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When performing myocardial perfusion imaging this season, his profile may result in 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—which may reduce false-positives and equivocal cases.

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Please see us at RSNA. Booth #4135

Cardiolite*
Kit for the preparation of Technetium Tc99m Sestamibi

_To reduce soft-tissue attenuation_
_Cardiolite comes through_

**DU PONT PHARMA**
Radiopharmaceuticals

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.*
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 pancreas and/or taste perversion (metallic or bitter taste) immediately after injection of Technetium Tc99m Sestamibi. A few patients (less than 1%) in the clinical trial experienced transient asymptomatic elevation of liver enzymes and creatine phosphokinase isoenzymes. These elevations usually occurred within 6 hours of injection and usually returned to normal during a monitoring period of approximately 24 hours. Because these events are transient and not associated with serious clinical consequences, no specific treatment is required. There is no information on the long-term effects of the drug on thyroid or parathyroid function in pregnant or nursing women. The occurrence of adverse reactions with Technetium Tc99m Sestamibi are similar to those seen with other technetium-labeled compounds.

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

<table>
<thead>
<tr>
<th>Dose</th>
<th>mCi/kg</th>
<th>mCi</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.0</td>
<td>20.0</td>
<td>1.4</td>
</tr>
<tr>
<td>20.0</td>
<td>20.0</td>
<td>1.4</td>
</tr>
<tr>
<td>20.0</td>
<td>20.0</td>
<td>1.4</td>
</tr>
</tbody>
</table>

The dose administered should be the lowest required to provide an adequate study with consistent quality.

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.

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

<table>
<thead>
<tr>
<th>Organ</th>
<th>Estimated Radiation Absorbed Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>2.0 hour</td>
</tr>
<tr>
<td>Gallbladder Wall</td>
<td>2.0 hour</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>2.0 hour</td>
</tr>
<tr>
<td>Liver</td>
<td>2.0 hour</td>
</tr>
<tr>
<td>Kidneys</td>
<td>2.0 hour</td>
</tr>
<tr>
<td>Heart Wall</td>
<td>2.0 hour</td>
</tr>
<tr>
<td>Sestamibi</td>
<td>2.0 hour</td>
</tr>
<tr>
<td>Rest</td>
<td>2.0 hour</td>
</tr>
<tr>
<td>Stress</td>
<td>2.0 hour</td>
</tr>
</tbody>
</table>

Brief Summary

Cardiolite®
Kit for the preparation of Technetium Tc99m Sestamibi

F O R  D I A G N O S T I C  U S E

DESCRIPTION: Each 5ml vial contains a sterile, non-pyrogenic, lyophilized mixture of:

- Tetravalent (2-mercaptoethyl)acetylisonitrile (Cu) (0.5 mg) tetraferrate - 1.0mg
- Sodium Carbonate Dihydrate - 2.6mg
- L-Cysteine Hydrochloride Monohydrate - 1.0mg
- Sodium Chloride - 0.3g
- Stannous Chloride, Dihydrate, minimum (30% Cu) 0.005mg
- Stannous Chloride (Stannous and Stannic Dihydrate, maximum (as SnCl2·2H2O) - 0.006mg

Prior to lyophilization the pH is 5.3-5.9. The vials 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 Percetracte Tc99m Injection. The pH of the reconstituted product is 5.3 (p≤0.6). No bacteriostatic preservative is present.

The precise structure of the technetium complex is Tc99m(MIBI)2+ where MIBI is 2-mercaptoethylisonitrile.

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 for the Preparation of Technetium Tc99m Sestamibi is also useful in the evaluation of myocardial perfusion 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 as the area of interest, patients with suspected angina pectoris and patients with surgically proven coronary artery disease were 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 infarction from ischemia.

CONTRAINDICATIONS: None known.

