Samarium-153-EDTMP Biodistribution and Dosimetry Estimation

In a Phase 1 escalating dose protocol for palliation of pain, 52 patients with metastatic prostate cancer were treated with single doses of $^{153}$Sm-EDTMP.

Editorial: Therapy in Nuclear Medicine—A Bone of Contention.

Effect of Clodronate Treatment on Bone Scintigraphy in Metastatic Breast Cancer

The effect of intravenous clodronate therapy on the results of $^{99m}$Tc-MDP was evaluated in 11 female patients with breast cancer and metastatic bone disease.

Thallium-201 Versus Technetium-99m-MIBI in Evaluation of Childhood Brain Tumors: A Within-Subject Comparison

The relative diagnostic accuracy of $^{201}$TI and $^{99m}$Tc-MIBI was evaluated by SPECT imaging of 19 children with brain tumors initially diagnosed on clinical or histological grounds.

Prospective Comparative Study of Technetium-99m-WBCs and Indium-111-Granulocytes for the Examination of Patients with Inflammatory Bowel Disease

In 14 patients with inflammatory bowel disease, the abilities of $^{99m}$Tc-HMPAO labeled white blood cells and $^{111}$In-granulocytes to assess the presence and location of active disease were compared.

Technetium-94m-Teboroxime: Synthesis, Dosimetry and Initial PET Imaging Studies

The production of the positron emitter $^{94m}$Tc as $^{94m}$TeO$_4$ and its coordination into teboroxime and dosimetry calculations are described. Eleven clinical PET studies were performed and the results visually compared to those from $^{11}$N-ammonia.

Radioimmunolocalization of Metastatic Breast Carcinoma Using Indium-111-Methyl Benzydil DTPA BrE-3 Monoclonal Antibody: Phase I Study

A Phase 1 clinical study using $^{111}$In-MX-DTPA-BrE-3 was undertaken to determine the pharmacokinetics, tumor localization and toxicity of this radioimmunoconjugate.

Studies with Positron Emission Tomography After Systemic Administration of Fluorine-18-Uracil in Patients with Liver Metastases from Colorectal Carcinoma

To evaluate its uptake and kinetics in vivo, 50 patients with 78 hepatic metastases from colorectal tumors were injected with $^{18}$F-fluorouracil and examined with PET.

Gallium-67 and Technetium-99m-Methylene Diphosphonate Scintigraphy in Determining Prognosis for Children with Stage IV Neuroblastoma

The prognostic significance of the level of avidity for $^{67}$Ga or $^{99m}$Tc-MDP at the primary or secondary tumor sites at diagnosis was evaluated in 35 children who had presented with Stage IV neuroblastoma.


Regional Cerebral Blood Flow in Mood Disorders. II. Comparison of Major Depression and Alzheimer's Disease

Regional cerebral blood flow in matched groups with major depression, Alzheimer's disease, and in controls was compared. The scaled subprofile model (developed to identify abnormalities in regional networks) indicated distinct topographic profiles.


Evaluation of Effective Portal Venous Flow in Chronic Liver Diseases Using Echo-Doppler Flowmetry Combined with Per Jejunal Portal Scintigraphy

In 32 patients with chronic liver disease, effective portal venous flow under steady-state conditions was evaluated using echo-Doppler flowmetry combined with per jejunal portal scintigraphy.

Ventilation-Perfusion Scintigraphy in the PIOPED Study. Part I. Data Collection and Tabulation

Part one details the methods used to describe and categorize ventilation-perfusion scintigrams obtained in patients enrolled in the PIOPED study.

Ventilation-Perfusion Scintigraphy in the PIOPED Study. Part II. Evaluation of the Scintigraphic Criteria and Interpretations

The authors present an evaluation of the criteria used for categorical interpretation of the ventilation-perfusion scans performed in the PIOPED study. They conclude that, while most criteria were appropriate, three criteria should be reconsidered.

A Gallium-68 Radiopharmaceutical That Is Retained in Myocardium: $^{68}$Ga(4,6-MeO$_2$sal)2BAPEN

The $^{68}$Ga complex of this ligand was prepared by ligand exchange from $^{68}$Ga-acetylaceionate and its biodistribution determined in ether-anesthetized rats following intravenous injection.

Editorial: Clinical PET—Its Time Has Come?

