



The Path Forward

Strategic Framework 2024-2029

Provincial Pathology & Laboratory Medicine Program
Department of Pathology and Laboratory Medicine
BC Cancer & BC Cancer Vancouver
Provincial Health Services Authority

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1. Strategic Framework

Mandate

Provincial referral network *leading* cancer pathology, genomics, laboratory medicine, research & education for equitable, accessible, timely & high-quality diagnostics to improve patient outcomes.

Vision

Transform cancer care through excellence in laboratory medicine.

Goals

1. Optimize infrastructure & resources
2. Improve quality & efficiency
3. Adopt new technology & embrace innovation
4. Lead research & education

Strategy 2024-2029

Optimize infrastructure & resources	Improve quality & efficiency	Adopt new technology & embrace innovation	Lead research & education
Organizational structure with clear roles & responsibilities	Improve slide, specimen, block, transportation system for review and consult	Collaboration and partnership	Protect time for academic activities (E.G. teaching & research)
Expertise (sub-specialty group & networking) including recruitment & retention of workforce	Lead development and implementation of QA standards across diagnostic system	New tests, new markers, new technology	Hub of collaboration & support
Resource allocation & negotiation	Optimize workflow & batch testing	Identify funding sources & innovative solutions	Capitalize data, library, & tissues for research & teaching
Uniform laboratory services	Implement digital pathology technology	Educate & train internal workforce	Educate & train residents, fellows, & clinicians

Year-one Priorities and Action Plan

What needs to be done	Who	Resources needed	When	How to monitor progress	Measures of success
Organization structure with clear roles and responsibilities	Helen Anderson Rob Kirkpatrick Zu-hua Gao	None	December 2024	Frequent updates	Terms of Reference for each key leadership position
Establish province-wide subspecialty expert groups	Zu-hua Gao Gang Wang	Authorization from BC Cancer for cross appointments	December 2024	Frequent updates	Establish 3 or more functional subspecialty groups
Digital pathology	Zu-hua Gao Gang Wang Chen Zhou Rob Kirkpatrick Henry Ng	Confirm funding from PLMS/Innovate BC and BCCA	July 2024	Regular update meetings	Functional pilot program by July 2024
Pathologist overage payment	Gang Wang Graham Slack Diana Ionescu	Approval and support from medical affairs BCCA/PHSA	June 2024	Frequent updates & discussions	Past overage paid out; new payment system established
Recruitment and retention	Gang Wang Diana Ionescu Rob Kirkpatrick Brenda Smith Stephen Yip Sean Young	Workload data Recruitment Committee	December 2024	Management committee discussions	Increase FTEs & decrease in overtime. 2Pathologists, 1 CCMG, 1 scientific director and 1 lab operation director for CGL recruited
Improve histology and IHC resources/workflow	Gang Wang Brenda Smith Ron Garbuio Henry Ng Eddie Yuen	Funding (AP bundle budget pending April 2024), space, personnel, instrumentation, assistant clerk	July 2024	Finalize space, install machine, validate IHC assay, Update new markers	Monitor send outs IHC requests, TAT

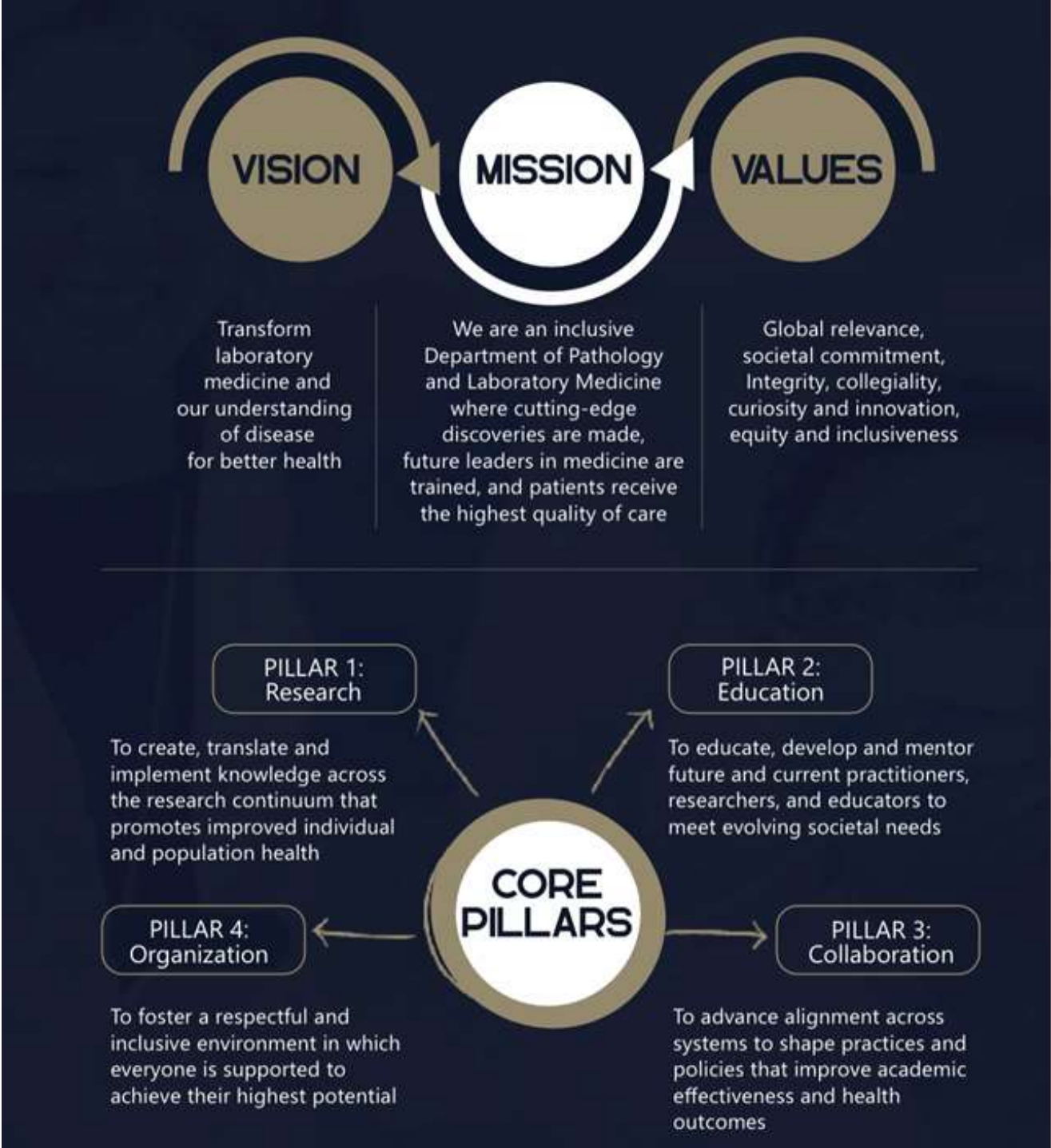
Standardize the QA & workload monitoring system	Jinesa Moodley Dirk van Niekerk Andrew Lytle Gang Wang	Protected time, PHSA Health System Redesign funding (to apply)	November 2024	Data collection points, such as error rate, TAT, etc.	Have first departmental QA report Submit Cancer Pathology version of L4E system for publication.
Establish cancer pathology fellowship program	Gang Wang	Funding, connections with Middle east self-funded residents Approval from BC Cancer to use physician salary budget for our own funded fellowship	December 2024	Post advertisement; Track applicant numbers	Establish at least one fellowship program at BCCA
Clarify review process for TG	Diana Ionescu 1 representative from each TG	Clerical support, people	June 2024	Monitor discussion with Tumour Board	SOP from each TG for review process
Additional clerical staff	Brenda Smith Lily Yuen Gang Wang	Additional operational funding	June 2024	Frequent updates	Funding for additional clerical staff
Execute on Genomics strategy (expansion plans)	Stephen Yip Zu-hua Gao Scientific director Rob Kirkpatrick Operation director	Funding approval & implementation plans	September 2024	Frequent updates & discussions	Finalized CGL strategic plan
CGL new tests (OGN, Myeloid MRD, lyseq66)	Stephen Yip Scientists Lymphoma group	Funding, IT, technologists	December 2024	Frequent updates & discussions	Implementation of identified tests

