

# GCT Sisters in Seattle – *Doing it for ourselves*



# Scans:

CT?

MRI?

or PET?



~4 – 5 mm size for detection

Potentially 100 million cells

# Computed Tomography (CT)

- CT Scans are sensitive to differences in tissue density (like an x-ray is)
- CT Scans are typically better at showing bones than MRI, but less effective at showing the soft tissue
- CT scans take around 5 minutes, MRI's usually take 30 minutes
- CT scans utilize ionizing radiation

GE Discovery CT750 HD  
High Definition CT Scanner



# Magnetic Resonance Imaging (MRI)

- Produces very clear, detailed pictures of the organs and structures in the body but not bones
- It is a form of medical imaging that uses no ionizing radiation
- MRI is sensitive for detecting differences in tissue based on water content and/or fat.



# Positron Emission Tomography (PET)

- Provides a means for evaluating body function.
- It is a form of medical imaging that uses no ionizing radiation, but does use small amounts of radioactive tracers.
- Sensitive to detecting accumulation of the tracer.
- Tracers can be modified to try and highlight specific tissues.



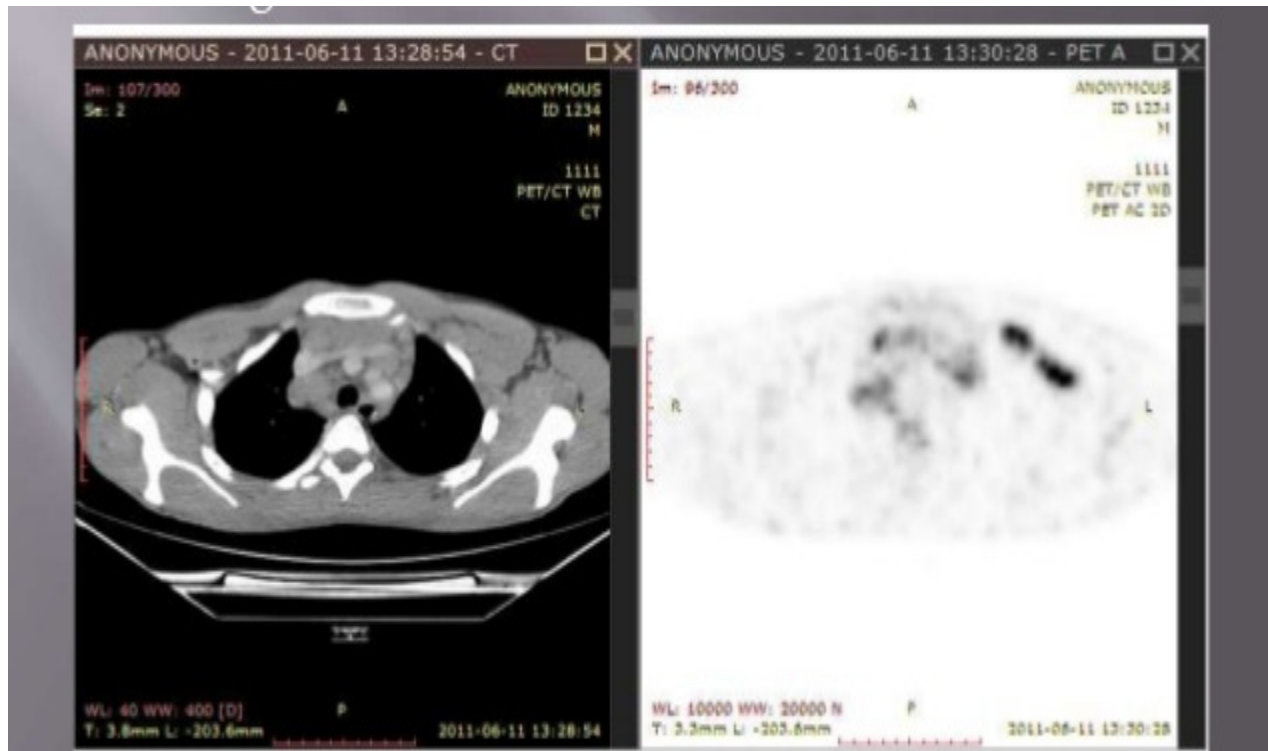
# Positron Emission Tomography (PET)