Sperm Cell Dynamics in the Female Rabbit Genital Tract After Insemination Monitored by Radiolabeled Spermatozoa

The authors performed noninvasive
dynamic imaging of Tc-HMPAO-labeled spermatogonia in the female rabbit genital tract. Motility and labeling stability was analyzed.

**Evaluation of Metallobenzylguanidine Uptake by the Norepinephrine, Dopamine and Serotonin Transporters**

The authors have studied measurement of MIBG uptake by cell lines that have been transfected with complementary DNA encoding human norepinephrine, bovine dopamine and rat serotonin monoamine transporters, respectively.

**Biotinylated Iodo-Polylysine for Pretargeted Radiation Delivery**

The authors offer an “alternative” radiobiotin tracer with the goal of improved targeting to prelocalized streptavidin. In vivo localization of this tracer was evaluated in a rat model in which streptavidin agarose beads were physically localized to precapillary arterioles in the lungs.

**Iododeoxyuridine Uptake and Retention as a Measure of Tumor Growth**

Uptake and retention of IUDR was measured in two C6 glioma cell lines with different growth characteristics.

**Renal Scintigraphy in Acute Scleroderma: Report of Three Cases**

Renal scintigraphy findings in acute renal failure secondary to scleroderma are reported.

**Diagnosis of Renovascular Hypertension with Captopril Renal Scintigraphy in a Patient with a Solitary Kidney**

A patient with a solitary kidney due to renal agenesis and contralateral kidney perfusion impairment due to renal artery stenosis was successfully treated with percutaneous transluminal renal angioplasty.

**Prompt Visualization of the Gallbladder with a Rim Sign—Acute or Subacute Cholecystitis?**

An immunosuppressed neutropenic patient developed symptoms of acute cholecystitis. A Tc-DISIDA scan demonstrated a rim sign but with normal gallbladder visualization. On restudy, with the white count recovering, a persistent rim sign was seen, but without gallbladder visualization.

**A Case of Metastatic Malignancy Masquerading as an Hepatic Hemangiomia on Labeled Red Blood Cell Scintigraphy**

A 36-yr-old woman with a history of gastric neuro-endocrine carcinoma underwent Tc-red blood cell scintigraphy for evaluation of a 2-cm echogenic liver mass demonstrated on ultrasound.

**Tumor Targeting In Vivo and Metabolic Fate of 5-[Iodine-125]Iodo-2-Deoxuridine Following Intratumoral Injection in Patients with Colorectal Cancer**

Twenty-four hours before ablative surgery, ten patients with colorectal cancer were injected intratumorally with radiiodinated IudR. Following resection, activity in the tumor and surrounding tissues was measured in a gamma counter and microautoradiography was performed.

**Quantification of Renal Uptake of Technetium-99m-DTPA Using Planar Scintigraphy: A Technique That Considers Organ Volume**

The authors provide a method that corrects for scatter and attenuation using a volume depth-independent build-up factor technique, after which background correction is accomplished with consideration of the target organ volume.

**“Anatometabolic” Tumor Imaging: Fusion of FDG PET with CT or MRI to Localize Foci of Increased Activity**

A method for digitally fusing metabolic PET images with anatomic CT or MRI images was validated in ten patients with a variety of visceral cancers.

**Results of a Clinical Receiver Operating Characteristic Study Comparing Filtered Backprojection and Maximum Likelihood Estimator Images in FDG PET Studies**

Maximum likelihood estimator reconstruction was compared with filtered backprojection for the detection of small focal lesions introduced artificially into otherwise normal FDG PET brain scan data.

**Iterative Reconstruction Methods for Nonuniform Attenuation Distribution in SPECT**

A version of the Chang method and a projection precorrection technique were employed to investigate whether the use of an attenuation map could improve nonuniform attenuation compensation.

**Comparison of Personnel Radiation Dose from Myocardial Perfusion Scintigraphy: Technetium-99m-Sestamibi Versus Thallium-201**

Whole-body and hand radiation doses to technical staff were retrospectively compared during three distinct 4-mo periods when either Tl or Tc-sestamibi were exclusively used for stress myocardial perfusion imaging. Significant exposure level increases during the sestamibi period led to the establishment of several radiation reduction methods.

**Clinicopathologic Conferences: Paget’s Disease in a Patient with Breast Cancer**

A 55-yr-old postmenopausal white female was found to have a right breast mass during an admission for depression. A staging work-up, including total body scan, demonstrated diffusely increased tracer uptake in the right hemipelvis and the second lumbar vertebra.