2. Background Information

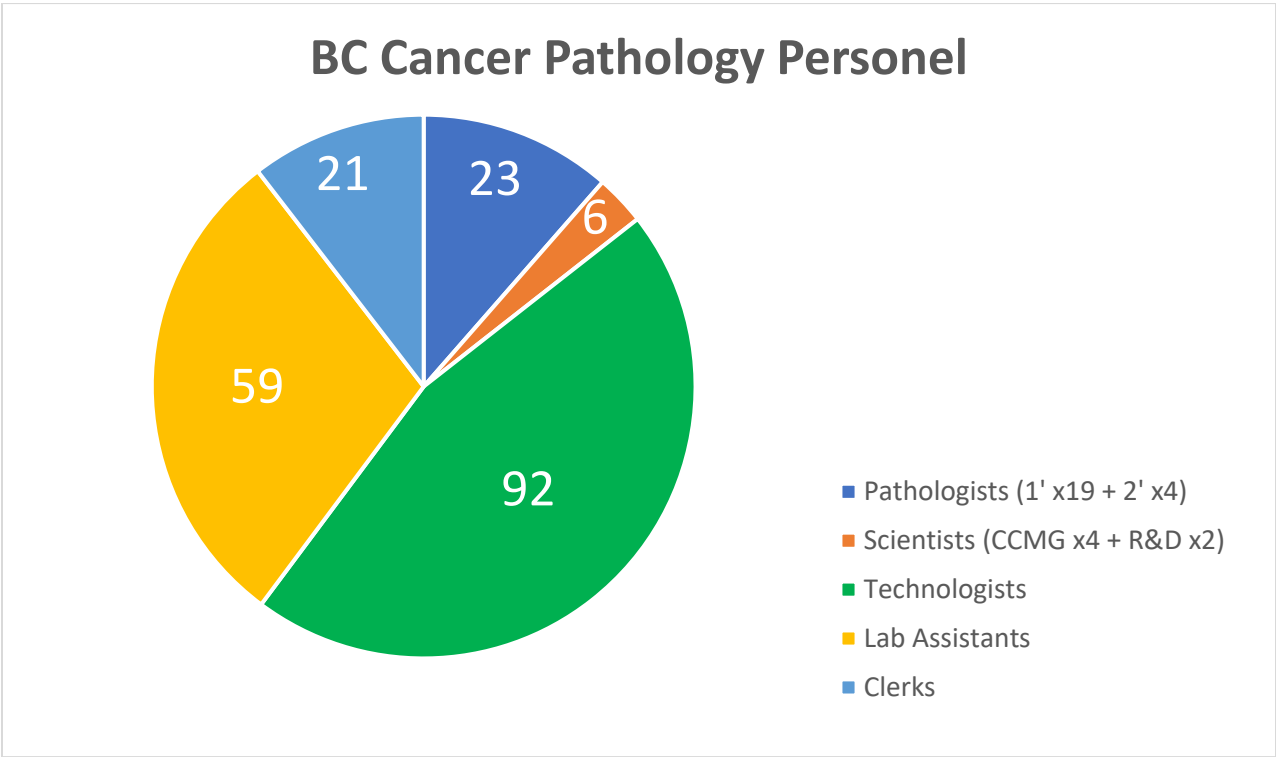
BC's 10-Year Cancer Action Plan

10-year goals			
Reduce the incidence of cancer	Improve survival, cure rates and quality of life	Ensure a strong system delivering modern, evidence-based care	
Strategies guiding B.C.'s priorities for action			
Prevent cancer and find cancer earlier	Ensure timely access to cancer treatments	Optimize care through collaboration and partnership	Revitalize provincial cancer care system through essential system enablers
Priorities for action			
Enhance prevention strategies with emphasis on at risk populations	Strengthen equity of access to cancer surgery services	Enhance provincial reach through strengthened networks with primary and community providers	Stabilize and enhance the cancer care workforce
Strengthen and expand best practice screening programs	Expand access to evidence-based radiotherapy services	Strengthen and expand multi-disciplinary cancer teams	Innovate and advance data and digital means to inform and improve care
