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

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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

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. © 1994, DuPont Pharma
FOR DIAGNOSTIC USE

DESCRIPTION: Each 5mL vial contains a sterile, non-pyrogenic, lyophilized mixture of: Tetraka (2-methoxy isobutyrate) Copper (1) tetrafluoroborate - 1.0mg Sodium Citrate Dihydrate - 2.2mg L-Cysteine Hydrochloride Monohydrate - 1.0mg Mannitol - 30mg Stannous Chloride, Dihydrate, minimum (SnCl2+2H2O) - 0.025mg Stannous Chloride, Dihydrate, (SnCl2+2H2O) - 0.070mg Tin Chloride (Stannous and Stannic Chlorides), min. dosage (as SnCl2+H2O) - 0.086mg

Prior to lyophilization the pH is 5.3-5.9. 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 Perchlorate 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 Tc99m(MBI)2, where MBI is 2-methoxy isobutyrate.

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 heart disease or coronary artery disease is accomplished using rest and stress techniques.

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

Rest-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 in patients with suspected anemia pectoris or coronary artery disease is shown. Disease localization isolated to the apex has not been established. Tc99m Sestamibi has not been studied or evaluated in other cardiac diseases.

It is usually not possible to differentiate recent from old myocardial infarction or to differentiate recent myocardial infection 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 practice and the approved indications. The rate of administration has occurred to 4 hours after Tc99m Sestamibi use and is usually accompanied with exercise stress testing (See Precautions).

PRECAUTIONS:

GENERAL

The contents of the vial are intended only for use in the preparation of Technetium Tc99m Sestamibi and are not to be administered directly to the patient without first undergoing the 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 not radioactive. However, after the Sodium Perchlorate 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 Perchlorate Tc99m Injection containing oxidants should not be used.

Technetium Tc99m Sestamibi should not be used more than six hours after preparation.

Radio pharmaceuticals should be used only by physicians who are qualified by training and experience in the safe use of radiopharmaceuticals and who have experience and training to have been approved by the appropriate government agency authorized to license the use of radiopharmaceuticals.

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

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

- Fatigue
- Palpitations
- Bradyarhythmia
- Carcinogenesis, Mutagenesis, Impairment of Fertility

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

The active intermediate, [CuMBI]2+, was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HGPRT and sister chromatid exchange tests (all in mice). At cytotoxic concentrations (20ng/mL), an increase in cells with chromosome aberrations was observed in the in vivo human lymphocyte assay. [CuMBI]2+, did not show genotoxic effects in the in vivo mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9mg/kg, >60 x maximum human dose).

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 an animal with 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 Perchlorate 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 metallic or bitter taste immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing, edema, injection site inflammation, dyspepsia, nausea, vomiting, pruritus, rash, urticaria, dry mouth, fever, diarrhea, fatigue, dyspnea, and hypotension also have been attributed to administration of the agent. Cases of angina, chest pain, and death have occurred (see Warnings and Precautions). The following adverse reactions have been rarely reported: signs and symptoms of anaphylaxis occurring 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 clinically effective injection of Technetium Tc99m Sestamibi.

DOSAGE AND ADMINISTRATION:

The dose range in 1.5Sv/mCi (100-200MgCi) is adjusted to give the desired test dose. No patients were monitored for a dose greater than 300MgCi. The dose must be administered in a single dose to the patient. The dose to be administered should be the lowest dose range to provide 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 radioactivity calibration system immediately prior to patient administration. Radiochemical purity should be checked prior to patient administration.

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

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

RADIATION DOSIMETRY:

The radiation doses to organs and tissues of an average patient (70kg) per 1100MBq (30mCi) of Technetium Tc99m Sestamibi injected intravenously are shown in Table 4.

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi Estimated Radiation Absorbed Dose

<table>
<thead>
<tr>
<th>Organ</th>
<th>2.0 hour void</th>
<th>4.8 hour void</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>rad/Sv/mCi</td>
<td>mGy/MBq</td>
</tr>
<tr>
<td>REST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast</td>
<td>0.2</td>
<td>2.0</td>
</tr>
<tr>
<td>Gallbladder Wall</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Large Intestine Wall</td>
<td>5.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Lower Large Intestine Wall</td>
<td>3.9</td>
<td>4.0</td>
</tr>
<tr>
<td>Heart Wall</td>
<td>0.6</td>
<td>6.1</td>
</tr>
<tr>
<td>Kidneys</td>
<td>0.5</td>
<td>5.1</td>
</tr>
<tr>
<td>Liver</td>
<td>0.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Lungs</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>Testes</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>18.5</td>
</tr>
</tbody>
</table>

For more detailed information, see the Package Insert (10CFR 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.)

