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The perfect form for Cardiolite

In myocardial perfusion imaging, his form may produce images that are considered technically inadequate because of soft-tissue attenuation.

That’s where Cardiolite comes through, especially for female and large-chested or obese male patients. The higher photon energy (140 keV) provides greater anatomical detail that can enhance interpretive confidence—and may reduce false-positives and equivocal cases.

Cardiolite also offers the unique advantage of direct measurement of both myocardial perfusion and ventricular function from one study.

So the next time you’re faced with imaging female and large-chested or obese male patients, use Cardiolite and reduce soft-tissue attenuation.

Cardiolite
Kit for the preparation of Technetium Tc99m Sestamibi

To reduce soft-tissue attenuation Cardiolite comes through

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Double double-efficiency
ultra-flared fan-beam NeuroScintigraphy.
Brief Summary

Cardiolite
Kit for the preparation of Technetium Tc99m Sestamibi

FOR DIAGNOSTIC USE

DESCRIPTION: Each 5mL vial contains a sterile, non-pyrogenic, lyophilized mixture of: Technetium-99m (2-mercaptobenzyliodine) Copper(I) (1) pertechnetate - 1.0mg Sodium Chloride, DiI lylate - 0.01mg L-Cystein Hydrochloride Monohydrate - 1.0mg Methyl Alcohol
Stannous Chloride, Dihydrate, minimum (SnCl2·2H2O) - 0.025mg Stannous Chloride, Dihydrate, minimum (SnCl2·2H2O) - 0.007mg Tin Chloride (Stannous and Stannic Dihydrate), min. (as SnCl2·2H2O) - 0.098mg

Prior to rehydration the pH is 5.3 to 5.9. The contents of the vial are lyophilized and stored under nitrogen.

This drug is administered by intravenous injection for diagnostic use after reconstitution with sterile, non-pyrogenic, oxygen-free Sodium Pertechnetate Tc99m Injection. The pH of the reconstituted product is 5.5 (5.0-6.0). No bacteriostatic preservative is present.

The precise structure of the technetium complex is Tc99mMIBI,® where MIBI is 2-mercaptobenzyliodine.

INDICATIONS AND USAGE: CARDIOLITE®, Kit for the Preparation of Technetium Tc99m Sestamibi is a myocardial perfusion agent that is useful in the evaluation of ischemic heart disease. CARDIOLITE®, Kit for the Preparation of Technetium Tc99m Sestamibi is useful in distinguishing normal from abnormal myocardium and in the localization of the abnormality, in patients with suspected myocardial infarction, ischemic heart disease or coronary artery disease. Evaluation of ischemic, post-infarct, or coronary artery disease is accomplished using rest and stress techniques.

CARDIOLITE®, Kit for the Preparation of Technetium Tc99m Sestamibi is also useful in the evaluation of myocardial function using the first pass technique.

Best exercise imaging with Tc99m Sestamibi in conjunction with other diagnostic information may be used to evaluate ischemic heart disease and its localization.

In clinical trials, using a template consisting of the anterior wall, inferior-posterior wall and isolated apex, localization in the anterior or inferior-posterior wall patients with suspected angina pectoris or coronary artery disease was accomplished using rest and stress techniques.

CARDIOLITE®, Kit for the Preparation of Technetium Tc99m Sestamibi is not yet used in the evaluation of myoccardial function using the first pass technique.

INDICATIONS AND USAGE: CARDIOLITE®, Kit for the Preparation of Technetium Tc99m Sestamibi is useful in distinguishing normal from abnormal myocardium and in the localization of the abnormality, in patients with suspected myocardial infarction, ischemic heart disease or coronary artery disease. Evaluation of ischemic, post-infarct, or coronary artery disease is accomplished using rest and stress techniques.

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CARDIOLITE®, Kit for the Preparation of Technetium Tc99m Sestamibi is not yet used in the evaluation of myoccardial function using the first pass technique.

