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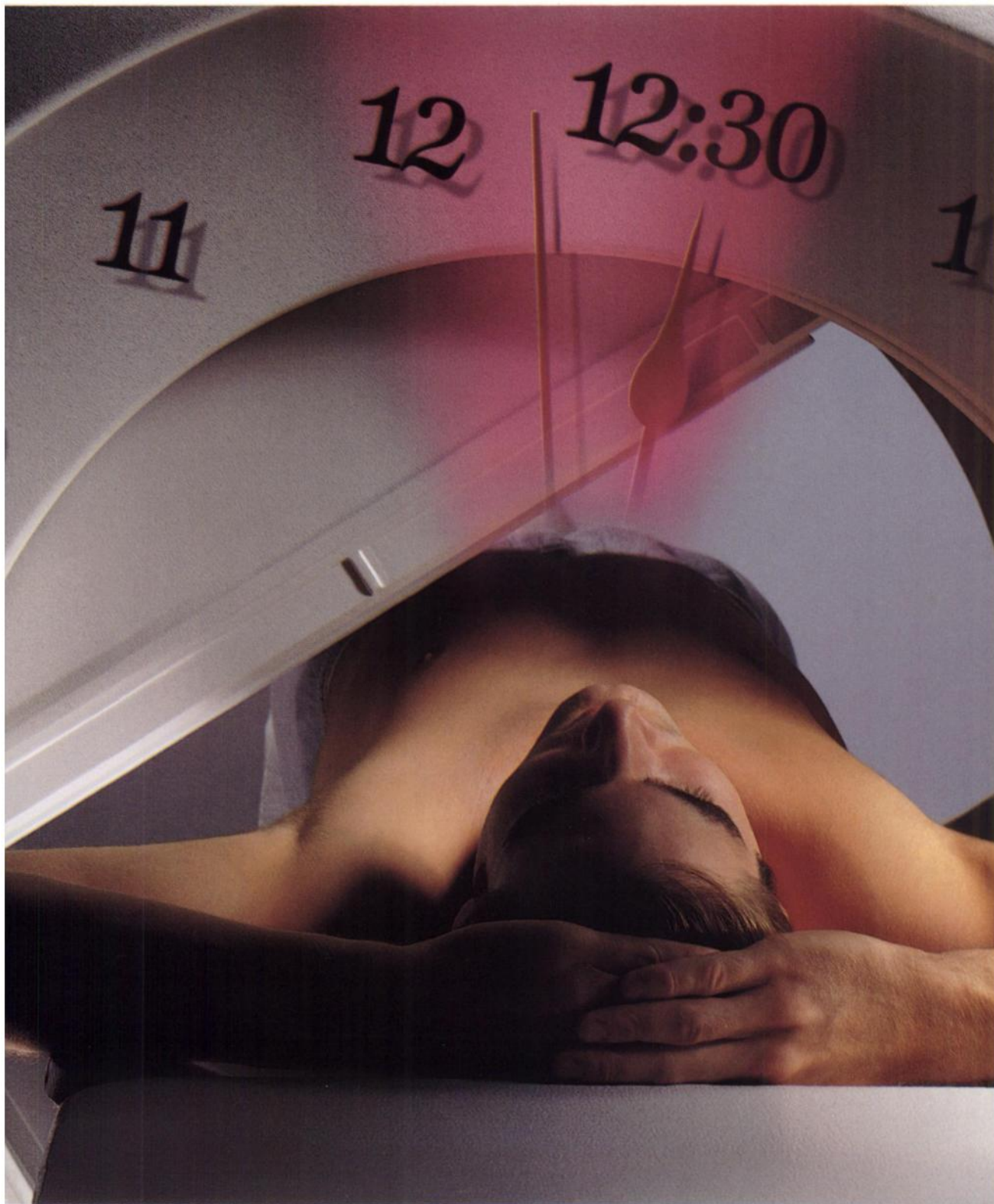
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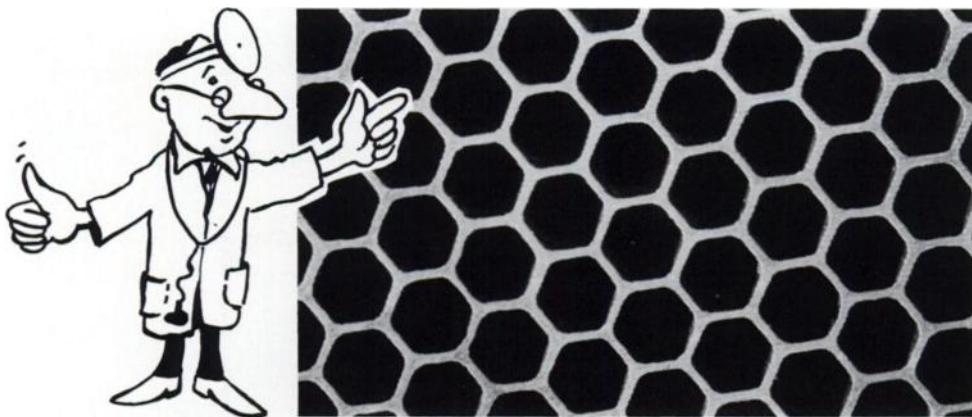
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# DON'T USE A FOIL COLLIMATOR...



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# FOR BETTER IMAGE QUALITY USE A MICRO CAST COLLIMATOR...



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# The rule of thumb in stress perfusion imaging

In myocardial perfusion imaging, the quality of information is directly related to the level of exercise, as measured by the percentage of maximal predicted heart rate achieved by the patient at the time of tracer injection. This is because myocardial oxygen demand is mainly determined by the heart rate. When oxygen demand is increased by exercise, the disparity in coronary blood flow caused by the presence of significant CAD produces perfusion defects, which allow for lesion detection. This provides valuable physiological information for CAD diagnosis.<sup>1,2</sup>

A rule of thumb governs the exercise stress test. Patients are asked to exercise to 85% of their maximal predicted heart rate. This rule has been determined from a review of exercise ECG studies where diagnostic information has been considered inconclusive at heart rates below 85% of the maximal predicted heart rate.<sup>3-5</sup>

## When to bend it

However, not all patients will achieve 85% of their maximal predicted heart rate. Some may reach diagnostic endpoints in testing. Others will have physical limitations or may be on beta blockers that prevent them from achieving the optimal level.

To maximize diagnostic certainty and avoid the risk of false-negative test results, suboptimal stress should be avoided.

## Pharmacologic stress: The measure of success in imaging after suboptimal exercise

In images taken after patients have failed to reach 85% of their maximal predicted heart rate, defects may go undetected.<sup>4,5</sup> I.V. Persantine® (dipyridamole USP) can help salvage potentially nondiagnostic perfusion studies where patients have achieved suboptimal exercise levels. This form of pharmacologic stress, administered when the patient's heart rate has returned to baseline, allows for reliable results and may result in a higher yield of useful imaging information.<sup>6</sup>

In addition, I.V. Persantine offers a proven safety record,<sup>7\*</sup> gradual onset, and a convenient, easy-to-follow protocol. In pharmacologic stress, it's the rule by which all other agents are measured. In perfusion imaging, anything less diminishes diagnostic certainty.

