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Safety and Clinical Utility of Combined Intravenous Dipyridamole/Symptom-Limited Exercise Stress Test with Thallium-201 Imaging in Patients with Known or Suspected Coronary Artery Disease

The authors evaluated the safety and clinical utility of combination intravenous dipyridamole and symptom-limited exercise in 384 consecutive patients. *page 2053*

Editorial: Exercise-Dipyridamole Myocardial Perfusion Imaging: The Circle Is Now Complete.

Heart and Skeletal Muscle Glucose Disposal in Type 2 Diabetic Patients as Determined with Positron Emission Tomography

Myocardial and skeletal muscle glucose uptake was examined in nine type 2 diabetic patients and 13 control subjects using PET and the insulin clamp technique *page 2064*

The Value of Quantitative Analysis of Glucose Utilization in the Detection of Myocardial Viability with PET

Seventy nondiabetic patients with prior myocardial infarction and angiographically confirmed coronary artery disease were studied with ¹⁸F-FDG PET after oral glucose loading *page 2068*

Estimation of Dopamine D2 Receptor Binding Potential in the Striatum with Iodine-123-IBZM SPECT: Technical and Interobserver Variability

Factors contributing to the quantification of the striatal dopamine D2 receptor binding potential in vivo using ¹²³I-iodobenzamide and SPECT were analyzed in phantoms, healthy volunteers and patients with parkinsonian syndrome. *page 2076*

Clinical Evaluation of Thallium-201 SPECT in Supratentorial Gliomas: Relationship to Histologic Grade, Prognosis and Proliferative Activities

Twenty-eight presurgical patients with supratentorial gliomas were administered bromodeoxyuridine for cell kinetic studies and underwent ²⁰¹Tl SPECT studies *page 2085*

Editorial: Thallium-201 SPECT in the Evaluation of Gliomas
 *page 2089*

Thallium-201 SPECT for Predicting Histological Types of Meningiomas

Early and delayed thallium SPECT studies were obtained from 13 patients histologically classified as meningothelial, transitional and fibroblastic and malignant. *page 2091*

A Complementary Role of Thallium-201 Scintigraphy and Mammography in the Diagnosis of Breast Cancer

The diagnostic specificity of thallium imaging for breast cancer and its efficacy as a complement to mammography were evaluated in two groups: patients with breast abnormalities scheduled for biopsy or surgery and patients suspected of a recurrence of cancer after mastectomies or lumpectomies. *page 2095*

Early Detection of Lymphoma Recurrence with Gallium-67 Scintigraphy

The sensitivity of ⁶⁷Ga scintigraphy for the detection of lymphoma recurrence was studied at an average interval of 8.7 months following treatment of 32 patients who had developed recurrent lymphoma. Specificity was studied in 36 patients with no recurrence who were in continuous clinical remission. *page 2101*

The Hot Spot Hepatobiliary Scan in Focal Nodular Hyperplasia

A prospective study was conducted of 14 patients with histologically proven focal nodular hyperplasia utilizing a hepatobiliary scan with TBIDA and a colloid scan with rhenium sulfur colloids. *page 2105*

Rhenium-186-Labeled Chimeric Antibody NR-LU-13: Pharmacokinetics, Biodistribution and Immunogenicity Relative to

Murine Analog NR-LU-10

Nine patients with metastatic carcinoma received a rhenium-labeled mouse-human chimeric monoclonal antibody. Tumor localization was demonstrated by gamma camera imaging in seven of the nine patients *page 2111*

Postprandial Gastric Motility in Infants with Gastroesophageal Reflux and Delayed Gastric Emptying

Postprandial gastric motility was quantified using a perfused catheter placed into the distal stomach of five infants with gastroesophageal reflux and delayed gastric emptying of labeled formula *page 2120*

Evaluation of Experimental Liver Tumor Using Fluorine-18-2-Fluoro-2-Deoxy-D-Glucose PET

VX2 liver tumors were studied by ¹⁸F-FDG PET in order to compare the uptake profile of this liver tumor with that previously reported for human liver tumors to determine the applicability of this model to the investigation of human liver tumors *page 2124*

In Vivo Bioactivity and Biodistribution of Chemotactic Peptide Analogs in Nonhuman Primates

A ^{99m}Tc-labeled hydrazino nicotinamide derivatized chemotactic peptide analog was used to study biodistribution and inflammation imaging in Rhesus monkey *page 2130*

Distribution of Gallium-67 in Normal and Hypotransferrinemic Tumor-Bearing Mice

The uptake of ⁶⁷Ga by two types of implanted tumors and by normal tissues in normal and severely hypotransferrinemic strains of Balb/C mice was evaluated in order to determine whether transferrin is required for uptake of ⁶⁷Ga in vivo. *page 2135*

