

Canadian Cancer
Trials Group



Groupe canadien
des essais sur le cancer

Canadian Cancer Trials Group

“Who Are We” and “Where Are We Going”

2019 New Investigators Clinical Trial Course

Janet Dancey, MD, FRCPC

Director, Canadian Cancer Trials Group



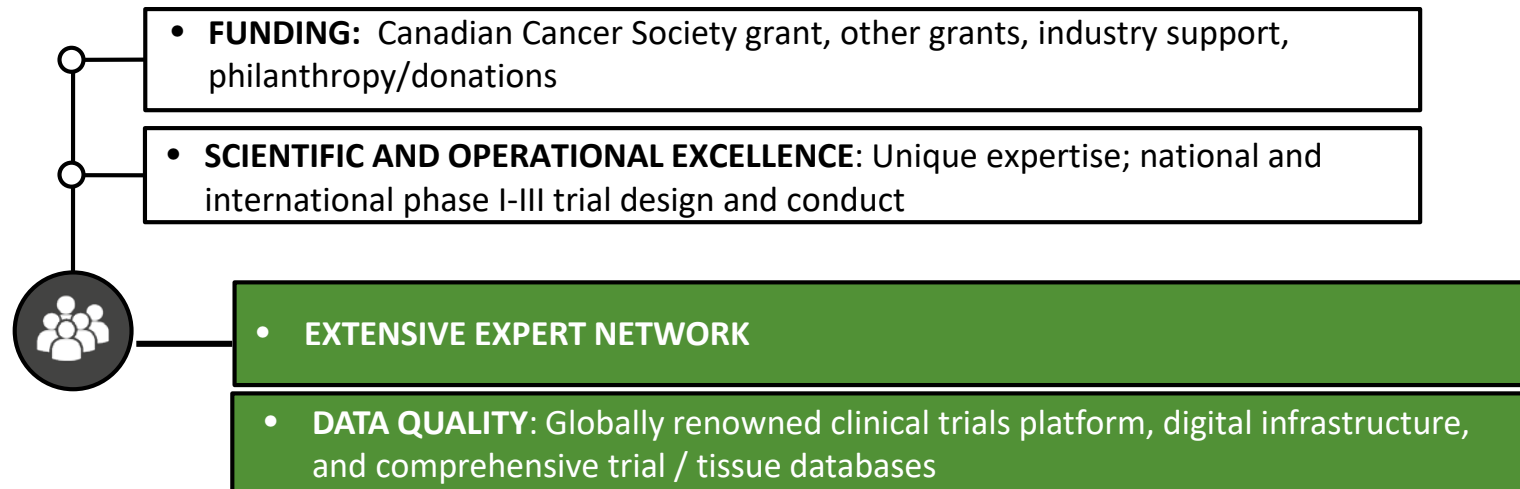
Educational Objectives

- **Session Name:** Canadian Cancer Trials Group - “who are we” and “where are we going”

Educational Objectives:

1. History of the CCTG
2. Structure and organization
3. Key accomplishments
4. Key priorities 2016-2021 strategic plan

Canadian-based **ACADEMIC RESEARCH GROUP** with almost 40 years experience in the fight to end cancer



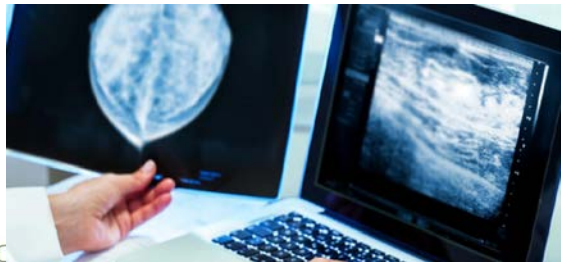
*The CCTG **drives health care innovation** in its role in developing and testing new cancer treatments and protocols and is a **mechanism for diffusion of innovation** through its investigator network*



Mission

To Develop and Conduct Clinical Trials Aimed at Improving the Treatment and Prevention of Cancer, with the Ultimate Goal or Reducing Morbidity and Mortality from this Disease

- ✓ *All treatment modalities including supportive care*
- ✓ *All Patients - Pediatric, young adults, elderly*
- ✓ *All Phases of Trials*



#trialsthatmatter

KEY MILESTONES



Joseph L. Pater

NCIC CTG
Established

NIH Funding for
Intergroup Trials

Tumour Bank
Established

Monitoring
Program Expanded

NCI-NCTN Grant as Canadian
Coordinating Group

CCS NCI CFI
Renewed



IND Program
Established

IND Program
Expands

1ST planned
NDA trial

Relocation to
QCRI facility

CFI Major Science
Initiative Award

CCTG new
name



Elizabeth A. Eisenhauer

Canadian Cancer Trials Group

Science

- Novel Therapeutics, Immunotherapy, Precision Medicine
- Rare Cancers
- Innovative Trial Methodology

Capabilities

- Multi-Disciplinary Expertise to Conduct Phase I-III Trials
- Trial Design, Conduct Regulatory, Contractual & Ethics
- Trials that change practice
- Global regulatory approvals

Partnerships

- National & International Researchers & Consortia
- Academic & Industry Collaborators
- Cancer Agencies, Regulatory Agencies

Leadership

- Initiative to Streamline Clinical Trials
- Canadian Cancer Clinical Trials Network
- CTRNeT
- RECIST Working Group