Optimize an expedited pathway from suspicion of cancer to diagnosis and staging.	Expand access to evidence-based systemic therapies	Integrate research and cancer care	Plan and deliver capital and IMIT infrastructure to support key priorities
	Expand specialized cancer services	Ensure culturally safe and equitable care for Indigenous cancer patients	
	Enhance connection to palliative care and survivorship services		

UBC Department of Pathology and Laboratory Medicine Strategic Framework 2023-2028



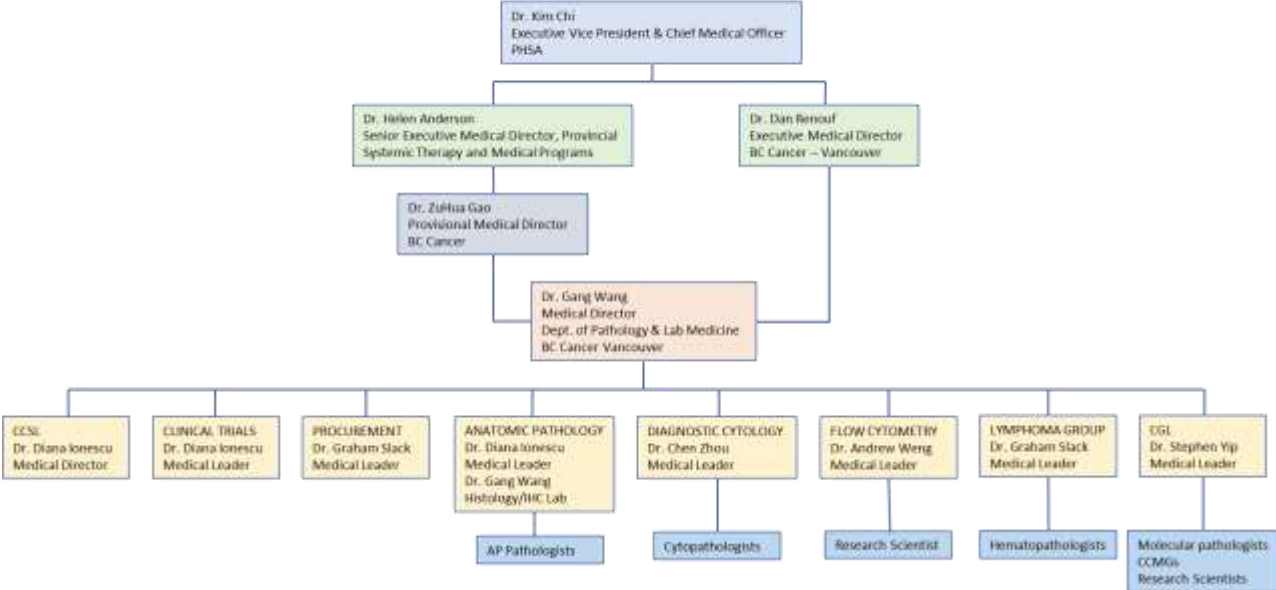
Human Resources - BC Cancer Pathology and Laboratory Medicine Program



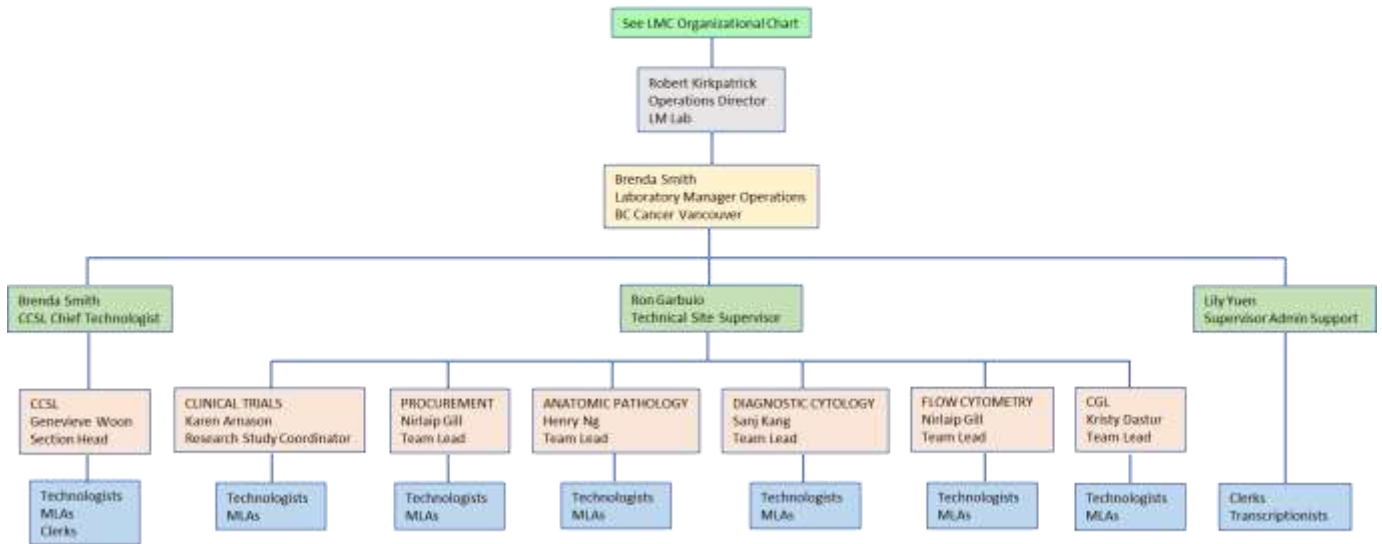
BC Cancer Provincial Laboratory Medicine Department is a total of 201 staff members, the bulk being technologists and lab assistants. The full department includes of only 23 pathologists.