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

- Fatigue
- Dyspnea
- Chest Pain
- ST-depression
- Arrhythmia
- Cynaclemia, Myasthenia, Impairment of Fertility

In comparison with most other diagnostic technetium labeled radiopharmaceuticals, the radiation dose to the gonads (1) male and (2) female 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)]BF4, was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HIPRT and sister chromatid exchange tests (all in vitro). At cytotoxic concentrations (25mg/mL), an increase in cells with chromosome abnormalities was observed in the in vitro human lymphocyte assay. [Cu(MIBI)]BF4, did not show genotoxic effects in the in vivo mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (25mg/kg) > 600 x maximal human dose.

Pregnancy Category C
Animal reproduction and teratogenicity studies have not been conducted with Technetium Tc99m Sestamibi. It is also known that 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.

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

ADVERSE REACTIONS: During clinical trials, approximately 5% of patients experienced a transient metallic taste or paresthesia (metallic or bitter taste) immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing, edema, injection site infection, injection site edema, anger, anxiety, nausea, vomiting, pruritis, rash, diaphoresis, dry mouth, fever, dizziness, pruritis, rash, nausea, vomiting, 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 not been clearly related to the generic drug: nausea, vomiting, and symptoms occurring shortly after administration of the agent; transient arthritis in a wrist joint; and severe hyperventilation, which was characterized by dyspnea, hyperventilation, brain edema, 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 (70 kg) is:

- 370-1110 MBq (10-30 mCi)

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.

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

Parenteral drug products should be used only for intravenous use for the patient and not for intramuscular or subcutaneous use.

1) The patient should be observed for more than 20 minutes after the injection of the technetium-99m radiopharmaceutical unless otherwise specified by the physician.

RADIATION DOSIMETRY: The radiation doses to organs and tissues of an average patient (70 kg) per 1110 MBq (30 mCi) of Technetium-99m Sestamibi injected intravenously are shown in Table 4.

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

<table>
<thead>
<tr>
<th>Organ</th>
<th>2.0 hour</th>
<th>4.0 hour</th>
<th>8.0 hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCI/Mob</td>
<td>1110 MBq</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Blood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Blood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lung</td>
<td>0.3</td>
<td>0.1</td>
<td>0.01</td>
</tr>
<tr>
<td>Brain</td>
<td>0.3</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Heart</td>
<td>0.2</td>
<td>0.1</td>
<td>0.05</td>
</tr>
<tr>
<td>Kidney</td>
<td>0.3</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Spleen</td>
<td>0.2</td>
<td>0.1</td>
<td>0.05</td>
</tr>
<tr>
<td>Surrounding tissues</td>
<td>0.4</td>
<td>0.3</td>
<td>0.2</td>
</tr>
</tbody>
</table>

The above values are calculated as mean values using the Monte Carlo technique and are shown in milligrays per megabecquerel.

How Supplied: Du Pont Radiopharmaceuticals'® CARDIOLITE®, Kit for the Preparation of Technetium Tc99m Sestamibi is supplied as a 5mL vial in lots of (two) (2), (five) (5) and (thirty) (30) vials, sterile and non-pyrogenic.

Prior to rehydration 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.

The U.S. Nuclear Regulatory Commission has approved this reagent kit for distribution to persons licensed to use byproduct material pursuant to sections 35.11 and 35.200 of Title 10 CFR Parts 30, 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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Brief Summary

Circle Reader Service No. 34
Maximal Vasodilation
for patients unable to exercise adequately

Imaging comparable to maximal exercise

- Interpretable images obtained in 98.7% of patients\(^1\)
- 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

ADENOSCAN\textsuperscript{®} adenosine

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

BRIEF SUMMARY
For Intravenous Infusion Only

DESCRIPTION
Adenosine is an endogenous nucleoside occurring in all cells of the body. It is chemically 9-amino-9-beta-D-ribofuranosyl-6-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.a. 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. Atrioventricular bypass tract(s) such as atioventricular nodal, atrioventricular nodal-arterioventricular node, or atrioventricular node-arterioventricular node bypass tract.
3. Known or suspected bronchoconstrictive or bronchospastic lung disease (e.g., asthma).
4. Known hypersensitivity to adenosine.

