

National Human Radiobiology Tissue Repository

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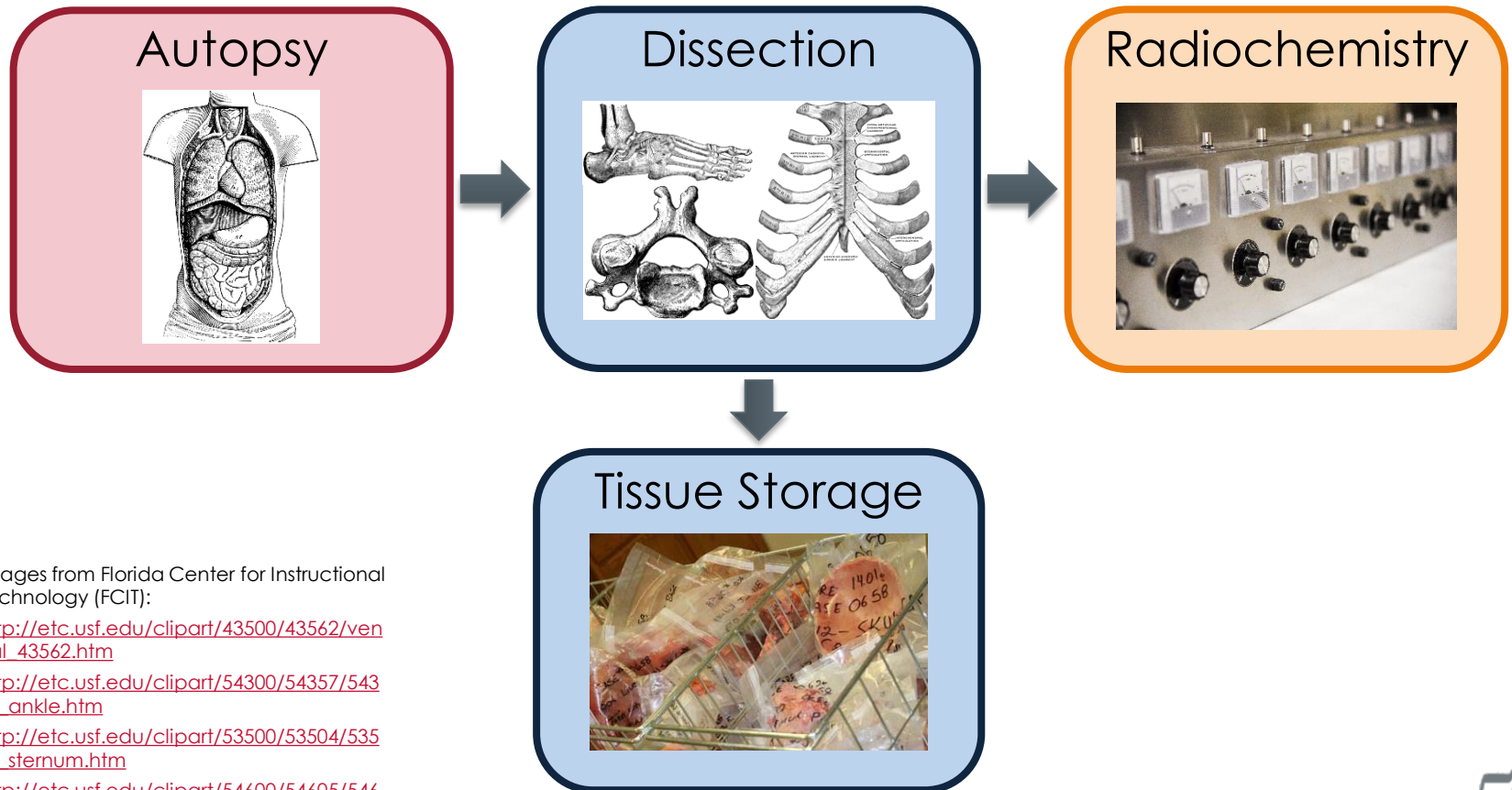
*“Learning from Plutonium
and Uranium Workers”*





