# The Therapy Center of Excellence

*Hossein Jadvar, MD, PhD, MPH, MBA, SNMMI President*

As 2016 gets underway, I am delighted to report that the Therapy Center of Excellence (CoE) is now a reality. The leadership team is in place, with Suresh Srivastava, PhD, serving as president. The center currently has 237 members, many of whom were previously members of the Nuclear Oncology Council, which was dissolved and folded into the Therapy CoE.

The Therapy CoE is part of the implementation of SNMMI's strategic plan, which identifies the advancement of targeted radionuclide therapy (TRT) as one of its key goals. Dedicated to all aspects of the development and utilization of TRT as an alternative or addition to other treatments, the center:

- Provides a forum for members with similar interests in the field;
- Serves as a resource, providing TRT expertise and data;
- Fosters TRT research and education (including training elements in therapy and clinical trial design and help with relevant guidelines and appropriate use criteria development); and
- Collaborates with other professionals and organizations.

Many issues need focused attention, including the paucity of availability of targeted radioisotopes for research and clinical use. In addition, guidelines are needed for integrating TRT into existing standards of care. Hand-in-hand with this is the importance of better understanding TRT side effects/toxicity compared with conventional therapies. Also, patient-reported outcomes must be considered when assessing quality-of-life benefits with TRT.

As with all new therapies, Centers for Medicare & Medicaid Services reimbursement is a concern. The Therapy CoE will collect data to support the efficacy of specific TRTs, making the case for funding.

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While the center is still in the project planning stage, over the next 3 years I would like to see it focus on advocacy, education, and outreach. To accomplish its goals, it is important for the center to partner with SNMMI's Clinical Trials Network, PET Center of Excellence, and Evidence and Quality Committee, as well as other organizations and government agencies.

The center leadership is reaching out to such organizations as the American Association of Physicists in Medicine, American Society for Therapeutic Radiology and Oncology, American Society of Clinical Oncology, and World Association of Radiopharmaceutical and Molecular Therapy. The leadership also looks forward to collaborating with government agencies, including the National Cancer Institute, U.S. Food and Drug Administration, and U.S. Department of Energy.

The Therapy CoE will sponsor a categorical session at the 2016 SNMMI Annual Meeting in San Diego, CA, so please plan to attend if you will be at the meeting. In the meantime, I hope you will consider becoming a member of the Therapy CoE (dues are only $15)—adding your expertise and ideas as the center works to advance the use of approved agents, assist in the development of emerging agents, and advocate for regulatory approval and reimbursement of new agents.



*Each month the editor of Newsline selects articles on diagnostic, therapeutic, research, and practice issues from a range of international publications. Most selections come from outside the standard canon of nuclear medicine and radiology journals. These briefs are offered as a monthly window on the broad arena of medical and scientific endeavor in which nuclear medicine now plays an essential role. The lines between diagnosis and therapy are sometimes blurred, as radiolabels are increasingly used as adjuncts to therapy and/or as active agents in therapeutic regimens, and these shifting lines are reflected in the briefs presented here. We have also added a small section on noteworthy reviews of the literature.*

## PET and PET/CT in Residual/Recurrent HNSCC

In an article e-published on December 29 in *Otolaryngology–Head and Neck Surgery*, Cheung et al. from the University of Sydney (Australia) reported on a systematic review and metaanalysis designed to assess the accuracy of PET and PET/CT in identifying residual and/or recurrent local and regional disease and distant metastases in patients with head and neck squamous cell carcinoma (HNSCC) after radiation therapy with or without chemotherapy. The authors identified 27 reports that met study criteria. The pooled

sensitivity and specificity of PET for detecting residual or recurrent disease at the primary site was 86.2%; the corresponding figure for PET/CT was 82.3%. The pooled sensitivity and specificity of PET for detecting residual and recurrent neck disease was 72.3%; the corresponding figure for PET/CT was 88.3%. For distant metastases, the figures were 84.6% for PET and 94.9% for PET/CT. These data from the literature suggested that PET and PET/CT are highly accurate for detecting residual and/or recurrent HNSCC, with PET/CT more specific than PET alone. The authors noted that specificity in these studies was greater for scans performed >12 wk after radiation therapy with or without chemotherapy. They concluded by supporting "the use of PET/CT after 12 wk posttreatment for the assessment of residual or recurrent disease."