WARNINGS:
Fetal Cardiac Arrest, Life-Threatening Ventricular Arrhythmias, and Myocardial Infarction
Fetal cardiac arrest, ventricular tachycardia (requiring resuscitation), and nonfatal myocardial infarction have been reported coincident with Adenoscan infusion. Infants with unstable aortic may be at greater risk.

Block
Adenoscan (adenosine) acts as a direct depressant effect on the SA and AV nodes and has the potential to cause first-, second-, or third-degree AV block, or atrioventricular nodal, atrioventricular nodal-arterioventricular node bypass tract, or atrioventricular node-arterioventricular node bypass tract. Approximately, 6.3% of patients develop AV block with Adenoscan, including first-degree (2.8%), second-degree (2.9%) and third-degree (0.6%) heart block. All episodes of AV block have been asymptomatic, transient, and did not require intervention. Adenoscan can cause atrioventricular bypass tract. 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 atrioventricular 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. Since pause has been rarely observed with adenosine infusion.

Potentially
Adenosine (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 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, atrioventricular heart disease, pacer or pacemaker, and cerebrovascular, systemic cardiac artery disease with cerebrovascular insufficiency, or uncontrolled hypertension, due to the risk of hypotensive complications in these patients. Adenoscan should be discontinued in any patient who develops persistant or symptomatic hypotension.

Hypertension
Increased in systolic and diastolic pressure have been observed (as great as 140 mm Hg systolic in one case) concurrent with Adenoscan infusion; most limited reached apnoeasly within seven minutes, but in some cases, hypertension lasted for several hours.

Bronchoconstriction
Adenoscan (adenosine) is a respiratory stimulant probably due to activation of brainstem cholinergic and intravenous administration in man has been shown to increase minute ventilation (40%) and reduce intracranial PCO2 (lowering respiratory alkalosis). Approximately 29% of patients experienced symptoms of airway constriction, and 50% showed evidence of use and were able to breathe deeply with Adenoscan. These respiratory complaints are transient and only rarely require intervention.

Adenoscan 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 moderately obstructed airway and no respiratory decompensation has occurred during adenosine infusion in patients with obstructive pulmonary disease. Adenoscan should be used with caution in patients with obstructive lung disease or asthma, 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, calcium antagonists, and amidopyrine) with apparent adverse interactions, and its effectiveness with these agents has not been systematically evaluated. Because of the potential for additive or synergistic depression effects on the SA and AV nodes, Adenoscan should be used with caution in these pre-existing heart conditions. The use of these agents is contraindicated with Adenoscan. The use of these agents is contraindicated with Adenoscan. The use of adenosine and dipyridamole has not been systematically evaluated. Whenever possible, drugs that might inhibit or augment the effects of adenosine should be withheld at least five half-life times prior to the use of adenosine.

Carcinogenesis, Mutagenesis, Impairment of Fertility
Studies in animals have not been performed to evaluate the carcinogenic potential of Adenoscan (adenosine). Adenosene was negative for genotoxicity in the Salmonella (Ames Test) and mammalian Microsome Assay. Adenosene, however, like other nucleosides at millimolar concentrations present for several doubling times of cells in culture, is known to produce a variety of chromosomal aberrations. In rats and mice, adenosenene administered intraperitoneally once a day for five days at 55, 150, and 500 mg/kg (10-30 tests) and 5-15 (once times human dosage on a mg/m2 basis) caused decreased spermatogenesis and increased numbers of abnormal sperm in the rat. Selection of the ability of adenosenene to produce chromosomal damage.

Pregnancy Category C
Animal reproduction studies have not been conducted with adenosenene; 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 Adenosene in patients less than 18 years of age have not been established.