WARNINGS: In studies in patients in whom cardiac disease is known or suspected, care shall be taken to identify and remove uninvolved tissue or to perform imaging in accordance with accepted clinical procedure. Infrequently, death has occurred to 4 to 24 hours after Tc99m Sestamibi use and is usually associated 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 preparative procedure. Radioactive drugs must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Also, care should be taken to minimize radiation exposure to the patient during the preparation with proper attention paid to the radiopharmaceutical dosage form.

Contents of the kit before preparation are not radioactive. However, after the Sodium Percetracte 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 standard aseptic procedures during preparation. Technetium Tc99m labeling reactions involved depend on maintaining the stannous ion in the reduced state. Hence, Sodium Percetracte Tc99m Injection containing oxidants should not be used. Technetium Tc99m Sestamibi should not be used for more than six hours after preparation.

Radioactivepharmaceuticals should be used only by physicians who are qualified by training and experience in the safe use and handling of radionuclides and whose experience and training have been approved by the appropriate government agency authorized to license the use of radionuclides.

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

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

- Fatigue 35%
- Dyspnea 17%
- Chest Pain 10%
- ST-depression 7%
- Arrhythmia 4%

Carcinogenesis, Mutagenesis, Impairment of Fertility

In comparison with other diagnostic technetium labeled radiopharmaceuticals, the radiation dose to the ovaries (0.018mSv/200mCi) at rest, 1.2 mSv/300mCi at exercise) is high. Minimal exposure (ALARA) is necessary in women of childbearing capability. (See Dosimetry subsection in DOSAGE AND ADMINISTRATION section).

The active intermediate, [CuMIBI]BF4, was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HPT and sister chromatid exchange tests (all in vivo). At cytogenetic concentrations (3x10⁴M), an increase in cells with chromosome aberrations was observed in the in vitro human lymphocyte assay. [CuMIBI]BF4, did not show genotoxic effects in the in vivo mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9mg/kg = 0.5 % of maximum human dose).

Pregnancy Category C

Animal reproduction and teratogenicity studies have not been conducted with Technetium Tc99m Sestamibi. It is also unknown 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 Sestamibi is excreted in human milk during lactation. It is not known whether Technetium Tc99m Sestamibi is excreted in human milk. Therefore, formulized feedings should be substituted for breast feedings. A
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- NEJM on the Second Edition

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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

Stress

Redistribution

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 baseline.
- Interpretable images were obtained in 98.7% of patients.

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
For Intravenous Infusion 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, non-pyrogenic solution of adenosine 3 mg/mL and sodium chloride 9 mg/mL, in Water for injection, q.s. The pH of the solution is between 4.5 and 7.5.

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

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

WARNINGS:
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 following Adenoscan administration. Patients with unstable angina may be at greater risk.

Skeletal and Adrenergic Medullary Nervous System Bradycardia and Hypotension.

Adenoscan (adenosine) acts directly on the SA and AV nodes and has the potential to cause first-, second-, or third-degree AV block or sinoatrial arrest. Approximately 15% of patients develop AV block with Adenoscan, including first-degree (2.3%), second-degree (7.3%) and third-degree AV block. All episodes of AV block were asymptomatic, transient, and did not require intervention. Adenoscan can cause severe 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 sino node dysfunction (except in patients with a functioning artificial pacemaker). Adenoscan should not be used in any patient who develops persistent or symptomatic high-grade AV block. Sinus pause has been rarely observed with adenosine infusions.

Hypotension
Adenoscan (adenosine) is a potent peripheral vasodilator and can cause significant hypotension. Patients with an intact baroreceptor 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, cardiac, or cerebrovascular insufficiency, or uncorrected hypovolemia, due to the risk of hypotensive complications. Patients should be monitored in any patient who develop persistent or symptomatic hypotension.

