravenous Inflation Only

**DESCRIPTION**

Adenosine is an endogenous nucleoside occurring in all cells of the body. It is chemically 5-amino-9-beta-D-ribofuranosyl-9H-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, nonpyrogenic 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. Severe aortic or 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 bronchocative or bronchospastic lung disease (e.g., asthma).
4. Known hypersensitivity to adenosine.

**WARNINGS:**

**Painful Cardiac Arrest, Life-Threatening Hypotension, and Myocardial Infarction:**

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

**Intravenous Adenoscan** (adenosine) has the potential peripheral vasodilator and can cause significant hypotension. Patients with an intact baroreceptor reflex mechanism are able to maintain blood pressure and tachycardia in response to Adenoscan by increasing heart rate and cardiac output. However, Adenoscan should be used with caution in patients with autonomic dysfunction, idiopathic or periperal arterial disease with cerebrovascular insufficiency, or uncontrolled hyperventilation, due to the risk of hypotensive complications in these patients. Adenoscan should be discontinued in any patient who develops persistent or symptomatic high-grade AV block. Since pause has been rarely observed with adenosine infusion.

**Myocardial Infarction:**

Adenoscan (adenosine) is a potent peripheral vasodilator and can cause significant hypotension. Patients with an intact baroreceptor reflex mechanism are able to maintain blood pressure and tachycardia in response to Adenoscan by increasing heart rate and cardiac output. However, Adenoscan should be used with caution in patients with autonomic dysfunction, idiopathic or peripheral arterial disease with cerebrovascular insufficiency, or uncontrolled hyperventilation, due to the risk of hypotensive complications in these patients. Adenoscan should be discontinued in any patient who develops persistent or symptomatic hypotension.

**Hypertension:**

Intravenous Adenoscan (adenosine) has been administered for up to 6 minutes. In one case, a patient with severe cardiac disease and significant chest pain was noted to develop hypotension during a 12-minute infusion of intravenous Adenoscan. In this patient, the infusion was stopped due to the development of hypotension. The patient subsequently experienced a life-threatening episode of cardiac arrhythmia.

**Drug Interactions:**

Intravenous Adenoscan (adenosine) has been given with other cardiovascular drugs (such as beta adrenergic blocking agents, calcium channel blockers, and calcium channel blockers) in patients with normal renal function without apparent adverse interactions, thus its effectiveness with these agents has not been systematically evaluated.

Because of Adenoscan's ability to cause a variety of side effects, it is important to recognize that the safety and efficacy of Adenoscan in the presence of these agents have not been systematically evaluated.

**Adverse Reactions:**

Adenoscan has been administered intravenously to 1421 patients in controlled and uncontrolled U.S. clinical trials. Despite the short half-life of adenosine, 10% of the side effects occurred not with the infusion of Adenoscan but several minutes after its termination. Also, 6.1% of the side effects began coincident with the infusion, but persisted after the infusion was completed. In many cases, it is not possible to know whether these late adverse events are the result of Adenoscan infusion.

**Rashes:**

4.4% Gastrointestinal discomfort 13% Second-degree AV block 3% Chest discomfort 40% Lightheadedness/dizziness 12% Palpitations 2%

**Dysthesia or loss to breathe deeply 39% Upper extremity discomfort 4% Hypotension 2%**

**Headache**

19% ST segment depression 3% Palpitations 2%

**Throat, neck or jaw discomfort**

19% Second-degree AV block 3% Anaphylaxis 1%

Adverse experiences at any severity were reported in less than 1% of patients included:

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

Cardiovascular: systolic blood pressure; chest discomfort; third-degree AV block; bradycardia; palpitation; sinus rate; sinus pauses; sweating; unexplained; hypertension (systolic blood pressure) >200 mm Hg.

Central Nervous System: dizziness; emotional instability; transax.

Gastrointestinal: vomiting; pressure, urgency.

Respiratory: dyspnea.

**OVERDOSAGE:**

The half-life of Adenoscan is less than 10 seconds and side effects of Adenoscan (adenosine) are caused by adenosine's activity, which is due to the adenosine receptor antagonists and theophylline have been used to effectively terminate persistent side effects. In controlled U.S. clinical trials, theophylline (500-150 mg slow intravenous injection) was used 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 mg/kg/min infused for 6 minutes (total dose of 8.4 mg/kg).

The dose of thallium-201 should be injected at the midpoint of the infusion (after the first three minutes of Adenoscan). There is no need for premedication with Adenoscan and may be injected directly into the Adenoscan infusion. The injection should be given at a venous access as possible to prevent an inadvertent increase in the dose of Adenoscan (the contents of T-201 may be used). There are no data on the safety or efficacy of alternative Adenoscan infusion protocols.

**NOTES:**

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PROPOSED AMENDMENT TO REVISE THE SNM BYLAWS
ARTICLE XII, SECTION 1A

At its October 21-22, 1995 meeting, the Society of Nuclear Medicine (SNM) Board of Directors approved a motion to establish a new commission on radiopharmaceuticals, recognizing that this action would entail an amendment of Article XII, Section 1A, that is the addition of the following commission: “9. Commission on Radiopharmaceuticals.”