*Otolaryngology–Head and Neck Surgery*

## PSMA as Antiangiogenic Target

Crowley et al. from the New York Presbyterian Hospital/Weill Cornell Medical College (New York, NY) reported on January 15 ahead of print in the *Journal of Clinical Endocrinology and Metabolism* on a study assessing the potential of prostate-specific membrane antigen (PSMA) as an antiangiogenic target in adrenocortical carcinoma, a rare tumor type with poor prognosis and limited therapeutic options. The study included evaluation of PSMA by quantitative polymerase chain reaction and immunohistochemistry in 50 adrenal samples, including 16 normal adrenal glands, 16 adrenocortical adenomas, 15 primary adrenocortical carcinomas, and 3 adrenocortical carcinoma metastases. One patient underwent whole-body PET/CT to assess SUVs. Elevated PSMA was seen in adrenocortical carcinoma samples compared to benign samples. Immunohistochemistry localized PSMA expression in the neovasculature of adrenocortical carcinoma and confirmed overexpression of PSMA in these samples compared with benign samples. Samples with >25% PSMA-positive vessels were 33 times more likely to be malignant than benign. Using an $^{89}$Zr-labeled agent, whole-body PET/CT imaging showed anti-PSMA targeting in all (5 of 5) of the patient's multiple lung masses, with an average measurement of 3.49 ± 1.86 cm and an SUV of 1.4 ± 0.65 relative to blood pool at 0.8 SUV. The authors concluded that PSMA is "significantly overexpressed in adrenocortical carcinoma neovasculature when compared to normal and benign adrenal tumors" and that this expression "can be used to image adrenocortical carcinoma metastases in vivo and may be considered as a potential diagnostic and therapeutic target" in this setting.

*Journal of Clinical Endocrinology and Metabolism*

## $^{18}$F-FMISO and Antiangiogenic Tx Monitoring

In an article e-published on December 22 ahead of print in *Molecular Oncology*, Hernández-Agudo et al. from the Spanish National Cancer Research Center and the Instituto de Investigación Sanitaria Gregorio Marañon (both in Madrid, Spain) described studies using $^{18}$F-misonidazole ($^{18}$F-FMISO) PET to track vascular normalization in response to "window-of-opportunity" treatment with the antiangiogenic agent dovitib. The study, conducted in mice, used 2 patient-derived pancreas xenografts (Panc215 and Panc286) and the MMTV-PyMT spontaneous breast cancer model. Mice were treated during a week of window-of-opportunity treatment with dovitinib or control vehicle, with both baseline and follow-up $^{18}$F-FMISO PET and $^{18}$F-FDG PET imaging, as well as histologic assessments. After this treatment, gemcitabine (pancreas)/adriamycin (breast) or control vehicle were added, and animals were treated until the identified humane endpoint. Tumor growth inhibition and survival were the parameters studied. The researchers found that $^{18}$F-FMISO SUV did not change after dovitib window-of-opportunity treatment compared with control vehicle in the Panc215 xenografts; however, $^{18}$F-FMISO SUV decreased significantly in treated Panc286. Histologic assessments showed that a 10-KDa perivascular dextran extravasation was not reduced with dovitinib or vehicle treatment in Panc215 but was reduced in Panc286. The addition of dovitinib to gemcitabine made no difference in Panc215 but increased tumor growth inhibition in Panc286. Moreover, $^{18}$F-FMISO SUV changes were accompanied by an almost 100% increase in interstitial gemcitabine delivery. The authors concluded that "$^{18}$F-FMISO accurately monitored vascular renormalization and improved interstitial chemotherapy delivery."

*Molecular Oncology*

## PET/CT Screening in SDHB and SDHD Mutation

Komaczewski et al. from the Royal Hobart Hospital and the University of Tasmania (both in Hobart, Australia) reported on January 18 ahead of print in *Clinical Endocrinology* on a study assessing the utility of $^{18}$F-FDG PET/CT in screening for detection of succinate dehydrogenase B and D (SDHB and SDHD, respectively) mutation–related lesions. The study included the imaging records of 22 patients (20 SDHB and 2 SDHD; total of 31 images completed). All had undergone $^{18}$F-FDG PET imaging as well as some combination of MR and/or CT imaging, either alone or in combination with $^{68}$Ga-labeled DOTATATE PET/CT. $^{18}$F-FDG PET was positive in 5 and negative in 21 studies from patients with SDHB mutations. Positive $^{18}$F-FDG PET correlated with MR, CT, and $^{68}$Ga-labeled DOTATATE PET with no missed lesions. Positive lesions on $^{18}$F-FDG PET in patients with SDHD lesions correlated with other imaging in 3 of 5 studies. Some metastatic lesions visualized on fused $^{18}$F-FDG PET/CT were not visualized on $^{18}$F-FDG PET alone. The authors concluded that "$^{18}$F-FDG PET/CT is suitable for detecting SDHB and SDHD mutation–related lesions and may be considered effective for periodic surveillance of patients with these mutations."