DOSAGE AND ADMINISTRATION: The dose range in 1.5Sv/mCi (100-200MgCi) is adjusted to give the desired test dose. No patients were monitored for a dose greater than 300MgCi. The dose must be administered in a single dose to the patient. The dose to be administered should be the lowest dose range to provide 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 radioactivity calibration system immediately prior to patient administration. Radiochemical purity should be checked prior to patient administration.

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

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

RADIATION DOSIMETRY:

The radiation doses to organs and tissues of an average patient (70kg) per 1100MBq (30mCi) of Technetium Tc99m Sestamibi injected intravenously are shown in Table 4.
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Model Specifications:
- Auto/Manual trigger control
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- ECG output
- Audio indicator
- Trigger pulse LED
- Isolation amplifier for patient safety
- Compatible with all computers
  AccuSync models 5L, 6L and 1L are CSA and ETL (UL544) approved

<table>
<thead>
<tr>
<th>Model</th>
<th>Strip Chart</th>
<th>CRT Monitor</th>
<th>HR/R-R Int</th>
<th>Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>5L</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<tr>
<td>6L</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>1L</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>3L</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>4M</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

Accessory and optional products available:
The AccuAmp 5, the 5 lead system available for AccuSync 5L, 6L, and 1L, transmits information through fiber optic link. Patient cables, lead wires, and BNC cables available for AccuSync models.

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Introducing*
Maximal Vasodilation*

for pharmacologic stress imaging in patients unable to exercise adequately

*Relative to intracoronary papaverine*
Introducing ADENOSCAN®

adenosine

Maximal Vasodilation* for Myocardial Perfusion Imaging

Indicated as an adjunct to thallium-201 myocardial perfusion scintigraphy in patients unable to exercise adequately

Adenoscan/Tl-201

62-year old male with no history of myocardial infarction referred for adenosine/thallium-201 stress study.

Imaging comparable to exercise
Maximal pharmacologic stress

- Most patients reach maximum coronary hyperemia* 
- Coronary blood flow increases 3- to 4-fold over baseline¹ 
- Interpretable images were obtained in 98.7% of patients²

Established safety profile

- With a half-life of <10 seconds, adverse experiences usually resolved quickly† 
- The most common adverse experiences were flushing (44%), chest discomfort (40%) and dyspnea or the urge to breath deeply (28%) 
- Contraindicated in patients with 1) 2nd- or 3rd-degree AV block, 2) sinus node disease, 3) and known or suspected bronchoconstrictive or bronchospastic lung disease (eg, asthma) 
- Theophylline was used in less than 2% of patients

* Intracoronary Doppler flow catheter studies have demonstrated that a dose of intravenous Adenoscan of 140 mcg/kg/min produces maximum coronary hyperemia (relative to intracoronary papaverine) in most cases within 2-3 minutes of the onset of the infusion. Coronary blood flow velocity returns to basal levels within 1-2 minutes of discontinuing the Adenoscan infusion.

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

Please see brief summary of prescribing information on adjacent page.
Maximal Vasodilation*

in patients unable to exercise

• Consistent maximal vasodilation*
• Imaging comparable to exercise
• Well established safety profile†

Recommended intravenous dose for adults is 140 mcg/kg/min infused for six minutes.
Available in a convenient single-use 30 mL vial.

ADENOSCAN®
adenosine
For maximal pharmacologic stress imaging

Please see brief summary of prescribing information on adjacent page.

*Relative to intracoronary papaverine.
† Contraindicated in patients with 2nd- or 3rd-degree AV block, sinus node disease and known or suspected bronchoconstrictive or bronchospastic lung disease.

References:
BRIEF SUMMARY

Adenoscan®
adenosine

DESCRIPTION
Adenosine is an endogenous nucleoside occurring in all cells of the body. It is chemically 5'-endo-P-hexose-1-phosphate-
5'-phosphoribosylamine.
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 4 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.

