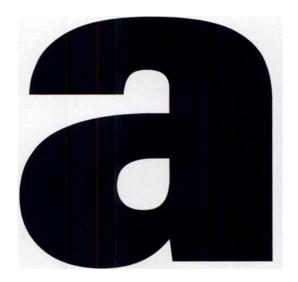
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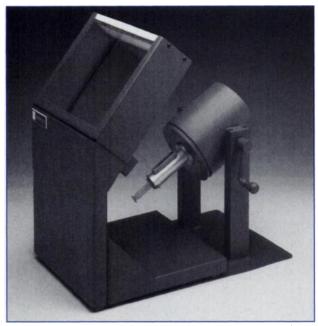
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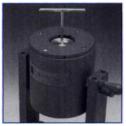
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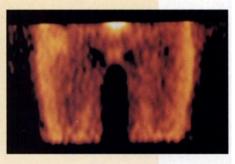
is happening.

One patient at a time.



with esophageal cancer.

24 minute MCD scan revealed abnormal uptake of FDG tracer, showing primary tumor and metastatic disease.



with metastatic melanoma.

22 minute MCD scan revealed abnormal uptake of FDG tracer in pelvis.



sagittal view of Patient with metastatic melanoma.

24 minute MCD scan revealed abnormal uptake of FDG in mediastinum.



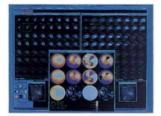
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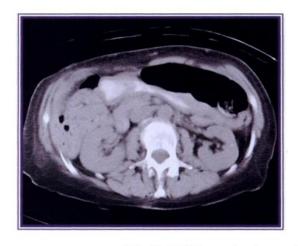
Small Cell Lung Carcinoma

CT showed evidence of chest involvement, but no definite distant metastases...





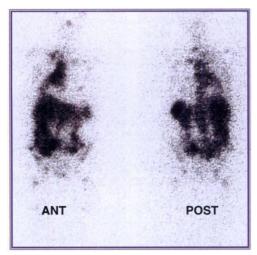
Chest CT scans showing evidence of right retroclavicular mass, right hilar and mediastinal lymphadenopathy associated with right middle and right lower lobe consolidation, as well as possible superimposed mass and bilateral pleural effusion.



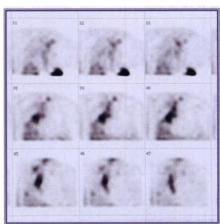


Abdominal CT scan showing no definitive evidence of metastatic disease.

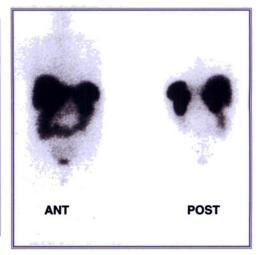
OctreoScan imaging identified extensive metastases, localizing chest and thoracic spine lesions



Initial OctreoScan whole body images identifying widespread disease involvement.



Initial OctreoScan coronal SPECT images localizing chest lesions.



OctreoScan follow-up whole body images showing marked overall improvement.
(Uptake in the liver, spleen, kidneys and GI are normal.)

Patient History

A middle-aged female, with a history of heavy smoking, presented with increasing dyspnea, abdominal pain and changes in her mental status. Chest CT revealed extensive disease. A biopsy of a right retroclavicular mass was positive for small cell lung carcinoma. Abdominal CT showed no definite evidence of metastases.

OctreoScan Scintigraphy

OctreoScan whole body imaging identified extensive activity in the head, chest, abdomen, pelvis, and spine. OctreoScan SPECT imaging localized chest lesions to the right retroclavicular, right hilar and mediastinal regions, as well as the thoracic spine, confirming the findings seen on chest CT.

Clinical Course

After receiving a course of chemotherapy of cytoxan, adriamycin and vincristine, the patient's mental status improved and her shortness of breath and abdominal pain resolved. Follow-up OctreoScan studies showed marked overall improvement.

Decisive Clinical Information

This case illustrates the benefits of OctreoScan imaging in the detection of small cell lung carcinoma, the whole body evaluation for distant metastases which may sometimes not be obvious on CT scanning, as well as for the follow-up of therapeutic response to treatment.





Kit for the Preparation of Indium In-III Pentetreotide

BRIEF SUMMARY OF PRESCRIBING INFORMATION

DESCRIPTION

OctreoScan* is a kit for the preparation of indium In-111 pentetreotide, a diagnostic radio-pharmaceutical. It is a kit consisting of two

- 1) A 10-mL OctreoScan Reaction Vial which contains a lyophilized mixture of 10 µg pentetreotide.
- 2) A 10-mL vial of Indium In-111 Chloride Sterile

Indium In-111 pentetreotide is prepared by combining the two kit components.



Indium In-111 pentetreotide is an agent for the scintigraphic localization of primary and metastatic neuroendocrine tumors bearing somatostatin receptors.

CONTRAINDICATIONS

None known

WARNINGS

DO NOT ADMINISTER IN TOTAL PARENTERAL NUTRITION (TPN) ADMIXTURES OR INJECT INTO TPN INTRAVENOUS ADMINISTRATION LINES; IN THESE SOLUTIONS, A COMPLEX GLYCOSYL OCTREOTIDE CONJUGATE MAY FORM.

The sensitivity of scintigraphy with indium in-111 pentetreotide may be reduced in patients concurrently receiving therapeutic doses of octreotide acetate. Consideration should be given to temporarily suspending octreotide acetate therapy before the administration of indium in-111 pentetreotide and to monitoring the patient for any signs

PRECAUTIONS

General

- Therapy with octreotide acetate can produce severe hypoglycemia in patients with insulinomas. Since pentetreotide is an analog of octreotide, an intravenous line is recommended in any patient suspected of having an insulinoma. An intravenous solution containing glucose should be administered just before and during administration of indium In-111 pentetreotide.
- 2. The contents of the two vials supplied with the kit are intended only for use in the preparation of indium In-111 nentetrectide and are NOT to be administered separately to the patient.
- Since indium In-111 pentetreotide is eliminated primarily by renal excretion, use in patients with impaired renal function should be carefully considered.
- 4. To help reduce the radiation dose to the thyroid, kidneys, bladder, and other target organs, patients should be well hydrated before the administration of indium in-111 pentetreotide. They should increase fluid intake and void frequently for one day after administration of this drug. In addition, it is recommended that patients be given a mile laxative (e.g., bisecody) or loctulose) before and after administration of indium in-111 pentetreotide (see Dosage and Administration section).
- Indium In-111 pentetreotide should be tested for labeling yield of radioactivity prior to administration. The product must be used within six hours of preparation.
- Components of the kit are sterile and nonpyrogenic. To maintain sterility, it is essential that directions are followed carefully. Aseptic technique must be used during the preparation and administration of indium In-111
- 7. Octreotide acetate and the natural somatostatin hormone may be associated with cholelithiasis, presumab altering fat absorption and possibly by decreasing motility of the gallbladder. A single dose of indium In-111 pentetreotide is not expected to cause cholelithiasis.
- As with any other radioactive material, appropriate shielding should be used to avoid unnecessary radiation exposure to the patient, occupational workers, and other persons.
- 9. Radiopharmaceuticals should be used only by physicians who are qualified by specific training in the safe use and handling of radionuclides.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Studies have not been performed with indium in-111 pentetreotide to evaluate carcinogenic potential or effects on fertility. Pentetreotide was evaluated for mutagenic potential in an in vitro mouse lymphoma forward mutation assay and an in vivo mouse micronucleus assay; evidence of mutagenicity was not found.

Pregnancy Category C

Animal reproduction studies have not been conducted with indium In-111 pentetreotide. It is not known whether indium in-111 pentetreotide can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Therefore, indium in-111 pentetreotide should not be administered to a pregnant woman unless the potential benefit justifies the potential risk to the fetus.

<u>**Nursing Mothers**</u>

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when indium In-111 pentetreotide is administered to a nursing woman.

Pediatric Use

Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

The following adverse effects were observed in clinical trials at a frequency of less than 1% of 538 patients. dizziness, fever, flush, headache, hypotension, changes in liver enzymes, joint pain, nausea, sweating, and weakness. These adverse effects were transient. Also in clinical trials, there was one reported case of bradycardia and one case of decreased hematocrit and hemoglobin.

and one case or occreased remiscion and nemopulous.

Pentetreotide is derived from octreotide which is used as a therapeutic agent to control symptoms from certain tumors. The usual dose for indium In-111 pentetreotide is approximately 5 to 20 times less than for octreotide and is subtherapeutic. The following adverse reactions have been associated with octreotide in 3% to 10% of patients: nausea, injection site pain, diarrhea, abdominal pain/discomfort, loss estools, and vomitting. Hypertension and hyper- and hypoglycemia have also been reported with the use of octreotide.

DOSAGE AND ADMINISTRATION

Before administration, a patient should be well hydrated. After administration, the patient must be encouraged to drink fluids liberally. Elimination of extra fluid intake will help reduce the radiation dose by flushing out unbound, labelled pentetreotide by glomerular filtration. It is also recommended that a mild laxative (e.g., bisacodyl or

lactulose) be given to the patient starting the evening before the radioactive drug is administered, and continuing for 48 hours. Ample fluid uptake is necessary during this period as a support both to renal elimination and the bowel-cleansing process. In a patient with an insulinoma, bowel-cleansing should be undertaken only after consultation with an endocrinologist.

The recommended intravenous dose for <u>planar</u> imaging is 111 MBq (3.0 mCi) of indium In-111 pentetreotide prepared from an OctreoScan kit. The recommended intravenous dose for <u>SPECT</u> imaging is 222 MBq (6.0 mCi) of indium In-111 pentetreotide.

The dose should be confirmed by a suitably calibrated radioactivity ionization chamber immediately before

As with all intravenously administered products, OctreoScan should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit. Preparations containing particulate matter or discoloration should not be administered. They should be disposed of in a safe manner, in compliance with applicable regulations.

Aseptic techniques and effective shielding should be employed in withdrawing doses for administration to patients. Waterproof gloves should be worn during the administration procedure.

