CLINICAL SCIENCES

DIAGNOSTIC NUCLEAR MEDICINE

Detection of Severe Coronary Heart Disease with TI-201: Comparison of Resting Single Photon Emission Tomography with Invasive Arteriography
Carl-Martin Kirsch, Reinhard Doliwa, Udalrich Buell, and Detlev Roedler ................. 761

Diagnostic Value of Image Processing in Myocardial Scintigraphy
Luc Cinotti, Michel Meignan, Jean-Pierre Usdin, Norbert Vasile, and Alain Castaigne .......... 768

Repeatability of Estimates of Left-Ventricular Volume from Blood-Pool Counts: Concise Communication
Robert J. Burns, Maurice N. Druck, D. Sheila Woodward, Sylvain Houle, Peter R. McLaughlin .... 775

INVESTIGATIVE NUCLEAR MEDICINE

Brain Blood Flow Measured with Intravenous H$_2$¹⁵O. I. Theory and Error Analysis
P. Herscovitch, J. Markham, and M. E. Raichle .............................................. 782

Brain Blood Flow Measured with Intravenous H$_2$¹⁵O. II. Implementation and Validation
M. E. Raichle, W. R. W. Martin, P. Herscovitch, M. A. Mintun, and J. Markham ................. 790

CASE REPORTS

Differential Skeletal Uptake of Tc-99m-Tagged Pyrophosphate and Methylene Diphosphonate in Leukemia
Renato Armas, Ronald Neumann, and Stanley J. Goldsmith .................................... 799

In-111-Labeled Leukocyte Imaging: False-Positive Study Due to Acute Gastrointestinal Bleeding
Mark F. Fisher and Thomas G. Rudd ................................................................. 803

BASIC SCIENCES

RADIOCHEMISTRY AND RADIOPHARMACEUTICALS

C-11 Dimethyloxazolidinedione (DMO): Biodistribution, Radiation Absorbed Dose, and Potential for PET Measurement of Regional Brain pH: Concise Communication
Kimberlee J. Kearfott, Larry Junck, and David A. Rottenberg .................................. 805

Labeled Choline and Phosphorylcholine: Body Distribution and Brain Autoradiography: Concise Communication
Robert P. Friedland, Chester A. Mathis, Thomas F. Budinger, Brian R. Moyer, and Mark Rosen ... 812

PHYSICS AND RADIATION BIOLOGY

Radiation Dose Calculations for Inhalation of Tc-99m Sulfur Colloid Radioaerosol
Frank S. Prato and Simon Vinitski ................................................................. 816

INSTRUMENTATION

SPECT Resolution and Uniformity Improvements by Noncircular Orbit
Stephen C. Gottschalk, David Salem, Chun Bin Lim, and Robert H. Wake ......................... 822
COMPUTER SCIENCES

Ventricular Performance in Congenital Left-to-Right Shunt: Temporal Fourier Analysis of Gated Blood-Pool Data
Kan Takeda ................................................................. 829

TECHNICAL NOTES

Radiation Dose Estimates for Oral Agents Used in Upper Gastrointestinal Disease
Jeffry A. Siegel, Raymond K. Wu, Linda C. Knight, Ronald E. Zelac, Howard S. Stern, and Leon S. Malmud .......................................................... 835

A Modified Composite Video Signal Generator for the GAMMA 11 Computing System
Robert L. Richardson and William H. Bettinger ........................................ 838

ADJUNCTIVE MEDICAL KNOWLEDGE

Radionuclide Scrotal Imaging: Further Experience with 210 New Patients–Part 2: Results and Discussion
David C. P. Chen, Lawrence E. Holder, and Moshe Melloul ...................................... 841

TEACHING EDITORIAL

The SPECTrum of Thallium-201 Imaging in Coronary Artery Disease
Richard W. Smalling .......................................................... 854

LETTERS TO THE EDITOR

Re: The Exercise Renogram. A New Approach Documents Renal Involvement in Systemic Hypertension
D. P. Schreiner ................................................................. 859

Reply
John H. Clorius and Peter Schmidlin ............................................................. 859

Unexpected Breast Uptake of Tc-99m PIPIDA
Albert J. Moreno, William A. Coffey, Jerry M. Brown, and Robert Stallworth ........................................ 861

BOOK REVIEWS

Radioimmunoassay and Related Procedures in Medicine, 1982
Reviewed by Eileen Nickoloff ..................................................... 862

Applications of Nuclear and Radiochemistry
Reviewed by Michael Welch .......................................................... 862

Medical Radiation Biology, 2nd Edition
Reviewed by Amin I. Kassis .......................................................... 862

Reviewed by E. James Potchen ..................................................... 863
Biomedical Thermology  
Reviewed by Yosh Maruyama ................................................. 863

ABSTRACTS OF CURRENT LITERATURE ........................................ 864
INFORMATION FOR AUTHORS .................................................. 869
CALENDAR .................................................................................. 870, 42A
PLACEMENT .............................................................................. 47A, 48A