CONTRAINDICATIONS:
Intravenous Adenoscan (adenosine) should not be administered to individuals with:
1. Second- or third-degree AV block (except in patients with a functioning artificial pacemaker).
2. Sinus node disease, such as sick sinus syndrome or symptomatic bradyarrhythmia (except in patients with a functioning artificial pacemaker).
3. Known or suspected bronchospastic or bronchospasm (lung disease, e.g., asthma).

WARNINGS:
Fetal Cardiac Arrest, Life Threatening Ventricular Arrhythmias, and Myocardial Infarction.
Fetal cardiac arrest, sustained ventricular tachycardia (requiring resuscitation), and nonfatal myocardial infarction have been reported
in infants born to mothers given Adenoscan in labor. Patients with unstable angina may be at greater risk.
Sinoatrial and Atrioventricular Nodal Block.
Adenoscan (adenosine) exerts a direct depressant effect on the SA and AV nodes and has the potential to cause first-, second-, or third-degree
AV block, or sinus bradycardia. Approximately 3.9% of patients developing AV block with Adenoscan, including first-degree (2.3%), second-degree (2.2%)
and third-degree (0.6%) AV block were symptomatic, transient, and did not require intervention. Adenoscan can cause sinus bradycardia.
Adenoscan should be used with caution in patients with pre-existing first-degree AV block or bundle branch block and should be avoided in
patients with high-grade AV block or sinus node dysfunction (except in patients with a functioning artificial pacemaker). Adenoscan
should be discontinued in any patient who develops persistent or symptomatic high-grade AV block. Since pause has been rarely observed
with adenosine infusions.

Hypotension
Adenoscan (adenosine) is a potent peripheral vasodilator and can cause significant hypotension. Patients with an intact baroreceptor 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, electric vascular heart disease, pericardial or
cardiac effusions, and cardiac arrhythmia with coronary-mechanical insufficiency or uncorrected hypotension, due to the risk of hypotensive
complications in these patients. Adenoscan should be discontinued in any patient who develops persistent or symptomatic hypotension.

Hypersensitivity
Increases in systolic and diastolic pressure have been observed (as great as 140 mm Hg systolic in one concomitant) with Adenoscan
infusions, but these effects have been isolated to spontaneous within minutes, but in some cases, hypertension lasts more than 1 hour.

Bromocriptine/Adenoscan: Adenosine (adenosine) is a respiratory stimulant (probably through activation of peripheral body chemoreceptors) and
intravenous administration in man has been shown to increase minute ventilation (Ve) and reduce arterial PCO2 (causing respiratory alkalosis).
Approximately 29% of patients experience breathlessness (dyspnea) or an urge to breathe deeply with Adenoscan. These respiratory complaints are
transient and only rarely require intervention.

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

PRECAUTIONS:
Drug Interactions
Intravenous Adenoscan (adenosine) has been given with other cardioactive drugs (such as a beta adrenergic blocking agents, cardiac glycosides,
and calcium channel blockers) without apparent adverse interactions, but the effectiveness with these agents has not been systematically evaluated.

The potential for additive or synergistic depressant effects on the SA and AV nodes, however, Adenoscan should be used with caution in
the presence of these agents. The vasodepressive effects of Adenoscan are inhibited by adenosine receptor antagonists, such as dipyridamole (e.g.,
garlic and thienopyridines). The safety and efficacy of Adenoscan is not theophylline. The safety and efficacy of Adenoscan in patients with
pre-existing pulmonary hypertension has not been systematically evaluated. Wherever possible, drugs that might inhibit or augment the effects of adenos-
scan should be withheld for at least five half-lives prior to the use of Adenoscan.

Cardiovascular: Impairment of Fertility
Studies in animals have not been performed to evaluate the carcinogenic potential of Adenoscan (adenosine). Adenosine was negative for
genotoxic potential (in the Salmonella strain and mammalian Maron/Monks Assay).
Adenoscan, however, like other nucleosides at millimolar concentrations present for several doubling times of cells in culture, is known to produce a
worry of chromosomal alterations. In rats and mice, adenosine administered intraperitoneally once a day for five days at 50, 150 and 500 mg/kg
(10-20 times) and 5-15 milac times human dosage on a mg/kg basis) has caused decreased spermatogenes and increased numbers of abnormal
sperm, a reflection of the ability of Adenoscan to produce chromosomal damage.

