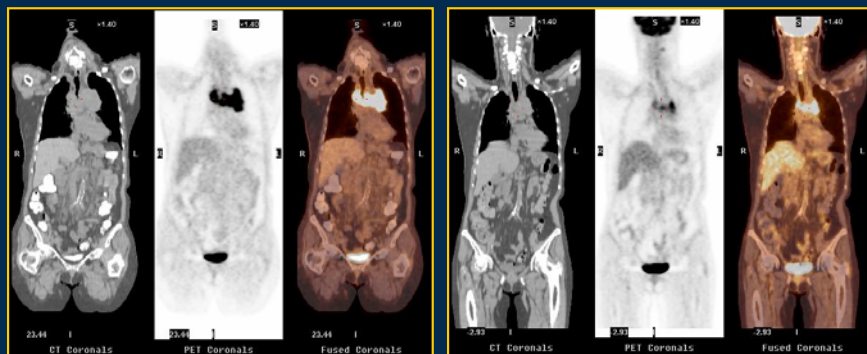


## Case Study

Baseline June 2006

Post Tx August 2006



CT

PET

Fused  
PET/CT

CT

PET

Fused  
PET/CT

### Patient History

- 64 y/o female with small cell lung cancer diagnosed by mediastinoscopy
- CT scan (+) for paraaortic intracaval lymph nodes
- PET/CT scan ordered for wholebody initial staging and therapy baseline
- 2<sup>nd</sup> PET/CT ordered for treatment monitoring following chemo/radiation therapy

### PET/CT Findings

- 6/06: Extensive mediastinal and paratracheal tumor invasion
- 8/06: Interval reduction in size and extent of uptake involving the mediastinal adenopathy compatible with good response to therapy.

### Discussion:

Small cell lung cancer is the most aggressive form of lung ca, with 60-70% of pts presenting with advanced disease. Therefore accurate pre-treatment evaluation is key to choosing the most effective therapeutic pathway. As seen above, PET/CT can provide accurate staging and therapy monitoring information to direct appropriate management. That is because PET/CT appears to better distinguish between benign and malignant lesions and to better define the extent of disease than are CT or MRI alone.<sup>3</sup>

### Featured Indication:

## Treatment Monitoring in Small Cell Lung Cancer

Until recently, Medicare has covered PET/CT scans for non-small cell lung cancer only. Now, under the National Oncologic PET Registry, small cell cancer, and all other cancers, are covered. PET/CT may be used for these cancers for initial diagnosis, initial staging, restaging, assessment of recurrence, and assessing the effectiveness of therapy *during* the course of therapy.<sup>1</sup>

Insurance coverage notwithstanding, PET has been shown multiple times to be superior to other imaging techniques in staging local/regional and distant metastatic small cell lung cancer disease. Brink, et al, found that PET was 100% sensitive and 98% specific in detecting extrathoracic lymph node involvement, compared to CT at 74% and 94%, respectively.<sup>2</sup> Kamel, et al, found that utilization of PET for small cell lung cancer resulted in a change in stage and management in 29% of patients studied.<sup>3</sup>

At left, this patient received a PET/CT scan for initial staging, and for therapy monitoring. This data was incorporated into her radiation oncologist's radiation treatment planning (RTP) computer to help better delineate active tumor from residual, dead tumor following treatment. Such improvement in RTP with PET images has been documented by multiple researchers and has become routine in our practice.<sup>4</sup>

1. CMS Public Affairs News Release, Feb 10, 2006.
2. Brink, I., et al, *J Nuc Med*, May 2006, n=125.
3. Kamel, E., et al, *J Nuc Med*, Apr 2003, n=42.
4. Olivier, P., et al, *Diag Imaging*, June 2004.

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## Medicare Coverage Policy for PET/CT Scans expands under the National Oncologic PET Registry (NOPR)\*

Medicare patients meeting the following criteria for *will* be covered\*

- Diagnosis
- Initial staging for metastases
- Monitoring effectiveness of ongoing Tx
- Re-staging for assessment of concluded Tx, and local or regional recurrence

### Cancers Previously Covered

Breast  
Cervical  
Colorectal  
Esophageal  
Head & Neck Cancers  
Non Sm Cell Lung  
Lymphoma  
Melanoma  
Solitary Pulm Nodule  
Thyroid

### NOPR Coverage\*

Unknown Primary  
Paraneoplastic Synd.  
Gastric  
Liver  
Gallbladder  
Pancreas  
Small Cell Lung  
Thymus  
Bone  
Male Breast  
Ovarian  
Prostate  
Testicular  
Penile  
Bladder  
Kidney  
Eye  
Sarcoma  
Myeloma  
Merkle Cell  
Other Not Listed

\*Medicare coverage as part of the National Oncologic PET Registry, which requires submission of pre- and post-PET data for each patient. Many private payers, including BCBS and UHC cover PET imaging for many of the above indications.

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# The Stage

September 2006

## To Order a PET/CT Scan:

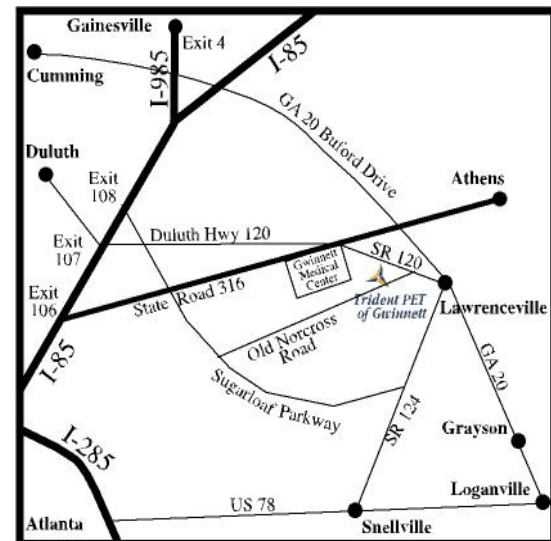
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