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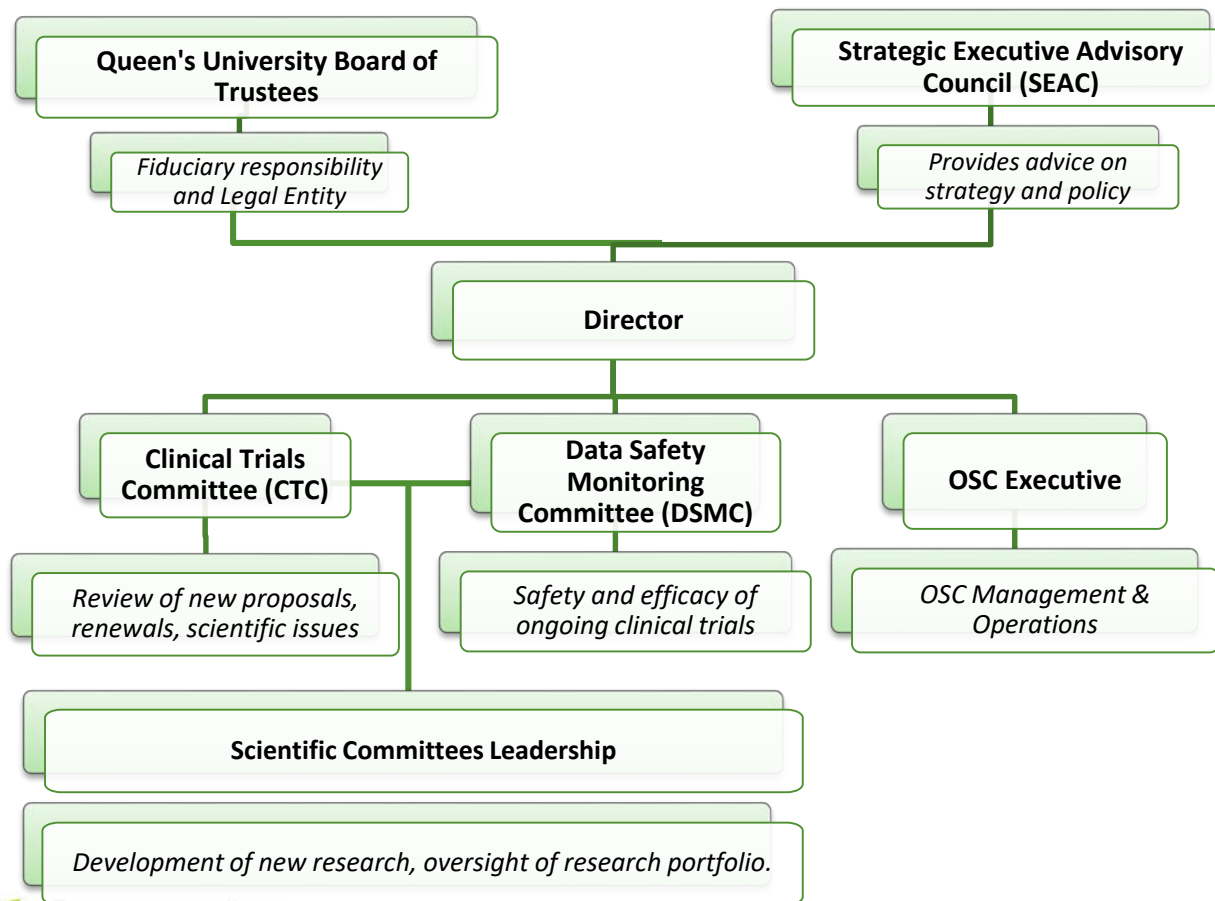


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SCIENTIFIC & OPERATIONAL EXPERTISE