**Ask questions about pharmacologic stress with I.V. Persantine.**  
Call the Du Pont Pharma Nuclear Cardiology Infoline at 1-800-343-7851 for further information.



\*Serious adverse reactions associated with the administration of I.V. Persantine have included fatal and nonfatal myocardial infarction, ventricular fibrillation, symptomatic ventricular tachycardia, transient cerebral ischemia, and bronchospasm. Severe adverse events have occurred infrequently (0.3%) in a study of 3911 patients. 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.

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

Please see brief summary of prescribing information on reverse for contraindications, warnings, and adverse reactions.

References: 1. Gould KL. Pharmacologic intervention as an alternative to exercise stress. *Semin Nucl Med.* 1987;17:121-130. 2. Verzijlbergen JF, Vermeersch PHMJ, Laarman GJ, Ascoop CAPL. Inadequate exercise leads to suboptimal imaging. Thallium-201 myocardial perfusion imaging after dipyridamole combined with low-level exercise unmasks ischemia in symptomatic patients with non-diagnostic thallium-201 scan who exercise submaximally. *J Nucl Med.* 1991;32:2071-2076. 3. Goldschlager N, Selzer A, Cohn K. Treadmill stress tests as indicators of presence and severity of coronary artery disease. *Ann Intern Med.* 1976;85:277-286. 4. Iskandrian AS, Hoo J, Kong B, Lyons E. Effect of exercise level on the ability of thallium-201 tomographic imaging in detecting coronary artery disease: analysis of 461 patients. *J Am Coll Cardiol.* 1989;14:1477-1486. 5. Colby J, Haked A-H, Iskandrian AS, Matteman S. Hemodynamic, angiographic and scintigraphic correlates of positive exercise electrocardiograms: emphasis on strongly positive exercise electrocardiograms. *J Am Coll Cardiol.* 1983;2:21-29. 6. Young DZ, Guiney TE, McKusick KA, et al. Unmasking potential myocardial ischemia with dipyridamole thallium imaging in patients with normal submaximal exercise thallium tests. *Am J Noninvas Cardiol.* 1987;1:11-14. 7. Data on file, Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, Conn.

# I.V. PERSANTINE®

(dipyridamole USP) Injection 5mg/ml

## I.V. PERSANTINE®

(dipyridamole USP) Injection 5mg/ml

### Brief Summary of Prescribing Information

#### 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 two non-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 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 previously (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 shown in the following table:

	Incidence (%) of Drug-Related Adverse Events
Chest Pain/Angina Pectoris	19.7
Headache	12.2
Dizziness	11.8
Electrocardiographic Abnormalities/ST-T changes	7.5
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%).

**OVERDOSAGE** No cases of overdosage in humans have been reported. It is unlikely that overdosage will occur because of the nature of use (i.e., single intravenous administration in controlled settings). See WARNINGS.

**Caution** Federal law prohibits dispensing without prescription.



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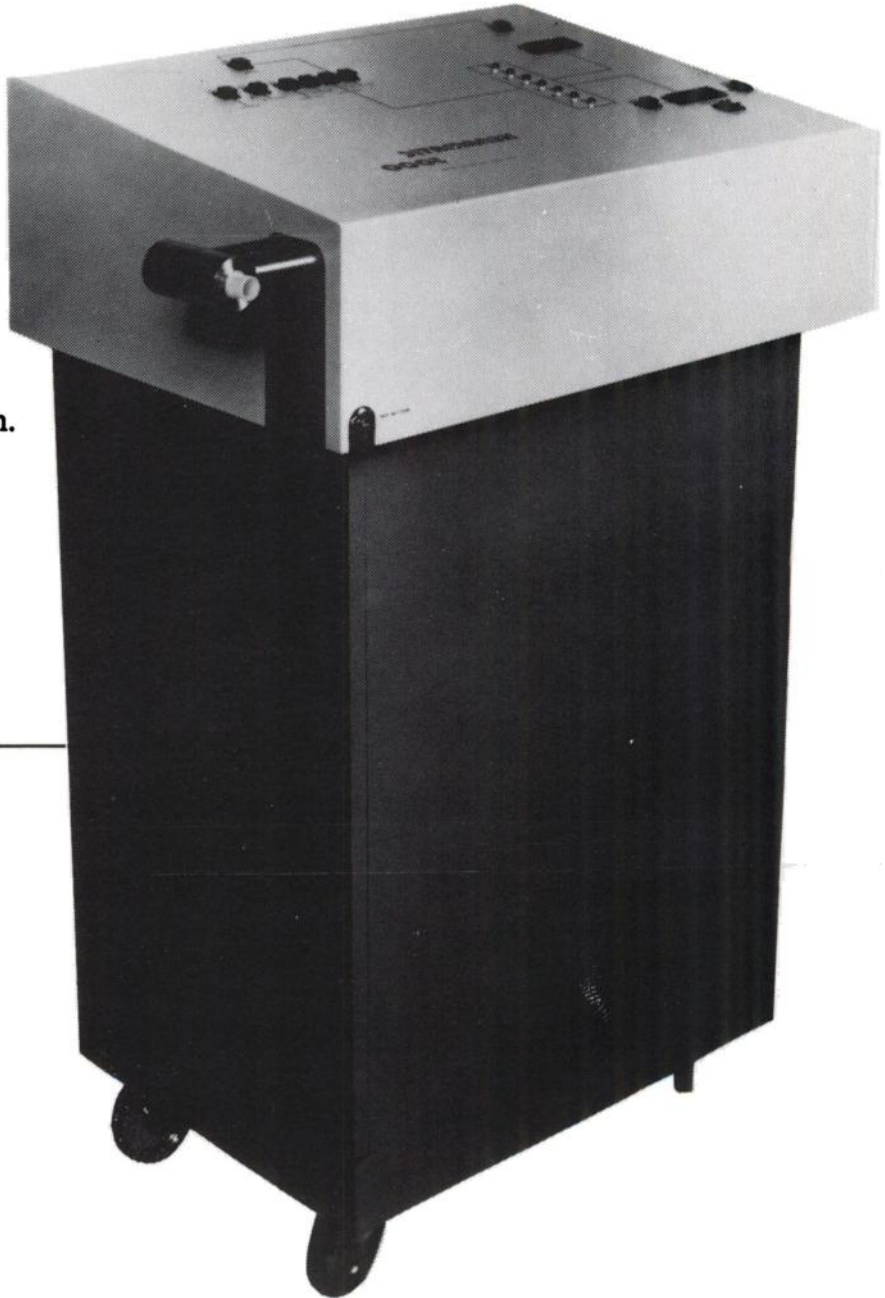


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**N E W**

Breakthrough in cancer detection...