Do not administer OctreoScan in TPN solutions or through the same intravenous line

Radiation Dosimetry

The estimated radiation doses' to the average adult (70 kg) from intravenous administration of 111 MBq (3 mCl) and 222 MBq (6 mCl) are presented below. These estimates were calculated by Oak Ridge Associated Universit using the data published by Krenning, et al.²

Estimated Absorbed Radiation Doses after Intravenous Administration of Indium In-111 Pentetreotide³ to a 70 kg patient

	PLAN	IAR .	SPI	ECT
Kidneys	54.16	5.42	108.32	10.83
Liver	12.15	1.22	24.31	2.43
Spleen	73.86	7.39	147.73	14.77
Uterus	6.34	0.63	12.67	1.27
Ovaries	4.89	0.49	9.79	0.98
Testes	2.90	0.29	5.80	0.58
Red Marrow	3.46	0.35	6.91	0.69
Urinary Bladder Wall	30.42	3.04	60.48	6.05
GI Tract				
Stomach Wall	5.67	0.57	11.34	1.13
Small Intestine	4.78	0.48	9.56	0.96
Upper Large Intestine	5.80	0.58	11.59	1.16
Lower Large Intestine	7.73	0.77	15.46	1.55
Adrenals	7.55	0.76	15.11	1.51
Thyroid	7.43	0.74	14.86	1.49
1000			100	
Effective Dose ⁴ Equivalent	13.03	1.30	26.06	2.61

- 1. Values listed include a correction for a maximum of 0.1% indium In-114m radiocontaminant at calibration
- E.P. Krenning, W.H. Bakker, P.P.M. Kooij, W.A.P. Breeman, H.Y.Oei, M. de Jong, J.C. Reubi, T.J. Visser, C. Bruns, D.J. Kwekkeboom, A.E.M. Reijs, P.M. van Hagen, J.W. Koper, and S.W.J. Lamberts, "Sometostatin Receptor Scintigraphy with Indium-111-DTPA-D-Phe-1-Octreotide in Man: Metabolism, Doeimetry and Comparison with lodine-123-Tyr-3-Octreotide," The Journal of Nuclear Medicine, Vol. 33, No. 5, May 1992, pp. 652-655.
- 3. Assumes 4.8 hour voiding interval and International Commission on Radiological Protection (ICRP) 30 model for the gastrointestinal tract calculations
- 4. Estimated according to ICRP Publication 53.

HOW SUPPLIED

The OctreoScan kit. NDC 0019-9050-40, is supplied with the following components:

- A 10-mL OctrooScan Reaction Vial which contains a hyphilized mixture of:
 A 10-mL OctrooScan Reaction Vial which contains a hyphilized mixture of:
 10 ug pentetreotide [N-(diethylenetriamine-N,N,N,N-tetracetic acid-N-acetyl)-D-phenylalanyl-L-hemicystyl-L-phenylalanyl-D-nyptophyl-L-hysyl-L-threonyl-L-hemicystyl-L-threoninol cyclic (2-7) disuffide), (also known as octreotide DTPA),
 2.0 mg gentisic acid [2,5-dihydroxybenzoic acid],
 4.9 mg trisodium citrate, anhydrous,
 10.0 mg citric acid, anhydrous, and
 10.0 mg inositol.

Before hyophilization, sodium hydroxide or hydrochloric acid may have been added for pH adjustment. The vial contents are sterile and nonpyrogenic. No bacteriostatic preservative is present.

2. A 10-mL vial of Indium In-111 Chloride Sterile Solution, which contains 1.1 mL of 111 MBo/mL (3.0 mCi/mL) indium In-111 chloride in 0.02 N HCl at time of calibration. The vial also contains ferric chloride at a concentration of 3.5 µg/mL (ferric ion, 1.2 µg/mL). The vial contents are sterile and nonpyrogenic. No bacteriostatic preservative

In addition, the kit also contains the following items: (1) a 25 G x 5/8" needle (B-D, Monoject) used to transfer Indium In-111 Chloride Sterile Solution to the OctreoScan Reaction Vial, (2) a pressure sensitive label, and (3) a

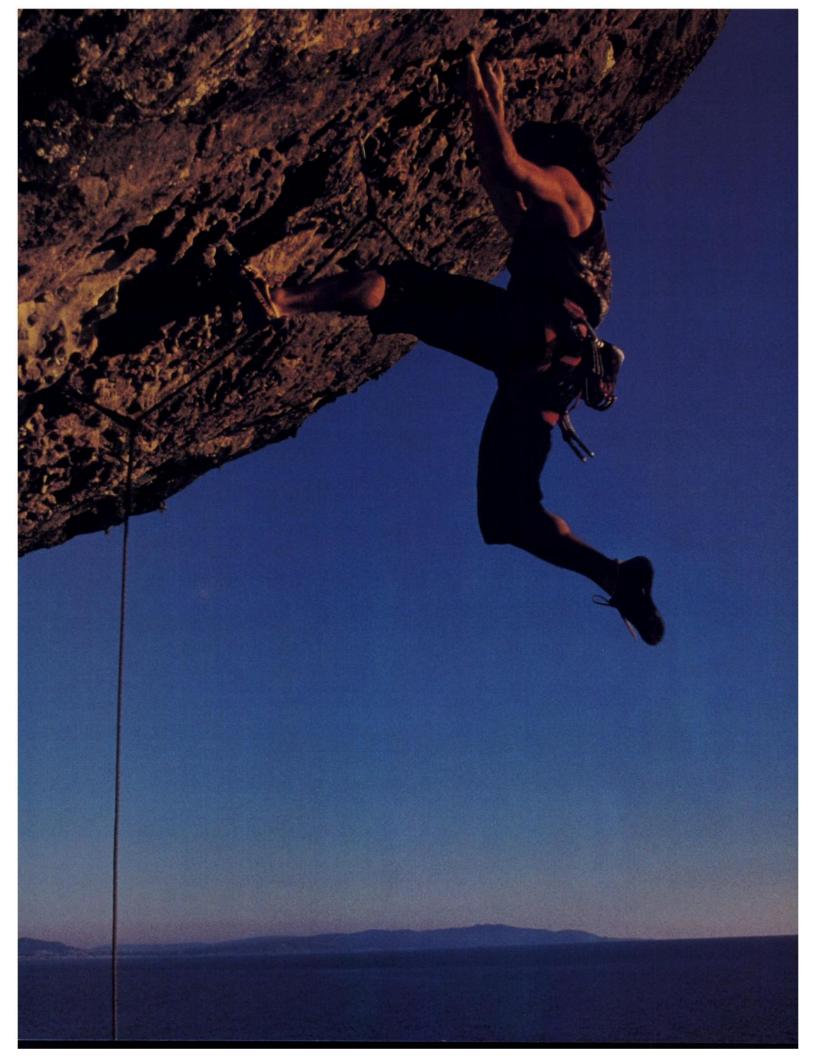


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It's better under stress

The value of cardiac imaging lies in the accuracy of stress perfusion images. And that's where Cardiolite® comes through.

With Cardiolite, you can simultaneously obtain stress perfusion and resting function (gated stress Cardiolite study)—that's critical diagnostic information regarding cardiac perfusion, wall motion, wall thickening, and LVEF—all of which can help with patient management decisions. And, for patients unable to achieve adequate levels of stress through exercise, imaging results can be optimized by using pharmacologic agents such as I.V. Persantine* (dipyridamole USP).

To enhance patient management, find out about the advantages of stress Cardiolite before you order your next study.

By performing stress Cardiolite studies you can...

- · Accurately diagnose CAD
- · Risk stratify patients with known or suspected CAD
- Reduce equivocal interpretation in difficult-to-image patients (women, obese, and large-chested)
- Acquire stress perfusion and resting function information
- Improve patient management decisions, which may reduce costs



To reduce the uncertainty 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. Pharmacologic stress may be associated with serious adverse events such as myocardial infarction, arrhythmias, hypertension, bronchoconstriction, and cerebrovascular events. Caution should be used when pharmacologic stress is selected as an alternative to exercise.

Persantine® is a registered trademark of Boehringer Ingelheim International GmbH. I.V. Persantine® is manufactured and distributed by DuPont Pharma under license from Boehringer Ingelheim Pharmaceuticals, Inc.

Please see brief summary of prescribing information on adjacent page.

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FOR DIAGNOSTIC USE

INDICATIONS AND USAGE: CARDIOLITE®, Kit for the preparation of Technetium Tc99m Sestamibi, is a myocardial perfusion agent that is indicated for detecting coronary artery disease by localizing myocardial increases of indicated for detecting coronary artery disease by localizing myocardial increases (reversible defects) and infarction (non-reversible defects), an evaluating myocardial function and developing information for use in patient management decisions. CARDIOLITE* evaluation of myocardial inchemia can be accomplished with rest and cardiovascular stress techniques (e.g., exercise or pharmacologic stress in accordance with the pharmacologic stress agent's labeling).

It is usually not possible to determine the age of a myocardial infarction or to differentiate a recent myocardial infarction from ischemia.

CONTRAINDICATIONS: None known

WARNINGS: In studying patients in whom cardiac disease is known or suspected, care should be taken to assure continuous monitoring and treatment in accordance with sale, accepted clinical procedure. Infrequently, death has occurred to 24 hours after Tc99m Sestambi use and is usually associated with exercise stress testing See PRECAUTIONS).

**HOZA nours are: recent resistant use and a transparant associated with serious adverse result of texts.)

Pharmacologic induction of cardiovascular stress may be associated with serious adverse events such as myocardial infarction, arrhythmias, hypotension, bronchoconstriction and cerebrovascular events. Caution should be used when pharmacologic stress is selected as an alternative to exercise; it should be used when indicated and in accordance with the pharmacologic stress agent's labeling.

PRECAUTIONS:

GENERAL

ontents of the vial are intended only for use in the preparation of Technetium Tc99m Sestamibi and are not to be istered directly to the patient without first undergoing the preparative procedure.

Radioactive drugs must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Also, care should be taken to minimize radiation exposure to the patients consistent with proper patient management.

Contents of the lat before preparation are not radioactive. However, after the Sodium Pertechnetate Tc99m Injection is added, adequate shielding of the final preparation must be maintained.

The components of the kit are sterile and non-pyrogenic. It is essential to follow directions carefully and to adhere to

ptic procedures during preparation.

Technetium Tc99m labeling reactions involved depend on maintaining the stannous ion in the reduced state. Hence, Sodium Pertechnetate Tc99m Injection containing oxidants should not be used.