Hypertension
Intravenous Adenoscan (adenosine) is a respiratory stimulant (probably through activation of cardiod body chemoreceptors) and intravenous administration in man is associated with a reflex increase in respiratory rate and depth. In addition, supine patients experience bradycardia (up to 20%) or an urge 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 asthma and to mild to moderate exacerbation of their symptoms has been reported. Respiratory complications have occurred during adenosine infusion in patients with obstructive pulmonary disease. Adenoscan should be used with caution in patients with obstructive lung disease not associated with asthma (e.g., emphysema, bronchitis, etc.) and should not 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 cardiovascular drugs (such as beta adrenergic blocking agents, cardiac glycosides, and calcium channel blockers) without apparent adverse interactions, but the effectiveness of these agents has not been systematically evaluated. Because of the potential for additive or synergistic depressant effects on the SA and AV nodes, however, Adenoscan should be used with caution in patients with these agents being used concomitantly. The vasodepressant effects of Adenoscan are inhibited by adenosine receptor antagonists, such as caffeine and theophylline. The safety and efficacy of Adenoscan in the presence of these agents has not been systematically evaluated.

The concomitant use of Adenoscan and potentiated adenosine by nucleoside transport inhibitors, such as dapsone. The safety and efficacy of Adenoscan in the presence of dapsone has not been systematically evaluated. Whenever possible, drugs that might inhibit or augment the effects of adenosine should be withheld for at least five half-lives prior to the use of Adenoscan.

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

In addition, other nucleosides at millimolar concentrations present in several doubling times of cells in culture, is known to produce a variety of chromosomal aberrations. In rats and mice, adenosine administered intraperitoneally once a day for five days at 100, 150 mg/kg (10-30 rats) and 5-15 (3 mice) times human dosage on a mg/m² basis caused decreased spermatogenesis and increased numbers of abnormal sperm, a reflection of the ability of adenosine to produce chromosomal damage.

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

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

ADVERSE REACTIONS:
The following reactions with an incidence of at least 1% were reported with intravenous Adenoscan among 1421 patients enrolled in controlled and uncontrolled U.S. clinical trials. Despite the short half-life of adenosine, 10.9% of the side effects occurred not with the infusion of Adenoscan but several hours after the infusion terminated. Also, 14.6% of the side effects did not begin coincident with the infusion persisted for one hour or more after the infusion was complete. It is not possible to know whether these late adverse events are the result of Adenoscan infusion.

Flushings
44% Gastronomic discomfort 13% Second-degree AV block 3%
Gastrointestinal discomfort 40% Lightheadedness/dizziness 12% Hypertension 2%
Dyspnea or urge to breathe deeply 28% Headache 18% Tachycardia 3%
Headache 12% Headache 12% Tachycardia 3%
Throat, neck or jaw discomfort 15% First-degree AV block 3% Asthma 1%
Adverse experiences of any severity reported in less than 1% of patients include:
Body: Bother, back discomfort; lower extremity discomfort; weakness
Cardiovascular System: nonfatal myocardial infarction; life-threatening ventricular arrhythmias; third-degree AV block; bradycardia; palpitation; sinus arrest; syncope; peripheral edema; tachycardia; hypertension; flushing; fever, chills, hyperventilation; increased heart rate (50-125 mg intravenous injection) was needed to abort Adenoscan side effects in less than 2% of patients
Central Nervous System: drowsiness; emotional instability; transients
Gastrointestinal System: gastrointestinal discomfort; vomiting
Respiratory System: cough
Special Senses: blurred vision; dry mouth; ear discomfort; metallic taste; nasal congestion; taste changes; tongue discomfort
OVERDOSE:
The half-life of Adenoscan is less than 10 seconds and side effects of Adenoscan when they occur usually resolve quickly when the infusion is discontinued, although delayed or persistent effects have been observed. Methylenamine, such as caffeine and theophylline, are competitive adenosine receptor antagonists and theophylline has been used to effectively terminate persistent side effects. In controlled U.S. clinical trials, theophylline (50-125 mg low 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/kg/min infused for six minutes (total dose of 0.04 mg/kg).
The required dose of thalium-201 should be injected at the midpoint of the Adenoscan infusion (i.e., after the first three minutes of Adenoscan infusion).

