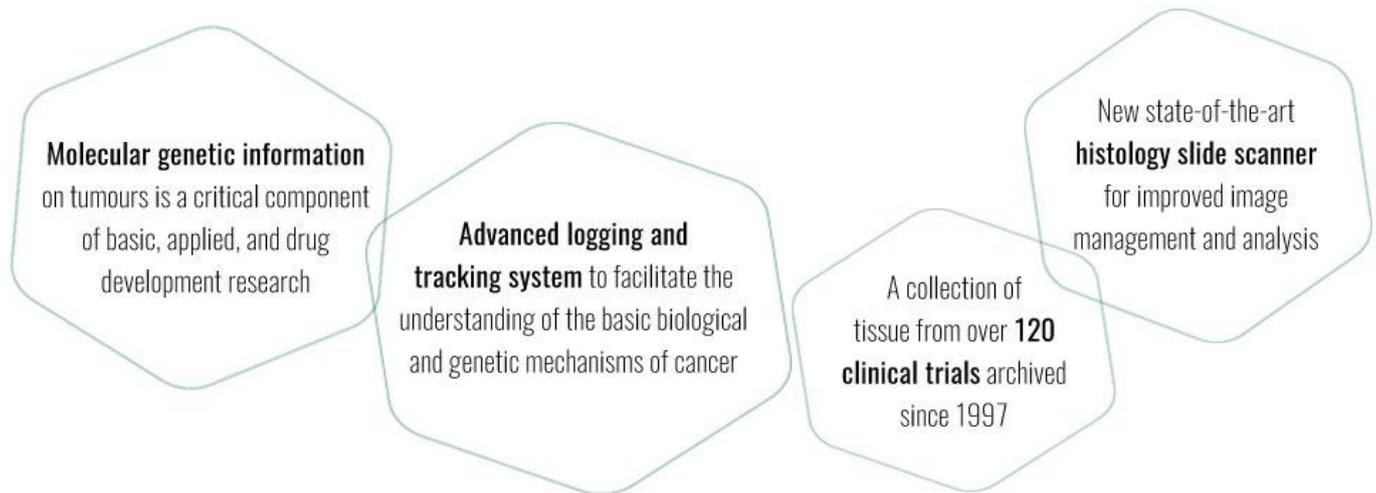


CCTG Tissue Bank - Correlative Science



Facilitating the understanding of the basic biological and genetic mechanisms of cancer

Facilitating the understanding of the basic biological and genetic mechanisms of cancer, response and resistance to therapy, and adverse effects of treatment

In the late 1990s the Cancer Clinical Trials Group recognized the importance of the collection of tumor tissue associated with patients accrued to clinical trials and the potential for enriching the clinical trial data with biological correlates. Since 1997, the CCTG's Tumour Tissue Data Repository (TTDR) has been the central biobank and steward for tissue collected from over 120 clinical trials.

Disease specific tissue samples from patients accrued to CCTG studies are received and catalogued from institutions across Canada and the world, then linked to an associated clinical trials dataset. Access to this tissue permits the assessment of prognostic factors in determining the outcome of disease, the assessment of predictive factors to various chemotherapeutic agents and treatment regimens, and facilitates the understanding of the basic biological and genetic mechanisms of cancer. The TTDR is housed within the Department of Pathology and Molecular Medicine at Queen's University in Kingston Ontario, is a Canadian Tissue Repository Network accredited biobank, and operates under the ethical parameters associated with the CCTG through Queen's University.

- [Complete inventory of available samples](#)
- [Canadian Cancer Trials Group Correlative Science and Tissue Banking Procedures - 2019Mar11](#)
- [Application for Tissue Research](#)

Expand All

[What we do](#)

What are we collecting?

It might sound simple but having a clear understanding of what is being collected is essential. Formalin Fixed Paraffin Embedded Blocks (FFPE); Cores – 0.6 to 4 mm FFPE cores; Slides – Coated /Uncoated with various staining including Hematoxylin and Eosin (H&E), Immunohistochemistry (IHC) and Fluorescence (FL) stains; Whole Blood and derivatives including plasma, serum, cellular component, DNA and RNA; Urine; Other specimens types are collected in smaller numbers including fresh frozen tissue, buccal swabs, bone marrow and bone marrow aspirates, as well as circulating tumour cells (CTCs).

How are specimens tracked and logged?

The TTDR has developed a logging and tracking database systems and has continually updated and added new functionality over time. Presently this is a complex and interactive system based on an Oracle backbone with features including sample logging, tracking, reporting, tissue microarray tracking, and storing digital images. It is also equipped to cross-check information, as well as generate multiple reports.

How are specimens requested?

There are 2 main ways in which TTDR obtains specimens: For trials requiring the Tissue Bank to request tissue, a request letter is sent to the participating centre with instructions to submit the appropriate material. For trials in which the protocol mandates automatic tissue submission, material is submitted directly by participating centres based on instructions within the protocol.