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

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

ADVERSE REACTIONS:
The following reactions with an incidence of at least 1% were reported with intravenous Adenoscan among 1421 patients enrolled in controlled
and uncontrolled studies. The reactions are listed by body system and by decreasing order of incidence. The list does not include reactions
of rare frequency or those not related to the pharmacologic action of the drug. The symptoms or reactions included were observed in
Adenoscan but several hours after the infusion terminated. Also, 0.4% of the side effects that began coincident with the infusion persisted for up to 24 hours 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.

Flushing
44.9% Gastrointestinal discomfort 13.9% Second-degree AV block 3.6%
Chest discomfort 40.9% Hypertension 12.9% Pericarditis 2.6%
Dyspnea or urge to breathe deeply 29.9% Upper extremity discomfort 4.9% Hypotension 2.5%
Headache 19.9% ST segment depression 1.9% Nausea 2.2%
Threre is no data on the safety or efficacy of adenosine infuse protocol.

Adverse experiences of any severity reported in less than 1% of patients include:
Body: A sympaent back discomfort; lower extremity discomfort; weakness.
Cardiovascular System: Non-fatal myocardial infarction; Re-threatening ventricular arrhythmia; third-degree AV block; bradycardia, palpitation; sinus
block; sinus pause; swelling; P wave changes, hypertension (systolic blood pressure > 200 mm Hg).
Central Nervous System: Drowsiness; emotional instability; tremors.
Gastrointestinal System: Nausea; migrating pressure; urgency.
Respiratory System: Cough.
Special Senses: blurred vision; dry mouth; ear discomfort; metallic taste; nasal congestion; xerosis; tongue discomfort.
OVERDOSAGE:
The half-life of Adenoscan is less than 10 seconds and side effects of Adenoscan (adenosine) (when they usually resolve quickly when the infusion is
 discontinued), although delayed or persistent effects may have been observed. Manifestations, such as caffeine and theophylline, have been observed
adenosine receptor antagonists and theophylline has been used to effectively terminate persistent side effects. In controlled U.S. clinical trials,
theophylline (300-125 mg slow intravenous injection) was used to abort Adenoscan side effects in less than 1% 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 six minutes (total dose of 0.84 mg/kg).
The recommended intravenous dose for patients ≥60 years of age is 100 mg/kg/min infused for six minutes.
This dose of Adenoscan is not expected to be effective in patients with advanced coronary artery disease. In such patients, adenosine receptors
are less sensitive or unresponsive to pharmacological stimuli, and the recommended dose of Adenoscan may be insufficient to elicit a therapeutic
response. Therefore, doses of Adenoscan greater than 100 mg/kg/min may be necessary to elicit a response in these patients. In these patients,
the recommended dose is 140 mg/kg/min infused for six minutes (total dose of 0.84 mg/kg).
This dose of Adenoscan is not expected to be effective in patients with advanced coronary artery disease. In such patients, adenosine receptors
are less sensitive or unresponsive to pharmacological stimuli, and the recommended dose of Adenoscan may be insufficient to elicit a therapeutic
response. Therefore, doses of Adenoscan greater than 100 mg/kg/min may be necessary to elicit a response in these patients. In these patients,
the recommended dose is 140 mg/kg/min infused for six minutes (total dose of 0.84 mg/kg).

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Your choice of collimators should be an integral part of choosing your Camera system and computer. MICRO-CAST COLLIMATORS from NUCLEAR FIELDS will guarantee artifact free images. Independent tests at clinical sites have proven that the inferior quality of foil constructed collimators produce disturbing artifacts.

Why compromise your expensive investment by accepting inferior foil constructed collimators. A few simple tests can determine the quality of your collimators. Demand from your camera supplier MICRO-CAST collimators, if they are really concerned about your image quality they would not enforce foil constructed collimators on you.

Call your NUCLEAR FIELDS representative for more information.
**DUPONT PHARMA CARDIOVASCULAR NUCLEAR MEDICINE RESEARCH FELLOWSHIP**

The Society of Nuclear Medicine Awards Committee announces that a fellowship for $30,000 is available for July 1, 1996. The objective of this fellowship is to: (1) Encourage physician to enter the field of Cardiovascular Nuclear Medicine, and (2) Support high quality nuclear cardiology clinical research.

