

1977 Subject Index

(Asterisk indicates abstract)

Artifact

- acute myocardial infarction imaging, 112*
- bone imaging, ^{99m}Tc-diphosphonate, 17
- flood field image, particulate phantom content, 213
- liver-spleen image, bladder activity, 163

Biliary, *see Gallbladder*

Bladder

- activity on liver-spleen scan, 163

Blood, *see Red blood cells*

Bone

- imaging, artifacts, ^{99m}Tc-diphosphonate, 17
- imaging, cranial hyperostosis, 161
- rib phantom for myocardial studies, 50
- scanning, bladder retention of activity, 163
- scanning, techniques, ^{99m}Tc-pyrophosphate, 23
- ^{99m}Tc-diphosphonate kit evaluation, 54
- tomography, 146, 152

Book review

- An Introduction to the Physics of Nuclear Medicine*, 171
- Atlas of angiography*, 57
- ICRU Report 25, Conceptual Basis for the Determination of Dose Equivalent*, 106
- NCRP Report No. 49: Structural Shielding Design and Evaluation for Medical Use of X-rays and Gamma Rays of Energies up to 10 MeV*, 107
- Roentgenology of the Gallbladder and Biliary Tract*, 221
- Scintillation Camera Lung Imaging: An Anatomic Atlas and Guide*, 106
- The Basic Physics of Radiation Therapy, 2nd Edition*, 106
- Xeroradiography: Uncalcified Breast Masses*, 221

Brain

- angiography, book review, 57
- imaging, Dandy-Walker cyst, ^{99m}Tc-GHT, in infant, 85
- tomography, Anger rectilinear tomographic scanner, 146
- tomography, ^{99m}TcO₄⁻, 152

Breast

- xeroradiography, uncalcified mass, book review, 221

Camera, scintillation

- computer system choice, 199
- lung imaging, book review, 106
- multi-crystal, left ventricular ejection fraction, 112*
- window settings, ⁶⁷Ga, 108*
- window settings, myocardial imaging, 52

Cardiology, *see Heart*

Cesium-137

- source, equipment performance testing, 41

Chi-square test, 41, 217, 218

Chromatography

- gel column, ^{99m}Tc-agents, 94
- miniaturized, ^{99m}Tc-diphosphonate, 54
- paper, ^{99m}Tc-MAA, 111*
- radio-, scanning device, 208
- ^{99m}Tc-Sn-MAA, 28

Chromium-51

- red blood cell labeling syringe, 32

Clinical evaluation

- Anger rectilinear tomographic scanner, 146
- ferritin radioassay, 63 cases, 110*
- myocardial imaging, acute infarct, technical aspects, 385 cases, 112*
- pancreas scanning, cold spot technique, 720 cases, 108*
- prolactin radioimmunoassay, 110*
- T₃ kits, 109 cases, 110*

Computer

- ⁶⁷Ga/^{99m}Tc subtraction technique, 108*
- systems, buyer's guide, 199

Departmental operations

- department design, 112*
- emergency planning, 46
- infection control, 110*

laboratory relocation, 111*

- large volume scheduling, performance control, 143
- quality assurance of patient care, 111*, 197
- radiopharmacy design, 90
- record keeping, 143
- scheduling, nuclear medicine and radiography studies, 111*

Diphosphonate, *see Technetium-99m*

Display

- choice of, 199

Dose calibrator

- performance, quality control, 35, 168, 169

Education

- book review: physics of nuclear medicine, 171
- in-service, 169
- VOICE program, 56

Field uniformity

- Anger rectilinear tomographic scanner, 146
- effect of phantom contents, 213

Fluorescence scanning

- thyroid, energy window selection, 108*

Folate

- radioassay, normal range, 101
- radioimmunoassay, normal values, 101
- radioimmunoassay, quality assurance, 109*

Gallbladder

- roentgenology, book review, 221

Gallium-67

- camera window settings, 108*
- ^{99m}Tc image subtraction, 108*
- tomography, Anger rectilinear scanner, 146
- tomography, dual photopeak analyzer, 109*

Gastrointestinal tract

- reduced Tc uptake, in animals, 110*

Gating

- ECG, 112*

Heart

- dynamic model, ventricular time-activity curves, 109*
- ECG-gated studies, rest and stress, 112*
- exercise studies, ^{99m}Tc, 112*
- imaging, rib phantom, 50
- imaging, ^{99m}Tc-albumin, window setting, 52
- imaging, ²⁰¹Tl, ^{99m}Tc-pyrophosphate, 112*
- left ventricular ejection fraction, multi-crystal scintillation camera, 112*

Hippuran, *see Iodine-131*

Infection

- control, 110*

Instrumentation, *see specific instrument*

Insulin

- radioimmunoassay kit improvement, 205

Iodine-125

- dose calibrator performance, 35
- insulin, radioimmunoassay kit, 205

Iodine-131

- dose calibrator performance, 35, 168, 169
- o-iodohippurate, comprehensive renal function studies, 81

Kidney

- screening study, imaging, urinary excretion, ERPF, ¹³¹I-o-iodohippurate, 81

Kit

- ferritin assay, 110*
- insulin radioimmunoassay, improvement, 205
- Serum T₃, comparison, 110*
- ^{99m}Tc-diphosphate, evaluation, 54
- ^{99m}Tc, radiochromatogram scanning, 208
- ^{99m}Tc-Sn-MAA, impurities, 28, 55, 105
- ^{99m}Tc, Sn(II) spot test, 88