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

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

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

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

Fatione Dyspnea Chest Pain ST-depression Arrhythmia 7% 1%

Carcinogenesis, Mutagenesis, Impairment of Fertility

In comparison with most other diagnostic technetium labeled radiopharmacuticals, the radiation dose to the ovaries (1.5rada/30mCi at rest, 1.2 rada/30mCi at exercise) is high. Minimal exposure (ALARA) is necessary in women of childbearing capability. (See Dosimetry subsection in DOSAGE AND ADMINISTRATION section.)

cundorang capating, to see Domentery Sussection in DOCAGE ARID ADVANCES IN A 1101 section. The active intermediate, $[Cu(MBD)]_{AB}$ was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HPRT and sister chromatid exchange tests (all in vitro). At cytotoxic concentrations (2 $20\mu gm$), an increase in cells with chromosome abertations was observed in the in vitro human hymphocyte assay. (Cu(MBD)_ABFq did not show genotoxic effects in the in vitro momenter micronucleus test at a dose which caused systemic and bone marrow toxicity (9mg/kg, > 600 × maximal human dose).

Pregnancy Category C

Animal reproduction and tenstogenicity studies have not been conducted with Technetium Tc99m Sestamibi. It is also not known whether Technetium Tc99m Sestamibi can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. There have been no studies in pregnant women. Technetium Tc99m Sestamibi should be given to a pregnant woman only if clearly needed.

Nursing Mothers

Technetium Tc99m Pertechnetate is excreted in human milk during lactation. It is not known whether Technetium Tc99m Sestamibi is excreted in human milk. Therefore, formula feedings should be substituted for breast feedings.

Pediatric Use

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

Sarety and enecurveness in ciniciren neaw time age of 16 nave not oeste estatosisted.

ADVERSE REACTIONS: During clinical trials, approximately 8% of patients experienced a transient parosmia and/or taste perversion (metallic or bitter taste) immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing, edema, injection site inflammation, dyspepsia, nausea, vomiting, pruritus, rash, urticaria, dry outh, fever, fozieness, fatigue, dyspene, and hypotension also have been attributed to administration of the agent. Cases of angina, chest pain, and death have occurred (see WARNINGS and PRECAUTIONS). The following adverse reactions have been rarely reported: signs and symptoms consistent with esizure occurring shortly after administration of the agent; transient arthribis in a wrist joint; and severe hypersensitivity, which was characterizeder administration of the agent; transient arthribis in a wrist joint; and severe hypersensitivity, which was characterizeder short phytotension, bradycardia, asthenia and vomiting within two hours after a second injection of Technetium Tc99m Sestamibi.

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VPERSANTINE (dipyridamole USP) Injection 5mg/ml

INDICATIONS AND USAGE IV Persantine* (dipyridamole USP) is indicated as an alternative to exercise in thallium myocardial perfusion imaging for the evaluation of coronary artery disease in patients who cannot exercise

CONTRAINDICATIONS Hypersensitivity to dipyridamole

WARNINGS Serious adverse reactions associated with the administration of intravenous Persantine* (dipyridamole USP) have included cardiac death, fatal and non-fatal myocardial infarction, ventricular fibrillation, symptomatic ventricular tachycardia, stroke, transient cerebral ischemia, seizures, anaphylactoid reaction and bronchospasm. There have been reported cases of asystole, simus node arrest, simus node depression and conduction block. Patients with abnormalities of cardiac impulse formation/conduction or severe coronary artery disease may be at increased risk for

In a study of 3911 patients given intravenous Persantine* as an adjunct to thallium myocardial perfusion imaging, two types of serious adverse events were reported: 1) four cases of myocardial infarction (0.1%), two fatal (0.05%), and two non-fatal (0.05%); and 2 is is cases of severe bronchospans (0.2%). Although the incidence of these serious adverse events was small (0.3%, 10 of 3911), the potential clinical information to be gained through use of intravenous Persantine* thallium imaging must be weighed against the risk to the patient. Patients with a history of unstable angina may be at a greater risk for severe myocardial ischemia. Patients with a history of asthma may be at a greater risk for bronchospasm during IV Persantine* use.

risk for bronchospasm during IV Persantine* use.

When thallium myocardial perfusion imaging is performed with intravenous Persantine*, parenteral aminophylline should be readily available for relieving adverse events such as bronchospasm or chest pain. Vital signs should be monitored during, and for 10-15 minutes following, the intravenous infusion of Persantine* and an electrocardiographic tracing should be obtained using at least one chest lead. Should severe chest pain or bronchospasm cour, parenteral aminophylline may be administered by slow intravenous injection (50-100 mg over 30-60 seconds) in doses ranging from 50 to 250 mg. In the case of severe hypotension, the patient should be placed in a supine position with host littled down if necessary, before administration of parenteral aminophylline. If 250 mg of aminophylline does not relieve chest pain symptoms within a few minutes, sublingual nitroglycerin may be administered. If chest pain continues despite use of aminophylline and nitroglycerin, the possibility of myocardial infarction should be considered. If the clinical condition of a patient with an adverse event permits a one minute delay in the administration of parenteral aminophylline, thallium-201 may be injected and allowed to circulate for one minute before the injection of aminophylline. This will allow initial thallium perfusion imaging to be performed before reversal of the pharmacologic effects of Persantine* on the coronary circulation.

PRECAUTIONS See WARNINGS

Drug Interactions Oral maintenance theophylline and other xanthine derivatives such as caffeine may abolish the coronary vasodilatation induced by intravenous Persantine (dipyridamole USP) administration. This could lead to a false negative thallium imaging result (see Mechanism of Action).

Myasthenia gravis patients receiving therapy with cholinesterase inhibitors may experience worsening of their dis in the presence of dipyridamole.

in the presence of oppyritamote. Carcinogenesis, Mutagenesis, Impairment of Fertility In studies in which dipyridamole was administered in the feed at doses of up to 75 mg/kg/day (9.4 times* the maximum recommended daily human oral dose) in mice (up to 128 weeks in males and up to 142 weeks in females) and rats (up to 111 weeks in males and females), there was no evidence of drug related carcinogenesis. Mutagencity tests of dipyridamole with bacterial and mammalian cell systems were negative. There was no evidence of impaired fertility when dipyridamole was administered to male and female rats at oral doses up to 500 mg/kg/day (63 times* the maximum recommended daily human oral dose). A significant reduction in number of corpora lutes with consequent reduction in implantations and live fetuses was, however, observed at 1250 mg/kg/day.

*Calculation based on assumed body weight of 50 kg.

Pregnancy Category B Reproduction studies performed in mice and rats at daily oral doses of up to 125 mg/kg (15.6 times* the maximum recommended daily human oral dose) and in rabbits at daily oral doses of up to 20 mg/kg (2.5 times* the maximum recommended daily human oral dose) have revealed no evidence of impaired embryonic development due to dipyridamole. There are, however, no adequate and well controlled studies in pregnant women.

Because animal reproduction studies are not always predictive of human responses, this drug should be used during pregnancy only if clearly needed.

*Calculation based on assumed body weight of 50 kg.

Nursing Mothers Dipyridamole is excreted in human milk.

Pediatric Use Safety and effectiveness in the pediatric population have not been established.

ADVERSE REACTIONS Adverse reaction information concerning intravenous Persantine* (dipyridamole USP) is derived from a study of 3911 patients in which intravenous Persantine* was used as an adjunct to thallium myocardial perfusion imaging and from spontaneous reports of adverse reactions and the published literature.

Serious adverse events (cardiac death, fatal and non-fatal myocardial infarction, ventricular fibrillation, asystole, sinus node arrest, symptomatic ventricular tachycardia, stroke, transient cerebral ischemia, seizures, anaphylactoid reaction and bronchospasm.) are described above (see WARNINGS)

and pronocnospasm.) are described above (see WARUINGS).

In the study of 3911 patients, the most frequent adverse reactions were: chest pain/angina pectoris (19.7%), electrocardiographic changes (most commonly \$T-T changes) (15.9%), headache (12.2%), and dizziness (11.8%).

Drug-related adverse events occurring with >1% incidence in this study were: chest pain/angina pectoris (19.7%), headache (12.2%), dizziness (11.8%), electrocardiographic abnormalities/\$T-T changes (7.5%), electrocardiographic abnormalities/extraystoles (5.2%), hypotension (4.6%), nausea (4.6%), flushing (3.4%), electrocardiographic abnormalities/extraystoles (3.2%), dyspane (2.6%), pain unspecified (2.6%), blood pressure lability (1.6%), hypertension (1.5%), paresthesia (1.3%), and fatigue (1.2%).

Less common adverse reactions occurring in 1% or less of the patients within the study included:

Cardiovascular System: Electrocardiographic abnormalities unspecified (0.8%), palpitation (0.3%), ventricular tachycardia (0.2% see WARNINGS), bradycardia (0.2%), myocardial infarction (0.1% see WARNINGS), AV block (0.1%), syncope (0.1%), orthostatic hypotension (0.1%), atributatic hypotension (0.1%), atributatic hypotension (0.1%), atributatic hypotension (0.1%), atributatic hypotension (0.1%), artibutatic hypotension (0.1%), artibutatic hypotension (0.1%), artibutatic hypotension (0.1%), artibutation (0.1%), deema (0.03%), cardiomyopathy (0.03%), elema (0.03%).

Central and Peripheral Nervous System: Hypothesis (0.5%), hypertonia (0.3%), nervousness/anxiety (0.2%), tremor (0.1%), abnormal coordination (0.03%), somnolence (0.03%), dysphonia (0.03%), migraine (0.03%), vertigo (0.03%).

Gastrointestinal System: Dyspepsia (1.0%), dry mouth (0.8%), abdominal pain (0.7%), flatulence (0.6%), vomiting (0.4%), eructation (0.1%), dysphagia (0.03%), teneamus (0.03%), appetite increased (0.03%).

Respiratory System: Pharyngitis (0.3%), bronchospasm (0.2% see WARNINGS), hyperventilation (0.1%), rhinitis (0.1%), coughing (0.03%), pleural pain (0.03%).

Other: Myalgia (0.9%), back pain (0.05%), injection site reaction unspecified (0.4%), diaphoresis (0.4%), asthenia (0.3%), malaise (0.3%), arthralgia (0.3%), injection site pain (0.1%), rigor (0.1%), earache (0.1%), tinnitus (0.1%), vision abnormalities unspecified (0.1%), dyageusia (0.1%), thirst (0.03%), depersonalization (0.03%), eye pain (0.03%), renal pain (0.03%), perineal pain (0.03%), breast pain (0.03%), intermittent claudication (0.03%), leg cramping (0.03%), indicational postmarketing experience, there have been rare reports of allergic reaction including urticaria, pruritus, dermatitis and rash.

