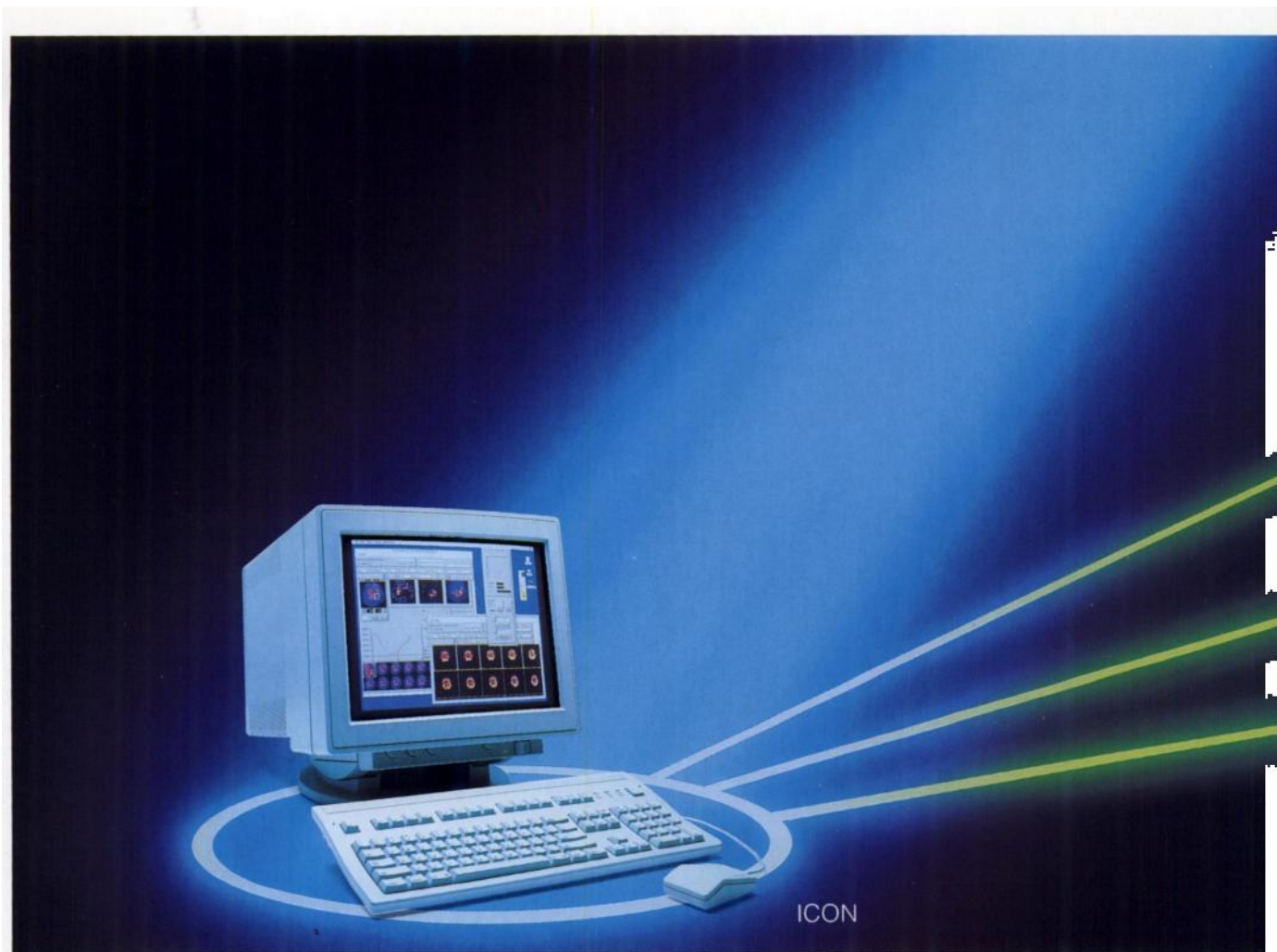
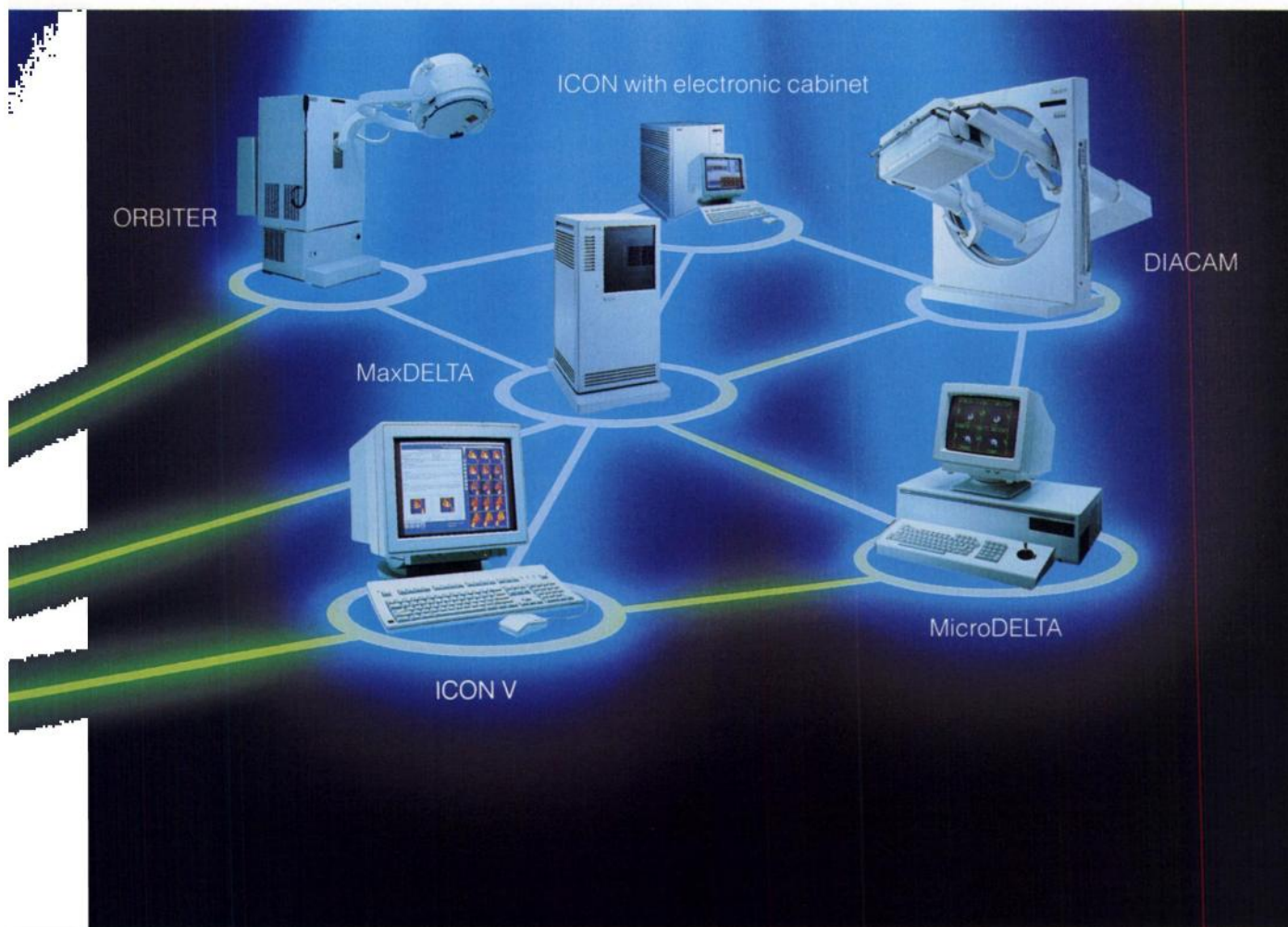


