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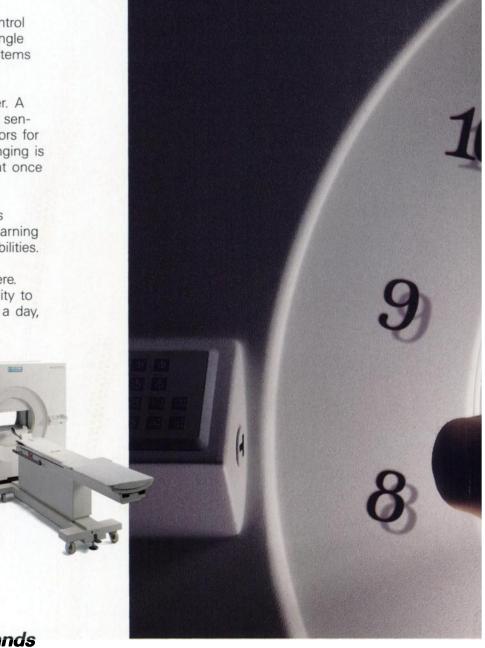
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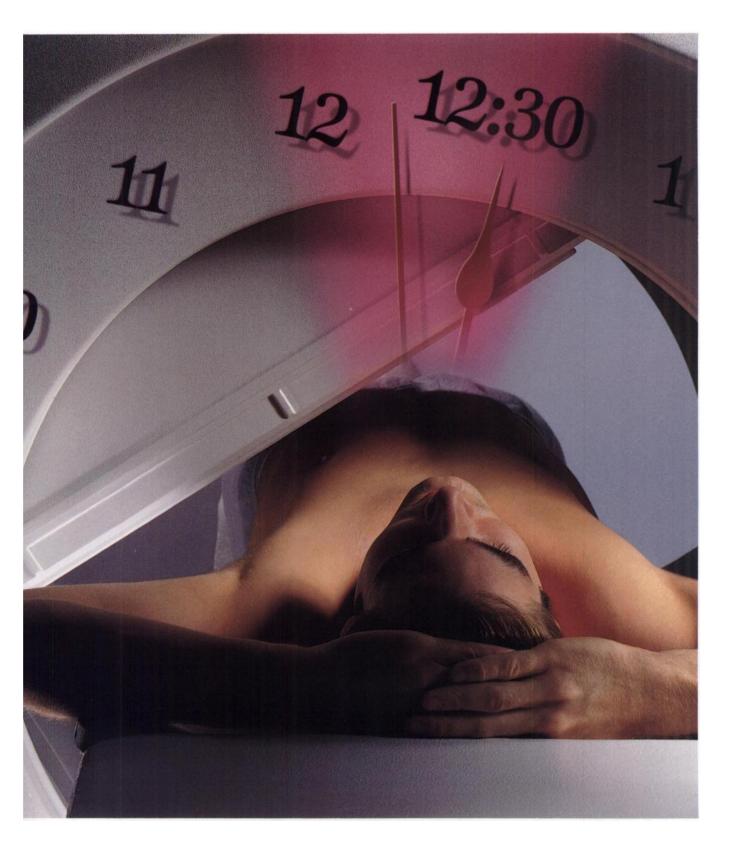
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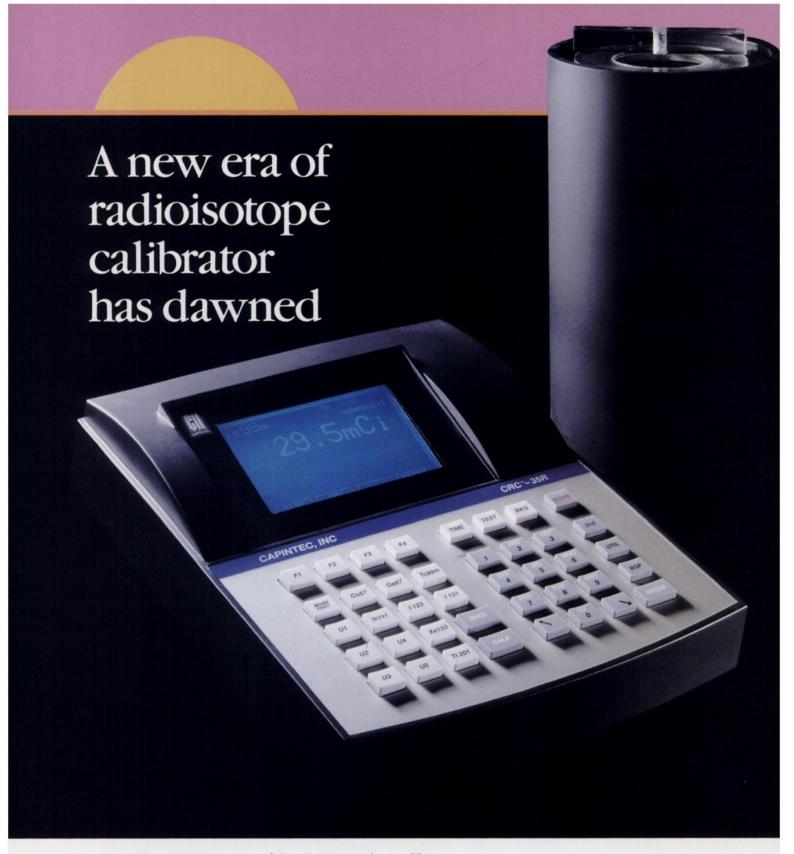
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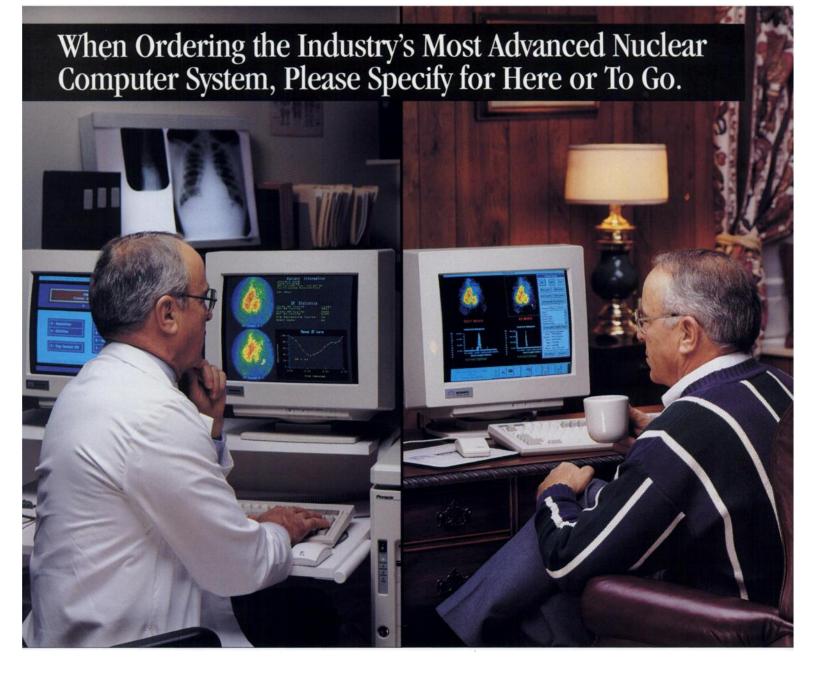
