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SPECT-CT Improves Treatment of Thyroid Cancer

In a study to determine the diagnostic value of molecular imaging in nodal staging of patients with thyroid cancer, researchers were able for the first time to accurately distinguish between cancerous cells in regional lymph nodes and normal residual thyroid tissue directly after surgery.

Researchers from the University of Erlangen-Nürnberg, Germany, reported in an article in the January issue of *The Journal of Nuclear Medicine* on the results of a study using a hybrid single photon emission computed tomography (SPECT-CT) camera to determine and locate the spread of cancer cells to nearby lymph nodes.

According to the researchers, the demonstration or exclusion of cancer spread (metastasis) in regional lymph nodes plays a major role in treating the disease since all patients with lymph node metastases are considered to be at high risk for recurrence.

In the study, 57 patients re-

"With SPECT-CT imaging, we were able to determine tumor spread much earlier than before," said Daniela Schmidt, MD, a co-author of the article. "Earlier detection will lead to earlier individualized treatment of this potentially deadly cancer."

ceived radioiodine therapy. Afterwards, a SPECT-CT camera was rotated around the patients at a variety of angles to capture where the radioactivity was occurring. SPECT imaging can locate cells in the

body that are not behaving normally, but does not provide the detailed, X-ray-like images that CT imaging can. The hybrid camera, however, is able to reveal both the malignant cell activity and the exact anatomical location.

The researchers also reported that this information led to a revision of the original diagnosis in 35 percent of the study participants. The images reclassified as benign six of 11 lesions that had been considered lymph node metastases and 11 of 15 lesions considered to be indeterminate.

Since the advent of radioiodine therapy, differentiated thyroid carcinoma (DTC) has been considered one of the more curable cancers. In 2009, about 37,340 new cases of thyroid cancer will be diagnosed in the United States. Of the new cases, about 28,410 will occur in women, and 8,930 in men.

—SNM Press Release



Reimbursement Information		
CPT/HCPCS	Description	2009 Payment Rate
78803	Radiopharmaceutical localization of tumor or distribution of radiopharmaceutical agent (s); tomographic (SPECT)	\$1,081.51

PET Coverage Update

A proposal by the Centers for Medicare and Medicaid Services to expand coverage of FDG-PET studies elicited mixed reactions among proponents. Though some applauded the move, others, particularly PET researchers, felt that it fell short of expectations.

CMS proposes to cover one FDG-PET study for Medicare beneficiaries with biopsy-proven or strongly suspected solid tumors based on other diagnostic exams. The initial PET scan would be used for diagnostic or staging purposes and to guide management.

The policy will cover all cancers except prostate and breast cancer and the evaluation of regional lymph nodes

Solid Tumor Type	Diagnosis	Staging	Restaging	Monitoring	Initial Treatment *	Subsequent Treatment **
Breast (female and male)	N/C	1	Cover	Cover	1	Cover
Cervix	CED	Cover	Cover	CED	Cover	Cover
Colorectal	Cover	Cover	Cover	Cover	Cover	Cover
Esophagus, Head & Neck (not thyroid or CNS), Lymphoma, Non-small cell lung	Cover	Cover	Cover	CED	Cover	Cover
Brain, Ovary, Pancreas, Small cell lung, Soft tissue sarcoma, Testes	CED	CED	CED	CED	Cover	CED
Prostate	CED	CED	CED	CED	N/C	CED
Thyroid	CED	CED	3	CED	Cover	3
All other solid tumors	CED	CED	CED	CED	Cover	CED

in melanoma. The uses of PET beyond the initial patient evaluation, however, will continue to require Coverage with Evidence Development (CED).