USTUR Activities

USTUR tissues and related samples are the primary collection of NHRTR materials



Images from Florida Center for Instructional Technology (FCIT):

http://etc.usf.edu/clipart/43500/43562/ventral_43562.htm

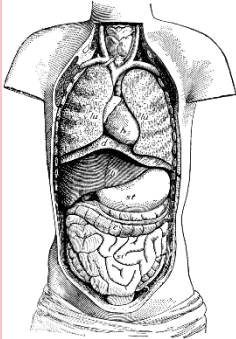
http://etc.usf.edu/clipart/54300/54357/54357_ankle.htm

http://etc.usf.edu/clipart/53500/53504/53504_sternum.htm

http://etc.usf.edu/clipart/54600/54605/54605_vertebra.htm



Autopsy



http://etc.usf.edu/clipart/43500/43562/ventral_43562.htm

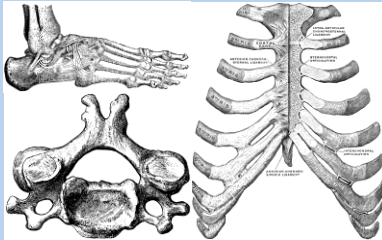
- Autopsies for whole-body and local partial-body donations are performed at the USTUR's autopsy facility in Richland, WA
- Most partial-body autopsies are performed near the municipality where the Registrant passes away

Samples Generated

- Paraffin-embedded tissue blocks (future inventory project)
- Histology slides (3,490)



Dissection



http://etc.usf.edu/clipart/54300/54357/54357_ankle.htm

http://etc.usf.edu/clipart/53500/53504/53504_sternum.htm

http://etc.usf.edu/clipart/54600/54605/54605_vertebra.htm

- Tissues from the right side of the body go to the radiochemistry laboratory for analysis
- Left-side tissues are stored for future use
- Organs divided in half

Samples Generated

- Frozen tissues (9,081)
- Formalin-fixed tissues (139)



Radiochemistry



- Drying/Ashing
- Digestion/Dissolution
- Actinide Separation
- Alpha Spectrometry

Up next: George Tabatadze, Radiochemistry Progress Report

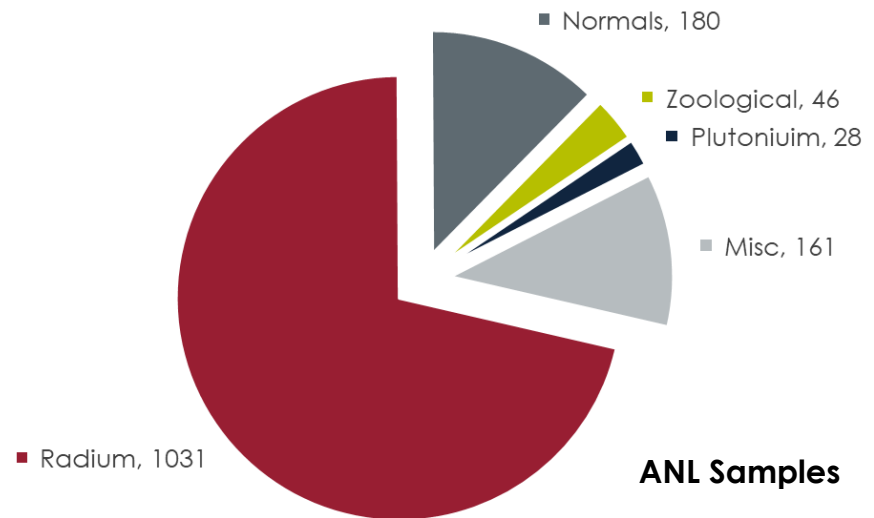
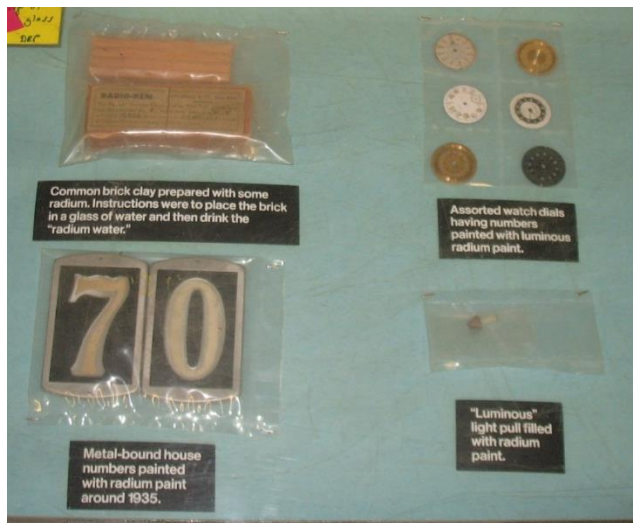
Samples Generated

- Ashed tissues (not inventoried)
- Acid solutions (6,015)
- Acid solution aliquots (approx. 1,600)
- Alpha-counting sources, i.e. planchets (766)



