

**PET and NAC in TNBC:** Groeux comments on the demonstrated accuracy of change in  $SUV_{max}$  on  $^{18}F$ -FDG PET during neoadjuvant chemotherapy in predicting pathologic complete response in breast cancer and calls for similar trials in patients with triple-negative disease. . . . **Page 863**

**Diagnostic radiopharmaceutical oversight:** Schwarz and Clarke offer perspective on the U.S. evolution of review, assessment, and regulation of new radiopharmaceuticals and preview an article on this topic in this issue of *JNM*. . . . **Page 865**

**FDA diagnostic radiopharmaceutical review:** Marcus details the way in which the U.S. Food and Drug Administration considers diagnostic radiopharmaceuticals, focusing on common non-radioactive drugs and diagnostic radiopharmaceuticals and calling for formation of a standing advisory committee. . . . **Page 868**

**PSMA in nonprostate cancers:** Salas Fragomeni and colleagues provide a state-of-the-art overview of evidence-based studies and future promise of radiotracers targeting the prostate-specific membrane antigen in a potentially broad range of non-prostate cancers. . . . **Page 871**

**$\alpha$ -Emitters for radiotherapy:** Poty and colleagues, in the first of 2 educational reviews, explore the diversity, basic radiochemistry, restrictions, and hurdles of  $\alpha$ -emitting radionuclides in cancer therapeutics. . . . **Page 878**

**Small proteins for radionuclide imaging:** Krasnqi and colleagues focus on small proteins that could allow same-day radionuclide-based imaging, with emphasis on clinical applications and promising preclinical developments in oncology. . . . **Page 885**

**Machine learning in glioma:** Papp and colleagues report on a study designed to establish and validate machine learning-driven survival models for glioma built on in vivo  $^{11}C$ -MET PET data, ex vivo characteristics, and patient data. . . . **Page 892**

**First-in-human  $^{89}Zr$ -pertuzumab PET/CT:** Ulaner and colleagues evaluate the safety, dosimetry, and pharmacokinetics of  $^{89}Zr$ -pertuzumab PET/CT for human epidermal growth factor receptor 2-targeted imaging in patients with HER2-positive breast cancer. . . . **Page 900**

**From SSR agonists to antagonists:** Bodei and Weber survey the development of somato-

statin receptor-targeted imaging and therapy for neuroendocrine tumors and preview 2 articles in this issue of *JNM* on systematic evaluation of PET imaging with radiolabeled sstr2 antagonists. . . . **Page 907**

**$^{68}Ga$ -OPS202 PET/CT phase I study:** Nicolas and colleagues report on evaluation of this novel somatostatin receptor antagonist, including safety, biodistribution, dosimetry, and optimal imaging time-points in patients with gastroenteropancreatic neuroendocrine tumors. . . . **Page 909**

**$^{68}Ga$ -OPS202 PET/CT phase II study:** Nicolas and colleagues present the results of the phase II component of a phase I/II study evaluating the imaging sensitivity of  $^{68}Ga$ -OPS202, compared with that of  $^{68}Ga$ -DOTATOC, in patients with gastroenteropancreatic neuroendocrine tumors. . . . **Page 915**

**$^{68}Ga$ -RM26 PET in prostate cancer:** Zhang and colleagues analyze the safety, biodistribution, and radiation dosimetry of this gastrin-releasing peptide receptor antagonist PET tracer to assess its clinical diagnostic value in prostate cancer patients. . . . **Page 922**

**PSMA+ total tumor volume and BED:** Begum et al. simulate the effect of prostate-specific membrane antigen (PSMA)-positive total tumor volume on biologically effective doses in patients with metastatic castration-resistant prostate cancer undergoing  $^{177}Lu$ -PSMA radioligand therapy. . . . **Page 929**

**$\alpha$ -RIT in solid tumors:** Carlin looks at current challenges to routine clinical use of  $\alpha$ -radioimmunotherapy and offers commentary on a recent related article in *JNM*. . . . **Page 934**

**Test-retest evaluation of Flortaucipir F 18:** Devous and colleagues report on test-retest reproducibility of PET imaging with this tracer for tau neurofibrillary tangles in healthy controls and individuals with mild cognitive impairment and Alzheimer disease. . . . **Page 937**

**PERSI quantitation of Flortaucipir F 18:** Southekal and colleagues present parametric estimation of reference signal intensity, a new technique for Flortaucipir F 18 count normalization that leverages the advantages of white matter reference regions while mitigating potential partial-volume effects. . . . **Page 944**

**Exploring biomarkers for cocaine addiction:** de Laet and colleagues detail findings in a rat

model of cocaine self-administration monitored longitudinally using  $^{18}F$ -FPEB PET, proton MR spectroscopy, and behavioral tests. . . . **Page 952**

**Tau imaging in Alzheimer tauopathy mice:** Ni and colleagues use transgenic mouse models of tauopathies to compare in vivo imaging with both  $^{11}C$ -PBB3 PET and MR imaging to postmortem measures of tau probe binding. . . . **Page 960**

**$^{18}F$ -FDG PET/MR imaging in chronic sciatica:** Cipriano and colleagues report on a study assessing the feasibility of an  $^{18}F$ -FDG PET/MR imaging approach to improving diagnosis of chronic sciatica and possibly elucidating causative pathology. . . . **Page 967**

**$^{11}C$ -Erlotinib PET in the human brain:** Verheijen and colleagues describe the effects of the ABCB1 and ABCG2 transporter inhibitor elacridar on brain uptake using  $^{11}C$ -erlotinib PET in mice and in patients with advanced or metastatic solid tumors. . . . **Page 973**

**Anti-CD4 immuno-PET in colitic mice:** Freise and colleagues report on PET imaging with an antimouse CD4 antibody fragment targeting CD4-positive T cells in a mouse model of inflammatory bowel disease. . . . **Page 980**

**Fluorescent dyes and tracer kinetics:** Buckle and colleagues introduce a bimodal hybrid tracer design to systematically and quantitatively evaluate the influence of elongation of the polymethine chain in a fluorescent cyanine dye on the imaging potential of a targeted tracer. . . . **Page 986**

**Mini-EXPLORER PET scanner:** Berg and colleagues describe a long-axial-field-of-view PET scanner for high-sensitivity and total-body imaging of nonhuman primates and present the physical performance with first phantom and animal imaging results. . . . **Page 993**

**Reproducibility of thoracic MR-AC maps:** Olin and colleagues evaluate the quality of current vendor-provided thoracic MR attenuation correction maps and the reproducibility of their impact on  $^{18}F$ -FDG PET quantification in patients with non-small cell lung cancer. . . . **Page 999**

**New-generation fetal dose estimates:** Stabin provides revised radiopharmaceutical dose estimates to the fetus based on Radiation Dose Assessment Resource International Commission on Radiological Protection 89 reference female pregnant and nonpregnant models. . . . **Page 1005**