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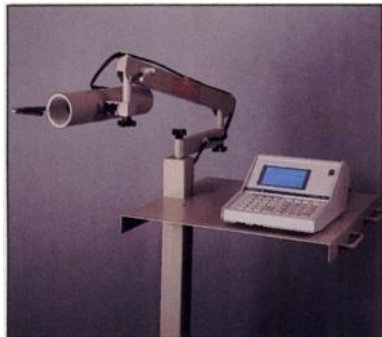
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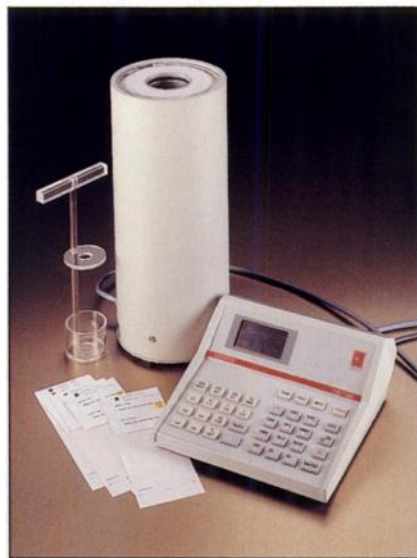
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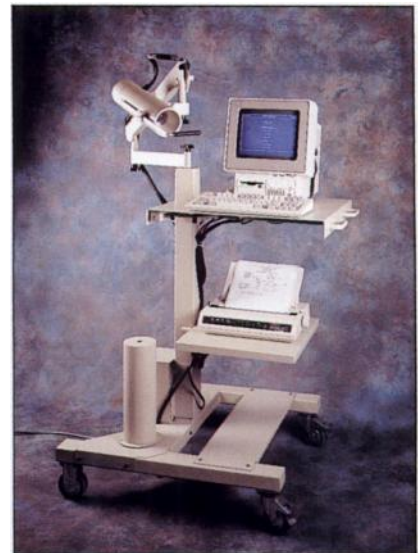
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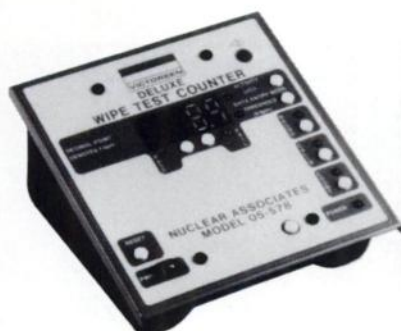


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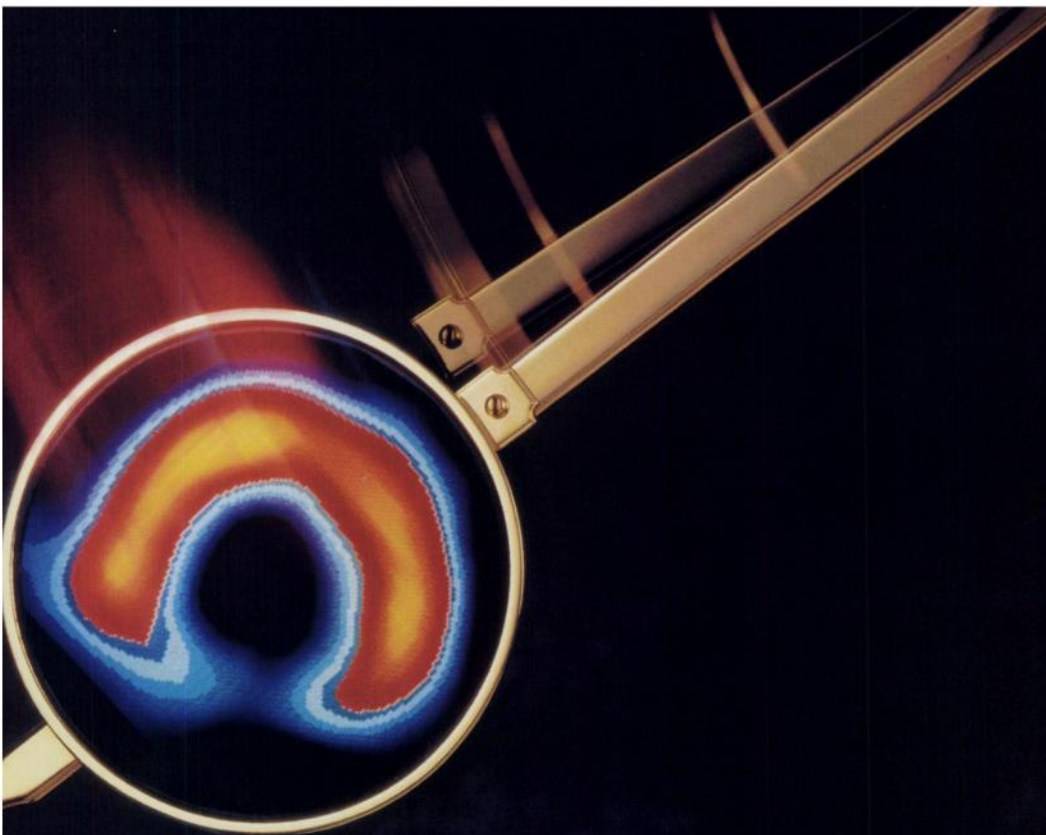
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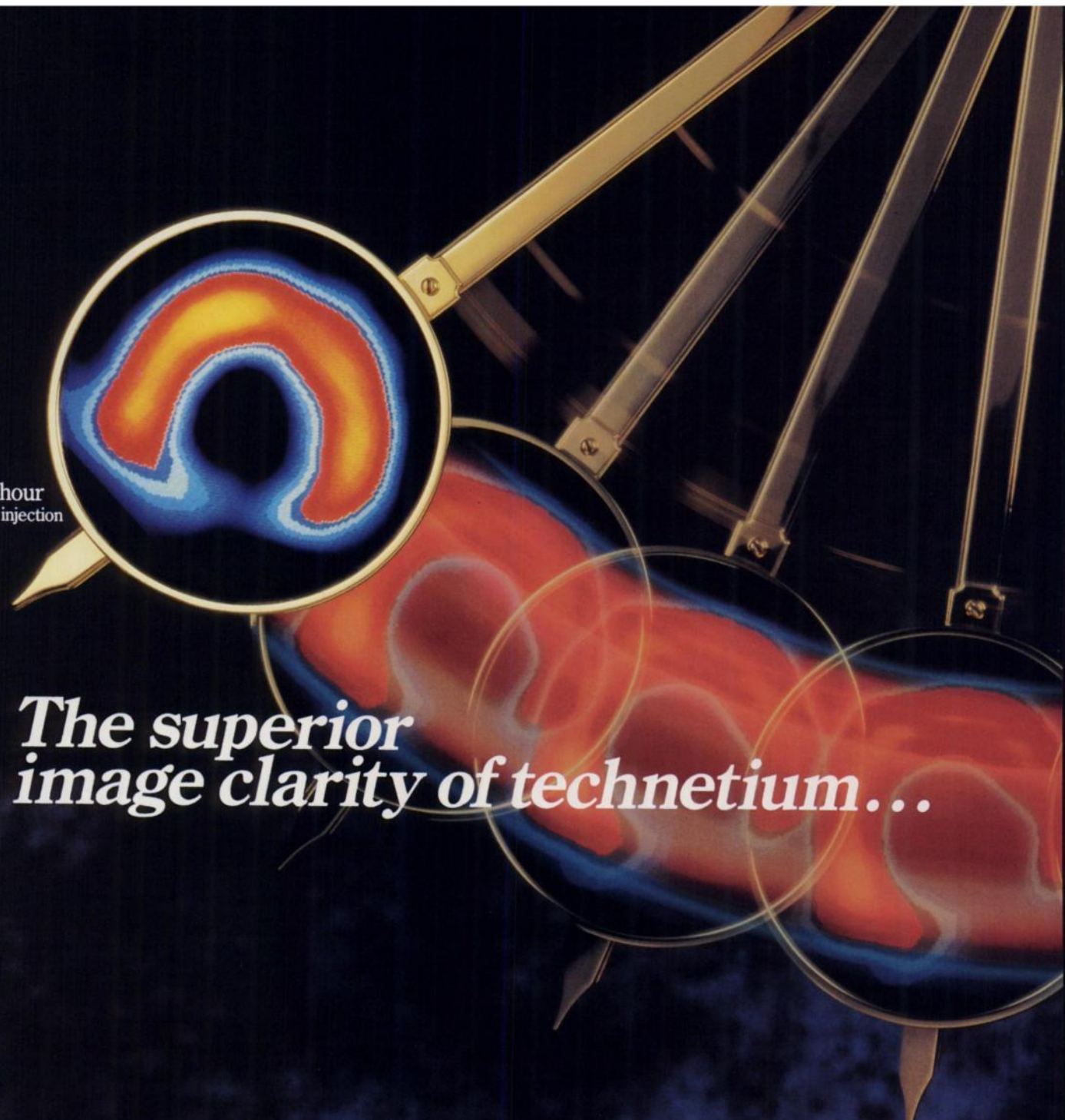


