PSMA salivary gland toxicity: Langbein and colleagues look at xerostomia and related side effects of radiolabeled prostate-specific membrane antigen therapies and at the potential for avoiding, mitigating, or reversing these toxicities. ***Page 1172***

The immunoimaging toolbox: Mayer and Gambhir provide a comprehensive overview of current state-of-the-art immunoimaging, with a focus on imaging strategies and their applications in immunotherapy. ***Page 1174***

Controversies in radioiodine use: Pryma offers perspective on the challenges of over- and undertreatment with ^{131}I in differentiated thyroid cancer and previews 2 related articles in this issue of *JNM*. ***Page 1184***

Thyroid cancer management: Tuttle examines 3 issues in thyroid cancer management: the option of thyroid lobectomy as initial therapy, preoperative neck imaging to optimize initial surgery, and use of ^{131}I for remnant ablation, adjuvant treatment, or known persistent/recurrent disease. ***Page 1187***

In favor of radioiodine therapy: Schmidt and colleagues review differing opinions about ^{131}I therapy in differentiated thyroid carcinoma and look at research and consensus guidelines that should be considered in treatment decisions for low- and intermediate-risk patients. ***Page 1195***

Photoacoustic molecular imaging: Yu and colleagues describe the current state of the art in photoacoustic molecular probes, recent translational efforts, and critical barriers to clinical translation of this novel technology. ***Page 1202***

^{18}F-AlF–labeled biomolecule conjugates: Kumar surveys the development of ^{18}F-AlF labeling as a novel, fast, simple, and inexpensive procedure and points to the need for target-specific biomolecules with demonstrated long-term in vitro and in vivo stability. ***Page 1208***

^{18}F-FES PET/CT: Kurland and Oesterreich review the role of ^{18}F-fluoroestradiol PET/CT in selecting and managing patients with metastatic breast cancer and in developing new therapies and call for more specific definitions of estrogen receptor heterogeneity. ***Page 1210***

Heterogeneous ^{18}F-FES uptake in breast cancer: Nienhuis and colleagues analyze ^{18}F-fluoroestradiol PET to assess estrogen receptor expression heterogeneity in tumor and normal tissue at multiple sites in patients with metastatic breast cancer. ***Page 1212***

^{89}Zr-anti-CD20 mAb theranostics: Yoon and colleagues use PET/CT to assess tumor targeting with 2 ^{89}Zr-labeled anti-CD20 monoclonal antibodies and determine their biodistributions in a preclinical mouse model with CD20 xenografts. ***Page 1219***

PARP-1 radiotherapy in glioblastoma: Jannetti and colleagues demonstrate in mouse studies the potential for ^{131}I- poly(ADP-ribose) polymerase 1 therapeutics to induce DNA damage and apoptosis in cancer cells while sparing healthy brain tissue. ***Page 1225***

Anti–Müllerian-inhibiting substance receptor type II antibody: Deshayes and colleagues assess in preclinical models the possibility of using the radiolabeled 16F12 mouse monoclonal antibody in a theranostic approach for small-volume ovarian peritoneal carcinomatosis, such as after cytoreductive surgery. ***Page 1234***

Measuring BAT activity with radiometry: Crandall and colleagues evaluate in healthy human subjects the operating characteristics of a microwave radiometry system in noninvasive assessment of activated and nonactivated brown adipose tissue to reflect metabolic activity. ***Page 1243***

β-cell mass imaging with ^{11}C-(+)-PHNO: Bini and colleagues evaluate PET brain radioligands in the pancreas in healthy controls and type-1 diabetes mellitus subjects and identify this D_3-preferring receptor agonist as a potential marker of β-cell mass. ***Page 1249***

PE in sickle cell disease: Tivnan and colleagues explore the influence of chest radiography in patient selection and diagnostic performance of CT pulmonary angiography or ventilation–perfusion scintigraphy in suspected pulmonary emboli in sickle cell disease. ***Page 1255***

^{18}F-GE180 versus ^{11}C-PBR28: Zanotti-Fregonara and colleagues compare ^{18}F-GE180, a third-generation PET tracer for quantifying the translocator protein (TSPO), and the well-established TSPO tracer ^{11}C-PBR28 by scanning with each tracer during the same day in the same subjects. ***Page 1260***

Quantification of ^{18}F-PBR111 binding: Ottoy and colleagues determine whether the test–retest variability of ^{18}F-PBR111, a second-generation PET ligand that specifically binds to the translocator protein, is acceptable to detect a psychosis-associated neuroinflammatory signal in schizophrenia. ***Page 1267***

Dosimetry of ^{18}F-FE-PE2I: Lizana and colleagues investigate the whole-body biodistribution and dosimetry of this radioligand in healthy volunteers to determine its utility as a suitable PET imaging agent for the dopamine transporter. ***Page 1275***

Dosimetry with updated ICRP phantoms: Josefsson and colleagues use ^{68}Ga-DOTATATE PET/CT scans to compare dosimetry based on the most recent International Commission on Radiological Protection standards (phantoms and tissue-weighting factors) with dosimetry based on prior standards. ***Page 1281***

Body-surface-area model limitations: Kafrouni and colleagues quantitatively assess the ability of the body-surface-area model to predict tumor-absorbed dose and treatment outcome with ^{90}Y microspheres through retrospective voxel-based dosimetry. ***Page 1289***

Comparing multimeric ^{68}Ga-RGD peptides: Lobeek and colleagues compare the targeting characteristics of 4 ^{68}Ga-labeled multimeric cyclic arginine-glycine-aspartate–based tracers in an $\alpha_v\beta_3$ integrin–expressing tumor model and a model in which $\alpha_v\beta_3$ integrin is expressed solely on the neovasculature. ***Page 1296***

^{18}F-FDG PET in the octopus: Zullo and colleagues report on a method of administering ^{18}F-FDG to the common octopus to perform a PET biodistribution assay characterizing glucose metabolism in organs and regenerating tissues. ***Page 1302***

Imaging liver injury with ^{18}F-DFA PET: Salas and colleagues evaluate in a preclinical model whether ^{18}F-2-deoxy-2-fluoroarabinose, a PET radiotracer that measures the ribose salvage pathway, can be used to monitor acetaminophen-induced liver injury and failure. ***Page 1308***

Fluorescence imaging of rucaparib: Kossatz and colleagues describe the intrinsic fluorescence properties of the clinically approved poly(ADP-ribose) polymerase inhibitor rucaparib and its potential to directly measure drug distribution and target engagement. ***Page 1316***

Harmonization for multicenter PET studies: Orlhac and colleagues propose a method that, by removing the center effect while preserving patient-specific effects, standardizes features measured from PET images obtained using different imaging protocols. ***Page 1321***

PET/MR measurement of CBF: Ssali and colleagues detail a noninvasive PET/MR imaging approach to cerebral blood flow quantification in ^{15}O-water PET that eliminates the need to measure arterial input function. ***Page 1329***