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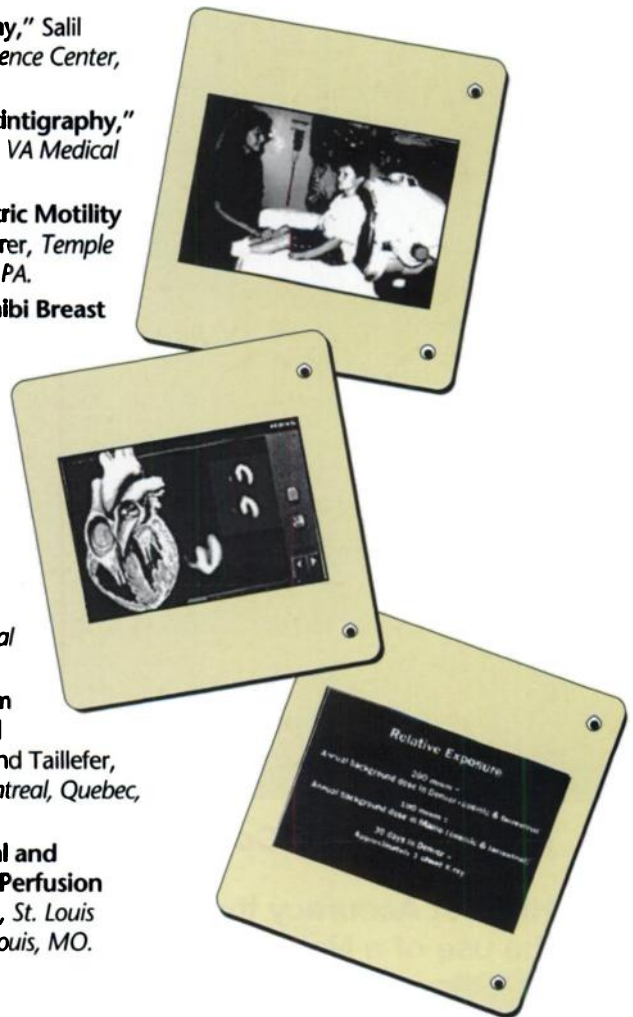
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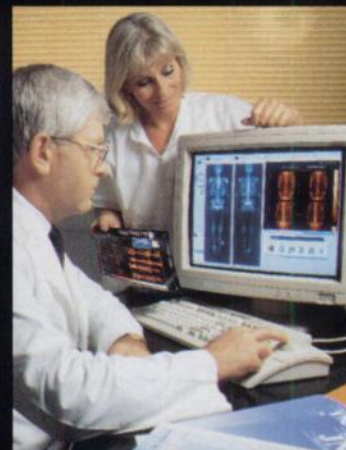
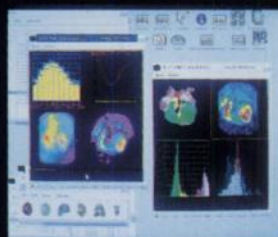
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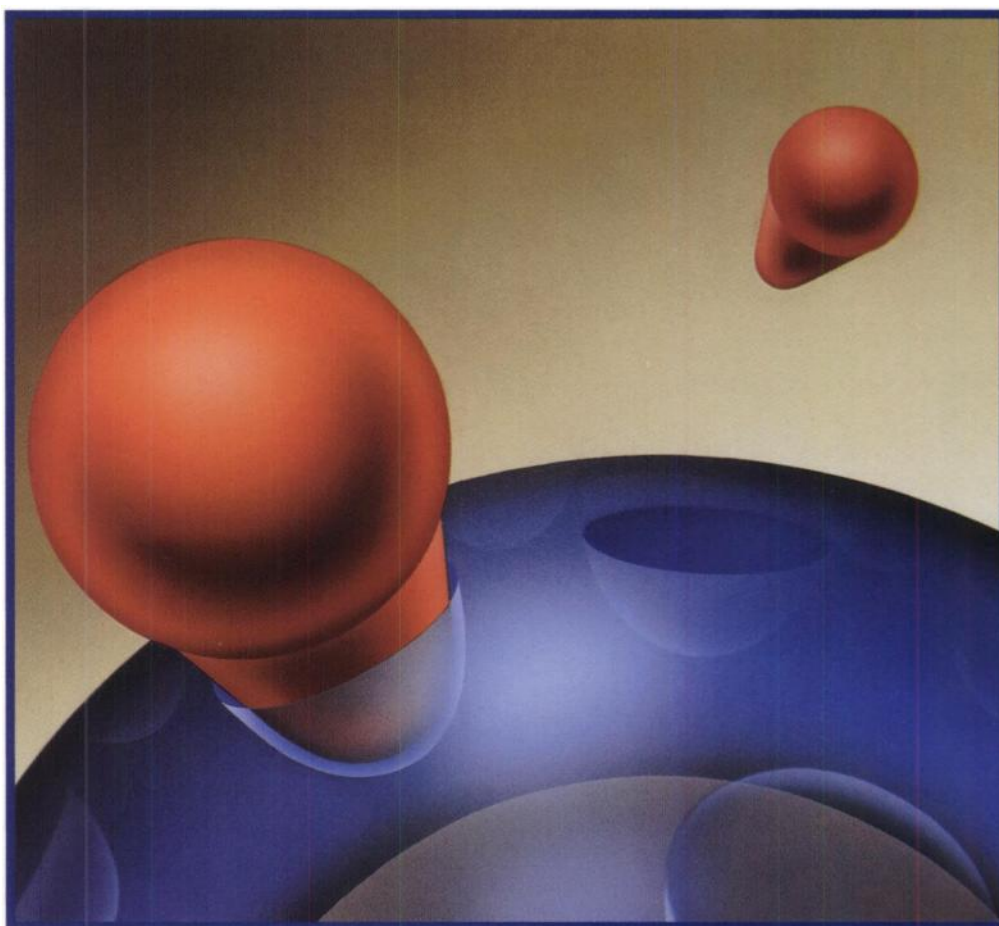
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Introducing
.....

A New Way to Image Neuroendocrine Tumors

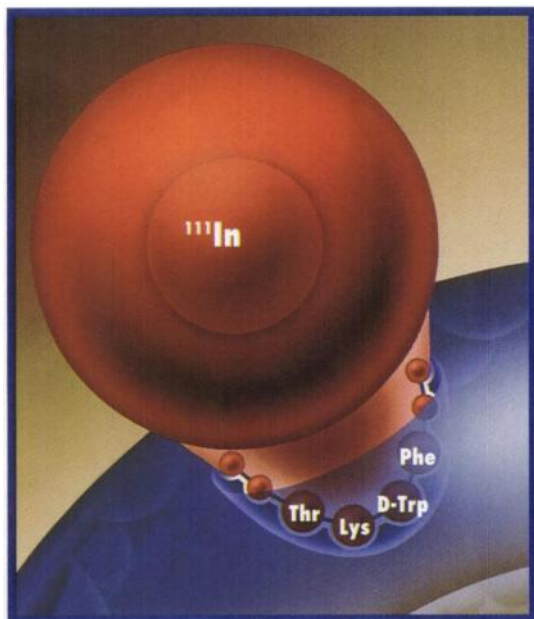




Introducing

OCTREOSCAN®

Kit for the Preparation of Indium In-111 Pentetreotide

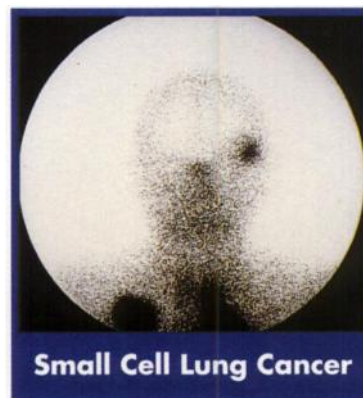
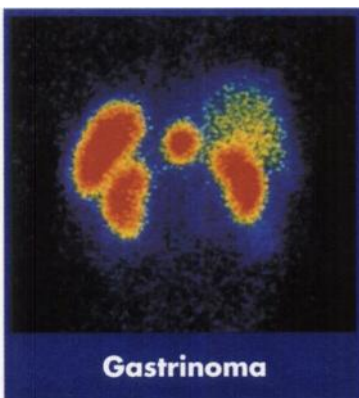
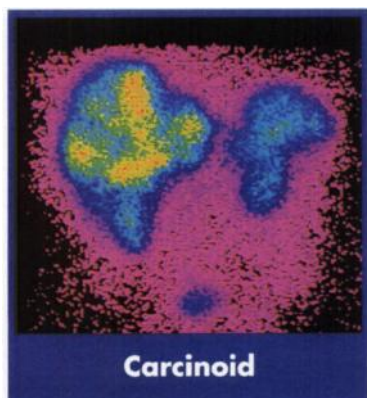


Somatostatin Receptor Imaging for Neuroendocrine Tumors

Somatostatin is an endogenous neuropeptide that acts as a regulator of growth hormone secretion. Neuroendocrine tumors contain a high density of somatostatin receptors. OctreoScan®, a radiolabeled form of the somatostatin analog octreotide, shares the same binding site as naturally occurring somatostatin, which makes it a sensitive indicator for somatostatin receptor-bearing neuroendocrine tumors. Since the concentration of receptors on tumors may vary, the sensitivity of OctreoScan® may vary among tumor types.

Enhances Neuroendocrine Tumor Localization

Neuroendocrine tumors generally are small and slow-growing in nature, which can make localization difficult. Functional imaging with OctreoScan® frequently is sensitive enough to enable localization of small primary tumors or metastases. In a multicenter study, OctreoScan® results were consistent with the final diagnosis in 86.4% of patients (267/309).^{*} OctreoScan imaging results produced a change in patient management in 31.1% of cases (64/206).^{*}



^{*}Source: Data on file, Mallinckrodt Medical, Inc.

Patient Management Benefits

OctreoScan® whole-body imaging enables rapid localization of the primary neuroendocrine tumor and sites of metastatic spread.

OctreoScan® imaging also provides tumor localization and characterization information that can help determine the extent of a patient's disease accurately, which may obviate the need for additional invasive procedures such as biopsy or angiography.

OctreoScan® imaging may enable clinicians to modify a patient's diagnostic work-up and initiate appropriate measures (resection, octreotide therapy) at an early stage of the disease process. OctreoScan® also can be used for patient follow-up to monitor the effects of surgery, radiotherapy, or chemotherapy.

Clinical Impact of OctreoScan® Imaging*

Yielded information about localizations not known before



27.9% (57/204)

Demonstrated uptake in lesions known to exist, but not verified as neuroendocrine tumors



28.2% (55/195)

Localized neuroendocrine tumors in patients with clinical and hormonal evidence of tumor but no prior localizations



37.5% (21/56)

Special Considerations

Adverse effects observed in clinical trials (at a frequency of <1%) included dizziness, fever, flush, headache, hypotension, changes in liver enzymes, joint pain, nausea, sweating and weakness. Pentetreotide is an analog of octreotide, which has been shown to produce severe hypoglycemia in insulinoma patients. In patients suspected of having an insulinoma, an IV solution containing glucose should be administered before and during OctreoScan® administration. Patients should be well hydrated prior to OctreoScan® administration to enhance renal clearance and reduce the radiation dose to the bladder and other target organs. Use in patients with impaired renal function should be carefully considered.

The sensitivity of OctreoScan® scintigraphy may be reduced in patients concurrently receiving therapeutic doses of octreotide acetate. Consideration should be given to suspending octreotide therapy before OctreoScan® administration and monitoring the patient for signs of withdrawal.

Please consult the following page for a brief summary of prescribing information.

OCTREOSCAN[®]

Kit for the Preparation of Indium In-111 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 components:

- 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 Solution.

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



INDICATIONS AND USAGE

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 of withdrawal.

PRECAUTIONS

General

1. 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 pentetreotide and are NOT to be administered separately to the patient.
3. 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 mild laxative (e.g., bisacodyl or lactulose) before and after administration of indium In-111 pentetreotide (see Dosage and Administration section).
5. 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.
6. 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 pentetreotide.
7. Octreotide acetate and the natural somatostatin hormone may be associated with cholelithiasis, presumably by 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.
8. 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.

Nursing Mothers

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.

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, loose stools, and vomiting. 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 planar imaging is 111 MBq (3.0 mCi) of indium In-111 pentetreotide prepared from an OctreoScan kit. The recommended intravenous dose for SPECT 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 administration.