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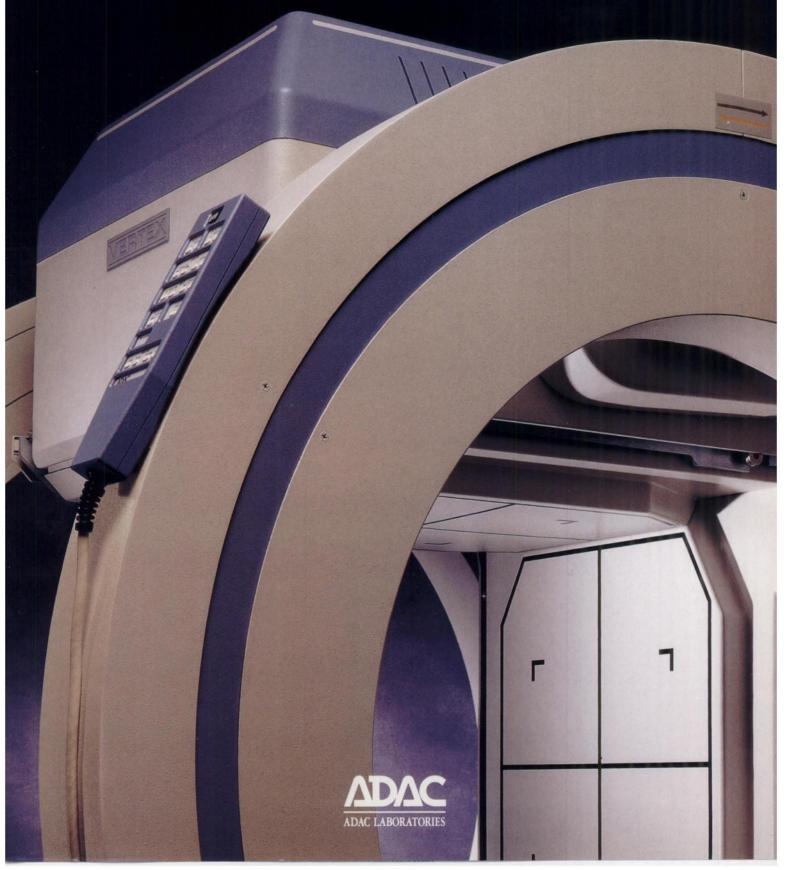
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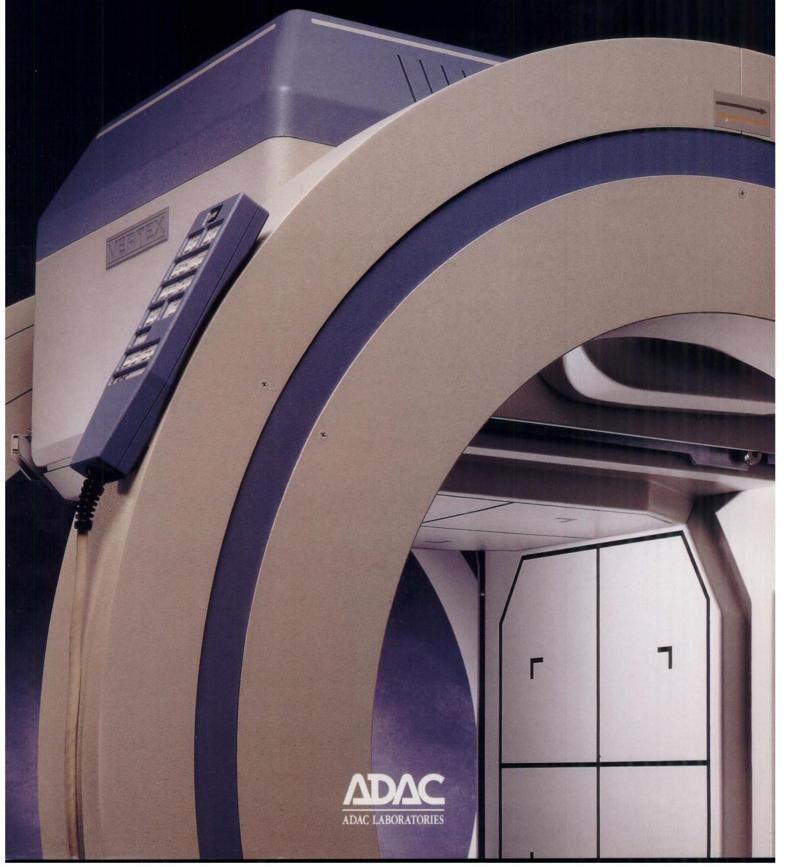
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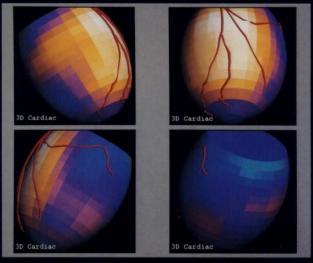