DU PONT PHARMA

Radiopharmaceuticals

Distributed by Radiopharmaceutical Division The DuPont Merck Pharmaceutical Co. Billerica, MA 01862

2 ml ampule & 10 ml vial Manufactured by DuPont Merck Pharma Manati, Puerto Rico 00674

Manufactured by DuPont Merck Pharma Aquadilla, Puerto Rico 00604

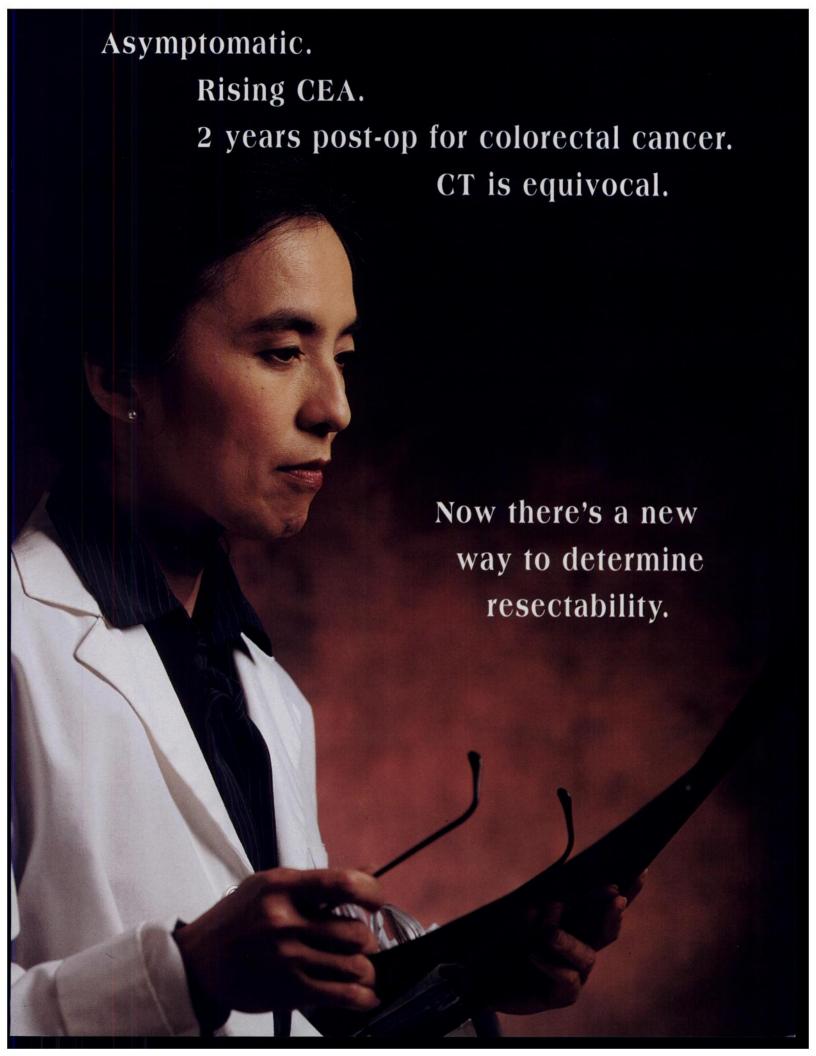


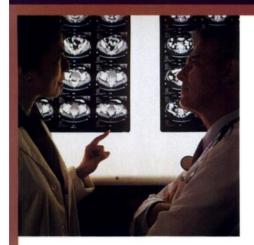
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Printed in U.S.A. 4/95 513113-0495 Brief Summary







SENSITIVE IMAGING TO HELP DRIVE MANAGEMENT DECISIONS

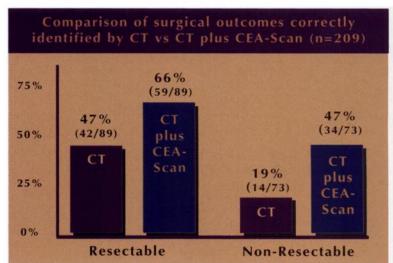
C EA-Scan is a new imaging agent that enhances your pre-operative determination of colorectal cancer resectability. CEA-Scan is indicated, in conjunction with standard diagnostic evaluations, for detection of the presence, location and extent of recurrent and/or metastatic colorectal carcinoma involving the liver, extrahepatic abdomen and pelvis in patients with a histologically confirmed diagnosis of colorectal carcinoma.

Surgery confirms that CEA-Scan with CT can help you make decisions concerning surgical resectability. Compared to CT alone, CEA-Scan with CT:

- Identified 59/89 versus 42/89 patients with resectable disease, a 40% increase in detection rate
- Identified 34/73 versus 14/73 patients with non-resectable disease, or more than twice as many
- In patients with negative or equivocal CT (occult disease), reduced the number of falsenegative patients from 59 to 23, a 60% decrease.

CEA-Scan has a 97% positive predictive value for lesions when concordant with CT (146 true-positive lesions versus 4 false-positives).

BETTER IDENTIFICATION OF RESECTABLE/NON-RESECTABLE DISEASE



IMPROVES SENSITIVITY

		d specificit agnostic m	y of ethods (SDM
	SDM		CEA-Scan
Sensitivity	57.9%		71.3%
	(103/178)	P=0.006	(127/178)
Specificity	84.4%		62.5%
	(27/32)	P=0.12	(20/32)

SENSITIVE, SAME-DAY IMAGING

CEA-Scan enables improved colorectal cancer detection compared to standard diagnostic methods (SDM, 95% of which were CT).

- In general, CEA-Scan was more sensitive and less specific in the abdomen and pelvis than CT¹
- However, direct comparisons of the performance characteristics of SDM to CEA-Scan are difficult to interpret, since the results of SDM were entry criteria for both Phase 3 protocols.

ADVANCED TECHNOLOGY

CEA-Scan offers the advantages of Fab' fragment design.

- Short biological half-life (13±4 hours) and rapid blood clearance improve tumor-to-background ratios²
- Minimal liver metabolism allows hepatic imaging
- Small fragment size enhances renal clearance
- · Fragment technology provides lower immunogenicity

ESTABLISHED SAFETY PROFILE

Over 400 patients who have received CEA-Scan have been evaluated for human anti-mouse antibody (HAMA).

- <1% showed an elevation of HAMA levels</p>
- · Limited data are available regarding the safety of re-administration

In the patients studied with CEA-Scan, one patient each developed the following minor self-limiting adverse effects: transient eosinophilia, nausea, bursitis, urticaria, generalized itching, headache, upset stomach and fever. Out of a total of over 500 patients receiving the product to date, there has been a single report of an apparent grand mal epileptic seizure in a severely hypertensive patient that was "possibly related" to CEA-Scan infusion.



Patient underwent abdominoperineal resection in 1987. Presented 5 years post-op with negative CT and rising CEA.



CEA-Scan abdominal SPECT image indicating tumor uptake (T, arrow). Surgery confirmed the positive CEA-Scan image.

HELPING YOU MAKE DECISIONS ABOUT TUMOR RESECTABILITY

Manufactured by:

●IMMUNOMEDICS, INC.

Distributed by:
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MEDICAL

Please see adjacent page for brief summary of prescribing information

References

- Moffat FL Jr., Pinsky CM, Hammershaimb L, et al. Clinical utility of external immunoscintigraphy with the IMMU-4 technetium-99m-Fab' antibody fragment in patients undergoing surgery for carcinoma of the colon and rectum. Results of a givotal. Phase III trial. J Clin Oncol. 1996;14:2295-2305.
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 Tempero M, Brand R, Holdeman K, Matamoros A. New imaging techniques in colorectal cancer. Semin Oncol. 1995; 22(5):448-471.



For the Preparation of Technetium Tc 99m Arcitumomab. Sterile, Non-Pyrogenic, Lyophilized Powder for Intravenous Use Only.

CEA-Scare is a radiodiagnostic agent consisting of a murine monoclonal antibody Fab' fragment, arcitumomab, formulated to be labeled with **Technetium [***Te].' The active component, arcitumomab, is a Fab' fragment generated from IMMU-4, a murine IgG₁ monoclonal antibody produced in murine ascitic fluid supplied to Immunomedics, Inc., by Charles River Laboratories. IMMU-4 is purified from the ascitic fluid and is digested with pepsin to produce F(ab'): fragments and subsequently reduced to produce the 50,000-daiton arcitumomab. Each vial contains the non-radioactive materials necessary to prepare one patient dose. CEA-Scari is a sterile, lyophilized formulation, containing 1.25 mg of arcitumomab and 0.29 mg stannous chloride per vial, with potassium sodium tartrate tetrahydrate, sodium acetate trihydrate, sodium chloride, acetic acid, glacial, hydrochloric acid, and sucrose. The imaging agent, technetium Tc 99m CEA-Scan®, technetium Tc 99m arcitumomab, is formed by reconstitution of the contents of the CEA-Scan® vial with 30 mCi of [ImTc] sodium pertechnetate in 1 ml of Sodium Chloride for Injection, USP. The resulting solution is pH 5-7 and for intra-venous use only. Following administration, the labeled antibody can be visualized by common nuclear medicine instrumentation.

IMPICATIONS

CEA-Scan® (Arcitumomab) is indicated, in conjunction with standard diagnostic evaluations (e.g., additional imaging evaluation), for detection of the presence, location and extent of recurrent and/or metastatic colorectal carcinoma involving the liver, extrahepatic abdomen and pelvis in patients with a histologically confirmed diagnosis of colorectal carcinoma. CEA-Scan® provides additional information in patients with no evidence of disease by standard diagnostic modalities (SDM) in whom recurrence or metastasis is suspected based upon elevated or rising serum CEA, and in patients with evidence of metastatic or recurrent disease on SDM. A retropective analysis suggests that these data can be useful in the evaluation of patients in whom surgical intervention (biopsy, exploratory laparotomy and surgical resection) is under consideration

CEA-Scare is not indicated for the differential diagnosis of suspected colorectal carcinoma or as a screening tool for colorectal cancer. CEA-Scane is not intended for readministration or for assessment of response to treatment. (see PRECAUTIONS)

CONTRAINDICATIONS

CEA-Scan® should not be administered to patients who are hypersensitive to products of murine origin or to Technetium [Tc-99m.]