**ONCO SCINT<sup>®</sup> CR/OV**

Satumomab Pendetide (1mg/2mL)

A new diagnostic tool  
that can assist  
decision making  
in patients with  
colorectal or recurrent  
ovarian adenocarcinoma

Please see last page for brief summary of prescribing information.



**N E W**

# **ONCO SCINT<sup>®</sup> CR/OV**

Satumomab Pendetide (1mg/2mL)

To enhance decision making in the management of patients

The first monoclonal antibody-based  
in determining both the location and

**Reveals malignancy with tumor-targeted accuracy—**

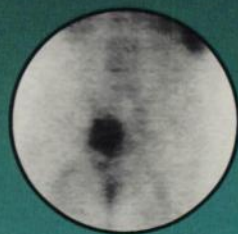
specifically targets the cell-surface antigen, TAG-72, common to colorectal and ovarian adenocarcinomas,<sup>1,2</sup> making it possible—with the use of existing nuclear medicine equipment—to detect extrahepatic abdominal and pelvic lesions.<sup>3,4</sup>

**Provides information beyond the scope of standard diagnostic modalities—when interpreted in conjunction with a review of information obtained from other appropriate tests**

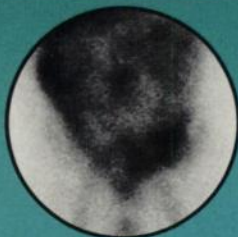
Found to be beneficial in these difficult situations:



- determining the source of a rising serum tumor marker in patients with an otherwise-negative workup<sup>2,4,5</sup>



- determining extrahepatic abdominal and pelvic involvement in patients thought to have isolated and resectable recurrence<sup>2,4</sup>



- differentiating disease from postsurgical or postradiation anatomic changes<sup>4</sup>

OncoScint is a registered trademark of CYTOGEN Corporation.

Please see last page for brief summary of prescribing information.



with colorectal or recurrent ovarian cancer...

## imaging agent effective extent of disease

### Assists decision making in patient management<sup>2-5</sup>—

enhanced medical/surgical management in  
difficult colorectal<sup>3,4</sup> and recurrent ovarian  
cases.<sup>2,5</sup>

### Excellent safety profile\*—

with generally minor and transient side  
effects occurring in less than 4% of patients  
studied (most frequently reported: fever,  
chills and clinically insignificant changes in  
blood pressure).<sup>2</sup>

\*See Adverse Reactions section of brief summary on  
following page.

For further information, please call  
1-800-833-3533.

# ONCO SCINT<sup>®</sup> CR/OV

Satumomab Pendetide (1mg/2mL)

**Tumor-targeted cancer detection**



## OncoScint® CR/OV Kit (satumomab pendetide)

Kit for the Preparation of indium In 111 satumomab pendetide  
For Intravenous Use Only  
Brief summary of prescribing information

### INDICATIONS AND USAGE

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

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

Administration of OncoScint® CR/OV-In may result in falsely elevated values from *in vitro* immunoassays, including tests for carcinoembryonic antigen (CEA) and CA 125. Because this interference may persist for months, the clinical laboratory should investigate for assay interference in patients who develop elevated CEA or CA 125 subsequent to imaging with OncoScint® CR/OV-In (see *Drug/Laboratory Test Interactions*).

Due to insufficient safety and efficacy data regarding repeat administration of this product, this imaging agent is limited to single use only.

### CONTRAINDICATIONS

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

### WARNINGS

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

### PRECAUTIONS

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

Each OncoScint® CR/OV kit is a unit of use package. The contents of the kit are to be used only to prepare OncoScint® CR/OV-In; unlabeled OncoScint® CR/OV should NOT be administered directly to the patient. After radiolabeling with indium-111, the entire OncoScint® CR/OV-In dose must be administered to the patient for whom it was prescribed. **Reducing the dose of either component may adversely impact imaging results, and, therefore, is not recommended.**

The contents of the kit are not radioactive. However, after the indium In 111 chloride is added, appropriate shielding of OncoScint® CR/OV-In must be maintained. Care should be taken to minimize radiation exposure to patients and medical personnel, consistent with proper hospital and patient management procedures.

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

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

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

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

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

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

Preliminary data are available from repeat-administration studies of OncoScint® CR/OV-In in 69 patients who have received 105 repeat doses. However, there are insuff-

icient data to determine the safety and efficacy of this product after repeat administration (see ADVERSE REACTIONS).

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

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

**Pregnancy Category C** Animal reproduction studies have not been conducted with OncoScint® CR/OV-In. It is also not known whether OncoScint® CR/OV-In can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. OncoScint® CR/OV-In should not be administered to a pregnant woman unless, in the opinion of the physician, the information to be gained outweighs the potential risks. MAB B72.3 has been shown to react with fetal gastrointestinal tissues.

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

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

**Pediatric Use** The safety and effectiveness of OncoScint® CR/OV-In in children have not been established.

### ADVERSE REACTIONS

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

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

### OVERDOSAGE

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

### DOSE AND ADMINISTRATION

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

### HOW SUPPLIED

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

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

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Revised 12/30/92

**References** 1. Nabi HA, Doerr RJ. Radiolabeled monoclonal antibody imaging (immunoscintigraphy) of colorectal cancers: current status and future perspectives. *Am J Surg*. 1992;163:446-456. 2. Data on file. CytoGen Corporation, Princeton, NJ. 3. Doerr RJ, Abdel-Nabi H, Krag D, et al. Radiolabeled antibody imaging in the management of colorectal cancer: results of a multicenter clinical study. *Ann Surg*. 1991;118-124. 4. Collier BD, Abdel-Nabi H, Doerr RJ, et al. Immunoscintigraphy with <sup>111</sup>In-CYT-103 in the management of colorectal carcinoma: a comparison with computed tomography. *Radiology*. 1992;185:179-186. 5. Surwit EA, Childers JM, Krag DN, et al. Clinical assessment of <sup>111</sup>In-CYT-103 immunoscintigraphy in ovarian cancer. *Gynecol Oncol*. 1993; 48:285-292.