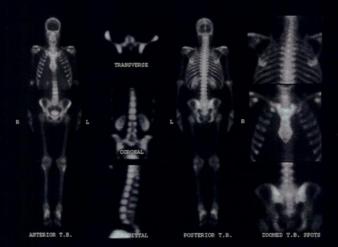




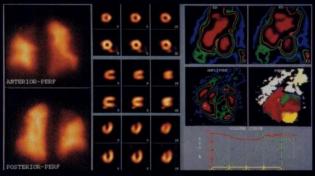
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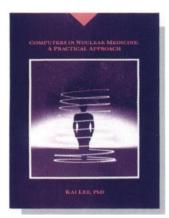


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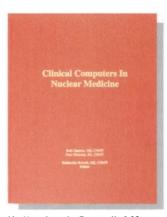


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This illustrated guide explains both how computers work and how processing techniques obtain diagnostic information from radionuclide images.

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- •Hardware components in nuclear medicine computer systems. Principles behind common image processing techniques.
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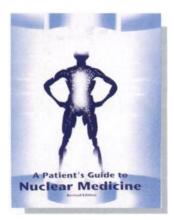


A companion text to Computers in Nuclear Medicine, this survey traces the evolution of nuclear medicine computer technology. Featured chapters describe how nuclear medicine study protocols have been radically altered through the use of computers; the revolutionary impact of computers on quality assurance; and the development of software and hardware for the gamma camera. An essential guide for staff operating computers in clinical settings.

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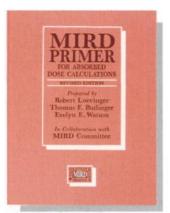
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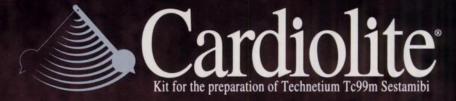
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Please see next page for brief summary of prescribing information.

GNOSTIC D A

DESCRIPTION: Each 5ml vial contains a sterile, non-pyrogenic, lyophilized mixture of: Tetrakis (2-methoxy isobutyl isonitrile) Copper (I) tetrafluoroborate - 1.0mg

Sodium Citrate Dihydrate - 2.6mg

L-Cysteine Hydrochloride Monohydrate - 1.0mg

Mannitol - 20mg

Stannous Chloride, Dihydrate, minimum (SnCl₂•2H₂O) - 0.025mg

Stannous Chloride, Dihydrate, (SnCl₂*2H₂O) - 0.075mg

Tin Chloride (Stannous and Stannic) Dihydrate, maximum (as SnCl₂*2H₂O) - 0.086mg

Prior to lyophilization the pH is 5.3-5.9. The contents of the vial are lyophilized and stored under nitro-

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

The precise structure of the technetium complex is Tc99mfMIBILe* where MIBI is 2-methoxy isobutyl isonitrile.

INDICATIONS AND USAGE: CARDIOLITE, Kit for the preparation of Technetium Tc99m ardial perfusion agent that is useful in the evaluation of ischemic heart dise CARDIOLITE, Kit for the preparation of Technetium Tc99m Sestamibi is useful in distinguishing normal from abnormal myocardium and in the localization of the abnormality, in patients with sus pected myocardial infarction, ischemic heart disease or coronary artery disease. Evaluation of schemic heart disease or coronary artery disease is accomplished using rest and stress tech-

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

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

In clinical trials, using a template consisting of the anterior wall, inferior-posterior wall and isolated apex, localization in the anterior or inferior-posterior wall in patients with suspected angina pectoris or coronary artery disease was shown. Disease localization isolated to the apex has not been established. Tc99m Sestamibi has not been studied or evaluated in other cardiac diseases.

It is usually not possible to differentiate recent from old myocardial infarction or to differentiate recent myocardial infarction from ischemia.

CONTRAINDICATIONS: None known.

WARNINGS: In studying patients in whom cardiac disease is known or suspected, care should be taken to assure continuous monitoring and treatment in accordance with safe, accepted clinical procedure. Infrequently, death has occurred 4 to 24 hours after Tc99m Sestamibi use and is usually associated with exercise stress testing (See Precautions).

PRECAUTIONS:

GENERAL

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

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

Contents of the kit 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 strict aseptic procedures during preparation.

Technetium Tc99m labeling reactions involved depend on maintaining the star mous 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:

Fatigue	35%
Dyspnea	17%
Chest Pain	16%
ST-depression	7%
Arrhythmia	196

Carcinogenesis, Mutagenesis, Impairment of Fertility

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

The active intermediate, [Cu(MIBI),]BF, 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 (≥ 20µg/ml), an increase in cells with chromosome aberrations as observed in the in vitro human lymphocyte assay. [Cu(MIBI),]BF, did not show genotoxic effects in the in vivo mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9mg/kg, > 600 × maximal human dose).

Pregnancy Category C

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

Nursing Mothers

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

Pediatric Use

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

ADVERSE REACTIONS: During clinical trials, approximately 8% of patients experienced a transient metallic or bitter taste immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing and non-itching rash have also been attributed to administration of the agent. Cases of angina, chest pain, and death have occurred (See WARNINGS and PRECAUTIONS).
The following adverse reactions have been rarely reported: signs and symptoms consistent with seizure occurring shortly after administration of the agent; transient arthritis in the wrist joint; and severe hypersensitivity, which was characterized by dyspnea, hypotension, bradycardia, asthenia and vomiting within two hours after a second injection of Technetium Tc99m Sestamibi.

DOSAGE AND ADMINISTRATION: The suggested dose range for I.V. administration in a single dose to be employed in the average patient (70kg) is: 370-1110MBq (10-30mCi)

The dose administered should be the lowest required to provide an adequate study consistent with ALARA principles (see also PRECAUTIONS).

When used in the diagnosis of myocardial infarction, imaging should be completed within four hours

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

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

RADIATION DOSIMETRY: The radiation doses to organs and tissues of an average patient (70kg) per 1110MBq (30mCi) of Technetium Tc99m Sestamibi injected intravenously are shown in Table 4.

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

	Estimated Radiation Absorbed Dose REST			
Organ				
	2.0 hour void		4.8 hour void	
	rads/ 30mCi	mGy/ 1110MBq	rads/ 30mCi	mGy/ 1110MBq
Breasts	0.2	2.0	0.2	1.9
Gallbladder Wall	2.0	20.0	2.0	20.0
Small Intestine	3.0	30.0	3.0	30.0
Upper Large Intestine Wall	5.4	55.5	5.4	55.5
Lower Large Intestine Wall	3.9	40.0	4.2	41.1
Stomach Wall	0.6	6.1	0.6	5.8
Heart Wall	0.5	5.1	0.5	4.9
Kidneys	2.0	20.0	2.0	20.0
Liver	0.6	5.8	0.6	5.7
Lungs	0.3	2.8	0.3	2.7
Bone Surfaces	0.7	6.8	0.7	6.4
Thyroid	0.7	7.0	0.7	6.8
Ovaries	1.5	15.5	1.6	15.5
Testes	0.3	3.4	0.4	3.9
Red Marrow	0.5	5.1	0.5	5.0
Urinary Bladder Wall	2.0	20.0	4.2	41.1
Total Body	0.5	4.8	0.5	4.8