ADVERSE REACTIONS:
Adverse reactions with an incidence of at least 1% were reported with intravenous Adenoscan among 1431 patients enrolled in controlled and uncontrolled U.S. clinical trials. Despite the short half-life of adenosine, 0.99% of the side effects occurred within the first minute of the infusion (usual less than two 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 stopped. In many cases, it is not possible to know whether these late adverse events are the result of Adenoscan infusion.

Hypotension
Flush 44%
Gastrointestinal discomfort 13%
Second-degree AV block 3%
 Chest discomfort 9%
Dyspnea or cough 12%
Hypotension 4%
Skin reactions 2%
Tachycardia 18%
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, chest pain, weakness.
Cardiovascular System: nonfatal myocardial infarction; life-threatening ventricular arrhythmias; third-degree AV block; bradycardia; palpitation; sinus tachycardia; sinus pause, tachycardia, headache, changes, hypotension (systolic blood pressure < 200 mm Hg).
Central Nervous System: dizziness, emotional instability, tremors.
Gastrointestinal System: gastric; urinary pressure; urgency.
Respiratory System: cough.
Special Senses: blurred vision; dry mouth; ear discomfort; metallic taste; nasal congestion; anosmia; tongue discomfort.
OVERDOSE:
The half-life of adenosine is less than 10 seconds and side effects of Adenoscan (adenosine) 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 (550 mg to intravenous injection) was needed to abort Adenoscan side effects in less than 2% of patients.

DOSEAGE 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/m2/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 vial as possible to prevent the inadvertent release of the Adenoscan (the contents of the vial) being administered. There are no data on the safety of Adenoscan injections in patients with concomitant use of other adenosine or Adenosene administered by the intravenous route have not been established.

Methylenediamine drug products should be expected safely for paracutaneous matter and decongestion prior to administration.

CAUTION: Federal law prohibits dispensing without prescription.

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Circle Reader Service No. 50
In HAMA-negative patients with colorectal or recurrent ovarian adenocarcinoma

**ONCOSCINT® CR/OV**

Satumomab Pendetide (1mg/2mL)

A tumor-targeted road map to monitor and stage cancer

- For presurgical staging to plan or potentially alter the operative approach
- Helps define the prognosis related to the stage of disease
- Assists in planning individual treatment before surgery
- Assists in monitoring patients at risk of recurrence

For further information call 1-800-833-3533

**ONCOSCINT® CR/OV**

Satumomab Pendetide (1mg/2mL)

*Please see brief summary of prescribing information on adjacent page.*
In HAMA-negative patients with colorectal or recurrent ovarian adenocarcinoma

A tumor-targeted road map to monitor and stage cancer

Prior to administration of OncoscinT® CR/OV-in, patients who have previously received this or other murine antibody-based products should be tested for HAMA using approved methodology. Clinical laboratory studies suggest that this immune response should be used after completion of standard diagnostic tests when additional information regarding disease extent could aid in patient management. The diagnostic information acquired through the use of OncoscinT® CR/OV-in should be interpreted in conjunction with a review of information obtained from other appropriate tests.

OncoscinT® CR/OV-in 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 have alterations in the biodistribution of the radiomurineconjugate and in the quality of imaging. Therefore, it is vital that before any repeat use of OncoscinT® CR/OV-in, HAMA levels should be determined in pre-infusion sera. The results should be evaluated with respect to the patient's clinical situation and the guidelines below should be followed.

Readministration of OncoscinT® CR/OV-in should not be given to patients whose HAMA level > 400 ng/mL because of the possibility of infusion reactions, and unnecessarily altered biodistribution and poor quality images. In general, if HAMA values are < 50 mg/mL, most subjects will image normally. Altered biodistribution may occur in 3-4% (3/30) samples of cases for unknown reasons unrelated to HAMA level. If HAMA values are between 50 and 400 ng/mL, there is a higher incidence of subjects who will show altered biodistribution (7/13 samples) and uninformative imaging; in this range the frequency of HAMA interference with imaging has yet to be determined.