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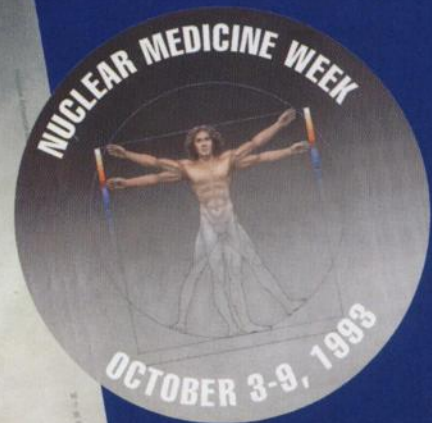
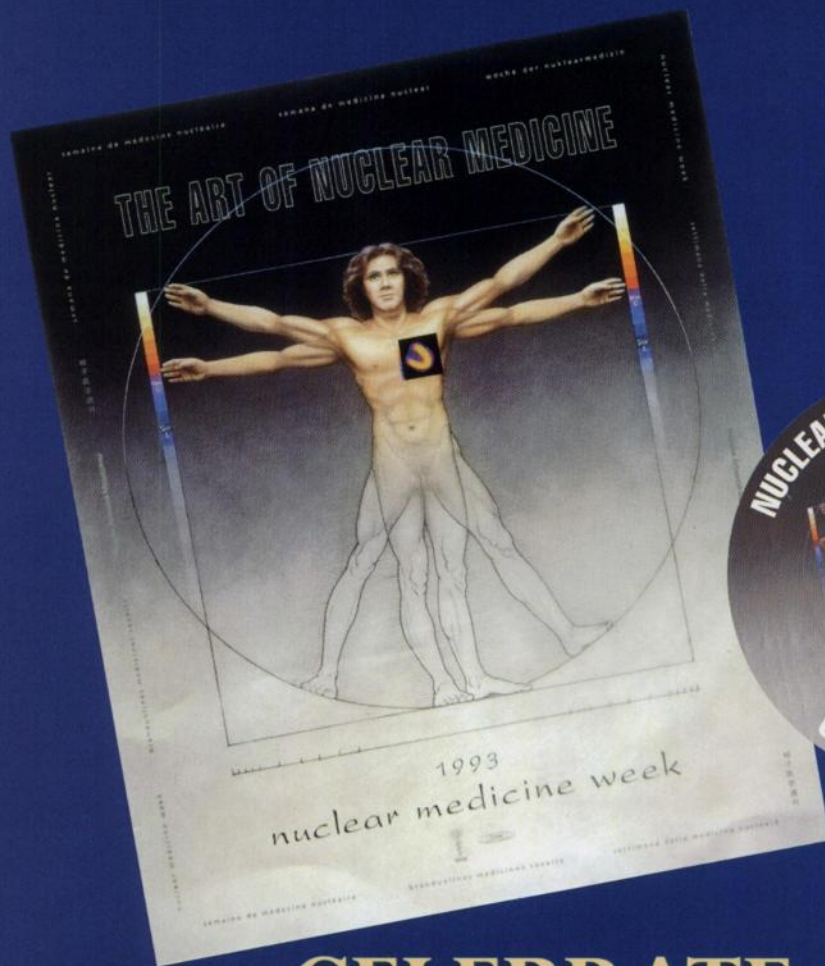
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# CELEBRATE NUCLEAR MEDICINE WEEK

Nuclear Medicine Week—October 3 through 9—is the prime time to demonstrate pride in your profession — and to make the profession's presence known both among the public and other health care professionals.

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

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

*P.S. Don't Forget Syncor's Media Stars Contest — details in the Guidelines.*



# CELEBRATE NUCLEAR MEDICINE WEEK

The following materials are available for promoting  
Nuclear Medicine Week in your area.

**Posters** — \$5.00 each, 4-9 posters are \$4.50 each, 10 or more \$4.00 each.

I would like \_\_\_\_\_ posters × \$ \_\_\_\_\_ \$ \_\_\_\_\_

**Buttons** — \$1.00 each

I would like to order \_\_\_\_\_ buttons \$ \_\_\_\_\_

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I would like to receive \_\_\_\_\_ stickers.

(Minimum order is 10 stickers) \$ \_\_\_\_\_

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I would like to order a free set of "Guidelines  
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*Payment must be enclosed with your order. Payments must be made in U.S. dollars drawn  
on U.S. banks. No foreign funds will be accepted. Make checks payable to:*

## The Society of Nuclear Medicine

Orders will be sent out by 1st class mail or UPS. Orders received after September 1, 1993  
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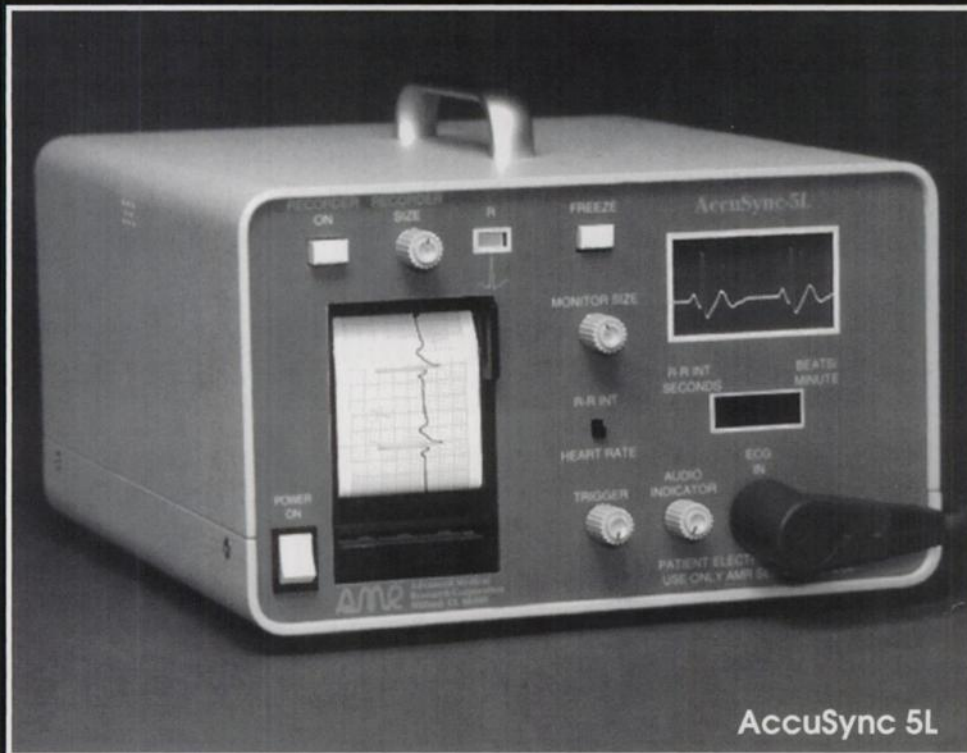
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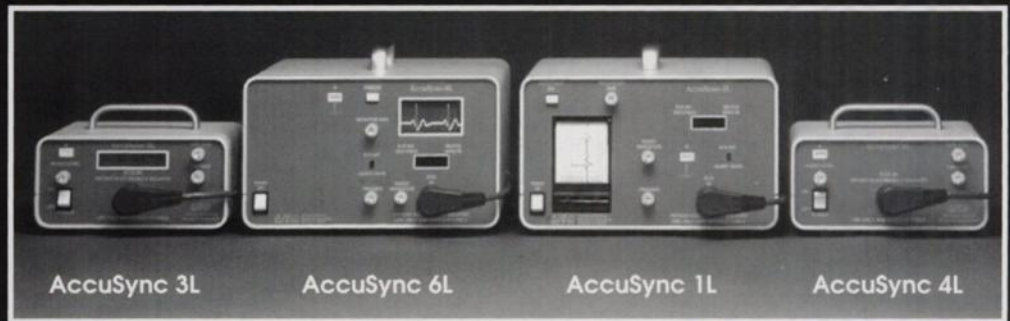
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- Audio indicator
- Trigger pulse LED
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- Compatible with all computers

