IN THIS ISSUE

CONTINUING EDUCATION

Paul J. Bohdiewicz

Indium-111 Satumomab Pendetide: The First FDA-Approved Monoclonal Antibody for Tumor Imaging

Indium-111 satumomab pendetide was the first labeled monoclonal antibody to be approved by the FDA for tumor imaging. It is reactive with most colorectal and ovarian cancers, as well as other cancers. After reading this article, the technologist will understand the FDA approval process, phase trial results, safety and adverse reactions, human antimurine antibody response, indications, imaging protocol, and strengths and weaknesses of imaging with satumomab pendetide. **155**

Hendrik Everaert, Alex Maes, Anne-Sophie Hambye, Lisbeth Mesotten, Luc Mortelmans and Philippe R. Franken

Nuclear Cardiology, Part III: Scintigraphic Evaluation of Cardiac Perfusion

After reading Part III of this series of nuclear cardiology articles, the technologist should be able to: (a) compare and contrast radiopharmaceuticals used for myocardial perfusion imaging; (b) describe imaging protocols used for detecting coronary artery disease; and (c) describe imaging patterns seen following reconstruction of myocardial images. **164**

IMAGING

Nellie L. Kelty, Lawrence E. Holder and Salma H. Khan

Dual-Isotope Protocol for Indium-111 Capromab Pendetide Monoclonal Antibody Imaging

Kelty et al. describe a dual-isotope imaging protocol using ^{99m}Tc-labeled red blood cells with ^{111}In capromab pendetide monoclonal antibody imaging for detecting and localizing nodal metastasis in prostate cancer. Preliminary data suggest increased accuracy compared with the single-isotope technique. **174**

ZongJian Cao and Lawrence E. Holder

Effects of the Attenuation Map Used in the Chang Algorithm on Quantitative SPECT Results

This study examined the effects on SPECT quantitation caused by erroneous size and position of the attenuation map and inaccurate pixel size used in the Chang algorithm. The authors found that a true left-right symmetry in the pixel value can be altered significantly by a small error in the geometric parameters for a uniform attenuator with symmetric geometry, such as the human brain. **178**

April Mann, Alan W. Ahlberg, Michael P. White, Dawn M. Cross, Jose Piriz, R. Scott Morris and Gary V. Heller

Effect of Time on Liver Clearance of Technetium-99m-Tetrofosmin in Patients with Acute Chest Pain: When Should Imaging Begin?

Due to stable myocardial retention and technetium imaging characteristics, ^{99m}Tc-tetrofosmin has been considered potentially useful for acute chest pain imaging. Quantitative analysis suggests that the optimal imaging time should be at least 45 min after the injection of ^{99m}Tc-tetrofosmin. **186**

Kenya Murase, Hiroyoshi Fujioka, Takeshi Inoue, Yoshihiro Ishimaru, Akihisa Akamune, Yuji Yamamoto and Junpei Ikezoe

Measurement of Blood Radioactivity for Quantification of Cerebral Blood Flow Using a Gamma Camera

This study was designed to determine whether gamma cameras can be substituted for well-type scintillation counters in measuring blood radioactivity counts to be used as an input function for the quantitative measurement of cerebral blood flow (CBF). The results suggest that gamma cameras can be used to measure CBF. **191**

NUCLEAR PHARMACY

Berit A. Jansson, Meta B. Göransson and Brita N. Ågren

Adsorption of Some Technetium-99m Radiopharmaceuticals onto Disposable Plastic Syringes

The authors did this study to determine the adsorption behavior of some widely used, commercially available ^{99m}Tc radiopharmaceuticals onto different types of plastic syringes. The data suggest that the extent of adsorption depends on pharmaceutical excipients in the kits and/or the type of syringe used. **196**

Martha W. Pickett, Judith E. Kosegi, Kathleen S. Thomas and Kristen M. Waterstram-Rich

The Incidence of Blood Contamination of Lead Unit Dose Containers With and Without Single-Use Protective Inserts Used with Commercially Prepared Radiopharmaceutical Unit Doses

Pickett et al. evaluated the effectiveness of disposable plastic inserts in radiopharmaceutical unit dose lead containers in preventing the distribution of doses in blood-contaminated containers. They found that proper use of disposable plastic inserts reduces the possibility of distributing contaminated containers. **200**

Graeme M. Snowdon

A Safe, Simple Method for Preparing Heat-Damaged Red Cells for Diagnosing Splenic Infarct or Trauma

Snowdon did this study to demonstrate a fast, safe and simple method for preparing heat-damaged red blood cells. This method successfully used the UltraTag® RBC kit to radiolabel patient blood and obtain high-quality planar and SPECT images of the spleen. **204**

COMMENTARY

Bohdan Bybel, Michel Blais, Richard Vandierendonck and Albert A. Driedger

Radiation Safety When a Patient Dies After Therapy

The authors present a case report to illustrate the issues that arise when a patient dies soon after radionuclide therapy. The requirements of safe practice, the shift of accountability, the ethical aspects and forthcoming changes in regulatory constraints are discussed. **206**