CCTG Governance

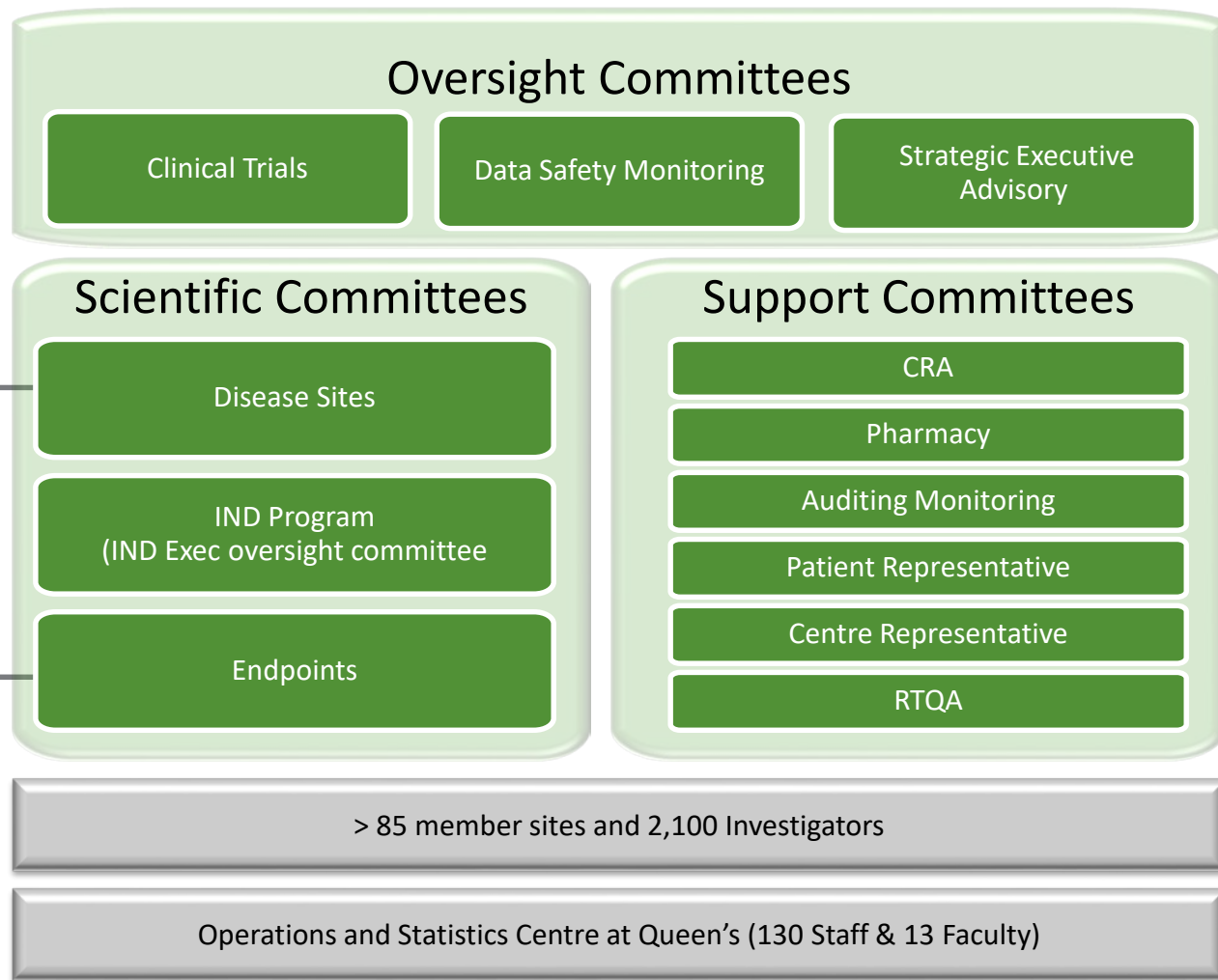


Committees

1. Brain*
2. Breast
3. GI
4. GU
5. Gyne
6. Hematology
7. H&N*
8. Lung
9. Melanoma*
10. Sarcoma*
11. Symptom Control

1. Quality of Life
2. Economic Analysis
3. Correlative
Biology/Banking

*Rare cancer initiative



Faculty at Queen's University



Dr. Janet Dancey
Director
Melanoma, Sarcoma



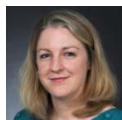
Dr. Lesley Seymour
Investigational New Drugs



Dr. Chris O'Callaghan
GI, Brain



Dr. Wendy Parulekar
Breast, GYNE



Dr. Annette Hay
Hematology, Economics



Dr. Harriet Richardson
Symptom Control,



Dr. Lois Shepherd
Heme, Breast, Biobank



Dr. James Taylor
Heme, Lung



Dr. Dongsheng Tu
Group Biostatistician



Dr. Bingshu Chen
Senior Biostatistician



Dr. Keyue Ding
Senior Biostatistician



Dr. Joe Pater
Lung, methodology



Dr. Tricia Cotterel
Molecular Pathology, Biobank



Operations and Statistics Centre

Operations & Statistics Centre (Queen's)

Contracts, finance, and administration support

Site and Investigator qualification and credentialing

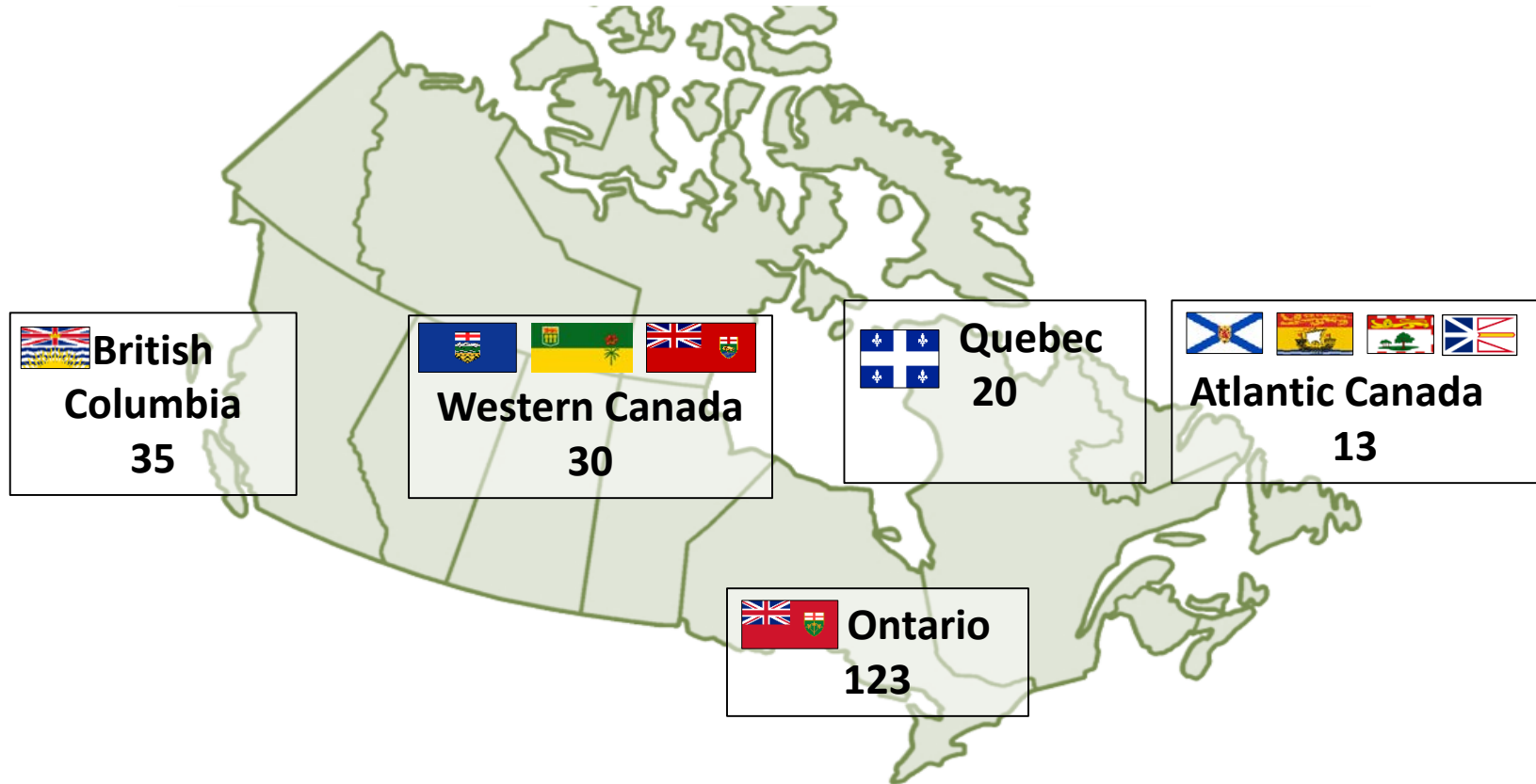
Scientific and methodological expertise

Project management, protocol development, data management, and trial/site activation support