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

The safety of Adenoscan administered by the intravenous route have not been established.

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

CAUTION: Federal law prohibits dispensing without prescription.
For over fourteen years, Advanced Medical Research, now known as AccuSync Inc., has been serving the cardiac health care industry with the finest line of cardiac gates available in today's market.

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- Trigger pulse LED
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- Compatible with all computers

**AccuSync models 5L, 6L and 1L are CSA and ETL (UL544) approved**

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<tr>
<th>Model</th>
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<th>CRT Monitor</th>
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using aerosols to determine the patency of the pulmonary airway system? Use a gas (that's what the airway system is for), and Xenon (127 or 133) are gases which are safe, economical and easy to administer with the XENAMATIC™ 3000.

- Shielded for Xe 127 and Xe 133 (radiation profile available on request).
- World's only system that allows you to study patients on Ventilators.
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Since its founding in 1970, the Technologist Section of the Society of Nuclear Medicine has been dedicated to advancing the science and education of Nuclear Medicine Technology nationwide.

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To order by mail, please fill out the accompanying order form

Please allow six to eight weeks for delivery.

Celebrate in 1995 as the SNM Technologist Section honors its past and anticipates the future.
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**TOTAL AMOUNT**

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1996 promises to bring many exciting advances to the field of nuclear medicine. What better way to learn about the latest research and examine the newest technology than at the Society of Nuclear Medicine's 43rd Annual Meeting? Amidst the scenic beauty of Denver, the Mile High City, you can participate in the extensive scientific and educational programs, review posters, and visit with the numerous companies exhibiting nuclear medicine products and related services. In addition, you will have the opportunity to meet colleagues and other health care professionals from around the world.

Mark your calendars now for the Society of Nuclear Medicine's 43rd Annual Meeting in Denver, Colorado June 2 - 6, 1996.

Please watch for the Meeting Preview Guide in early 1996.
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The 1996 Scientific Program Committee, Scientific Exhibits Subcommittee and the Scientific & Teaching Sessions Committee solicit the submission of abstracts from members and nonmembers of the Society of Nuclear Medicine for the 43rd Annual Meeting in Denver, CO. Accepted Scientific Paper and Scientific Exhibit abstracts will be published in a special supplement to the May issue of The Journal of Nuclear Medicine and accepted Technologist Section abstracts will be published in the June issue of the Journal of Nuclear Medicine Technology. Original contributions on a variety of topics related to nuclear medicine will be considered, including:
• Instrumentation and Data Analysis
• Radioassay
• Radiopharmaceutical Chemistry
• Dosimetry/Radiobiology

- Nuclear Magnetic Resonance Chemistry
- Clinical Science Applications:
- Bone/Joint
- Cardiovascular (clinical, basic, and PET)
- Endocrine
- Gastroenterology
- Neurosciences: Basic, Neurology and Psychiatry
- Pediatrics
- Pulmonary
- Renal/Electrolyte/Hypertension
- Hematology/Infectious Disease
- Oncology Diagnosis (antibody)
- Oncology Diagnosis (non-antibody)
- Oncology/Therapy

Authors seeking publication for the full text of their papers are strongly encouraged to submit their work for immediate review to JNM, and for the technologist section, to JNMT.

There are two abstract forms for the annual meeting. The Scientific Paper abstract form can be obtained in the October 1995 JNM. The Scientific Exhibits abstract form is only available by calling or writing to:
The Society of Nuclear Medicine
Att: Abstracts
1850 Samuel Morse Drive
Reston, VA 20190-5316
Tel: (703)708-9000 • FAX: (703)708-9015

Deadline for receipt of abstracts for scientific papers is Tuesday, January 9, 1996.

Deadline for receipt of abstracts for scientific exhibits is Tuesday, January 9, 1996.