Organization Structure - BC Cancer Pathology and Laboratory Medical Team

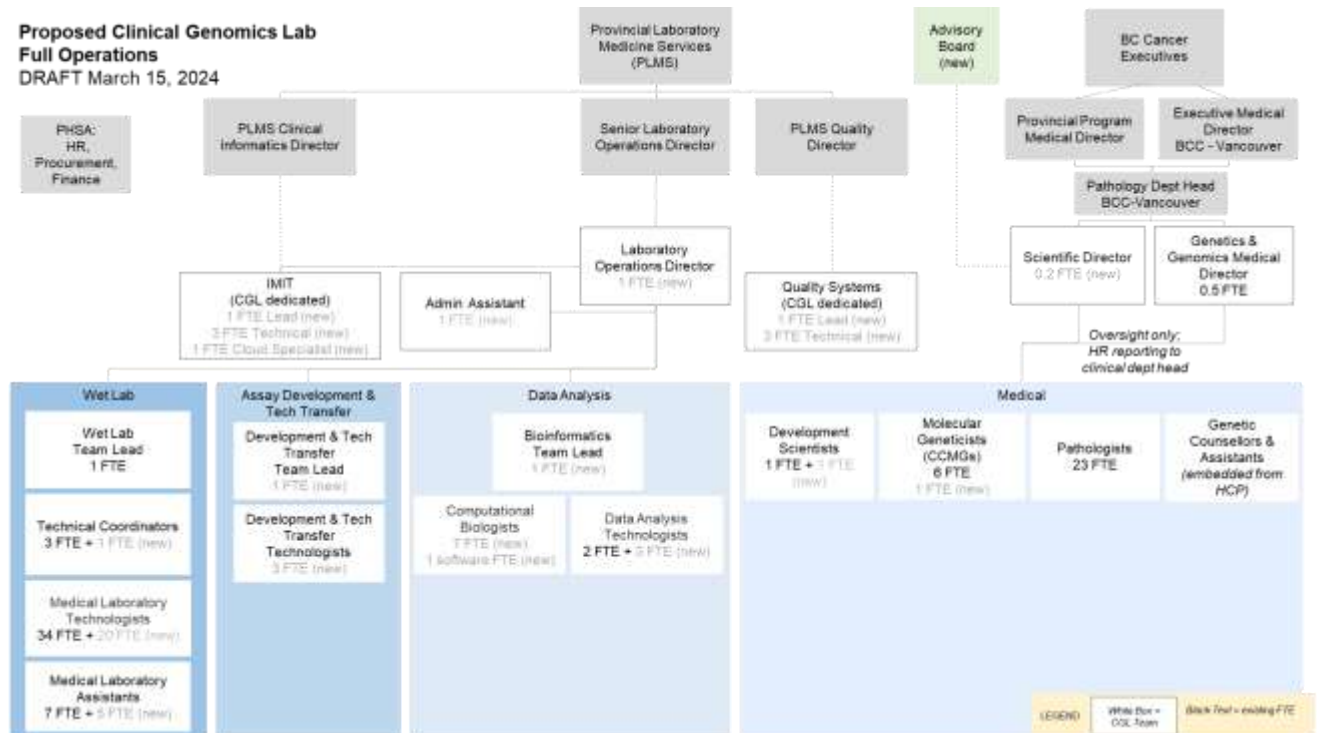
BC Cancer Pathology & Laboratory Medicine Services (Medical) March 2024