*Clinical Endocrinology*

## PET/CT in Intraorbital Tumors

In an article e-published on January 14 ahead of print in the *British Journal of Ophthalmology*, Klingenstein et al. from the Ludwig-Maximilians-Universität (Munich, Germany) detailed the results of a study designed to assess the clinical and imaging performance of PET/CT using $^{18}$F-FDG, $^{18}$F-fluoroethylcholine, and/or $^{68}$Ga-DOTATATE in patients with secondary and primary intraorbital tumors. The study included 14 adults and 1 child with primary orbital masses who underwent combined whole-body PET/CT. Gold standards included histopathology, conventional radiographic studies, and clinical follow-up. PET/CT detected the orbital masses in all 15 patients and correctly identified these as malignant. In 11 patients, local osseous infiltration was correctly identified on PET/CT, as well as lymph node metastases in 2 of 8 patients with hematogenous orbital metastases and in 5 of 6 patients with infiltrative carcinoma. Additional distant metastases were identified in all 8 patients with orbital metastases. Only 1 patient with infiltrative carcinoma showed disseminated disease on PET/CT. Local recurrence was detected in another patient who also had prostate cancer. The authors concluded that "PET/CT is a sensitive tool for the detection and localization of orbital masses, enabling assessment of both morphology and cell metabolism." They recommended detailed imaging of the head and neck region with a small field of view when lymphatic metastases are suspected and whole-body imaging for staging of metastatic disease in patients with intraorbital tumors, and noted the utility of different radiotracers for elucidating different aspects of disease and disease spread.

*British Journal of Ophthalmology*

## Longitudinal $^{18}$F-Florbetapir PET in MCI

Shokouhi et al. from Vanderbilt University (Nashville, TN) and Lawrence Berkeley National Laboratory (CA) reported in the January 15 issue of *Alzheimer's Research & Therapy* (2016;8:2) on a study evaluating the effect of reference tissue normalization in a test–retest $^{18}$F-florbetapir PET SUV ratio analysis using cerebellar gray matter, white matter (with 2 different segmentation masks), brainstem, and corpus callosum as reference regions. The authors calculated correlation between $^{18}$F-florbetapir PET SUV and concurrent cerebrospinal fluid amyloid-β 1-42 levels in images acquired over the course of 2 y from a group of individuals with mild cognitive impairment. A new image analysis technique was also investigated to identify more subtle changes in amyloid-β. All cerebral-to-white matter normalization schemes resulted in higher inverse correlation between PET and cerebrospinal fluid amyloid-β 1-42 than did SUV ratios normalized to cerebellar gray matter. Brainstem normalization provided the highest and most stable correlations. The novel image analysis technique resulted in the lowest coefficient of variation and highest inverse correlation to cerebrospinal fluid amyloid-β 1-42 levels across all time points and reference regions compared with SUV ratio mean and median values. The authors concluded that "the selection of reference tissue for normalization and the choice of image analysis method can affect changes in cortical $^{18}$F-florbetapir uptake in longitudinal studies."