Clinical SPECT Fellowship
A one week visiting fellowship in Single Photon Emission Computed Tomography (SPECT) is being offered by Arizona Medical Imaging and the Arizona Institute of Nuclear Medicine. The Fellowship is designed to provide a broad exposure to all aspects of SPECT through case observation in an active clinical practice setting, supplemented by didactic sessions. Visiting Fellows are given an opportunity to become part of the Nuclear Medicine team and to experience the entire gamut of nuclear medicine procedures being performed, at both inpatient and outpatient setting.

Tuition: The tuition fee of $1500 includes the course syllabus, handouts, breaks, and lunches. Enrollments are limited. CME credit available.

Program Directors: Hirsch Handmaker, M.D., Jack Bodker, M.D.

Arizona Institute
Of Nuclear Medicine

Register for the following dates: (please include a second choice)
October 9-13, 1995
February 5-9, 1996
December 4-8, 1995
April 15-19, 1996

A check in the amount of $1500 should accompany this registration form and be made payable to Arizona Institute of Nuclear Medicine. Fax registrations will be accepted.

Name ____________________________

Work Address ____________________________

City/State/Zip ____________________________

Office Phone ____________ Office Fax ____________

Home address ____________________________

Registrations and payments should be sent to:
Kristin Saddler • SPECT Fellowship Coordinator • 1331 N. 7th St., Suite 1110
Phoenix, AZ 85006 • Phone: (602) 252-3111 • Fax: (602) 242-2100
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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**SNM 43RD ANNUAL MEETING**

**Critical Dates**

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**DON’T FORGET THE MID-WINTER MEETING IS IN SAN JUAN, PUERTO RICO**

**DATE:** January 9-16, 1996

**LOCATION:** Caribe Hilton Hotel and Casino

**EDUCATION PROGRAM SPONSOR:** The Computer and Instrumentation Council
New Products

Each description of the products below was condensed from information supplied by the manufacturer. The reviews are published as a service to the professionals working in the field of nuclear medicine and their inclusion herein does not in any way imply an endorsement by the Editorial Board of The Journal of Nuclear Medicine or by the Society of Nuclear Medicine.

Innovative Color Printing for Medical Applications

The Codonics NP-1600M medical color printer is a high quality paper and transparency output solution designed for medical imaging applications. Utilizing dye-sublimation technology and digital image processing, the NP-1600M generates precise grayscale and color prints through a dry imaging process. A high-speed internal SPARC processor, standard Ethernet interface and built-in print spoiler allow shared access of the printer. Print requests are quickly spooled and processed to free valuable personnel and equipment resources.

To provide consistency high image quality for medical applications, Codonics engineers have developed an innovative printer calibration technique called CorrectImage™. This ensures uniform color distribution by compensating for elemental printhead variations during the printing process. CorrectImage significantly improves image quality by reducing artifacts such as ghosting and color shifting common in dye-sublimation printers. The NP-1600M interfaces are industry standard Ethernet and Centronics parallel. These interfaces provide high speed connectivity to workstation based imaging systems, including Apple Macintosh, IBM, PC, Sun and Silicon Graphics. Many proprietary systems also support one or both of the NP-1600M interfaces. No special software drivers are required to transfer images to the NP-1600M. EtherTalk is used for Apple Macintosh networks. LPR and FTP allow easy printer access from workstations using TCP/IP. Telnet can be used to connect to the printer and modify operational parameters or the print queue. Both TCP/IP and EtherTalk can be used simultaneously.

Codonics, 17991 Englewood Dr., Middleburg Heights, OH 44130. Phone: (216) 243-1198. Fax: (216) 243-1334.

