

**Hyperpolarized  $^{13}\text{C}$  MRS in prostate cancer:** Wilson and Kurhanewicz identify metabolic shifts seen in cancer that may be exploited for diagnosis, with a special focus on agents and platforms developed for hyperpolarized  $^{13}\text{C}$  MR spectroscopy. . . . . **Page 1567**

**Clinical readiness of quantitative SPECT:** Liu and Sinusas look at the promise and challenges associated with practical assessment of absolute myocardial perfusion with dynamic SPECT imaging. . . . . **Page 1573**

**Diagnostic imaging in NETs:** Mansi and Cuccullo offer perspective on PET/CT with DOTA peptides in diagnosis and staging of patients with neuroendocrine tumors and preview a related article in this issue of *JNM*. . . . . **Page 1576**

**PET/CT in young breast cancer patients:** Riedl and colleagues retrospectively evaluate the utility of  $^{18}\text{F}$ -FDG PET/CT staging in a group of asymptomatic breast cancer patients younger than 40 years of age. . . . . **Page 1578**

**PET and NSCLC survival:** Huang and colleagues explore the value of standardized uptake values and metabolic tumor volumes on  $^{18}\text{F}$ -FDG PET/CT in predicting survival in locally advanced non-small cell lung cancer during early stages of concurrent chemoradiotherapy. . . . . **Page 1584**

**Improving DLBCL prognosis:** Cerci and colleagues report on data from a multinational study of PET and risk assessment in diffuse large B-cell lymphoma, looking specifically at marrow involvement identified by staging PET and routine bone marrow biopsy for predicting outcomes. . . . . **Page 1591**

**NET imaging assessment:** Etchebehere and colleagues compare the relative capabilities of  $^{99\text{m}}\text{Tc}$ -HYNIC-octreotide SPECT/CT,  $^{68}\text{Ga}$ -DOTATATE PET/CT, and whole-body diffusion-weighted MR imaging in patients with neuroendocrine tumors. . . . . **Page 1598**

**Tryptophan uptake in nontumoral brain:** Kamson and colleagues investigate clinical correlates of tryptophan metabolic abnormalities in the nontumoral hemisphere of glioma patients using  $\alpha$ - $^{11}\text{C}$ -methyl-tryptophan PET. . . . . **Page 1605**

**Amino acid-based PET in glioblastoma:** Lapa and colleagues compare information provided by  $^{18}\text{F}$ -FET and  $^{18}\text{F}$ -DOPA in PET/CT imaging of patients with high-grade gliomas. . . . . **Page 1611**

**$^{18}\text{F}$ -FP-CIT PET/MR and AC:** Choi and colleagues evaluate quantification of  $^{18}\text{F}$ -FP-CIT binding in brain PET/MR, focusing on the effects of ultrashort echo time-based attenuation correction including bone segmentation. . . . . **Page 1617**

**Categorizing  $^{18}\text{F}$ -flutemetamol PET:** Thurfjell and colleagues assess a fully automated quantification method for classifying  $^{18}\text{F}$ -flutemetamol PET studies as negative or positive for brain amyloid. . . . . **Page 1623**

**Myocardial uptake suppression on PET:** Demeure and colleagues investigate the efficacies of different interventions for suppressing myocardial  $^{18}\text{F}$ -FDG uptake in PET/CT detection of arterial atherosclerotic plaque inflammation. . . . . **Page 1629**

**$^{212}\text{Pb}$  radioimmunotherapy:** Meredith and colleagues report on the safety, distribution, pharmacokinetics, immunogenicity, and tumor response of intraperitoneal  $^{212}\text{Pb}$ -TCMC-trastuzumab in patients with human epidermal growth factor receptor type 2-expressing malignancy. . . . . **Page 1636**

**Fat-MR-constrained PET reconstruction:** Prevrhal and colleagues describe potential improvements in  $^{18}\text{F}$ -FDG PET image quality using a technique to constrain PET image reconstruction to low-fat regions, with the rationale that fatty tissue metabolism is low in glucose consumption. . . . . **Page 1643**

**Targeting neuropeptide receptors in tumors:** Morgat and colleagues provide an educational overview of the biology and roles of bombesin, neurotensin, and neuropeptide-Y receptor systems that offer high potential in the field of nuclear oncology. . . . . **Page 1650**