	SIRESS			
Organ	2.0 hour void		4.8 hour void	
	rads/ 30mCi	mGy/ 1110MBq	rads/ 30mCi	mGy/ 1110MBq
Breasts	0.2	2.0	0.2	1.8
Gallbladder Wall	2.8	28.9	2.8	27.8
Small Intestine	2.4	24.4	2.4	24.4
Upper Large Intestine Wall	4.5	44.4	4.5	44.4
Lower Large Intestine Wall	3.3	32.2	3.3	32.2
Stomach Wall	0.5	5.3	0.5	5.2
Heart Wall	0.5	5.6	0.5	5.3
Kidneys	1.7	16.7	1.7	16.7
Liver	0.4	4.2	0.4	4.1
Lungs	0.3	2.6	0.2	2.4
Bone Surfaces	0.6	6.2	0.6	6.0
Thyroid	0.3	2.7	0.2	2.4
Ovaries	1.2	12.2	1.3	13.3
Testes	0.3	3.1	0.3	3.4
Red Marrow	0.5	4.6	0.5	4.4

diopharmaceutical Internal Dose Information Center, July 1990, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831, (615) 576-3449

4.2

0.4

30.0

Urinary Bladder Wall

Total Body

HOW SUPPLIED: Du Pont Radiopharmaceutical's CARDIOLITE®, Kit for the Preparation of Technetium Tc99m Sestamibi, is supplied as a 5ml vial in kits of two (2), five (5) and thirty (30) vials, sterile and non-pyrogenic.

Prior to lyophilization the pH is between 5.3-5.9. The contents of the vials are lyophilized and stored under nitrogen. Store at 15-25°C before and after reconstitution. Technetium Tc99m Sestamibi contains no preservatives. Included in each two (2) vial kit are one (1) package insert, six (6) vial shield labels and six (6) radiation warning labels. Included in each five (5) vial kit are one (1) package insert, six (6) vial shield labels and six (6) radiation warning labels. Included in each thirty (30) vial kit are one (1) package insert, thirty (30) vial shield labels and thirty (30) radiation warning labels.

The U.S. Nuclear Regulatory Commission has approved this reagent kit for distribution to persons licensed to use byproduct material pursuant to section 35.11 and section 35.200 of Title 10 CFR Part 35, to persons who hold an equivalent license issued by an Agreement State, and, outside the United States, to persons authorized by the appropriate authority.

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Our I-125 has been tested and approved for release by our Quality Control group and complies with the following specifications:			
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SPECIFIC ACTIVITY:	No carrier added (> 17 Ci/mg lodine)		
IODATES:	≤ 2%		
RADIONUCLIDIC PURITY:	≥ 99.9% I-125 ≤ 0.0005% I-126 ≤ 0.0001% Cs-137 ≤ 0.0001% Cs-134 No other gammas detected		
CHROMATOGRAPHY:	Radiochemical Purity is more than 99%		
RADIONUCLIDIC IDENTIFICATION:	The gamma ray spectrum compares with that of a I-125 calibrated NIST reference standard source		

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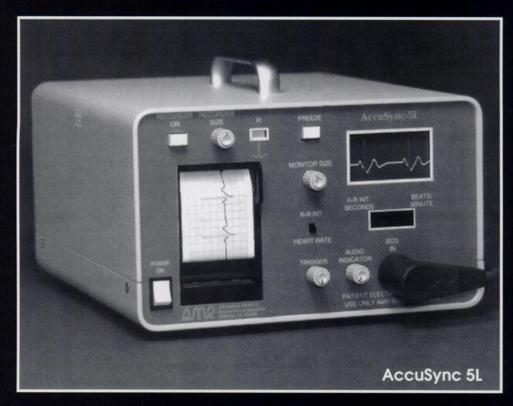
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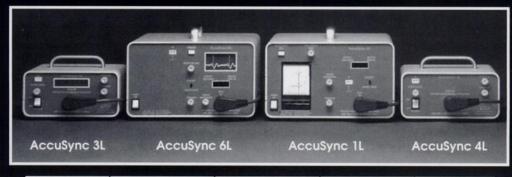
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Model	Strip Chart	CRT Monitor	HR/R-R Int	Trigger
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6L		•	•	•
1L	•		•	•
3L			•	•
4L				•

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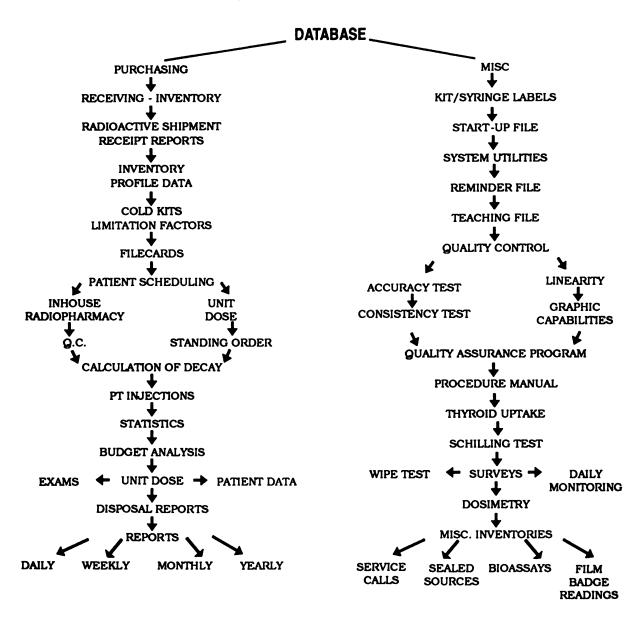
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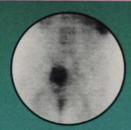
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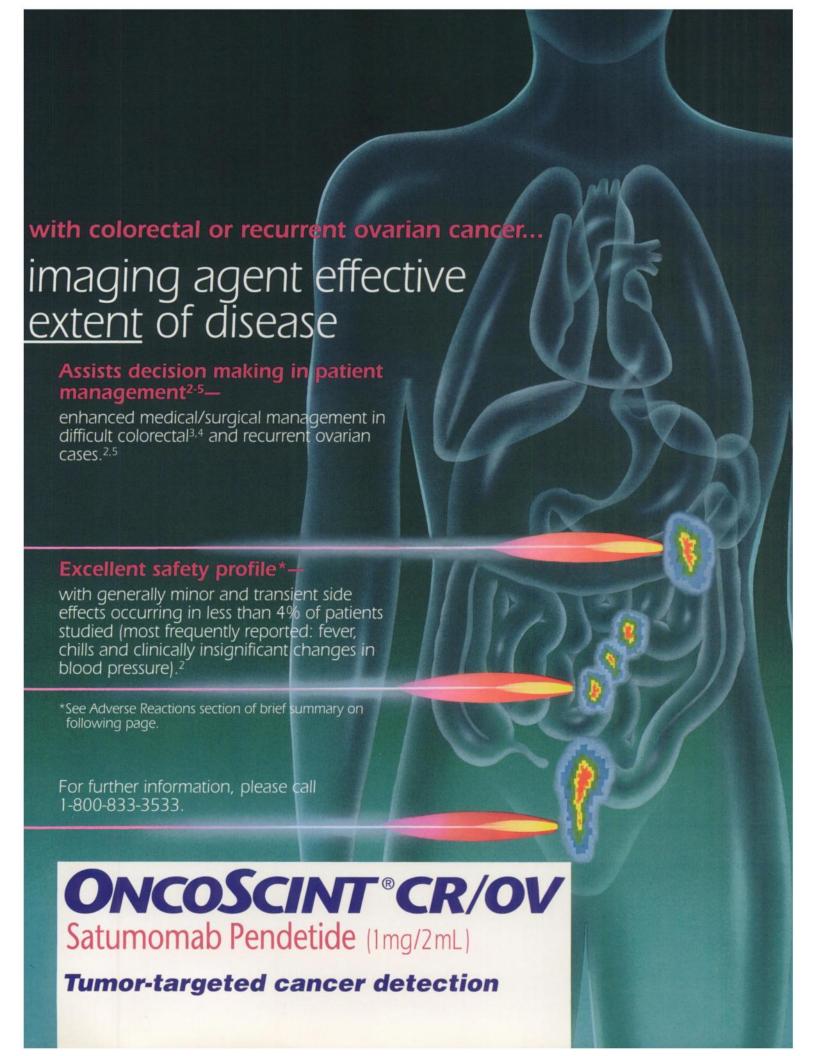
 determining extrahepatic abdominal and pelvic involvement in patients thought to have isolated and resectable recurrence^{2,4}