Economical Radioactive Measurements Can Be Achieved Using the CRC®-35R

Designed with the busy department in mind, the powerful CRC®-35R offers time-savings and easy-to-use features in a sleek new package. The menu-driven system provides for automated tracking of inventory, dose calculation, quality assurance record keeping, radiopharmaceutical purity analysis and isotope decay correction. The inventory control function categorizes by radionuclide, compound or both and allows for withdrawals from multiple dose vials. The CRC-35R allows the user to step through daily tests, system tests, as well as accuracy, constancy, quality control, linearity and geometry testing. Radiopharmaceutical dispensing information for up to 100 patient doses can be stored in memory. In addition, the memory provides half-life data for 86 radionuclides, pre and postcalibration measurement activities and the ability to measure over 200 radionuclides. The new calibrator’s screen displays nuclide activity, Ci or Bq calibration numbers, the date and the time. A high-speed printer provides peel-off label tickets and full-page reports with the push of a button. The system can be configured with up to eight remote ionization chambers and readouts. Capintec Inc., Christina Sautait, 6 Arrow Rd., Ramsey, NJ 07446. Phone: (201) 825-9500. Fax: (201) 825-1336.

Backup Power for Broadband Communications

Designed for use in hospital, clinic or lab facilities to power ultrasound, monitoring, diagnostic, computer and communication equipment, the AlphaMed Uninterruptible Power Supply (UPS) exceeds the stringent safety requirements of health care industry equipment. Current models are available in 1500VA, 2000VA and 2500VA power ranges with varying input and output hospital grade connector configurations. The AlphaMed UPS from Alpha Technologies provides clean and uninterrupted backup power to medical and dental equipment in case of utility power failure and/or interruption. The systems low current leakage prevents the unit from interfering with other critical equipment. Health care facility computer networks such as, LAN/WAN and telecommunication networks can provide complete status and performance monitoring through the use of AlphaMed’s communication features including RS-232 port, SNMP compatibility, two-way on-board modem and intelligent digital panel. Alpha Technology, 3767 Alpha Way, Bellingham, WA 98226-8302. Phone: (206) 647-2360. Fax: (206) 671-4936.

Ensuring Safety With SECURE™ Injection Shield

An improved injection shield for use in the administration of unit-dose radiopharmaceuticals is now on the market. The SECURE™ Safety Injection Shield is capable of reducing the chance of accidental needlesticks and eliminating shield contamination. Other shields currently on the market require the user to load the syringe in the shield, then withdraw it back through the shield after injection. This can cause contamination of the shield from radioactive and potentially biohazardous material. The advanced Syncor design allows the syringe to pass through the protective shield directly into a sharps container with the simple push of a tab. As a result, shields can be maintained with normal cleaning rather than advanced sterilization procedures. The problem of shield contamination is eliminated with this injection shield; there is no need to recap a used needle. Syncor International Corp., Marc Mullen, Program Manager, 2001 Prairie St., Chatsworth, CA 91311. Phone: (818) 717-4477. Fax: (818) 717-4676.
Position Available
Chief of Nuclear Medicine at the VA Hospital, Salt Lake City

Applications are being sought for the Chief of Nuclear Medicine, Veteran's Administration Medical Center, Salt Lake City, UT. The position includes an academic appointment in the Dept. of Radiology, University of Utah School of Medicine. The applicant is expected to develop a research program. A CV and 3 letters of reference should be sent to: Frederick L. Datz, MD, Director of Nuclear Medicine, Dept. of Radiology, University of Utah Health Sciences Center, Salt Lake City, UT 84132. The University of Utah is an EE-AA employer and encourages applications from women and minorities.

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. Vail, MD, Northern California PET Imaging Center, 3195 Folsom Blvd., Sacramento, CA 95816. Phone (916) 733-3200, Fax (916) 733-6203.

NOMINATIONS SOUGHT FOR
Benedict Cassen Prize

$25,000 Award

To a scientist or physician-scientist whose work has led to a major advance in basic or clinical nuclear medicine science.

Deadline: November 15, 1995

For more information, contact: Education & Research Foundation, The Society of Nuclear Medicine, 1850 Samuel Morse Dr., Reston, VA 22090; or Sue Weiss, C.N.M.T., Administrative Director (312) 880-4416.