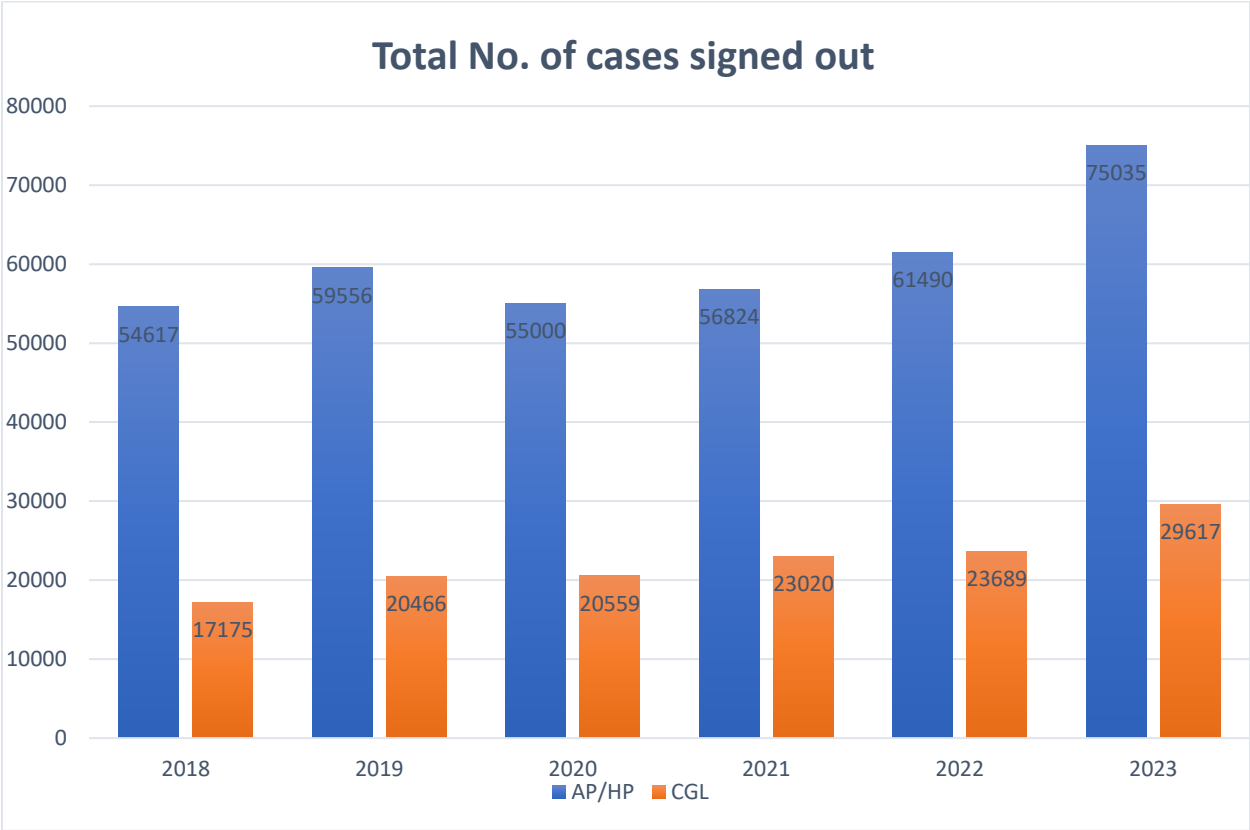
BC Cancer Pathology & Laboratory Medicine Services (Operational) March 2024



Proposed Clinical Genomics Lab Full Operations DRAFT March 15, 2024



Workload- Department of Pathology and Laboratory Medicine, BC Cancer Vancouver



In 2023, the pathology department processed 104,652 requests, the bulk originating from Anatomical Pathology/Hemopathology.

3. The Process

Internal Survey

Survey questions: BC Cancer Pathology and Laboratory Medicine

The following questions were sent out to 23 Medical Scientific staff members within BC Cancer Pathology and Laboratory Medicine Program on January 2024. 4 responses were received (17% response rate).

1. What is our mandate? How should the BC Cancer Pathology and Laboratory Medicine Department be positioned within the BC healthcare ecosystem, specifically, within the provincial medical laboratory diagnostics system?
2. In your opinion, how a world leading cancer pathology and laboratory medicine department should look like? Please be as specific as possible.
2. What are the gaps between BC Cancer Pathology and Laboratory Medicine Department and the prestigious academic institution you are trained from? And how can we fill those gaps?
3. What should be our vision and mission? Please write down your phrase.
4. What should be our strategy moving forward? What should be our priorities for action?
6. What are the strengths of the BC Cancer Pathology and Laboratory Medicine Department? Please provide a list.
7. What are the weakness of the BC Cancer Pathology and Laboratory Medicine Department? Please provide a list.
8. What are the external and internal opportunities? Please provide a list.
9. What are the threats? Please provide a list.
10. What can be done to improve our working relationship with other academic hospitals such as VGH/SPH/WCH and BCCRC to achieve synergy for better patient care?
11. How can we work together with other hospitals outside Vancouver to improve the quality and efficiency of care?
12. In your opinion, what new technology platform should we bring to the BC Cancer Pathology and Laboratory Medicine Department as early as possible?
13. Do you have suggestions regarding our immunohistochemistry and molecular testing manual?
14. What is the BC Cancer Pathology Department and pathologists' role/position in clinical/translational research and biobanking, in the era of precision/personalized medicine? How should we fulfill this role/need?
15. Given the means we have, how can we better support everybody's academic effort to ensure everyone thrives in their career?

External Main Stakeholder Survey

The following questions were sent out to 35 main stakeholders outside BC Cancer Pathology and Laboratory Medicine Program on January 2024. 5 responses were received (14% response rate).

1. In your opinion, what should the mandate of BC Cancer Pathology and Laboratory Medicine Department (BCC-DPLM) be?
2. How should BCC-DPLM be positioned within the BC healthcare ecosystem, specifically, within the provincial medical laboratory diagnostics system?
3. In your opinion, what should a world leading cancer pathology and laboratory medicine department should look like? Please be as specific as possible.
4. Do you see any gaps between BCC-DPLM current offerings and the needs of the clinical cancer programs? Yes/No.
 - a. If Yes > What are the gaps and how should we fill these gaps?
5. Do you have any suggestions on how to build a world leading cancer DPLM that meets the demands of our clinicians, our patients, our trainees and our research collaborators? Yes/No.
 - a. If Yes > Please describe how.
6. Can we improve our working relationship with other academic hospitals such as VGH/SPH/WCH and BCCRC to achieve synergy for better patient care? Yes/No.
 - a. If Yes > Please provide your suggestions.
7. Can we improve our contribution in education and research collaboration with UBC and BCCRC and simultaneously facilitate academic career development of our faculty members? Yes/No.
 - a. If Yes > Please share your thoughts
8. Can we improve the quality and efficiency of care by working with hospitals outside of Vancouver? Yes/No.
 - a. If Yes > Please describe how.
9. Is BCC-DPLM missing any technologies? Yes/No
 - a. If Yes > Please indicate the new technology platform we should consider.
10. What is the BC Cancer Pathology Department and pathologists' role/position in clinical/translational research and Biobanking, in the era of precision/personalized medicine? How should we fulfill this role/need?
11. What support and guidance can you provide to us in your capacity?

