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She’s 47. She’s been here before. But her mammogram is no easier to read—even with spot compression. And now she’s getting anxious. Cancer is hard to find in this breast tissue type. It’s hard to be sure if it’s there...
New Miraluma™—the next step toward an answer when confronted with a difficult mammogram. Miraluma™ is an effective adjunct to mammography that can detect lesions even in dense breast tissue.

The diagnostic sensitivity of Miraluma™ is decreased in tumors <1 cm in largest dimension. There have been rare reports of signs and symptoms consistent with severe hypersensitivity and seizure after administration of Technetium Tc 99m Sestamibi.

For more information, call Technical Services at 1-800-635-2683 or access the DuPont Radiopharmaceuticals Web site at www.radiopharm.com
INDICATIONS AND USAGE: Breast imaging: MIRALUMA®, Kit for the Preparation of Technetium Tc 99m Sestamibi, is indicated for planar imaging as a second line diagnostic test after mammography to assist in the evaluation of breast lesions in patients with an abnormal mammogram or a palpable breast mass. MIRALUMA® is not indicated for breast cancer screening, to confirm the presence or absence of malignancy, and it is not an alternative to biopsy.

Myocardial Imaging: CARDIOLITE®, Kit for the preparation of Technetium Tc 99m Sestamibi, is a myocardial perfusion agent that is indicated for detecting coronary artery disease by localizing myocardial ischemia ( reversible defects) and infarction ( non-reversible defects), in evaluating myocardial function and developing information for use in patient management decisions. CARDIOLITE® evaluation of myocardial ischemia can be accomplished with rest and cardiovascular stress techniques (e.g., exercise or pharmacologic stress in accordance with the pharmacologic stress agent's labeling).

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

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 Tc 99m Sestamibi use and is usually associated with exercise stress testing (See Precautions). Pharmacologic induction of cardiovascular stress may be associated with serious adverse events such as myocardial infarction, arrhythmia, hypotension, bronchospastiction and cerebrovascular events. Caution should be used when pharmacologic stress is selected as an alternative to exercise; it should be used when indicated in accordance with the pharmacologic stress agent's labeling.

Technetium Tc 99m Sestamibi has been rarely associated with acute severe allergic and anaphylactic events of angioedema and generalized urtica. In some patients the allergic symptoms developed on the second injection during CARDIOLITE® imaging. Patients who receive CARDIOLITE® or MIRALUMA® imaging are receiving the same drug. Caution should be exercised and emergency equipment should be available when administering Technetium Tc 99m Sestamibi. Also, before administering either CARDIOLITE® or MIRALUMA®, patients should be asked about the possibility of allergic reactions to other drug.

PRECAUTIONS:

GENERAL The contents of the vial are intended only for use in the preparation of Technetium Tc 99m Sestamibi and are not to be administered directly to the patient without first undergoing the preparative procedure. Radiotoxic 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 patient consistent with proper patient management.

Contents of the kit before preparation are not radioactive. However, after the Sodium Pertechnetate Tc 99m 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 Tc 99m labeling reactions involved depend on maintaining the sterility of the reduced state. Hence, Sodium Pertechnetate Tc 99m Injection containing oxidants should not be used.

Technetium Tc 99m 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 radiocouclides and whose experience and training have been approved by the appropriate government agency authorized to license the use of radiocouclides. 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 sufficient to stop the test reported during controlled studies were commonly cardiac patients were:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue</td>
<td>35%</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>17%</td>
</tr>
<tr>
<td>Chest Pain</td>
<td>16%</td>
</tr>
<tr>
<td>ST-depression</td>
<td>7%</td>
</tr>
<tr>
<td>Arrhythmia</td>
<td>1%</td>
</tr>
</tbody>
</table>

Information for Patients

CARDIOLITE® and MIRALUMA® are different names for the same drug. Patients should be advised to inform their health care provider if they had an allergic reaction to either drug or if they had an imaging study with either drug.

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 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, Cu(MIBI)BF4 was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/Hprt and sister chromatic exchange tests (all in vitro).

At cytoxic concentrations (≥ 20 μg/ml), an increase in cells with chromosome aberrations was observed in the in vitro human lymphocyte assay. Cu(MIBI)BF4 did not show genotoxic effects in the in vivo mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (8 mg/kg, > 600 × maximal human dose).

Pregnancy Category C

Animal reproduction and teratogenic studies have not been conducted with Technetium Tc 99m Sestamibi. It is also not known whether Technetium Tc 99m 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 Tc 99m Sestamibi should be given to a pregnant woman only if clearly needed.

Nursing Mothers

Technetium Tc 99m Pertechnetate is excreted in human milk during lactation. It is not known whether Technetium Tc 99m Sestamibi is excreted in human milk. Therefore, formula feedings should be substituted for breast feedings.

Pediatric Use

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

ADVERSE REACTIONS: Adverse events were evaluated in 3741 adults who were evaluated in clinical studies. Of these patients, 3056 (77% men, 22% women, and 0.7% of the patient's genders were not recorded) were in cardiac clinical trials and 673 (100% women) in breast imaging trials. Cases of anemia, chest pain, and death have occurred (See Warnings and Precautions). Adverse events were reported at a rate of 0.5% or greater reported after receiving Technetium Tc 99m Sestamibi administration are shown in the following table:

Table 9

<table>
<thead>
<tr>
<th>Body System</th>
<th>Breast Studies</th>
<th>Cardiac Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Women</td>
</tr>
<tr>
<td>Body as a Whole</td>
<td>n=673</td>
<td>n=685</td>
</tr>
<tr>
<td>Headache</td>
<td>21 (3.1%)</td>
<td>6 (0.9%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>9 (1.3%)</td>
<td>24 (3.5%)</td>
</tr>
<tr>
<td>Chest Pain/Angina</td>
<td>0 (0%)</td>
<td>18 (2.6%)</td>
</tr>
<tr>
<td>ST segment changes</td>
<td>0 (0%)</td>
<td>11 (1.6%)</td>
</tr>
<tr>
<td>Digestive System</td>
<td>8 (1.2%)</td>
<td>4 (0.5%)</td>
</tr>
<tr>
<td>Nausea</td>
<td>4 (0.6%)</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td>Special Senses</td>
<td>132 (19.6%)</td>
<td>62 (9.1%)</td>
</tr>
<tr>
<td>Taste Perversion</td>
<td>129 (19.2%)</td>
<td>60 (8.8%)</td>
</tr>
<tr>
<td>Paresthesia</td>
<td>8 (1.2%)</td>
<td>6 (0.9%)</td>
</tr>
</tbody>
</table>

* Excludes the 22 patients whose gender were not recorded.

