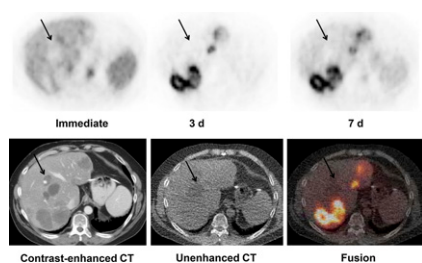


Cardiac neuronal imaging: Bengel focuses on basic methodologic aspects of and challenges in the translation of targeted imaging of the sympathetic nervous system from research tools to routine clinical applications **Page 1167**

Reviving antibody imaging: Boerman and Oyen provide an overview of immuno-PET and its applications in patient management, dose calculation in radioimmunotherapy, and development of antibody-based drugs and preview a related article in this issue of *JNM* **Page 1171**

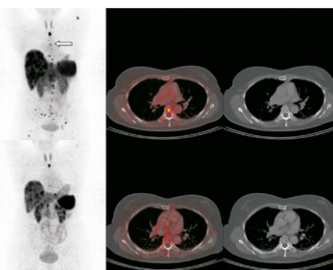
¹²⁴I-huA33-antibody PET: Carrasquillo and colleagues use quantitative PET to evaluate the biodistribution and other in vivo attributes of a humanized monoclonal antibody with implications for imaging and treatment of colorectal cancer **Page 1173**



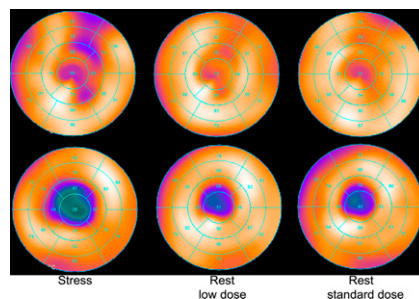
¹⁸F-FLT PET in lung cancer: Brockenbrough and colleagues describe relationships among static/dynamic analysis parameters of ¹⁸F-FLT PET, expression of the proliferation marker Ki-67, and protein expression and enzymatic activity of thymidine kinase-1 in resected lung lesions **Page 1181**

Personalizing PET-guided therapy: Meyer zum Büschenfelde and colleagues report on the use of salvage neoadjuvant radiochemotherapy to improve outcomes in patients with adenocarcinomas of the esophagus identified on ¹⁸F-FDG PET as likely to respond poorly to conventional preoperative chemotherapy . . . **Page 1189**

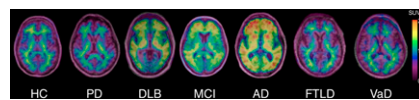
Bone mets after PRRT: Ezziddin and colleagues look at response and long-term control of bone metastases from gastroenteropancreatic neuroendocrine tumors after peptide receptor radionuclide therapy with ¹⁷⁷Lu-octreotate **Page 1197**



Lower-dose MPI: Nkoulou and colleagues determine whether accurate assessment of ischemic myocardial disease is feasible with a low-dose/low-dose 1-d SPECT myocardial perfusion imaging protocol using a cadmium zinc telluride device **Page 1204**



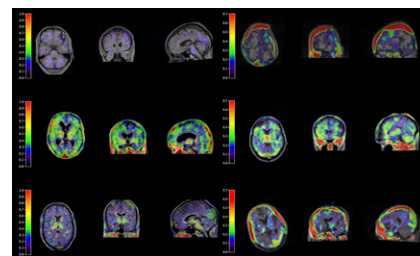
¹⁸F-florbetaben in dementia: Villemagne and colleagues use ¹⁸F-florbetaben PET to compare cortical amyloid deposition in controls and in individuals with mild cognitive impairment, frontotemporal lobar degeneration, dementia with Lewy bodies, vascular dementia, Parkinson disease, and Alzheimer disease **Page 1210**



PET score for Alzheimer progression: Herholz and colleagues evaluate the utility of a predefined quantitative measure extracted from ¹⁸F-FDG PET imaging as a valid biomarker to monitor progression of mild cognitive impairment to Alzheimer disease **Page 1218**

Multimodal neuroimaging in gliomas: Stadlbauer and colleagues investigate and categorize peritumoral fiber tract alterations according to changes in metabolism and integrity of fiber structures using ¹⁸F-fluoroethyl tyrosine PET and diffusion tensor imaging in patients with cerebral gliomas **Page 1227**

Microglial activation after TBI: Folkersma and colleagues assess (*R*)-¹¹C-PK11195 binding as an indirect marker of neuronal damage after traumatic brain injury **Page 1235**