Regulatory compliance, ethical oversight, pharmaco-vigilance, and quality assurance (monitoring/auditing)

IT expertise, EDC, programming & analysis, trial infrastructure (websites, drug management, registration/randomization, rostering/credentialing)

CCTG National Leadership



Structure – 85 Member Sites in All Provinces

British Columbia

- BC Cancer Agency
- Vancouver Cancer Centre
- Abbotsford Centre
- Centre for the North, Prince George
- Cancer Centre for the Southern Interior
- Fraser Valley Cancer Centre
- Vancouver Island Centre
- Surrey Memorial Hospital Fraser Valley Health Authority
- Clinical Research Unit at Vancouver Coastal Health Authority
- Lion's Gate Hospital
- Children and Women's Health Centre
- St. Paul's Hospital



Alberta

- Tom Baker Cancer Centre
- Alberta Children's Hospital
- Prostate Cancer Centre
- Cross Cancer Institute
- Foothills Hospital
- University of Alberta Hospital
- Lethbridge Cancer Centre
- Stollery Children's Centre



Saskatchewan

- Allan Blair Cancer Centre, Regina
- Saskatoon Cancer Centre



Manitoba

- CancerCare Manitoba (Pediatric)
- CancerCare Manitoba
- Western Manitoba Cancer Centre



Ontario

- Children's Hospital of Eastern Ontario Oncology
- Cancer Centre of Southeastern Ontario at Kingston
- Ottawa Hospital Research Institute
- McMaster Children's Hospital
- Niagara Health System
- St. Joseph's Healthcare Charlton Campus
- Juravinski Cancer Centre at Hamilton Health Sciences
- Lakeridge Health Oshawa
- William Osler Health Centre, Brampton
- Markham Stouffville Hospital
- Stronach Regional Health Centre at Southlake
- Toronto East General Hospital
- Hospital for Sick Children
- Humber River Regional Hospital
- St. Michael's Hospital
- North York General Hospital
- Princess Margaret Cancer Centre
- Credit Valley Hospital
- Trillium Health Centre - West Toronto

- St. Joseph's Health Centre, Toronto
- Mount Sinai Hospital
- Royal Victoria Regional Health Centre
- Odette Cancer Centre at Sunnybrook Health Sciences
- Cambridge Memorial Hospital
- Grand River Regional Cancer Centre
- London Regional Cancer Program
- Windsor Regional Cancer Centre
- Health Sciences North, Sudbury
- Algoma District Cancer Program Sault Area

Hospital

- Thunder Bay Regional Health Science Centre



Quebec

- CHU de Québec Children's
- Hotel de la Cité-de-la-Santé
- Centre de Santé et de Services Sociaux de Chicoutimi
- Centre hospitalier universitaire de Sherbrooke
- CHA-Hôpital de l'Enfant-Jésus
- University Institute of Cardiology and Pneumology Quebec
- CHUQ-Pavillon Hotel-Dieu de Quebec
- Centre de santé et de services sociaux de Rimouski-Neigette
- CHA-Hôpital du St-Sacrement
- Centre hospitalier régional de Trois-Rivières
- L'Hotel-Dieu de Lévis
- CIUSSS de L'Est-de-l'Île-de-Montreal Hôpital Maisonneuve-Rosemont
- CHU Sainte-Justine Centre de cancérologie Charles-Bruneau
- Hôpital du Sacre-Coeur de Montréal
- Jewish General Hospital
- CHUM-Pavillon Saint-Luc
- CHUM - Hôpital Notre-Dame
- Hôpital Charles LeMoine
- McGill University Health Centre Montreal Children's Hospital
- Research Institute of the McGill University Health Centre
- Centre de Santé et de services sociaux de Gatineau



Atlantic Canada

Newfoundland and Labrador

- Janeway Children's Health & Rehabilitation Centre
- Dr. H. Bliss Murphy Cancer Centre