WARNINGS

Anaphylactic and other hypersensitivity reactions can occur following administration of mouse protein to patients. Although serious reactions of this type have not been observed in clinical trials after CEA-Scane administration, medications for the treatment of hypersensitivity reactions, e.g., epinephrine, antihistamines and corticosteroids, should be available for immediate use in the event of an allergic reaction during administration of this agent.

PRECAUTIONS

CEA-Scan® is to be interpreted in conjunction with standard diagnostic modalities. A negative or positive CEA-Scan® by itself should not be utilized in the diagnostic evaluation of colorectal cancer. Discordant results are substantially less predictive than concordant results.

CEA-Scan® should not be used as a screening test for colorectal cancer.

Limited data are available regarding the safety of readministration.2 There are no data to support the efficacy of CEA-Scan® readministration. CEA-Scan® should be used only once in each patient.

The components of CEA-Scan® are sterile and non-pyrogenic. It is essential to follow preparation directions carefully and to adhere to strict aseptic procedures during preparation of CEA-Scan® [***Tc]. The contents of the vial are intended only for use in the preparation of CEA-Scan® [**Tc] and are not to be administered directly

The contents of the vial before preparation are not radioactive. However, after **Tc-pertechnetate is added, adequate shielding of the preparation must be maintained. Appropriate safety measures should be used to minimize radiation exposure to clinical personnel and patients, consistent with proper patient management.

Radiopharmaceuticals should be used only by physicians who are qualified by training and experience in the safe use and handling of radionuclides.

imaging interpretation

General

There are limited data to determine the imaging characteristics and efficacy of the CEA-Scan® (Arcitumomab) in detection of lesions outside of the abdominopelvic cavity.23

Areas of potential false-positive readings, particularly with planar imaging, may be observed near the major bloodpool organs (heart, major vessels, etc.) at very early imaging times, near the sites of antibody fragment metabolism (kidneys and urinary bladder), and in the intestines and gallbladder. Late imaging may also aid in the evaluation of suspected normal bowel activity.

With regard to imaging of tumor near the kidneys or urinary bladder, it is advisable to have the patient void urine prior to acquisition of imaging data to decrease bladder activity. Careful SPECT imaging near the kidneys and bladder has been helpful.

Porta Hepatis Region

Precise localization of lesions in the region of the porta hepatis has been difficult. Lesions within the porta hepatis region may be present within the liver or the portal nodes. At the time of surgical exploration, such lesions (which if nodal would preclude resection of hepatic metastases) should be explored first.

There were 52 false-positive lesions observed in 41 patients from a total of 209 surgically explored subjects in the two pivotal trials. Thirty-five of these lesions were in occult disease patients. Of the 52 false-positive lesions, 11 were observed in the liver, 17 in the extra-hepatic abdomen, and 24 in the pelvis. A pathological correlate to the lesions was infrequently documented; these included granulomas in the liver (1 instance), adhesions with or without suture granulomas (4 cases), surgical incision site (1 case). Descriptions of false-positive lesions within the abdomen were suggestive of colonic activity in several cases.

Hot, Rimmed, and Cold Lesions

Only hot or rimmed lesions should be considered as positive for tumor. Lesions that are rimmed or cold usually fill in as hot or rimmed, respectively, with time. ** Often, large lesions, due to poor vascularization or central necrosis, will appear to be cold.

Information for Patients

Murine monoclonal antibodies are foreign proteins, and their administration can induce human anti-mouse antibodies (HAMA). While limited data exist concerning the clinical significance of HAMA, the presence of HAMA may interfere with murine antibody-based immunoassays (e.g., serum CEA assays), could compromise the efficacy of in vitro or in vivo diagnostic or therapeutic murine antibody-based agents, and may increase the risk of adverse reactions. For these reasons, patients should be informed that the use of this product could

affect the future use of other murine-based products, including CEA-Scan®, and they should be advised to discuss prior use of murine-based antibody products with their physicians. (see Heterologous Protein Administration)

Heterologous Protein Administration

The presence of HAMA and human anti-mouse fragment antibodies have been reported in patients before and receiving CEA-Scan® (<1% of patients develop HAMA to the antibody fragment). While hypersensitivity reactions to CEA-Scan® have not been observed to date, it is possible that such reactions could occur, resulting in anaphylactic shock, serum sickness or death. In addition, patients who have previously received murine monoclonal antibody products are more likely to have HAMA. When considering the use of the CEA-Scar® in patients who have previously received murine antibody-based products, physicians should be aware of the potential for HAMA to increase the risk of allergic reactions and to alter clearance and biodistribution. The quality or sensitivity of the imaging study may then be compromised.

Drug/Laboratory Test Interactions

The presence of HAMA in serum may interfere with two-site murine antibody-based immunoassays, such as assays for CEA and CA-125. If HAMA is known or suspected to be present, the clinical laboratory should be notified that interference may occur.

CEA-Scan® may interfere with serum assays for assessment of serum levels of CEA. Therefore, any determination of serum CEA should be made prior to injection with CEA-Scan*. Assays for serum CEA should not be performed within 7 days after injection of CEA-Scan

No data are available on possible drug interactions. Do not mix or administer CEA-Scan® with other products. Sufficient time should be allowed for clearance and radioactive decay before and after the use of this product and other products using radionuclides.

Carcinogenesis, Mutagenesis, Impairment of Fertility
No long-term animal studies have been performed to evaluate the carcinogenic or mutagenic potential of Technetium Tc 99m arcitumomab or to determine its effects on fertility in males or females.

Animal reproduction studies have not been conducted with CEA-Scane. It is also not known whether it can cause fetal harm or affect reproductive capacity when administered to a pregnant woman. CEA-Scan® should be used during pregnancy only if, in the opinion of the physician, the information to be gained justifies the potential risk to the fetus. Examinations using a radiopharmaceutical in a woman of child-bearing capability should be performed during the first 8-10 days following the onset of menses, if possible.

Before administering a radioactive medicinal product to a mother who is breast feeding, consideration should be given whether the investigation could be reasonably delayed until the mother has ceased breast feeding. If the use of the product is deemed to be clinically indicated, breast feeding should be interrupted, the expressed milk discarded, and formula feedings substituted for breast feeding.

Pediatric Use

Safety and diagnostic accuracy in persons under 21 years of age have not been established.

ADVERSE REACTIONS

In the patients studied with CEA-Scan®, one patient each developed the following minor self-limiting adverse effects: transient eosinophilia, nausea, bursitis, urticaria, generalized itching, headache, upset stomach and fever. Out of a total of over 500 patients receiving the product to date, there has been a single report of an apparent grand mal epileptic seizure in a severely hypertensive patient that was "possibly related" to CEA-Scane infusion

Over 400 patients who have received CEA-Scan® have been evaluated for HAMA by Immunomedics using ELISA methodology. Fewer than 1% of the patients showed an elevation of HAMA levels to fragment after being injected with CEA-Scane. If the physician suspects HAMA based on an adverse reaction or altered biodistribution pattern, and deems that a HAMA assay is clinically warranted, he/she should telephone Immunomedics, Inc., at 800 327-7211, between 8:30 a.m. and 5:00 p.m. Eastern Standard Time, for information on procedures to be followed for submission of patient serum for assessment of HAMA directed against mouse monoclonal antibody fragments.

Intravenous infusion of intact IgG and F(ab'): of IMMU-4 in doses of up to 25 mg or arcitumomab at doses up to 10 mg have not shown any serious adverse reaction.

HOW SUPPLIED

Package containing one (1) vial, with a single-use dose of 1.25 mg lyophilized arcitumomab. The product should not be used beyond the expiration date printed on the label

REFERENCES

- 1. Hansen HJ, Jones AL, Sharkey RM, Grebenau R, Blazejewski N, Kunz A, Buckley MJ, Newman ES, Ostella F, Goldenberg DM. Preclinical evaluation of an 'Instant' *Tc-labeling kit for antibody imaging. Cancer Res. 1990:50:794-798.
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- 3. Moffat FL, Pinsky CM, Hammershaimb L, Petrelli NJ, Patt YZ, Whaley FS, Goldenberg DM, and the Immunomedics Study Group. Clinical utility of external immunoscintigraphy with the IMMU-4 technetium-99m-Fab' antibody fragment in patients undergoing surgery for carcinoma of the colon and rectum. Results of a pivotal, Phase III trial. J Clin Oncol 1996;14:2295-2305.
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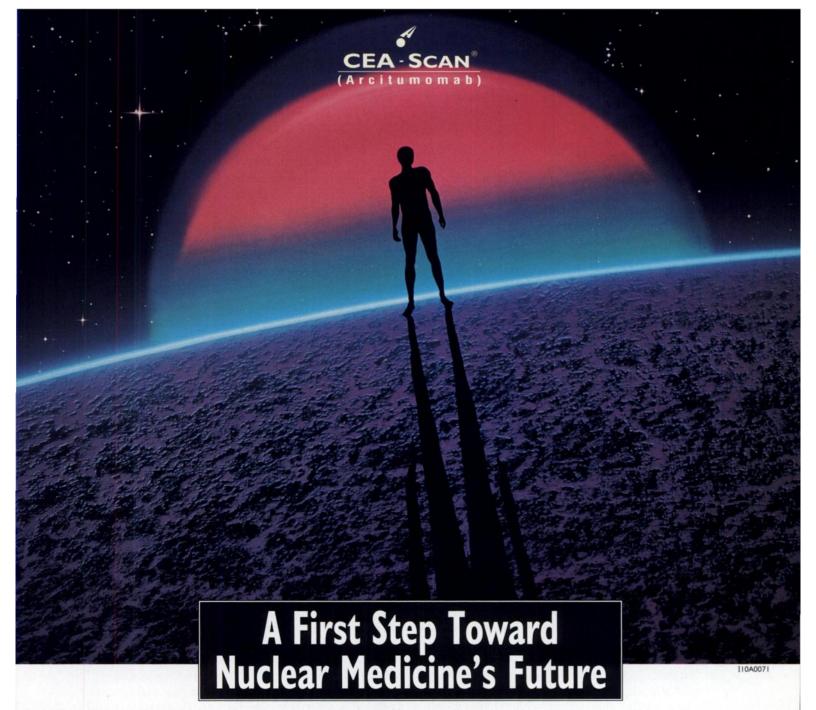
Immunomodics, Inc. 300 American Road Morris Plains, NJ 07950

Manufactured by:

Distributed by:







Nuclear medicine's future depends upon its ability to better detect and treat disease. So you have a stake in the future of CEA-Scan® (Arcitumomab), a new radiodiagnostic agent for detection and staging of recurrent and metastatic colorectal cancer.*

CEA-Scan is the first Tc99m-labeled antibody. The first antibody fragment. The first same-day antibody fragment imaging agent. The first antibody fragment diagnostic agent with the ability to detect liver metastases. And the first with virtually no immunogenicity (less than 1%). With CEA-Scan and CT, you can help oncologists and surgeons better evaluate the 600,000 Americans who've undergone laparotomy for colorectal cancer. You can better detect lesions which, if excised, make surgical cure possible. Conversely, CEA-Scan and CT can detect otherwise occult disease that can make such resection useless.