In accord with the SNM Bylaws, Article XV, Section 3, regarding amendments to the Bylaws, the proposed amended Section is hereby published for the SNM Membership:

ARTICLE XII
COMMISSIONS AND COMMITTEES

Section 1: DESCRIPTION
A. The House of Delegates shall have the following Standing Commissions, as well as Subcommissions established, as circumstances warrant, to address professional, scientific, research, education and practice issues and Society programs:

(1) Commission on Chapters
(2) Commission on Councils
(3) Commission on Education
(4) Commission on Ethics
(5) Commission on Nominations, Bylaws & Organization
(6) Commission on Practice
(7) Commission on Health Care Policy
(8) Commission on Scientific Affairs & Research
(9) Commission on Radiopharmaceuticals

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Position Available

Division Chief of Nuclear Medicine

Peoria Radiology Associates seeks a board certified radiologist with specialty board certification in Nuclear Medicine. Responsibilities will include Division Chief of the Nuclear Medicine section and occasional coverage of CT, MRI, Sonography and Geriatric Radiology. The successful candidate will be a group of 20 radiologists with a thriving practice in a large tertiary care hospital and surround by community hospitals. Resident and medical student teaching will be expected. Send CV and date of availability to Dr. T. Campbell, 630 Laura Lee Place, Peoria, IL 61617.

Fellowships

Unexpected opening in Nuclear Medicine fellowship program beginning July 1996. One or two year program leading to board eligibility. Full range of education including PET, radiopharmaceutical therapy, pediatrics and opportunities to do research. Applicants should have completed two years of an approved residency program. Apply: David E. Kuhl, MD, Division of Nuclear Medicine, University of Michigan Medical Center, 1500 E. Medical Center Drive, Ann Arbor, MI 48109-0028. Phone: 313-936-5388, Fax: 313-936-8182.

Postdoctoral fellows in neuroimaging are currently available at University of Chicago for research studies of patients with psychiatric illnesses. Yale’s brain imaging group has world-renowned expertise and state-of-the-art facilities in several imaging modalities. The currently funded tised fellowships will primarily use PET, SPECT and structural MRI. Applicants must have either an MD or PhD degree. Experience is preferred but not required. Must have either expertise in or be capable of readily learning computer analysis of imaging data. Send CV to: Robert B. Innis, MD, PhD, Dir. Neuroradiological Brain Imaging Program, Yale University & VA Med. Ctr. 116A2, 950 Campbell Ave., West Haven, CT 06516, EOE.

PET Technologist

The Henry M. Jackson Foundation for the Advancement of Military Medicine is seeking to hire a PET Technologist who will perform advanced computer-based PET imaging procedures on patients and experimental animals. Procedures include computer data acquisition and processing of brain and body PET scans using a wide variety of radiopharmaceuticals. Responsible for image reconstruction and display, scanner calibration, computer data transfer and archiving, and operation of ancillary PET laboratory equipment. Attention to detail and computer literacy required. Must be either CNMT or ARRT registered as a nuclear medicine technologist and have experience in an accredited nuclear medicine program – no prior experience in PET is required. Heavy lifting of large equipment and equipment set up with the help of other employees. Will require flexible hours with possibility of some overtime. Interested individuals should submit a cover letter and resume to: Human Resources Department, The Henry M. Jackson Foundation for the Advancement of Military Medicine, 1401 Rockville Pike, Suite 600, Rockville, MD 20852. Or e-mail at hr@hjf.org AA/E/E

Postdoctoral Fellowship in PET Instrumentation

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Registered and Certified Nuclear Medicine Technologist

A suburban central Pennsylvania radiology practice is seeking a registered and certified nuclear medicine technologist to work full-time with two other full-time technologists in the operation of its nuclear medicine department. This well-equipped department performs SPECT myocardial perfusion studies and gated cardiac blood pool scans. The emphasis here is placed on the quality of work, the well-being and comfort of our patients, and the safety of our employees. Experience with quantitative analysis and the use of personal computers would be beneficial, but we can train a well-qualified and motivated individual. Please send resumes and certifications (including reg. and cert. numbers), letters of recommendation, and any other information you feel is pertinent to your application to: Chief Administrator, 3701 Penn Ave., Pittsburgh, PA 15213.

Research Assistant Professor

A Research Assistant Professor position in the area of in vivo CNS receptor imaging is available in the Department of Radiology, University of Pennsylvania. Candidates should have either a MD/PhD or MD degree with experience in vivo imaging, radiopharmaceuticals or related areas of neuroscience. Knowledge of tracer kinetics is helpful but not necessary. The scientist will participate as a team member developing 1-123 and Tc-99m labeled tracers for functional imaging of CNS receptors with SPECT in animals and humans. A generous start-up package will be provided and the scientist is expected to develop extramural research support. Send resume to: Hank F. Kung, PhD, Department of Radiology, University of Pennsylvania, Philadelphia, 3400 Spruce Street, Philadelphia, PA 19104-4283. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. E-mail: kung@hfm3.sup.mac.upenn.edu; http://summary.sup.mac.upenn.edu

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