



oneVCU | RESEARCH

Tissue and Data Acquisition and Analysis Core (TDAAC)



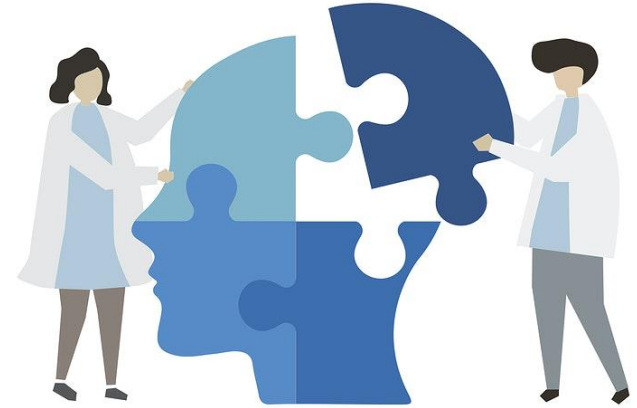
Our Team

Director of TDAAC

Dr. Michael Idowu, MD, MPH

Support Personnel

- Pamela Jill Grizzard, Manager
- Brandy Greenawalt, Research Coordinator
- Kory Davis, Laboratory Specialist
- Tana Blevins, Genomic Technologist





History and Background

Established in 2002 with a grant from the state of **Virginia's Commonwealth Technology Research Fund (CTRF)**.

TASSCR (Tissue Acquisition System to Support Cancer Research) Protocol

TASSCR is a protocol for tissue acquisition along with *an informed consent*

The TASSCR protocol and informed consent have been vetted and renewed by the IRB since 2002.

The protocol governs procedures for data acquisition, tissue handling, patient consents, and sample processing.

Emphasis on patient care first and high quality residual specimens for biobanking



Facilities and Equipment

Equipment

Tissue Handling & Storage:

Biosafety Cabinet
Fume Hood
Ultra Low Freezers (-80°C)
Liquid Nitrogen Dewars

Tissue Processing:

Cryostat
Microtome
Histological Sectioning and Staining Equipment
*Tissue Microarray Grand Master *NEW**

RNA Extraction/QC:

Capillary Electrophoresis Bioanalyzer
MagMax Express
Nanodrop Spectrophotometer

Location

Sanger Hall Room B1-046





New Equipment Highlight

- ❖ TMA Grand Master with PCR Extraction is an automated and sophisticated tissue microarrayer, which allows the precise selection of specific regions of interest on the donor paraffin blocks and their insertion in one or more recipient blocks.
- ❖ High speed and advanced features make it possible to accommodate 72 blocks (60 donor blocks and 12 recipient blocks) at the same time.
- ❖ TDAAC will centrally house several TMA Pre-Configured Blocks: Non-small cell lung carcinoma, triple negative breast, ovarian epithelial, endometrial, pancreatic, and hepatocellular cancers





