

**Theranostics in oncology:** Taieb and colleagues provide an introduction to integrated diagnostics and therapeutics, using the radioiodine theranostic model as a template for future development of nuclear medicine approaches. . . . . *Page 1659*

**Optical imaging of ionizing radiation:** Shaffer and colleagues review optical imaging of both radionuclide- and beam-based ionizing radiation from high-energy photons and charged particles through mechanisms including radioluminescence, Cerenkov luminescence, and scintillation. . . . . *Page 1661*

**<sup>18</sup>F-FDG-derived blood flow and outcomes:** Doot looks at PET protocols that may enable routine predictive blood flow or <sup>18</sup>F-FDG transport measures after neoadjuvant therapy in breast cancer and previews a related article in this issue of *JNM*. . . . . *Page 1667*

**PET/CT and cardiac infection:** Gomes and colleagues detail evidence for the value of <sup>18</sup>F-FDG PET/CT in diagnostic workups of suspected infective endocarditis or implantable cardiac electronic device-related infection and discuss a related article in this month's *JNM*. . . . . *Page 1669*

**Predictive vs. post-SIRT <sup>90</sup>Y dosimetry:** Gnesin and colleagues evaluate agreement between the predictive dosimetry of <sup>99m</sup>Tc-MAA SPECT/CT and posttreatment dosimetry based on <sup>90</sup>Y time-of-flight PET/CT in selective internal radiation therapy in patients with hepatocellular carcinoma. . . . . *Page 1672*

**G5 as radioembolization injection vehicle:** Paprotka and colleagues compare the need for peri-interventional on-demand analgesia when water is replaced with 5% glucose for <sup>90</sup>Y-resin microsphere administration. . . . . *Page 1679*

**<sup>131</sup>I and salivary function in DTC:** Klein Hesse-link and colleagues prospectively assess the effect of high-activity radioiodine treatment on stimulated whole saliva flow rate and other characteristics in patients being treated with radioiodine for differentiated thyroid cancer. . . . . *Page 1685*

**Quantifying lung cancer heterogeneity:** Grootjans and colleagues investigate the influence of respiratory motion and varying noise levels on quantification of PET imaging textural parameters in patients with non-small cell lung cancer. . . . . *Page 1692*

**PERCIST and SUV harmonization strategies:** Quak and colleagues determine the consistency of PERCIST classification across different reconstruction algorithms in patients with cancer and whether a proprietary software tool can harmonize SUV estimation to provide consistent response classification. . . . . *Page 1699*

**Blood flow response in breast cancer:** Humbert and colleagues use a short dynamic <sup>18</sup>F-FDG PET acquisition to assess the prognostic relevance of tumor blood flow changes in response to chemotherapy in patients with triple-negative breast cancer. . . . . *Page 1707*

**PSMA PET in recurrent prostate cancer:** Rauscher and colleagues compare the accuracy of <sup>68</sup>Ga-PSMA-HBED-CC PET and morphologic imaging in the assessment of lymph node metastases in patients with biochemical recurrence of prostate cancer. . . . . *Page 1713*

**<sup>68</sup>Ga-PSMA PET/CT in prostate cancer:** Fendler and colleagues report on the ability of <sup>68</sup>Ga-PSMA-HBED-CC PET/CT to localize cancer in the prostate and surrounding tissue at initial diagnosis. . . . . *Page 1720*

**PET/CT in infective endocarditis:** Granados and colleagues determine the diagnostic accuracy of <sup>18</sup>F-FDG PET/CT in patients with suspected infective endocarditis or implantable cardiac electronic device infections. . . . . *Page 1726*

**<sup>18</sup>F-florbetaben PET in cardiac amyloidosis:** Law and colleagues describe the feasibility of <sup>18</sup>F-florbetaben PET imaging in the diagnosis of cardiac amyloidosis in patients with amyloid light chain and amyloid transthyretin heart disease and in controls with hypertensive disease. . . . . *Page 1733*