Soon, we'll be introducing additional products for the diagnosis and treatment of other diseases, providing truly new capabilities for nuclear medicine, and those who practice it.

■IMMUNOMEDICS, INC.

300 American Road, Morris Plains NJ 07950 Phone: 201-605-8200 Fax: 201-605-8282

Manufactured by Immunomedics, Inc.

*Please see preceding page for a brief summary of prescribing information.

Distributed by Mallinckrodt Medical, Inc.

Introducing a view from the heart.



Technetium Tc99m Tetrofosmin for Injection

A clear view.

- Technetium labeled
- Rapid and sustained myocardial uptake, with images available from 15 minutes to 4 hours post-injection
- Rapid GI clearance

A convenient view.

- Room temperature preparation, and 8 hour reconstituted shelf-life
- No redistribution
- Available in unit dose

An efficient view.

- Flexible scheduling
- Assessment of myocardial perfusion and ventricular function with a single injection
- Sensitive and reliable detection of coronary disease

A patient's view.

- Low-radiation exposure compared to other myocardial perfusion agents
- Less than 1% of patients experienced side effects in clinical trials of 764 adults.





Kit for the Preparation of Technetium Tc99m Tetrofosmin for injection

Diagnostic radiopharmaceutical For intravenous use only Code N166A

DESCRIPTION

The Medi-Physics Myoview™ kit is supplied as a pack of five vials for use in the preparation of a technetium Tc99m tetrofosmin intravenous injection to be used for the scintigraphic delineation of regions of reversible myocardial ischemia in the presence or absence of infarcted myocardium. Each vial contains a pre-dispensed, sterile, non-pyrogenic, lyophilized mixture of 0.23 mg tetrofosmin [6,9-bis(2-ethoxyethyl)-3,12-dioxa-6,9-diphospha-tetradecane], 30 µg stannous chloride dihydrate (minimum stannous tin 5.0 µg; maximum total stannous and stannic tin 15.8 µg), 0.32 mg disodium sulphosalicylate and 1.0 mg sodium D-gluconate, and 1.8 mg sodium hydrogen carbonate. The lyophilized powder is sealed under a nitrogen atmosphere with a rubber closure. The product contains no antimicrobial preservative.

Caution: Federal (USA) law prohibits dispensing without a prescription

CLINICAL PHARMACOLOGY

General

When technetium Tc99m pertechnetate is added to tetrofosmin in the presence of stannous reductant, a lipophilic, cationic technetium Tc99m complex is formed, Tc99m tetrofosmin. This complex is the active ingredient in the reconstituted drug product, on whose biodistribution and pharmacokinetic properties the indications for use depend.

A total of 252 patients with ischemic heart disease or atypical chest pain who had a reason for retroises stress imaging were studied in two open-label, multi center, clinical trials of Tc99m tetrofosmin (study a and study b). Of these 252 patients there were 212 (83%) males and 40 (17%) females with a mean age of 60.5 years (range 33.7 to 82.4 years). At peak exercise, maximum heart rate achieved and peak systolic blood pressure were comparable after Myoview and thallium-201 exercise studies.

All patients had exercise and rest planar imaging with Myoview and thallium-201; 191 (76%) patients also had SPECT imaging. The Myoview and thallium-201 images were separated by a mean of 5.1 days (1-14 days before or 2-14 days after Myoview). For Myoview imaging, each patient received 185-296 MBq (5-8 mCi) Tc99m tetrofosmin at peak exercise and 555-888 MBq (15-24 mCi) Tc99m tetrofosmin at rest approximately 4 hours later. For thallium-201 imaging, patients received thallium-201 55.5-74 MBq (1.5-2.0 mCi) at peak exercise

The images were evaluated for the quality of the image (excellent, good or poor) and the diagnosis (with scores of 0 = normal, 1 = ischemia, 2 = infarct, 3 = mixed infarct and ischemia). The primary outcome variable was the percentage of correct diagnoses in comparison to the final clinical diagnosis. All planar images were blindly read; SPECT images were evaluated by the unblinded investigator. A subset of 181/252 (71%) patients had coronary angiography comparisons to the planar images of Myoview or thallium-201.

INDICATIONS AND USAGE

Myoview is indicated for scintigraphic imaging of the myocardium following separate administrations under exercise and resting conditions. It is useful in the delineation of regions of reversible myocardial ischemia in the presence or absence of infarcted myocardium.

CONTRAINDICATIONS

None known.

WARNINGS

In studying patients with known or suspected coronary artery disease, care should be taken to ensure continuous cardiac monitoring and the availability of emergency cardiac treatment.

General

To minimize radiation dose to the bladder, the patient should be encouraged to void when the examination is completed and as often thereafter as possible. Adequate hydration should be encouraged to permit frequent voiding.

The contents of the Myoview vial are intended only for use in the preparation of technetium

Tc99m tetrofosmin injection and are NOT to be administered directly to the patient.

As with all injectable drug products, allergic reactions and anaphylaxis may occur.

Sometimes Tc99m labeled myocardial imaging agents may produce planar and SPECT images with different imaging information.

Technetium Tc99m tetrofosmin injection, like other radioactive drugs must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel Care should also be taken to minimize radiation exposure to the patient consistent with proper patient management.

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

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

Carcinogenesis, Mutagenesis, Impairment of Fertility

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

Pregnancy Category C

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

Nursing Mothers

Technetium Tc99m Pertechnetate can be excreted in human milk. Therefore, formula should be substituted for breast milk until the technetium has cleared from the body of the nursing woman.

Pediatric Use

Safety and effectiveness in pediatric patients have not been established.

ADVERSE REACTIONS

Adverse events were evaluated in clinical trials of 764 adults (511 men and 253 women) with a mean age of 58.7 years (range 26-94 years). The subjects received a mean dose of 7.67 mCi on the first injection and 22.4 mCi on the second injection of Myoview.

Deaths did not occur during the clinical study period of 2 days. Six cardiac deaths occurred 3 days to 6 months after injection and were thought to be related to the underlying disease or cardiac surgery. After Myoview injection, serious episodes of angina occurred in 3 patients. Overall cardiac adverse events occurred in 5/764 (less than 1 %) of patients after Myoview injection.

The following events were noted in less than 1 % of patients: Cardiovascular: angina, hypertension, Torsades de Pointes Gastrointestinal: vomiting, abdominal discomfort Hypersensitivity: cutaneous allergy, hypotension, dyspnea Special Senses: metallic taste, burning of the mouth, smelling something

There was a low incidence (less than 4%) of a transient and clinically insignificant rise in white blood cell counts following administration of the agent.

DOSAGE AND ADMINISTRATION

For exercise and rest imaging, Myoview is administered in two doses.

- The first dose of 5-8 mCi (185-296 MBq) is given at peak exercise.
- The second dose of 15-24 mCi (555-888 MBq) is given approximately 4 hours later, at rest.

Imaging may begin 15 minutes following administration of the agent.

Dose adjustment has not been established in renally or liver impaired, pediatric or geriatric patients.

RADIATION DOSIMETRY

Based on human data, the absorbed radiation doses to an average human adult (70 kg) from intravenous injections of the agent under exercise and resting conditions are listed in Table 1. The values are listed in descending order as rad/mCi and μ Gy/MBq and assume urinary bladder emptying at 3.5 hours.

Estimated Absorted Radiation Dose (Technetium Tc99m Tetrofosmin Injection)

	Absorbed radiation dose			
	Exe	Exercise		est
Target Organ	rad/mCi	µGy/MBq	rad/mCi	μ Gy/MB q
Gall bladder wall	0.123	33.2	0.180	48.6
Upper large intestine	0.075	20.1	0.113	30.4
Bladder wall	0.058	15.6	0.071	19.3
Lower large intestine	0.057	15.3	0.082	22.2
Small intestine	0.045	12.1	0.063	17.0
Kidney	0.039	10.4	0.046	12.5
Salivary glands	0.030	8.04	0.043	11.6
Ovaries	0.029	7.88	0.035	9.55
Uterus	0.027	7.34	0.031	8.36
Bone surface	0.023	6.23	0.021	5.58
Pancreas	0.019	5.00	0.018	4.98
Stomach	0.017	4.60	0.017	4.63
Thyroid	0.016	4.34	0.022	5.83
Adrenals	0.016	4.32	0.015	4.11
Heart wall	0.015	4.14	0.015	3.93
Red marrow	0.015	4.14	0.015	3.97
Spleen	0.015	4.12	0.014	3.82
Muscle	0.013	3.52	0.012	3.32
Testes	0.013	3.41	0.011	3.05
Liver	0.012	3.22	0.015	4.15
Thymus	0.012	3.11	0.009	2.54
Brain	0.010	2.72	0.008	2.15
Lungs	0.008	2.27	0.008	2.08
Skin	0.008	2.22	0.007	1.91
Breasts	0.008	2.22	0.007	1.83

Dose calculations were performed using the standard MIRD method (MIRD Pamphlet No.1 (rev). Society of Nuclear Medicine, 1976. Effective dose equivalents (EDE) were calculated in accordance with ICRP 53 (Ann. ICRP 18 (1-4), 1988) and gave values of 8.61 x 103 mSv/MBq and 1.12 x 102 mSv/MBq after exercise and rest respectively.

Manufactured by Amersham International plc – Amersham, United Kingdom Patent No. 5,045,302 (r)

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CELEBRATE NUCLEAR MEDICINE WEEK

October 6-12, 1996

Nuclear Medicine Week –

October 6 through 12, 1996. Celebrate

Nuclear Medicine Week by spotlighting your facility and demonstrating your enthusiasm, devotion and pride in your profession.

Nuclear Medicine Week also gives you the opportunity to educate potential patients, referring physicians and your community about the history, value and safety of nuclear medicine.