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 mCi) and 222 MBq (6 mCi) are presented below. These estimates were calculated by Oak Ridge Associated Universities using the data published by Krenning, et al.¹

Estimated Absorbed Radiation Doses after Intravenous Administration of Indium In-111 Pentetreotide² to a 70 kg patient

	PLANAR		SPECT	
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	30.24	3.02	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
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.

2. 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. Reij, P.M. van Hagen, J.W. Koper, and S.W.J. Lamberts, "Somatostatin Receptor Scintigraphy with Indium-111-DTPA-D-Phe-1-Octreotide in Man: Metabolism, Dosimetry and Comparison with Iodine-123-Tyr-3-Octreotide," *The Journal of Nuclear Medicine*, Vol. 33, No. 5, May 1992, pp. 652-658.

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, is supplied with the following components:

1. A 10-mL OctreoScan Reaction Vial which contains a lyophilized mixture of:
 - (i) 10 µg pentetreotide [N-(diethylenetriamine-N,N',N''-tetraacetic acid-N'-acetyl)-D-phenylalanyl-L-hemicystyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-L-hemicystyl-L-threonyl cyclic (2-7) disulfide], (also known as octreotide DTPA),
 - (ii) 2.0 mg gentisic acid [2,5-dihydroxybenzoic acid],
 - (iii) 4.9 mg trisodium citrate, anhydrous,
 - (iv) 0.37 mg citric acid, anhydrous, and
 - (v) 10.0 mg inositol.

Before lyophilization, 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 MBq/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 is present.

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 package insert.

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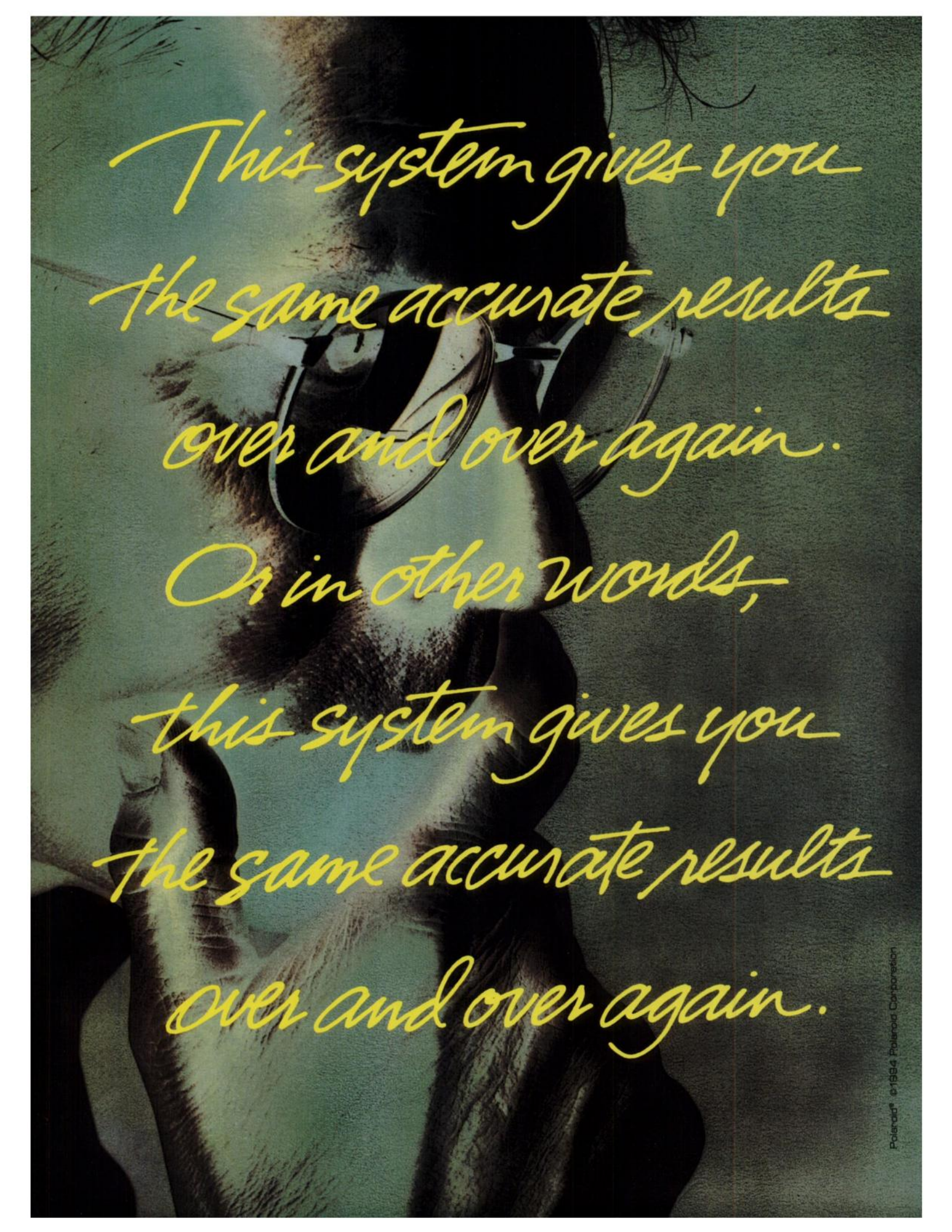
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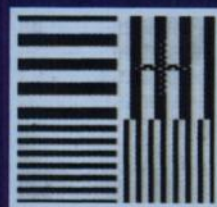
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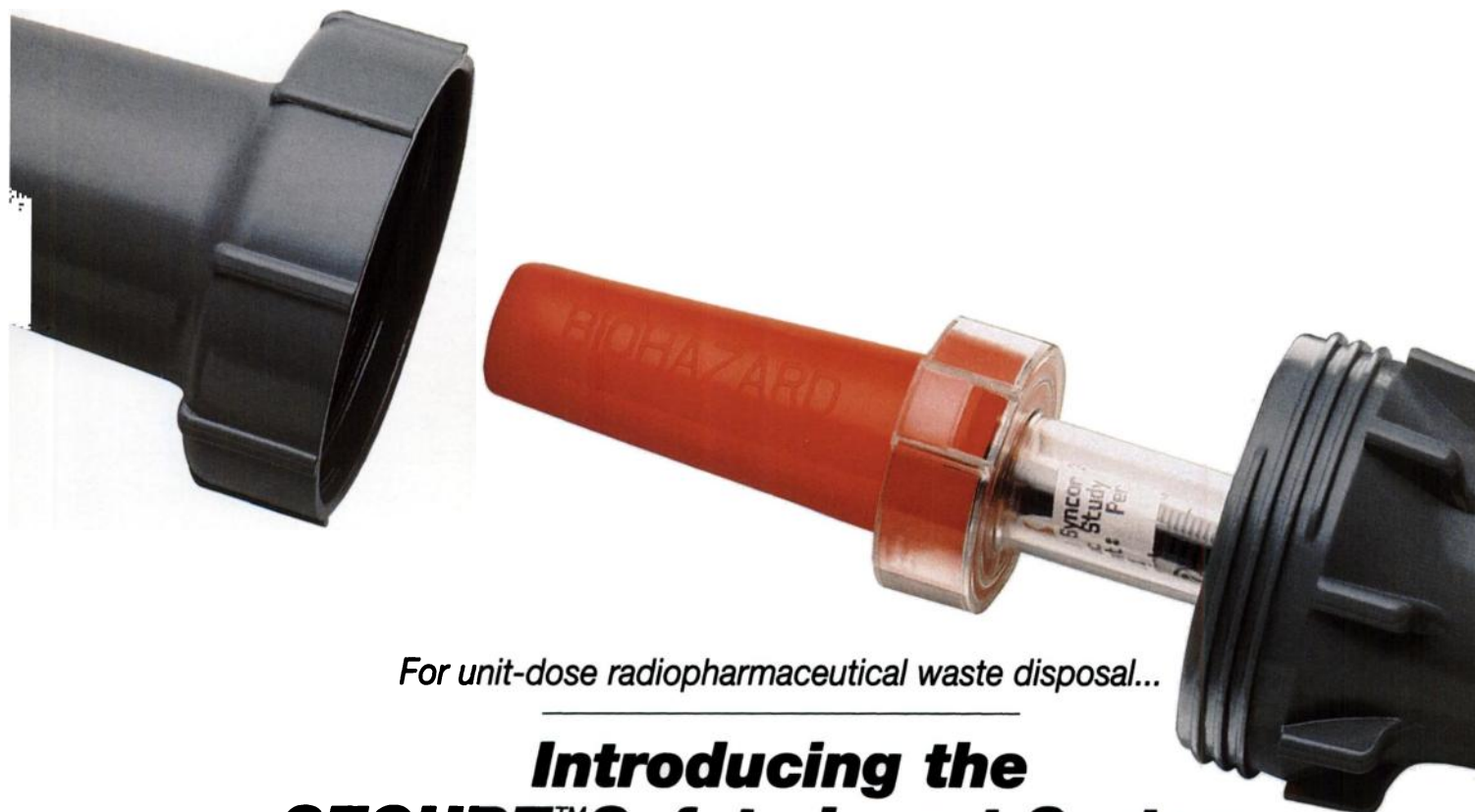
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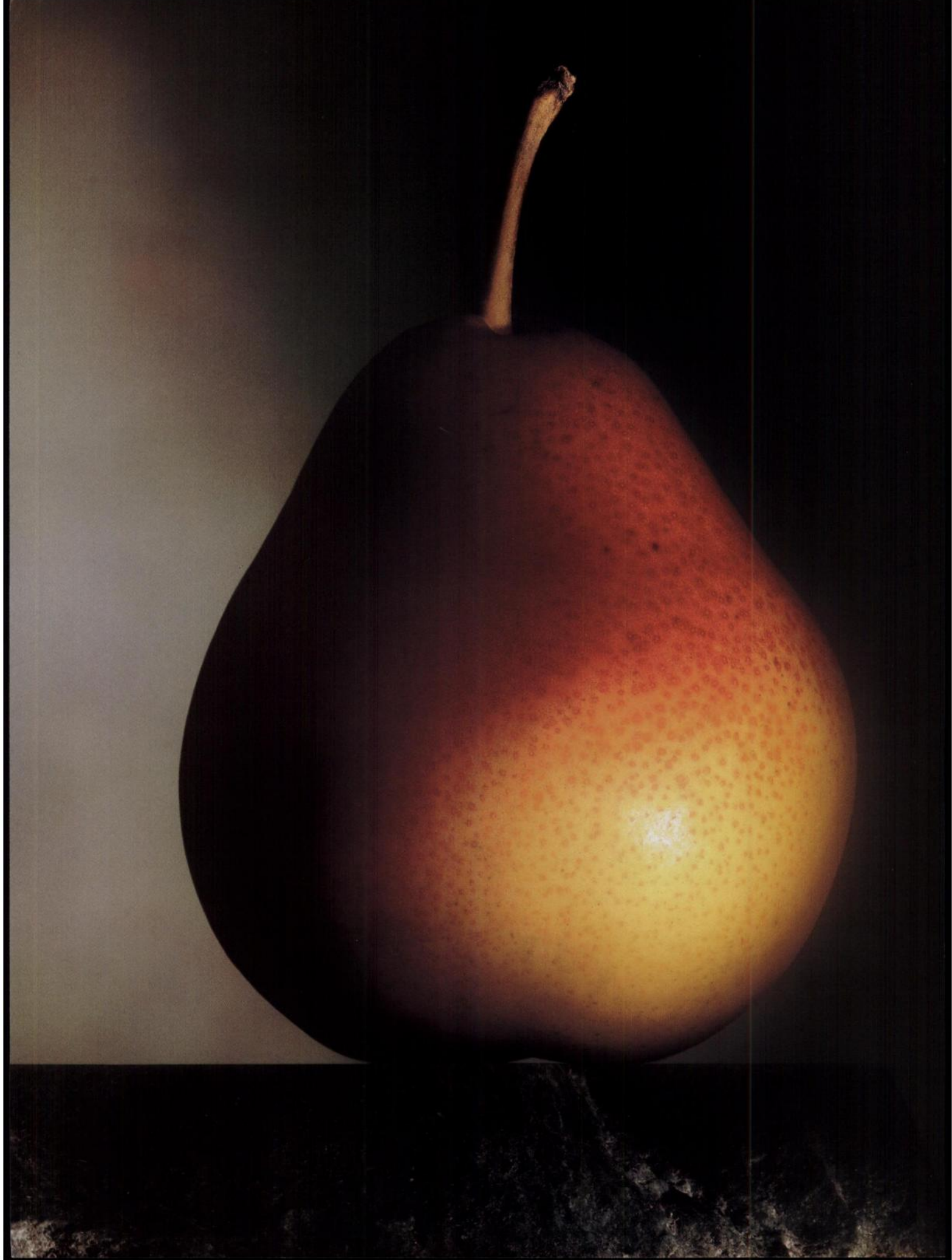
Convenience With Uncompromised Safety

Innovative design filed with the U.S. Patent and Trademark Office, patent pending.