Inaugural Cancer Pathology and Laboratory Medicine Retreat

Date: February 23, 2024

Location: Holiday Inn Broadway Arbutus Room

Morning			Moderator
8:00 to 8:30	Opening remarks	Kim Chi, Helen Anderson, Dan Renouf	Zu-hua Gao
8:30 to 9:00	Setting the direction	Zu-hua Gao	Zu-hua Gao
9:00 to 10:00	Define our mandate, vision, and goals	Group discussion	Zu-hua Gao
10:00 to 10:30	Wrap up	Zu-hua Gao	Zu-hua Gao
10:30 to 10:45	Break		
10:45 to 11:15	SWOT analysis	Gang Wang	Gang Wang
11:15 to 12:15	Discuss our strategy	Group discussion	Gang Wang
12:15 to 12:45	Wrap up	Gang Wang	Gang Wang
12:45 to 2:00	Lunch		
Afternoon			
2:00 to 2:25	Molecular diagnostics	Stephen Yip	Gang Wang
2:25 to 2:50	Anatomical pathology and clinical trials	Diana Ionescu	Gang Wang
2:50 to 3:15	Hematopathology	Graham Slack	Gang Wang
2:15 to 2:40	Tumor group pathway and rapid access clinic	Christine Simmons, Shaifa Nanji, Amilya Ladak	Gang Wang
2:40 to 3:00	Wrap up of above talks	Gang Wang	Gang Wang
3:00 to 3:15	Break		
3:15 to 3:30	Transform ideas to action	Zu-hua Gao	Zu-hua Gao
3:30 to 5:00	Define priorities and action plan	Group discussion	Zu-hua Gao
5:00 to 5:30	Wrap up	Zu-hua Gao	Zu-hua Gao
Evening			
5:30 to 7:30	Dinner		

The inaugural Pathology retreat was held at the Holiday Inn, in Vancouver, British Columbia. 54 pathologists, team members and leaders were invited. The retreat was carefully planned to set direction, define mandates and document visions and goals which will guide strategic and operational planning and drive critical future planning to support actions within the BC Cancer Action Plan. Additionally, the retreat supported team building and general updates on the primary thematic areas within BC Cancer's Pathology department,

The one-day retreat was attended by 46 engaged attendees including Pathologists, both local and regional, and stakeholders from BC Cancer Senior Leadership, Provincial Laboratory Medicine Services (PLMS), University of British Columbia, Vancouver Coastal Health, St. Paul's Hospital and BC Cancer Provincial Programs. Regional representatives unable to attend in-person were supported through virtual conferencing tools.

The morning session was opened by BC Cancer's executive team including:

- Dr. Kim Chi, Chief Medical Officer and Executive Vice President
- Dr. Dan Renouf, Executive Medical Director, BC Cancer Vancouver
- Dr. Helen Anderson, Senior Executive Medical Director, Provincial System Therapy and Medical Programs and
- Dr. Zu-Hua Gao, Provincial Medical Director, Pathology and Laboratory Services BC Cancer

BC Cancer leadership addresses the pathology team at the inaugural 2024 Pathology Retreat in Vancouver, BC, Canada.



Dr. Kim Chi, Chief Medical Officer and Executive Vice President, BC Cancer addresses the team at the 2024 Pathology retreat



Dr. Dan Renouf, Executive Medical Director, BC Cancer Vancouver



Dr. Helen Anderson, Senior Executive Medical Director, Provincial System Therapy and Medical Programs



Dr. Zu-Hua Gao, Provincial Medical Director, Pathology and Laboratory Services BC Cancer

The foundational morning sessions were critically important and commenced with an introductory speech by Dr. Gao, Provincial Medical Director of BC Cancer's PLMS department. Dr. Gao set the direction for the day and invited the team to jointly define the department's mandate, vision and 5-year strategy with detailed plans to guide the team on a forward-facing path.



During the very successful retreat, the team collaborated and fine tuned the PLMS mandate, vision, goals and strategies to strive towards becoming a world leader in pathology and laboratory medicine. The team continued to develop goals for a 5-year strategic planning and strategies for a one-year action plan.

Teams actively engaged in formulating the department's strategic plan.