differentiating disease from postsurgical or postradiation anatomic changes⁴

OncoScint is a registered trademark of CYTOGEN Corporation.

Please see last page for brief summary of prescribing information.



OncoScint® CR/OV Kit (satumomab pendetide)

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

Brief summary of prescribing information

INDICATIONS AND USAGE

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

OncoScint® CR/OV-In is not indicated as a screening test for ovarian or colorectal

Administration of OncoScint® CR/OV-In may result in falsely elevated values from in vitro immunoassays, including tests for carcinoembryonic antigen (CEA) and CA 125. Because this interference may persist for months, the clinical laboratory should investigate for assay interference in patients who develop elevated CEA or CA 125 subsequent to imaging with OncoScint® CR/OV-In (see *Drug/Laboratory Test Interactions*). Due to insufficient safety and efficacy data regarding repeat administration of this product, this imaging agent is limited to single use only.

CONTRAINDICATIONS

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

WARNINGS

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

PRECAUTIONS

General The components of the kit are sterile and pyrogen free and contain no preservative. OncoScint® CR/OV-In (indium In 111 satumomab pendetide) should be used within 8 hours after radiolabeling. It is essential to follow the directions for preparation carefully and to adhere to strict aseptic procedures during preparation of the radiolabeled product.

Each OncoScint® CR/OV kit is a unit of use package. The contents of the kit are to be used only to prepare OncoScint® CR/OV-In; un-

only to prepare Uncoscint® CR/OV-in; unlabeled Oncoscint® CR/OV-in; unlabeled Oncoscint® CR/OV should NOT be administered directly to the patient. After radiolabeling with indium-111, the entire Oncoscint® CR/OV-in dose must be administered to the patient for whom it was prescribed. Reducing the dose of either component may adversely impact imaging results, and, therefore, is not recommended. The contents of the kit are not radioactive. However, after the indium in 111 chloride is added, appropriate shielding of Oncoscint® CR/OV-in must be maintained. Care should be taken to maintain radiation exposure to notificate and medical personnel consistent.

be taken to minimize radiation exposure to patients and medical personnel, consistent with proper hospital and patient management procedures

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

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

Heterologous Protein Administration Murine monoclonal antibodies (MAbs) are heterologous proteins, and their administration can induce human anti-murine anti-bodies (HAMA).

OncoScint® CR/OV-In has been shown to induce HAMA to murine IgG after single administration in about 40% of patients in tumor imaging trials. HAMA levels became negative (undetectable or < 400 ng/mL) in approximately half of such patients at 4 to 12 months after infusion.

While limited data exist concerning the clinical significance of HAMA, detectable HAMA levels can after the clearance and tissue biodistribution of MAbs. In patients who develop persistently elevated serum HAMA levels, the efficacy of diagnostic or therapeutic murine antibody-based agents may be compromised

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

Preliminary data are available from repeat-administration studies of OncoScint® CR/OV-In in 69 patients who have received 105 repeat doses. However, there are insufficient data to determine the safety and efficacy of this product after repeat administration (see ADVERSE REACTIONS)

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

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

Pregnancy Category C Animal reproduction studies have not been conducted with OncoScint® CR/OV-In. It is also not known whether OncoScint® CR/OV-In can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity.

OncoScint® CR/OV-In should not be administered to a pregnant woman unless, in the opinion of the physician, the information to be gained outweighs the potential risks. MAb B72.3 has been shown to react with fetal gastrointestinal tissues.

In general, examinations using radiopharmaceuticals in women of childbearing potential should be performed during the first few days (approximately 10) following the onset of mense

Nursing Mothers and/or Lactating Women It is not known whether OncoScint® CR/OV-In is excreted in human milk and, if so, for how long. Because many drugs are excreted in human milk, caution should be exercised when OncoScint® CR/OV-In is administered to a nursing woman. OncoScint® CR/OV-In has not been administered to lactating females and therefore should not be administered to nursing mothers unless, in the opinion of the physician, the information to be gained outweighs the potential risk. In such cases, formula feedings should be substituted for breast feedings. **Pediatric Use** The safety and effectiveness of OncoScint® CR/OV-In in children have not

Now, to assist decision making in the management of patients with colorectal or recurrent ovarian cancer...

OncoScint°cr/ov

Satumomab Pendetide (Img/2mL)

Effective in determining both the location and extent of disease

Please refer to complete prescribing information before using OncoScint CR/OV.