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



AccuSync 3L

AccuSync 6L

AccuSync 1L

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

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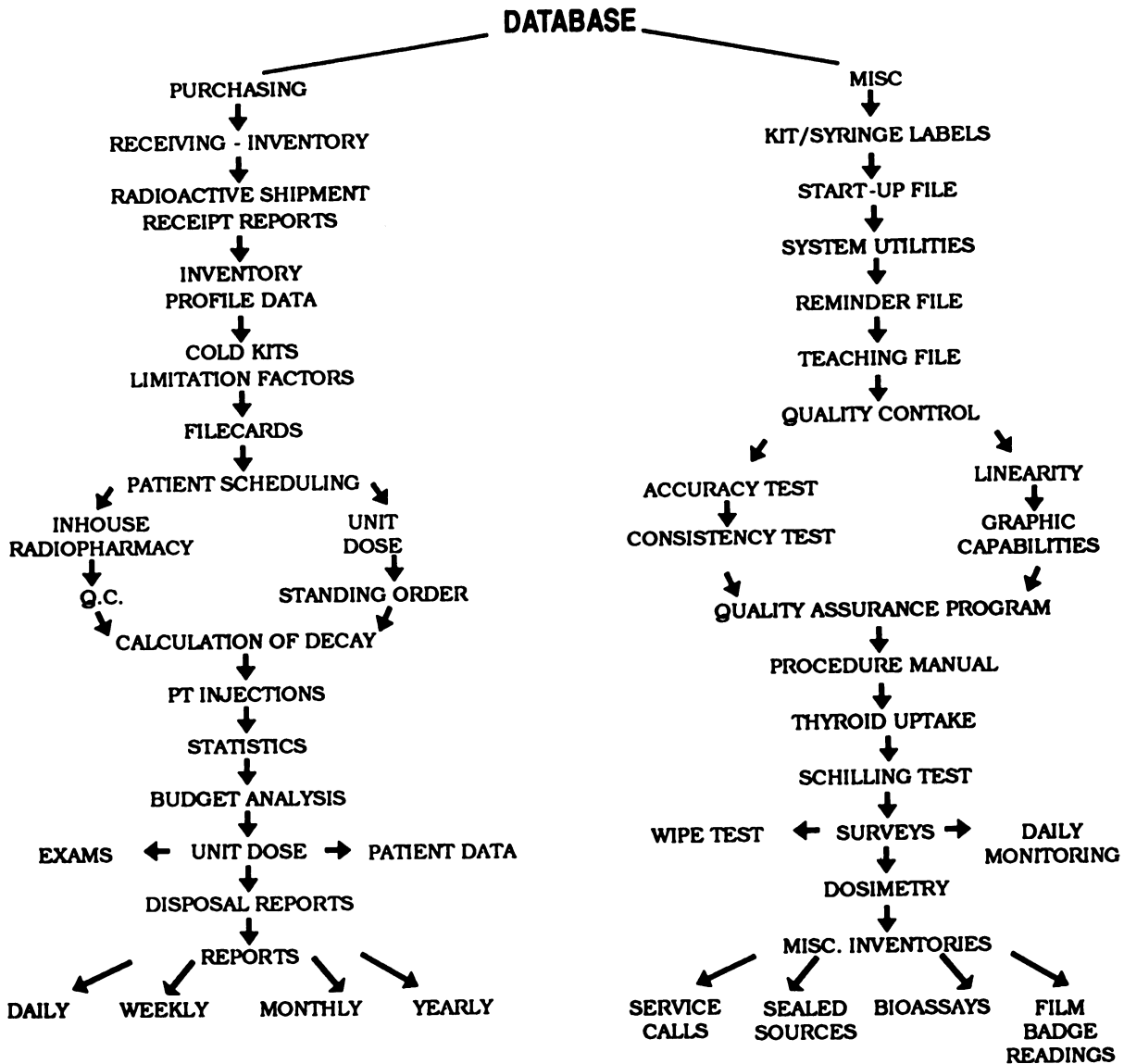
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# Computers in Nuclear Medicine: A Practical Approach

Kai Lee, PhD



Computers have become an indispensable tool in nuclear medicine. This is the book for those who wish to acquire a basic understanding of how computers work and the processing techniques used to obtain diagnostic information from radionuclide images. The text gives a thorough description of the hardware components of a nuclear medicine computer system and explains the principles behind many common image processing techniques. The following topics are discussed in detail:

- Functions and components of a computer system
- Mass storage devices
- Input and output devices
- Computer software
- Nuclear Medicine image acquisition methods
- Methods of qualitative image analysis
- Quantitative image analysis
- Nuclear cardiology
- Quantitative data analysis
- Single-photon emission computed tomography
- Selecting a computer for nuclear medicine

The book is illustrated throughout to help the reader conceptualize the topics as they are discussed.