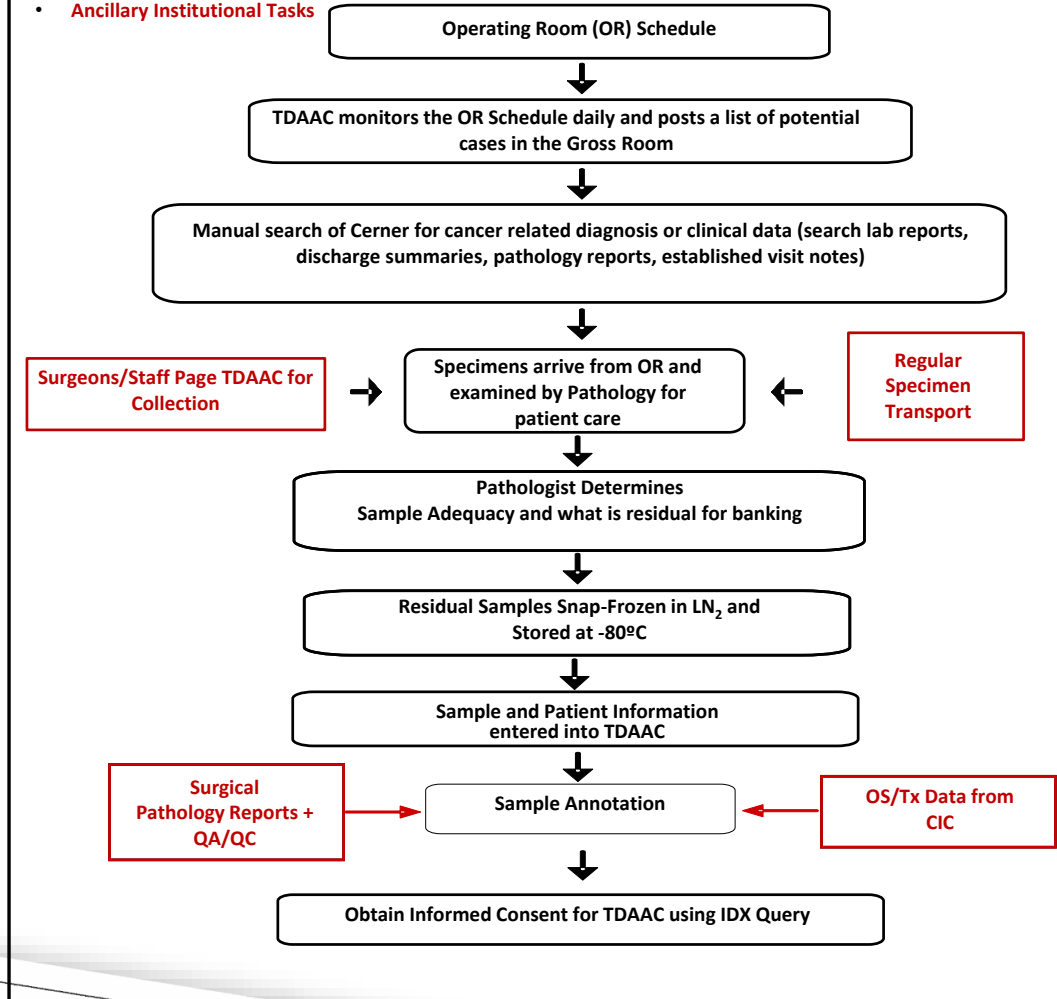
Services Provided

Services Provided by the TDAAC	
Category	Description
Standard Specimen acquisition and banking	<p>TDAAC acquires and stores <u>residual</u> specimens from cancer patients in compliance with the TDAAC IRB-approved protocol. Informed consent is obtained from the patients on an individual basis (no universal consent).</p> <p>Curate a database consisting of demographic data, clinical-pathologic, and outcomes data in collaboration with the Cancer Informatics Core (CIC)</p>
Customized/Targeted specimen acquisition and banking/processing	<p>TDAAC prospectively collects samples for specific investigator-initiated, IRB-approved translational research projects requiring fresh tumor specimens specifically collected for research. TDAAC assists in prospective sample collection for IRB-approved studies, extraction and quantitation of high-quality nucleic acids, collection of fresh specimens for developing PDX models, consultation for study development, and support for scientific grant applications.</p>
Obtaining Consent and Sample processing	<p>TDAAC assists with obtaining consents for TDAAC and investigator-initiated projects. The TDAAC provides services in addition to specimen acquisition, including but not limited to TMA construction, RNA extraction and quantification, frozen and FFPE tissue sections, processing blood to extract plasma among others.</p>