In the clinical studies for breast imaging, breast pain was reported in 12 (1.7%) of the patients. In 10 of these patients the pain appears to be associated with biopsy/surgical procedures. The following adverse reactions have been reported in ≤ 0.5% of patients: signs and symptoms consistent with seizure occurring shortly after administration of the agent; transient arthritis; angioedema, arthralgia, dysphoria, syncope, and severe hypersensitivity characterized by dyspnea, hypotension, bradycardia, asthe- nia, abdominal pain, vomiting, pruritis, rash, and urticaria within two hours after a second injection of Technetium Tc 99m Sestamibi. A few cases of flushing, edema, injection site inflammation, dry mouth, fever, and fatigue have also been attributed to administration of the agent.

DOSAGE AND ADMINISTRATION: For Breast Imaging: The recommended dose range for I.V. administration of MIRALUMA® is a single dose of 740-1110 MCI (20-30 mCI).

For Myocardial Imaging: The suggested dose range for I.V. administration of CARDIOLITE® in a single dose to be employed in the average patient (70Kg) is 375-1110MCI (10-30mCI).

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Asymptomatic.
Rising CEA.
2 years post-op for colorectal cancer.
CT is equivocal.

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

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

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

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

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

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

ADVANCED TECHNOLOGY

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

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

ESTABLISHED SAFETY PROFILE

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

- <1% showed an elevation of HAMA levels;
- Limited data are available regarding the safety of re-administration.

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

HELPING YOU MAKE DECISIONS ABOUT TUMOR RESECTABILITY

Manufactured by:
IMMUNOMEDICS, INC.

Distributed by:
MALLINCKRODT MEDICAL

Please see adjacent page for brief summary of prescribing information

References:
CEA-Scan®
(Arcitumomab)

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

DESCRIPTION
CEA-Scan® is a radiodiagnostics agent consisting of a murine monoclonal antibody Fab' fragment, arcitumomab, formulated to be labeled with 99mTc-Technetium [Tc99m]. The active component, arcitumomab, is a Fab' fragment generated from IMMU-4, a murine IgG1 monoclonal antibody supplied by Immunomedics, Inc., by Charles River Laboratories. IMMU-4 Fab' is purified from the ascitic fluid and is digested with papain to produce Fab'2 fragments and subsequently reduced to produce the 50,000-dalton arcitumomab. 99mTc-Technetium arcitumomab contains the non-radioactive materials necessary to prepare one patient dose. CEA-Scan® is a sterile, lyophilized formulation, containing 1.25 mg of arcitumomab and 0.29 mg stannous chloride per vial, with potassium sodium tartrate tetrhydrate, sodium acetate trihydrate, sodium chloride, acetic acid, glacial acetic acid, and sucrose. The imaging agent, technetium Tc 99m CEA-Scan®, technetium Tc 99m arcitumomab, is formed by reconstitution of the contents of the CEA-Scan® vial with 30 ml of [99mTc] sodium pertechnetate in 1 ml of Sodium Chloride for injection, USP. The resulting solution is pH 7.5 and for intravenous use. Following administration, the labeled antibody can be visualized by common nuclear medicine instrumentation.

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

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

CONTRAINDICATIONS
CEA-Scan® should not be administered to patients who are hypersensitive to products of murine origin or to Technetium [Tc99m].

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

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

CEA-Scan® should not be used as a screening test for colorectal cancer. Limited data are available regarding the safety of readministration. There are no data to support the efficacy of CEA-Scan® readministration. CEA-Scan® should be used only once in each patient.

The components of CEA-Scan® are sterile and non-pyrogenic. It is essential to follow preparation directions carefully and to adhere to strict aseptic procedures during preparation of CEA-Scan® [Tc99m]. The contents of the vial are intended only for use in the preparation of CEA-Scan® [Tc99m] and are not to be administered directly to patients. The contents of the vial before preparation are not radioactive. However, after [99mTc]-pertechnetate is added, adequate shielding of the preparation must be maintained. Appropriate safety measures should be used to minimize exposure of personnel and patients, consistent with proper patient management. Radiopharmacists should be used only by physicians who are qualified by training and experience in the safe use and handling of radionuclides.

Imaging Interpretation
General
There are limited data to determine the imaging characteristics and efficacy of the CEA-Scan® (Arcitumomab) in detection of lesions outside of the abdominopelvic cavity. Areas of potential false-positive readings, particularly with planar imaging, may be observed near the major bloodpool organs (heart, major vessels, etc.), at very early imaging times, near the sites of antibody fragment metabolism (kidneys and urinary bladder), and in the intestines and gallbladder. Late imaging may also aid in the evaluation of suspected normal bowel activity.

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

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

False-Positive Lesions
There were 52 false-positive lesions observed in 41 patients from a total of 206 surgically explored subjects in the two pivotal trials. Thirty-five of these lesions were in occult disease patients. Of the 52 false-positive lesions, 11 were observed in the liver, 17 in the extra-hepatic abdomen, and 24 in the pelvis. A pathological correlate of these lesions was infrequently documented; these included granulomas in the liver (1 instance), adhesions with or without suture granulomas (4 cases), surgical incision site (1 case). Descriptions of false-positive lesions within the abdomen were suggestive of colonic activity in several cases.