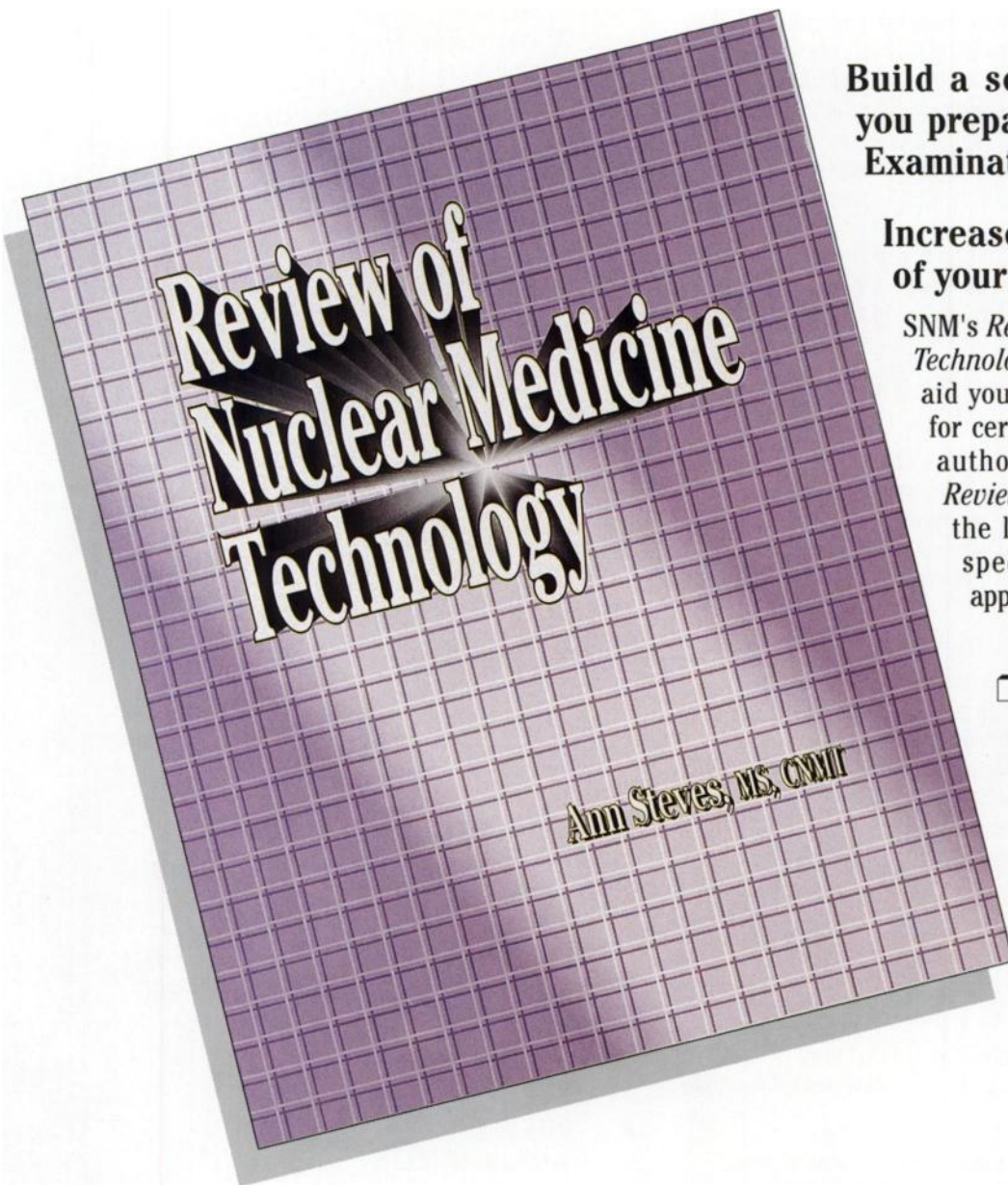
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# SPECT BRAIN IMAGING CLINICAL FELLOWSHIP

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 SPECTamine® and Ceretec®. 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.

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LisaAnn Trembath  
SPECT Brain Imaging Fellowship Coordinator  
Nuclear Medicine Division  
Medical College of Wisconsin  
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# EUROPEAN ASSOCIATION OF NUCLEAR MEDICINE CONGRESS 1993



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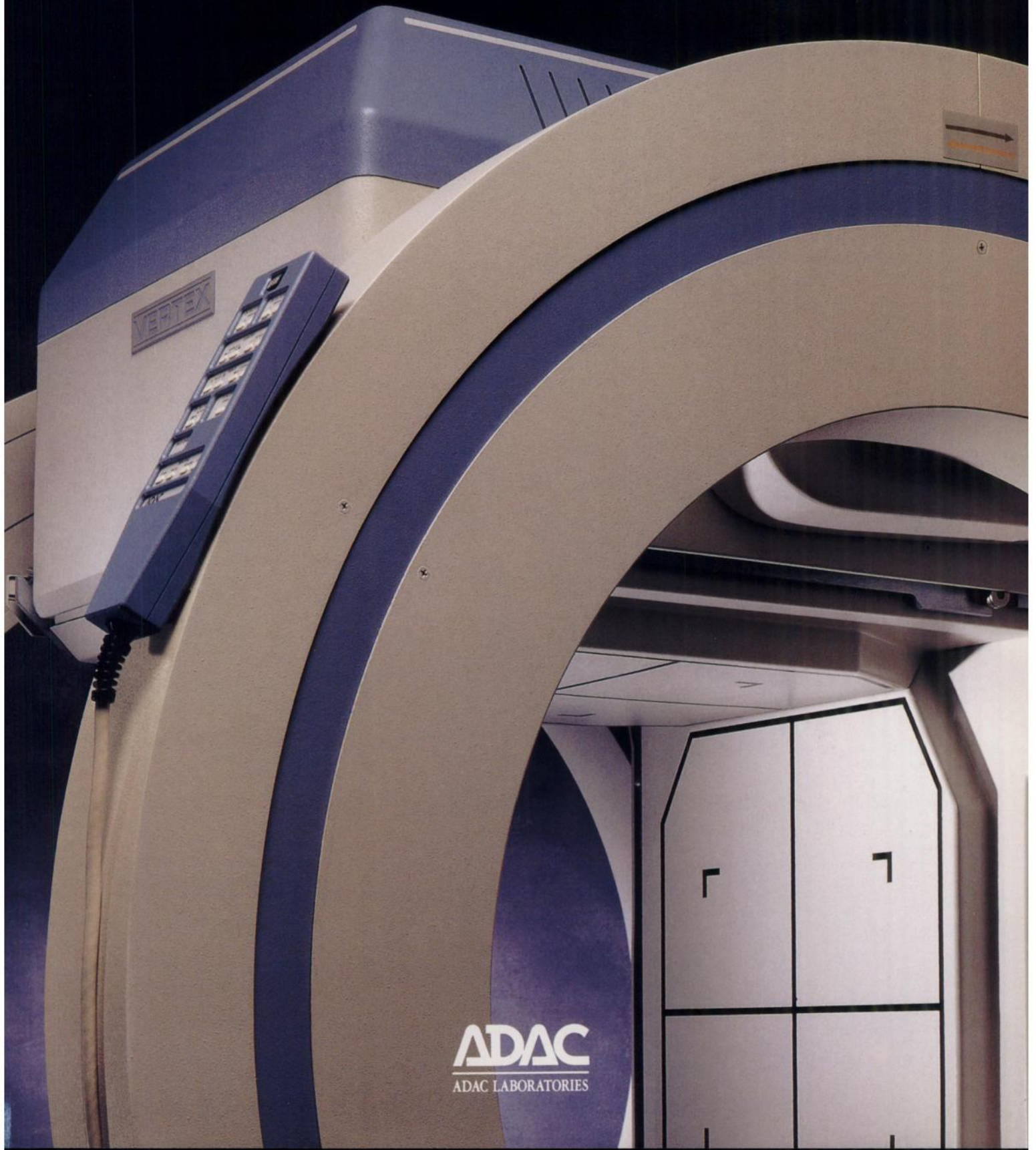
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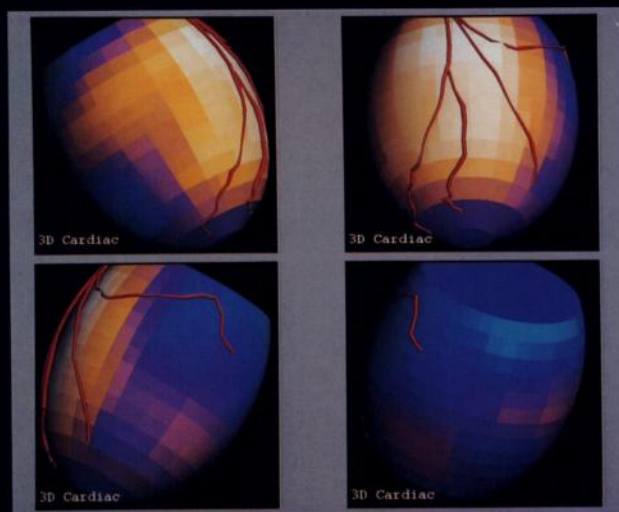