*Alzheimer's Research & Therapy*

## $^{68}$Ga-DOTATATE PET/CT and GEP-NETS

In an article e-published on December 28 ahead of print in the *Journal of Clinical Oncology*, Sadowski et al. from the National Institutes of Health (Bethesda, MD) reported on the results of a prospective study to assess the clinical utility of $^{68}$Ga-DOTATATE PET/CT in detecting unknown primary and metastatic gastroenteropancreatic neuroendocrine tumors (GEP-NETs). The study included 131 patients with GEP-NETS who underwent $^{68}$Ga-DOTATATE PET/CT, $^{111}$In-pentetreotide SPECT/CT and multiphasic CT scan, and/or MR imaging along with clinical lab assessments. $^{68}$Ga-DOTATATE PET/CT detected 95.1% of lesions with an average $SUV_{max}$ of 65.4 ± 47 (range, 6.9–244), anatomic imaging (CT or MR) detected 45.3% of lesions, and $^{111}$In-pentetreotide SPECT/CT detected 30.9% of lesions. $^{68}$Ga-DOTATATE PET/CT identified a previously unknown primary tumor in 4 of 14 patients. $^{68}$Ga-DOTATATE PET/CT detected primary GEP-NET, lymph node, and distant metastases correctly in 72 of 113 (63.7%) lesions when compared with histopathology, whereas SPECT/CT identified only 22.1% and anatomic imaging identified only 38.9%. $^{68}$Ga-DOTATATE PET/CT findings changed management in 43 of 131 (32.8%) patients. $^{68}$Ga-DOTATATE PET/CT detected lesions in 65.2% of patients with carcinoid symptoms but negative biochemical results; 40% of these lesions were detected neither by anatomic nor SPECT/CT imaging. The authors concluded that "$^{68}$Ga-DOTATATE PET/CT imaging provides important information for accurate staging of GEP-NETs and selection of appropriate treatment interventions even in the absence of biochemical evidence of disease in symptomatic patients."

*Journal of Clinical Oncology*

## PET/CT in Localized Esophageal Cancer

Paumier et al. from the Institut de Cancérologie de l'Ouest Paul-Papin (Angers, France), the CHU d'Angers (France), and the CHRU Morvan (Brest, France) reported on January 4 ahead of print in *Cancer Radiotherapie* on a study designed to evaluate the prognostic utility of different parameters on pretreatment $^{18}$F-FDG PET/CT in localized esophageal cancer. The study included the records of 83 such patients who were treated with curative intent and received chemoradiotherapy alone or followed by surgery. Patients were followed for a median of 21.8 mo (range, 0.16–104 mo). Baseline PET/CT parameters assessed in relation to survival included $SUV_{max}$, metabolically active tumor volume (measured with either an automatic segmentation software or an adaptive threshold method), and total lesion glycolysis measured by either of these 2 methods. Median overall survival was

22 mo, with 67 deaths (49 associated with cancer and 18 from intercurrent causes). None of the assessed factors correlated significantly with overall survival. Univariate analysis correlated metabolically active tumor volume as measured with the automatic segmentation software and both calculated measures of total lesion glycolysis as correlating with overall survival. This correlation held true in multivariate analysis only for the metabolically active tumor volume software measure, where $<18$ cm$^3$ correlated with 31.2-mo survival and $>18$ cm$^3$ correlated with 20-mo survival. The authors concluded that metabolically active tumor volume measured with the automatic segmentation software at baseline PET/CT was a "significant prognostic factor, which should be tested on a larger cohort."

*Cancer Radiotherapie*

## PET/CT $SUV_{max}$ and Colorectal Screening

In an article published in the January 9 issue of the *European Journal of Medical Research* (2016;21:2) Luboldt et al. from the Johann Wolfgang von Goethe University Hospital (Frankfurt, Germany), the Multiorgan Screening Foundation (Munich, Germany), and the Institute of Medical Informatics and Biometry/University Hospital (Dresden, Germany) reported on a study designed to determine: (1) the lowest $SUV_{max}$ on $^{18}$F-FDG PET/CT in colorectal cancer that could be used as a threshold to trigger endoscopy evaluation; and (2) whether additional normalization is required for $SUV_{max}$ in individual assessment. $SUV_{max}$ as measured on PET/CT in 54 colorectal carcinomas was correlated with sex, age, blood glucose level, injected activity, body mass index, and time to scan. No correlation was found between $SUV_{max}$ and any of these "extrinsic" factors. The lowest $SUV_{max}$ value was 5 (range, 5.0–24.6). These data led the authors to conclude that semiautomation in colorectal screening is possible with PET/CT, providing a basis for further study in the feasibility of automated screening, and that "independent from extrinsic factors, an $SUV_{max}$ $\geq$5.0 in a focal colorectal uptake in $^{18}$F-FDG PET/CT should automatically trigger for endoscopic evaluation, if not contraindicated." They recommended that cases with $SUV_{max}$ $<5$ be assessed individually before referral for endoscopy, a protocol that would result in more interpretation time available for those cases with a lower uptake and more ambiguous diagnoses.