* Formerly diagnosis and staging
** Formerly restaging and monitoring response to treat-

ment when a change in treatment is anticipated
N/C = noncover
(1) Breast: Covered for initial staging of metastatic disease. Noncovered for initial staging of axillary lymph nodes.
(2) Melanoma: Noncovered for initial staging of regional lymph nodes
(3) Thyroid: Covered for restaging of follicular cell types

Licensing Requirements for Sentinel Lymph Node Biopsy

The NRC has issued Regulatory Issue Summary (RIS) 2008-31 to inform all licensees who perform sentinel lymph node (SLN) biopsy procedures that if the excised tissue does not contain more than 100 microcuries (microCi) (3.7 megabecquerels) of technetium-99m (Tc-99m), the surgical removal of lymph nodes does not require an NRC by-product material license.
NRC RI Summary: 2008-31

Online CE Opportunities

There are currently 12 NucMed credits available online @ www.nucmeded.org. All classes are free of charge.

- Establishing an Advanced Nuclear Imaging Center — 1.0 Credit
- Improving Patient Satisfaction for Imaging Centers — 1.0 Credit
- Anatomy and Physiology Review for NMT — 1.0 Credit
- Cardiac Electrophysiology for NMT — 1.0 Credit
- Myocardial Perfusion Testing — 1.0 Credit

- Principles of Doppler Physics — 1.0 Credit
- Radiation Safety for PET/CT — 1.0 Credit
- Fundamentals of PET and CT — 1.0 Credit
- Stress Testing in Cardiac Nuclear Med. Tech. — 1.0 Credit
- Conflict Basics, Resolution and Communication — 0.5 Credit
- Conflict Styles, Collaboration and Planning — 0.5 Credit
- Personality Styles, Problem Solving and Rapport — 0.5 Credit
- Meetings, Open Forum and Decision Making — 0.5 Credit

2009 Reimbursement: Cardiovascular Nuclear Imaging

Code	Description	Physician Office/FSC Medicare Part B, Payment Unadjusted for Geography* As of 1/1/09 ¹	Medicare Hospital Outpatient Payment as 1/1/09 ² Unadjusted for Geography*
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Myocardial Perfusion Imaging		Professional	Technical	
78460	Myocardial perfusion imaging (planar single study at rest or stress (exercise or pharmacological) with or without quantification)	\$44	\$142	Assigned to APC 377 with a payment rate of \$774
78461	Myocardial perfusion imaging (planar single study at rest or stress (exercise or pharmacological) with or without quantification)	\$63	\$147	Assigned to APC 377 with a payment rate of \$774
78464	Myocardial perfusion imaging tomographic (SPECT) single study (including attenuation correction when performed) at rest or stress (exercise and/or pharmacological) with or without quantification	\$58	\$216	Assigned to APC 377 with a payment rate of \$774
78465	Myocardial perfusion imaging tomographic (SPECT) multiple studies (including attenuation correction when performed) at rest or stress (exercise and/or pharmacological) and redistribution and/or rest injection with or without quantification	\$79	\$406	Assigned to APC 377 with a payment rate of \$774
Add-On	Codes			
78478	Myocardial perfusion study with wall motion (NOT FOR USE WITH THALLOUS CHLORIDE TI 201 INJECTION)	\$27	\$32	Assigned status of "N" payment packaged into procedure
78480	Myocardial perfusion study with ejection fraction (NOT FOR USE WITH THALLOUS CHLORIDE TI 201 INJECTION)	\$18	\$32	Assigned status of "N" payment packaged into procedure

Code	Description	Physician Office/FSC Medicare Part B, Payment Unadjusted for Geography* As of 1/1/09 ¹	Medicare Hospital Outpatient Payment as 1/1/09 ² Unadjusted for Geography*
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93015	Cardiovascular stress test; with physician supervision, with interpretation and report	\$100	N/A
93016	Cardiovascular stress test; with physician supervision, with interpretation and report	\$25	N/A
93017	Cardiovascular stress test; tracing only	\$60	Assigned to APC 100 with a payment rate of \$171
93018	Cardiovascular stress test; interpretation and report only	\$16	N/A

¹ Source of information is the Federal Register 42 CFR Parts 405, 409, et al. Medicare Program; Payment Policies under the Physician Fee Schedule and Other Revisions to Part B for Cy 2009: Final Rule <http://edocket.access.gpo.gov/2008/pdf.E8-26212.pdf>

*Actual Medicare allowables vary by region of the country.