**Cerebellar A $\beta$  plaques and florbetaben SUVR:** Catafau and colleagues assess the influence of amyloid- $\beta$  pathology, including neuritic plaques, diffuse plaques, and vascular deposits, on <sup>18</sup>F-florbetaben SUV ratios using the cerebellum as a reference. . . . . *Page 1740*

**Human mGluR5 and novelty seeking:** Leurquin-Sterk and colleagues use <sup>18</sup>F-FPEB PET to explore associations between metabotropic glutamate receptor 5 and temperament traits in healthy adults. . . . . *Page 1746*

**<sup>18</sup>F-GE180 PET for neuroinflammation:** Fan and colleagues report on optimal scan duration and kinetic modeling strategies for PET imaging with this 18-kDa translocator protein-targeting agent in older healthy adults. . . . . *Page 1753*

**Pregnancy and <sup>18</sup>F-FDG:** Zanotti-Fregonara and colleagues refine fetal dose estimates associated with <sup>18</sup>F-FDG administration in PET imaging using realistic voxel-based phantoms. . . . . *Page 1760*

**Imaging lung inflammation:** Scherer and Chen provide an educational overview of current and novel imaging approaches for measuring pulmonary inflammation, with a special focus on potential applications of <sup>18</sup>F-FDG PET. . . . . *Page 1764*

**Vessel-targeted  $\alpha$ -particle immunotherapy:** Behling and colleagues investigate changes in tumor vascular morphology and functionality caused by <sup>225</sup>Ac-E4G10, an antivascular therapeutic agent, in a transgenic orthotopic glioblastoma model. . . . . *Page 1771*

**PET/MR-guided photothermal therapy:** Zhou and colleagues describe translational studies on the feasibility of photothermal therapy for ovarian cancer under the guidance of PET and MR temperature imaging using copper sulfide nanoparticles. . . . . *Page 1778*

**Apoptosis and inflammation:** Kamkar and colleagues report on timed results assessing histologic atherosclerosis, inflammation with <sup>18</sup>F-FDG PET, and apoptosis with <sup>99m</sup>Tc-rhAnnexin V-128 imaging in apolipoprotein E-deficient mice undergoing low-dose radiation. . . . . *Page 1784*

**Novel PET imaging of atherosclerosis:** Kim and colleagues determine whether mannoseylated human serum albumin specifically binds to the mannose receptor on macrophages and test the feasibility of <sup>68</sup>Ga-labeled NOTA-MSA PET imaging of atherosclerotic plaques. . . . . *Page 1792*

**Erythropoietin in ischemia cell therapy:** Garrigue and colleagues use SPECT/CT to evaluate erythropoietin priming of endothelial colony-forming cells to enhance homing to ischemic sites after cerebral artery occlusion and reperfusion in rats and explore associated protective and regenerative effects. . . . . *Page 1798*

**Target upregulation:** Taelman and colleagues performed a screen for drugs that upregulate the somatostatin receptor subtype 2 and characterize the effects of these drugs on transcriptional, translational, and functional levels in vitro and in vivo. . . . . *Page 1805*

**Selective PET imaging of VEGF receptors:** Meyer and colleagues report on the development of 2 first-in-class <sup>89</sup>Zr-labeled PET tracers that enable selective imaging of vascular endothelial growth factor receptors-1 and -2. . . . . *Page 1811*

**PET and soluble epoxide hydrolase:** Horti and colleagues detail basic and translational studies with <sup>18</sup>F-FNDP, a PET radiotracer with potential for elucidating the role of soluble epoxide hydrolase in conditions affecting the central nervous system. . . . . *Page 1817*

**Multiscale texture analysis:** Orhac and colleagues investigate the relationship between PET-derived texture indices, precise tracer distribution, and biologic heterogeneity using PET, autoradiographic, and histologic images. . . . . *Page 1823*