Nova Scotia

- Capital District Health Authority, Hematology
- Cape Breton Cancer Centre



Prince Edward Island

- PEI Cancer Treatment Centre

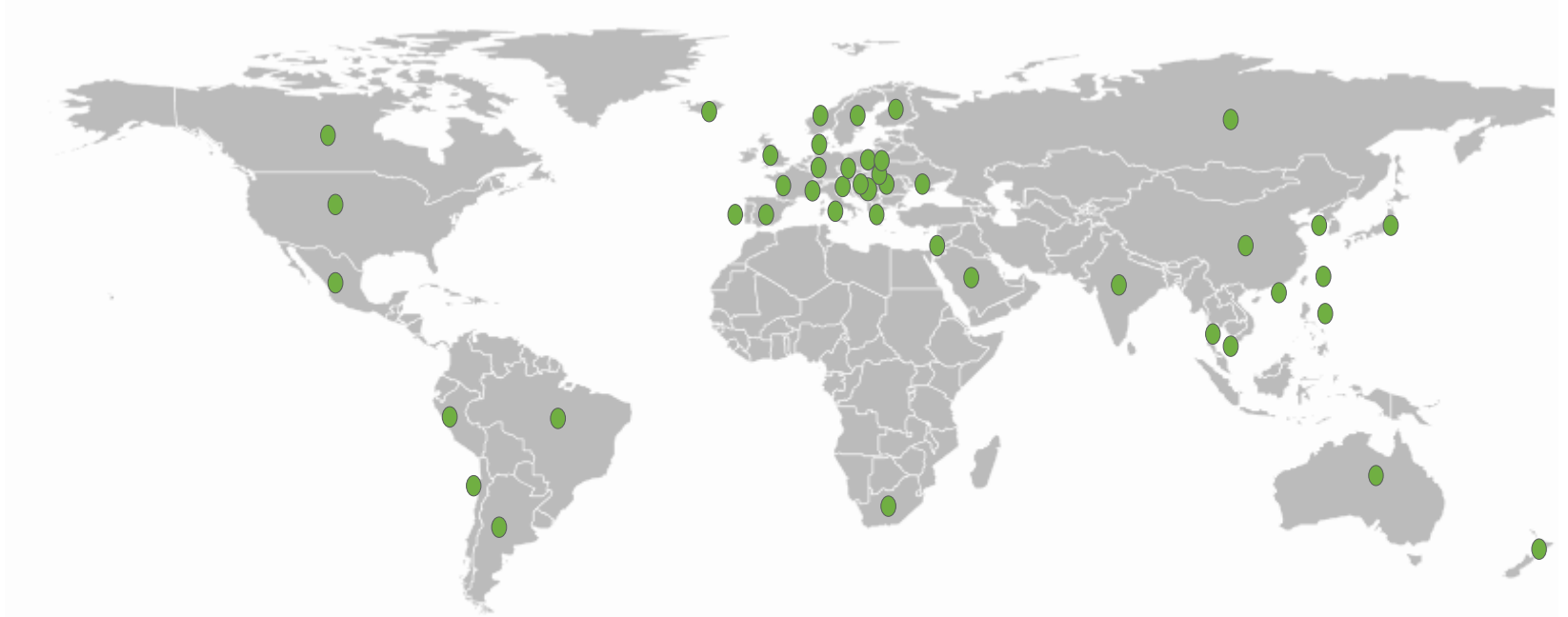


New Brunswick

- Saint John Regional Hospital
- Dr. Everett Chalmers Hospital
- The Moncton Hospital
- Dr. Léon-Richard Oncology Centre



Structure - International



International collaboration with academic investigators and sites
>40 countries on 6 continents



National and International Collaborations



National

- Pediatric Investigational New Drug Platform
- National Adolescent Young Adult Trials Platform
- Grants - Stand Up to Cancer Canada, Canadian Breast Cancer Foundation, Terry Fox Research Institute Brain Tumour Group, Myeloma Canada Research Network, and Canadian Institutes of Health Research
- Networks – Canadian Cancer Trials Network, Clinical Trials Ontario, and Network of Networks



United States

- Canadian Collaborating Partner of the US National Clinical Trials Network (NCTN) and partner with US Groups
- Membership on NCTN scientific steering committees
- Liaison to NCTN – Medidata Rave Implementation and, more recently, Good Clinical Practice compliance, including Audit/Monitoring, Investigator Credentialing, and Standard Operating Procedures

National and International Collaborations



International

- European Organization for the Research and Treatment of Cancer
- Medical Research Council UK, Cancer Research UK, University College London
- International Rare Cancer Initiative
- Gynecologic Cancer Intergroup Group
- Breast International Group
- France – UNICANCER (PA6, CO27), IFCT (BR31)
- Australia – University of Sydney, Australasian Gastro-Intestinal Group, Australasian Lung Cancer Trials Group
- Italy – National Cancer Institute of Naples
- Asia – CX.5, BR.31, Chinese University Hong Kong
- Consortia - Lung Immunotherapy NSCLC Consortium brought Groups/sites together from 13 countries to conduct BR.31

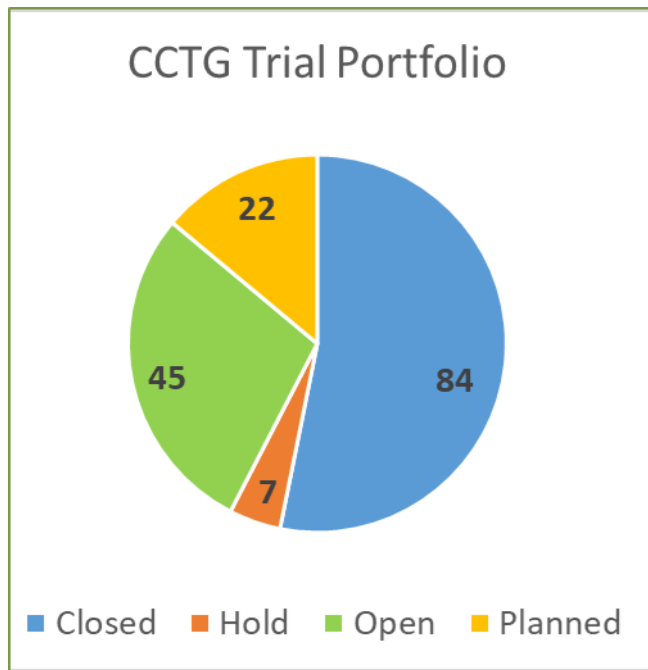


CCTG Network 2018-2019

- **Canada:**
 - Member centres = 86 (+1);
 - Provinces = 10
 - Activate/Accrual = 57 (66%)
 - New
 - Lions Gate Hospital (CAVL)
 - Women's College Hospital (CAMX)
 - > 6200 Canadian members
 - > 2,000 Investigators,
 - > 4,200 Clinical Trial Team Members,
 - New
 - Investigators 99
 - CTPs 462
- **Global:**
 - Centres = 705
 - Countries = 21
 - Active/Accrual = 21 (100%) with
 - Accrual = 19 (90%)
 - Trials = BR31, BL12, BR34, CX5, I227, MA32, **SC24,MA39, I235**
 - > 25000 members worldwide
 - > 6,200 Investigators and
 - > 19,000 CTP world wide

Trial Portfolio

158 trials in the portfolio that are open, onhold, closed/follow up, and planned!