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

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

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

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

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

No data are available on possible drug interactions. Do not mix or administer CEA-Scan® with other products. Precautions should be taken to ensure that all clearance and radioactive decay before and after the use of this product and other products using radionuclides.

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

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

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

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

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

Overdosage
Intravenous infusion of intact IgG and Fab'2 of IMMU-4 in doses of up to 25 mg or arcitumomab at doses up to 10 mg have not shown any serious adverse reaction.

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

References
2. Data on File at Immunomedics, Inc.

Immunomedics, Inc.
388 American Road
Morris Plains, NJ 07950

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IMMUNOMEDICS, INC.

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

This is the official entry for the 1997 PR Stars Contest sponsored by the SNM-TS and Technology Imaging Services. Please fill out the entry form and complete the requested information on the reverse side. Based on the information you provide, a panel of judges will evaluate the entries using the point system outlined on the reverse side of this page and select a winner. All entrants must be a Nuclear Medicine Technologist and staff members of a hospital or nuclear medicine facility. Entries must be postmarked no later than December 1, 1997.

Entrant Information:

Your Name: .................................................................
Hospital/Facility: ..........................................................
Address: ......................................................................
City: ...........................................................................
State: .........................................................................
Zip: ...............................................................................
Telephone: .................................................................
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Please provide the information requested on the reverse side
Please describe and document your promotional activities and results. All original materials will be returned upon completion of the contest. The following point systems will be used for judging.

Please use the check list to assure all questions are answered.

1. Please compose a detailed description, including the goals and objectives, of your nuclear medicine PR activities. (7 points)

2. Did the goals and objectives you set reflect those of the PR Stars Contest to:
   a. Reinforce nuclear medicine to referring physicians? (10 points)
   b. Promote nuclear medicine to healthcare workers? (5 points)
   c. Increase community awareness? (5 points)
   d. Encourage career paths? (5 points)

3. How effective were you in reaching the goals of the PR Stars Contest?
   a. Increasing physician referrals? (10 points)
   b. Increasing awareness among healthcare workers? (5 points)
   c. Increasing community awareness? (5 points)
   d. Encouraging career paths? (5 points)
   e. Showing pride in your profession. (5 points)

4. What available resources did you use? (budget, manpower, media, etc...) (3 points)

5. How effectively did you use the available resources? (10 points)

6. How practical was your program?
   a. Can it be easily used by others? (5 points)
   b. Was it cost effective? (5 points)

7. When did your PR activity take place?

8. Please provide a detailed time-line of the planning and implementation of your program.
   (10 points)
   For Example:
   August 1   Strategic planning session with staff technologists.
   August 15  Drafted text regarding nuclear medicine for publication in facility newsletter.

9. Are you a current member of the SNM-TS? (5 points)
   Yes .........  No .........

Thank you for your entry!

Good Luck!

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Ann M. Steves, MS, CNMT

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Whether you’re a nuclear medicine resident preparing for your board exams, or a veteran clinician, the new Nuclear Medicine Self-Study Program series will meet your self-assessment needs.

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Under the Senior Editorship of Thomas P. Haynie, Self-Study IV: Nuclear Medicine Oncology is under way. The first topic booklet, “Nuclear Medicine Oncology: An Overview,” is now available from Matthews Medical Books. Future topic booklets (and dates) are—

- “Non-Antibody Tumor Imaging” (Oct. 1997)
- “Antibody Tumor Imaging” (Feb. 1998)
- “PET Tumor Imaging” (June 1998)
- “Non-Antibody Cancer Therapy” (Sept. 1998)
- “Antibody Cancer Therapy” (Dec. 1998)
- “Bone Cancer Therapy” (March 1998)
- “The Future of Nuclear Medicine Oncology” (June 1999).

Self-Study III: Nuclear Medicine Cardiology (Elias H. Botvinick, Senior Editor), will commence its series in September with “Physical and Technical Aspects of Nuclear Cardiology.” Following booklets in the quarterly series will include:

- “Radionuclide Assessment of Congenital Heart Disease”
- “Myocardial Perfusion Imaging by Single Photon Radionuclides I”
- “Myocardial Perfusion Imaging by Single Photon Radionuclides II”
- “Radionuclide Ventriculography”
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  - Details common conditions bone scans are used to detect
  - Bone imaging in children

- **NUCLEAR MEDICINE RENAL IMAGING IN CHILDREN**
  - General information about renal imaging in children
  - Radionuclide Cystography
  - Diuretic Renal Scintigraphy
  - Cortical Renal Scintigraphy

- **CARDIAC NUCLEAR IMAGING STRESS-REST TEST**
  - Includes preparation guidelines for all aspects of the test

- **NUCLEAR MEDICINE BRAIN IMAGING**
  - General information about brain imaging
  - Perfusion Imaging
  - Stress-Rest Testing
  - Cisternography

- **NUCLEAR MEDICINE LIVER AND HEPATOBILIARY IMAGING**
  - General information about liver and hepatobiliary imaging
  - Hepatobiliary Imaging in children

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

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DESCRIPTION
The Medi-Physics Myoview™ kit is supplied as a pack of five vials for use in the preparation of a technetium Tc99m tetrofosmin intravenous injection to be used for the scintigraphic delineation of regions of reversible myocardial ischemia in the presence or absence of infarcted myocardium. Each vial contains a pre-dispersed, sterile, non-pyrogenic, lyophilized mixture of 0.23 mg tetrofosmin ([6,8-bis(2-ethoxyethyl)-3,12-dioxo-6,9-diphenosuccinyl]3), 0.2 mg D-glucuronate, and 1.0 mg sodium D-glucuronate. It is supplied with a reductant (1-4), D-gluconate.