Non-USTUR Collections

- LASL: Los Alamos Scientific Laboratory
 - ✓ Population Studies – acid solutions (3,228)
- ANL: Argonne National Laboratory
 - ✓ Radium dial painters (1,031)
 - ✓ Plutonium injection studies (28)
 - ✓ Ra, Th, U artifacts (110)





Inventory Status

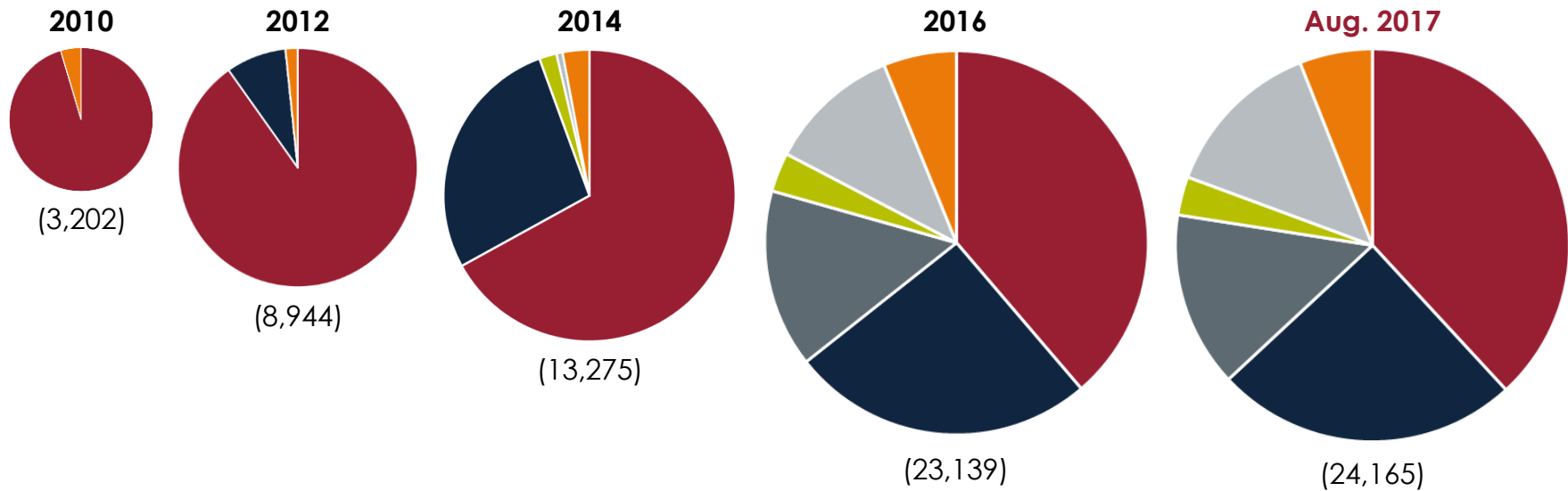
- **Maintenance:** Inventory of existing samples is complete; new samples are inventoried as they are received or generated
- **Active:** Inventory of existing samples is ongoing
- **Future:** Inventory not yet initiated

	USTUR	ANL	LASL
Frozen and formalin-fixed tissues	Maintenance	Active	--
Histology slides	Maintenance	Active	--
Tissue blocks	Future	Future	--
Acid solutions	Maintenance	--	Active
Planchets	Active	--	--



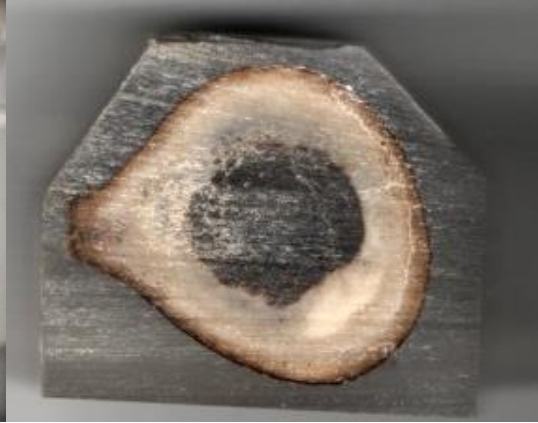
Data Trends for Major Inventory Projects

■ Tissues ■ Acids ■ Slides ■ Planchets ■ LASL ■ ANL



* Number of samples excludes miscellaneous sample types

** Area of each circle is proportional to the number of samples



Questions?