*European Journal of Medical Research*

## Imaging Modality and Bone in Multiple Myeloma

Bhutani et al. from the National Institutes of Health (Bethesda, MD), Carolinas HeathCare System (Charlotte, NC), the Memorial Sloan–Kettering Cancer Center (New York, NY), the University of Texas MD Anderson Cancer Center (Houston, TX), and the University of Pennsylvania (Philadelphia) reported on December 21 ahead of print in *Leukemia & Lymphoma* on a study comparing the sensitivities of skeletal survey, $^{18}$F-FDG PET/CT, $^{18}$F-NaF PET/CT, and morphologic dynamic contrast-enhanced (DCE) MR imaging in monoclonal gammopathy of undetermined significance (MGUS; 10 patients), smoldering multiple myeloma (SMM; 10 patients), and multiple myeloma (10 patients). An additional 16 patients with SMM underwent skeletal surveys and $^{18}$F-FDG PET/CT imaging. In patients with MGUS, only DCE MR imaging identified focal marrow abnormality—in a single patient. Of the 26 SMM patients, 5 (19%) were reclassified as multiple myeloma on the basis of lytic bone lesions on CT and 6 had unifocal or diffuse marrow abnormalities. In the 10 patients in the multiple myeloma group, marrow abnormalities were seen on PET/CT in 8 and on DCE MR imaging in 9. Abnormal uptake on $^{18}$F-NaF PET/CT was seen only in those multiple myeloma patients with lytic lesions on CT, offering no additional clinical information.

*Leukemia & Lymphoma*

## PET in Resectable NSCLC: NEOSCAN Trial

In an article e-published on December 24 ahead of print in the *Journal of Thoracic Oncology*, Chaft et al. from the Memorial Sloan–Kettering Cancer Center/Weill Cornell Medical College (New York, NY) and the Massachusetts General Hospital (Boston) reported on results from a trial assessing $^{18}$F-FDG PET–measured response rates to alternative chemotherapy in patients with non–small cell lung cancer (NSCLC) who had experienced suboptimal PET response after 2 cycles of neoadjuvant chemotherapy. The results were part of the Neoadjuvant Platinum-Based Chemotherapy for Patients with Resectable NSCLC with Switch to Chemotherapy Alternative in Nonresponders (NEOSCAN) trial. The phase 2 study enrolled 40 patients with resectable stage IB–IIIA lung cancers (primary tumor $>2$ cm and $SUV_{peak} \geq 4.5$) who had undergone pretreatment $^{18}$F-FDG PET/CT before 2 cycles of cisplatin (or carboplatin) + gemcitabine (squamous) or pemetrexed (adenocarcinomas) and then a repeat PET/CT. When $SUV_{peak}$ in the primary tumor decreased by $\geq$35%, patients were maintained on the initial chemotherapy. Therapy in patients with $<$35% PET response was changed to vinorelbine + docetaxel. Postoperative radiation therapy was recommended to all patients with positive N2 nodes. Of the 40 patients, 15 (38%) were found to have a $<$35% decrease in $SUV_{peak}$ at repeat PET/CT, and 13 of these patients received vinorelbine + docetaxel. The study met its primary endpoint with 10 of 15 (67%) PET metabolic responses to alternate therapy. The authors concluded that using $^{18}$F-FDG PET/CT to assess response and change preoperative chemotherapy in nonresponding patients "can improve radiographic measures of response," an approach that can also be used to "test new drugs, attempting to optimize perioperative chemotherapy to achieve better long-term outcomes."

*Journal of Thoracic Oncology*

## Multimodal Preop Localization in Hyperparathyroidism

Lee et al. from the Mayo Clinic (Rochester, MN) reported on January 5

ahead of print in the *World Journal of Surgery* on a study designed to determine the added benefit of multimodality imaging techniques in localization before focused parathyroidectomy in primary hyperparathyroidism. The study included 360 patients who underwent a standardized multimodal imaging workup including $^{123}$I/$^{99}$Tc-sestamibi subtraction scintigraphy, SPECT, and SPECT/CT. Curative surgery was performed in 96% of patients, using preoperative imaging and intraoperative monitoring. Retrospective imaging analysis indicated that, based on correct lateralization, $^{123}$I/$^{99}$Tc-sestamibi had sensitivity, positive predictive value, and accuracy of 86%, 93%, and 81%, respectively. The respective percentages for SPECT were 77%, 92%, and 72%, and for SPECT/CT were 75%, 94%, and 71%. Of 312 patients (87%) with positive uptake on sestamibi (93% true-positive, 7% false-positive), concordant findings were present in 86% of SPECT and 84% of SPECT/CT imaging results. When imaging results were discordant and at least 1 method was true-positive, $^{123}$I/$^{99}$Tc-sestamibi was significantly more likely to be accurate than either SPECT or SPECT/CT. In the United States, the inclusion of SPECT and SPECT/CT in primary hyperparathyroidism imaging protocols increases patient cost up to 2.4-fold. The authors concluded that "$^{123}$I/$^{99}$Tc-sestamibi subtraction imaging is highly sensitive for preoperative localization in primary hyperparathyroidism" and that SPECT and SPECT/CT are usually concordant with $^{123}$I/$^{99}$Tc-sestamibi and rarely increase the sensitivity.