INDICATIONS
This complex is the active ingredient in the reconstituted drug product, whose biodistribution and pharmacokinetic properties the indications for use depend.

Clinical Trials
A total of 252 patients with ischemic heart disease or atypical chest pain who had a reason for exercise stress imaging were studied in two open-label, multi-center, clinical trials of Tc99m tetrofosmin (study a and study b). Of these 252 patients there were 212 (83%) males and 40 (17%) females with a mean age of 60.5 years (range 33.7 to 82.4 years). At peak exercise, maximum heart rate achieved and peak systolic blood pressure were comparable after Myoview and thallium-201 exercise studies. All patients had exercise and rest planar imaging with Myoview and thallium-201; 191 (76%) patients also had SPECT imaging. The Myoview and thallium-201 images were separated by a mean of 5.1 days (1-14 days before or 2-14 days after Myoview). For Myoview imaging, each patient received 185-296 MBq (5-8 mCi) Tc99m tetrofosmin at peak exercise and 555-888 MBq (15-24 mCi) Tc99m tetrofosmin at rest approximately 4 hours later. For thallium-201 imaging, patients received thallium-201 55.7-57 MBq (1.5-2.0 mCi) at peak exercise.

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

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

DOSAGE AND ADMINISTRATION
For exercise and rest imaging, Myoview is administered in two doses:
- The first dose of 5-8 mCi (185-296 MBq) is given at peak exercise.
- The second dose of 15-24 mCi (555-888 MBq) is given approximately 4 hours later, at rest.

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

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

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

Table 1
<table>
<thead>
<tr>
<th>Target Organ</th>
<th>Exercise</th>
<th>Rest</th>
<th>Absorbed radiation dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>rad/mCi</td>
<td>μGy/MBq</td>
<td>rad/mCi</td>
</tr>
<tr>
<td>Gall bladder wall</td>
<td>0.123</td>
<td>33.2</td>
<td>0.180</td>
</tr>
<tr>
<td>Upper large intestine</td>
<td>0.075</td>
<td>20.1</td>
<td>0.113</td>
</tr>
<tr>
<td>Bladder wall</td>
<td>0.056</td>
<td>15.4</td>
<td>0.071</td>
</tr>
<tr>
<td>Lower large intestine</td>
<td>0.057</td>
<td>15.7</td>
<td>0.062</td>
</tr>
<tr>
<td>Small intestine</td>
<td>0.045</td>
<td>12.1</td>
<td>0.063</td>
</tr>
<tr>
<td>Kidney</td>
<td>0.039</td>
<td>10.4</td>
<td>0.046</td>
</tr>
<tr>
<td>Salivary glands</td>
<td>0.030</td>
<td>8.04</td>
<td>0.043</td>
</tr>
<tr>
<td>Ovary</td>
<td>0.029</td>
<td>7.86</td>
<td>0.035</td>
</tr>
<tr>
<td>Uterus</td>
<td>0.027</td>
<td>7.34</td>
<td>0.031</td>
</tr>
<tr>
<td>Bone surface</td>
<td>0.023</td>
<td>6.23</td>
<td>0.021</td>
</tr>
<tr>
<td>Pancreas</td>
<td>0.019</td>
<td>5.00</td>
<td>0.018</td>
</tr>
<tr>
<td>Stomach</td>
<td>0.017</td>
<td>4.60</td>
<td>0.017</td>
</tr>
<tr>
<td>Thyroid</td>
<td>0.016</td>
<td>4.34</td>
<td>0.022</td>
</tr>
<tr>
<td>Adrenals</td>
<td>0.016</td>
<td>4.32</td>
<td>0.015</td>
</tr>
<tr>
<td>Heart wall</td>
<td>0.015</td>
<td>4.14</td>
<td>0.015</td>
</tr>
<tr>
<td>Red marrow</td>
<td>0.015</td>
<td>4.14</td>
<td>0.015</td>
</tr>
<tr>
<td>Spleen</td>
<td>0.015</td>
<td>4.12</td>
<td>0.014</td>
</tr>
<tr>
<td>Muscle</td>
<td>0.013</td>
<td>3.52</td>
<td>0.012</td>
</tr>
<tr>
<td>Testes</td>
<td>0.013</td>
<td>3.41</td>
<td>0.011</td>
</tr>
<tr>
<td>Liver</td>
<td>0.012</td>
<td>3.22</td>
<td>0.015</td>
</tr>
<tr>
<td>Thymus</td>
<td>0.012</td>
<td>3.11</td>
<td>0.009</td>
</tr>
<tr>
<td>Brain</td>
<td>0.010</td>
<td>2.72</td>
<td>0.008</td>
</tr>
<tr>
<td>Lungs</td>
<td>0.008</td>
<td>2.27</td>
<td>0.008</td>
</tr>
<tr>
<td>Skin</td>
<td>0.008</td>
<td>2.22</td>
<td>0.007</td>
</tr>
<tr>
<td>Breasts</td>
<td>0.008</td>
<td>2.22</td>
<td>0.007</td>
</tr>
</tbody>
</table>

Dose calculations were performed using the standard MIRD method (MIRD Pamphlet No.1 (r) Society of Nuclear Medicine, 1976. Effective dose equivalents (EDE) were calculated in accordance with ICRP 53 (Ann. ICRP 18 (1-4), 1988) and gave values of 8.61 x 10^(-4) mSv/MBq and 1.12 x 10^(-4) mSv/MBq after exercise and rest respectively.

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Patent No. 5,045,302 (r)

Distributed by: Medi-Physics, Inc., Amersham Healthcare
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February, 1996

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Do you know the most effective and efficient way to perform a myocardial perfusion study?

How does your procedure for performing renal studies for renovascular hypertension compare with the procedure recommended by leading nuclear medicine experts?