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How to recognize a candidate for Cardiolite®

The shape of your patients may help you recognize the potential for soft-tissue attenuation, especially in fleshy figures.

For female and large-chested or obese male patients, Cardiolite comes through with higher photon energy (140 keV) to provide images with greater anatomical detail. Clear images can enhance interpretive confidence—which may reduce false-positives and equivocal cases.

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

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

Cardiolite

Kit for the preparation of Technetium Tc99m Sestamibi

To reduce soft-tissue attenuation Cardiolite comes through



Stress testing should be performed only under the supervision of a qualified physician in a laboratory equipped with appropriate resuscitation and support apparatus. There have been infrequent reports of signs and symptoms consistent with seizure and severe hypersensitivity after administration of Tc99m Sestamibi.

Please see brief summary of prescribing information on adjacent page.

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Cardiolite

Kit for the preparation of Technetium Tc99m Sestamibi

FOR DIAGNOSTIC USE

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 ($\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$) - 0.025mg Stannous Chloride, Dihydrate, ($\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$) - 0.075mg Tin Chloride (Stannous and Stannic) Dihydrate, maximum (as $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$) - 0.086mg

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

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

The precise structure of the technetium complex is $\text{Tc99m}[\text{MIBI}]_6^+$ where MIBI is 2-methoxy isobutyl isonitrile.

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

CARDIOLITE, Kit for the preparation of Technetium Tc99m Sestamibi, is also useful in the evaluation of myocardial 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 Perchlorate Tc99m Injection is added, adequate shielding of the final preparation must be maintained.

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

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

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

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	1%

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 necessary in women of childbearing capability. (See Dosimetry subsection in DOSAGE AND ADMINISTRATION section.)

The active intermediate, $[\text{Cu}(\text{MIBI})_2\text{BF}_4]$, 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 ($\geq 20\mu\text{g/ml}$), an increase in cells with chromosome aberrations was observed in the *in vitro* human lymphocyte assay. $[\text{Cu}(\text{MIBI})_2\text{BF}_4]$ did not show genotoxic effects in the *in vivo* mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9mg/kg, $> 600 \times$ 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 Perchlorate is excreted in human milk during lactation. It is not known whether Technetium Tc99m Sestamibi is excreted in human milk. Therefore, formula feedings should be substituted for breast feedings.

Pediatric Use

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

ADVERSE REACTIONS: During clinical trials, approximately 8% of patients experienced a transient metallic or bitter taste immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing 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 after administration.

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

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

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

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

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

Organ	Estimated Radiation Absorbed Dose			
	REST		STRESS	
	2.0 hour void rads/ 30mCi	4.8 hour void mGy/ 1110MBq	2.0 hour void rads/ 30mCi	4.8 hour void mGy/ 1110MBq
Breasts	0.2	2.0	0.2	1.9
Gallbladder Wall	2.0	20.0	2.0	27.8
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	0.2	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

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

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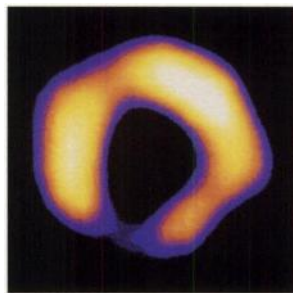
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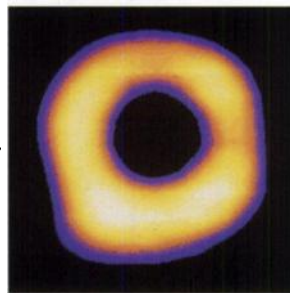
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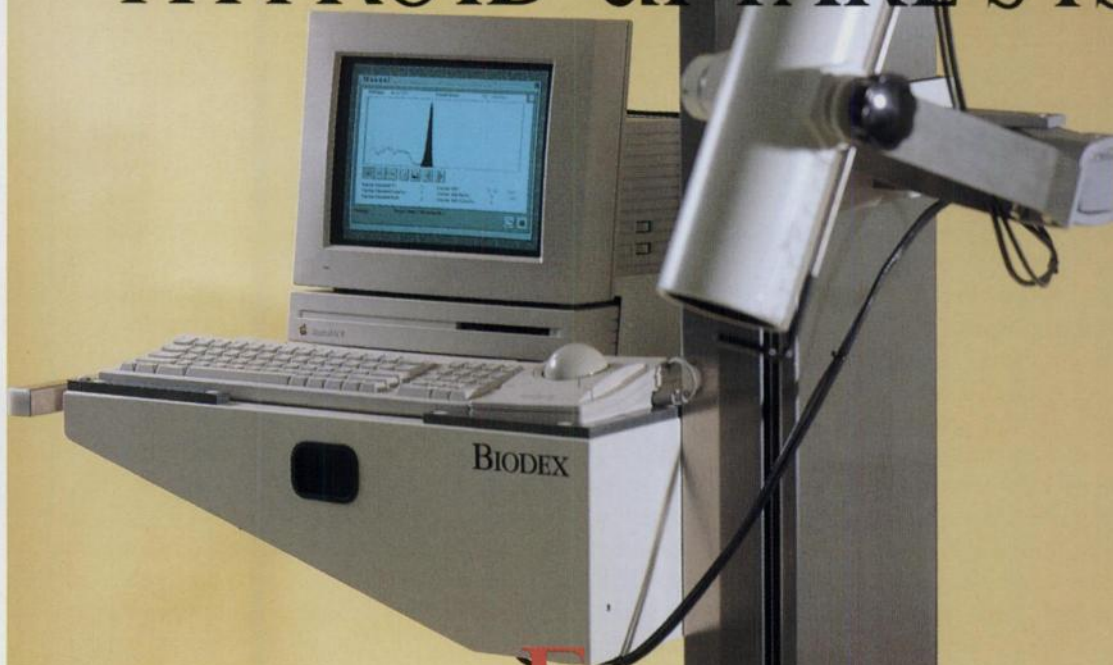
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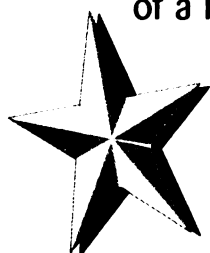
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Documentation of your activities is encouraged and may be mailed with your entry. (All original materials will be returned after the judging has been completed.) You may also use additional pages as necessary.

- ① Describe your Nuclear Medicine Week activities:
 - a. When did you celebrate? _____
 - b. What was your primary objective or message? _____
 - c. Who was your target audience? _____
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For more information: 1-800-221-7554

* References:

- 1) Shapiro B., Copp J.E., Sisson J.C., Eyre P.L., Wallis J., Beinwaltes W.H.: Iodine-131 Meta-iodobenzylguanidine for Locating of Suspected Pheochromocytoma: Experience in 400 Cases; J. Nucl. Med. 1985, 26: 576-585.
- 2) Pochedly, C. ed., *Neuroblastoma: Tumor Biology and Therapy*. CRC Press, Boca Raton, FL, 1990, ch. 8; p. 182

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BRIEF SUMMARY

Iobenguane Sulfate I 131 Injection. Diagnostic-For Intravenous Use

DESCRIPTION

Iobenguane Sulfate I 131 Injection is a sterile, pyrogen free radiopharmaceutical for intravenous injection. Each milliliter contains 0.69 mg of Iobenguane sulfate, 85.1 MBq (2.30 mCi) of I 131 (as Iobenguane sulfate I 131 at calibration), 0.36 mg of sodium acetate, 0.27 mg of acetic acid, 4.2 mg of sodium chloride, 0.56 mg of methyl paraben, 0.56 mg of propylparaben and 0.01 mL of benzyl alcohol. Iobenguane Sulfate I 131 is also known as I 131-meta-iodobenzylguanidine sulfate (I 131 MIBG).

INDICATIONS AND USAGE

Iobenguane Sulfate I 131 Injection is indicated as an adjunctive diagnostic agent in the localization of primary or metastatic pheochromocytomas and neuroblastomas.

CONTRAINDICATIONS

Iobenguane Sulfate I 131 is contraindicated in patients with known hypersensitivity to Iobenguane sulfate.

WARNINGS

As with other I 131 containing agents, in order to decrease thyroid accumulation of I 131, block the thyroid gland with iodine. (See Dosage and Administration section)

During and following the injection, patients with known or suspected pheochromocytoma should be carefully monitored for hypertensive crises.

PRECAUTIONS

General

ILOBENGUANE SULFATE I 131 IS CLEARED BY GLOMERULAR FILTRATION AND IS NOT DIALYZABLE. Caution should be exercised when administering the drug to renally impaired patients. Iobenguane Sulfate I 131 is not recommended in anephric patients. The radiation dose to the anephric patient would be substantially increased due to the delayed biological elimination of the drug. Also, because of the lack of clearance, the target-to-back ground ratios would severely compromise the outcome of the study. Iobenguane Sulfate I 131 use in patients with impaired renal function should be carefully considered. As with all radio-iodinated compounds, the patient should be well hydrated before and during examination.

Although iodinated contrast imaging agents have been confirmed to cause anaphylactic reactions in patients with hypersensitivity to iodine, the incidence of hypersensitivity reactions to Iobenguane Sulfate I 131 is rare. Since hypersensitivity or immune reactions are not concentration dependent, emergency treatment measures should be available.

Cardiac

Electrocardiographic (ECG) changes have been documented in dogs after the administration of 18 times the mg/m² conversion of the maximum human dose of Iobenguane Sulfate I 131. The maximum no observable effect level (NOEL) is not known. It is unknown if Iobenguane Sulfate I 131 can produce changes in ECG recordings in man.

Drug Interactions:

There are literature reports about patients and about in-vitro systems which suggest that the following drugs have the potential to decrease uptake of Iobenguane Sulfate I 131 in neuroendocrine tumors and may lead to false negative results if administered concomitantly: anti-hypertensives (labetalol, reserpine, calcium channel blockers), amitripyline and derivatives, imipramine and derivatives, doxapin, amoxapin, and loxapin, sympathetic-amines (phenylephrine, phenylpropylamine, pseudoephedrine, ephedrine) and cocaine. The clinical studies were not designed to show which drugs could cause false negative results. It is unknown if other drugs in the same classes have the same potential to inhibit the uptake of Iobenguane Sulfate I 131. Increasing the dose of Iobenguane Sulfate I 131 dose will not overcome any potential uptake-limiting effect of these drugs.

Normal biodistribution and excretion of Iobenguane Sulfate I 131 leads to localization in adrenergic storage granules of the adrenal gland. It is also localized in salivary glands, liver, spleen and urinary bladder. As in all nuclear imaging procedures, careful positioning may be useful in distinguishing normal biodistribution of the agent from localization in sites of pathology.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Studies with Iobenguane Sulfate I 131 have not been conducted to evaluate carcinogenic potential, mutagenic potential, or effects on fertility.

Pregnancy (Category C):

Animal reproduction studies have not been conducted with Iobenguane Sulfate I 131. It is also not known whether Iobenguane Sulfate I 131 can cause fetal harm when administered to a pregnant woman or if it can affect reproductive capacity. Therefore, Iobenguane Sulfate I 131 should not be administered to a pregnant woman unless the potential benefit justifies the potential risk to the fetus.

Nursing Mothers:

I 131 is excreted in human milk; it is not known if Iobenguane Sulfate I 131 is excreted in human milk. Therefore, breast feeding should be substituted with formula feeding until the Iobenguane Sulfate I 131 has cleared from the body of the nursing woman.

Pediatric Use

The safety and effectiveness of Iobenguane Sulfate I 131 have been reasonably established in children with neuroblastoma and pheochromocytoma.

Safety, effectiveness, metabolism, urinary excretion and tumor specificity of Iobenguane Sulfate I 131 is unknown in neonates.

ADVERSE REACTIONS

Transient episodes of marked hypertension have been reported in patients after injection of Iobenguane Sulfate I 131. Some of these patients were on anti-hypertensives and others were not.

Nausea, vomiting and sleepiness have been reported after injection of higher than the recommended doses of Iobenguane Sulfate I 131. The no effect level for these reactions has not been identified. An episode of fever, chills and hypotension has been reported. In clinical trials, no deaths have been attributed to the drug.