ADVERSE REACTIONS

After administration of over 500 single i.v. doses of OncoScint® CR/OV-In (indium In 111 satumomab pendetide) in clinical trials, adverse reactions were observed in less than 4% of patients. No deaths attributable to OncoScint® CR/OV-In administration were reported. The most common adverse reaction was fever, which occurred in less than 2% of patients. Other adverse reactions, each of which occurred in less than 1% of patients, are listed in order of decreasing frequency: chills, hypotension, hypertension, rash, pruritus, sweating, nausea, arthralgia, asthenia, chest pain, headache, hypothermia, pain, flushing, diarrhea, confusion, dizziness, nervousness, crying, and angioedema. Although causality was not determined, an isolated occurrence of reversible thrombocytopenia was observed in a patient who received OncoScint® CR/OV-In in clinical trials

Additional adverse reactions after 105 repeat administrations of OncoScint® CR/OV-In in 69 patients included two reports of fever, one complaint of abdominal pain, and two cases of non-serious, readily reversible reactions characterized primarily by flank pain.

OVERDOSAGE

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

DOSAGE AND ADMINISTRATION

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

HOW SUPPLIED

The OncoScint® CR/OV kit (NDC No. 0044-0579-01) for the preparation of indium-111 labeled OncoScint® CR/OV includes one vial containing 1 mg of saturnomab pendetide per 2 mL of sodium phosphate buffered saline and one 2 mL vial of sodium acetate buffer solution, 0.5 *M*. These solutions are sterile and pyrogen free and contain no preservative. Each kit also includes one sterile 0.22 µm Millex® GV filter, prescribing information, and two identification labels.

U.S. Patent Nos. 4,671,958 and 4,741,900

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Revised 12/30/92

References 1. Nabi HA, Doerr RJ. Radiolabeled monoclonal antibody imaging (immunoscintigraphy) of colorectal cancers: current status and future perspectives. Am J Surg. 1992;163:448-456. 2. Data on file. Cytogen Corporation, Princeton, NJ. 3. Doerr RJ, Abdel-Nabi H, Krag D, et al. Radiolabeled antibody imaging in the management of colorectal cancer: results of a multicenter clinical study. Ann Surg. 1991;118-124. 4. Collier BD, Abdel-Nabi H, Doerr RJ, et al. Immunoscintigraphy with "IIn-CYT-103 in the management of colorectal carcinoma: a comparison with computed tomography. Radiology. 1992;185:179-186. 5. Surwit EA, Childers JM, Krag DN, et al. Clinical assessment of "In-CYT-103 immunoscintigraphy in ovarian cancer. Gynecol Oncol. 1993; 48:285-292.

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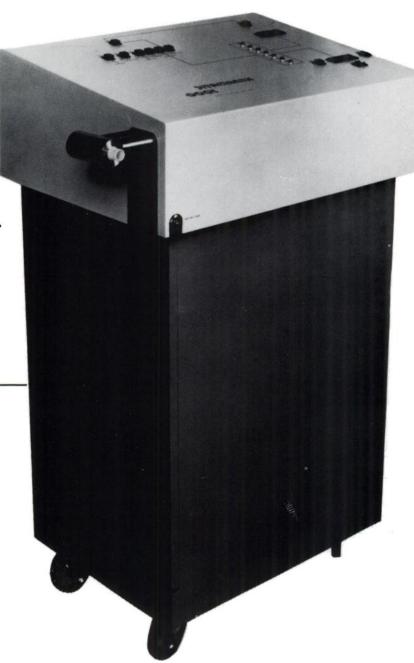
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BENEDICT CASSEN PRIZE



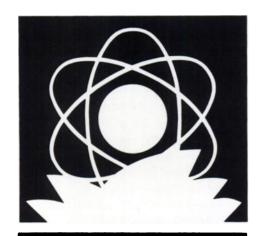
The Education and Research Foundation of The Society of Nuclear Medicine announces the Benedict Cassen Prize. Donated by the estate of Mary Wylie Cassen, the Prize honors Benedict Cassen, whose invention of the rectilinear radioisotope scanner—the first instrument capable of making an image of a body organ in a patient—was seminal to the development of clinical nuclear medicine.

The Prize is intended to recognize a significant achievement in nuclear medicine science and is to be awarded to the living scientist, or physician-scientist, whose work has led to a major advance in basic or clinical nuclear medicine science. The amount of the prize is \$25,000 if a single individual is selected, but may be increased in exceptional circumstances if the Prize is shared by more than one individual. The Prize will be awarded at an annual meeting of the Society of Nuclear Medicine, during which the recipient may present a featured lecture. A panel of distinguished national and international scientists and/or physician-scientists will assist in selecting the individual to be honored.

It is anticipated that the first Cassen Prize will be awarded at the annual meeting of the Society of Nuclear Medicine in 1994.

Further information concerning the Benedict Cassen Prize and nomination materials can be obtained from The Society of Nuclear Medicine, 136 Madison Avenue, New York, NY 10016-6760.

Nominations for the Prize must be postmarked no later than November 1, 1993.



6th WORLD CONGRESS OF THE WORLD FEDERATION OF NUCLEAR MEDICINE & BIOLOGY

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Get A Head Start

Celebrate Nuclear Medicine Week October 3-9, 1993

Nuclear Medicine Week—October 3 through 9—is the prime

time to demonstrate pride in your profession — and to make the profession's presence known both among the public and other health care professionals.

Under the sponsorship of the Society of Nuclear Medicine

and SNM's Technologist Section, Nuclear Medicine Week offers an excellent opportunity to educate, to stimulate, and to promote the successes of nuclear medicine. This week also gives you a specific time to spotlight your facility to referring physicians, potential patients, and to anyone else in your community who could benefit from nuclear medicine.

To help enhance the visibility of nuclear medicine facilities,

Mallinckrodt Medical, in association with the Technologist Section, has designed a striking new poster to mark this year's event. Buttons, stickers, and guidelines are also available to assist you with your celebration. We guarantee that this year's sensational design — carried over on all three items — will draw attention and spur positive comment.

What's more, you'll use the poster, buttons, and sticker as you increase public and professional awareness and add to nuclear medicine's public image.

But don't wait till October...Purchase <u>your</u> posters, buttons, and stickers at the Nuclear Medicine Week booth, located in the reception area of the Toronto Convention Centre.

Additional information on prices and on ordering

Nuclear Medicine Week items can be obtained by contacting the Society of Nuclear Medicine at (212)-889-0717.