4. Appendix

Appendix A: Morning Presentations

Setting the Direction presented by Dr. Zu-Hua Gao



BC cancer Retreat
Presentation 1.pptx



<h3>Setting the Direction</h3> <p><i>The future belongs to people who see possibilities before they become obvious.</i> —_Seton</p>	<h4>Objectives</h4> <ul style="list-style-type: none"> • Clarify our mandate • Define our vision and goals. • Develop 5-year strategy • Identify our priorities and develop an action plan. 	
<h4>The Golden Circle</h4> <p>—by Simon Sinek</p>	<h4>Why do we need to do this?</h4> <p><i>"If the department cannot adapt and evolve to reality it will lose its relevance and significance..... that ultimately would be a great loss for BC cancer patients as the quality of care would not be uniform and would result in the inequality and inefficiency of Cancer management....."</i></p> <p><i>Thank YOU for the insightful comments from those who responded to the survey!</i></p>	<h4>What is mandate?</h4> <p>A mandate is an authoritative command. It implies that compliance with the command is mandatory.</p> <ul style="list-style-type: none"> • Who do we think we are collectively? • What do we value? • What do we do? Define ourselves.
<h4>Examples of mandate</h4> <ul style="list-style-type: none"> • A political mandate are the promises made by a political party or politician that help them to get elected. A political party that promises to make education free would have a mandate to reduce the cost of education if they get elected. • BC Cancer's mandate covers the full spectrum of cancer care from prevention, screening, diagnosis and treatment, to research and education, to supportive and palliative care. 	<h4>What should be our mandate? (my thoughts)</h4> <ul style="list-style-type: none"> • Reference center, for complex and rare tests such as comprehensive molecular testing panel for all cancers • Referral center, for reviewing all cancer types and providing comprehensive standard genetic reports using "expert network" approach • Leader in innovation and adoption of new technology, such as developing and validating new markers, new tests, and new technology such as AI, liquid biopsy, etc. • A hub of collaboration, Provides laboratory support for tumor banking, clinical trials, and clinical research. 	<h4>Mandate: Survey response (selected)</h4> <ul style="list-style-type: none"> • Quality centralized cancer AP and molecular/genomic pathology service for BC. • A center of excellence for cancer pathology/genomic diagnostics for BC. • BC reference center of cancer (morphology/phenotype and genomic) diagnosis with a significant role in the translational research in cancer and in training of future cancer diagnosticians (residents and fellows). <p>• We need to jointly develop this today.</p>
<h4>What is vision?</h4> <ul style="list-style-type: none"> • It is a picture of the "preferred future," a concise inspirational statement of the organization's ultimate goal. • It should give us direction, energize us, and it eventually give us what we truly want. • It should be idealistic, challenging but realistic, simple and focused and benefit to all stakeholders of the organization. 	<h4>Examples of vision statement</h4> <ul style="list-style-type: none"> • BC cancer: A world free from cancer • UBC FMH: Transform health for everyone. • UBC CPJW: Transform laboratory medicine and our understanding of disease for better health 	<h4>What should be our vision?</h4> <ul style="list-style-type: none"> • My thoughts: "Transform laboratory diagnostics for better cancer care", or "A national/international leader in cancer diagnosis", comparable to MSK, MD Anderson". <p>• We need to jointly develop this.</p>

What are goals?

- It is the end toward which effort is directed.
- It should be SMART (specific, measurable, achievable, relevant, and time bound).

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Example of goals: UBC DPLM



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What should be our goals? My thoughts

1. Optimize people and structure
2. Building stronger relationships
3. Improve quality and turn around time of service

• We need to jointly develop this today

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What is strategy?

- Strategy functions as a flexible blueprint employed to achieve a particular goal, with the capacity for adaptation and change as needed.
- A good strategy provides a clear roadmap, consisting of a set of guiding principles or rules, that defines the actions

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Goals and strategies of BC Cancer

- The goal of BC Cancer plan is to ensure a cancer-free future for more people, help thousands more people survive their cancer diagnosis, and ensure B.C.'s cancer system delivers modern, evidence-based care. The plan also aims to make access to cancer care more equitable for people living in rural and remote communities by increasing funding to support expenses related to traveling for cancer care.
- The strategy to accomplish this goal include: (1) expanding cancer care teams and service hours, (2) improving cancer screening programs, (3) supporting cancer research, (4) increasing Indigenous patient support programs, (5) supporting patients who must travel for care from rural communities, (6) Rapid access for life threatening cancer.
- Embedded in the strategy is the availability of resources. British Columbia government has launched a 10-year cancer action plan with an initial investment of \$400 million to better prevent, detect, and treat cancers.

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Our goals and potential strategies forward (my thoughts) *We need to jointly develop this today*

1. Optimize people and structure
 - Assessment grouping, responsible for setting up diagnostic decisions, combination of tumor boards, education and research
 - "Smart network" - linking health authority with its close alignment to enhance continuity
 - Strategic recruitment and development of subspecialty leaders
 - Diagnostic and evidence systems, coordinate the academic support in care and research and we should have
2. Building stronger relationships
 - BC20 cancer team, general cancer
 - Other cancer supports, drive has across the province, digital in evidence
3. Improve practice and technology
 - Imaging and treatment practice standards, BCFA, support from province, SA, MS, LA, Accreditation
 - Cancer care system, patient, system, system, technology and evidence, setting thought, research, the best of everything, clinical research, collaborative with other, clinical research, patient care, to improve evidence, using evidence and research solutions
 - Implement digital sign-out to improve hel, facilitates effective communication, research, etc.

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Discussion #1

- Each table have a person to take notes, one person as the speaker
We will collect the notes from each table.
- Define our mandate 15 minutes
- Articulate our vision 15 minutes
- Develop 3-5 goals 30 minutes
- Presentation by each group: 55 minutes

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Alice was a little startled to seeing the Cheshire Cat sitting on a bough of a tree. The cat only grinned when it saw Alice. "That's my little girl," she began, rather harshly. "What's your name, what year I might go for from here?" "That depends a good deal on where you want to go to," said the cat. "I don't much care where" said Alice. "Then it doesn't matter which way you go," said the cat. "To begin with I got somewhere" Alice added as an explanation. "Oh, you'll sure to do that," said the cat, "if you only walk long enough."

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SWAT Analysis presented by Dr. Gang Wang