DOSEAGE AND ADMINISTRATION

Before administration of Iobenguane Sulfate I 131, the patient's thyroid gland should be blocked with Potassium Iodide Oral Solution (120 mg KI/day = 0.12 mL/day) or Lugol's Solution (up to 40 mg I/day = 0.3 mL/day). The blocking iodine should be administered one day before and daily for 5 to 7 days after the dose of Iobenguane Sulfate I 131.

Adults:

The recommended dose in adults is 0.5 mCi. In obese patients over 1.7 m² (65 kg), the dose should be 0.3 mCi/m² up to a maximum of 1.0 mCi.

Children:

The recommended dose in children is 0.3 mCi/m² up to a maximum total dose of 0.5 mCi. The minimum recommended dose for adequate imaging is 0.135 mCi.

Iobenguane Sulfate I 131 should be injected by slow intravenous infusion over 15-30 seconds (longer if necessary). Since the possibility of rebound hypertension exists, the patient's vital signs should be carefully monitored during and after injection.

In order to maintain sterility, it is essential that the user follow directions and adhere to strict aseptic procedure. As in the use of any radioactive material, care should be taken to insure minimum radiation exposure to the patient and clinical personnel.

Waterproof gloves should be worn by the user and a shielded syringe should be used during the preparation and administration of the dose. Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration.

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

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

RADIATION DOSIMETRY

The estimated absorbed radiation doses to adults and children from an intravenous dose of Iobenguane Sulfate I 131 are shown in Table 4.

Table 4: Estimated Absorbed Radiation Doses: Iobenguane Sulfate I-131

Organ	Adult		15 Years		10 Years		5 Years		1 Year	
	mGy/ 37MBq	rads/ mCi	mGy/ 18.5MBq	rads/ 0.5mCi	mGy/ 18.5MBq	rads/ 0.5mCi	mGy/ 18.5MBq	rads/ 0.5mCi	mGy/ 18.5MBq	rads/ 0.5mCi
Urinary Bladder Wall	29.6	2.96	18.5	1.85	27.8	2.78	42.6	4.26	83.3	8.33
Liver	29.2	2.92	18.5	1.85	29.6	2.96	42.6	4.26	83.3	8.33
Spleen	21.8	2.18	15.7	1.57	24.1	2.41	38.9	3.89	72.2	7.22
Heart Wall	14.1	1.41	9.1	0.91	14.1	1.41	22.2	2.22	40.7	4.07
Adrenal Medulla	7.8	0.78	5.4	0.54	8.0	0.80	10.7	1.07	16.5	1.65
Gallbladder Wall	5.2	0.52	3.0	0.30	4.3	0.43	6.7	0.67	12.6	1.26
Pancreas	4.1	0.41	2.4	0.24	3.9	0.39	5.9	0.59	10.9	1.09
Thyroid	3.4	0.34	2.6	0.26	4.1	0.41	8.7	0.87	16.5	1.65
Kidneys	3.3	0.33	2.0	0.20	3.1	0.31	4.8	0.48	8.7	0.87
Uterus	3.3	0.33	2.0	0.20	3.3	0.33	5.2	0.52	9.4	0.94
Ovaries	2.7	0.27	1.7	0.17	2.8	0.28	4.3	0.43	8.1	0.81
Total Body	2.3	0.23	1.4	0.14	2.3	0.23	3.3	0.33	6.4	0.64
Testes	2.2	0.22	1.4	0.14	2.2	0.22	3.7	0.37	7.0	0.70
Brain	1.8	0.18	1.1	0.11	1.9	0.19	3.1	0.31	5.9	0.59

*ORISE, Radiation Internal Dose Information Center, Radiation Dose Estimates for I-131 MIBG Intravenous Administration.

The following organs each receive less than 1 rad per procedure: breasts, LLI wall, small intestine, stomach, ULI wall, lungs, muscle, rad marrow, bone surfaces, skin and thymus.

If 0.5 mCi of Iobenguane Sulfate I 131 is used, the organ burden would be half of the doses listed above. The thyroid gland estimated burden is in the unblocked state. When the thyroid gland is blocked with Lugol's solution, uptake is minimal.

Peak scans were generally noted at 48 hours post-injection. However, serial scans at 24, 48 and 72 hours post-injection may be needed to optimally define the tumor.

HOW SUPPLIED:

Iobenguane Sulfate I 131 Injection is supplied in a 2 mL glass vial as a sterile, nonpyrogenic solution containing, at calibration time, 85.1 MBq/mL (2.3 mCi/mL) of Iobenguane Sulfate I 131 Injection. Store the drug at freezer temperature (-20 to -10°C).

NOTE:

Two to three hours prior to use, thaw the vial in the leaded container, at room temperature. Discard the unused portion of drug after 4-6 hours if kept at room temperature.

In conformance with USP recommendations, Iodine 131 preparations should not be used after the expiration date stated on the label.

NDC# 0455670100

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March 1984

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The Society of Nuclear Medicine Awards Committee announces that one fellowship for \$30,000 is available for July 1, 1995.

The objective of this fellowship is to: (1) Encourage physicians to enter the field of Cardiovascular Nuclear Medicine, and (2) Support high quality nuclear cardiology clinical research.

Funds can be used to support the research and/or salary of the investigator. Preference will be given to young physicians, or those new to the field of Cardiovascular Nuclear Medicine. Awards will be announced at the Annual SNM Meeting, June, 1995.

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

Deadline: January 6, 1995

Research and Development Fellowship

MALLINCKRODT FELLOWSHIP

Mallinckrodt, Inc. has announced an Annual Fellowship of \$30,000 for a physician fellow active in nuclear medicine research and/or development. The award is to further a research or development project in SPECT imaging or therapy in oncology and applicants are asked to submit their curriculum vitae, a detailed account of their research project including prior accomplishments on the project, and future plans. Deadline for this year's award is January 6, 1995. Requested information, along with at least two letters supporting the application, should be forwarded to: William J. MacIntyre, PhD, The Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090. The recipient will be announced at the Annual Meeting of The Society of Nuclear Medicine. Research and Development Fellowship

THE SNM MEDI- PHYSICS THERAPY AWARD

The Society of Nuclear Medicine announces the third in a series of research grants supported by Medi-Physics, Inc., Amersham Healthcare to further work in the use of unsealed sources in therapy applications.

This year's grant of \$30,000 offers you the opportunity to do high quality, innovative research in an exciting therapy area and to enhance the emphasis of therapy in nuclear medicine. Preference will be given to young physicians or scientists who have recently entered the field.

For more information and application forms, please contact:

**The Society of Nuclear Medicine
SNM Awards Committee
1850 Samuel Morse Drive
Reston, VA 22090**

Deadline: January 6, 1995

Completed applications must be returned by January 6, 1995. The award winner will be announced at the 1995 Annual SNM Meeting in Minneapolis, MN.

CALL FOR ABSTRACTS FOR SCIENTIFIC PAPERS AND SCIENTIFIC EXHIBITS

The Society of
Nuclear Medicine

42nd

Annual Meeting
June 12 - June 15,
1995
Minneapolis,
Minnesota

The 1995 Scientific Program Committee, Scientific Exhibits Subcommittee and the Scientific & Teaching

Sessions Committee solicit the submission of abstracts from members and nonmembers of The Society of Nuclear Medicine for the 42nd Annual Meeting in Minneapolis, MN. Accepted Scientific Paper and Scientific Exhibit abstracts will be published in a special supplement to the May issue of the *Journal of Nuclear Medicine* and accepted Technologist Section abstracts will be published in the June issue of the *Journal of Nuclear Medicine Technology*. Original contributions on a variety of topics related to nuclear medicine will be considered, including:

- Instrumentation and Data Analysis
- Radioassay
- Radiopharmaceutical Chemistry
- Dosimetry/Radiobiology
- Nuclear Magnetic Resonance Chemistry
- Clinical Science Applications:

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

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

There are two abstract forms for the annual meeting. The Scientific Paper abstract form can be obtained in the October 1994 JNM. The Scientific Exhibits abstract form is only available by calling or writing to:

The Society of Nuclear Medicine
Att: Abstracts
1850 Samuel Drive
Reston, VA 22090
Tel: (703)708-9000 • FAX: (703)708-9015

**DEADLINE FOR RECEIPT OF ABSTRACTS FOR SCIENTIFIC PAPERS
IS WEDNESDAY, JANUARY 4, 1995.**

**DEADLINE FOR RECEIPT OF ABSTRACTS FOR SCIENTIFIC EXHIBITS
IS WEDNESDAY, JANUARY 4, 1995.**

1S

SPECT BRAIN IMAGING CLINICAL FELLOWSHIP

Department of Radiology
Section of Nuclear Medicine



BENEFIT

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 Ceretec® and Neurolite®.

Objectives include:

- Development of interpretation skills for brain images.
- Appreciation of clinical applications of SPECT brain imaging.
- Knowledge of image acquisition and reconstruction.
- 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.

TUITION:

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.

CREDIT:

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.

Register me for the following dates:

☐ November 14-15, 1994

I will need reservations for _____ Sunday and Monday
night / _____ only on Monday night,
I will need a _____ single / _____ double room.

A check in the amount of \$650 should accompany this registration form and be made payable to the Medical College of Wisconsin. Telephone registrations must be confirmed by check within 10 days.

Name _____

Address _____

City/State/Zip _____

Office Phone _____

☐ work address

☐ home address

Registrations and payment should be sent to:

LisaAnn Trembath
SPECT Brain Imaging Fellowship Coordinator
Nuclear Medicine Division
Medical College of Wisconsin
8700 W. Wisconsin Avenue
Milwaukee, WI 53226 • (414) 777-3756

SNM 42ND ANNUAL MEETING *Critical Dates*

Item	Due Date
ABSTRACT FORMS	
Scientific Papers	October Issue JNM 1/4/95
Scientific Exhibits	1/4/95
REGISTRATION FORM	5/5/95
HOUSING FORM	5/12/95

**CONTACT SNM
DEPARTMENT
OF MEETINGS**

DON'T FORGET THE MID-WINTER MEETING IS IN SAN DIEGO, CALIFORNIA

TITLE: The Nuclear Medicine Information Super Highway

DATE: February 7-8, 1995

LOCATION: San Diego Mission Valley Hilton

SPONSOR: The Computer and Instrumentation Council

Celebrate the 25th Anniversary

*The Society of Nuclear Medicine
Technologist Section*



You're Invited:

To: A Year-Long Anniversary Celebration.

For: The 25th Anniversary of the Technologist Section of The Society of Nuclear Medicine.

When: Throughout 1995.

Where: Your office, hospital, university, Chapter meeting, 1995 SNM Annual Meeting....
We're celebrating wherever you are!

What: The 25th Anniversary of the founding of the SNM Technologist Section will be celebrated throughout the year with special commemorative events, such as:

- Lectures honoring technologist pioneers;
- Chapter membership drives with achievement awards;
- JNMT articles chronicling the history of the Technologist Section; and
- An all out 25th Anniversary party at the 1995 SNM Annual Meeting in Minneapolis.

Additionally, the Technologist Section will have special 25th Anniversary memorabilia for sale, including T-shirts, mugs, buttons, posters, and more.

Directions: Please join in the Technologist Section's 25th Anniversary celebration by participating in its local and national commemorative events, and by purchasing special anniversary memorabilia.

RSVP: Kristin Ludwig at The Society of Nuclear Medicine for additional information:
1850 Samuel Morse Drive, Reston, Virginia 22090-5316.