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The answers to these questions and more may be found in the 1997 Society of Nuclear Medicine Procedure Guidelines Manual. This publication will help you achieve high quality nuclear medicine studies to insure that your patients get the treatment they deserve. This informative and useful reference tool is now available for only $20.00. To order your copy, contact Olivia Wong at (703)708-9000 x250 or via e-mail at owong@snm.org

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Guideline for Gated Equilibrium Radionuclide Ventriculography
ENDOCRINE GUIDELINES
Guideline for Thyroid Uptake Measurement
Guideline for Thyroid Scintigraphy
Guideline for Extended Scintigraphy for Differentiated Thyroid Cancer
Guideline for Parathyroid Scintigraphy
GASTROINTESTINAL GUIDELINES
Guideline for Hepatobiliary Scintigraphy
Guideline for Hepatic and Splenic Imaging
Guideline for C-14 Urea Breath Test
GENERAL GUIDELINES
Guidelines for Guideline Development
Guideline for General Imaging
Guideline for Imaging With Radiopharmaceuticals
GENITOURINARY GUIDELINES
Guideline for Diagnosis of Renovascular Hypertension

INFECTION GUIDELINES
Guideline for Gallium Scintigraphy in Inflammation
Guideline for In-111 Leukocyte Scintigraphy for Suspected Infection/Inflammation
Guideline for Tc-99m Exametazime (HMPAO) Labeled Leukocyte Scintigraphy for Suspected Infection/Inflammation

NEUROLOGY GUIDELINES
Guideline for Brain Perfusion Single Photon Emission Computed Tomography (SPECT) Using Tc-99m Radiopharmaceuticals

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Guideline for Gallium Scintigraphy in the Evaluation of Malignant Disease
Guideline for Tumor Imaging Using F-18 FDG
Guideline for Bone Pain Treatment

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Guideline for Radionuclide Cystography in Children
Guideline for Diuretic Renography in Children
Guideline for Renal Cortical Scintigraphy in Children

PULMONARY GUIDELINES
Guideline for Lung Scintigraphy

SKELETAL GUIDELINES
Guideline for Bone Scintigraphy
Now for osteoblastic metastases in patients with prostate or breast cancer

Relief
• Onset of pain relief as early as 1 week in the majority of patients
• Allows reduction in opioid use*

*In controlled clinical trials, approximately half the patients reduced opioid usage by week 4.
BEFORE IT CONSUMES

Recovery

- White blood cell and platelet counts tend to return to pretreatment levels by week 8.

Quadramet® causes bone marrow suppression. Prior to administration, clinical benefit should be judged to outweigh the risk in patients having compromised bone marrow reserves or undergoing therapy that causes myelosuppression.
Therapeutics – For Intraavenous Administration

INDICATIONS: Quadrarne! is indicated for relief of pain in patients with confirmed osteoblastic metastatic bone lesions that enhance on radionuclide bone scan.

CONTRAINDICATIONS: Quadrarne! is contraindicated in patients who have known hypersensitivity to EDTMP or similar phosphonate compounds.

WARNINGS: Quadrarne! causes bone marrow suppression. In clinical trials, while blood cell counts and platelet counts decreased to a nadir of approximately 40% to 50% of baseline in 123 (95%) of patients within 3 to 5 weeks after Quadrarne!, and tended to return to pretreatment levels by 8 weeks. The grade of marrow toxicity is shown in the table below.

Number and percent of patients who experienced marrow toxicity in clinical trials of Quadrarne!

<table>
<thead>
<tr>
<th>Hemoglobin</th>
<th>Leukocytes</th>
<th>Platelets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>Placebo</td>
<td>Placebo</td>
</tr>
<tr>
<td>Grade</td>
<td>N = 185</td>
<td>N = 185</td>
</tr>
<tr>
<td>0-2</td>
<td>78 (42%)</td>
<td>162 (88%)</td>
</tr>
<tr>
<td>3</td>
<td>6 (7%)</td>
<td>20 (11%)</td>
</tr>
<tr>
<td>4</td>
<td>1 (1%)</td>
<td>3 (2%)</td>
</tr>
</tbody>
</table>

* Toxicity Grade based on National Cancer Institute Criteria. Normal levels are Hemoglobin >10g/dL, Leucocyte 4.0 x 10^9/l, and Platelets ≥150x10^9/cm3.

Before Quadrarne! is administered, consideration should be given to the patient’s current clinical and hematologic status and bone marrow reserve. Response to therapy with myelotoxic agents. Metastatic prostate and other cancers can be associated with decreased intramedullary radiopharmaceutical (DIC) activity. Caution should be exercised in treating cancer patients whose platelet counts are falling or who have any other clinical or laboratory findings suggesting DIC. Because of the unknown potential for additive effects on bone marrow, Quadrarne! should not be given concurrently with chemotherapy or other myelosuppressive therapy unless the clinical benefits outweigh the risks. Use of Quadrarne! in patients with evidence of compromised bone marrow reserve from previous therapy or disease involvement is not recommended unless the potential benefits of the treatment outweigh the risks. Blood counts should be monitored weekly for at least 8 weeks, or until recovery of adequate bone marrow function.

PREGNANCY: Quadrarne! is classified as a Pregnancy Category D. Although the effects of Quadrarne! on human pregnancy have not been studied thoroughly in humans, dogs that received non-radioactive samarium (EDTMP) 6 times the human dose on body weight, 3 times based on a clinical equivalent (mg/kg) or a clinical equivalent (mg/cm2) with or without the presence of pyridoxine. The fetal development of Quadrarne! has not been studied. Quadrarne! is not expected to cross the placenta in significant amounts.

ADVERSE REACTIONS:

- Nausea and Vomiting
- Hematologic and Lympathic
- Coagulation Disorder
- Hemoglobin Decreased
- Leukopenia
- Lymphopenopathy
- Thrombocytopenia
- Any Bleeding Manifestations
- Myelosuppression
- Myelosuppression
- Pathologic Fracture
- Nervous
- Diarrhea
- Paresthesia
- Skin/Nails
- Other

In a total of 207 patients who received Quadrarne! in controlled clinical trials, adverse events that were reported at a rate of 2.1%. The most common adverse events observed in controlled clinical studies of Quadrarne! are summarized in the table below.