How do we compensate centres for submitting tissue?

The standard reimbursement for Canadian Centres is \$50.00 per case submitted to the TTDR. A "request for payment form" is submitted with the request letter. The Centre fills out the "request for payment form" and returns it to the bank along with the sample. If centres are submitting tissue without a formal request from the TTDR then a "request for payment form" is provided to each participating Centre to submit along with the sample.

What happens to tissue after it arrives?

Any tissue arriving at the Bank is de-identified and can only be linked to the clinical database by the Canadian Cancer Trials Group Tumour Bank Coordinator and Central Office Biostatistical Group. All blocks, slides or vials for a particular Canadian Cancer Trials Group Patient ID (eg. CALM0001) are given a unique identifying number called the Tumour Bank ID (TBID). The TBID can then be used to link the block/slide/vial back to other patient identifiers such as accession number and surgical date. Received specimens can be banked, processed, sent for central pathology review, forwarded for analysis based on the protocol, or provided to researchers for approved correlative science projects.

[Access](#)

What is the process for the release of banked tissue?

The Correlative Sciences Disease Site Specific Review Committees of the Canadian Cancer Trials Group have established a scientific review process for all requests. A well-defined concept and protocol describing the research project, hypothesis, underlying scientific premise, rationale for access to a particular trial material, and statistical considerations must be provided. Adequate funding must be sought or received. REB (Ethics) approval for the project at the site where the research will be conducted must be in place. Analysis of assay results is conducted by the statistical center of the Canadian Cancer Trials Group. To apply for tissue access, please complete the form below: [Application for tissue research](#).

Who reviews application for material access?

Several Disease Site Specific Review Committees have been setup to review requests for disease site specific collections. These committees include the Central Office Physician for the disease site, the Disease Site Chair, the Chairs of Studies on which material is being requested (as needed), 1-2 Pathologists, 1-2 Clinical/Basic Scientists, a Central Office Statistician, and Tumour Banking personnel. Requests for material in the Bank are reviewed 4-6 times a year. All requests will be considered and will be evaluated on the basis of the science involved and the value inherent in the use of clinical trials related material.

Tissue de-identification

Material (tissue blocks, slides, serum, plasma etc.) is received at the Canadian Cancer Trials Group Tumour Bank from the originating institution labeled with pathology accession number and occasionally with other local identifiers. Upon receipt of the material, it is logged by our pathology coordinator and assigned a unique tumour bank ID number. The tumour bank maintains a database with patient information such as Canadian Cancer Trials Group ID number, patient initials, pathology accession number and Tumour Bank ID Number. Local accession numbers and other unique identifiers are retained in the database at the bank to ensure that blocks can be returned to the pathology department of origin on request. The value of the Canadian Cancer Trials Group tumour bank lies in our ability to link results of correlative studies to an extensive clinical database. However, in order to preserve patient confidentiality, patient identifiers are not provided to researchers accessing the material. Material from the bank may be requested for research use, following the policy we have developed for requesting such specimens. Once a project has been approved, pathologic material is released to the researcher, and leaves the bank identified by the unique Tumour bank ID number. Results of correlative studies are returned by the researcher to our central office for analysis, with individual patient results identified by tumour bank ID. Correlation with the clinical database can take place once the correlative study data is linked via the tumour bank ID number to data in our clinical database, by Canadian Cancer Trials Group biostatisticians.

What materials are available?

[Click here to see our current inventory](#)

[Facilities](#)

Storage Facilities

The tissue bank has the capability to store tens of thousands of paraffin blocks, slides, and frozen fluid samples.

Refrigerators (4° C)

All unstained slides are stored in metal drawers inside refrigerators or a walk-in cold room. The refrigerators are easily accessible for the addition and removal of slides. The location of each slide in the refrigerator is catalogued in a central database making retrieval quick and easy.

-80° C Ultra Low Temperature Freezers

Plasma, blood, serum, derivatives such as DNA and RNA, and urine samples are stored in small plastic vials inside cardboard boxes. The boxes are stored in large metal drawers, with each drawer holding over 20 boxes. The location of each sample is catalogued in a central database making retrieval quick and easy.

Paraffin Block Cabinets

Paraffin blocks and tissue microarrays are stored in a variety of paraffin block cabinets. Paraffin blocks are stored at room temperature. The location of each sample is catalogued in a central database making retrieval quick and easy.

TMA Facility

The Tissue MicroArray facility is collaboration between the Canadian Cancer Trials Group and Queens University department of Pathology and Molecular Medicine.

[Contact](#)

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Resource Links

- [The Canadian Tumour Repository Network \(CTRNet\)](#)
- [OICR - Ontario Tumour Bank](#)
- [International Society for Biological and Environmental Repositories \(ISBER\)](#)
- [Office of Biorepositories and Biospecimen Research \(OBBR\)](#)
- [NCI Specimen Resource Locator](#)
- [Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans \(TCPS\)](#)