Funds can be used to support the research and/or salary of the investigator. Preference will be given to young physicians, or those new to the field of Cardiovascular Nuclear Medicine. The award will be announced at the next Annual SNM Meeting, June, 1996, in Denver, CO.

For more information and an application: The Society of Nuclear Medicine, SNM Awards Committee 1850 Samuel Morse Drive, Reston, VA 22090

**Deadline: January 6, 1996**

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**MALLINCKRODT FELLOWSHIP**

Mallinckrodt, Inc. has announced an Annual Fellowship of $30,000 for a physician fellow active in nuclear medicine research and/or development. The award is to further a research project involving the development of single photon radiopharmaceuticals or beta emitters to be used in nuclear medicine oncology. Applicants are asked to submit their curriculum vitae, a detailed account of their research project including prior accomplishments on the project, and future plans. Deadline for this year’s award is January 6, 1996. Requested information, along with at least two letters supporting the application, should be forwarded to: William J. MacIntyre, PhD, The Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090. The recipient will be announced at the Annual Meeting of The Society of Nuclear Medicine.

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**THE SNM/MEDI-PHYSICS AWARD FOR INNOVATION IN BRAIN IMAGING**

The Society of Nuclear Medicine announces an exciting new research grant supported by Medi-Physics, Inc., Amersham Healthcare for functional brain imaging using SPECT in the field of neuropsychiatry.

This year’s grant challenges the candidate to do innovative research which will expand the clinical utility of functional brain imaging and enhance the emphasis of SPECT brain imaging services in nuclear medicine departments across the United States. Preference will be given to young physicians or scientists who have recently entered the field.

For more information and application forms, please contact: The Society of Nuclear Medicine SNM Awards Committee 1850 Samuel Morse Drive Reston, VA 22090

Completed applications must be returned by January 6, 1996. The award winner will be announced at the 1996 Annual SNM Meeting in Denver, Colorado.

**Deadline: January 6, 1996**


Position Available

**Fellowship**
Research fellowship in PET at the Northern California PET Imaging Center, affiliated with the University of California at Davis, for one year starting 7/1/96. Active clinical and research facility, 800 studies per year in oncology, neurology and cardiology. BC/BE applicant expected to participate in interpretation of studies, oncologic PET research and presentation of results. Please send curriculum vitae to: Peter E. Valk, MD, Northern California PET Imaging Center, 3195 Folsom Blvd., Sacramento, CA 95816. Phone (916) 733-3200, Fax (916) 733-6203.

**Nuclear Cardiology Lead Technologist**
The University of Rochester Medical Center, Rochester, New York. Full time opportunity for a dedicated position leading a superb technical staff in a University Medical Center teaching hospital. We need a CNMT with excellent technical, patient care and managerial skills to grow with us using a network of state of the art multthead cameras and computers. If you would like to grow with us and develop your own technical staff in a multi-million dollar facility in the beautiful finger lakes region of New York state and want professional growth and good benefits, please send resume or call: Ronald G. Schwartz, M.S., MD, F.A.C.C., (ABIM, ABIM-CV, ABNM), Director of Nuclear Cardiology, University of Rochester Medical Center, 601 Elmwood Avenue, Box 679, Rochester, NY 14642-8679. Phone (716) 275-6173.

**Nuclear Medicine Radiologist - Central New Jersey**
A 34 person radiology group seeks a board certified radiologist with additional nuclear medicine boards or ABR special competency to share responsibilities in nuclear medicine and general radiology. Cardiac, nuclear and SPECT experience required. Practice includes two 450-bed hospitals, 3 offices, radiology residency and medical student teaching. Send CV to Anthony Yudd, MD, PhD, c/o Kathy McGrath, Radiology Group of New Brunswick, P.A., 800 Ryders Lane, P.O. Box 1075, East Brunswick, NJ 08816-1075.