This year, the Nuclear Medicine Week posters, buttons and stickers celebrate 1996 as the 100th year since the discovery of radioactivity. Designed by the Technologist Section, the commemorative items help enhance the visibility of nuclear medicine and will add to your festivities.



Don't forget the annual PR Star Contest sponsored for the first time by Technology Imaging Services! Be a Public Relations star and win prizes for yourself and your institution. Look for details and entry forms in JNM and JNMT.

NUCLEAR MEDICINE

Nuc

NUCLEAR MEDICINE WEEK IS SPONSORED BY THE SOCIETY OF NUCLEAR MEDICINE AND THE TECHNOLOGIST SECTION.

CELEBRATE NUCLEAR MEDICINE WEEK

THE FOLLOWING MATERIALS ARE AVAILABLE FOR PROMOTING NUCLEAR MEDICINE WEEK.

POSTERS	BUTTONS	STICHERS	BALLOONS
\$5.00 each	\$1.00 each	\$.25 each	4 for \$1.00

Payment must be enclosed with your order. Payment must be made in U.S. dollars and drawn on U.S. banks. No foreign funds will be accepted.

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Promoting Confidence Through Understanding

The newly expanded SNM Patient Pamphlet Series is a necessity for every nuclear medicine facility. It is designed to help inform your patients about nuclear medicine and the specific procedure they will undergo.

General Information Pamphlet

The Benefits of Nuclear Medicine provides a general overview of nuclear medicine, information about various nuclear medicine procedures and answers the most commonly asked questions. This pamphlet is a must for every nuclear medicine facility. (.40 ¢ /copy) (Minimum order 50 copies)



The Benefits of

A Patient's Guide to Nuclear Medicine and Guidelines for Patients Receiving Radioiodine Treatment, the cornerstones of the series, are still available.

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CARDIAC NUCLEAR IMAGING STRESS-REST TEST

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To order individual pamphlets, contact Matthews Medical Books at: 800-633-2665, or outside the U.S. call 314-432-1401

Visit the SNM web site http://www.snm.org

For Spanish-speaking patients, *Guidelines for Patients Receiving Radioiodine Treatment* is available in Spanish. Look for other Spanish-language SNM Patient Pamphlet titles appearing in 1997.

To receive a complimentary sample of any SNM patient pamphlet, contact Stacey Silver at 703-708-9000 x223 or e-mail your request (and mailing address) to ssilver@snm.org

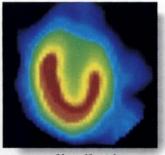
Maximal Vasodilation

for patients unable to exercise adequately

Imaging comparable to maximal exercise

- Interpretable images obtained in 98.7% of patients¹
- Maximal coronary hyperemia achieved in 2-3 minutes
- No supplemental exercise necessary





Redistribution

Rapid onset, short duration

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

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



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

!Fujisawa

 Cerquiera MD, Verani MS, Schwaiger M, et al. Safety profile of adenosine stress perfusion imaging: results from Adenoscan multicenter trial registry. J Am Coll Cardiol. 1994;23:384-389.

BRIEF SUMMARY

For Intravenous Infusion Only DESCRIPTION

ADENOSCAN® adenosine

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

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

Each Adenoscen 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:

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

 1. Second- or third-degree AV block (except in patients with a functioning artificial pecemaker).

 2. Sinus node disease, such as sick sinus syndrome or symptomatic bradycardia (except in patients with a functioning artificial pecemaker).

 3. Known or suspected bronchoconstrictive or bronchospisstic lung disease (e.g., asthma).

 4. Known hypersensitivity to adenosine.

Fatal Cardiac Arrest, Life Threatening Ventricular Arrhythmias, and Myocardial In:

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

samoutries and Attrioventricular Nodel Block
Adenosean (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 8.3% of patients develop AV block with Adenosean, including first-degree (2.9%), second-degree (2.9%) and third-degree (9.9%) heart block. All episodes of AV block have been asymptomatic, transient, and did not require intervention. Adenosean can cause sinus bradycardia. Adenosean should be used with caution in patients with pre-existing first-degree (9.9%) heart block or bundle branch block and should be avoided in patients with high-grade AV block or sinus node dystruction (except in patients with a functioning artificial pacemates). Adenosean should be discontinued in any patient who develops persistent or symptomatic high-grade AV block. Sinus pause has been rarely observed with adenosine influeions.

Hypotension
Adenosean (Netacosina)
**References (Netaco

reposersors.

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

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

Adenoscan (adenosine) is a respiratory stimulant (probably through activation of carotid body chemoreceptors) and intravenous administration in man has been shown to increase minute verifilation (bi) and reduce a ferrial PO2 causing respiratory alkalesis. Approximately 28% of publish

Intervention.

Adenoeine administered by inhelation 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. Adenoeses has been administered to a limited number of patients with asthman and mild to moderate exacerbation of their symptoms has been reported. Respiratory compromise has occurred during adenoese influsion in patients with obstructive pulmonary disease. Adenoese and be used with caution in patients with obstructive lung disease. Adenoese and with caution in patients with obstructive lung disease not associated with bronchoconstriction (e.g., emphysems, bronchitis, etc.) and should be avoided in patients with bronchoconstriction or bronchospsem (e.g., asthma). Adenoese a should be discontinued in any patient who develops severe respiratory difficulties.

PRECAUTIONS:

Drug Interactions

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

Carcinogenesis, Mutagenesis, Impairment of Fertility

Studies in animals have not been performent or evaluate the carcinogenic potential of Adenoscan (adenosine). Adenosine was negative for genotosic potential in the Salmonella (Arnes Teet) and Mammalian Microsome Assay.

Adenosine, however, like other nucleosides at millimoter concentrations present for several doubling times of cells in culture, is known to produce a variety of chromosomal alterations. In rats and mice, adenosine administered intraperitonesly once a day for five days at 50, 100, and 150 mg/kg 10-30 (rats) and 5-15 (mice) times human dosage on a mg/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 adenceine; nor have studies been performed in pregnant women. Because it is not known whether Adencecan can cause fetal harm when administered to pregnant women, Adencecan 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 196 were reported with intravenous Adenoscan among 1421 patients enrolled in controlled and unconfrolled U.S. clinical trials. Despite the short half-life of adenosers, 10.6% of the side effects occurred not with the influsion of Adenoscan but several hours after the influsion terminated. Also, 8.4% of the side effects that began coincident with the influsion persisted for up to 24 hours after the influsion was complete. In many cases, it is not possible to know whether these late adverse events are the result of Adenoscan influsion.

Flushing Chest discomfort	44% 40%	Gastrointestinal discomfort Lightheadedness/dizziness	13% 12%	Second-degree AV block Paresthesia	3% 2%
Dyspnea or urge to breathe deeply	28%	Upper extremity discomfort	496	Hypotension	2%
Headache	1896	ST segment depression	396	Nervoueness	296
Throat, neck or jaw discomfort	1596	First-degree AV block	3%	Anhythmias	196

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

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

Cardiovascular System: nonfatal myocardial infarction; life threatening ventroular arrhythmia; third-degree AV block; bradycardia; palpitation; sinus exit block; sinus puse; sweating: Twine changes, hypertension (system: 2000 mm Hg).

Central Nervous System: drowsiness; emotional instability; tremors. Central Nervous System: drowines; amenda fraction pause; sweeting; T-wave changes, hyp Central Nervous System: drowines; emotional ins Genital/Urtnary System: wagnal pressure; urgency. Respiratory System: output System:

ion; dry mouth; ear discomfort; metallic taste; nasal congestion; scotomas; tongue discomfort.

OVERDOSAGE:

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

DOSAGE AND ADMINISTRATION:

For intravenous infusion only.

For intravenous infusion only.

Adenoscan should be given as a continuous peripheral intravenous infusion.

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

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

Thalium-201 is physically compatible with Adenoscan and may be injected directly into the Adenoscan infusion and the six of the injection should be as close to the venous access as possible to prevent an inadventer increase in the dose of Adenoscan (the contents of the IV tubing) being administered. There are no data on the safety or efficacy of alternative Adenoscan infusion protocols.

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

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

CAUTION: Federal law prohibits dispensing without prescription.

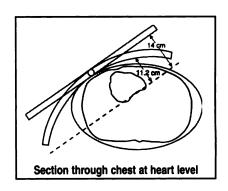
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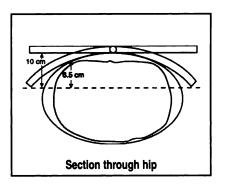
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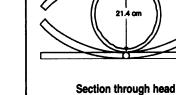




In gamma cameras, image quality depends upon spatial resolution. With flat detectors, spatial resolution is best along that part of the detector closest to the structure being imaged. Spatial resolution degrades as the distance to from the detector to the body increases.



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Note to Practitioners:

This product was introduced at the SNM-Denver Meeting and is now available for nuclear medicine imaging. Ask your gamma camera supplier to build your next camera with CurvePlate™ detectors.

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PowerPC Macintosh based Nuclear Medicine Computers

Replace your old out-dated Micro Delta, ADAC and GE computers

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Circle Reader Service No. 140

Milwaukee, WI

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SPECT and CLINICAL NUCLEAR MEDICINE CME Course Oct. 5-6, 1996 Saturday-Sunday June 7-8, 1997 Saturday-Sunday Medical College of Wisconsin

Course Overview:

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 LisaAnn Trembath, CNMT

Tuition:

The tuition fee of \$315.00 for physicians and \$95.00 for technologists includes the course syllabus, handouts, breaks, breakfasts and lunches.

For Information or to register:

Please call Arline Pluer at 414-259-2072.

The 1997 Scientific Program Committee, Scientific Exhibits Subcommittee and the Scientific & Teaching Sessions Committee solicit the submission of abstracts

CALL FOR
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PAPERS AND
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EXHIBITS

the Society of Nuclear Medicine A A th

Annual Meeting June 1- June 5, 1997 San Antonio, Texas

from members and nonmembers of the Society of Nuclear Medicine for the 44th Annual Meeting in San Antonio, TX. 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
- . 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.

The Scientific Paper and Exhibit abstract form can be obtained in the September and October 1996 JNM. You can also obtain an abstract form by writing to:

Society of Nuclear Medicine Att: Abstracts 1850 Samuel Morse Drive Reston, VA 20190 Tel: (703)708-9000 Fax: (703)708-9015 http://www.snm.org

DEADLINE FOR RECEIPT OF ABSTRACTS FOR SCIENTIFIC PAPERS IS THURSDAY, JANUARY 9, 1997.