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A magnifying glass with a gold-colored frame is positioned in the upper left corner. Inside the lens is a circular cardiac scan image, likely a PET or SPECT scan, showing a cross-section of a heart. The image displays a bright, glowing ring of red and orange, indicating high metabolic activity, surrounding a darker, blue-tinted area. The background of the entire advertisement is a dark, textured blue.

*Here come two  
important new benefits  
in cardiac imaging*



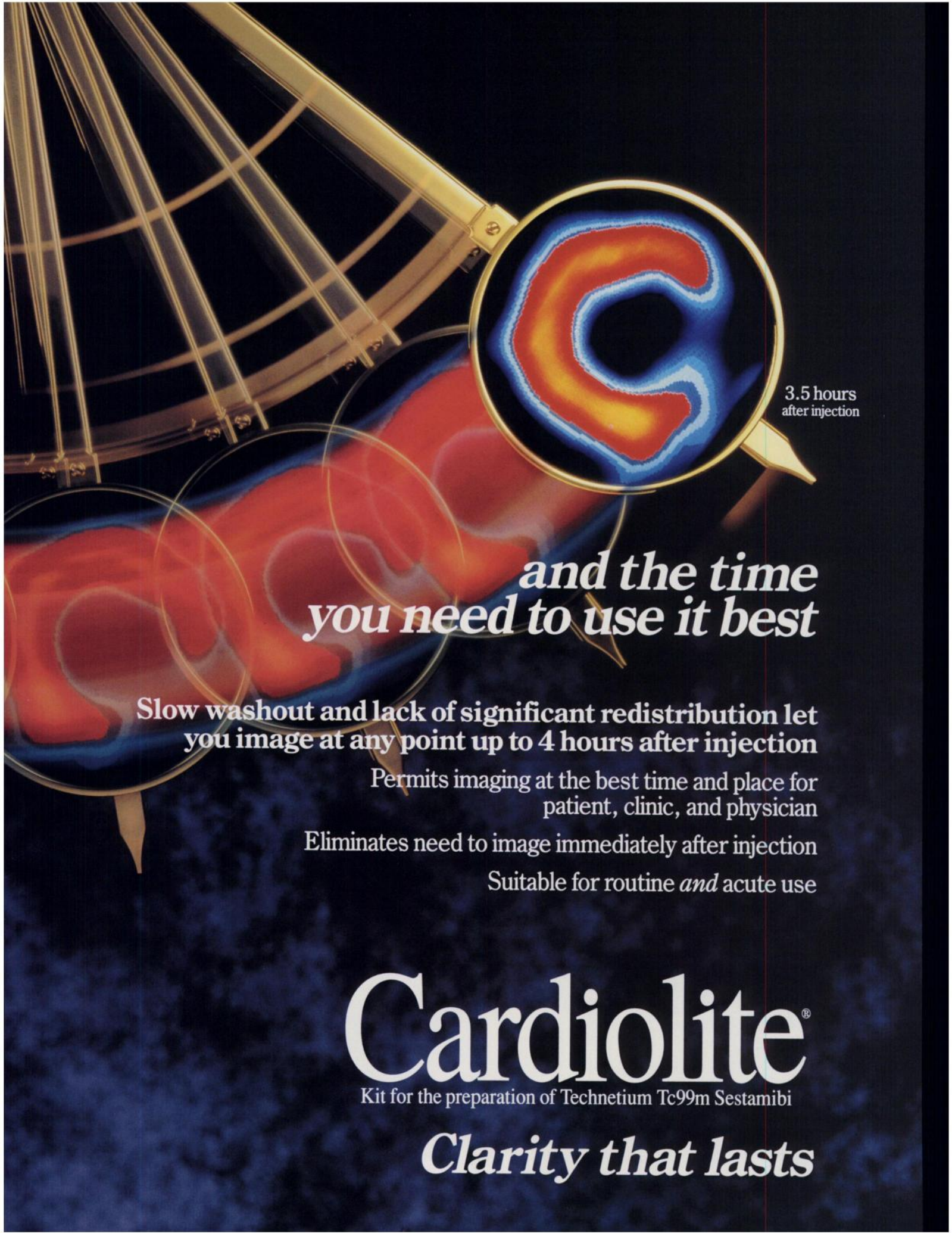


1 hour  
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*The superior  
image clarity of technetium...*

*Please see last page of advertisement for brief summary of prescribing information.*





3.5 hours  
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**Slow washout and lack of significant redistribution let  
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Permits imaging at the best time and place for  
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**Cardiolite<sup>®</sup>**

Kit for the preparation of Technetium Tc99m Sestamibi

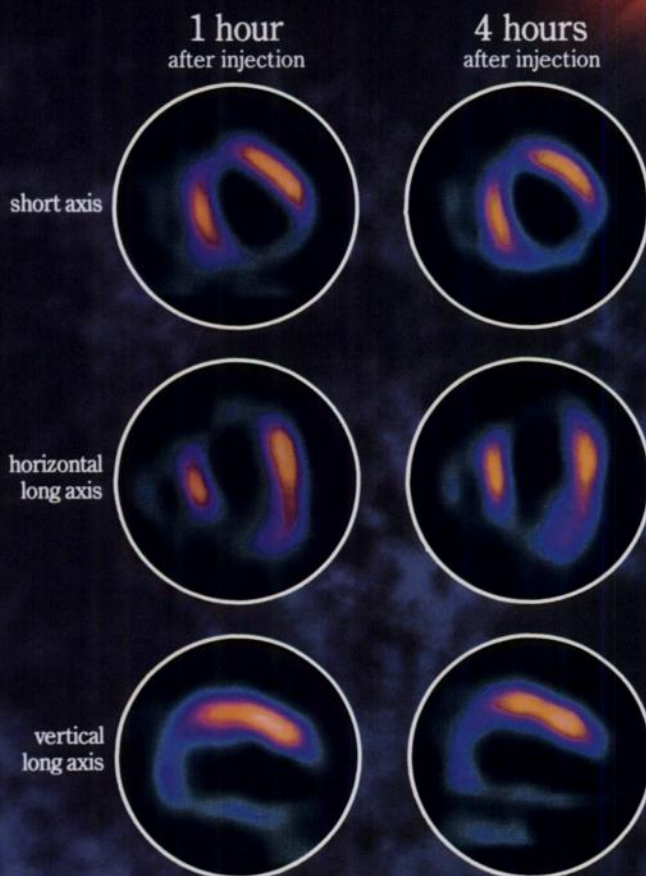
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# Cardiolite<sup>®</sup>