FOR SALE 

Slightly used, heavily discounted



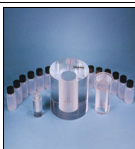
**Used Dose Calibrator
Capintec CRC-10R.....\$1,575.00**

works well...



Lead Bricks.....\$60.00 each

*Rectangular Lead Brick; 8" l x 4" w x
2" h (20 x 10 x 5 cm), 27 lb (12.5 kg)/
each*



**Thyroid Uptake Neck Phantom....
\$295.00**

*(Complete with Bottle Carrier, Capsule
Holder and 12 Polyethylene bottles)*

Technologist Job Line

If you are interested in the following position please feel free to contact the department directly, or give us a call at the pharmacy.

Diagnostic Health Services is seeking a technologist to cover 1 day per week (Tuesdays) in Indiana. Call Bill Gooch at (800) 322-6341.

Technologist looking for full-time or part-time position .

Karen Foncannon

Contact info:

Karen.foncannon@hotmail.com

731-661-9287

Wk: 731-541-7866

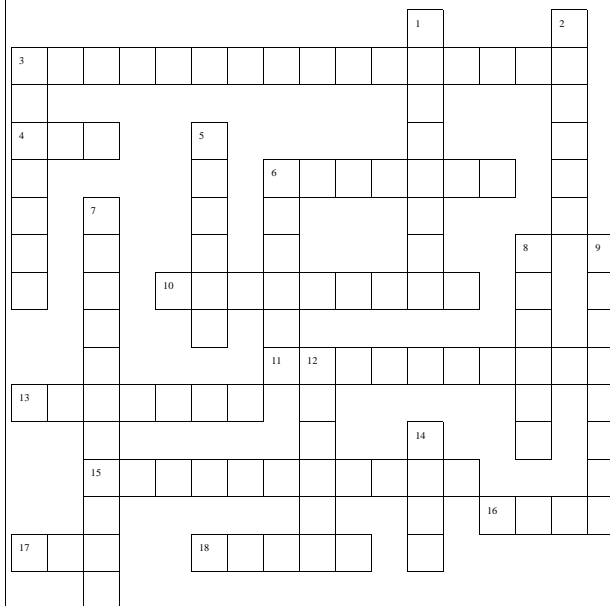
1409 East Virginia Street
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705 Miller Road
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Nuclear Medicine Crossword Puzzle



Across

3. An important quality assurance test for SPECT (three words)
4. Ensures radiation safety procedures are followed within an organization
6. A device that aids in uniformity tests for SPECT
10. A rotating collimator with a larger field of view, more uniformity of sensitivity (two words)
11. A type of nuclear medicine SPECT device, also denotes a body plane
13. Nerve Cells
15. A camera type that can rotate around a patient taking information in slices through the body
16. Patient prep for a lung ventilation/perfusion scan
17. Number of lobes in the left lung
18. The type of study that requires and ECG device attached to the patient

Down

1. Plane separating the body from Anterior to Posterior
2. Combined with DTPA, it makes an excellent CFS study agent
3. Plane that separates the body from left to right
5. An extrinsic flood sheet source
6. A type of oval orbital pattern, but not designed by Planters
7. A type of correction that gets rid of artifacts
8. Upper chamber of the heart
9. A circular heart image profile that plots the max pixel counts of short axis slices along the radius originating from the left ventricle
12. Denotes moving in a circular pattern
14. Attached to I-123, this pharmaceutical effectively detects pheochromocytoma

NOTE TO READERS: In an effort to keep the Monthly Scan relevant, useful and informative, feedback on the contents of the newsletter is welcome. Readers desiring to contribute articles, suggestions for future articles, bulletins, website postings, and other items of interest to the Monthly Scan readership, should contact a pharmacist at Radiopharmacy, Inc.