**$^{47}\text{Sc}$  radionuclide therapy:** Müller and colleagues investigate the suitability of  $^{47}\text{Sc}$  for therapy in a preclinical setting using a novel DOTA-folate conjugate with an albumin-binding entity, with promise for combined  $^{44}\text{Sc}/^{47}\text{Sc}$  PET imaging and radionuclide therapy. . . . . **Page 1658**

**SPECT and PET in irradiated HNSCC:** van Dijk and colleagues visualize changes in systemically accessible epidermal growth factor receptor with  $^{111}\text{In}$ -cetuximab-F(ab') $_2$  SPECT before and after radiotherapy for head and neck squamous cell carcinoma, with simultaneous  $^{18}\text{F}$ -FDG PET uptake evaluation. . . . . **Page 1665**

**PET estimation of ALA-induced PpIX:** Suzuki and colleagues characterize the properties of  $^{11}\text{C}$ -labeled 5-aminolevulinic acid analog as a PET tracer to estimate protoporphyrin IX accumulation in tumors. . . . . **Page 1671**

**$^{99\text{m}}\text{Tc}$ -cAbVCAM1-5 imaging:** Broisat and colleagues assess the imaging sensitivity of this single-domain antibody fragment directed against mouse or human vascular cell adhesion molecule 1, with potential for detection of inflamed atherosclerotic lesions. . . . . **Page 1678**

**Dynamic SPECT absolute MBF:** Wells and colleagues evaluate the measurement of myocardial blood flow using a multipinhole dedicated cardiac SPECT camera in a pig model of rest and transient occlusion at stress with 3 common tracers:  $^{201}\text{Tl}$ ,  $^{99\text{m}}\text{Tc}$ -tetrofosmin, and  $^{99\text{m}}\text{Tc}$ -sestamibi. . . . . **Page 1685**

**hCTR1 as a novel imaging reporter gene:** Kim and colleagues evaluate the potential for use of the human copper transporter 1 gene as a new reporter gene for tracking targeted delivery in vivo with PET using  $^{64}\text{CuCl}_2$ . . . . . **Page 1692**

**oxLDL and macrophage  $^{18}\text{F}$ -FDG uptake:** Lee and colleagues explore the effect of oxidized low-density lipoprotein on macrophage  $^{18}\text{F}$ -FDG uptake and investigate underlying molecular mechanisms, including the roles of hypoxia-inducible factor-1 $\alpha$  and reactive oxygen species. . . . . **Page 1699**

**PET/NIR fluorescent tumor targeting:** Pérez-Medina and colleagues describe the development of an  $^{89}\text{Zr}$ -based labeling strategy for liposomal nanoparticles that accumulate in tumors, with potential for integration into simultaneous PET and near-infrared imaging agents. . . . . **Page 1706**

**Adenosine 2A PET in rhesus monkeys:** Barret and colleagues detail the development of a new  $^{18}\text{F}$ -labeled adenosine 2A PET radiotracer and explore relationships between plasma levels and  $A_{2A}$  occupancy by preladenant and tozadenant in nonhuman primates. . . . . **Page 1712**

**Improved GRP receptor antagonists:** Gourni and colleagues determine whether and how N-terminal modulations improve the affinity and pharmacokinetics of radiolabeled gastrin-releasing peptide receptor antagonists. . . . . **Page 1719**

**Imaging reactivation tuberculosis:** Murawski and colleagues present a novel mouse model simulating the evolution of tuberculosis infection and reactivation disease, with implications for the use of serial  $^{18}\text{F}$ -FDG imaging in the study of pathogenesis and evaluation of novel therapeutics. . . . . **Page 1726**

**$\sigma$ -receptor imaging in porcine brain:** Brust and colleagues use the  $\sigma$ -receptor-specific agent  $^{18}\text{F}$ -fluspidine in swine to investigate the in vivo kinetics of the (R)-(+)- and (S)-(-)-enantiomers to identify their potential for imaging in humans. . . . . **Page 1730**

**PET in muscle denervation:** Lee and colleagues explore the extent of glucose hypermetabolism in denervated muscle and investigate the feasibility of  $^{18}\text{F}$ -FDG PET imaging for detection of muscle denervation in a rat model. . . . . **Page 1737**