Kit for the preparation of Technetium Tc99m Sestamibi

*Clarity that lasts*



CARDIOLITE scans (SPECT) from a 62-year-old male with three prior myocardial infarctions (LFOV camera equipped with a high-resolution collimator, 64 x 64 matrix, 180° arc RAO to LPO, 64 projections, 25 s/projection)

*Please see last page of advertisement for brief summary of prescribing information.*

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## High degree of accuracy in detection of myocardial abnormalities

In blinded studies, CARDIOLITE imaging was 83% to 96% sensitive and 79% to 100% specific in detecting myocardial infarction, when compared with final diagnoses<sup>1</sup>

## Reassuring safety profile

No known contraindications  
Few adverse reactions

Of 2780 patients in worldwide trials, approximately 8% experienced a transient metallic taste following injection. A few cases of transient headache, mild nausea, flushing, and non-itching rash have also been reported. In worldwide commercial experience, one patient showed signs and symptoms consistent with seizure 8 to 10 min after injection. No other adverse reactions specifically attributable to the use of CARDIOLITE have been reported.<sup>1</sup>

### Reference

1. Data on file, Du Pont File H-23531.

**DU PONT  
PHARMA**

Radiopharmaceuticals



## Brief Summary

# Cardiolite

Kit for the preparation of Technetium Tc99m Sestamibi

## FOR DIAGNOSTIC USE

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

Tetrakis (2-methoxy isobutyl isonitrile) Copper (I) tetrafluoroborate - 1.0 mg  
Sodium Citrate Dihydrate - 2.6 mg  
L-Cysteine Hydrochloride Monohydrate - 1.0 mg  
Mannitol - 20 mg  
Stannous Chloride, Dihydrate, minimum ( $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ ) - 0.025 mg  
Stannous Chloride, Dihydrate, ( $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ ) - 0.075 mg  
Tin Chloride (Stannous and Stannic) Dihydrate, maximum (as  $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ ) - 0.086 mg

Prior to lyophilization the pH is 5.3 to 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 Pertechnetate Tc99m Injection. The pH of the reconstituted product is 5.5 (5.0-6.0). No bacteriostatic preservative is present.

The precise structure of the technetium complex is  $\text{Tc99m}[\text{MIBI}]_6^+$  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 distinguishing normal from abnormal myocardium, and in the localization of the abnormality, in patients with suspected myocardial infarction. It is also useful in the evaluation of myocardial function using the first-pass technique.

**CONTRAINDICATIONS:** None known.

**WARNINGS:** In studying patients in whom cardiac disease is known or suspected, take care to assure continuous monitoring and treatment in accordance with safe, accepted clinical procedure.

### 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 (as outlined in the full prescribing information).

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

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

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

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

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

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

#### Carcinogenesis, Mutagenesis, Impairment of Fertility

In comparison with most other diagnostic technetium-labeled radiopharmaceuticals, the radiation dose to the ovaries (1.5 rads/30 mCi) 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 (9 mg/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.

Ideally, examinations using radiopharmaceuticals, especially those elective in nature, of a woman of childbearing capability, should be performed during the first few (approximately 10) days following the onset of menses.

#### Nursing Mothers

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

#### Pediatric Use

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

**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. One patient demonstrated signs and symptoms consistent with seizure, 8 to 10 minutes after administration of the drug. No other adverse reactions specifically attributable to the use of Technetium Tc99m Sestamibi have been reported.

**DOSAGE AND ADMINISTRATION:** The suggested dose range for I.V. administration to be employed in the average patient (70 kg) is:

370 to 1110 MBq (10 to 30 mCi)

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 (see also CLINICAL PHARMACOLOGY section in full prescribing information).

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 room temperature (15 to 30°) before and after reconstitution.

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

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

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

Stabin, M., July, 1990, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831, (615) 576-3449.

**HOW SUPPLIED:** Du Pont's CARDIOLITE®, Kit for the preparation of Technetium Tc99m Sestamibi is supplied as a 5 mL 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 and 5.9. The contents of the vials are lyophilized and stored under nitrogen. Store at room temperature (15 to 30°C) before and after reconstitution. Technetium Tc99m Sestamibi contains no preservatives. Included in each two (2) vial kit is one (1) package insert, five (5) vial shield labels and five (5) radiation warning labels. Included in each five (5) vial kit is one (1) package insert, five (5) vial shield labels and five (5) radiation warning labels. Included in each thirty (30) vial kit is one (1) package insert, thirty (30) vial shield labels and thirty (30) radiation warning labels.

The US Nuclear Regulatory Commission has approved this reagent kit for distribution to persons licensed to use byproduct material identified in 35.100 and 35.200 of 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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Radiopharmaceuticals Division