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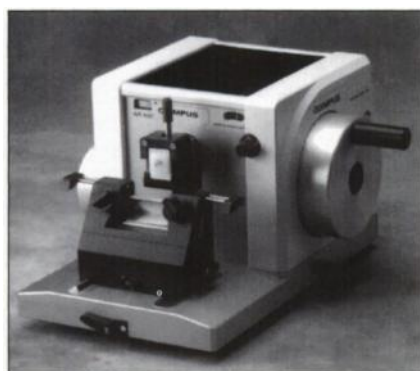
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Each description of the products below was condensed from information supplied by the manufacturer. The reviews are published as a service to the professionals working in the field of nuclear medicine and their inclusion herein does not in any way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

Olympus Introduces Rotary Microtomes



Two advanced rotary microtomes were recently introduced by the Precision Instrument Division of Olympus America Inc. Among the innovative features of the Olympus CUT4055 and CUT4060 microtomes are the vertical stroke of 70 mm, maximum horizontal advance of 40 mm, and sectioning thickness capability extending down to 0.5 μ . Each microtome also has a three-step automatic trim mode of 10, 20 or 30 μ . This feature provides quick access to the specific area of investigation. The new Olympus Model CUT4060 rotary microtome has specimen retraction and a section counter. Both of these models are designed with particular attention to ergonomic considerations. The coarse-advanced handwheel is in a far-forward location for accessibility and has a convenient sliding clutch. An anti-blocking mechanism on this handwheel can override the sliding clutch if necessary. A collision-protected feature deactivates the advance mechanism when maximum excursion is reached. A safety lock on the fine-advance handwheel can be activated from either side of these microtomes, offering 36 click positions distributed over 360° on the wheel. Counterweights in the fine-advance handwheel and the housing ensure balanced rotation. This handwheel is mounted separate from the cover, making cover removal and accessibility to the internal mechanisms easier to service. Cross-roller guides of both

these microtomes are especially strengthened to permit sectioning plastics. Other construction features include a sturdy dovetail guide for the anodized knife and blade holder, a base plate for easy cleaning and a stain-

less steel cylinder for the fine advance mechanism. **Olympus America Inc., Precision Instrument Division, 4 Nevada Dr., Lake Success, NY 11042-1179. (800) 446-5967, fax: (516) 222-7920.**

Medical Equipment Uninterruptible Power Supply

Alpha Technologies announces the AlphaMed Uninterruptible Power Supply (UPS) which provides clean and uninterrupted backup power to medical equipment in case of utility power failure and/or interruption. Designed for use in hospital, clinic and lab facilities to power ultrasound, monitoring, diagnostic, computer and communications equipment, the AlphaMed UPS exceeds the stringent safety requirements of health care industry equipment. Current models are available in 1500VA, 2000VA and 2500 VA power ranges with varying input and output hospital grade connector configurations.

The Alpha Med UPS systems meet the demanding safety and performance standards established for North American health

providers, including UL544 and CSA 22.2#125. Low current leakage prevents the unit from interfering with other crucial equipment. Equipment lifetime can be affected by uneven power quality and generator backup is not sufficient to protect against data loss and service interruption. The UPS incorporates all the advantages of the new Alpha CF UPS technology, providing power conditioning, no-break power protection and exceptional reliability. It supplies computer-grade sine wave output, ensuring maximum equipment performance. As an on-line UPS, it provides continuous power even during a total power failure. Its backup times can be easily extended to more than eight hours with the addition of Alpha's plug-and-play external battery packs.

Alpha Technologies, 3767 Alpha Way, Bellingham, WA 98226-8302. (206) 647-2360, fax: (206) 671-4936.



Camtronics Archium™ Digital Archive System Receives 510(k) Clearance

The industry's first all digital, real-time, network-based cardiac archive system has received 510(k) clearance from the FDA and is being installed at its first clinical sites at Stanford University Medical Center and Northridge Hospital in Los Angeles. The Archium™ system is a unique approach to archiving digital cardiac images. Unlike competitive analog devices or other digital storage media, the Archium system is based on a storage media-independent strategy which protects the cath lab from undoubted changes and updates in storage media technology. At the core of this unique strategy is an on-line storage controller which performs like a high-speed file server. The Archium system transfers acquired digital data at high data

transfer rates directly from the cath lab via a fiber optic line to the Working Storage Controller, which can store several weeks worth of images. The Archium transmits digital data

to a cardiac workstation at the same high data transfer rates, providing real-time review while avoiding lossy compression. By preserving absolute fidelity of the image data, the Archium system allows post-processing and quantitative analysis. The Archium system also provides multiple users concurrent access to a single patient study and enables individual users to access multiple patient studies. The high-speed file server combined with a fiber optic network, provides an advantage over current archive systems where access is limited. For more information contact: **Camtronics Medical Systems, (414) 367-0700.**



Positions Available

Fellowship

RESEARCH FELLOWSHIP IN NUCLEAR MEDICINE at the University of Illinois and Michael Reese Hospitals. One year position starting 1/1/95 is offered to BE/BC applicants interested in advanced clinical nuclear medicine research. Send CV to M.J. Blend, Section of Nuclear Medicine (M/C 931) University of Illinois, 1740 West Taylor, Chicago, IL 60612

Physician

PHYSICIAN - Full-time position in general nuclear medicine (includes all cardiac studies but no PET) in well-equipped and well-staffed medium size community hospital in mid-west. Excellent opportunities for clinical research inclined. Send CV to Box # 1001, The Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090

NORTHERN CALIFORNIA - The Kaiser Permanente Medical Center in Santa Clara, CA is seeking a BC/BE Nuclear Medicine Physician for a career opportunity with the nation's leading HMO. All aspects of nuclear medicine services are provided to a 250,000 member prepaid patient population. Clinical and administrative experience required.

Internal medicine background preferred. Academic opportunities are available. Competitive salary, generous benefits and a comprehensive retirement program. For more information, send CV with cover letter to: Diane Butler, The Permanente Medical Group, Inc. Physician Recruitment, Dept. 68, 1814 Franklin, 4th floor, Oakland, CA, 94612. EOE.

NUCLEAR MEDICINE POSITION BC/BE NM Physician on BC/BE in IM needed for expanded hospital-based and private OP facility on the Southeast. Practice is 50% internal medicine clinical duties with emphasis on thyroid diseases and osteoporosis. Routine NM with SPECT and Radionuclide therapy. Qualified candidates send CV to Box# 1003, The Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090.

Radiology

NUCLEAR MEDICINE PHYSICIAN/RADIOLOGIST Short term locum required for intermittent coverage in well-established hospital practice in southwestern Ontario. Must be able to perform routine nuclear studies. Cardiac imaging beneficial. Reply to Box #1002, The Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090.

RADIOLOGIST/NUCLEAR MEDICINE - 5 person NY/NJ group seeking radiologist with special competency in Nuclear Medicine. Interest in mammography desired but not essential. Young, progressive group located in 400 bed hospital with nearby imaging center. Send CV to: James Heimann, M.D., 5 Franklin Ave., Belleville, NJ 07109; (201) 450-2038, (201) 751-2011

RADIOCHEMIST - Seeking position in a PET center or in a radiopharmaceutical manufacturing facility. PhD in Organic Chemistry. Four years experience in manufacturing of PET radiotracers, development and optimization of synthetic methods, development, installation and service of radiochemical equipment. Reply to Box #1009, The Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090.

Positions Wanted

FULL TIME position wanted for M.D. AP/CP and ABNM certified. Experienced. Available spring 1995 or sooner. Reply to Box #1010, Society of Nuclear Medicine, 1850 Samuel Morris Drive, Reston, VA 22090.

RADIOCHEMIST

The University of Alabama at Birmingham is seeking a Co-Director for a well funded interdisciplinary project involving the development of novel tracers for the purpose of identifying and detecting early abnormal molecular change and evaluating therapeutic efficacy in autoimmune, inflammatory, and cerebrovascular disease. The candidate should have demonstrated excellence in research and be qualified to take on a leadership role in the area of molecular imaging and radioisotope labeling of antibodies. The candidate should have experience in molecular synthesis since the major goal of the project will be to engineer novel molecular structures that have high binding specificity. Emphasis will be placed on developing the tracers using cell culture systems and basic animal models of disease leading to human application. Experience with FDA applications is desirable.

Labeling will include iodination and chelation methods for the preparation of antibodies, proteins, receptor ligands, and oligonucleotide probes. Development and testing of NMR tracers and contrast agents will be performed on radioligands with demonstrated efficacy. The candidate should have an excellent understanding of immuno-molecular biology, and be highly motivated and capable of advancing the discipline of new tracer technology. The applicant should have a Ph.D. in chemistry or equivalent and additional experience in radiolabeling and molecular engineering. The starting position and salary will be at the level of instructor or assistant professor, depending on experience. For further information please send a letter of interest, curriculum vitae, and three letters of reference to:

James M. Mountz, M.D., Ph.D.

Associate professor of Radiology and Nuclear Medicine

Director of Neuro-Nuclear Medicine

Department of Radiology and Nuclear medicine

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NUCLEAR PHARMACY PHYSICIST

The Department of Radiology,
School of Medicine and Department of
Pharmacy Practice, School of Pharmacy,
University of Colorado Health Sciences Center,
are pleased to announce an opening
for a jointly appointed faculty position.

Selected individual will provide radiopharmacy services to Division of Nuclear Medicine, Department of Radiology at University Hospital and participate in on-going research in Nuclear Medicine and University of Colorado Cancer Center. Opportunities also exist for initiation of self-directed research in radiopharmacy and in collaboration with faculty in the School of Pharmacy. Successful candidate will teach in the School of Pharmacy Pharm D. program, the Medical Physics graduate program in Radiology and will precept Pharm D. students on elective clerkship rotations.

Applicants must have an advanced degree in pharmacy, radiopharmacy, or radiochemistry. Board certification in Nuclear Pharmacy (BCNP) is desired. Starting dates, rank and salary determined by qualifications. Applicants accepted until the position is filled. For consideration send current curriculum vitae and the names and telephone numbers of three references to:

R. Edward Hendrick, Ph.D., Chief
Division of Radiological Sciences
University of Colorado Health Sciences Center
4200 East Ninth Avenue, Box C278
Denver, Colorado 80262-0277
T: (303) 270-8468, F: (303) 270-8993
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ADVERTISE IN JNM Reservations for December Issue Closes November 1 Contact: Jessica McLane (703) 708-9000

Classified Advertising Information: 1994/1995

Policy: *The Journal of Nuclear Medicine* and the *Journal of Nuclear Medicine Technology* accept classified advertisements from medical institutions, groups, suppliers, and qualified specialists in nuclear medicine. Acceptance is limited to Positions Open, Positions Wanted, and Equipment. We reserve the right to decline, withdraw, or modify advertisements.

Line-Ads: \$22.00 (JNM) or \$19.00 (JNMT) per line or fraction of line (approx. 40 characters per line, including spaces). Please allow 28 characters for the first line which will appear in capital letters. Special **Positions Wanted** rate for SNM members: \$10.00 per line. *Note:* Box numbers are available for the cost of the two lines required.

Examples of Line-Ads:

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Ave., 8th fl., New York, NY 10016-6760. EOE.

◀ Estimate 28 characters
first line
◀ Estimate 40 characters
per line ▶

NUCLEAR MEDICINE PHYSICIAN with board
certification in internal medicine or radiology needed
for expanding out patient imaging practice. Qualified
applicants should send CV to: I.M.C. Inc., 2040 W.
Wisconsin Ave., Suite 378, Milwaukee, WI 53233;
(414) 933-8730. EOE.

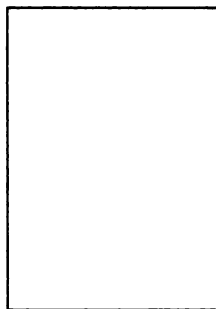
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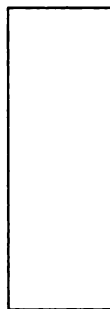
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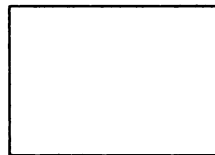
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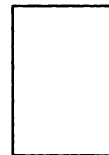
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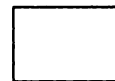
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Half page500
Quarter400
Eighth350

*Publisher-set charges: page \$150; half page \$100; quarter page \$75; eighth page \$50

Terms: Payment and an authorized Purchase Order must accompany order. Make check payable to: The Society of Nuclear Medicine. *Note:* 15% agency commission is offered on display ads only.

Deadlines: *JNM*— Last business day of the month preceding the publication date (for example, August 31st for October issue). *JNMT*— 25th of second month preceding publication date (for example, October 25th for December issue).

Frequency: *The Journal of Nuclear Medicine* is a monthly and the *Journal of Nuclear Medicine Technology* is a quarterly, published in March, June, September, and December.

Send copy to: Classified Advertising Department
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For further information, please contact Jessica McLane at (703) 708-9000.



THE SOCIETY OF NUCLEAR MEDICINE, INC.