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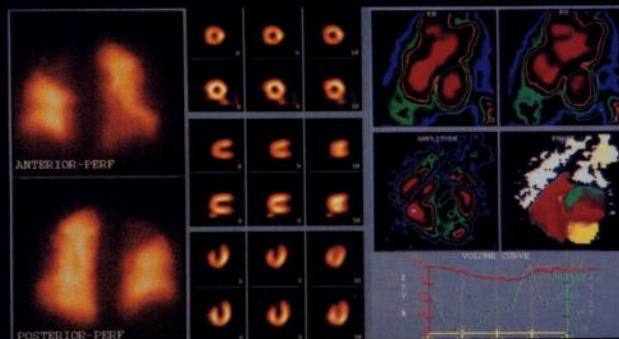
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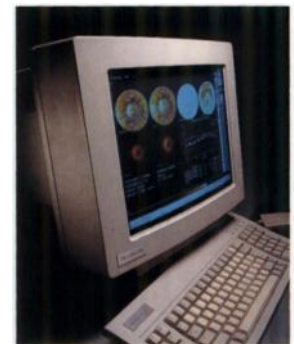
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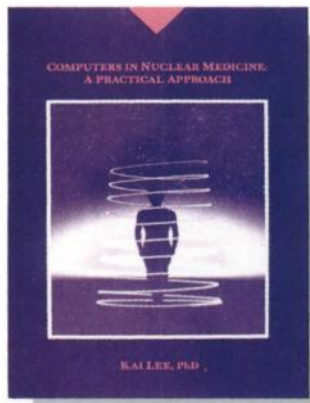


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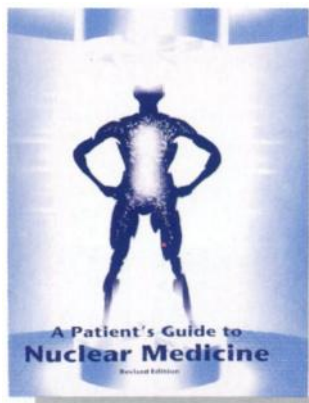
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- Hardware components in nuclear medicine computer systems. Principles behind common image processing techniques.

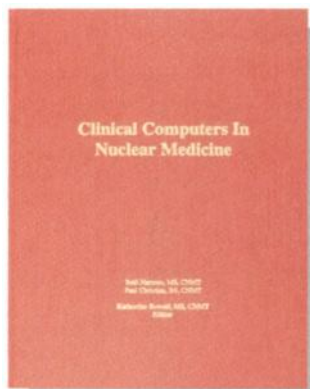
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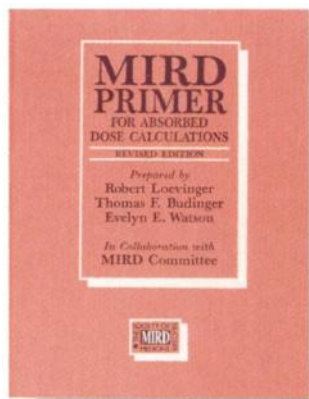
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**Katherine L. Rowell, MS, CNMT, Editor**  
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A companion text to *Computers in Nuclear Medicine*, this survey traces the evolution of nuclear medicine computer technology. Featured chapters describe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



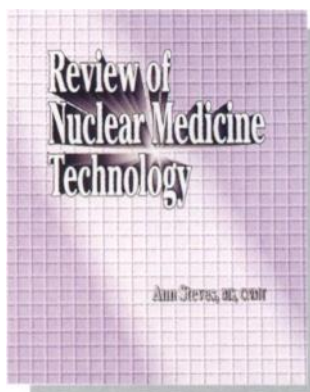
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- Preparation for certification exams.

- Test-taking techniques.

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### Forthcoming

**Curriculum Guide for Nuclear Medicine Technologists, 2nd Edition**

**Marcia Boyd, MS, CNMT, Editor**

Available February 1993.

An invaluable tool for educators and program administrators, this new edition of the *Curriculum Guide* also serves continuing education aims for those already working in the field.

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## Custom Radioisotope Shielding



Biodex Medical Systems now offers a Product Specialist to help design customized shielding systems for laboratories where radiopharmaceuticals, radionuclides and sources are handled and stored. There is a complete selection of lead-lined modular furniture or the product specialist can create a storage unit to meet specific applications. Standard modules range from refrigeration and sink units to generator and decay storage. All units are 36.5" tall for uniform work surface and topped with a stainless steel counter with 4" back splash and designed to support heavy work loads. For maximum safety, each unit is key locked to prevent unauthorized access. Unlike lead bricks, the lead-lined modular units provide shielding on all six sides; are not prone to leakage; cannot fall over; are safe to handle and provide extra countertop space. **Biodex Medical Systems, Inc., Box 702, Shirley, NY 11967-0702. (516) 924-9000.**

## Mini-PACS

An agreement between 3M and RSTAR, Inc. has been announced to develop and market a mini-PACS (picture archival communications system) under the 3M brand name. The new 3M Mini-PACS for ICU/CCU can electronically send conventional x-ray images directly from a hospital's radiology department to its intensive care and critical units. It will allow attending ICU or CCU physicians to see a patient's x-rays quickly without wait-

ing for them to be delivered by messenger. The system includes a digitizer to convert x-ray images to digital data that can be transmitted via high speed fiber optic and Ethernet local area networks to the intensive or critical care unit. The image can then be viewed on a high or medium resolution screen in ICU/CCU, or printed on a 3M Laser Imager XL System. The 3M Medical Imaging Systems Division is the world's leading supplier of laser imagers for producing hard copy films of CT scans and other medical diagnostic images. It is also a leading manufacturer for conventional medical x-ray films, laser imaging films and digital imaging systems for making hard copy films of ultrasound images. **3M Medical Imaging Systems, P.O. Box 33600, St. Paul, MN 55133-3600.**