- 52 trials open/on hold (7)
 - 31 CCTG Led
 - 16 NCTN Led
 - 2 NCTN CCTG led
- 22 approved/in development
 - 9 CCTG Led
 - 9 NCTN US Group Led
 - 4 Other Group

CCTG Impact and Reach



- >85 Canadian institutions, ,
- >700 international centres, 40 countries, 6 continents
- Leading academic centers



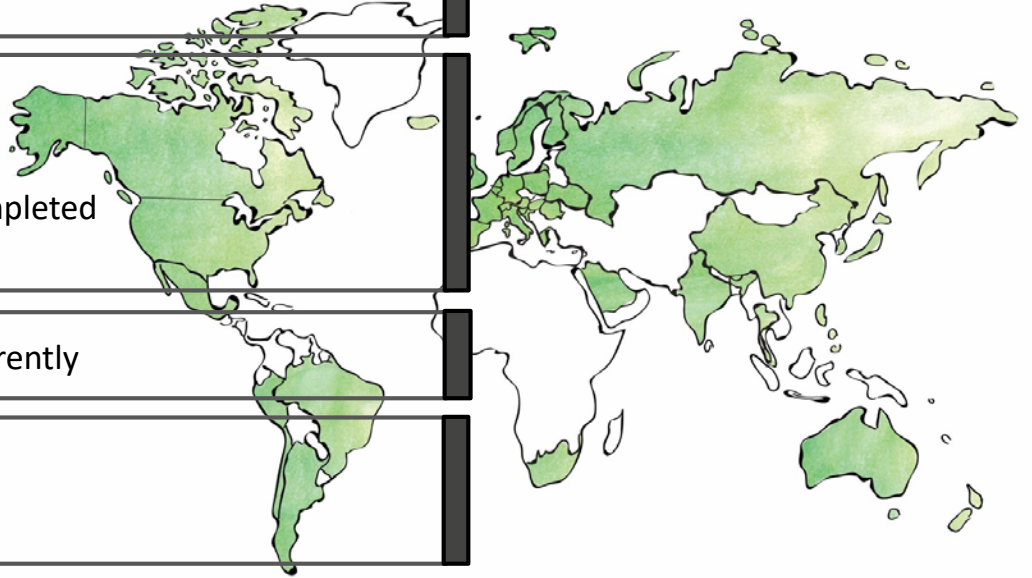
- > 80,000 patients enrolled
- 1,500-3,000 patients/year
- > 508 trials ongoing or completed
- > 2000 publications



- 150+ trials running concurrently



- Bio-banking facilities
- >300,000 specimens from
- >24,000 trial patients



Publications for 2018

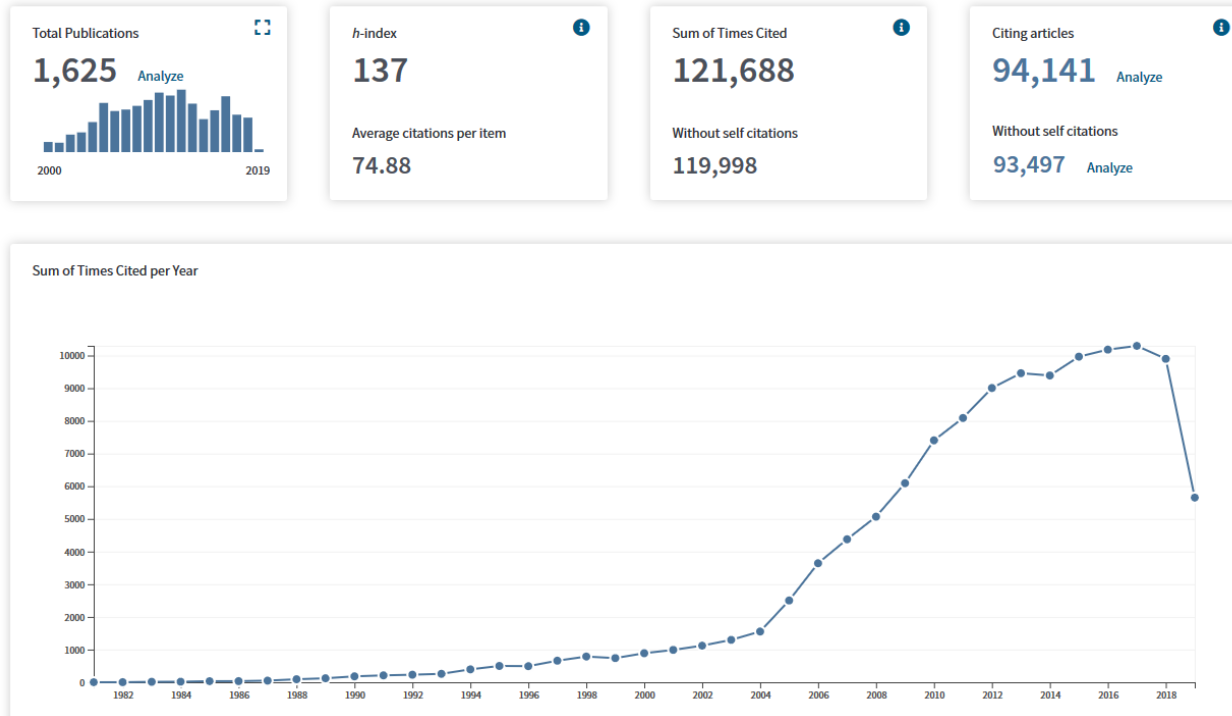
- Total publications and abstracts = 77
- Total # of abstracts = 40
- Total # of manuscript publications = 37
- Total of CCTG-led trial primary publications = 9
- Total of non-CCTG-led trial primary publications = 6