41st Annual Meeting

June 5-8, 1994 • Orlando, Florida

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PHYSICIAN SECTION

GENERAL SESSIONS

- ACP1 Academic Council Annual Program

SCIENTIFIC PAPERS

- NM1 Cardiovascular: Young Investigator Award Competition
- NM2 Instrumentation & Data Analysis: SPECT: Reconstruction Theory I
- NM3 Radiopharmaceutical Chemistry: Positrons I
- NM5 Neuroscience: Neurology I: Receptors
- NM6 Oncology Diagnosis / Antibody I: Peptides
- NM7 Gastroenterology I: Liver & Biliary Tract
- NM8 Endocrinology I: Thyroid (No Paper 51 - S. Khan)
- NM9 Cardiovascular Clinical: Myocardial Perfusion Imaging I (No Paper 55 - R. Senior)
- NM10 Instrumentation & Data Analysis: SPECT: Reconstruction Theory II
- NM11 Radiopharmaceutical Chemistry: Technetium I (No Paper 65 - Y. Chan)
- NM12 Neuroscience: Neurology II
- NM13 Oncology Diagnosis / Non-Antibody I (No Paper 78 - A. Waxman)
- NM14 Cardiovascular PET: Quantification of Regional Perfusion
- NM15 Pulmonary I (No Paper 92 - H. Sostman)
- NM16 Cardiovascular Clinical: Myocardial Perfusion Imaging II
- NM17 Instrumentation & Data Analysis: SPECT: New Approaches
- NM18 Radiopharmaceutical Chemistry: Proteins/Antibodies/Peptides I
- NM19 Neuroscience: Neurology III
- NM20 Neuroscience: Basic I (No Paper 121 - A. Wijers)
- NM21 Computer & Instrumentation: Young Investigator Competition
- NM22 Bone & Joint I
- NM24 Cardiovascular PET: Assessment of Tissue Availability (No Paper 147 - P. Rubin)
- NM25 Instrumentation & Data Analysis: PET: Instrumentation I
- NM26 Radiopharmaceutical Chemistry: General
- NM27 Neuroscience: Neurology IV
- NM28 Hematology / Infectious Disease I: Pre-Clinical
- NM29 Cardiovascular Basic: Nitroimidazole / Tetrafosmin
- NM30 Pulmonary II
- NM31 Cardiovascular Clinical: Myocardial Viability and Metabolism I
- NM32 Instrumentation & Data Analysis: PET: Instrumentation II (No Paper 199 - M. Dahlborn)
- NM33 Radiopharmaceutical Chemistry: Pre-Clinical Testing I (No Paper 205 - J. Lee)
- NM34 Neuroscience: Psychiatry I (No Paper 207 - K. Berman)
- NM35 Oncology Diagnosis/Antibody II
- NM36 Cardiovascular Basic: Neuronal
- NM37 Pediatrics I
- NM38 Cardiovascular Clinical: Prognosis I
- NM39 Instrumentation & Data Analysis: General I
- NM40 Radiopharmaceutical Chemistry: Proteins/Antibodies/Peptides II
- NM41 Neuroscience: Neurology V
- NM42 Oncology Diagnosis/Non-Antibody II: Pre-Clinical Studies (2 Tapes)
- NM43 Neuroscience: Basic II
- NM44 Endocrinology II: Parathyroid, Adrenal, etc.
- NM45 Cardiovascular Clinical: Tc-99m Agents, Unique Applications (No Paper 273 - K. Nichols)
- NM46 Instrumentation & Data Analysis: PET: Analysis I
- NM47 Radiopharmaceutical Chemistry: Positrons II
- NM48 Neuroscience: Psychiatry II (2 Tapes)
- NM49 Oncology Diagnosis/Non-Antibody III: Lung Cancer/PET
- NM50 Cardiovascular PET: New Imaging Approaches
- NM51 Dosimetry/Radiobiology I: Small Scale Dosimetry - Suborgan Cellular DNA
- NM52 Cardiovascular Clinical: Thrombus, Plaque and Receptor Imaging
- NM53 Instrumentation & Data Analysis: SPECT: Cardiac Applications
- NM54 Radiopharmaceutical Chemistry: Positrons III
- NM55 Neuroscience: Psychiatry III
- NM56 Oncology Diagnosis/Antibody III
- NM57 Gastroenterology II: Gastric Emptying
- NM58 Bone & Joint II
- NM59 Cardiovascular Clinical: Assessment Left Ventricular Function/Attenuation Correction
- NM60 Instrumentation & Data Analysis: SPECT: Emission Transmission (No Paper 364 - M. King)
- NM61 Radiopharmaceutical Chemistry: Halogens
- NM62 Neuroscience: Neurology VI
- NM63 Oncology Diagnosis/Non-Antibody IV: Peptides
- NM64 Cardiovascular Basic: Miscellaneous
- NM65 Renal/Electrolyte/Hypertension I
- NM67 Cardiovascular: Blumgart Lecture/Dual Isotope Imaging (No Paper 409 - E. DePuey)

- NM68 Instrumentation & Data Analysis: PET: Analysis II (No Paper 415 - J. Yu)
- NM69 Radiopharmaceutical Chemistry: Proteins/Antibodies/Peptides III
- NM70 Neuroscience: Neurology: VII (2 Tapes)
- NM71 Gastroenterology III: Miscellaneous
- NM72 Cardiovascular PET: Evaluation of Neuronal Function and Metabolism
- NM73 Dosimetry/Radiobiology II (2 Tapes)
- NM74 Hematology/Infectious Disease II: Clinical (No Paper 451 - S. Reske)
- NM75 Cardiovascular Clinical: Tc-99m Perfusion Agents
- NM76 Instrumentation & Data Analysis: SPECT: General Applications
- NM77 Oncology Diagnosis/Non-Antibody V: GI/GU PET (No Paper 467 - C. Ho)
- NM78 Neuroscience: Neurology VIII (No Paper 472 - J. Kuikka)
- NM79 Bone & Joint III
- NM80 Neuroscience: Basic III (No Paper 484 - D. Elmaleh)
- NM81 Dosimetry/Radiobiology III: Radioimmunotherapy (No Paper 490 - S. DeNardo)
- NM82 Renal/Electrolyte/Hypertension II
- NM83 Cardiovascular Clinical: Prognosis II
- NM84 Instrumentation & Data Analysis: General II (2 Tapes)
- NM85 Radiopharmaceutical Chemistry: Pre-Clinical Testing II (No Paper 515 - J. Vessotskie)
- NM86 Neuroscience: Basic IV
- NM87 Oncology Diagnosis/Non-Antibody VI: Lymphoma, Peptides, PET and 67GA
- NM88 Pulmonary III
- NM89 Pediatrics II
- NM90 Cardiovascular Clinical: Myocardial Viability and Metabolism II (No Paper 546 - R. Senior)
- NM91 Instrumentation & Data Analysis: PET: Analysis III
- NM92 Radiopharmaceutical Chemistry: Technetium II
- NM93 Neuroscience: Basic V (No Paper 563 - D. Elmaleh)
- NM94 Oncology Diagnosis/Non-Antibody VII: Breast PET
- NM95 Instrumentation & Data Analysis: General III
- NM96 Oncology/Therapy: Innovations (2 Tapes)
- NM97 Radioassay (No Paper 590 - M. Ferdeghini)

CATEGORICAL SEMINARS

- NM100 Cardiovascular Nuclear Medicine -1994 (Not R. Taillefer - Given by D. Miller; Not D. Miller - Given by K. Brown; (Not B. Zaret, R. Gibbons, G. DePuey) (2 Tapes)
- NM101 Tumor Imaging in Clinical Practice (Not A. Waxman) (3 Tapes)
- NM102 Functional Brain Imaging: A Perspective for the 1990s (Not L. Mark) (4 Tapes)
- NM103 Pediatric Nuclear Imaging: Honey I Nuked the Kids: The Sequel (Not M. Mejd; M. Gelfand) (3 Tapes)
- NM104 Quantitation of Cardiac Perfusion, Metabolism and Necrosis by Histology, PET and NMR (3 Tapes)
- NM105 The Role of Radiotracers in New Drug Discovery and Development (Not W. Eckelman; J. Fowler; M. Welch) (2 Tapes)
- NM106 New Advances in Therapy with Unsealed Sources (3 Tapes)
- NM107 Computer Networks and Their Implementation (4 Tapes)
- NM108 Workshop on Quantitative Biological Data Collection and Calculation of Absorbed Dose Estimates Using the MIRD Method (Not J. Siegel - Given by D. Fisher) (4 Tapes)
- NM109 Clinical Applications of Monoclonal Antibody Imaging of Solid Tumors: A Problem-Oriented Approach (4 Tapes)
- NM111 Marketing Strategies for Nuclear Medicine in the Changing Environment (Not M. Lecklitner) (2 Tapes)

CONTINUING EDUCATION

- NM113 Renal I: Methodology for Renal Function and Studies (2 Tapes)
- NM114 Brain Imaging: An Introduction to Instrumentation, Imaging Agents Processing, Image Interpretation and Clinical Applications for Nuclear Medicine
- NM115 Oligonucleotides as Pharmaceuticals
- NM116 Practical Orthopedic Bone Scanning
- NM118 Gastroenterology I: Quantitative Hepatobiliary Imaging (Not E. Oates)
- NM119 NRC: Management of Radioactive Material Safety Programs at Medical Facilities (Not L. Camper)
- NM120 Gastroenterology II: Gastric Emptying Blood Pool and Leukocyte Imaging (2 Tapes)
- NM121 Cardiovascular: Debate on Nuclear Cardiology and Correlative Imaging (Not J. Maddahi)
- NM122 Monoclonal Antibodies I: Molecular Nuclear Biology
- NM123 Cardiovascular: Practical Issues in Cardiovascular SPECT Imaging (2 Tapes)
- NM124 Bone Densitometry

- ☐ NM125 Cardiovascular: Modes of Stress Testing in Conjunction with Radionuclide Myocardial Perfusion Imaging
- ☐ NM126 Therapy of the Pain of Osteoblastic Metastases with Unsealed Sources (Not J. Eary)
- ☐ NM128 Overview of Bone SPECT Imaging (2 Tapes)
- ☐ NM129 Renal II: Interventional Studies in Renal Nuclear Medicine
- ☐ NM130 Bone Imaging in Orthopedics & Sports Medicine
- ☐ NM131 Radiopharmaceutical: Compartmental Modeling: How to do it on Your PC
- ☐ NM132 Cardiovascular: Update on New Cardiovascular Radiotracers (Not A. Lahiri; M. Doe)
- ☐ NM133 Radiopharmaceutical: Use of Radiolabeled Peptides for Diagnostic Imaging
- ☐ NM135 Radionuclide Monitoring of Organ Transplants
- ☐ NM136 Practical Liver Tumor Imaging (2 Tapes)
- ☐ NM137 New Development in Pediatric Imaging
- ☐ NM138 Cardiovascular: Myocardial Viability Assessment and Prognosis Stratification with Radionuclide Imaging
- ☐ NM139 Monoclonal Antibodies II: The Next Generation of Imaging and Therapeutic Agents for Non-Hodgkins Lymphoma
- ☐ NM140 SPECT Analysis: Basic Principles
- ☐ NM141 Renal III: Clearance and Imaging Techniques (Not J. Conway)
- ☐ NM144 Annual Meeting Highlights

TECHNOLOGIST SECTION

CONTINUING EDUCATION

- ☐ TS202 Orthopedic Imaging I: Bone Scans: Increasing the Specificity in Sports Injuries, E. Nagle, MD / Reflex Sympathetic Dystrophy: Clinical & Scintigraphic Considerations, L. Holder
- ☐ TS203 Orthopedic Imaging II: Bone SPECT Imaging, R. McDonald, MD / Dual versus Triple Headed Gamma Camera's: What's Best for Bone Scintigraphy, W. Drane, MD
- ☐ TS204 Orthopedic Imaging III, Nuclear Medicine Evaluation of Bone Infection, L. Ramanna, MD / The Use of Strontium-89 in Treating Painful Skeletal Metastases, C. Dickinson, MD (2 Tapes)
- ☐ TS205 SPECT I: Current Applications and Instrumentation / The Expanding Role of SPECT in the Community Hospitals, D. Collier, MD / Equipment Selection: Computers and Single & Multi-Headed Cameras, J. Galt, PhD (2 Tapes)
- ☐ TS206 SPECT II: Tips to Improve Clinical Studies / Cardiac SPECT, D. Basso CNMT / Brain, Bone and Tumor SPECT, D. Faulker (2 Tapes)
- ☐ TS207 SPECT III: Technological Improvement and Economic Realities / Solving the Attenuation and Scatter Problems, J. Cullom, PhD / SPECT Reimbursement Forecast Under "Managed Competition", B. McLaughlin
- ☐ TS208 Total Quality Management I (Sunday) / JCAHO, S. Gilbert, CNMT
- ☐ TS209 Total Quality Management II (Sunday) / Team Building—Part I, P. McLoughlin
- ☐ TS210 Total Quality Management III (Sunday) / Customer Service, J. Herbst
- ☐ TS212 Oncology (Monday) / Bone Scintigraphy in Malignant Tumors, S. Grossman, MD / Breast Tumor Imaging, I. Khalkhail, MD; L. Diggles, CNMT / Octreotide Imaging, J. Glowinski, MD / Monoclonal Antibodies, L. Trembath, CNMT; V. Cronin, CNMT (3 Tapes)
- ☐ TS213 Nuclear Cardiology I: Myocardial Perfusion Imaging / Modes of Stress Testing, G. Heller, MD, PhD / Choosing a Myocardial Perfusion Imaging Agent, J. Udeason, MD / Introduction to

