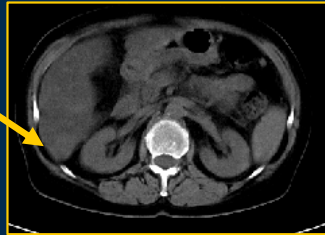
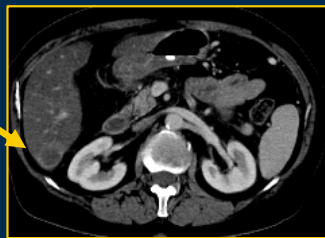


## Featured Case Study Metastatic Pancreatic Cancer



No Contrast



With Contrast



PET

### Patient History

- 54 y/o female with hx/of pancreatic carcinoma
- PET/CT scan ordered for restaging following Tx

### PET/CT Findings

- Increased FDG uptake in
- 2.4cm lesion in inferior aspect of right lobe of liver

### Impression:

- Findings consistent with metastatic pancreatic cancer

### Discussion:

The contrast-enhanced CT, performed as part of the PET/CT scan, helped confirm a subtle hepatic lesion on PET, which was not evident on the un-enhanced CT portion of the test. Contrast enhancement of the CT portion of the PET/CT scan is often critical to identifying liver lesions. Normal, physiologic, heterogenous FDG uptake in the liver may make smaller lesions difficult to identify by un-enhanced PET/CT imaging.

Findings and Impression reported by Steve Clark, MD

## A More Complete Picture?

In December 2000, *TIME* magazine awarded the developers of the combined prototype PET/CT scanner the Medical Invention of the Year.<sup>1</sup> At that time, the developers envisioned the CT component of the scanner providing anatomical reference points for the localization of lesions noted on the PET portion of the scan. The CT was primarily used as a mechanism to measure patient attenuation coefficients that provided more accurate placement of the data within the scan. The CT portion of those early PET/CT scans consisted of a very low mAs, did not include controlled patient breathing, nor was I.V. contrast utilized, and was thus often referred to as a “non-diagnostic” CT for attenuation correction.

Since that time, however, physicians have seen the potential for more accurate lesion, nodal, and vessel delineation when a fully diagnostic CT is performed routinely with the PET scan. Indeed, Trident’s referring physicians have recently begun to request contrast-enhanced PET/CT’s (CEPCT), and we have since implemented this option for your patients.

Recently published data confirms that a CEPCT can improve reader confidence when interpreting the scan. Antoch, et al, found that CEPCT’s “provided more precise anatomic localization of pathology by differentiation of the lesion from its surrounding structures on CT.” The authors found the benefits were most profound in head and neck, and in the abdomen and pelvis, where delineation from muscle, vascular structures, or the intestines is critical, due to normal, physiologic uptake of FDG. Additionally, CEPCT’s were found to be of additional value in tumors with mild to moderate FDG uptake, as seen with hepatic metastases.<sup>2</sup>

Many providers now consider CEPCT’s standard of care in their institutions. The additional information has helped interpreting physicians differentiate pathological from normal physiologic uptake of FDG, and, in some cases, help to detect sub-centimeter metastases, which may reduce the number of false positive and false negative results.<sup>3</sup>

1. Jaroff, L., A Winning Combination. In: *TIME*; December 3, 2000.

2. Antoch, et al, *Journ Nuc Med.*, Vol 45, No. 1 (Suppl), Jan 2004.

3. Kincade, K., PET Moves Closer to Diagnostic Standard of Care, *AuntMinnie.com*, March 1, 2007.



# The Stage

April 2007

## Your Choice for A More Complete Picture

Trident imaging centers offer physicians the option to choose a fully diagnostic, contrast-enhanced PET/CT scan that includes a CT with I.V. contrast. Conversely, physicians may choose a “non-diagnostic,” un-enhanced CT with the PET/CT scan. A portion of our Request for Examination form is shown below...

## To Order a PET/CT Scan:

Call: 770-513-2499

Fax: 770-513-2715

Email:

infogwinnett@tridentpet.com

Trident PET of Gwinnett  
545 Old Norcross Road,  
Suite 200  
Lawrenceville, GA 30045

### EXAM REQUESTED (Check all that Apply):

#### ONCOLOGICAL PET/CT SCAN TO INCLUDE:

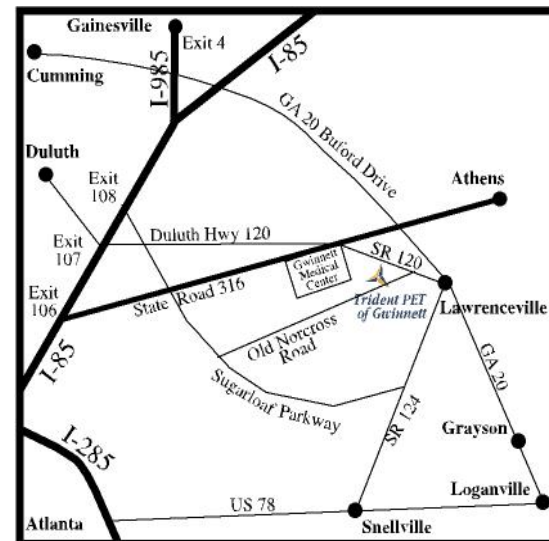
- ENHANCED CT OF NECK, CHEST, ABDOMEN, PELVIS WITH I.V. CONTRAST (unless clinically contraindicated).
- NON-ENHANCED, “NON-DIAGNOSTIC” CT WITHOUT I.V. CONTRAST.

#### Cancer Type:

- |  |   |
|--|---|
| <input type="checkbox"/> Brain Tumor (Primary) | <input type="checkbox"/> Lymphoma (HD & NHL)    |
| <input type="checkbox"/> Breast Cancer         | <input type="checkbox"/> Melanoma               |
| <input type="checkbox"/> Cervical Cancer       | <input type="checkbox"/> Ovarian Cancer         |
| <input type="checkbox"/> Colorectal Cancer     | <input type="checkbox"/> Pancreatic Cancer      |
| <input type="checkbox"/> Esophageal Cancer     | <input type="checkbox"/> Sarcoma                |
| <input type="checkbox"/> Gastric Cancer        | <input type="checkbox"/> Testicular Cancer      |
| <input type="checkbox"/> Head and Neck Cancers | <input type="checkbox"/> Thyroid Cancer         |
| <input type="checkbox"/> Liver Cancer          | <input type="checkbox"/> Unknown Primary Cancer |
| <input type="checkbox"/> Lung Cancer           | <input type="checkbox"/> Other _____            |

#### For:

- Characterization of Solitary Pulmonary Nodule
- Primary Diagnosis
- Initial Staging
- Restaging / Recurrence
- Evaluation of Current Treatment



Your patient, your choice.

770-513-2499  
www.tridentpet.com



“A More Complete Picture”