**Nuclear Medicine Residency**
St. Luke's-Roosevelt Hospital Center, a 1315 bed voluntary university hospital of Columbia University College of Physicians and Surgeons, is offering a two-year nuclear medicine residency position beginning in July 1996 consisting of concurrent training in clinical imaging, physics, radiopharmacy and radioummunoassay. The program is designed to prepare trainees for examination and certification by the American Board of Nuclear Medicine. The nuclear medicine service, a division of the department of radiology, is equipped with 16 state-of-the-art camera/computer systems, housed in laboratories for which new construction/renovation is nearly complete. A full spectrum of nuclear medicine and nuclear cardiology studies are performed. Research involves both clinical and basic sciences. Training programs include radiology and nuclear medicine residencies and a nuclear cardiology fellowship. A letter of inquiry should be sent to: Steven Parmett, MD, St. Luke's Hospital Site Director, Division of Nuclear Medicine, St. Luke's-Roosevelt Hospital, 1111 Amsterdam Avenue, New York, NY 10025. St. Luke's-Roosevelt is an Equal Opportunity Employer.

**Positions Wanted**
Physician/Pathologist BC AP/CP/NM, seeks full-time position for path/muc. med. practice. Experienced in all areas including cardiac, pediatric, oncologic, etc. Available 1/1/96 or possibly sooner. Please reply to Society of Nuclear Medicine, Box # 1001, 1850 Samuel Morse Drive, Reston, VA 22090.

Wanted ABNM certified physician seeks FT job. Dr. Garcia, (914) 778-2601.

Nuclear Medicine Technologist, F/T or P/T, Southwest US. (619) 627-7714.

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Deadline January 15, 1996

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**THE UNIVERSITY OF GENEVA (SWITZERLAND)**
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Is seeking qualified candidates for a position of:

ASSOCIATE PROFESSOR of Nuclear Medicine

Full-time associate head of the Division of Nuclear Medicine, one of the major Sections of the Department of Radiology.

The Candidate should demonstrate ability to direct a research program and to ensure pre- and post-graduate teaching in the context of a new problem-based learning curriculum. Leadership qualities are expected.

Applicants should be board certified in Nuclear Medicine and have practical experience in this field.

Please send application, curriculum vitae and list of publications before December 31, 1995 to:

The Dean of the Faculty of Medicine
Centre Medical Universitaire
Rue Michel-Servet 1
1211 Geneva 4
Switzerland
Fax: (+41.22) 372.49.31

where further information can be obtained. Women are encouraged to apply.
Authors seeking publication for the full text of their papers are strongly encouraged to submit their work to The Journal of Nuclear Medicine for immediate review.

Day and time assignments for oral presentation cannot be changed. Please refer to the “Meeting Memo” in the October 1995 issue of The Journal of Nuclear Medicine for further information on the Scientific Program Committee policies and objectives.

2. Awards Criteria
Society Program Awards
(Oral Presentation Only)

a. Cardiovascular Young Investigator Award
i) All applicants must be currently enrolled or within 5 years of completing a certified training program (there is no age limit)
ii) No separate submission necessary
iii) All former first prize winners are ineligible

b. Computer and Instrumentation Young Investigator Award
i) Only medical students, residents, fellows, graduate students, post-doctoral fellows and those with less than two (2) years experience as faculty member may apply.
ii) All former first prize winners are ineligible.
iii) The abstract must be submitted to one of the Instrumentation and Data Analysis categories.
c. Berson-Yalow Award
All research making use of the indicator-dilution method will be considered for this award. Abstracts which summarize research on receptor-based radiopharmaceuticals, for example, will be judged for the Berson-Yalow award.

3. Organization of body of abstract
Organize the body of the abstract as follows:
• A statement of the purpose of the study (preferably one sentence).
• A statement of the methods used.
• A summary of the results presented in sufficient detail to support the conclusions.
• A statement of the conclusions reached. It is not satisfactory to state “the results will be discussed” or “other data will be presented.”

4. Abbreviations
Use only standard abbreviations. Abbreviations used in The Journal of Nuclear Medicine are preferred. No abstract will be accepted unless the chemical identity of the radiopharmaceutical involved in the study is specified as accurately and completely as possible (for well-established radiopharmaceuticals, standard abbreviations such as MDP, DTPA, etc., are acceptable). Abstracts in which radiopharmaceuticals are identified only by code numbers will be automatically rejected.

5. Superscripts and subscripts
The mass number of an element should follow the elemental abbreviation on the same line and be separated by a hyphen (Tc-99m). DO NOT USE SUPERSCRIPTS OR SUBSCRIPTS to identify isotopes.

