Robert H. Lurie
Comprehensive Cancer Center
of Northwestern University

PATHOLOGY CORE FACILITY

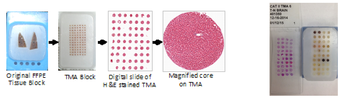
Facilitating basic, translational and clinical research
at Northwestern University

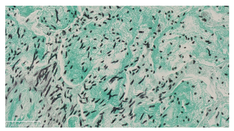
The Pathology Core Facility (PCF) is a centralized, comprehensive, core laboratory providing histology, immunohistochemistry, molecular analysis and extraction, and microscopic evaluation services for human tissue-based studies. We facilitate basic, translational, and clinical research at Northwestern University, with laboratories in downtown Chicago, Illinois.

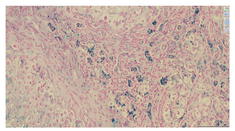
We are accredited by the College of American Pathologists (CAP) and CLIA certified with the capability to serve integral marker studies that require biomarker-based treatment arm assignment. In addition to core laboratory services, we perform procurement of fresh biospecimens for clinical trials and biobanking.

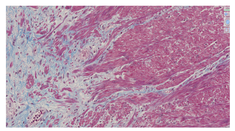
Services

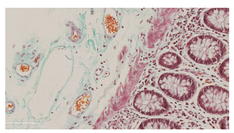
- DNA/RNA Extraction
- H&E Staining
- Human Specimen Procurement, Processing and Shipment for Clinical Trials
- IHC Staining
- Instrument Use/Rental
- Processing/Embedding/Cutting of Human & Animal Tissue
- Quantitative Analysis of Tissue
- Special Dye Staining
- TMA Mapping/Creation/Sectioning
- TUNEL
- Whole Slide Scanning

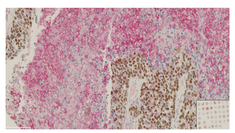


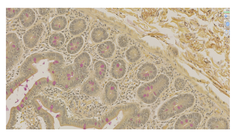

Human Lung with Fungus - Grocott's Methenamine Silver Stain at 20X

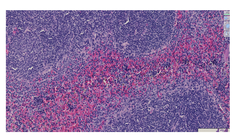

Human Liver-Iron Deposit, Prussian Blue Stain at 20X

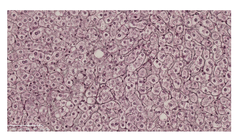

Human Normal Colon - Trichrome Masson Stain for Collagen at 20X

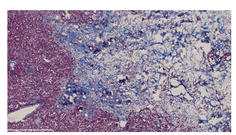

Human Normal Colon - Goldner's Trichrome Stain for Collagen at 20X


Human Ovary Ca TMA - CD44 Membrane and PD X 8 Nuclear Stain, 1:50 at 20X

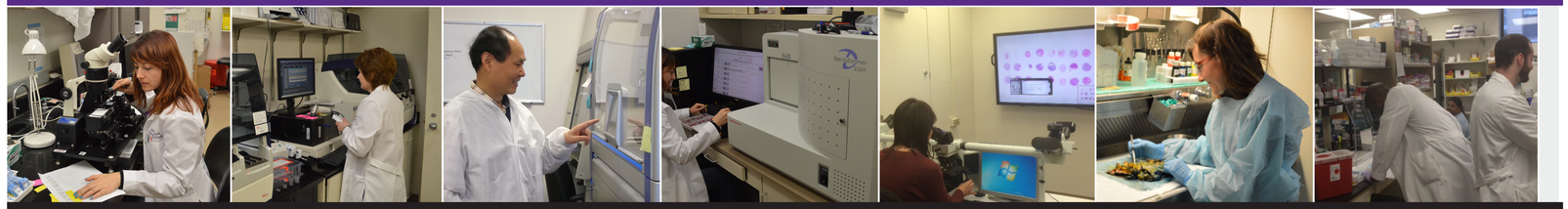

Human Normal Colon – Mucicarmine Stain in Goblet Cells at 20X


Mouse Normal Spleen - Hematoxylin & Eosin (HE) Stain at 20X


Human Normal Liver - Reticulin Silver Stain at 20X


Rat Liver Tumor (Frz. Tissue) with Y90 Radioactive Spheres - Trichome Mason Stain at 5X

See **cancer.northwestern.edu/pathcore** for pricing and a requisition form. Discounts are available for Lurie Cancer Center members.



Histology/TMA

The PCF Histology Laboratory offers expertise in processing, embedding, sectioning and staining tissues.

Extensively trained technicians can provide paraffin embedded or frozen sections for the best histology, molecular and immunohistochemistry results.

Creating a TMA allows evaluation of many tissues on a single slide while minimizing issues of variability, storage and reagents saved.

IHC Laboratory

The IHC Laboratory offers a list of standardized immunostains and the opportunity to use other antibodies commercially available or antibodies newly developed by the investigator. The PCF is equipped with four state-of-the-art automated strainers that allow for large volume reproducible staining.

Molecular Laboratory

DNA and RNA extraction is requested in almost every clinical study to perform correlatives and for banking purposes. The PCF Molecular Laboratory is able to support this high volume request with a partly automated process. Spectrophotometric measurements are performed on every extraction and much more!

Microscopy

With the state-of-the-art instruments such as, NanoZoomer, 5-head microscope and VisioPharm software, the slides are scanned, reviewed in real time by the Research Associate and Scientific Director, who are aware of specific scientific goals of the project, and are competent to evaluate the results. If satisfactory, the slides are batched, and presented for review to the Director. Dr. Wei has extensive experience with interpreting the results of routine and special histology, IHC and molecular assays in both the clinical and research settings.

Bio Repository

The PCF Bio-Repository laboratory specializes in the procurement, processing, preservation, storage and distribution of bio-specimens collected for research purposes. Patient and bio-specimen information is collected and stored using the BSI-II (Biological Specimen Inventory-II) system. This provides a secure software environment for the data entry, storage, requisitions, shipment tracking and reporting of specimens.

The Bio-Repostiory acts as an "honest broker" for the research community. We house over 200,000 specimens comprised of fixed tissue, frozen tissue, DNA, whole blood, plasma, serum, mononuclear cells and buffy cells across a range of diagnoses. Our freezers are monitored using the Mesa Amegaview continuous monitoring system to insure the safety of the biospecimens.

Clinical Trials Unit (PCF-CTU)

In conjunction with the Lurie Cancer Center's Clinical Research Office (CRO), the Pathology Core Facility's Clinical Trials Unit (PCF-CTU) participates in the review, budget development, initiation, conduct and close-out of clinical trials at the Lurie Cancer Center.

The PCF-CTU is also responsible for the procurement, processing and shipment of bio-specimens, including blood, bone marrow, cerebral spinal fluid, fresh tissue and archival tissue, as required for each IRB-approved protocol. Currently, the PCF-CTU handles over 200 clinical trials. The PCF-CTU also works with several departments within FSM conducting non-oncology related clinical trials.

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