DEADLINE FOR RECEIPT OF ABSTRACTS FOR SCIENTIFIC EXHIBITS IS THURSDAY, JANUARY 9, 1997.



One of the goals of the Society Of Nuclear Medicine Technologist Section (SNM-TS) has been to take an active role in educating the public and the medical community about nuclear medicine procedures and the benefits of this functional imaging modality.

This is the official entry form for the 1996 PR Stars contest sponsored by the SNM-TS and Technology Imaging Services. Please fill out the information requested on the reverse side of this form. Based on this information, a panel of judges will evaluate the entries and select the winner. All entrants must be staff members of a hospital or Nuclear Medicine facility. Entries must be postmarked no later than December 16, 1996.

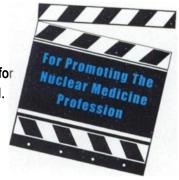
Prizes:

First Place: \$1,000 for your institution; \$350 for the entrant; up to \$1,000 for

airfare to the SNM 1997 Annual Meeting to accept your award.

Second Place: \$500 for your institution; \$250 for the entrant.

Third Place: \$250 for your institution; \$100 for the entrant.



Entry Form:

Your Name		
Hospital/Facility		
Address		
City		
Telephone/ Fax	•	

Mail or Fax by December 16, 1996 To:

Technology Imaging Services P.O. Box 3589
Youngstown, Ohio 44513

Fax: (330) 758-1617 Tel: (800) 409-2688

Attn: Jenny O'Kane, Vice President







Documentation of your activities is encouraged and may be mailed with your entry. (All original materials will be returned after judging has been completed.) You may also use additional pages as necessary.

	b. What was your primary objective or message?
-	c. Who was your target audience?
Wh	at available resources did you use? (budget, manpower, media, etc.)
	scribe your success in achieving your primary objective, hitting your target audience or successfully eveying your message. Include the most notable aspects and/or anecdotes.
Did	your celebration have any positive outcome(s)?



Thank you for your entry, and GOOD LUCK!

Patti Corrigan, C.N.M.T. Nuclear Medicine Week Chairperson



Position Available

BC-BE Nuclear Medicine Physician with PET Experience

Full-time employment in new outpatient nuclear diagnostic facility in Boca Raton, Florida. Opening in November 1996 the Center to house a dedicated Siemens 951R PET, whole-body Anger camera and Lunar DPX-L. Emphasis on oncologic, neurologic, orthopedic and clinical research applications in nuclear medicine. Send C.V. to: Metabolic Imaging of Boca, P.O. Box 11697, Fort Lauderdale, FL 33339-1697. Email: GMPR57A@prodigy.com.

Division Chief of Nuclear Medicine

Peoria Radiology Associates seeks a board certified radiologist with specialty board certification in nuclear medicine. Responsibilities will include Division Chief of the Nuclear Medicine section and occasional coverage of CT, MRI, Sono and General Radiology. The successful candidate will be joining a group of 20 radiologists with a thriving practice in a large tertiary care hospital and surrounded by community hospitals. Resident and medical student teaching will be expected. Send CV and date of availability to: Dr. G.T. Campbell, c/o Laura Lee, Peoria Radiology Associates, 530 N.E. Glen Oak Ave., Peoria, IL 61637.

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 1997 consisting of concurrent training in clinical imaging, physics, radiopharmacy and radio-immunoassay. 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 and computer systems, housed in laboratories for which new construction and renovation is nearly complete. A full spectrum of nuclear medicine and nuclear cardiology studies are performed. Research involves both clinical studies and basic sciences. Training programs include radiol-

ogy and nuclear medicine residencies and a nuclear cardiology fellowship. A letter of inquire should be sent to: Steven Parmett, MD, Roosevelt Hospital Site Director, Division of Nuclear Medicine, St. Luke's-Roosevelt Hospital, 1000 Tenth Amsterdam Ave., New York, NY 10019. SLRHC is an Equal Opportunity Employer.

Nuclear Medicine ABNM or ABR Special Competence Residency

The Division of Nuclear Medicine at Oregon Health Sciences University, which is affiliated with the imaging ervice at the Portland, Oregon Veterans Administration Hospital, invites applications for 2 openings beginning July 1997 in an approved one or two-year program leading to eligibility for ABNM and/or ABR Special Competence certification. The program involves both hospitals with a diversity of patients, procedures and research oppor-tunities and with a very well equipped and staffed physi-cal facilities. Interested physicians may contact: Jeffrey Stevens, MD, Division of Nuclear Medicine OP23, OHSU, 3181 SW Sam Jackson Park Road, Portland, OR 97201. OHSU is an equal opportunity, affirmative action institu-

Nuclear Medicine Residency
July 1997. Comprehensive imaging/RIA/therapy program in 4 hospitals (private, county, VA) with 2500 total beds. Mobil imaging for over 200 ICU beds. Large pediatric population. Strong cardiovascular emphasis. Stateof-the-art instrumentation including SPECT and computer processing. One year of ACGME-approved preparatory residency required prior to entry. Contact: Warren H. Moore, MD, Department of Radiology, Baylor Colle Medicine, One Baylor Plaza, Houston, TX 77030. Baylor College of Medicine is an EO/AA employer.

Pet Fellowship
Research fellowship in PET at the Northern California PET Imaging Center affiliated with the University of California at Davis, for one year starting 7/1/97. 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, presentation of results and teaching. Please send curriculum vitae to: Peter E. Valk, MD, Northern Cali-

fornia PET Imaging Center, 3195 Folsom Blvd., Sacramento, CA 98516.

Postdoctoral Research Fellowship (MD, PhD): Cancer Imaging (UCSF and LBNL)

Two year research training fellowship in diagnostic oncology imaging. Research training focuses on NMR imaging and spectroscopy, as well as emission tomography (PET and SPECT). Equipment includes state-of-the-art MRI, PET and other imaging devices and laboratory facilities at the UCSF Department of Radiology and at the Lawrence Berkeley National Laboratory Center for Functional Imaging. Trainees work under direct guidance of a faculty preceptor. Program funded by the National Cancer Institute (T32 CA 66527). Minorities and women are encouraged to apply. Send inquiries to: Randell A. Hawkins, MD, PhD, Department of Radiology, University of California, San Francisco, (UCSF), 505 Parnassus Ave., San Francisco, CA 94143-0252. Phone: (415) 476-1521. Email: randy hawkins@radmacl.ucsf.edu.

Position Wanted

Experienced, ABNM certified physician seeks FT iob. Dr. Garcia: 914-778-2601.

ABNM certified, young physician with expertise in all clinical aspects of nuclear medicine seeks a temporary or permanent, part-time or full-time employment in a Veterans administration hospital beginning immediately. Phone: (210) 616-5311.

ABNM and general surgery board certified physician seeks a full-time nuclear medicine position. Would consider a combination general surgery and nuclear medicine practice for the right opportunity. Willing to relo-cate. Experienced in all aspects of nuclear medicine including PET. Expertise in nuclear medicine departmental development. Excellent clinical rapport with referring physicians resulting in increased departmental productivity. Please reply to the Society of Nuclear Medicine, Box #1001, 1850 Samuel Morse Drive, Reston, VA 20190-5316.

A full-time career opportunity exists at the VA Medical Center, Dallas, Texas. This 644-bed hospital is affiliated with the UTHSC at Dallas. Incumbent will serve as chief technologist.

Qualifications: Must be certified in nuclear medicine by the NMTCB or the ARRT; at least four years of clinical nuclear medicine technology experience; demonstrate supervisory skills; applicants must be a US citizen and meet the physical requirements of the position. Subject to drug testing. Competitive salary commensurate with experience. Excellent benefits package. Send resume and salary history or contact Andrew Jackson, Human Resources Management Service, 4500 S. Lancaster Rd., Dallas, TX 75216, (214) 376-5451, ext. 5426.

The VA Medical Center is an equal opportunity employer and is a smoke free facility.

RADIOCHEMIST

The Division of Nuclear Medicine at The Mount Sinai Medical Center seeks a radiochemist with a Ph.D. in Radiochemistry or Radiopharmacy. The candidate should demon-

strate experience in heading and managing a radiochemistry laboratory, teaching, and collaborative and independent research abilities.

Applicants should send a curriculum vitae and references to: Josef Machac, M.D., Director, Nuclear Medicine, Box 1411,

The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574. The Mount Sinai Medical Center is an equal opportunity employer.

The Mount Sinai Medical Center

Society of Nuclear Medicine 1997 ANNUAL MEETING

GENERAL POLICIES:

PREVIOUSLY PUBLISHED OR PRESENTED MATERIALS

Materials that have been accepted or published as full papers prior to its submission to the SNM Annual Meeting should not be submitted as an abstract of a scientific paper. Abstracts appearing elsewhere in identical or similar form will be rejected.

PUBLICATION OF ACCEPTED ABSTRACTS

Abstracts accepted for presentation will be published in a special supplement of the May 1997 issue of *The Journal of Nuclear Medicine* and the accepted Technologist Section abstracts in the June 1997 issue of the *Journal of Nuclear Medicine Technology*.

CHANGES AFTER SUBMISSION

Abstracts are to be submitted in final format. NO changes can be made after receipt at the Central Office.

EDITING

On all accepted abstracts, the Scientific Program Committee reserves the right to edit those not submitted in the proper format for publication in the Journal and to recategorize submitted abstracts where appropriate.

1. Multiple contributions on a similar topic

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January 9, 1997.

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Society of Nuclear Medicine 1997 ANNUAL MEETING

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Materials that have been accepted or published as full papers prior to its submission to the SNM Annual Meeting should not be submitted as an abstract of a scientific paper. Abstracts appearing elsewhere in identical or similar form will be rejected.

PUBLICATION OF ACCEPTED ABSTRACTS

Abstracts accepted for presentation will be published in a special supplement of the May 1997 issue of *The Journal of Nuclear Medicine* and the accepted Technologist Section abstracts in the June 1997 issue of the *Journal of Nuclear Medicine Technology*.

CHANGES AFTER SUBMISSION

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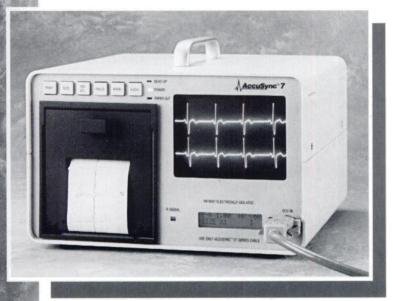


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