OncoscinT® CR/OV-in is not indicated as a screening test for ovarian or colorectal cancer.

Administration of OncoscinT® CR/OV-in may result in falsely elevated values from in vitro immunosassays, including tests for carcinoembryonic antigen (CEA) and CA 125. Because this interference may persist for months, the clinical laboratory should investigate for assay interference in patients who develop elevated CEA or CA 125 subsequent to imaging with OncoscinT® CR/OV-in (see Drug/Laboratory Test Interactions).

CONTRAINdications

OncoscinT® CR/OV-in (in vivo) in patients who are hypersensitive to this or any other product of murine origin or to intraluminal 111 chlord.

WARNINGS

Allergic reactions, including anaphylaxis, can occur in patients who receive murine antibodies. Although serious anaphylaxis has not been observed in clinical trials after OncoscinT® CR/OV-in (in vivo) in patients with 111 satumomab pendetide) administration, medications for the treatment of hypersensitivity reactions should be available during administration of this agent.

PRECAUTIONS

The components of the kit are sterile and pyrogen free and contain no preservative. OncoscinT® CR/OV-in (in vivo) is a sterile, pyrogen-free, and 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-in kit is a unit of use package. The contents of the kit are to be used only to prepare OncoscinT® CR/OV-in; unlabeled OncoscinT® CR/OV-in should not be administered directly to the patient. After radiolabeling with indium-111, the entire OncoscinT® CR/OV-in must be administered to the patient from whom it was prepared. Reducte the dose of either component may adversely impact imaging results, and, therefore, is not recommended.

The content of the kit is not radioactive. However, after the indium 111 chloride is added, appropriate shielding of OncoscinT® CR/OV-in must be maintained. Care should be taken to minimize radiation exposure to patients and medical personnel, consistent with proper hospital and patient management procedures.

In addition, radioisotopicals should be used only by physicians and other professionals who are qualified by training and experience in the use and handling of radioisotopicals.

Information provided to Patients: Monovalent 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 immunosassays, 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 monoclonal antibodies and that their administration can induce human anti-murine antibodies (HAMA). While limited data exist concerning the clinical significance of HAMA, it is known that patients who receive murine antibody-based products 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 re-administering the administration of OncoscinT® CR/OV-in 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 altered or of no diagnostic utility. Therefore, prior to administration of murine antibody, including OncoscinT® CR/OV-in, the physician should review the patient history to determine whether the patient has previously received such products.

References:

CYTOGEN

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June 15 - 16, 1996 (Saturday - Sunday)
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A basic review of clinical SPECT with emphasis on practical and essential information is presented. This course is intended to be of particular interest to nuclear medicine physicians, radiologists and nuclear medicine technologists working in a busy community hospital or imaging center. Lectures will cover SPECT in the areas of cardiac, bone, tumor and brain imaging. In addition, thyroid cancer therapy and infection imaging in nuclear medicine will be presented.

Faculty:
B. David Collier, MD
Robert S. Hellman, MD
Arthur Z. Krasnow, MD
Ali T. Isitman, MD
Lisa Ann Trembath, CNMT

Tuition:
The tuition fee of $295.00 for physicians and $95.00 for technologists includes the course syllabus, handouts, breaks, breakfasts and lunches.

For information or to register:
Please call Lisa Ann Trembath at 414-777-3756.

European Nuclear Medicine Congress '96
14-18 September 1996
Bella Center, Copenhagen, Denmark

Congress President:
Dr. Harriet Dige-Petersen, Copenhagen

President Scientific Committee:
Prof. Ignasi Carrió, Barcelona

Contact:
CONGREX Holland bv
Keizersgracht 782
1017 EC Amsterdam, NL
Tel: +31 20 6261372
Fax: +31 20 6259574
E-mail: eanm-s@cgxams.nl

The abstracts will be published in the September 1996 issue of the European Journal of Nuclear Medicine.
Join more than 8000 of your colleagues in celebrating the 43rd Annual Meeting of the Society of Nuclear Medicine in Denver, Colorado, June 2-6, 1996. Participate in the intensive educational program, review posters, discuss the most recent developments with colleagues and join any of a host of much talked about extracurricular activities. Don't miss this opportunity to learn, mingle with your colleagues, and visit with exhibitors.

