

Stuck in a V/Q rut? Graham offers a wake-up call and rationale for consideration of changing from conventional planar imaging to SPECT for ventilation–perfusion lung studies. . . . *Page 1395*

α -synuclein radiotracers: Shah and colleagues provide an overview of current developments in and future potential for brain imaging targeting the α -synuclein protein in a range of neurodegenerative diseases. . . . *Page 1397*

Choline imaging in prostate cancer: Mansi and colleagues contribute perspectives on the current clinical utility of choline-based PET imaging in diagnosis, staging, and prognosis in prostate cancer and assess the potential of hybrid modalities and alternative radiotracers. . . . *Page 1401*

^{90}Y -resin radioembolization: Devic and colleagues report on the results of a meta-analysis of published literature on the efficacy of ^{90}Y -resin radioembolization in patients with liver-dominant metastatic neuroendocrine tumors. . . . *Page 1404*

Head and neck PET/CT interpretation: Marcus and colleagues provide data validating the Hopkins interpretation criteria for PET/CT assessment of therapy response and survival outcomes in patients with head and neck squamous cell cancer. . . . *Page 1411*

^{18}F -FLT PET/CT in NSCLC: Frings and colleagues detail simplified quantitative parameters of ^{18}F -FLT uptake in patients with non–small cell lung cancer before and after initiation of treatment with a tyrosine kinase inhibitor. . . . *Page 1417*

^{11}C -choline PET/CT and salvage RT: Castellucci and colleagues identify factors that influence the rate of ^{11}C -choline PET/CT detection of recurrent prostate cancer in patients in early-phase biochemical relapse under consideration for salvage radiation therapy. . . . *Page 1424*

MILLISIEVERT Study: Einstein and colleagues provide results from this multi-institutional study comparing image quality, interpretation, total perfusion deficit, and ejection fraction in patients receiving both ultra-low-dose imaging on a high-efficiency SPECT camera and standard low-dose Anger SPECT imaging. . . . *Page 1430*

^{18}F -flurpiridaz absolute MBF in humans: Packard and colleagues detail a new approach to quantitation of myocardial blood flow with PET, taking advantage of the early kinetics and high first-pass extraction of this radiotracer by the myocardium. . . . *Page 1438*

First-in-human LMI1195 PET data: Sinusas and colleagues report on human safety, whole-organ biodistribution, and radiation dosimetry for this novel ^{18}F -labeled norepinephrine transporter ligand intended for use in mapping cardiac nerve terminals. . . . *Page 1445*

^{90}Y PET/CT reconstruction bias: Tapp and colleagues examine current quantitative limitations in PET/CT evaluation of postradioembolization ^{90}Y distribution in the liver and describe the feasibility of an alternative approach. . . . *Page 1452*

Fetal and maternal PET dosimetry: Xie and Zaidi use new-generation pregnant phantoms as input to calculate organ and tissue S values for 9 PET radionuclides as well as fetal/maternal absorbed and effective doses from 21 radiotracers at different gestation periods. . . . *Page 1459*

Angiogenesis imaging in moyamoya: Kim and colleagues perform angiogenesis imaging in indirect revascularization surgery for pediatric moyamoya disease to evaluate angiogenic activity and its correlation with treatment efficacy. . . . *Page 1467*

^{18}F -FDG and MR pediatric tumor imaging: Zukotynski and colleagues document ^{18}F -FDG uptake across a spectrum of pediatric brain tumors and correlate ^{18}F -FDG PET with MR imaging variables, progression-free survival, and overall survival. . . . *Page 1473*

Optimum LBM correction for SUV: Tahari and colleagues provide data favoring a specific optimal lean body mass formulation for normalizing standardized uptake values in clinical PET, with special relevance to increasing rates of obesity. . . . *Page 1481*

Radioiodine and alternate thyroid therapy: Pryma and Mandel offer an educational overview of the current role of radioactive iodine therapy, including patient selection and preparation, assessment of outcomes, and status of alternate or adjunctive therapeutics. . . . *Page 1485*

One-step ^{225}Ac mAb labeling: Maguire and colleagues detail an efficient, single-step radiolabeling method for production of therapeutically active conjugates of antibodies with ^{225}Ac at high specific activity, with promise for targeted therapy in a range of cancers. . . . *Page 1492*

^{18}F -labeled octreotate: Liu and colleagues report on an alkyltrifluoroborate–octreotate conjugate that is radiolabeled in a 1-step ^{18}F exchange reaction in high yield and with high specific activity, with potential for clinical PET imaging in neuroendocrine tumors. . . . *Page 1499*

^{18}F -FPIA tumor detection: Witney and colleagues detail the design of and initial animal studies with a new probe for cancer detection and imaging of aberrant lipid metabolism. . . . *Page 1506*

Development of ^{11}C -Lu AE92686: Kehler and colleagues report on discovery and initial validation of this novel phosphodiesterase 10A ligand and its tritiated analog, with implications for PET imaging of brain function. . . . *Page 1513*

Dual-labeled MN-14 image-guided surgery: Rijpkema and colleagues demonstrate the preclinical feasibility of image-guided resection of carcinoembryonic antigen–expressing tumors using this ^{11}In - and fluorescence-labeled agent. . . . *Page 1519*

PET and VEGFR: Li and colleagues describe the synthesis and initial preclinical performance of ^{64}Cu -labeled probes based on a kinase inhibitor already in clinical use, for development of a vascular endothelial growth factor receptor–selective theranostic radiopharmaceutical. . . . *Page 1525*

^{11}C -PBB3 radiosynthesis: Hashimoto and colleagues establish protocols for radiosynthesis and quality control of this agent for in vivo imaging of tau pathology in the human brain and characterize its photoisomerization, biodistribution, and metabolism. . . . *Page 1532*

Imaging slowly diffusing radiotracers: Wilks and colleagues investigate the effects of subvoxel spatial heterogeneity on measured time–activity curves in PET imaging and the effects of ignoring diffusion limitation on parameter estimates from kinetic modeling. . . . *Page 1539*

Multimodality imaging and metastatic rhabdomyosarcoma: Armeanu-Ebinger and colleagues validate PET/MR imaging using optical imaging in a disseminated rhabdomyosarcoma mouse model. . . . *Page 1545*

Robotic-assisted SLN fluorescence imaging: Liss and colleagues determine the ability of the FireFly camera system to detect fluorescent sentinel lymph nodes after administration of a dual-labeled molecular imaging agent in an animal model. . . . *Page 1552*

MIRDcell V2.0: Vaziri and colleagues describe a software application that models the distribution of radiopharmaceuticals in tissues, calculates distribution of radiation dose, models responses on a cell-by-cell basis, and predicts the surviving fraction of labeled and unlabeled cell populations. . . . *Page 1557*