<table>
<thead>
<tr>
<th>Adverse Event</th>
<th>Placebo</th>
<th>Quadrarne! 1.0 mcg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td># Patients with Adverse Event</td>
<td>2 (6%)</td>
<td>169 (85%)</td>
</tr>
<tr>
<td>Body As A Whole</td>
<td>56 (16%)</td>
<td>100 (50%)</td>
</tr>
<tr>
<td>Pain, Fatigue</td>
<td>2 (6%)</td>
<td>14 (7%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>1 (1%)</td>
<td>12 (6%)</td>
</tr>
<tr>
<td>Arthritis</td>
<td>2 (6%)</td>
<td>10 (5%)</td>
</tr>
<tr>
<td>Chest Pain</td>
<td>4 (14%)</td>
<td>8 (4%)</td>
</tr>
<tr>
<td>Hypersensitivity</td>
<td>0 (0%)</td>
<td>6 (3%)</td>
</tr>
<tr>
<td>Hypersensitivity</td>
<td>0 (0%)</td>
<td>4 (2%)</td>
</tr>
<tr>
<td>Digestive</td>
<td>44 (14%)</td>
<td>82 (41%)</td>
</tr>
<tr>
<td>Abdominal Pain</td>
<td>7 (26%)</td>
<td>12 (6%)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>3 (13%)</td>
<td>12 (6%)</td>
</tr>
<tr>
<td>Nausea and Vomiting</td>
<td>37 (14%)</td>
<td>65 (32.7%)</td>
</tr>
<tr>
<td>Hematologic and Lympathic</td>
<td>12 (43%)</td>
<td>54 (27%)</td>
</tr>
<tr>
<td>Coagulation Disorder</td>
<td>0 (0%)</td>
<td>3 (1.5%)</td>
</tr>
<tr>
<td>Hemoglobin Decreased</td>
<td>21 (33%)</td>
<td>81 (40.7%)</td>
</tr>
<tr>
<td>Leukopenia</td>
<td>6 (9%)</td>
<td>118 (59.2%)</td>
</tr>
<tr>
<td>Lymphopenopathy</td>
<td>0 (0%)</td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>8 (9%)</td>
<td>136 (69.2%)</td>
</tr>
<tr>
<td>Any Bleeding Manifestations*</td>
<td>8 (9%)</td>
<td>32 (16.1%)</td>
</tr>
<tr>
<td>Myelosuppression</td>
<td>0 (0%)</td>
<td>1 (0.5%)</td>
</tr>
<tr>
<td>Pathologic Fracture</td>
<td>2 (2%)</td>
<td>5 (2.5%)</td>
</tr>
<tr>
<td>Nervous</td>
<td>39 (43%)</td>
<td>58 (30%)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>12 (13%)</td>
<td>9 (4.9%)</td>
</tr>
<tr>
<td>Paresthesia</td>
<td>17 (19%)</td>
<td>13 (7%)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0%)</td>
<td>2 (1%)</td>
</tr>
</tbody>
</table>

*Includes cutaneous (gastrointestinal, ocular) reactions reported. In 2 additional 207 patients who received Quadrarne! in controlled clinical trials, adverse events that were reported at a rate of 23%. The most common adverse events observed in controlled clinical studies of Quadrarne! are summarized in the table below.

In a total of 207 patients who received Quadrarne! in controlled clinical trials, adverse events that were reported at a rate of 2.1%. The most common adverse events observed in controlled clinical studies of Quadrarne! are summarized in the table below. Quadrarne! should be considered before administering Quadrarne! in pregnant women. Quadrarne! is classified as a Pregnancy Category D. Quadrarne! is not expected to cross the placenta in significant amounts.

*Adverse events reported in ≥ 1.0% of patients who received Quadrarne! or placebo in controlled clinical trials.

<table>
<thead>
<tr>
<th>Adverse Event</th>
<th>Placebo</th>
<th>Quadrarne! 1.0 mcg/kg</th>
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<tbody>
<tr>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td># Patients with Adverse Event</td>
<td>2 (6%)</td>
<td>169 (85%)</td>
</tr>
<tr>
<td>Body As A Whole</td>
<td>56 (16%)</td>
<td>100 (50%)</td>
</tr>
<tr>
<td>Pain, Fatigue</td>
<td>2 (6%)</td>
<td>14 (7%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>1 (1%)</td>
<td>12 (6%)</td>
</tr>
<tr>
<td>Arthritis</td>
<td>2 (6%)</td>
<td>10 (5%)</td>
</tr>
<tr>
<td>Chest Pain</td>
<td>4 (14%)</td>
<td>8 (4%)</td>
</tr>
<tr>
<td>Hypersensitivity</td>
<td>0 (0%)</td>
<td>6 (3%)</td>
</tr>
<tr>
<td>Hypersensitivity</td>
<td>0 (0%)</td>
<td>4 (2%)</td>
</tr>
<tr>
<td>Digestive</td>
<td>44 (14%)</td>
<td>82 (41%)</td>
</tr>
<tr>
<td>Abdominal Pain</td>
<td>7 (26%)</td>
<td>12 (6%)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>3 (13%)</td>
<td>12 (6%)</td>
</tr>
<tr>
<td>Nausea and Vomiting</td>
<td>37 (14%)</td>
<td>65 (32.7%)</td>
</tr>
<tr>
<td>Hematologic and Lympathic</td>
<td>12 (43%)</td>
<td>54 (27%)</td>
</tr>
<tr>
<td>Coagulation Disorder</td>
<td>0 (0%)</td>
<td>3 (1.5%)</td>
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<tr>
<td>Hemoglobin Decreased</td>
<td>21 (33%)</td>
<td>81 (40.7%)</td>
</tr>
<tr>
<td>Leukopenia</td>
<td>6 (9%)</td>
<td>118 (59.2%)</td>
</tr>
<tr>
<td>Lymphopenopathy</td>
<td>0 (0%)</td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>8 (9%)</td>
<td>136 (69.2%)</td>
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<tr>
<td>Any Bleeding Manifestations*</td>
<td>8 (9%)</td>
<td>32 (16.1%)</td>
</tr>
<tr>
<td>Myelosuppression</td>
<td>0 (0%)</td>
<td>1 (0.5%)</td>
</tr>
<tr>
<td>Pathologic Fracture</td>
<td>2 (2%)</td>
<td>5 (2.5%)</td>
</tr>
<tr>
<td>Nervous</td>
<td>39 (43%)</td>
<td>58 (30%)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>12 (13%)</td>
<td>9 (4.9%)</td>
</tr>
<tr>
<td>Paresthesia</td>
<td>17 (19%)</td>
<td>13 (7%)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0%)</td>
<td>2 (1%)</td>
</tr>
</tbody>
</table>
Promote your profession with classic elegance. These SNM gold finished pins are perfect on a lapel or as a tie tack. ¾" round or rectangle.