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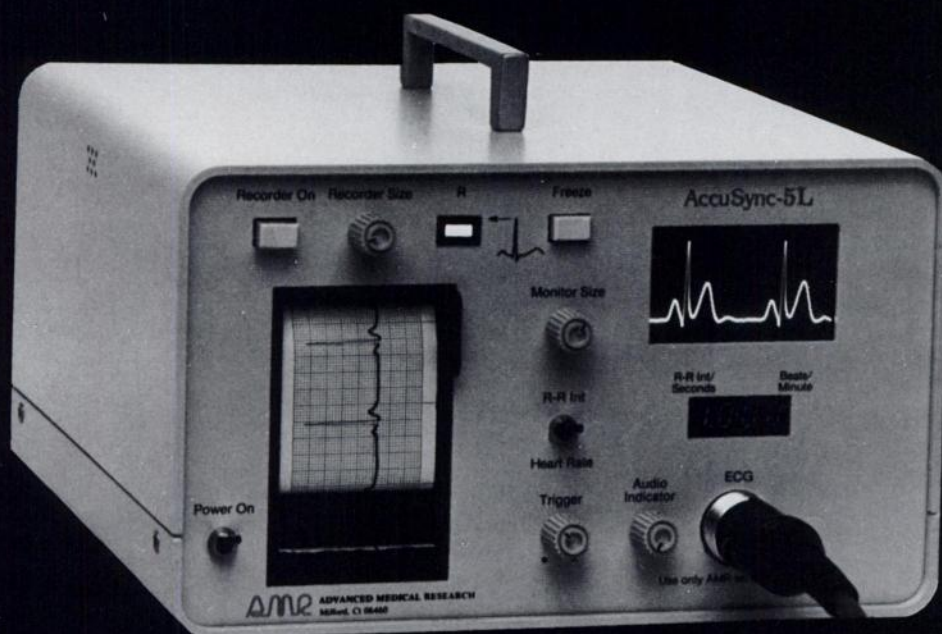
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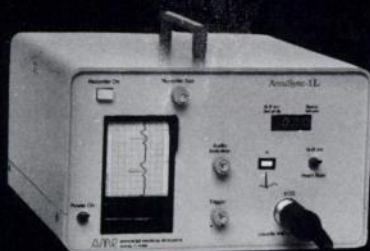
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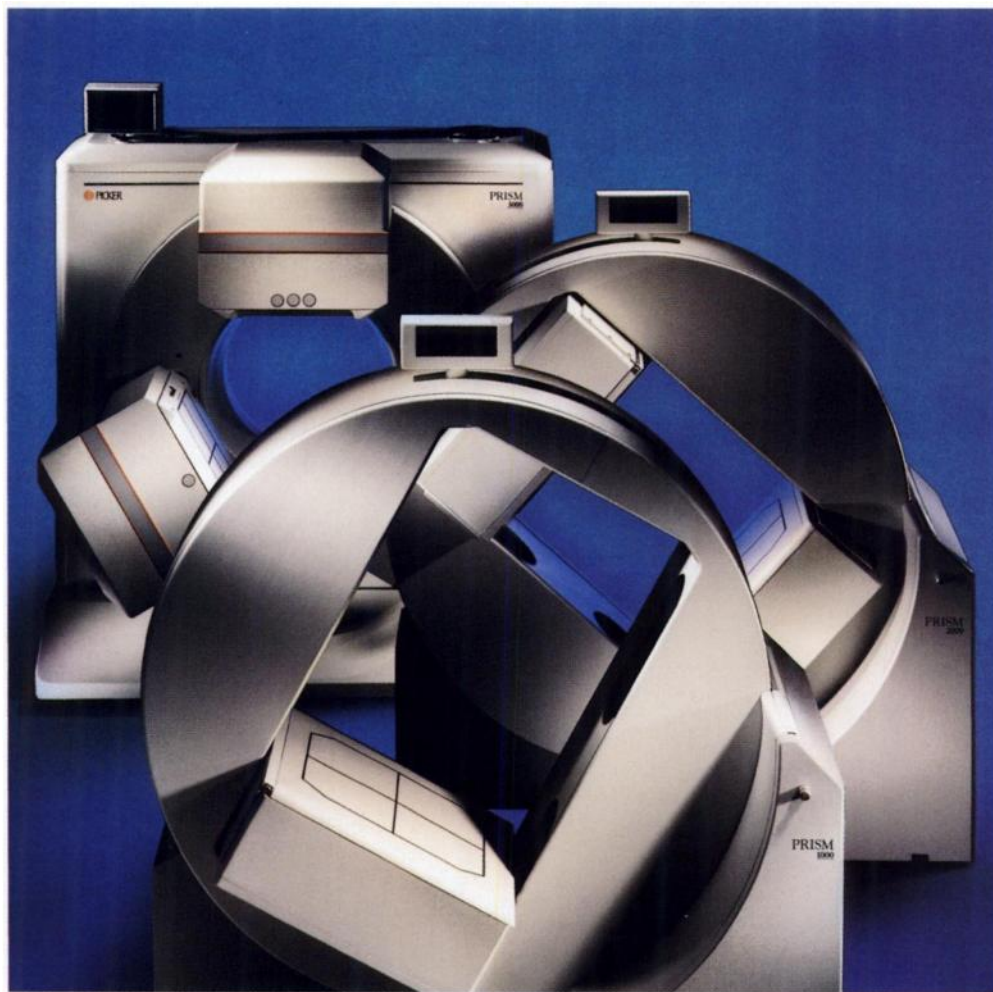
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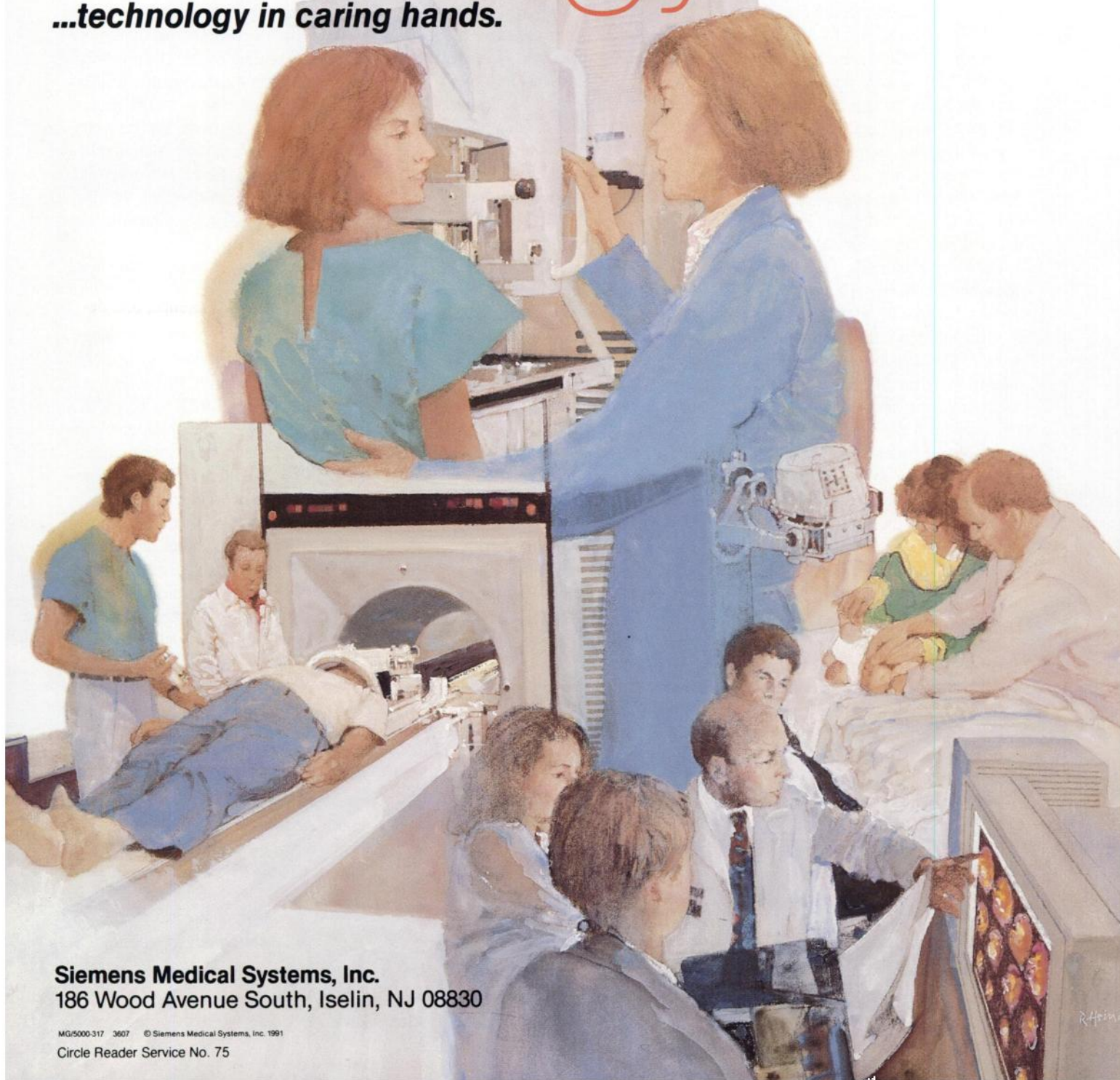
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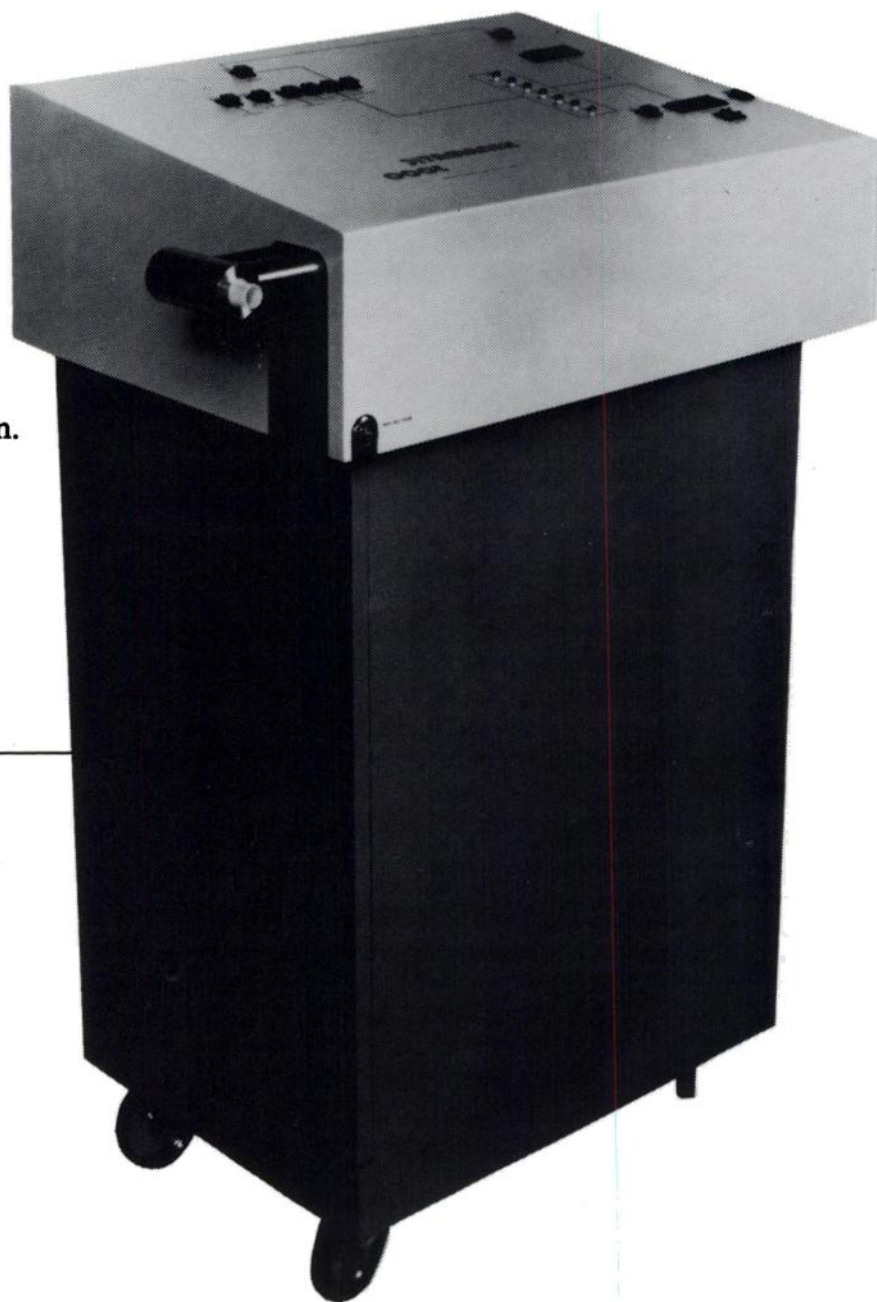
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## **Equivalent sensitivity and specificity**