Usefulness depends on the effectiveness of the tracer that is used

Standard: 18F-FDG: tracer tagged to glucose – sensitive to tumours or body parts with high metabolism (not generally effective with GCT)

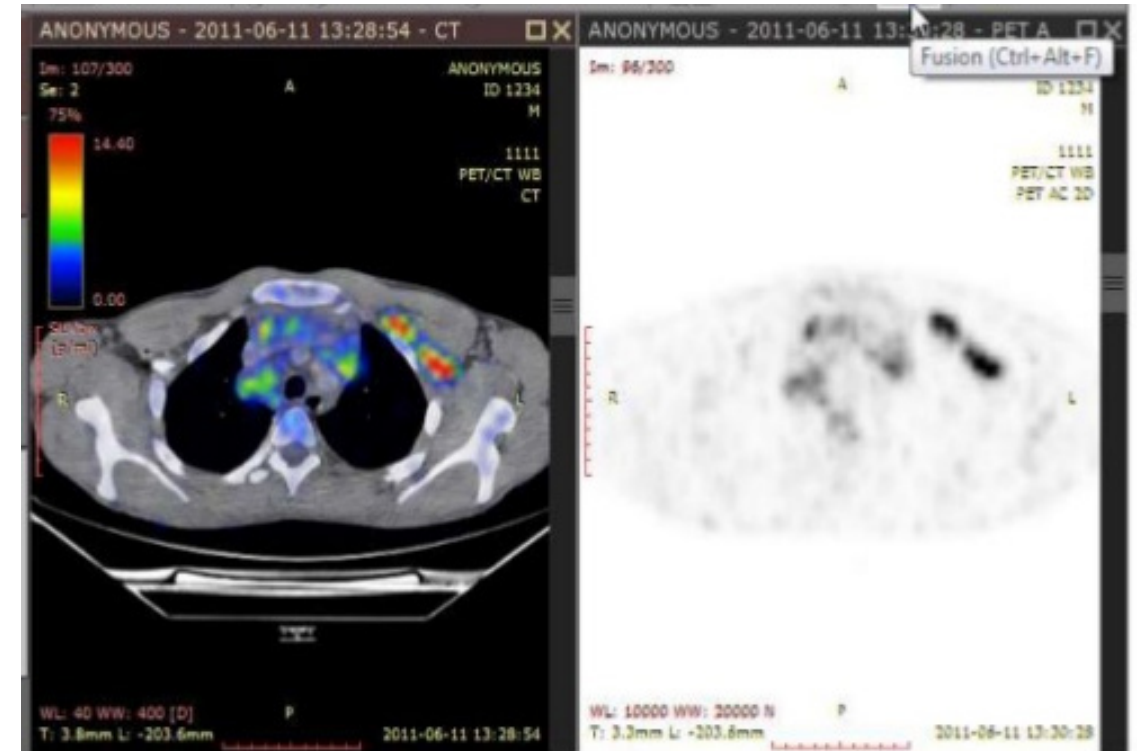
18F-FES: tracer tagged to estradiol – possibly more sensitive to ER+/PR+ tumours like GCT

# PET – CT: combining two modes of scans



CT

PET



PET/CT

PET

# Scans: CT, MRI or PET?

Cost: CT - \$1,000 to \$3,000 or more \*  
MRI - \$1,000 to \$4,000  
PET - \$3,000 to \$6,000

Price dependent on size of the scan area (i.e. abdomen-only, chest and abdomen, etc.)



# Current standard

At this time (2019) the standard for most cases of GCT is the CT scan.

Further reading:

The Evolution of Imaging in Cancer: Current State and Future Challenges

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4313866/>

Positron emission tomography (PET) and magnetic resonance imaging (MRI) for assessing tumour resectability in advanced epithelial ovarian, fallopian tube and/or primary peritoneal cancer

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6464503/>