THIS MONTH IN

# JNM

**PET/CT monitoring of recurrence:** Rohren and colleagues presents an SNMMI comment on this aspect of the recent American Society of Clinical Oncology Top Five List in Oncology as part of the Choosing Wisely Campaign. . . . . ***Page 699***

**Folate receptor imaging:** Maurer and colleagues focus on $^{99m}$Tc-etarfolatide as a whole-body imaging agent and on the ways in which it may be used to direct folate receptor–targeted therapy. . . . . ***Page 701***

**Thyroid cancer in children:** Avram and Shulkin provide perspectives on current approaches to treatment in pediatric patients with differentiated thyroid cancer, including advances in optimal selection of patients for $^{131}$I therapy. . . . . ***Page 705***

**$^{89}$Zr-radiolabeled antibodies:** Marquez and colleagues review the recent increase in preclinical and clinical investigations with this class of immuno-PET imaging agents and preview an article on glypican-3 targeting in this issue of *JNM*. . . . . ***Page 708***

**Recurrent juvenile thyroid carcinoma:** Mihailovic and colleagues analyze the probability of recurrence, prognostic factors, treatment, and outcomes in adolescents with differentiated thyroid cancer. . . . . ***Page 710***

**PET/MR in astrocytic gliomas:** Morana and colleagues investigate the diagnostic role, clinical contribution, and prognostic value of fused $^{18}$F-DOPA PET/MR images in pediatric supratentorial infiltrative astrocytomas. . . . . ***Page 718***

**PET/MR and lung lesions:** Rauscher and colleagues prospectively assess differences in quality, detection rate, size, and radiotracer uptake in pulmonary lesions using $^{18}$F-FDG PET/CT and PET/MR imaging. . . . . ***Page 724***

**Whole-body aberrant gene expression detection:** Sörensen and colleagues explore the clinical distribution, safety, dosimetry, and efficacy of $^{111}$In-ABY-025 in determining HER2 status in metastatic breast cancer. . . . . ***Page 730***

**SUV and ADC in breast tumors:** Baba and colleagues identify correlations between apparent diffusion coefficients from diffusion-weighted MR imaging and standardized uptake values from $^{18}$F-FDG PET imaging in breast cancer and look at their potential in diagnosis and prognosis. . . . . ***Page 736***

**PET/CT and occult lymph node metastasis:** Moon and colleagues investigate the value of $^{18}$F-FDG parameters of primary tumors in predicting occult lymph node metastasis in patients with clinically N0 esophageal squamous cell carcinoma. . . . . ***Page 743***

**$^{11}$C-acetate PET/CT in myeloma:** Ho and colleagues compare the performance of $^{11}$C-acetate with that of $^{18}$F-FDG in PET/CT in multiple myeloma, including diagnostic accuracy, identification of high-risk patients, and monitoring of treatment response. . . . . ***Page 749***

**SLN technique in prostate cancer:** Rousseau and colleagues use laparoscopic surgery to validate the accuracy of an isotopic sentinel lymph node technique and correlate results with those from extended pelvic lymphadenectomy dissection in patients with localized prostate cancer. . . . . ***Page 753***

**Diabetes and $^{18}$F-FDG hypometabolism:** Roberts and colleagues explore the associations of type 2 diabetes with amyloid accumulation measured using $^{11}$C-Pittsburgh compound B and brain hypometabolism measured using $^{18}$F-FDG PET. . . . . ***Page 759***

**Carrier-free $^{123}$I-iobenguane:** Chin and colleagues report on a first-in-human phase 1 clinical study of a high-specific-activity carrier-free formulation of this agent for high-contrast, receptor-targeting SPECT applications. . . . . ***Page 765***

**DAB4 and therapy monitoring:** Al-Ejeh and colleagues characterize this murine monoclonal antibody in in vitro, human xenograft, and ex vivo analyses of clinical samples to determine suitability as a marker of cell death after cytotoxic treatment and a predictor of response. . . . . ***Page 772***

**UTE bone maps for AC:** Delso and colleagues assess the limitations of ultrashort-echo-time imaging for bone segmentation in MR-based attenuation correction of PET data in head and neck imaging. . . . . ***Page 780***

**Radionuclides in nephrourology:** Taylor, in part 2 of an educational overview, focuses on common clinical indications of suspected obstruction and renovascular hypertension and summarizes the status of radionuclide renal imaging in detection of infection and evaluation of the transplanted kidney. . . . . ***Page 786***

**Zirconium PET for HCC:** Sham and colleagues detail the use of an $^{89}$Zr-conjugated monoclonal antibody against glypican-3, a hepatocellular carcinoma–specific cell surface proteoglycan, for intrahepatic tumor localization with PET. . . . . ***Page 799***

**PSMA as imaging reporter:** Castanares and colleagues evaluate the use of prostate-specific membrane antigen as a genetic imaging reporter and compare its utility with that of 2 clinically established reporters. . . . . ***Page 805***

**Melanoma theranostic agent:** Qin and colleagues explore the use of $^{64}CuCl_2$ as an agent for both PET imaging and radionuclide therapy of malignant melanoma in preclinical studies. . . . . ***Page 812***

**Optical assessment of early response:** Liu and colleagues report on studies designed to determine whether optical imaging of vascular endothelial growth factor expression can be an early biomarker for tumor response to gefitinib therapy. . . . . ***Page 818***

**Imaging molecular events in RA:** Zheng and colleagues describe the development of a SPECT/CT radiotracer for visualization of the complement receptor of the Ig superfamily in a mouse model of rheumatoid arthritis using radiolabeled Nanobodies. . . . . ***Page 824***

**High-resolution antibody micro-SPECT:** Branderhorst and colleagues test multipinhole SPECT with sub–half-millimeter resolution in intratumoral distributions of radiolabeled antibodies directed toward the epidermal growth factor receptor and compare the results with full 3D target expression assessed by immunohistochemistry. . . . . ***Page 830***

**PET and $I_2$-imidazoline targeting:** Parker and colleagues describe development and initial studies in nonhuman primates with $^{11}$C-BU99008, a PET radioligand selective for $I_2$-imidazoline binding sites, with potential for assessment of alterations in expression patterns of this protein in disease. . . . . ***Page 838***

**$^{64}$Cu dynamics in Menkes disease model:** Nomura and colleagues use $^{64}$Cu-labeled PET imaging to investigate the effects of disulfiram on copper biodistribution in a mouse model of Menkes disease, an X-linked recessive disorder of copper metabolism. . . . . ***Page 845***

**PET and aromatase imaging:** Takahashi and colleagues report on development and initial studies of $^{11}$C-cetrozole, with potential for noninvasive PET quantification of aromatase expression and elucidation of the functional roles of aromatase in neurologic and emotional disorders. . . . . ***Page 852***

**Novel 5HT4R PET tracer:** Tavares and colleagues evaluate $^{18}$F-MNI698 as a potential PET radiotracer for imaging of serotonin 4 receptors in the brain, with promise in multiple brain disorders, including Alzheimer and Huntington diseases. . . . . ***Page 858***