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## **Strong prognostic value**

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## **Established safety profile**

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†† Side effects are usually mild and can include chest pain, dizziness, headache, hypotension and nausea.

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Please see last page of this ad for references and prescribing information, including contraindications, warnings and adverse reactions.

**THALLOUS CHLORIDE TI 201**  
**DIAGNOSTIC FOR**  
**INTRAVENOUS USE**

**DESCRIPTION:** Thallous Chloride TI 201 is supplied in isotonic solution as a sterile, non-pyrogenic, diagnostic radiopharmaceutical for intravenous administration. The aqueous solution at the time of calibration contains 37MBq/ml (1mCi/ml) Thallous Chloride TI 201. The pH is adjusted with hydrochloric acid and/or sodium hydroxide solution. It is made isotonic with 9mg/ml sodium chloride and is preserved with 9mg/ml benzyl alcohol.

Thallium TI 201 is cyclotron produced with no carrier added and contains no less than 98% Thallium TI 201 as a percentage of total activity with contaminants less than 0.3% Thallium TI 200, 1.2% Thallium TI 202, and 0.2% Lead Pb 203 expressed as a percentage of TI 201 activity at calibration. It is recommended that Thallous Chloride TI 201 be administered close to calibration time to minimize the effect of higher levels of radionuclide contaminant.

**INDICATIONS AND USAGE:** Thallous Chloride TI 201 may be useful in myocardial perfusion imaging for the diagnosis and localization of myocardial infarction. It may also have prognostic value regarding survival, when used in the clinically stable patient following the onset of symptoms of an acute myocardial infarction, to assess the site and size of the perfusion defect.

Thallous Chloride TI 201 may also be useful in conjunction with exercise stress testing as an adjunct in the diagnosis of ischemic heart disease (atherosclerotic coronary artery disease). It is usually not possible to differentiate recent from old myocardial infarction, or to differentiate exactly between recent myocardial infarction and ischemia.

Thallous Chloride TI 201 is indicated also for the localization of sites of parathyroid hyperactivity in patients with elevated serum calcium and parathyroid hormone levels. It may also be useful in pre-operative screening to localize extrathyroidal and mediastinal sites of parathyroid hyperactivity and for post-surgical reexamination. Thallous Chloride TI 201 has not been adequately demonstrated to be effective for the localization of normal parathyroid glands.

**CONTRAINDICATIONS:** None known.

**WARNINGS:** In studying patients in whom myocardial infarction or ischemia is known or suspected, care should be taken to assure continuous clinical monitoring and treatment in accordance with safe, accepted procedure. Exercise stress testing should be performed only under the supervision of a qualified physician and in a laboratory equipped with appropriate resuscitation and support apparatus.

**PRECAUTIONS:** Data are not available concerning the effect of marked alterations in blood glucose, insulin, or pH (such as is found in diabetes mellitus) on the quality of Thallous Chloride TI 201 scans. Attention is directed to the fact that thallium is a potassium analog, and since the transport of potassium is affected by these factors, the possibility exists that the thallium may likewise be affected.

**GENERAL:** Do not use after the expiration time and date (5 days maximum after calibration time) stated on the label.

Do not use if contents are turbid.

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

Thallous Chloride TI 201, as all radioactive materials, must be handled with care and used with appropriate safety measures to minimize external radiation exposure to clinical personnel. Care should also be taken to minimize radiation exposure to patients in a manner consistent with proper patient management.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** No long-term animal studies have been performed to evaluate carcinogenic potential, mutagenic potential, or whether Thallous Chloride TI 201 affects fertility in males or females.

Ideally, examinations using radiopharmaceuticals, especially those elective in nature, of a woman of childbearing capability should be performed during the first few (approximately 10) days following the onset of menses.

**Pregnancy Category C:** Adequate reproductive studies have not been conducted in animals with Thallous Chloride TI 201. It is also not known whether Thallous Chloride TI 201 can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Thallous Chloride TI 201 should not be given to a pregnant woman except when benefits clearly outweigh the potential risks.

**Nursing Mothers:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, nursing should not be undertaken when a patient is administered radioactive material.

**Pediatric Use:** Safety and effectiveness in children below the age of 18 have not been established. 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.

**ADVERSE REACTIONS:** A single adverse reaction to the administration of Thallous Chloride TI 201 has been reported consisting of hypotension accompanied by pruritus and a diffuse rash which responded to antihistamines and steroids within one hour.

**HOW SUPPLIED:** Thallous Chloride TI 201 for intravenous administration is supplied as a sterile, nonpyrogenic solution containing at calibration time 37MBq/ml (1mCi/ml) of Thallous Chloride TI 201, 9mg/ml sodium chloride, and 9mg/ml of benzyl alcohol. The pH is adjusted with hydrochloric acid and/or sodium hydroxide solution. Vials are available in the following quantities of radioactivity: 81.4, 122.1, 162.8, 244.2, 325.6 and 366.3MBq (2.2, 3.3, 4.4, 6.6, 8.8 and 9.9mCi) of Thallous Chloride TI 201.