**Continuing Education Courses**
Refresher and state-of-the-art continuing education courses in chemistry, physics, quality assurance, cardiovascular nuclear medicine, PET, SPECT and NMR will supply up-to-the-minute approaches and procedures for all clinical settings.

**Scientific Papers**
This year's presentation of over 1000 scientific papers and posters include a distillation of the latest advancements and finest work achieved by outstanding scientists and physicians in the field of nuclear medicine. These papers, presented by the original authors, with over 30 subjects to choose from, will provide a unique opportunity for enhancing your knowledge or exploring new avenues in correlative areas of nuclear medicine. Ample time is allotted at these presentations for questions and discussions. An extensive display of scientific posters and exhibits will augment the presentation.

The ever-increasing importance of the role of nuclear medicine technologist will be explored in our Technologist Program, and over 70 hours of clinical updates will provide chief and staff technologists with the latest in basic, intermediate and advanced studies. This program will broaden expertise and enhance the technologist's contribution to nuclear medicine.

**Exhibit**
All the major manufacturers of nuclear medicine products and services, more than 100 in all, will be on hand to explain and demonstrate the most technologically-advanced equipment. Several companies will present User Meetings to give an in-depth understanding of their products.

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If you need further information, please contact:
Society of Nuclear Medicine Department: Meeting Services
1850 Samuel Morse Drive, Reston, Virginia 22090
Phone: (703) 708-9000 Fax: (703) 708-9015

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The year 1996 marks the 100th year after the discovery of radioactive nuclides. It is also the 50th year since the first shipment of radionuclides to civilians was made by the U.S. government. These events were milestones in the development of the diagnostic and therapeutic specialty we know today as Nuclear Medicine. To appropriately commemorate these major historical occurrences, the Society of Nuclear Medicine (SNM) is embarking on a Centennial Celebration Program.

This Centennial Celebration Program will offer us a vehicle to showcase our accomplishments and contributions in health care to congress, the media and the remainder of medicine. This is a celebration for the entire field, ranging from those in the research lab, through those caring for patients, to our industry. A number of special activities have been planned for this year. These include:

- A commemorative publication containing an illustrated history of nuclear medicine
- Media briefings on our history and how we benefit the nation
- A permanent time line exhibit of the significant events in nuclear medicine’s history
- A corporate historical poster contest and display
- A special “Nuclear Medicine Week” poster

To support these events marking our history and preparing for our future, we are inviting you to participate by becoming a member of the Centennial Honor Roll. Participation is open to individuals, corporations (or corporate divisions), government agencies, chapters, professional societies, business leagues, and academic institutions. Honor Roll categories are defined below:

Platinum Honor Roll Member:
Corporations and all other organizations - $2,500 and above
Individuals - $500 and above

Gold Honor Roll Member:
Corporations and all other organizations - $500 to $2,499
Individuals - $200 to $499

Silver Honor Roll Member:
Corporations and all other organizations -$100 to $499
Individuals - $50 to $199

All contributors will be recognized on the special Honor Roll listing in the commemorative publication and on a poster at the entrance to the commercial exhibits area during the 1996 SNM Annual Meeting in Denver, Colorado this June.

For your name to appear in the commemorative publication, your contribution must be received by April 15, 1996.

Help us support our celebration of one of the most exciting 100 years in medicine. Join us today.

CENTENNIAL CONTRIBUTION FORM
Please complete and detach this card and send it with your tax deductible Centennial contribution to SNM.