EXAMPLE

TECHNETIUM-99m POLYPHOSPHATE BONE IMAGING IN LEGG-PERTHES DISEASE. J.A. Danigelis, R.L. Fisher, and M.B. Ozonoff. Newington Children’s Hospital, Newington, CT.

This investigation was undertaken to compare the diagnostic usefulness of radionuclide bone imaging techniques to standard radiographic…
Boxes 1, 2 and 4 MUST be completed

1. Fill in only ONE letter in box below.
   This abstract is intended for:
   A. Technologist program
   B. Technologist student submission
   C. Society program
   D. Scientific exhibit

2. CHECK only ONE box below.
   I am willing to present this paper:
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3. Eligibility for Special "Awards" (Oral Only)
   [ ] Cardiovascular Young Investigators
   [ ] Computer and Instrumentation Young Investigators
   [ ] Berson-Yalow
   [ ] Technologist Cardiology
   [ ] Technologist Brain Imaging

4. Write only ONE category's abbreviation in the box below:
   CLINICAL SCIENCE/ APPLICATIONS:
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   Cardiovascular-Basic (CVB)
   Cardiovascular-Clinical (CVC)
   Cardiovascular-PET (CVP)
   Endocrine (END)
   Gastroenterology (GAS)
   Hematology/Infectious Disease (HID)
   Neurosciences:
   Basic (NSB)
   Neurology (NSN)
   Psychiatry (NSP)
   Oncology Diagnosis
   (antibody) (ODA)
   Oncology Diagnosis
   (non-antibody) (ODN)
   Oncology/Therapy (OT)
   Pediatrics (PED)
   Pulmonary (PUL)
   Renal/Hypertension (REH)
   INSTRUMENTATION & DATA ANALYSIS
   General (GEN)
   PET (PET)
   SPECT (SPT)
   DOSIMETRY/ RADIOPHARMACEUTICAL CHEMISTRY:
   Single Photons:
   Technetium (TPC)
   Halogens (HPC)
   Other Nuclides (OPC)
   Positrons (PPC)
   Therapy Nuclides (YPC)
   Pre-Clinical Studies (CPG)
   Radiopharmacy (RPC)
   [
   [ ] Write only ONE category in this box

1996 ABSTRACT FORM FOR SCIENTIFIC PAPERS ONLY
The Society of Nuclear Medicine 43rd Annual Meeting
Colorado Convention Center, Denver, CO
Monday, June 3--Thursday June 6, 1996
Do Not Fold Or Bend This Form/Abstract Will Be Published As Typed
Type Abstract Here: (Be sure to stay within border - 12.4 x 14.9 cm) (4 3/8" x 5 3/4")

List the name, address, & telephone number of the individual who should receive all correspondence.

TWO KEY WORDS FOR SUBJECT INDEX (See Meeting Memo for details)

DEADLINES
For Scientific Papers: Abstracts must be received (not postmarked) by Tuesday, January 9, 1996.
Please note: Acceptance or non-acceptance letters will be mailed March 1996.

*See General Policies, #9, on the instruction page of the abstract form, for criteria of these awards.
Technologist Section Awards are selected separately.
Mail Original Forms to:

THE SOCIETY OF NUCLEAR MEDICINE
Attn: Abstracts
1850 Samuel Morse Drive
Reston, VA 22090
(703) 708-9000

PLEASE NOTE: Be sure you have:
■ Enclosed the original abstract plus nine (9) photocopies of the official abstract form (page 1 only) plus one page of your supporting data.
■ Enclosed one self-addressed, stamped postcard with title and authors if receipt is to be acknowledged (optional). Note: Overseas or non-U.S. abstracts do not require return postage.

DO NOT FOLD abstract form; please mail in a large envelope using a cardboard backing. Abstracts received after the deadline will not be reviewed.

DEADLINE:
TUESDAY,
JANUARY 9, 1996 FOR RECEIPT OF ABSTRACTS.
No abstracts will be accepted after the deadline. NO EXCEPTIONS!

☐ I give permission to audiotape my presentation.
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Signature

I CERTIFY
That this identical abstract has not been submitted to any other national or international meeting or to more than one category of this SNM Meeting.
The material has not been accepted as a full paper prior to its submission to the SNM Annual Meeting.
That all of the listed authors have reviewed this abstract and agree to its submission

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