Biobanking Workflow

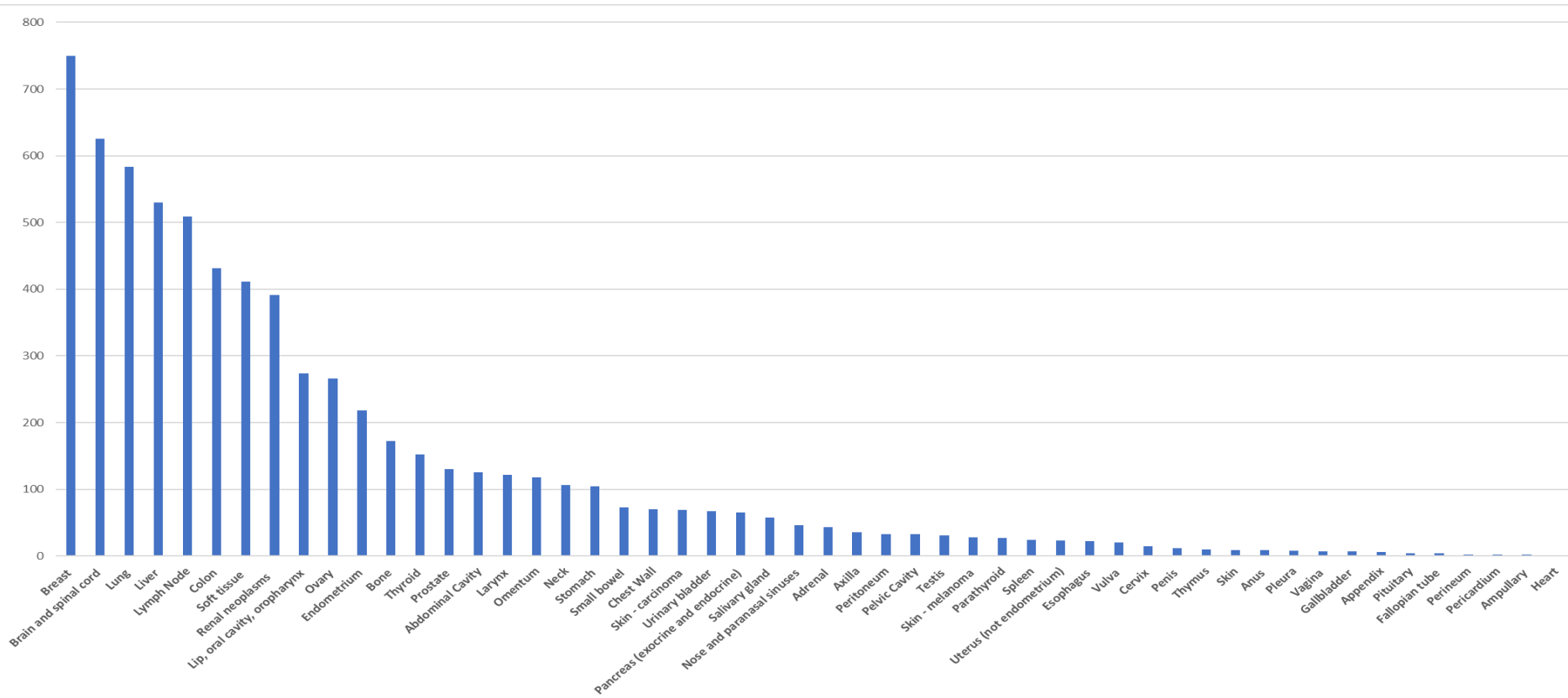
- TDAAC-Specific Tasks
- Ancillary Institutional Tasks