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By fax: 703-708-9015. Attn: Kristin Ludwig
Contribution Amount $ ________
Position Available

Chief, Section of Nuclear Medicine
The Department of Diagnostic Radiology, Yale University School of Medicine seeks applicants at the associate professor level or higher for the position of Chief, Section of Nuclear Medicine. The qualified applicant must have demonstrated excellence in research, teaching and program administration. Please send CV to: Dr. Bruce McCollum, Chair Department of Diagnostic Radiology, Yale University School of Medicine, P.O. Box 208042, New Haven, CT 06520-8042. Yale University is an equal opportunity/affirmative action employer. Applications from women and minority group members are encouraged. Application deadline is: April 10, 1996.

Nuclear Medicine Fellowship
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 Fellowship in PET/SPECT/MRI Imaging
Unique opportunity for postdoctoral training in functional brain imaging research. Emphasis on psychopharmacology and neuropsychiatric imaging. Special training in quantification techniques, research method and clinical applications. Didactic lectures, variety of projects, excellent mix of clinical and basic research. MD or MD/PhD and clinical credentials required. Position to start July 1996 or earlier if possible. Send applications to: Dean F. Wong, MD, PhD, Johns Hopkins Medical Institutions, Radiology-JHOC Bldg. Room 3245, 601 N. Caroline Street, Baltimore, MD 21287-0807. E-mail: dfwong@rad.jhu.edu

PET Physicist
PET physicist for the department of nuclear medicine at the Technische Universitaet Muenchen. We are seeking a physicist/computer scientist specialized in biokinetic modeling. Experience in PET and possible MR is required. The applicants main research will focus on analysis of neurological PET data. In addition, he/she is expected to develop a modeling group and interact with faculty members of computer sciences and mathematics at the Technische Universitaet Muenchen. Applications/information: Markus Schweiger, MD, Dept. of Nuclear Medicine, Technische Universitaet, Ismaninger Str. 22, 81675 Muenchen, Germany. Fax: ++49 89 41 40 29 71. Telephone: ++49 89 41 40 29 71.

Physician
Part-time/Locum: 100% NM hospital practice. Ex. Dept. Contact Dr. Cheng, 3118 Colyar Dr., Chattanooga, TN 37404. (423) 495-8736.

Position Wanted
Board certified nuclear medicine physician, board certified in internal medicine seeks new position. Well experienced in all aspect of nuclear medicine, especially nuclear cardiology. If interested, please respond to Box# 309, Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090-5316

Ivy trained Nuclear Medicine Fellow, BE 696, seeks advanced PET Fellowship training. Research enthusiast, solid references, maintains extensive teaching and conference files. Please respond to: Box #304, Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090-5316.

ABNM certified physician, seeks FT/PT position. Vast experience as chief of service in administrative/clinical aspects of nuclear medicine, including therapies. Special interest in thyroidology and oncology. Please respond to: Box #306, Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090-5316.

Nuclear Medicine Tech - Job Wanted. Experienced, personable, hard working and reliable. (SPECT) B.S., MT (ASCP) NM, CNMT (NMTCB), and state licensed. Call (806) 374-3509.

Experienced ABNM certified physician seeks FT job. Dr. Garcia: (914) 778-2601.

The “Forschungszentrum Rossendorf” (FZR), a member of the “Wissenschaftsgemeinschaft Blaue Liste” (50% Saxonian and 50% federal funding) and located near Dresden engages about 600 scientists, engineers and support staff. It pursues research in the fields of Biomedicine-Chemistry, Materials Research and Nuclear Physics in close cooperation with the Dresden University of Technology and other research groups. More specifically, such work is conducted in the five institutes of the FZR: The Institute for Ion-Beam Physics, for Bioinorganic and Radiopharmaceutical Chemistry, for Radiochemistry, for Nuclear and Hadronic Physics and for Safety Research. The PET Center Rossendorf, medical division, is the object of a cooperation between the FZR and the University Hospital, Dresden University of Technology, a medical health care center with 23 medical departments, 16 institutes and a total of 1380 inpatients.

We are searching for a:
Scientist to be simultaneously appointed as Chief of the Medical Division at the PET-Center Rossendorf, Germany, and
C3 Professor at the “Klinik und Poliklinik fur Nuklearmedizin”, University Hospital, Dresden University of Technology, Germany.