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<td>NM204</td>
<td>Duffel Bag</td>
<td></td>
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<td>$18.50</td>
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<tr>
<td>$100.01 to $200.00</td>
<td>add $12.00</td>
</tr>
</tbody>
</table>

**TOTAL**

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October 5 - 11, 1997

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

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

Nuclear Medicine Week is sponsored by the Society of Nuclear Medicine and the Technologist Section.

Keep the celebration alive all year long!
Promoting your profession does not need to be limited to Nuclear Medicine Week. Take advantage of every opportunity throughout the year to increase the understanding and utilization of Nuclear Medicine.

Don't forget the annual PR Stars Contest! Be a Public Relations star and win prizes for yourself and your institution. Look for details and entry forms in JNM and JNMT.

This year's Nuclear Medicine Week merchandise entitled, "Nuclear Medicine: For The Whole Picture" was designed by the Technologist Section and will add to your festivities and enhance the visibility of nuclear medicine.

Poster: This eye-catching full-color illustrated poster chronicles a patient through a nuclear medicine procedure. Display the poster prominently, use it as a teaching tool or give it to referring physicians to promote nuclear medicine. $5.00 each.

Party Pack for 10 people: Open-houses are popular events designed to educate and encourage understanding. Add to your festivities by serving your guests treats on plates, cups and napkins adorned with the Nuclear Medicine Week message. $10.00 for supplies for 10 people.

Balloons: Put the celebration back in Nuclear Medicine Week by decorating your facility with these colorful balloons. Perfect for open-houses, job fairs or any activity throughout the year. $1.00 for 4.

Buttons & Stickers: Get the nuclear medicine message out by wearing the buttons and using the stickers on all your correspondence. A perfect, inexpensive give-away.
Buttons are $1.00 each.
Stickers are $1.00 for 4.

Candy Bag: Display these tasty peppermints for all to enjoy. Individually wrapped with the Nuclear Medicine Week message, these mints are a perfect give-away to your patients, referring physicians or at open-houses. $5.00 for a bag of 50.

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<td>Button</td>
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<tr>
<td>Candy Bag (approx. 50 pieces)</td>
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<td>$5.00 per bag</td>
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<tr>
<td>Party Pack (plates, napkins, cups) for 10</td>
<td></td>
<td>$10.00</td>
<td></td>
</tr>
<tr>
<td>Guidelines: For Promoting Nuclear Medicine</td>
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<td>FREE</td>
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Two publications were prepared for the 44th Annual Meeting. First, the Continuing Education Course Handout Materials book contains all of the materials submitted to the Society by Continuing Education Course speakers. A bound book, this is a "must have" for all libraries!

The second book contains handouts from speakers for most of the Sunday Categorical Seminar Courses. This book will serve as another ready reference for all Nuclear Medicine libraries - at a bargain price!

Also available is the Abstract Book Supplement to the May, 1997 issue of the Journal of Nuclear Medicine. This book contains all accepted abstracts from the 44th Annual Meeting. Please note that all active members of the Society of Nuclear Medicine as well as new members who joined prior to June 1 will have already received this issue.

Please check the appropriate box(es) below:

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Siemens new dual-head variable angle E.CAM emission imaging system optimizes performance for all types of nuclear medicine procedures and all types of patients. According to Randy Weaterhead, vice president of marketing for Siemens, the E.CAM’s clinical flexibility is one of its most important features. “We received extensive customer input from around the world which resulted in a unique design that allows direct imaging of ambulatory, wheelchair or gurney patients with unparalleled performance for SPECT, whole-body and general imaging procedures,” said Weaterhead.

Features of the E.CAM include: an innovative open gantry, energy-independent HD3 digital detectors and ultra-thin imaging pallet (only 1/10th of an inch thick). These design enhancements eliminate the total number of parts needed. Additionally, the E.CAM’s modular system design and software-programmable detectors permit easy, cost-effective expansion to meet changing imaging or departmental needs. Siemens Medical Systems Inc., Nuclear Medicine Group, 2501 North Barrington Rd., Hoffman Estates, IL 60195-5203. Phone: (847) 304-7700.

Hitachi's New Line: Fixed and Variable Digital Detection Camera Systems

Hitachi Medical Corp. has come out with a new line of fixed and variable digital detection camera systems. Hitachi calls their SPECTRADigital™ series of rectangular 15 × 20 UFOV single, dual, variable and 16 × 22 UFOV jumbo products the “pioneer” of digital detection. The series offers the latest in digital signal processor-based and SLIP-ring technologies. The SPECTRADigital series has received FDA clearance. The SPECTRADigital V250DSP Variable Angle Dual-Detector System is the flagship product, aimed to target a large growing segment of nuclear medicine imaging systems. Nonuniform attenuation and coincidence detection imaging are currently works-in-progress. Scatter correction is a standard feature of all of the cameras.