2017-2018 Selected Publications

- Sparano JA et al. Adjuvant chemotherapy guided by a 21-gene expression assay in breast cancer, N Engl J Med, 379 (2018) 111-121.
 - **This trial has reduced the number of patients overtreated with chemotherapy following surgery. Over 900 Canadian patients participated in the trial.**
- Conroy T et al. FOLFIRINOX or gemcitabine as adjuvant therapy for pancreatic cancer, N Engl J Med, 379 (2018) 2395-2406.
 - **Regimen improved the long-term survival of patients with resected pancreatic cancer.**
- Gounder MM et al. Sorafenib for advanced and refractory desmoid tumors, N Engl J Med, 379 (2018) 2417-2428.
 - **First drug proven to be effective for patients with this rare neoplasm.**
- Woyach JA et al. Ibrutinib regimens versus chemoimmunotherapy in older patients with untreated CLL, N Engl J Med, 379 (2018) 2517-2528.
 - **Ibrutinib, was more effective and well tolerated in older patients.**
- Devarakonda S et al. Tumor mutation burden as a biomarker in resected non-small-cell lung cancer, J Clin Oncol, 36 (2018) 2995-3006.
 - **One of five publications from the international LACE-Bio consortium**
- Hanna T et al. Can administrative data improve the performance of clinical trial economic analyses? J Clin Oncol 36[30_suppl], 2. 9-25-2018.
- Hay AE et al. Linkage of clinical trial and administrative data: a survey of cancer patient preferences. Curr Oncol 2017; 24(3):161-167.

> 2000 Publications

ISI Web of Science 1980 - 2019



10 Highest Cited Publications

Title	Author	Journal	Year	Total Citations	Per Year
• New guidelines to evaluate the response to treatment in solid Tumors	Therasse P	JNCI	2000	12437	621.85
• New response evaluation criteria in solid tumours: Revised RECIST guideline (version 1.1)	Eisenhauer EA	EJC	2009	9615	874.09
• Radiotherapy plus concomitant and adjuvant temozolomide for glioblastoma	Stupp R	NEJM	2005	9416	627.73
• Effects of chemotherapy and hormonal therapy for early breast cancer on recurrence and 15-year survival: an overview of the randomised trials	Abe O	LANCET	2005	4745	316.33
• Erlotinib in previously treated non-small-cell lung cancer	Shepherd FA	NEJM	2005	4171	278.07
• Effects of radiotherapy with concomitant and adjuvant temozolomide versus radiotherapy alone on survival in glioblastoma in a randomised phase III study: 5-year analysis of the EORTC-NCIC trial	Stupp R	LANCET ONCOL	2009	3466	315.09
• Erlotinib plus gemcitabine compared with gemcitabine alone in patients with advanced pancreatic cancer: A phase III trial of the National Cancer Institute of Canada clinical trials group	Moore M	JCO	2007	2413	185.62
• K-ras mutations and benefit from cetuximab in advanced colorectal cancer	Karapetis C	NEJM	2008	2390	199.17
• Interpreting the significance of changes in health-related quality-of-life scores	Osoba D	JCO	1998	1494	67.91
• Erlotinib in lung cancer - Molecular and clinical predictors of outcome	Tsao MS	NEJM	2005	1427	95.13

Some High Impact CCTG Led Trials

- Aromatase inhibitors for breast cancer (MA.17) and extended adjuvant treatment (MA.17R)
- Regional nodal irradiation for early stage breast cancer (MA.20)
- Adjuvant therapy for lung cancer (BR.10)
- Erlotinib for lung cancer (BR.21)
- Temozolomide with radiation in the elderly (CE.6)
- Cetuximab for colon cancer (CO.17)
- Chemotherapy for Early Hodgkin lymphoma (HD.6)
- Important role of RT (PR.3), Intermittent Androgen Suppression (PR.7) in prostate cancer
- Dexamethasone for RT pain flare (SC.23)

Strategic Plan

Canadian Cancer Trials Group 2021 *Trials that Matter* Strategic Plan

Vision

The Group will conduct trials that matter in the ways that matter and present the results that matter to reduce the burden of cancer for Canadians and contribute to the sustainability of the Canadian healthcare system.

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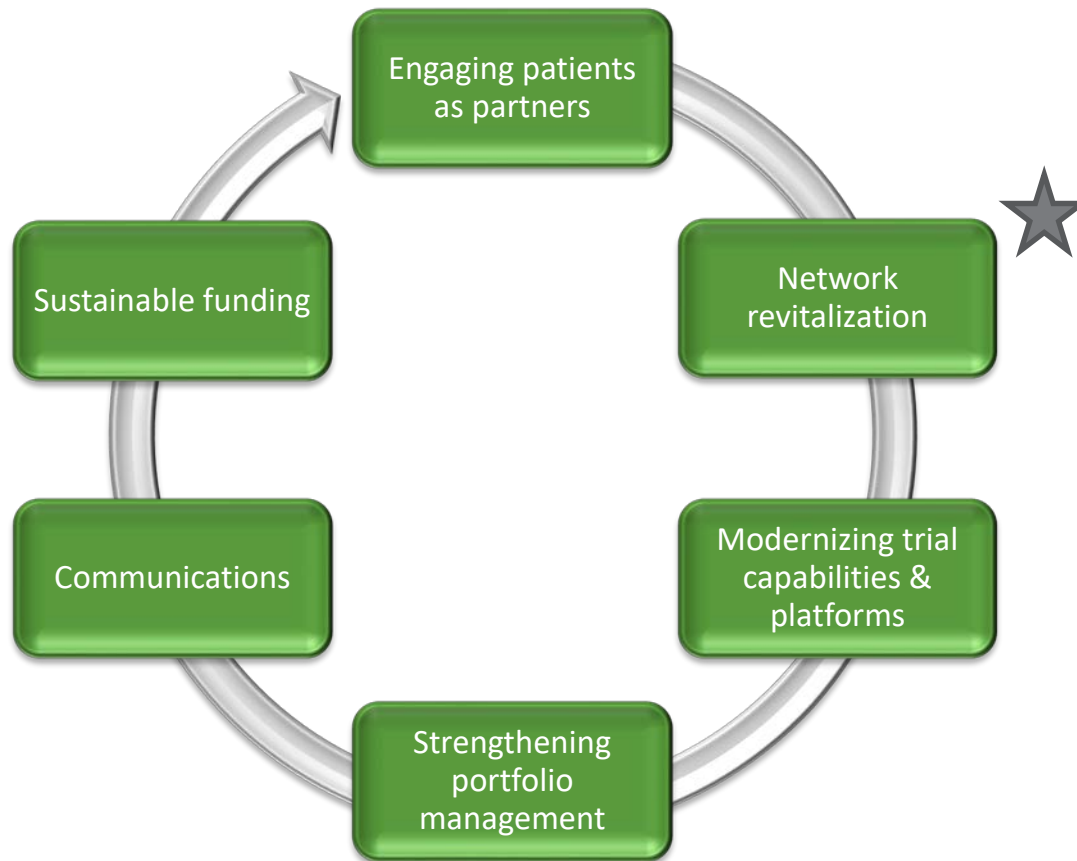
Appendices - Position papers