The cooperation is aimed at the development and production of radiopharmaceuticals and their clinical application in PET. This challenge at the interface of natural science and medical application requires a specialist in nuclear medicine with the expertise in multidisciplinary research, creative scientific work in the clinical application and the methodology of PET-technology and radiation protection and includes the responsibility for a successful cooperation between the FZR and the University Hospital in PET-research.

Applications will be evaluated by a joint Search Committee with representatives of the University Hospital, Dresden University of Technology and the FZR Rossendorf. As required by German Law, the Committee explicitly encourages lady scientists and handicapped scientists to apply for the position.

Please forward curriculum vitae, certificates, a list of publications as well as a selection of relevant reprints and a brief outline of the scientific work until March 31, 1996, to the chairman of the Search Committee:

Prof. Dr. med. W.-G. Franke-Direktor der Klinik und Poliklinik fur Nuklearmedizin der Medizinischen Fakultät der TU Dresden Fetscherstrasse 74 - 01307 Dresden - Germany.
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October 10 - 12, 1996,
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Conference Chairmen:
David M. Goldenberg, Sc.D., MD, Center for Molecular Medicine and Immunology
Steven M. Larson, MD, Memorial Sloan-Kettering Cancer Center

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- Radiation physics and dosimetry of radiolabeled antibodies and peptides
- Radiopharmaceuticals
- Experimental and clinical radioimmunodetection
- Experimental and clinical radioimmunotherapy
- New approaches to improved antibodies, peptides and targeting

Abstract Deadline: June 1, 1996
Registration: Before 6/15/1996, $475.00; after 6/15/1996, $550.00

For further information contact:
Lois Gillespie, Center for Molecular Medicine and Immunology, One Bruce Street, Newark, NJ 07103. Telephone: (201) 982-4600; Fax: (201) 982-7047.

The 1996 examination will be given Sunday, June 2, 1996 in Denver, Colorado, in conjunction with the 43rd Annual Meeting of the Society of Nuclear Medicine.

The examination is written and consists of two parts —

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

Part Two (2.5 hours) examines in depth the knowledge of a predetermined subspecialty area of the candidate’s choice including:
- Nuclear Medicine Physics and Instrumentation
- Nuclear Pharmaceutical Science and Radiochemistry
- Radiation Protection

Completed Applications must be postmarked by March 15, 1996. The examination fee is $450 ($400 refundable if you do not qualify).

For applications and more information, please contact:
Joanna Wilson, Associate Coordinator
American Board of Science in Nuclear Medicine
c/o The Society of Nuclear Medicine
1850 Samuel Morse Drive, Reston, Virginia 22090-5316
Tel: (703) 708-9000, ext. 250 • Fax: (703) 708-9015

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As SMV, our combination of powerful resources and strong financing, underscored by $50 million in committed capital, enables us to continue building on this tradition of excellence. To better meet the needs of our customers, SMV offers the most diverse product line-up in nuclear medicine. We offer solutions for meeting the vast array of clinical and economic requirements, and support them with comprehensive customer service.

Now, as you might expect from the world's largest dedicated nuclear medicine company, the SMV commitment to research and development spans the globe. Our mission — discover new practical solutions which expand the clinical value and use of nuclear medicine. Assuring Sopha, Summit and SMV customers — currently numbering over 3,500 systems in 50 countries — a steady stream of enhancements to keep their investment right up with the cutting-edge for years to come.

If you are considering a new nuclear medicine imaging system, plug into the high energy of SMV. For more information on our dynamic new company, products and services, please contact: SMV America, Inc.

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Available on Toshiba’s nuclear gammacamera systems, Optotune tunes the digital detector up to 512 times per second. That equates to super-crisp image quality every time, but of equal importance, it translates to exceptional reliability and maximum uptime. Digital detectors without Optotune may require service every two months to get similar tuning. And service time is downtime.

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