## Video Film Recorder

Nuclear Data Systems has developed a new high-performance video film recorder for use in nuclear medicine and digital x-ray system applications. The ImageView 4600 Series D accepts high line rate video signals in the range of 35 to 70 kHz. The system can also be provided in a dual line rate configuration. A built-in video splitter is available to provide flexibility in system integration. The monitor has a custom designed CRT with a proprietary electron gun and 120 MHz video bandwidth. Another important feature is that the system remembers the video selection (standard or inverted video) on system power-up. Excellent system reliability is assured because no moving parts are utilized except for a proven electromagnetic shutter. Unique solid state optical detection of dark slides and cassettes assures reliable system operation by eliminating the use of unreliable mechanical microswitches. **Nuclear Data Systems, 150 Spring Lake Dr., Itasca, IL 60143. (708) 285-3172.**

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### Physician

**NUCLEAR MEDICINE PHYSICIAN (BE/BC)** The Dayton VA Medical Center and Wright State University School of Medicine are seeking a BE/BC Nuclear Medicine physician for the position of Assistant Chief, Nuclear Medicine Service. Appointee must be eligible for faculty appointment at WSUSOM. Competitive salary and benefits. New hospital with state-of-the-art equipment including two SPECT cameras. Opened in June 1992. All applications received by September 30, 1993 will be considered. Applications received after that time will be considered if the position has not been filled. Send CV and three references to: Lawrence A. Gilbert, MD, Chief, Nuclear Medicine Service (115), VA Medical Center, 4100 West Third St., Dayton, OH 45428. Equal Opportunity Employer.

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### Physicist

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**PHYSICIST** Yale Brain Imaging research group is seeking a Ph.D. in Physics/Electrical Engineering to work on signal quantitation in SPECT and PET, including algorithms for scatter and attenuation correction. Position (postdoctoral fellow or Assoc. Res. Scientist) and salary (35-50,000) are dependent upon experience. Send CV and names of three references to Robert B. Innis, MD, PhD, Yale University & VA Med. Ctr/116A2, 950 Campbell Ave., West Haven, CT 06516. EOE.

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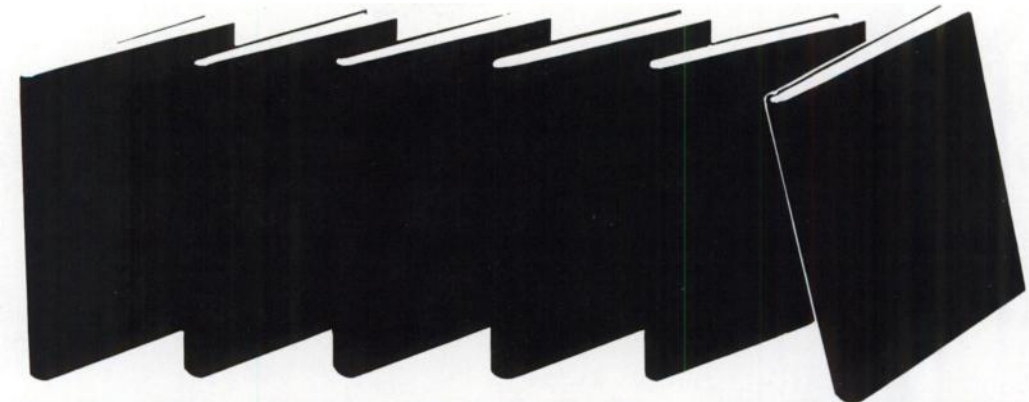
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## NUCLEAR MEDICINE PHYSICIAN/RADIOLOGIST

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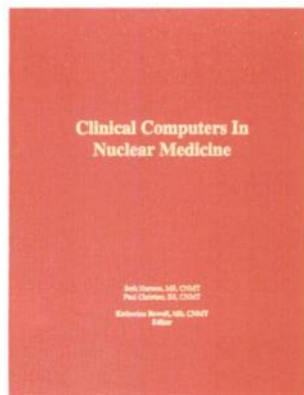
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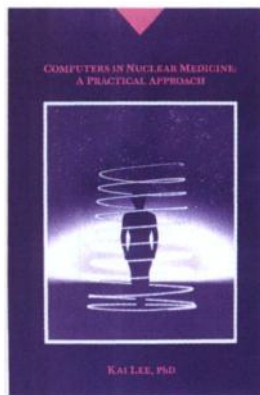
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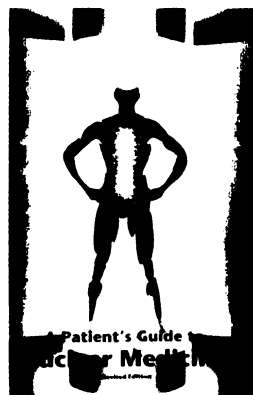
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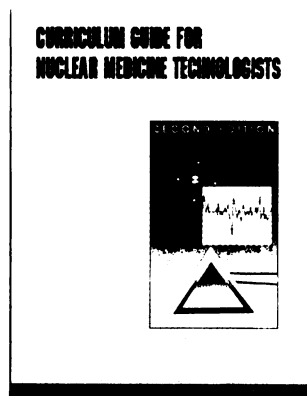
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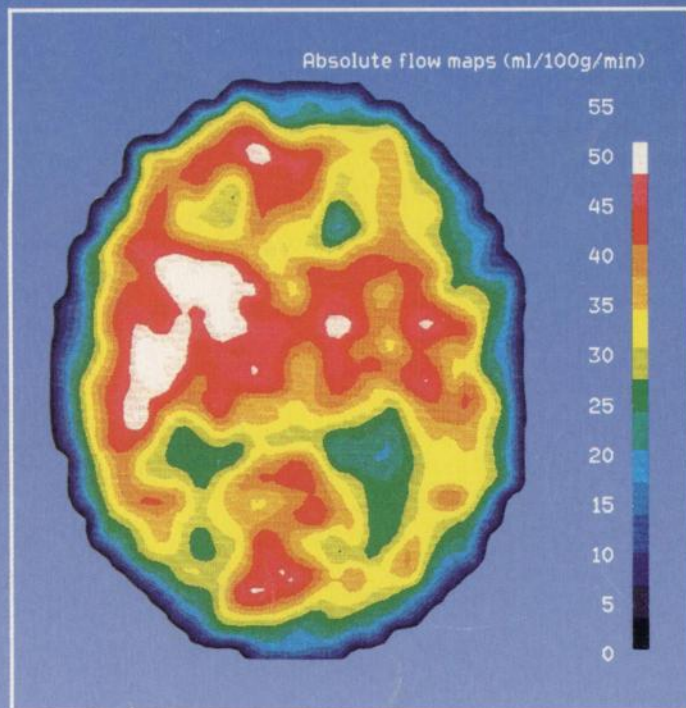
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