Pilot Project Backgrounder

The joint pilot project by TFRI, Princess Margaret (PM) and BC Cancer Agency (BCCA) will see investigators and clinicians collaborating on four projects involving three specific types of cancer: colorectal, ovarian and prostate. Brief summaries and project participant names appear below.

Project 1: A Collaborative Framework for Comprehensive Genomic Profiling of Cancer Patients to Understand Response and Resistance to Cancer Therapy

This project will focus on genomic profiling of 20 patients (10 from each centre) with metastatic colorectal cancer with collaboration across the two centres to identify molecular features associated with relapse after post-hepatic metastasectomy (surgical resection of liver metastases). The two centres will share genomic and clinical data to devise harmonized approaches that could be adopted at subsequent centres and enabling precision medicine trials at centres across Canada.

Co-leaders:	BCCA: Dr. Marco Marra
	PM: Dr. Trevor Pugh
Clinical leaders:	Princess Margaret: Drs. Lillian Siu and Phillippe Bedard
	BC Cancer Agency: Drs. Daniel Renouf and Janessa Laskin

Project 2: Optimizing and Harmonizing Adoptive T-Cell Immunotherapy for Ovarian Cancer

This project will cross-train highly qualified personnel and harmonize protocols and procedures in tumour-infiltrating lymphocyte (TIL) production and immune therapy. Their work will focus on adoptive T-cell therapy programs for high-grade serous ovarian cancer (HGSC), a rare form of ovarian cancer, to determine the strengths and limitations of this approach, and generate the next generation of immune therapies. Their findings will help set the foundation for multi-centre advanced immune therapy trials in ovarian cancer.

Co-leaders:	BCCA: Dr. Brad Nelson
	PM: Dr. Pam Ohashi
Clinical leaders:	PM: Dr. Marcus Butler
	BCCA: Dr. Anna Tinker

Project 3: Quantitative Molecular Imaging to Improve the Management of Prostate Cancer

This project will focus on a novel imaging agent targeting the prostate specific antigen to detect recurrent prostate cancer, with the intention of rapidly accelerating its approval and introduction into clinical practice in Canada. Their work will help to harmonize radiochemistry processes as well as to create joint standards for image analysis and quantification for future multi-centre trials using new radiopharmaceuticals, contrast agents and imaging methods in oncology.

Co-leaders:	BCCA: Dr. François Bénard
	PM: Drs. David Jaffray and Alejandro Berlin
Clinical leaders:	BCCA: Dr. Kim Chi
	PM: Drs. Ur Metser and Aaron Hansen

Project 4: IT Infrastructure Resource Development: Clinical and Genomic Data Sharing, Intra-Institutional Communication

This project will involve the two genomics laboratories of both cancer centres working together. The project will focus on connecting clinically derived genomic, phenotypic, therapeutic and outcome datasets currently maintained separately by each site. Key goals for this group include implementing a clinical data sharing system, a genomic data sharing system and web portal. The team hopes to create a framework that will form the basis for a national strategy in applied genomics, informatics and clinical trials that will lead to better access to personalized clinical cancer care for Canadians.

Co-leaders:	BCCA: Dr. Steven Jones
	PM: Dr. Trevor Pugh
Key personnel:	BCCA: Dr. Yussanne Ma, Lance Bailey, Scott Baker
	PM: Dr. Stuart Watt, Carl Virtanen