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

Patient Arm Support System



R-Made, Inc. introduces the patient arm support system. This system is designed to comfortably support a patient's arms during cardiac SPECT and other diagnostic imaging procedures. The arm support system is a new solution to motion artifact caused by the discomfort and pain of prolonged upper extremity hyperextension and abduction. The support system conforms to the patient's anatomy, suits the requirements of all major original equipment manufacturers and is the result of clinical testing over several years.

Laser Imager System

The Model 969 HO Laser Imager System has been introduced by 3M Medical Imaging Systems Division. This new imager is the first black and white diagnostic imager that uses new 3M Instant Daylight Load Film Cartridges which eliminates the need for darkroom operations. The 969 HO is also the first imager to feature the new builtin Image Quality Control System to produce consistent, high-quality diagnostic images directly from the electronic data produced by medical imaging systems such as computed tomography scanners. The imager uses an infrared laser to image the film, then transports it to a connected processor unit for instant processing. The processor densitometer analyzes the film and sends a signal to the laser imager which then monitors the density to produce sharp images every time. The 969 HQ also enhances productivity with high throughput and connections for eight different modalities in any digital or analog configuration. A fiber optic cable enables the imager to conEach feature has been engineered to best address patient need and to fit most imaging and treatment table designs without modification. It also increases technician efficiency and reduces the number of repeated studies related to motion artifact, thus keeping medical costs down for the patient. The support system is fast and easy to use and is mounted and removed in one piece and is tightly secured by adjustable mounting straps. R-Made, Inc., 6689 Orchard Lake Rd., West Bloomfield, MI 48322. 1-800-258-5386.

nect to any modality up to one kilometer away. In addition, the new laser imager is designed to interface with PACS and other evolving technologies. 3M Medical Imaging Systems Division, 3M Center Bldg., 223-2S-03, St. Paul, MN 55144-1000.

Noise Reduction Pad

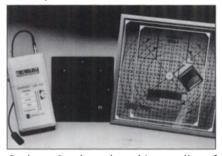
A new noise reduction pad is now available from Martinson-Nicholls Inc. The new Marmed noise reduction pad is a version of 3M's heavy duty vinyl-backed Nomad that inhibits noise and vibration. It replaces conventional foam pads and gauze sponges that are typically used under centrifuges or other laboratory instruments. The pad is extremely resilient and will not lose its shape or deteriorate when heavy duty equipment is placed on it. Marmed features a coated vinyl loop construction that absorbs sound and vibration. It is resistant to fungus, mildew, acids and organic solvents and will withstand bleach and other chemical bases such as sodium hydroxide and ammonia. Since the Marmed is water resistent, it is

easy to clean and it dries quickly. It can be easily disinfected should it come in contact with blood or other hazardous material. Martinson-Nicholls, Inc., 7863 Enterprise Dr., P.O. Box 296, Mentor, OH 44061-0296. (216) 951-1312.

Rectangular Field of View Camera

ADAC Laboratories introduces the new ARGUS™ rectangular field of view camera. The ARGUS™ is ideal for departments performing a large spectrum of patient exams including total body, planar, SPECT and cardiac procedures. Among the features on the ARGUS are: extended arm reach for greater access to the patient and ease of patient positioning; predefined imaging protocols eliminate repeat studies for improved patient flow; robotically controlled imaging positions enable consistent and reproducible imaging; rectangular 20" × 15" detectors for whole-body and large volume scans; compact gantry design reduces room size requirements; and easy to learn and simple to use imaging protocols. The direct drive detector allows optimal collimation, thereby providing high resolution and sensitivity. The detector is also designed to minimize the distance between the edge of the detector and the field of view for optimum brain SPECT imaging. ADAC Laboratories, 540 Adler Drive, Milpitas, CA 95035.

X-Ray Dosimeters



Capintec, Inc. has released its new line of instrumentation for x-ray testing and quality assurance. The Diarad QA-100 and Diarad OA-200 are microprocessor based, handheld dosimeters that utilize an external diode as a detector. The QA-100 measures and displays exposure, exposure rate and time in one small, easy to use unit. The QA-200 has expanded capabilities, including pulse and automatic measurement modes. Both units can be combined with additional accessories. The QA-100 and QA-200 can be configured with a number of detectors for a variety of applications. Custom kits for field service and consulting applications are also available. Capintec, Inc., 6 Arrow Rd., Ramsey, NJ 07446. (201) 825-9500.

New Products 37A

SPECT BRAIN IMAGING CLINICAL FELLOWSHIP MEDICAL

Department of Radiology Section of Nuclear Medicine



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This program is designed for nuclear medicine physicians. radiologists, technologists and referring physicians. It is intended to educate participants about the clinical utility of SPECT brain imaging with agents such as SPECTamine® and Ceretec®. Objectives include:

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- Appreciation of clinical applications of SPECT brain
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- Appreciation of factors that influence image quality.
- Knowledge of quality control techniques for SPECT.

SPONSORSHIP:

This program is sponsored by the Medical College of Wisconsin.

The tuition fee of \$650 includes the course syllabus, handouts. breaks, breakfasts, lunches, and other amenities involved in making this a pleasant learning experience. Maximum enrollments have been established. Cancellations prior to the course will be refunded, less a \$30 administrative fee.

The Medical College of Wisconsin is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

Accordingly, the Medical College of Wisconsin designates this continuing medical education activity as meeting the criteria for 13.00 hours in Category I toward the Physician's Recognition Award of the American Medical Association.

Nuclear Medicine Technologists who attend the SPECT Brain Imaging Clinical Fellowship are eligible for 1.0 VOICE credit.

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BENEDICT CASSEN POSTDOCTORAL FELLOWSHIP

The Education and Research Foundation of SNM has also established the Benedict Cassen Postdoctoral Fellowship award. The fellowship will be award to recent doctoral degree (Ph.D. or Ph.D. plus M.D.) recipients demonstrating an excellent academic record and exceptional research ability. Its purpose is to broaden recipients' basic exposure to nuclear medicine research at an institution different from that conferring the doctoral degree. The award, amounting to \$25,000 per year, is for two years, contingent upon satisfactory performance the first year.

Applicants may obtain the Cassen Postdoctoral Fellowship proposal format guidelines and selection criteria from SNM at the address below. The deadline for receipt of complete application packages is November 15, 1993. It is anticipated that the first Cassen Fellowships will be awarded in the spring or early summer of 1994.

For further information, contact Christine Santos, Society of Nuclear Medicine, 136 Madison Ave., NY, NY 10016-6760. Please specify "Benedict Cassen Prize" or "Benedict Cassen Postdoctoral Fellowship."