Nuclear Medicine Residency/Fellowship

Nuclear Medicine Residency/Fellowship positions are available at the University of Missouri Health Sciences Center beginning July 1, 1996. One year of prior ACGME approved clinical training and eligibility for Missouri States Medical License are required. The program is fully accredited by ACGME and provides comprehensive training in all aspects of nuclear medicine including nuclear cardiology, SPECT imaging and oncologic applications. Contact: Amolak Singh, MD, Professor of Radiology, Director of Nuclear Medicine, MU Health Sciences Center, One Hospital Drive, Columbia, MO 65212. Phone (314) 882-7955, Fax (314) 884-5557.

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 Yudzi, 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.

ACGME ACCREDITED TWO-YEAR NUCLEAR MEDICINE RESIDENCY

Two PGY-II and one PGY-III positions available for two-year Nuclear Medicine Residency at The Christ Hospital in Cincinnati, Ohio. The Christ Hospital, one of the country's most prestigious private institutions, is affiliated with University of Cincinnati Hospital. State-of-the-art equipment includes: one dual-head whole-body planar scanner, two triple-head SPECT scanners, two dual-head SPECT scanners, one single-head SPECT scanner, one multi-crystal cardiac first pass camera, and a Positron Emission Tomography scanner and cyclotron. The experience will include cardiac and non-cardiac clinical nuclear medicine, radiopharmacy, radio-immunoassay, nuclear physics, mathematics, radiation protection, exposure and training in Magnetic Rezonance Imaging and potentially spectroscopy. Extensive lectures and teaching conferences are pre-planned, and the faculty to resident ratio is 1:1. Our department, which includes 16 technical staff, performs well over 15,000 imaging procedures annually. Extensive academic support, extensive library resources, and the opportunity for research exists. Salary and benefits are highly competitive. Application should be received by February 1, 1996 for the program year starting July 1, 1996. Applicants must have at least one year of clinical experience in ACGME approved program. To apply, send/fax complete CV with two letters of recommendation to Stephen J. Pomeranz, MD, Director of Advanced Imaging, c/o Nuclear Medicine Residency Coordinator, 2139 Auburn Ave., Cincinnati, Ohio 45219. Telephone: 513-369-1146, Fax: 513-369-8414.

The Christ Hospital is an equal opportunity employer.

Physician Full-Time

A full-time employment opportunity is available to qualified physicians who are Board Eligible/Board Certified in both IM/NM or equivalent. Applicants must be trained and interested in practicing both internal medicine and nuclear medicine procedures. Responsibilities are approximately divided equally. Experience in thyroidology, osteoporosis and outpatient procedures for primary care is preferred. A unique growing solo practice that combines outpatient office IM/NM as well as hospital coverage for two community hospitals. Send CV to: Carolina Nuclear Medicine/Burlington Medical Center, Alamance Professional Village, 841 Heather Road, Burlington, NC 27215.

Positions Wanted

Nuclear medicine physician, ABNM, ABIM. Five + years experience at major university hospital with radiology residency and medical school. Experienced in all aspects of diagnostic and therapeutic nuclear medicine, including cardiac, pediatric, oncologic, SPECT, "Sr" therapy. Available Jan., 1996. Please respond to the Society of Nuclear Medicine, Box #1100, 1850 Samuel Morse Drive, Reston, VA 22090.

Experienced ABNM certified physician seeks FT job. Dr. Garcia, (914) 778-2601.
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Sopha Medical and Summit Nuclear have merged to form a dynamic new company. As SMV, our combined forces are focused on being the finest nuclear medicine imaging company in the world.

Behind our new name stands a history rich in nuclear medicine firsts. In 1985 it was the first 32 bit computer. In 1991 the first variable angle camera. Not to mention advanced all-digital detectors and the most envied clinical software in the business. All of which resulted in new industry standards for quality, efficiency and value.

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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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