Discussions with leaders: Oliver Sartor talks with Thomas Hope, Jeremie Calais, and Wolfgang Fendler about FDA approval of 68Ga-PSMA-11 for PET imaging of prostate-specific membrane antigen–positive lesions in men with prostate cancer. Page 146

68Ga-PSMA-11 NDA approval: Carlucci and colleagues describe the background and regulatory pathway for the academic-led New Drug Applications that facilitated FDA approval of this agent and outline implications for the larger PET community. Page 149

Real-world data in nuclear medicine: Bourla and Herrmann look at the promise and challenges of using information generated directly from medical practice, including electronic health records, to answer research questions and address evidence gaps. Page 156

11C dosimetry scans: Zanotti-Fregonara and colleagues suggest that performance of 11C dosimetry scans for new tracers should be abandoned in both animals and humans and replaced by a standard average dose of 5 μSv/MBq. Page 158

FAP imaging: Altmann and colleagues review the mechanisms, recent development, and future promise of fibroblast activation protein-targeting agents in radionuclide-based approaches to diagnosis and treatment of tumors and for diagnosis of nonmalignant diseases associated with extracellular matrix remodeling. Page 160

Quantitative nuclear cardiology: Slomka and colleagues provide the second in a series of educational overviews of the current state of quantitative clinical nuclear cardiology, here focusing on the roles of emerging and evolving analytic tools and their applications. Page 168

Breast cancer bone assessment: van Es and colleagues compare management recommendations based on bone lesion assessment by 18F-FDG PET or 99mTc bone scintigraphy, each with contrast-enhanced CT, in patients with newly diagnosed metastatic breast cancer. Page 177

18F-FES PET in endocrine sensitivity: Peterson and colleagues explore the use of 18F-fluoroestradiol PET imaging to elucidate the pharmacodynamics associated with histone deacetylase inhibitors and reduction of endocrine resistance in estrogen receptor–positive metastatic breast cancer. Page 184

Immunotherapy response in mesothelioma: Ferdinands and colleagues compare the prognostic value of volumetric PET response assessment with that of conventional criteria in patients receiving high-dose pembrolizumab for chemotherapy-resistant malignant mesothelioma. Page 191

18F-FAC PET drug delivery imaging: Russell and colleagues correlate tumor 18F-FAC PET images with 13C-gemcitabine levels in mouse models of pancreatic cancer and determine whether changes in gemcitabine can be tracked with this imaging technique. Page 195

FAPi-74 biodistribution: Giesel and colleagues describe evaluation of 18F-fibroblast activation protein inhibitor-18F-FAPi-74 in patients with lung cancer and document proof of mechanism for 68Ga-FAPi-74 labeled at ambient temperature. Page 201

18F-PSMA-1007 PET/CT accuracy: Sprute and colleagues determine the diagnostic accuracy of 18F-PSMA-1007 PET/CT imaging for N-staging of prostate cancer initially and for assessment of nodal recurrence. Page 208

68Ga-PSMA for staging in prostate cancer: Klingenberg and colleagues characterize the metastatic spread of prostate cancer in relation to 68Ga-PSMA uptake and the D’Amico classification and compare primary staging results from 68Ga-PSMA PET/CT and histopathology. Page 214

Intraarterial 90Y-DOTATOC PRRT: Lawhman-Heath and colleagues investigate whether hepatic intraarterial administration of 90Y-DOTATOC peptide receptor radionuclide therapy increases treatment efficacy while reducing systemic toxicity in neuroendocrine tumor patients with liver-dominant metastases. Page 221

225Ac-PSMA RNT and PD-1 blockade: Czerwinski and colleagues combine prostate-specific membrane antigen–targeted radionuclide therapy and immunotherapy to increase tumor immunogenicity in a mouse model of prostate cancer. Page 228

Anti–P-cadherin radioimmunoassay: Funase and colleagues detail the preclinical pharmacokinetics and pharmacology of FF-21101, an 111In- or 90Y-conjugated monoclonal antibody against P-cadherin, to evaluate potential clinical applications. Page 232

18F-Flortaucipir PET in neurodegeneration: Hammes and colleagues research the ability of 18F-flortaucipir PET to assess tau positivity as well as to differentiate between amyloid-positive and -negative forms of neurodegeneration on the basis of imaging signatures. Page 240

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MAO-B PET tracer 18F-SMBT-1: Harada and colleagues report on development and preclinical assessment of this promising and selective monoamine oxidase-B PET tracer candidate and discuss potential utility in quantitative monitoring of astroglisis in the human brain. Page 253

PET imaging of GluN2B subunits: Ahmed and colleagues investigate ortho-fluorinated and meta-fluorinated analogs of 18F-para-fluorinated-NB1, a PET probe targeting the GluN2B subunits of the N-methyl-D-aspartate receptor, with imaging potential in amyotrophic lateral sclerosis and other brain disorders. Page 259

68Ga-FAPI PET/CT in IgG4-related disease: Luo and colleagues detail preliminary results from a prospective cohort study evaluating the performance of 68Ga-fibroblast activation protein inhibitor PET/CT in comparison with 18F-FDG PET/CT in IgG4-related disease. Page 266

Dose-effect 166Ho radioembolization: Roekel and colleagues explore the relationship between dose and effect (i.e., response and toxicity) in colorectal cancer patients treated with 166Ho radioembolization. Page 272

VLA-4 imaging in ALI: Haddad and colleagues evaluate targeted imaging of very late antigen-4, a key integrin mediating adhesion and recruitment of immune cells to inflamed tissues, in quantification of inflammation in a mouse model of acute lung injury. Page 280

Ultra-fast list-mode reconstruction: Spangler-Bickell and colleagues present an infrastructure with which ultra-fast list-mode reconstructions of short PET frames (≤1 s) can be performed, producing dynamic series that can be used (among other applications) for real-time display of reconstructed data. Page 287