Store at room temperature (15-30°C).



**Radiopharmaceuticals**

Du Pont Radiopharmaceuticals, Inc.  
331 Treble Cove Road  
Billerica, MA, USA 01862

Printed in U.S.A.  
August 1988

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# I.V. PERSANTINE®

(dipyridamole USP) Injection 5mg/ml

**Prescribing Information**

**For Intravenous Injection**

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

**CONTRAINDICATIONS** Hypersensitivity to dipyridamole.

**WARNINGS** Serious adverse reactions associated with the administration of intravenous Persantine® (dipyridamole USP) have included fatal and non-fatal myocardial infarction, ventricular fibrillation, symptomatic ventricular tachycardia, transient cerebral ischemia, and bronchospasm.

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

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

**PRECAUTIONS** See WARNINGS.

**Drug Interactions** Oral maintenance theophylline may abolish the coronary vasodilatation induced by intravenous Persantine® (dipyridamole USP) administration. This could lead to a false negative thallium imaging result.

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

\*Calculation based on assumed body weight of 50 kg.

**Pregnancy Category B** Reproduction studies performed in mice and rats at daily oral doses of up to 125 mg/kg (15.6 times\* the maximum recommended daily human oral dose) and in rabbits at daily oral doses of up to 20 mg/kg (2.5 times\* the maximum recommended daily human oral dose) have revealed no evidence of impaired embryonic development due to dipyridamole. There are, however, no adequate and well controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human responses, this drug should be used during pregnancy only if clearly needed.

\*Calculation based on assumed body weight of 50 kg.

**Nursing Mothers** Dipyridamole is excreted in human milk.

**Pediatric Use** Safety and effectiveness in children have not been established.

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

Serious adverse events (fatal and non-fatal myocardial infarction, severe ventricular arrhythmias, and serious CNS abnormalities) are described above (see WARNINGS).

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

Adverse reactions occurring in greater than 1% of the patients in the study are chest pain/angina pectoris (19.7%), headache (12.2%), dizziness (11.8%), electrocardiographic abnormalities/ST-T changes (15.9%), electrocardiographic abnormalities/extrasystoles (5.2%), hypotension (4.6%), nausea (4.6%), flushing (3.4%), electrocardiographic abnormalities/tachycardia (3.2%), dyspnea (2.6%), pain unspecified (2.6%), blood pressure lability (1.6%), hypertension (1.5%), paresthesia (1.3%), fatigue (1.2%).

Less common adverse reactions occurring in 1% or less of the patients within the study included: Cardiovascular System: Electrocardiographic abnormalities unspecified (0.8%), arrhythmia unspecified (0.6%), palpitation (0.3%), ventricular tachycardia (0.2% see WARNINGS), bradycardia (0.2%), myocardial infarction (0.1% see WARNINGS), AV block (0.1%), syncope (0.1%), orthostatic hypotension (0.1%), atrial fibrillation (0.1%), supraventricular tachycardia (0.1%), ventricular arrhythmia unspecified (0.03% see WARNINGS), heart block unspecified (0.03%), cardiomyopathy (0.03%), edema (0.03%).

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

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

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

Other: Myalgia (0.9%), back pain (0.6%), injection site reaction unspecified (0.4%), diaphoresis (0.4%), asthenia (0.3%), malaise (0.3%), arthralgia (0.3%), injection site pain (0.1%), rigor (0.1%), earache (0.1%), tinnitus (0.1%), vision abnormalities unspecified (0.1%), dysgeusia (0.1%), thirst (0.03%), depersonalization (0.03%), eye pain (0.03%), renal pain (0.03%), perineal pain (0.03%), breast pain (0.03%), intermittent claudication (0.03%), leg cramping (0.03%).

Caution Federal law prohibits dispensing without prescription.



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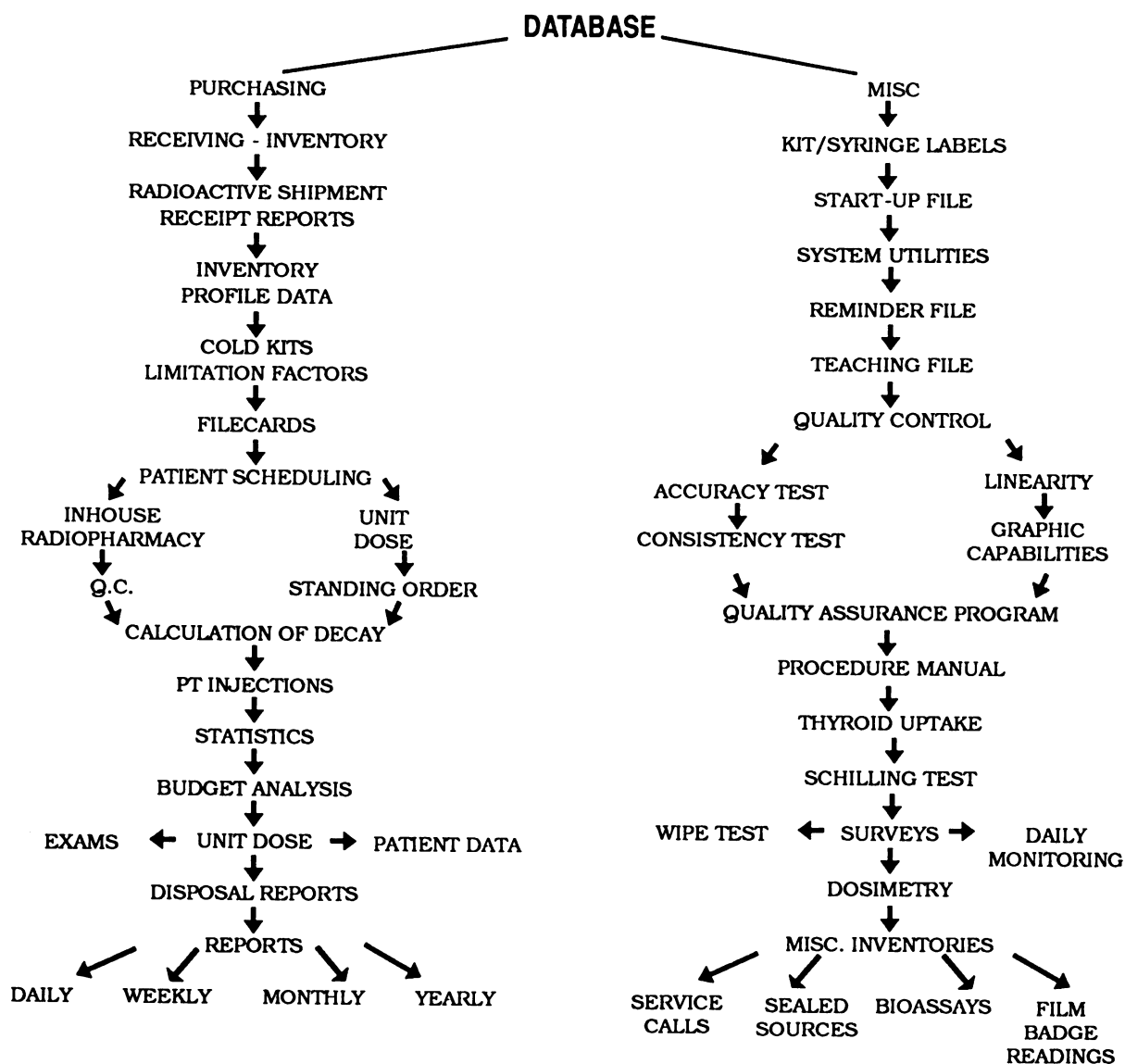
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Registration Form	November Issue	5/8/92
Housing Form	December Issue	5/15/92

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## FOR Scientific Papers and Scientific Exhibits

1992 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 39th Annual Meeting in Los Angeles, CA. Scientific Paper abstracts accepted for the program 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*. Abstracts accepted for Society Program Scientific Exhibits will not be published. Original contributions on a variety of topics related to nuclear medicine will be considered, including:



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

DEADLINES

For receipt of abstracts for  
**SCIENTIFIC PAPERS**  
is Tuesday, January 7, 1992.

