

SNMMI NEWSLINE

- 9N** SNMMI Annual Meeting Highlights Theranostics, Novel Research, and Image of the Year
- 11N** New Officers for SNMMI and SNMMI-TS
- 14N** Lassmann Recognized with Loevinger–Berman Award
George Sgouros and Frederic Fahey
- 15N** SNMMI New Fellows Honored
- 15N** USP to Establish New General Chapter on Compounding
- 16N** In Memoriam: Dirk J. Kwkkeboom, MD, PhD 1958–2017
- 16N** New Grants for TBI Research Reviewed
- 17N** Letter to the Editor: AUC for V/Q Imaging in Pulmonary Embolism. The Elephant in the Room: Planar or SPECT V/Q?
Pierre-Yves Le Roux and Pierre-Yves Salaun
- 18N** SNMMI Leadership Update: The SNMMI 2017 Annual Meeting: Ushering in the Future with a Focus on Theranostics, Research, Education, and Value
Virginia Pappas
- 19N** Science Briefs from the SNMMI 2017 Annual Meeting

EDITOR'S PAGE

- 1185** The Impact of the Impact Factor
Johannes Czernin

HOT TOPICS

- 1186** Acceleration of PSMA-Targeted Theranostics to the Clinic: Can Common Sense Prevail?
Johannes Czernin and Matthias Eiber

THE STATE OF THE ART

- 1188** The Use of Microdosing in the Development of Small Organic and Protein Therapeutics
Mats Bergstrom

CONTINUING EDUCATION

- 1196** ¹⁷⁷Lu-PSMA Radioligand Therapy for Prostate Cancer
Wolfgang P. Fendler, Kambiz Rahbar, Ken Herrmann, Clemens Kratochwil, and Matthias Eiber

FOCUS ON MOLECULAR IMAGING

- 1201** Noninvasive Interrogation of Cancer Metabolism with Hyperpolarized ¹³C MRI
Andrew Cho, Justin Y.C. Lau, Benjamin J. Geraghty, Charles H. Cunningham, and Kayvan R. Keshari

EDITORIAL

- 1207** Why Targeting of PSMA Is a Valuable Addition to the Management of Castration-Resistant Prostate Cancer: The Urologist's Point of View
Boris A. Hadaschik and Martin Boegemann

ONCOLOGY

Basic

- 1210** Human Epidermal Growth Factor Receptor 3–Specific Tumor Uptake and Biodistribution of ⁸⁹Zr-MSB0010853 Visualized by Real-Time and Noninvasive PET Imaging
Frank J. Warnders, Anton G.T. Terwisscha van Scheltinga, Christine Knuehl, Maarten van Roy, Erik F.J. de Vries, Jos G.W. Kosterink, Elisabeth G.E. de Vries, and Marjolijn N. Lub-de Hooge

Translational

- 1216** ■ **FEATURED TRANSLATIONAL SCIENCE ARTICLE.** Preclinical Evaluation of ¹¹C-Sarcosine as a Substrate of Proton-Coupled Amino Acid Transporters and First Human Application in Prostate Cancer
Morand Piert, Xia Shao, David Raffel, Mathew S. Davenport, Jeffrey Montgomery, Lakshmi Priya Kunju, Brian G. Hockley, Javed Siddiqui, Peter J.H. Scott, Arul M. Chinnaiyan, et al.
- 1224** First Evaluation of PET-Based Human Biodistribution and Dosimetry of ¹⁸F-FAZA, a Tracer for Imaging Tumor Hypoxia
Annarita Savi, Elena Incerti, Federico Fallanca, Valentino Bettinardi, Francesca Rossetti, Cristina Monterisi, Antonia Compierchio, Giampiero Negri, Piero Zannini, Luigi Gianolli, et al.

Clinical

- 1230** Equivalent Dose Rate 1 Meter from Neuroendocrine Tumor Patients Exiting the Nuclear Medicine Department After Undergoing Imaging
Jules Zhang-Yin, Anne-Sophie Dirand, Myriam Sasanelli, Gwenaëlle Corrége, Aude Peudon, Thierry Kiffel, Valérie Nataf, Jérôme Clerc, Françoise Montravers, and Jean-Noël Talbot
- 1236** Functional Imaging Signature of Patients Presenting with Polycythemia/Paraganglioma Syndromes
Ingo Janssen, Clara C. Chen, Zhenping Zhuang, Corina M. Millo, Katherine I. Wolf, Alexander Ling, Frank I. Lin, Karen T. Adams, Peter Herscovitch, Richard A. Felders, et al.
- 1243** The Predictive Value of Early In-Treatment ¹⁸F-FDG PET/CT Response to Chemotherapy in Combination with Bevacizumab in Advanced Nonsquamous Non–Small Cell Lung Cancer
Edwin A. Usmanij, Tinatin Natroshvili, Johanna N.H. Timmer-Bonte, Wim J.G. Oyen, Miep A. van der Drift, Johan Bussink, and Lioe-Fee de Geus-Oei
- 1249** Prognostic Value of Bone Marrow Tracer Uptake Pattern in Baseline PET Scans in Hodgkin Lymphoma: Results from an International Collaborative Study
Colette Zwarthoed, Tarec Cristoffer El-Galaly, Maria Canepari, Matthieu John Ouvrier, Julien Viotti, Marc Ettaiche, Simonetta Viviani, Luigi Rigacci, Livio Trentin, Chiara Rusconi, et al.
- 1255** Prospective Evaluation of the Clinical Implications of the Tumor Metabolism and Chemotherapy-Related Changes in Advanced Biliary Tract Cancer
Jaemin Jo, Hyun Woo Kwon, Seongyeol Park, Do-Youn Oh, Gi Jeong Cheon, and Yung-Jue Bang