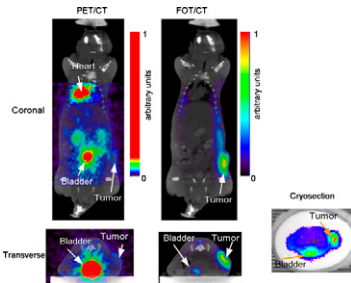


Radiation risk in children: Fahey and colleagues provide an overview of radiation dosimetry for radiopharmaceuticals and CT, radiation risk estimation in pediatric nuclear medicine, approaches for communication of risk to patients' families, and radiation dose reduction strategies **Page 1240**

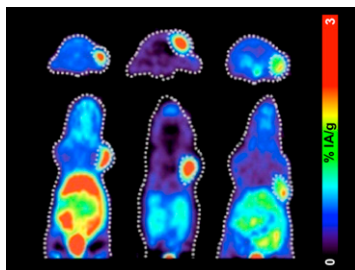
Extracerebral reference tissue in rats: Backes and colleagues describe a kinetic modeling approach in which PET-assessed glucose metabolism of the whiskers area of the rat can provide quantitative noninvasive determination of cerebral glucose consumption **Page 1252**

PET and response to crizotinib: Cullinane and colleagues report on PET imaging of glucose metabolism and cell proliferation to monitor tumor response to crizotinib, an adenosine triphosphate-competitive c-MET kinase inhibitor, in cell lines with aberrant c-MET signaling **Page 1261**

Integrated PET and optical 3D: Li and colleagues detail the development and evaluation of a simultaneous PET and 3-dimensional fluorescence optical tomography system for small-animal imaging **Page 1268**

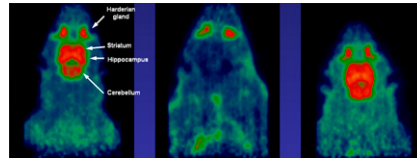


⁶⁴Cu- and ⁶⁸Ga-RGDs for PET: Dumont and colleagues describe novel radiolabeling and initial studies with arginine-glycine-aspartic acid peptides, with promise for visualizing and quantifying $\alpha_v\beta_3$ integrin expression **Page 1276**

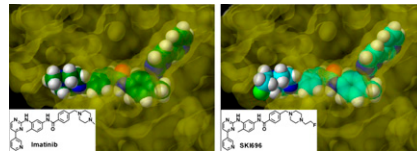


Multiplexed multipinhole SPECT: Strydom and colleagues evaluate innovative instrumentation for reproducible measurements of serial left ventricle perfusion, volume, and ejection fraction in myocardial infarcted and healthy rats **Page 1285**

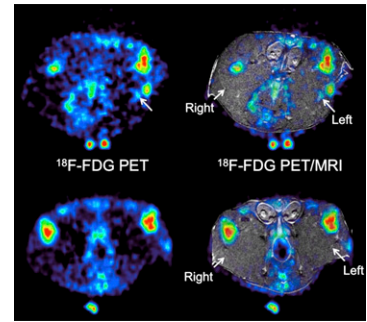
A₁R imaging: Paul and colleagues determine whether ¹¹C-MPDX PET can be used for quantitative studies of cerebral adenosine A₁ receptors in rat brain and discuss techniques that may enhance the information provided **Page 1293**



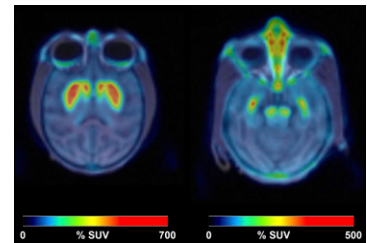
Radiolabeled imatinib analog: Glekas and colleagues report on the synthesis of an ¹⁸F-labeled analog of imatinib to be used to assess in vivo drug distribution and tracer concentration and as a PET imaging surrogate for imatinib **Page 1301**



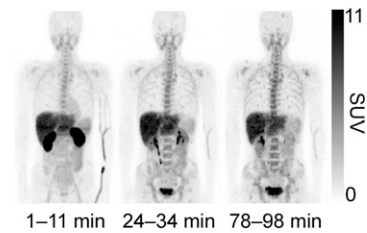
PET/MRI and nerve injury: Behera and colleagues explore the potential for hybrid ¹⁸F-FDG PET/MRI assessment of injured peripheral nerves in a small-animal model of neuropathic pain **Page 1308**



¹⁸F-LBT-999 bioassessment: Varrone and colleagues evaluate the quantification, bio-distribution, and radiation dosimetry of a novel dopamine transporter radioligand in nonhuman primates **Page 1313**



Clinical ¹¹C-4DST PET: Toyohara and colleagues describe safety, distribution, radiation dosimetry, and initial brain tumor imaging with this in vivo cell proliferation marker in humans **Page 1322**



ON THE COVER

A multimodal neuroimaging approach described in this issue provides complementary information on peritumoral fiber tract alterations in gliomas that may be helpful for planning treatment and predicting prognosis. In the 3 patients illustrated here, peritumoral fibers were of identical metabolic category but were shown by the new approach to be of 3 different structural types: compressed, normal, or attenuated.

See page 1230.