For receipt of abstracts for  
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is Tuesday, January 14, 1992.

There are two abstract forms for this year's meeting. The Scientific Paper abstract form can be obtained in the October 1991 *JNM*. The Scientific Exhibits abstract form is only available by calling or writing:

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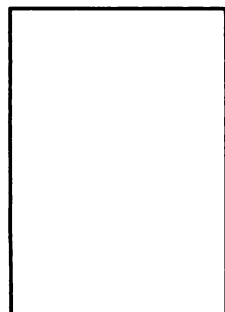
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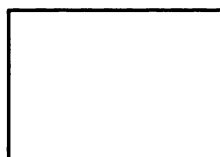
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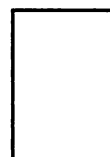
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The New England Chapter-SNM/TS announces "The Job Hotline," a national toll-free, hotline for nuclear medicine. The hotline is designed to provide a quick link for technologists seeking jobs and for hospitals seeking technologists. Institutions seeking technologists should call the hotline number, leave the name of the institution, title of the job opening, and name and number of the contact person; data are then stored for three months in a database for anyone who calls the hotline seeking employment. Technologists seeking employment should call the hotline number, specify state(s) which are of interest, specify type of job desired, and leave name and address. A listing will then be sent out in 48 hours; all inquiries are kept confidential. If an opening has not been filled within three months, the institution should call again to have it listed. The institution should also call if an opening has been filled so that it can be deleted from the database. The hotline numbers are 1-800-562-6387 (1-800-JOB-NETS) or 1-990-4212 in Maine. Questions or comments should be directed to: Tom Starno, Manager, Job Hotline, New England Chapter-TS at (207) 945-7186.

The Mideastern Chapter-SNM/TS will provide a referral network for technologists seeking employment and for hospitals in need of technologists. Interested individuals should call Cathy Gonzalez at (301) 855-1712. Please leave your name, address, phone number and a brief description of your request.

**NOTE:** SNM chapters are invited to submit job referral service listings for publication. Pertinent information—name and brief description of the service, telephone number and/or address, name or number of contact person for inquiries—should be sent to:

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### CardioGen-82<sup>®</sup> Rubidium Rb 82 Generator

#### INDICATIONS AND USAGE

Rubidium chloride Rb 82 injection is a myocardial perfusion agent that is useful in distinguishing normal from abnormal myocardium in patients with suspected myocardial infarction.

Cardiogen-82 (Rubidium Rb 82 Generator) must be used with an infusion system specifically labeled for use with the generator and capable of accurate measurement and delivery of doses of rubidium chloride Rb 82 injection not to exceed a single dose of 2220 MBq (60 mCi) and a cumulative dose of 4440 MBq (120 mCi) at a rate of 50 mL/min with a maximum volume per infusion of 100 mL and a cumulative volume not to exceed 200 mL. These performance characteristics reflect the conditions of use under which the drug development clinical trials were conducted.

Adequate data from clinical trials to determine precise localization of myocardial infarction or identification of stress-induced ischemia have not been collected.

Positron emission tomographic (PET) instrumentation is recommended for use with rubidium chloride Rb 82 injection.

#### CONTRAINDICATIONS

None known.

#### WARNINGS

Caution should be used during infusion as patients with congestive heart failure may experience a transitory increase in circulatory volume load. These patients should be observed for several hours following the Rb-82 procedure to detect delayed hemodynamic disturbances.

#### PRECAUTIONS

##### General

Data are not available concerning the effect of marked alterations in blood glucose, insulin, or pH (such as is found in diabetes mellitus) on the quality of rubidium chloride Rb 82 scans. Attention is directed to the fact that rubidium is physiologically similar to potassium, and since the transport of potassium is affected by these factors, the possibility exists that rubidium may likewise be affected.

Rubidium chloride Rb 82 injection must be administered only with an appropriate infusion system capable of meeting the performance characteristics previously described. (See INDICATIONS AND USAGE). The drug should be used only by those practitioners with a thorough understanding of the use and performance of the infusion system.

Repeat doses of rubidium chloride Rb 82 injection may lead to an accumulation of the longer lived radioactive contaminants strontium Sr 82 and strontium Sr 85.

Since eluate obtained from the generator is intended for intravenous administration, aseptic techniques must be strictly observed in all handling. Only additive free Sodium Chloride Injection USP should be used to elute the generator. Do not administer eluate from the generator if there is any evidence of foreign matter.

As in the use of any radioactive material, care should be taken to minimize radiation exposure to the patient consistent with proper patient management and to insure minimum radiation exposure to occupational workers.

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.

#### Carcinogenesis, Mutagenesis, Impairment of Fertility

No long-term studies have been performed to evaluate carcinogenic potential, mutagenicity potential, or to determine whether rubidium Rb 82 may affect fertility in males or females.

#### Pregnancy Category C

Animal reproductive studies have not been conducted with rubidium Rb 82. It is also not known whether rubidium Rb 82 can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Rubidium Rb 82 should be given to pregnant women only if the expected benefits to be gained clearly outweigh the potential hazards.

Ideally, examinations using radiopharmaceuticals, especially those examinations which are elective in nature, in women of childbearing capability should be performed during the first few (approximately 10) days following the onset of menses.

#### Nursing Mothers

It is not known whether rubidium Rb 82 is excreted in human milk. Due to the short half-life of rubidium Rb 82 (75 sec) it is unlikely that the drug would be excreted in human milk during lactation. However, because many drugs are excreted in human milk, caution should be exercised when rubidium Rb 82 is administered to nursing women.

#### Pediatric Use

Safety and effectiveness in children have not been established.

#### ADVERSE REACTIONS

No adverse reactions specifically attributable to rubidium Rb 82 have been reported during controlled clinical trials.

#### HOW SUPPLIED

Cardiogen-82 (Rubidium Rb 82 Generator) is supplied in the form of strontium Sr 82 adsorbed on a hydrous stannic oxide column with an activity of 90-150 millicuries Sr-82 at calibration time. The generator is encased in a lead shield surrounded by a labeled plastic container. Complete assay data for each generator are provided on the container label. Cardiogen-82 (Rubidium Rb 82 Generator) is intended for use only with an appropriate, properly calibrated infusion system labeled for use with the generator.

(J4-263)

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# We've removed your PET collar



## PET perfusion studies without a cyclotron

CardioGen-82® (Rubidium Rb 82 Generator) is the only generator-based myocardial perfusion agent indicated for PET imaging.

Now in 45 to 60 minutes you can have PET images to help you distinguish normal from abnormal myocardium. All without the expense of a cyclotron!

The short 75-second half-life lowers the radiation burden to the patient. When incorporated into the Rubidium Infusion System, serial imaging of myocardial blood flow changes can be performed as often as every ten minutes.



Rubidium-82  
Infusion System

The CardioGen-82 System also improves patient throughput and scheduling efficiency by enabling you to perform multiple studies in a short time.

Remove the PET collar from your department. Get the PET images you need in 45 to 60 minutes, without a costly cyclotron.

**CardioGen-82®**  
**Rubidium Rb-82 Generator**

Please see adjacent page for brief summary of prescribing information.

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 **SQUIBB®**  
Diagnostics