Synthetic Peptide Immunogens for the Development of a Cardiac Myosin Light Chain-1 Specific Radioimmunoassay

To determine if the presence of cardiac light chains in blood could be used to detect acute myocardial infarction, a

specific light chain immunoassay was developed. page 2144

Assessment of Radiolabeled Stabilized F(ab')₂ Fragments of Monoclonal Antiferritin in a Nude Mouse Model

The biodistribution of ¹¹¹In-labeled stabilized fragments of monoclonal antiferritin was studied in a nude mice bearing a human hepatoma tumor xenograft. page 2152

Biodistribution and Imaging Studies of Technetium-99m-Labeled Liposomes in Rats with Focal Infection

The potential of using liposomes containing reduced glutathione and labeled with ^{99m}Tc for localizing infection was evaluated in rats infected in the thigh with *staphylococcus aureus* . . . page 2160

A Malignant Melanoma Imaging Agent: Synthesis, Characterization, In Vitro Binding and Biodistribution of Iodine-125(2-Piperidinylaminoethyl)4-Iodobenzamide

In vitro binding studies of ¹²⁵I-PAB with human malignant melanoma cells revealed that the tracer was bound to the cells with a high affinity and that the binding was saturable. Biodistribution studies in nude mice implanted with human malignant melanoma demonstrated good tumor uptake page 2169

Technetium-99m-Labeled Chemotactic Peptides: Comparison with Indium-111-Labeled White Blood Cells for Localizing Acute Bacterial Infection in the Rabbit

Groups of six animals were co-injected with 1 mCi of ^{99m}Tc-HP plus 0.05 mCi of ¹¹¹In-white blood cells, and serial scintigrams were acquired from 3 to 6 hours, and then at 18 hours postinjection. page 2176

Thallium-201 Myocardial SPECT in Bland-White-Garland Syndrome

A myocardial ²⁰¹Tl SPECT examination was conducted both prior to and following surgery on two adult patients with anomalous left coronary artery originating from the pulmonary artery.

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Carcinoma in a Transplant Kidney Detected with MAG3 Scintigraphy

The authors report two cases of infiltrative renal tumor developing in two kidney transplants from a single cadaveric donor source page 2185

Detection of Hypervascular Brown Tumors on a Three-Phase Bone Scan

A patient with hyperparathyroidism secondary to chronic renal failure had multiple bony lesions with increased activity on both immediate static and delayed imaging. page 2188

Comparison of Radionuclide Bone Scan and Magnetic Resonance Imaging in Detecting Spinal Metastases

A retrospective comparison is made of ^{99m}Tc-MDP bone scans and corresponding MRI of the spine in 35 patients who had both studies within a 2-month span. page 2191

Editorial: Is the Whole Really the Sum of the Parts? page 2198

Comparison of Anatomically Defined Versus Physiologically Based Regional Localization: Effects on PET-FDG Quantitation

An MRI-based approach to the analysis of PET ¹⁸F-FDG images was compared to a PET-based approach using a standard, adjustable template based on simple geometric regions page 2201

Estimation of Upper Limits on Human Radiation Absorbed Doses from Carbon-11-Labeled Compounds

Upper limits were estimated assuming that ¹¹C compounds are instantaneously distributed in blood plasma and then transferred solely and irreversibly to a single organ page 2208

Compton Scatter Compensation Using the Triple-Energy Window Method for Single- and Dual-Isotope SPECT

A triple-energy window scatter com-

ensation method for considering position-dependent Compton scatter is proposed. Validation included physical evaluation with phantoms and application to one patient page 2216

Measurement of Pharmacokinetics of Yttrium-86 Radiopharmaceuticals with PET and Calculation of the Radiation Dose of Analogous Yttrium-90

A demonstration of the use of positron emission tomography via the positron emitting isotope ⁸⁶Y for individual in vivo quantification of uptake and dose in both normal tissue and tumor during pain treatment with ⁹⁰Y-labeled radiotherapeutics page 2222

Clinicopathologic Conferences: Hypertrophic Cardiomyopathy Complicated with Ventricular Aneurysm and Myocardial Necrosis page 2227

Bone Scintigraphy: Part 1. Oncology and Infection

The first of a three-part state-of-the-art review of topics on bone scintigraphy in the clinic. Part one, the bone scan in oncology and infection. page 2236

Bone Scintigraphy Part 2. Orthopedic Bone Scanning page 2241

Bone Scintigraphy Part 3. Bone Scanning in Metabolic Bone Disease page 2247

A Ticket to Ride: Peptide Radiopharmaceuticals page 2253

"Magic Bullets:" From Muskets to Smart Bombs!!! page 2264

Clinical PET: A Technology on the Brink

A review of the development of the technology, the radiopharmaceutical approval process, reimbursement policies and current utilization is presented, in support of the thesis that PET is on the brink page 2269

Thoughts at Compline. page 2272