*World Journal of Surgery*

## PET/CT in HL Staging and Early Response

In an article e-published on January 8 ahead of print in *Blood*, Barrington, from King's College London/St. Thomas's Hospital (London, UK), and a consortium of researchers from the UK, Italy, Australia, Sweden, Denmark, Norway, and New Zealand compared $^{18}$F-FDG PET/CT with CT for staging Hodgkin lymphoma and measured agreement between expert and local readers using a 5-point scale (Deauville criteria) to adapt treatment. The study was part of the Response-Adapted Therapy in Advanced Hodgkin Lymphoma (RATHL) clinical trial. The study included 1,161 patients staged for the trial with standard clinical assessment, CT, and bone marrow biopsy (RATHL staging), as well as PET/CT at baseline and after 2 cycles of chemotherapy. PET/CT was interpreted by experts at participating national core labs, with additional local readers interpreting the scans acquired during treatment. RATHL staging data and baseline PET were in agreement in 938 (80%) patients. In the remaining patients, PET/CT upstaged 159 (14%) and downstaged 74 (6%), with upstaging of extranodal disease in bone marrow (92 patients), lung (11 patients) or multiple sites (12 patients) on PET/CT accounting for the majority of differences between RATHL staging and PET/CT results. In the "vast majority" of cases, follow-up confirmed PET characterization of discrepant lesions as accurate. Only 5 patients were upstaged by marrow biopsy and 7 by contrast-enhanced CT in bowel and/or liver or spleen. Agreement on PET findings was good between local and core lab readers. The authors concluded that "these results confirm PET/CT as the modern standard for staging Hodgkin lymphoma and that response assessment using Deauville criteria is robust, enabling translation of RATHL results into clinical practice."

*Blood*

## Reviews

Review and summary articles provide an important way to stay up to date on the latest topics and approaches by providing valuable updates on pertinent literature and recently released guidelines. The Newsline editor recommends several such articles accessioned into the PubMed database in December and January. In the January issue of *Thyroid* (2016;26:1–133), Haugen and members of the American Thyroid Association provided the entire "2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer." Harada et al. from Tohoku University (Sendai, Japan) summarized the "Characteristics of tau and its ligands in PET imaging" in the January 6 issue of *Biomolecules.* In an article e-published on January 18 in *CNS Neuroscience & Therapeutics*, Zou et al. from the Third Affiliated Hospital of Sun Yat-Sen University (Guangzhou, China) and the University of Texas Medical School at Houston, reviewed "Positron emission tomography/single-photon emission tomography neuroimaging for detection of premotor Parkinson's disease." Lamarca et al. from the Christie NHS Foundation Trust (Manchester, UK), the University of Manchester (UK), and the Imperial College Hammersmith Hospital (London, UK) provided perspective on "$^{18}$F-FLT PET imaging of cellular proliferation in pancreatic cancer" on December 29 ahead of print in *Critical Reviews in Oncology/Hematology.* In an article e-published on December 21 ahead of print in *Endocrine*, Bulotta et al. from University "Magna Graecia" of Catanzaro (Italy) summarized "Emerging strategies for managing differentiated thyroid cancers refractory to radioiodine." Shimojo et al. from the National Institute of Radiological Sciences (Chiba, Japan) reported in the December issue of *Frontiers in Neuroscience* (2015;9:482) on "Imaging multimodalities for dissecting Alzheimer's disease: advanced technologies of positron emission tomography and fluorescence imaging." In the January issue of *Current Cardiology Reports* (2016;18:4), Gewirtz, from the Massachusetts General Hospital/Harvard Medical School (Boston) provided an overview of "Functional versus anatomic imaging of CAD: lessons learned from recent clinical trials." Scialpi et al. from Perugia University/S. Maria della Misericordia Hospital (Italy), Second University of Naples (Italy), and Sapienza University of Rome (Italy) published "Pancreatic tumors: imaging update 2015" on January 8 ahead of print in the *International Journal of Surgery.*