Kolmogrov-Smirnov test, 41, 217, 218

Lexis' divergence coefficient, 41, 217, 218

Licensure

Technologist Section SNM Position Paper, 56

Liver

imaging, bladder activity, 163
reduced Tc uptake, in animals, 110*
scintiangiography, ^{99m}Tc-S colloid, 155

Lung

CO₂ rebreathing effects, correction, 211
imaging, book review, 106
studies, ¹³³Xe charcoal trap adsorption, 166, 167
^{99m}Tc-Sn-MAA kit, purity, 28, 55, 105
ventilation and perfusion, right-to-left shunt, ¹³³Xe, ^{99m}Tc-MAA, 215

Models

animal, tissue distribution, 55, 105
heart, dynamic, ventricular time-activity curves, 109*

Myocardial, see Heart**o-iodohippurate, see Iodine-131****Pancreas**

scanning, cold spot technique, image subtraction, 108*

Patient

comfort, 197, 211
position, liver scintiangiography, 155

Pediatrics

Dandy-Walker cyst, brain imaging, ^{99m}Tc-GHT, 85

Pertechnetate, see Technetium-99m**Phantom**

emission tomography, 109*
flood field uniformity, artifact, 215
rib, myocardial studies, 50
tomographic, 109*

Pituitary gland

adenoma, prolactin radioimmunoassay, 110*

Prolactin

radioimmunoassay, clinical applications, 110*

Pyrophosphate, see Technetium-99m**Quality control**

dose calibrator, 35, 168, 169
equipment, goodness-of-fit test, 41, 217, 218
flood field phantom content, 213
folate radioimmunoassay, 109*
radiochemical, rapid feedback system, 94
Sn(II) spot test, 88
^{99m}Tc-diphosphonate kit evaluation, 54
^{99m}Tc-MAA, commercial, 111*
^{99m}Tc-MAA kit, 28, 55, 105
^{99m}Tc-MAA, labeling efficiency tests, 217

Radiation dosimetry

dose equivalent determination, book review, 106

Radiation safety

accident management, 46
charcoal trap adsorption of ¹³³Xe, 166, 167
hand exposure, 158
liver scintiangiography studies, ^{99m}Tc, 155
shielding, book review, 107

Radiation therapy

basic physics, book review, 106

Radioassay

ferritin, kit evaluation, 110*
normal range estimation, 101

Radioimmunoassay

folate, quality control, 109*
insulin, kit improvement, 205
prolactin, clinical application, 110*

Radiopharmacy

design, 90

Red blood cells

⁵¹Cr, ^{99m}Tc labeling, syringe, 32

Reliability factor

equipment performance test, 41, 217, 218

Scaler

multichannel, radiochromatogram scaling, 208

Scanner

tomographic multiplane, 152

Scanner, rectilinear

Anger, tomographic, 146
bone-scanning techniques, ^{99m}Tc-pyrophosphate, 23
⁶⁷Ga-citrate study, compared to tomographic scanner, 146

Selenium-75, selenomethionine

pancreas scanning, cold spot technique, 108*

Skull

cranial hyperostosis, bone imaging, 161

Spleen imaging

bladder activity, 163

Technetium-99m

-agents, quality control, rapid feedback system, 94
-albumin, myocardial imaging, 52
angiocardiology, exercise, 112*
-diphosphonate, bone imaging artifacts, 17
-diphosphonate, bone tomography, 146
-diphosphonate, kit evaluation, 54
dose calibrator performance, 35, 168, 169
-GHT, brain imaging, in infant, 85
-gluconate, left ventricular ejection fraction, 112*
image subtraction, ⁶⁷Ga scanning, 108*
kit preparation, radiochromatogram scanning, 208
kits, Sn(II) spot test, 88
-MAA, commercial, evaluation, 111*
-MAA, lung perfusion, right-to-left shunt, 215
-MAA, particle number effects, 215
pertechnetate, brain tomography, 146
-pyrophosphate, acute myocardial infarction imaging, 112*
-pyrophosphate, bone-scanning techniques, 23
-pyrophosphate, myocardial studies, rib phantom, 50
reduced, effect on imaging, in animals, 110*
-red blood cells, labeling syringe, 32
-S colloid, liver image subtraction, pancreas scanning, 108*
-S colloid, liver-spleen imaging, bladder activity, 163
-S colloid, scintiangiography, 155
-Sn-MAA, kit, purity, 28, 55, 105

Thallium-201

heart imaging, acute infarction, 112*

Thyrotropin

radioassay, normal range, 101

Thyroid

fluorescence scanning, window selection, 108*

Thyroxine

CPB, normal range, 101

Tomography

Anger rectilinear tomographic scanner, 146
clinical experience, 109*
dual independent, photopeak analyzer, 109*
multiangle readout, 109*
plane distribution, 152

Training, see Education**TSH, see Thyrotropin****Tumor**

breast mass, uncalcified, xeroradiography, book review, 221

T₃

kits, comparison, 100*
uptake, normal range, 101

T₄, see Thyroxine**Vitamin B₁₂**

radioassay, normal range, 101

Xenon-133

charcoal trap adsorption, 166, 167
lung ventilation, right-to-left shunt, 215

Xeroradiography

uncalcified breast mass, book review, 221

X-ray

gallbladder, biliary tract, 221
studies, scheduling with nuclear medicine, 111*