Hitachi is also offering a nuclear computer workstation called the SPECTRADigital 300SS Nuclear Data and Image Processing System. The product is based on a DICOM compliant multi-modality PACS backbone with strong networking and database management tools. In alliance with French and USA-based Medasys Digital Systems (MDS), Hitachi is banking on the market's demand for image fusion and electronic patient data management to fuel its growth and acceptance in nuclear medicine. MDS has a strong history in nuclear application programming and analysis, while their recent development activities have provided a RISC workstation architecture that is strong in the area of filmless nuclear medicine, management of extremely large image file databases and extensive compliance in the processing domain via DICOM and INTERFILE standards. By mid-1997, Hitachi and MDS will work with third-party software developers to implement nuclear analysis and image display protocols to their product line. Hitachi Medical Corp., Nuclear Medicine Products Division, 9177 Dutton Dr., Twinsburg, OH 44087. Phone: (216) 405-3330.

PET Dose Drawing Safety

The Dose Drawing Station, 511 “L” Block Shield, 511 Tungsten Vial Shield, 511 Tungsten Dose Drawing Syringe and Shield are four Capintec products that together produce a quick method for drawing a dose of FDG into a syringe.

The Dose Drawing Station is constructed with a center-balanced shield that provides a full 60-mm shielding and is easily rotated in three positions. The 511 “L” Block Shield stands in front of the drawing station. Its front wall contains a 1-inch thickness of lead with a 3-inch or 4-inch thick lead glass window, which provides excellent protection. A Tungsten Vial Shield with 1-inch lead equivalent shielding is placed into the center of the Dose Drawing Station and securely locked into place. The Tungsten Dose Drawing Syringe shield with 0.5 inch lead equivalent is then attached to the top of the dose drawing station. The body of the shield is rotated to the “drawing position” and, using only one hand, a dose is withdrawn. Capintec Inc., 6 Arrow Rd., Ramsey, NJ 07446. Phone: (201) 825-9500. Fax: (201) 825-1336.

New Tungsten Syringe Shields

The PIN-TEC™ and C-TEC™ syringe shields are built to withstand the rigors of daily use. The PIN-TEC has a double-pin action that grips the syringe and prevents it from inadvertently backing out or twisting in the shield; and the lead glass is held in place by a high-density metallic collar to protect from breakage. The C-TEC has a standard thumb screw holding the syringe firmly in place (it can be used for right- or left-handed people); and the glass is surrounded with a plasticized rubber grommet that also protects it from breakage.

Both syringe shields have a bright yellow fluorescent gloss-coated inside, which better reflects light for improved visibility of volume; full 1/4-inch of 5.2 g/cm3 lead glass for greater protection. Also, a beveled underbody allows better angle for ease of injection. The syringe body is made from a solid rod stock of tungsten, which has a higher density than lead. Capintec Inc., 6 Arrow Rd., Ramsey, NJ 07446. Phone: (201) 825-9500. Fax: (201) 825-1336.
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Deadline: November 15, 1997

For more information, contact: Education & Research Foundation, Society of Nuclear Medicine, 1850 Samuel Morse Dr., Reston, VA 20190-5316; or Sue Weiss, C.N.M.T., Administrative Director (773) 880-4416.

Society of Nuclear Medicine
45TH ANNUAL MEETING

Critical Dates

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DON'T FORGET THE MID-WINTER MEETING IN LAS VEGAS, NEVADA

DATE: January 24 – February 3, 1998

LOCATION: The Alexis Park Resort

EDUCATION PROGRAM SPONSOR: The Computer and Instrumentation Council

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The answers to these questions and more may be found in the 1997 Society of Nuclear Medicine Procedure Guidelines Manual. This publication will help you achieve high quality nuclear medicine studies to insure that your patients get the treatment they deserve. This informative and useful reference tool is now available for only $20.00. To order your copy, contact Olivia Wong at (703)708-9000 x250 or via e-mail at owong@snm.org

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- Guideline for General Imaging
- Guideline for Imaging With Radiopharmaceuticals

**GENITOURINARY GUIDELINES**
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- Guideline for In-111 Leukocyte Scintigraphy for Suspected Infection/Inflammation
- Guideline for Tc-99m Exemetazime (HMPAO) Labeled Leukocyte Scintigraphy for Suspected Infection/Inflammation

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- Guideline for Diuretic Renography in Children
- Guideline for Renal Cortical Scintigraphy in Children

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- Guideline for Lung Scintigraphy

**SKELETAL GUIDELINES**
- Guideline for Bone Scintigraphy
Position Available

Nuclear Medicine Physician
Private practice adding second full-time ABNM physician. South Coast Nuclear Medicine, 229 W. Pueblo St., Santa Barbara, CA 93105.

Nuclear Pharmacist
The Medical University of South Carolina, a 596-bed tertiary care referral center in Charleston, has an immediate opening in the Department of Pharmacy for a Nuclear Pharmacist to provide comprehensive nuclear pharmacy services to MUSC’s Medical Center and to outside hospitals in the Charleston area. Our practice environment allows unique opportunities for professional growth in the areas of clinical practice, teaching and research. For more information contact Dr. Kenneth T. Cheng at 803-792-7458 or 3238. Competitive compensation and benefits in a growing and caring environment. Applicants must complete MUSC application form. Apply Monday - Friday, 8:30 a.m. - 5:00 p.m. or call 803-792-9855 for an application. Department of Human Resources Management, Medical University of South Carolina, 171 Ashley Ave., Charleston, SC 29425-1055. An equal opportunity employer, m/f/v/d.

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