THIS MONTH IN
JNM

Solving challenging puzzles: Heather Jacene, MD, talks about her career as a clinical innovator in nuclear medicine and leadership roles in the SNMMI. . . . . ***Page 1***

Nuclear cardiology surrogate biomarkers: Miller and colleagues highlight key nuclear cardiology surrogate biomarkers, emphasizing the importance of standardized imaging protocols and robust quantitative techniques to ensure accuracy and reproducibility. . . . . ***Page 4***

Imaging the aging brain: Zhong and colleagues provide a brief overview of the current status of PET and multimodality molecular imaging of the aging brain and the ways in which associated elucidation of structural/functional change may guide research. . . . . ***Page 12***

CSC imaging: dos Santos and Witney explore the application of molecular imaging techniques to noninvasive detection of cancer stem cells, providing real-time monitoring with the potential to predict therapy resistance and guide personalized treatment.. . . . . ***Page 14***

The case for routine RPT dosimetry: Sunderland looks at barriers to adoption of routine clinical dosimetry for radiopharmaceutical therapy and reports on the results of a survey of current practice in North America. . . . . ***Page 20***

New guidelines in meningiomas: Albert and colleagues summarize recently published joint professional society practice guidelines/procedure standards for diagnosis and therapy of meningiomas using radiolabeled somatostatin receptor ligands. . . . . ***Page 24***

FAP PET guidelines: Hope and members of an SNMMI/European Association of Nuclear Medicine expert group provide procedure standards/practice guidelines for the use of fibroblast activation protein–targeted PET, including indications, procedure specifications, interpretation, documentation, and reporting. . . . . ***Page 26***

[^{18}F]FTT PET of PARP1 in ovarian cancer: Weeks and colleagues compare the efficacy of a PARP1-targeted radiotracer with that of [^{18}F]FDG in tumor features commonly assessed in ovarian cancer and in others not included in current routine analyses. . . . . ***Page 34***

CD137 PET and immunotherapy monitoring: Cheng and colleagues introduce [^{18}F]AlF-NOTA-BCP137, a bicyclic peptide–based probe that targets CD137 for noninvasive PET imaging of tumor-infiltrating activated T cells, with promise for monitoring multiple combination immunotherapies. . . . . ***Page 40***

Analyzing ^{177}Lu-PSMA-617 therapy criteria: Demirci and colleagues evaluate associations between TheraP trial eligibility criteria and treatment outcomes of patients who were deemed suitable for and treated on the basis of VISION trial criteria. . . . . ***Page 47***

Volume criteria in PSMA PET: Unterrainer and colleagues detail the results of a multicenter study comparing conventional imaging–based disease volume criteria with those of PSMA PET in a cohort of patients with metastatic hormone-sensitive prostate cancer. . . . . ***Page 54***

^{177}Lu-PSMA RLT versus cabazitaxel: Wenzel and colleagues compare progression-free and overall survival in clinical experience with patients with metastatic castration-resistant prostate cancer treated with ^{177}Lu-vipivotide tetraxetan-PSMA, cabazitaxel chemotherapy, or both. . . . . ***Page 61***

Pattern of metastases after PSMA RGS: Schweiger and colleagues use PSMA-ligand PET to evaluate patterns of biochemical failure, including early recurrent disease, in patients with prostate cancer after PSMA-radioguided surgery. . . . . ***Page 67***

Biochemical recurrence and PSMA: Delgado Bolton offers perspective on diagnostic and therapeutic nuclear medicine procedures using PSMA radiopharmaceuticals, providing context for an article in this issue of *JNM* and emphasizing the importance of multidisciplinary collaboration. . . . . ***Page 73***

PSMA PET staging and positivity: Miller and colleagues report on the use of PSMA-based PET staging for newly diagnosed prostate cancer in the Veterans Health Administration from 2020 to 2023, focusing on patterns and rates of positive PET findings. . . . . ***Page 75***

Tumor growth model for [^{177}Lu]Lu-PSMA: Zaid and colleagues develop and apply a mathematic model to test the hypothesis that current treatment and scheduling regimens for [^{177}Lu]Lu-PSMA therapy are suboptimal. . . . . ***Page 84***

Prodrug activation using radionuclides: Quintana and colleagues research whether a strategy of radionuclide-induced drug engagement for release can locally deliver combined radiation and chemotherapy to maximize tumor cytotoxicity while minimizing off-target exposure to activated chemotherapy agents. . . . . ***Page 91***

^{18}F-FAPI PET and PAH: Hou and colleagues investigate in a rat model the feasibility of using ^{18}F-labeled fibroblast activation protein inhibitor PET/CT to assess fibrotic remodeling of the pulmonary artery and right ventricle in pulmonary arterial hypertension. . . . . ***Page 98***

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Clinical value of Aβ PET quantification: Collij and members of the multinational AMYPAD Consortium report on an analysis of their data on correlations between quantification and visual assessment of amyloid-β PET images, pointing to potential enhancement of future treatment decisions. . . . . ***Page 110***

Quantitation of COX-1 in human brain: Ghazanfari and colleagues quantify the specific binding of [^{11}C]PS13 to cyclooxygenase-1 in healthy human brains using PET performed with arterial input function at baseline and after blockade by the COX-1–selective inhibitor ketoprofen. . . . . ***Page 117***

Comparison of tau PET imaging agents: Aliaga and colleagues perform head-to-head comparisons of the in vitro binding properties of [^{18}F]flortaucipir, [^{18}F]MK6240, and [^{18}F]PI2620 in postmortem human brain tissue from controls and individuals with Alzheimer disease. . . . . ***Page 123***

Imaging misfolded SOD1: Rousseau and colleagues detail preclinical development of [^{89}Zr]Zr-desferoxamine-α-miSOD1, a PET agent targeting selectively misfolded superoxide dismutase 1, a common cause of amyotrophic lateral sclerosis. . . . . ***Page 130***

Spinal cord myelin PET: van der Weijden and colleagues present a translational study evaluating [^{11}C]*N*-methyl-4,4′-diaminostilbene as a PET tracer for myelin imaging in the rat and human spinal cords, demonstrating the potential to quantify myelin density. . . . . ***Page 136***

Acute hypoxia and A_1AR availability: Michno and colleagues use [^{18}F]CPFPX), a PET tracer for the A_1 adenosine receptor, to determine whether hypoxia-induced adenosine release reduces A_1AR availability in human brain and is associated with altered brain perfusion and psychomotor vigilance. . . . . ***Page 142***

Quantitative accuracy of the Neuro-EXPLORER: Omidvari and colleagues assess the quantitative precision of this recently developed dedicated brain PET system, using phantom and human data imaging conditions relevant to dynamic neuroimaging studies.. . . . . ***Page 150***

SNMMI General Nuclear Medicine Highlights: Bartel summarizes selected noteworthy presentations in general nuclear medicine and molecular imaging from the 2024 SNMMI Annual Meeting. . . . . ***Page 158***

Extracranial PET staging for high-grade meningiomas: Ermiş and colleagues ask whether whole-body staging with [^{68}Ga]Ga-DOTATOC PET/CT for high-grade meningiomas should become standard clinical practice. . . . . ***Page 162***