Precision Medicine
investigator engagement
Data Sharing

Strategic Priorities – And Sample of Current Research

Strategic Priority	Research
Targeting Cancer Vulnerabilities	<ul style="list-style-type: none"> • Precision Medicine Including Immunotherapy • IND.223/cfDNA: Castrate Resistant Prostate Cancer Stratified Master Protocol • PM.1 CAPTUR CANadian Profiling and Targeted Agent Utilization Trial • OV.24 An RCT of Acetylsalicylic Acid Chemoprevention of High-Risk BRCA+ Ovarian Cancer prior to prophylactic surgery. • ALC6/S1612 (LEAP) A randomized phase 2/3 platform trial to test novel therapeutics in medically less fit older adults with acute myeloid leukemia.
Patient – Focused Research	<ul style="list-style-type: none"> • MAC.18 POSITIVE: A Study Evaluating the Pregnancy Outcomes and Safety of Interrupting Endocrine Therapy for Young Women with Endocrine Responsive Breast Cancer • CO.21 Colon Health and Life-Long Exercise Change (<i>CHALLENGE</i>)
Demonstrating Value	<ul style="list-style-type: none"> • BR.31 (and other RCTs): Cost-effectiveness analysis and QOL embedded as endpoints • ME.13 Phase III Study of Duration of Anti-PD1 Therapy in Metastatic Melanoma (STOP-GAP). • Value project linking QOL, preference, and cost-effectiveness data to create utilities

Strategic Priorities: 6 Enabling Strategies



Strategic Plan - Status of Activities

Strengthen scientific network governance and performance

Activities	Performance Measurement	Status
1. Plan for leadership succession	Address with Disease Site leadership	Complete / In Progress
2. Develop and/or update Terms of Reference	New terms of reference for scientific committees and executives and re-populate committees	2018 TOR for Phase III DSC - Complete 2019 TOR for Rare Cancer Initiative - Drafted 2019/2020 Endpoint and Standing committees next (e.g. PRC, QOL, CEA) and Site/Cen Rep roles as will need separate consideration and discussion
3. Develop Policies	Policy gaps identified and addressed; Policies reviewed and updated on a regular basis	Policy gaps to be analyzed now that TORs finalized - Next
4. Refresh executives with mid-career and young investigators	Monitor turnover in committee membership	Complete / In Progress
5. Provide performance metrics to investigators	Monitor Investigator and Centre performance	Additional tools to be developed - Next

CCTG Investigator Engagement

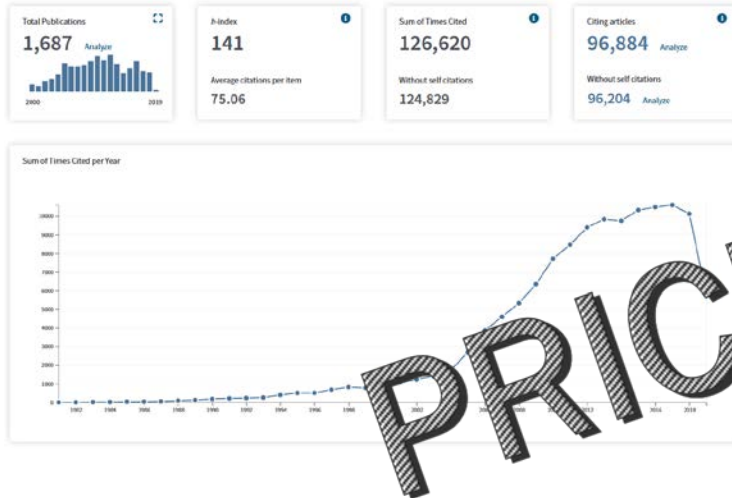
	Website member access	Scientific meeting	Secondary analyses	Trial Chair/Cttees	Scientific Cttees Member	Scientific Cttees Exec	Oversight Cttees
Trainees	Y	Non-funded Invitation	Y	-	Observer	-	-
Young Inv	Y	Funded Invitation	Y	New Curriculum	Member	Observer Member	Observer Member
Mid Career	Y	Funded Invitation	Y	Y	Y	Y	Y
Senior Inv	Y	Funded Invitation	Y	Y	Y	Y	Y

Data Initiative: Big, Right Data and Trials



- **Type of data:**
 - E-Patient reported outcomes
 - Population data bases
 - Large omic data sets
 - Sensors for monitoring physical and physiological functions.
 - E-medical records linkages
- **Acquisition of data:**
 - Data to support regulatory submissions
 - Statistical monitoring of trial data
 - Minimal datasets for pragmatic trials
- **Data sharing policy and data sharing platform**
- **RWE and clinical trials**
 - Synthetic control arms for RWE trials
 - Pragmatic trial methods using RWE

CCTG Value and Impact



- 17 Phase III clinical trials completed accrual and resulted in drug or pathology cost avoidance 1999-2011

Total drug cost savings: **\$27,935,957**

\$8,744 CA per patient

- 12% targeted therapy: \$11,900,775 (5 trials)
- Combined pathology and drug cost avoidance: **\$32,130,806**

Tang P et al, Curr Oncol 2016

Volunteerism of over 200 leaders and 5000 CDN investigators & trial staff/year

Thank you!



Canadian
Cancer
Society

Société
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