

**PSMA PET in prostate cancer:** Jadvar provides perspective on prostate-specific membrane antigen as a biomarker in imaging evaluation of prostate cancer and previews a study on this topic in this issue of *JNM*. . . . . **Page 1131**

**Quantitative accuracy of PET/CT:** Kinahan and colleagues look at the increasing need for precision results in PET/CT assessment of tumor response to therapy and introduce a related article in this issue of *JNM*. . . . . **Page 1133**

**Imaging T cells:** Neri describes current efforts and challenges in imaging T cells in vivo and outlines the novel biomedical opportunities afforded by this capability. . . . . **Page 1135**

**PET/CT repeatability in NSCLC:** Weber and colleagues explore the repeatability of quantitative parameters derived from  $^{18}\text{F}$ -FDG PET/CT imaging in non-small cell lung cancer and discuss the application of these results in monitoring tumor response to therapy. . . . . **Page 1137**

**PET and tumor fluid penetrance:** Lubberink and colleagues assess the effects of imatinib and anakinra on perfusable tissue fraction and tumor blood flow in colorectal cancer metastases using  $^{15}\text{O}$ -water PET/CT and kinetic modeling. . . . . **Page 1144**

**Prognosis and pretherapeutic SUR:** Bütof and colleagues investigate whether  $^{18}\text{F}$ -FDG PET imaging can provide independent prognostic information in patients with inoperable esophageal carcinoma and whether the tumor-to-blood standard uptake ratio can enhance the quality of this information. . . . . **Page 1150**

**Intraarterial hepatic SPECT/CT:** Gates and colleagues demonstrate typical and atypical findings of  $^{99\text{m}}\text{Tc}$ -MAA distribution on SPECT/CT obtained as part of pretherapeutic planning for radioembolization with  $^{90}\text{Y}$  microspheres. . . . . **Page 1157**

**PET/CT in pancreatic cysts:** Kauhanen and colleagues compare the accuracies of combined  $^{18}\text{F}$ -FDG PET and contrast-enhanced CT, multidetector CT, and MR imaging in differentiating malignant from benign pancreatic cysts. . . . . **Page 1163**

**$^{68}\text{Ga}$ -/ $^{177}\text{Lu}$ -PSMA theranostics:** Weineisen and colleagues describe development, preclinical evaluation, and proof-of-concept investigation of a prostate-specific membrane antigen inhibitor for imaging and therapy in patients with metastatic and castration-resistant prostate cancer. . . . . **Page 1169**

**PET/CT and survival after  $^{223}\text{Ra}$ :** Etchebehere and colleagues evaluate outcomes after  $^{223}\text{Ra}$ -dichloride therapy for hormone-refractory prostate cancer and determine whether skeletal tumor burden on whole-body  $^{18}\text{F}$ -fluoride PET/CT is prognostic for survival. . . . . **Page 1177**

**$^{18}\text{F}$ -fluoromethylcholine vs.  $^{68}\text{Ga}$ -PSMA:** Morigi and colleagues compare the detection rates of a  $^{68}\text{Ga}$ -prostate-specific membrane antigen agent and  $^{18}\text{F}$ -fluoromethylcholine in PET/CT in men initially managed with radical prostatectomy, radiation treatment, or both who were being considered for targeted therapy. . . . . **Page 1185**

**PET/CT, MTV, and endometrial cancer:** Husby and colleagues explore the value of  $^{18}\text{F}$ -FDG PET/CT for preoperative staging in endometrial carcinomas and the correspondence of  $^{18}\text{F}$ -FDG PET-specific quantitative tumor parameters, including metabolic tumor volumes, to clinical and histologic characteristics. . . . . **Page 1191**

**$\text{PiB } R_1$  as CBF proxy:** Chen and colleagues assess the suitability of  $^{11}\text{C}$ -Pittsburgh compound B blood-brain barrier delivery and relative delivery parameters as surrogate indices of cerebral blood flow in mild cognitive impairment and Alzheimer disease. . . . . **Page 1199**

**Red nucleus metabolic activity:** Hirata and colleagues use a high-resolution semiconductor PET system to investigate the metabolism of the human red nucleus and its correlation to other brain regions. . . . . **Page 1206**

**Current practices in V/Q scintigraphy:** Le Roux and colleagues survey current clinical standards of practice in Australia, Canada, and France for ventilation/perfusion imaging in evaluation of suspected acute pulmonary embolism. . . . . **Page 1212**

**Fetal  $^{18}\text{F}$ -FDG dosimetry:** Zanotti-Fregonara and colleagues estimate fetal radiation doses from  $^{18}\text{F}$ -FDG in a series of pregnant women who underwent PET imaging during clinical workup for malignancies. . . . . **Page 1218**

**Quantitative imaging of hypoxia:** Muzi and colleagues test the validity of using image-derived tissue regions that are highly correlated to blood levels as an alternative to serial blood sampling in  $^{18}\text{F}$ -FMISO PET assessment of hypoxia. . . . . **Page 1223**

**Upper gastrointestinal motility studies:** Maurer provides the first of 2 educational over-

views of gastrointestinal scintigraphy, focusing here on esophageal transit and gastric emptying. . . . . **Page 1229**

**RIT with cetuximab in CRC:** Vassileva and colleagues evaluate the preclinical efficacy of combination radioimmunotherapy, using a humanized  $^{131}\text{I}$ -labeled anti-carcinoembryonic antigen antibody and cetuximab in colorectal cancer. . . . . **Page 1239**

**Imaging periostin for cancer invasion:** Heidari and colleagues develop and characterize a PET tracer that specifically targets the extracellular matrix protein periostin and evaluate this probe in preclinical models of esophageal squamous cell carcinoma. . . . . **Page 1246**

**TBI and  $^{64}\text{CuCl}_2$  PET/CT:** Peng and colleagues report on the potential of this copper-based PET imaging agent as a biomarker for experimental traumatic brain injury in mice. . . . . **Page 1252**

**Immuno-PET and T cell reconstitution:** Tavaré and colleagues detail the generation of anti-CD4 and -CD8 cys-diabodies derived from parental antibody hybridomas for  $^{89}\text{Zr}$ -immuno-PET detection of helper and cytotoxic T cell populations. . . . . **Page 1258**

**PET and tumor-associated macrophages:** Blykers and colleagues explore the identification and  $^{18}\text{F}$ -labeled antibody fragment PET assessment of M2-oriented tumor-supporting macrophages within the tumor microenvironment as indicators of cancer progression and prognosis. . . . . **Page 1265**

**$^{89}\text{Zr}$ -HDL tumor-associated macrophage imaging:** Pérez-Medina and colleagues describe the development of reconstituted high-density lipoprotein-facilitated tumor-associated macrophage PET imaging in a preclinical breast cancer model. . . . . **Page 1272**

**PET/NIRF assessment of quantum dots:** Hu and colleagues report on a dual receptor-targeting dual-modality PET/near-infrared fluorescence probe for accurate assessment of the pharmacokinetics and tumor-targeting efficacy of semiconductor quantum dots. . . . . **Page 1278**

**Isotopes, image quality, and hybrid scanners:** Soderlund and colleagues investigate image quality for  $^{18}\text{F}$ ,  $^{11}\text{C}$ ,  $^{89}\text{Zr}$ ,  $^{124}\text{I}$ ,  $^{68}\text{Ga}$ , and  $^{90}\text{Y}$  on PET/CT and PET/MR clinical scanners. . . . . **Page 1285**