- ☐ "New" Myocardial Perfusion Imaging Agent, M. McMahon, BS, CNMT / SPECT Myocardial Perfusion Imaging: Sources of Error and Artifacts, R. Folks, BS, CNMT (2 Tapes)
- ☐ TS214 Nuclear Cardiology II: Function and Prognosis / Functional Assessment with Tc-99m-Sestamibi: First Pass D. Natale / Functional Assessment with Tc-99m - Sestamibi: Gated, S. Melancon; D. Masini / Myocardial Perfusion Imaging in "Acute" Cardiac Syndromes, R. Hendel, MD / The Evaluation of Congestive Heart Failure, B. Villegas, MD (2 Tapes)
- ☐ TS215 Total Quality Management I (Monday) / Marketing J. Herbst, CNMT
- ☐ TS216 Total Quality Management II (Monday) / Team Building - Part II, P. McLoughlin
- ☐ TS218 Total Quality Management IV (Monday) / Health Care Reform, B. Pounds CNMT / Future of TQM, M. Boyd
- ☐ TS222 Oncology (Tuesday) / Oncology Through the Eye of PET, J. Meddahi, MD / Interacting with the Terminal Patient, K. Thomas, CNMT (Not J. Eary, D. Bennett, R. Pattilo, M. Mannisto)
- ☐ TS224 Abdominal Imaging I: Abdominal and Genitourinary Imaging / Renal Radionuclide Urography, D. Trepashko, MD / Technical Considerations and Quantification of Renal Function Using Tc-99m Mag 3, J. Billingsley (Not B. Mullen) (2 Tapes)
- ☐ TS226 Pediatric Nuclear Medicine Technology I / Sedation of Pediatric Patients for Nuclear Medicine Studies, S. Weiss, CNMT / Radionuclide Cystography / Imaging of the Pediatric Gastrointestinal Tract, R. Wells, MD (Not J. Conway; B. Reid; S. Treves) (2 Tapes)
- ☐ TS227 Pediatric Nuclear Medicine: Technology II / Bone Imaging: Current Status, G. Mendel, MD; K. Mage
- ☐ TS228 Radiation Emergency Response Planning, K. Coleman
- ☐ TS229 Quality Control Procedures in a Nuclear Medicine Department / The Need for a QC Program in the Nuclear Medicine Department, C. Harris, MD / The FDA and CAP Requirements for Quality Assurance, P. Paras, PhD / NRC Requirements and the use of AAPM and ANSI Standards for Equipment Calibration, J. Lazewatsky, PhD / Calibration of Dose Calibrators, M. Bell / A Calibration Program for NaI Probes, Well Counters, TLC Measurements and Contamination Control, J. Parks, Jr, BS, CNMT / Quality Control of Planar Gamma Cameras, R. Nuccio, CNMT / Center of Rotation Calibration and Uniformity, H. Hines, PhD / Performance Evaluation of Multiple Detector Systems, D. Koller, CNMT / Quality Control of PET Cameras, A. Van Neufel, PhD / Personal Computer — A Place in Nuclear Medicine, J. O'Toole (3 Tapes)
- ☐ TS230 Neuro-SPECT I: Nuclear Medicine's Newest Technique / Top Ten Ways to Optimize Neuro-SPECT, L. Trembath, BA / Special Techniques Required for Neuro-SPECT Imaging, M. Devous, Sr., PhD
- ☐ TS231 Neuro-SPECT II: Nuclear Medicine's Newest Techniques / Dedicated SPECT Systems and the Reconstructed Brain I, G. Zubal, PhD / Clinical Applications of Neuro-Receptor Imaging, J. Selby, MD
- ☐ TS232 Neuro-SPECT III: Nuclear Medicine's Newest Technique / Comparisons of Neuroline and Ceretec in the Alzheimers Patient with Age Matched Controls, C. Van Dyck, MD (Not S. Treves)

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Hill (1:33:00)</p> <p><input type="checkbox"/> 8. Practical Orthopedic Bone Scanning- Dr.'s M. Brown, B. Collier (1:32:00)</p> <p><input type="checkbox"/> 9. GI I: Quantitative Hepatobiliary Imaging - Dr.'s G. Krishnamurthy, W. Drane (1:09:00)</p> <p><input type="checkbox"/> 10. SPECT I: Current Applications and Instrumentation - Dr.'s D. Collier, J. Galt (1:41:00)</p> <p><input type="checkbox"/> 11. SPECT II: Tips to Improve Clinical Studies - Dr.'s D. Basso, D. Faulkner (2 tapes) (A=47:00 B=55:00)</p> <p><input type="checkbox"/> 12. SPECT III: Technological Improvement and Economical Realities - Dr.'s J. Cullom, B. McLaughlin (1:10:00)</p> <p><input type="checkbox"/> 13. GI II: Gastric Emptying Blood Pool and Leukocyte Imaging - Dr.'s T. Chaudhuri, A. Maurer, S. Kipper (1:41:00)</p> <p><input type="checkbox"/> 14. Monoclonal Antibodies I: Molecular Nuclear Biology - Dr.'s D. Buchsbaum, M. Dewanjee (1:24:00)</p> <p><input type="checkbox"/> 15. Bone Densitometry - Dr.'s S. Jackson, I. Fogelman, L. Rosenthal (1:24:00)</p> <p><input type="checkbox"/> 16. Therapy of the Pain of Osteoblastic Metastases with Unsealed Sources - Dr.'s E. Silberstein, S. Goldsmith, R. Robinson (1:31:00)</p> <p><input type="checkbox"/> 17. Cardiovascular: Debate on Nuclear Cardiology and Correlative Imaging - Dr.'s S. Port, H. Schelbert, W. Stanford, W. Zoghbi, J. Ziffer (1:32:00)</p> <p><input type="checkbox"/> 18. Cardiovascular: Practical Issues in Cardiovascular SPECT Imaging - Dr.'s E. Garcia, J. Links, P. Rigo, G. DePuey (1:46:00)</p> <p><input type="checkbox"/> 19. Cardiovascular: Modes of Stress Testing in Conjunction with Radionuclide Myocardial Perfusion Imaging - Dr.'s F. Thwackens, P. Hendel, M. Verani, A. Rozanski, D. Berman (1:32:00)</p> | <p><input type="checkbox"/> 20. Nuclear Cardiology I: Myocardial Perfusion Imaging - Dr.'s G. Heller, J. Udelson (1:28:00)</p> <p><input type="checkbox"/> 21. Nuclear Cardiology I: Myocardial Perfusion Imaging, continued - Dr.'s M. McMahon, R. Folks (1:11:00)</p> <p><input type="checkbox"/> 22. Nuclear Cardiology II: Function and Prognosis - Dr.'s D. Natale, Dr. Masini (54:00)</p> <p><input type="checkbox"/> 23. Nuclear Cardiology II: Function and Prognosis, continued - Dr.'s R. Hendel, B. Villegas (1:22:00)</p> <p><input type="checkbox"/> 24. Overview of Bone SPECT Imaging - Dr.'s D. Collier, R. McDonald (1:38:00)</p> <p><input type="checkbox"/> 25. Bone Imaging in Orthopedics and Sports Medicine - Dr. L. Holder (1:18:00)</p> <p><input type="checkbox"/> 26. Cardiovascular: Update on New Cardiovascular Radiotracers - Dr.'s M. Gerson, R. Taillefer, A. Sinusas, N. Tamaki, D. Miller (1:07:00)</p> <p><input type="checkbox"/> 28. Renal II: Interventional Studies in Renal Nuclear Medicine - Dr.'s P. O'Reilly, J. Nally (1:38:00)</p> <p><input type="checkbox"/> 29. RADIOPHARM: Use of Radiolabeled Peptides for Diagnostic Imaging - Dr.'s R. Dean, E. Deutsch, A. Fishman (1:37:00)</p> <p><input type="checkbox"/> 30. Radionuclide Monitoring of Organ Transplants - Dr.'s H. Royal, C. Kuni, R. Boudreau (1:27:00)</p> <p><input type="checkbox"/> 34. New Developments in Pediatric Imaging - Dr.'s G. Sfakianakis, L. O'Tuama (1:34:00)</p> <p><input type="checkbox"/> 35. Practical Liver Tumor Imaging - Dr. H. Ziessman (1:37:00)</p> <p><input type="checkbox"/> 36. Cardiovascular: Myocardial Viability Assessment and Prognosis Stratification with Radionuclide Imaging - Dr.'s K. Brown, R. Bonow, M. Schwaiger, H. Socor, R. Burns (1:35:00)</p> <p><input type="checkbox"/> 37. Renal III: Clearance and Imaging Techniques - Dr. E. Fine (43:00)</p> <p><input type="checkbox"/> 38. Annual Meeting Highlights (1:22:00)</p> <p><input type="checkbox"/> 39. Monoclonal Antibodies II: The Next Generation of Imaging & Therapeutic Agents for Non-Hodgkins Lymphoma - Dr.'s G. Denardo, D. Goldenberg, W. Nelp (1:20:00)</p> <p><input type="checkbox"/> 40. SPECT Analysis: Basic Principles - Dr.'s M. King, I. Zubal (1:34:00)</p> <p><input type="checkbox"/> 45. Quality Control Procedures in the Nuclear Medicine Department - Dr.'s C. Harris, P. Paras, J. Lazewatsky, M. Dell, D. Koller, J. Parks, R. Nuccio, H. Hines, A. Van Neufel, J. O'Toole (3 tapes) (A=1:24:00 B=1:21:00 C=41:00)</p> |
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1995 ANNUAL MEETING

GENERAL POLICIES:

The 1995 Scientific Program Committee and the Scientific and Teaching Sessions Committee welcomes the submission of abstracts of original contributions in nuclear medicine from members and nonmembers of The Society of Nuclear Medi-

cine for the 42nd Annual Meeting in Minneapolis, MN, June 12-15, 1995. Deadline for receipt of abstract is January 4, 1995. To help you prepare your abstract, several policies have been formulated, as follows:

Instructions for Abstract Submission:

Please read this and the following pages thoroughly before preparing your abstract. Because of stringent time constraints, abstracts that do not comply with these instructions must be rejected.

1. Previously published or presented materials

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

2. Publication of accepted abstracts

Abstracts accepted for presentation will be published in a special supplement to the May 1995 issue of *The Journal of Nuclear Medicine* and the accepted Technologist Section abstracts in the June 1995 issue of the *Journal of Nuclear Medicine Technology*.

3. Changes after submission

Abstracts are to be submitted in final format. *No changes can be made at any time after receipt at the Central Office.*

4. 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.

5. Multiple contributions on a similar topic

Whenever possible, multiple contributions on the same or a similar subject from the same institution should be merged into a single abstract.

6. Publication of full text

Authors seeking publication for the full text of their papers are strongly encouraged to submit their work to *The Journal of Nuclear Medicine* for immediate review.

7. Day and time assignments for oral presentations cannot be changed.

8. Please refer to the "Meeting Memo" in the October 1994 issue of *The Journal of Nuclear Medicine* for further information on the Scientific Program Committee policies and objectives.

9. Awards Criteria

Society Program Young Investigator Awards (Oral Presentation Only)

1. Cardiovascular Young Investigator Award

A) All applicants must be currently enrolled or within 5 years of completing a certified training program (there is no age limit).

B) Only one (1) abstract per applicant may be submitted.

C) All former first prize winners are ineligible.

D) An identical abstract can be submitted to the regular Cardiovascular Clinical or Basic section for an independent review. An abstract submitted for the Young Investigator Award has an equal opportunity to be on the cardiovascular program as any other abstract.

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All research making use of the indicator-dilution method will be considered for this award. Abstracts which summarize research on receptor-based radiopharmaceuticals, for example, will be judged for the Berson-Yalow award. Therefore, multiple categories (such as neurosciences, oncology, and radiopharmaceuticals) in addition to the radioassay sessions for abstracts will be eligible for this award.