1262 ■ INVITED PERSPECTIVE. MRI and PET: Noninvasive Tools to Probe the Biology of Diffuse Intrinsic Pontine Glioma
Elizabeth R. Gerstner

1264 Correlation of ¹⁸F-FDG PET and MRI Apparent Diffusion Coefficient Histogram Metrics with Survival in Diffuse Intrinsic Pontine Glioma: A Report from the Pediatric Brain Tumor Consortium
Katherine A. Zukotynski, Sridhar Vajapeyam, Frederic H. Fahey, Mehmet Kocak, Douglas Brown, Kelsey I. Ricci, Arzu Onar-Thomas, Maryam Fouladi, and Tina Young Poussaint

THERANOSTICS

Basic

1270 ⁶⁸Ga-THP-PSMA: A PET Imaging Agent for Prostate Cancer Offering Rapid, Room-Temperature, 1-Step Kit-Based Radiolabeling
Jennifer D. Young, Vincenzo Abbate, Cinzia Imberti, Levente K. Meszaros, Michelle T. Ma, Samantha Y.A. Terry, Robert C. Hider, Greg E. Mullen, and Philip J. Blower

NEUROLOGY

Basic

1278 Determination of an Optimal Pharmacokinetic Model of ¹⁸F-FET for Quantitative Applications in Rat Brain Tumors
Marie Anne Richard, Jérémie P. Fouquet, Réjean Lebel, and Martin Lepage

1285 Prediction of the Clinical SUV Ratio in Amyloid PET Imaging Using a Biomathematic Modeling Approach Toward the Efficient Development of a Radioligand
Yuma Arakawa, YingHwey Nai, Miho Shidahara, Shozo Furumoto, Chie Seki, Nobuyuki Okamura, Manabu Tashiro, Yukitsuka Kudo, Kazuhiko Yanai, Kohsuke Gonda, et al.

Clinical

1293 Glucose Metabolic Profile by Visual Assessment Combined with Statistical Parametric Mapping Analysis in Pediatric Patients with Epilepsy
Yuankai Zhu, Jianhua Feng, Shuang Wu, Haifeng Hou, Jianfeng Ji, Kai Zhang, Qing Chen, Lin Chen, Haiying Cheng, Liuyan Gao, et al.

1300 Optimal Reference Region to Measure Longitudinal Amyloid- β Change with ¹⁸F-Florbetaben PET
Santiago Bullich, Victor L. Villemagne, Ana M. Catafau, Aleksandar Jovalekic, Norman Koglin, Christopher C. Rowe, and Susan De Santi

1307 Diagnostic Value of ¹⁸F-FDG PET/CT Versus MRI in the Setting of Antibody-Specific Autoimmune Encephalitis
Lilja B. Solnes, Krystyna M. Jones, Steven P. Rowe, Puskar Pattanayak, Abhinav Nalluri, Arun Venkatesan, John C. Probasco, and Mehrbod S. Javadi

1314 ■ FEATURED CLINICAL INVESTIGATION ARTICLE. Resting-State Networks as Simultaneously Measured with Functional MRI and PET
Alexandre Savio, Sarah Funger, Masoud Tahmasian, Srinivas Rachakonda, Andrei Manoliu, Christian Sorg, Timo Grimmer, Vince Calhoun, Alexander Drzezga, Valentin Riedl, et al.

CARDIOLOGY

Basic

1318 ■ FEATURED ARTICLE OF THE MONTH. Preclinical Evaluation of RYM1, a Matrix Metalloproteinase-Targeted Tracer for Imaging Aneurysm
Jakub Toczek, Yunpeng Ye, Kiran Gona, Hye-Yeong Kim, Jinah Han, Mahmoud Razavian, Reza Golestani, Jiasheng Zhang, Terence L. Wu, Jae-Joon Jung, et al.

Clinical

1324 Inter- and Intraobserver Agreement of ¹⁸F-FDG PET/CT Image Interpretation in Patients Referred for Assessment of Cardiac Sarcoidosis
Hiroshi Ohira, Brian Mc Ardle, Robert A. deKemp, Pablo Nery, Daniel Juneau, Jennifer M. Renaud, Ran Klein, Owen Clarkin, Karen MacDonald, Eugene Leung, et al.

RADIATION BIOLOGY

1330 ■ BRIEF COMMUNICATION. Human Dosimetry of the N-Methyl-D-Aspartate Receptor Ligand ¹¹C-GMOM
Jasper van der Aart, Thalia F. van der Doef, Paul Horstman, Marc C. Huisman, Robert C. Schuit, Arthur van Lingem, Albert D. Windhorst, Bart N.M. van Berckel, and Adriaan A. Lammertsma

1334 Resin Versus Glass Microspheres for ⁹⁰Y Transarterial Radioembolization: Comparing Survival in Unresectable Hepatocellular Carcinoma Using Pretreatment Partition Model Dosimetry
Axel Van der Gucht, Mario Jreige, Alban Denys, Paul Blanc-Durand, Ariane Boubaker, Anastasia Pomoni, Periklis Mitsakis, Marina Silva-Monteiro, Silvano Gnesin, Marie Nicod Lalonde, et al.

SPECIAL CONTRIBUTION

1341 Joint SNMMI-ASNC Expert Consensus Document on the Role of ¹⁸F-FDG PET/CT in Cardiac Sarcoid Detection and Therapy Monitoring
Panithaya Chareonthaitawee, Rob S. Beanlands, David H. Birnie, Edward S. Chen, Wengen Chen, Leslie T. Cooper, Marcelo F. Di Carli, Sharmila Dorbala, Robert J. Gropler, Edward J. Miller, et al.

DEPARTMENTS

8A This Month in JNM

1354 Letters to the Editor