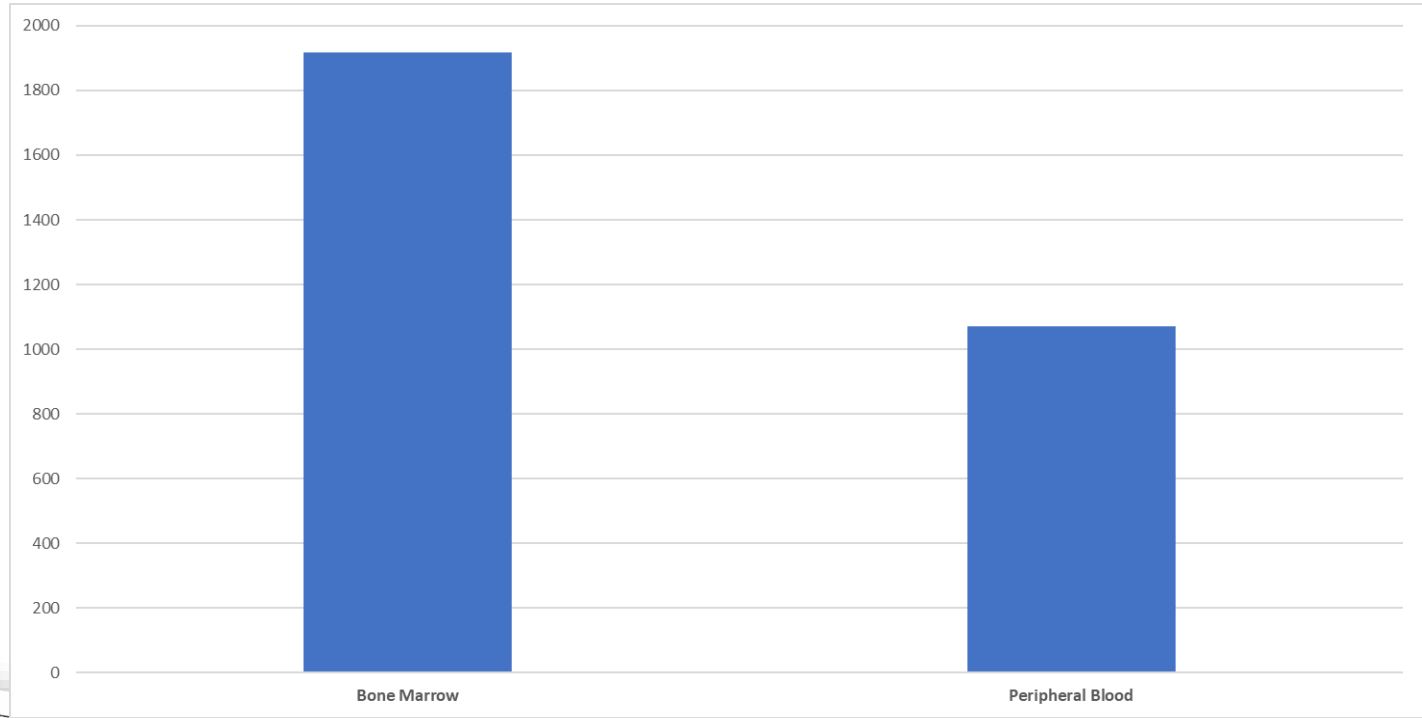
Quality Metrics – Banked frozen samples

- Documentation of *cold ischemic time*
- Histological evaluation to determine specimen adequacy:
 - % Tumor and % Benign tissue
 - % Necrosis
 - % Inflammatory Cells
 - For RNA extraction (RNA Integrity Number)
- For blood samples; collection and processing times as well as if they are lipemic, icteric, or hemolyzed are noted.

Banked Frozen Solid Tissue Samples



Banked Frozen Bone Marrow and Blood Samples





Utilization and Access

Access to Banked Human Tissue and Hematopoietic Samples

- Anonymization agreement (Honest Broker System)
- Customized tissue procurement (IIT specific IRB approval)
- Policy and Utilization Review Committee (PUR)

TDAAC Service Request Form:

<https://pathology.vcu.edu/research/tissue-and-data-acquisition/tdaac-service-request-form/>

All publications that include results, services or products generated by VCU Massey Cancer Center Shared Resources must include the following acknowledgement in the manuscript:

"Services in support of the research project were provided by the VCU Massey Cancer Center Tissue and Data Acquisition and Analysis Core, supported, in part, with funding from NIH-NCI Cancer Center Support Grant P30 CA016059."