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That all of the listed authors have reviewed this abstract and agree to its submission.

Signature of Principal Author

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Whenever possible, multiple contributions on the same or a similar subject from the same institution should be merged into a single abstract.

6. Publication of full text

Authors seeking publication for the full text of their papers are strongly encouraged to submit their work to *The Journal of Nuclear Medicine* for immediate review.

7. Day and time assignments for oral presentations cannot be changed.

8. Please refer to the "Meeting Memo" in the October 1994 issue of *The Journal of Nuclear Medicine* for further information on the Scientific Program Committee policies and objectives.

9. Awards Criteria

Society Program Young Investigator Awards (Oral Presentation Only)

1. Cardiovascular Young Investigator Award

A) All applicants must be currently enrolled or within 5 years of completing a certified training program (there is no age limit).

B) Only one (1) abstract per applicant may be submitted.

C) All former first prize winners are ineligible.

D) An identical abstract can be submitted to the regular Cardiovascular Clinical or Basic section for an independent review. An abstract submitted for the Young Investigator Award has an equal opportunity to be on the cardiovascular program as any other abstract.

E) You cannot check the "Posterboard Only" box on the form.

2. Computer and Instrumentation Young Investigator Award

A) Only medical students, residents, fellows, graduate students, post-doctoral fellows and those with less than two (2) years experience as faculty members may apply.

B) You cannot check the "Posterboard Only" box on the form.

3. Berson-Yalow Award

All research making use of the indicator-dilution method will be considered for this award. Abstracts which summarize research on receptor-based radiopharmaceuticals, for example, will be judged for the Berson-Yalow award. Therefore, multiple categories (such as neurosciences, oncology, and radiopharmaceuticals) in addition to the radioassay sessions for abstracts will be eligible for this award.

PLEASE CHECK THE APPROPRIATE BOX ON THE ABSTRACT FORM IF YOU WISH TO BE CONSIDERED FOR ANY OF THESE AWARDS.

SPECIFIC INSTRUCTIONS FOR PREPARATION OF ABSTRACT:

1. Abstract forms

Abstracts must be typed inside the blue rectangle as shown on the third page of this form. One page of optional supporting data is encouraged. Forms are available from The Society of Nuclear Medicine, 1850 Samuel Morse Drive, Reston, VA 22090. (703) 708-9000. **Photocopies of the abstract form cannot be accepted as originals.**

2. Printing instructions

When typing your abstract on a computer, use a letter quality printer. Do not use type that simulates script. Use a carbon ribbon or a slightly used black silk ribbon (brand new ribbons smudge; old

ones print too faintly). PRACTICE typing the abstract in a rectangle $4\frac{1}{4} \times 5\frac{1}{2}$ inches before using this form. Place left margin to left border width (inches)

DO NOT ERASE. Abstracts will be reduced photographically and will be reproduced exactly as submitted. Abstracts with smudges, errors, misspellings, poor hyphenation, skipped lines, typed-in margins, incorrect abbreviations, too-faint typing, etc. (or not conforming to prescribed rules) require retyping by the publisher at the author's expense.

3. Format for title and body

USE ALL CAPS for TITLE, following

the example given below. **Use initials rather than full spelling for authors' first and middle names.** Underline the name of the presenting author. Single space all typing, but leave a space between the title block and the body of the text. Indent each paragraph three spaces. Do not indent title. Draw special symbols in black India ink.

Make title brief, clearly indicating the nature of the investigation. Then state authors' names and institutional affiliations. Omit degrees, titles, institutional appointments, street addresses, and zip codes.

4. Organization of body of abstract

Organize the body of the abstract as follows:

- A statement of the purpose of the study (preferably one sentence).
- A statement of the methods used.
- A summary of the results presented in sufficient detail to support the conclusions.
- A statement of the conclusions reached. It is not satisfactory to state "the results will be discussed" or

"other data will be presented."

- Do not use subtitles, e.g., Methods, Results.

5. Abbreviations

Use only standard abbreviations. Abbreviations used in *The Journal of Nuclear Medicine* are preferred.

No abstract will be accepted unless the chemical identity of the radiopharmaceutical involved in the study is specified as accurately and completely as possible (for well-established radiophar-

maceuticals, standard abbreviations, such as MDP, DTPA, etc., are acceptable). Abstracts in which radiopharmaceuticals are identified only by code numbers will be automatically rejected.

6. Superscripts and subscripts

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

CHECK LIST:

Please be sure you have:

- ☐ Completed Boxes 1, 2, and 4, signed the conflict of interest declaration and indicate your abstract number in the space provided on this page and the two boxes on the last page of the abstract form.
- ☐ Enclosed the Conflict of Interest Declaration and the original abstract form and nine(9) copies.
- ☐ Designated an awards category, if appropriate. (Box 3 on front of Abstract Form)
- ☐ Enclosed one self addressed, stamped postcard with title and authors, for acknowledgement of receipt of abstract at SNM central office (optional).

EXAMPLE

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

This investigation was undertaken to compare the diagnostic usefulness of radionuclide bone imaging techniques to standard radiographic...

IMPORTANT

There are separate forms for Scientific Papers and Scientific Exhibits. Be sure you have the correct form.

All abstracts accepted for the program of The Society of Nuclear Medicine Annual Meeting will be printed directly from the typed copy of the abstract form. To ensure printing quality, the instructions must be followed completely for all abstracts. Please be sure to underline the name of the presenting author.

All Meeting Rooms will be set with dual screens and 35mm projectors. Requests for additional AV equipment must be made in writing by Friday, May 5, 1995.

Late or on-site requests will be charged to presenter.

Mail requests to: Department of Meeting Services
The Society of Nuclear Medicine
1850 Samuel Morse Drive, Reston, VA 22090

CONFLICT OF INTEREST DECLARATION ABSTRACT NO. _____

Having an interest or affiliation with any corporate organization does not prevent authors from making a presentation, but the relationship must be made known in advance to the audience in accordance with the Standards of the Accreditation Council for Continuing Medical Education.

A reasonable test to guide decisions about what to disclose is whether any particular affiliation could cause embarrassment to the individual or institutions

involved, or lead to questions about the authors' motives, if such affiliation(s) were made known to the general public.

Failure to disclose or false disclosure will require the SNM to remove your abstract from consideration/presentation.

Commercial organization(s) which provided direct or indirect support potentially related to the work reported in this abstract presentation must be list-

ed below. Identify by initials in column (C) any author(s) who have interests or affiliation with these organization(s) on the appropriate line(s). This form must be returned with your abstract. Signatures obtained by Fax are acceptable.

ALL AUTHORS MUST SIGN THIS FORM EVEN IF THERE ARE NO AFFILIATION(S)/INTEREST(S) TO REPORT. YOUR ABSTRACT WILL NOT BE REVIEWED WITHOUT THESE SIGNATURES.

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Boxes 1, 2 and 4 must be completed

1 **CHECK only ONE box below.**
This abstract is intended for:

☐ Technologist program

☐ Technologist student submission

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2 **CHECK only ONE box below.**
I am willing to present this paper:

☐ by posterboard only

☐ either orally or posterboard

3 **Eligibility for Special *Awards (Orally Only)**

☐ Cardiovascular Young Investigators

☐ Computer and Instrumentation Young Investigators

☐ Berson-Yalow

4 **Write only ONE category's abbreviation in the box below:**

CLINICAL SCIENCE/ APPLICATIONS:

Bone/Joint (B/J)

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Cardiovascular-Clinical (CVC)

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Endocrine (END)

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Neurosciences:

Basic (NSB)

Neurology (NSN)

Psychiatry (NSP)

Oncology Diagnosis (antibody) (ODA)

Oncology Diagnosis (non-antibody) (ODN)

Oncology/Therapy (OT)

Pediatrics (PED)

Pulmonary (PUL)

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INSTRUMENTATION & DATA ANALYSIS

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(DOS)

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Single Photons: C:

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Write only ONE category in this box

1995 ABSTRACT FORM FOR SCIENTIFIC PAPERS ONLY

**The Society of Nuclear Medicine 42nd Annual Meeting
Minneapolis Convention Center, Minneapolis, MN
Monday, June 12–Thursday June 15, 1995**

Do Not Fold Or Bend This Form/Abstract Will Be Published As Typed (Number must appear on Conflict of Interest Form)

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

Name

Institution

Division or Dept.

Street

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

(Electronically transmitted facsimiles will NOT be accepted)

DEADLINES

For Scientific Papers: Abstracts must be received (not postmarked) by Wednesday, January 4, 1995.
Please note: Acceptance or Rejection letters will be mailed no later than the week of March 12, 1995.

*See General Policies, #9, on the instruction page of the abstract form, for criteria of these awards. Technologist Section Awards are selected separately. Please see the December 1994 JNMT for description of these awards.

Mail the Items Listed Below to:

THE SOCIETY OF NUCLEAR MEDICINE

Attn: Abstracts
1850 Samuel Morse Drive
Reston, VA 22090
(703) 708-9000

PLEASE NOTE: Be sure you have:

■ **Enclosed the original abstract plus nine (9) photocopies** of the official abstract form (page 1 only) plus one page of your supporting data.

■ **Enclosed one self-addressed, stamped postcard** with title and authors if receipt is to be acknowledged (optional). Note: Overseas or non-U.S. abstracts do not require return postage.

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

DEADLINE:
WEDNESDAY,
JANUARY 4, 1995
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- ☐ I give permission to audiotape my presentation.
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I CERTIFY

That this identical abstract has not been submitted to any other national or inter- national meeting or to more than one category of this SNM Meeting.

The material has not been accepted as a full paper prior to its submission to the SNM Annual Meeting.

That all of the listed authors have reviewed this abstract and agree to its submission.

Signature of Principal Author



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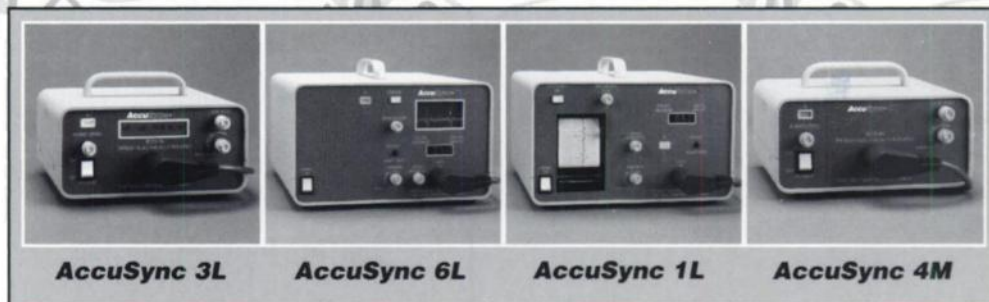
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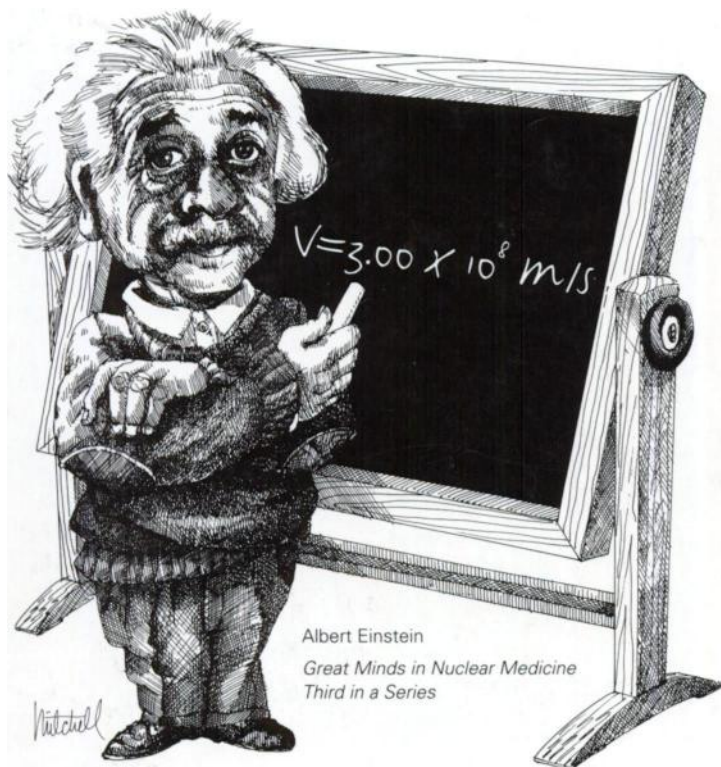


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