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Radiologist

NUCLEAR RADIOLOGIST at the University of Rochester Medical Center, Strong Memorial Hospital, a 750-bed tertiary care facility. Position is in the division of Nuclear Medicine, a division of the Department of Radiology. Individual must have successfully completed training for ABR certification with Special Competence in Nuclear Radiology or American Board of Nuclear Medicine. Research and teaching is a necessity in a strong academic division with full state-of-the-art nuclear equipment including SPECT and computerized work. Academic rank open depending on qualifications. Send letters of inquiry to: Robert E. O'Mara, MD, Chief, Division of Nuclear Medicine, Box 620, University of Rochester Medical Center, 601 Elmwood Avenue, Rochester, NY 14642. EO/AA/M-F employer.

Nuclear Pharmacist

A progressive, growing distributor of radiopharmaceuticals, offers an excellent career opportunity for a Nuclear Pharmacist in the Southeast and Midwest regions. Diverse duties include dispensing unit dose radiopharmaceuticals, procuring and maintaining pharmaceutical supplies, inventory management, quality control, and radiation safety and hazardous waste procedures in keeping with State and Federal regulations. Will also supervise pharmacy support personnel, and manage all other operations to ensure a safe and efficient nuclear pharmacy. B.S. degree in Pharmacy. Must

have training and education to be authorized by the NRC as an authorized user. Nuclear Pharmacy, I.V. and computer experience desired. Candidates must be strongly self-motivated, innovative, and able to work independently. Salary and benefits are superior. Relocation assistance available. Send your resumé and salary history to Box 702, The Society of Nuclear Medicine, 136 Madison Ave., New York, NY 10016. EOE MF/H/V

Cyclotron Operator

The Henry M. Jackson Foundation for the Advancement of Military Medicine, a non-profit research and education foundation, is seeking applications for a Cyclotron Operator. The incumbent will work on a project located in the PET/Radiochemistry Department, Warren G. Magnuson Clinical Center, National Institutes of Health. Applicants should have a minimum of 3-5 years experience operating model CS-30 or JSW-1710 cyclotrons or similar equipment in a radiopharmaceutical production capacity. Strong electronics, electrical, plumbing, and mechanical fabrication skills are desirable. Background and experience in computer programming and control interface development is also desirable. Salary will be commensurate with experience. The Foundation offers an excellent benefits package. Interested applicants should send a resumé and cover letter to the Henry M. Jackson Foundation for the Advancement of Military Medicine, 1401 Rockville Pike, Suite 600, Rockville, MD 20852 (Attn: Cyclotron Operator/JNM). EOE

Physician

NÜCLEAR MEDICINE PHYSICIAN: Position available for a well trained, board certified Nuclear Medicine physician with internal medicine or pathology background to join established practice of multi-specialty group. Fully equipped, state-of-the-art nuclear laboratory. Contact: B. Kashlan, MD, P.O. Box 1468, Terre Haute, IN 47808. Phone: (812) 232-9557.

NUCLEAR MEDICINE PHYSICIAN. Position available for ABNM board certified or board eligible nuclear medicine physician beginning July, 1994. This is a full-time position in a hospital based private practice with university affiliation. Clinical responsibilities include scan interpretation in a busy general nuclear medicine practice which includes both adult and pediatric patients as well as teaching responsibilities to both radiology and nuclear medicine residents. Send CV to Ronald J. Rosenberg, MD, 85 Seymour Street, Suite 404, Hartford, CT 06106.

Positions Wanted

ABNM-certified physician, seeks relocation. Extensive academic and private practice experience in all aspects of Nuclear Medicine including cardiac imaging, tumor imaging, SPECT techniques, and R.I.A. Reply to: Box 701, The Society of Nuclear Medicine, 136 Madison Ave., New York, NY 10016.

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CHIEF of Nuclear Medicine

The University of California, Davis, School of Medicine has a full-time faculty position available in the Nuclear Medicine Division of the Department of Radiology. Appointment will be at the Associate/Full Professor level (In-Residence or Professor of Clinical Radiology Series). Candidates must be Board certified in Nuclear Medicine, eligible for licensure in California, and have an academic background in Nuclear Medicine. Preference will be given to candidates who are board certified in both Nuclear Medicine and Diagnostic Radiology. This position will be Open Until Filled, but not later than December 31, 1993. Please forward a curriculum vitae, a letter outlining background and interests in teaching/research and the names of five references to: Richard W. Katzberg, MD, Chairman, Department of Radiology, 2525 Stockton Boulevard, Room 2003, Sacramento, California 95817. The University of California is an Equal Opportunity/Affirmative Action Employer and encourages applications from members of minority groups and women.

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Memorial Sloan-Kettering Cancer Center, an internationally renowned institution in cancer treatment and research located in New York City, is seeking a trained radiopharmacist to provide expanded nuclear pharmacy services within the Radiopharmaceutical Chemistry Service.

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Interested candidates should send a complete curriculum vitae which includes research and teaching experience, salary history, and at least three names of references to: Margaret Tedeschi, Employment Dept. #580, Memorial Sloan-Kettering Cancer Center, 1275 York Ave., NYC 10021. Equal opportunity employer, m/f/d/v.



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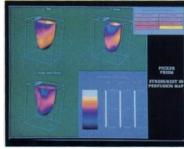
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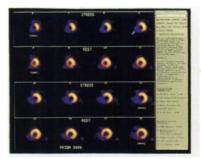
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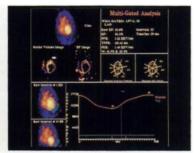
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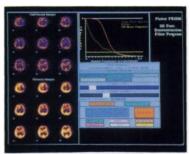
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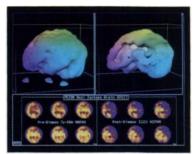
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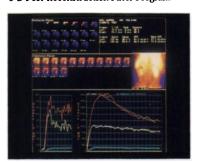
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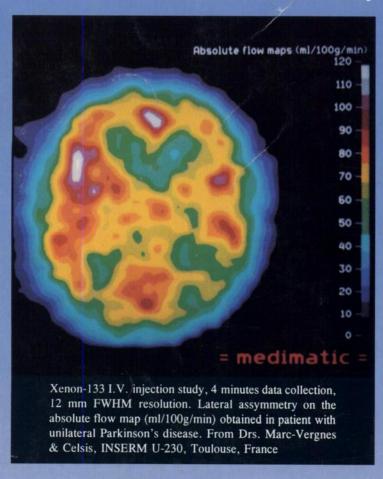
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