2024 retreat - GW.pptx

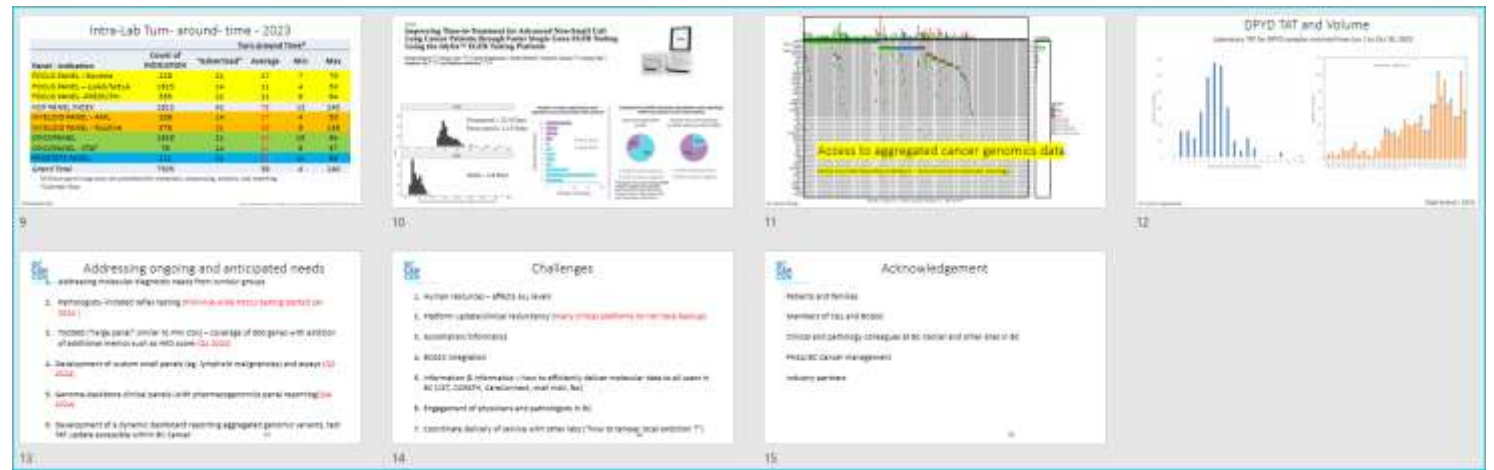
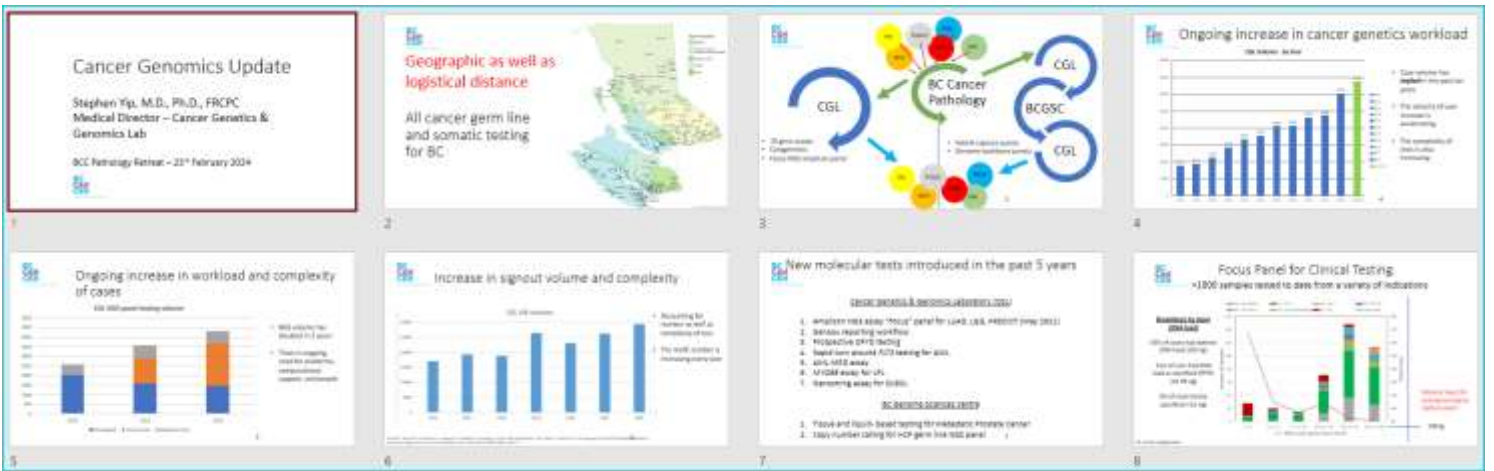


Appendix B: Special afternoon sessions provided an overview of each of the three thematic areas of anatomical pathology, cytogenetics and hematopathology.

Cancer Genomics Update by Dr. Stephen Yip,
 Medical Director, Cancer Genetics & Genomics Lab.



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 Cancer_MOL_PATHV.



Anatomical Pathology by Dr. Diana Ionescu,
Medical Leaders Anatomical Pathology Clinical



ANATOMICAL PATHOLOGY
Dr. Diana Ionescu, MD

Department Personnel Stats

- Medical Leader (AP Clinical) – Dr. Diana Ionescu
- Medical Leader (AP CL) – Dr. Gang Wang
- Team Lead – Penny Ng
- Technical Coordinator – Eddie Park
- Medical Laboratory Technologist 1 – 3
- Medical Laboratory Technologist 2 – 8
- Medical Laboratory Assistants – 2

Number of Cases and Percent Change – Surgical BS

Volume Part Type: Surgical BS

Number of Cases and Percent Change – Consults BC

Percent Change From 2022 – 2023
4.7% increase

Number of Cases and Percent Change – Reviews BR

Percent Change From 2022 – 2023
4.5% increase

Number of Cases and Percent Change – Clinical Trade BCT

Percent Change From 2022 – 2023
26.8% increase

Number of Cases and Percent Change – Special Tests BT

Quality Control/Quality Assurance

- 2023 89 Cases Reviewed – Internal Controls – 87%
- 2023 Turnaround* Times – *Data/Time accounted to dea/time reported out

Quality Control/Quality Assurance – Workload Limits – 2023

CLINICAL TRIALS

- APL (AP Clinical):**
 - 1. Review and update fee schedule
 - 2. Streamline billing
 - 3. Increase collaboration with research studies/clinical investigators
- APL (AP Lab):**
 - 1. Review and update fee schedule
 - 2. Streamline billing
 - 3. Increase collaboration with research studies/clinical investigators

STUDIES REQUESTING APPROVAL CLINICAL TRIAL UNIT (CTU)

STUDIES REQUESTING APPROVAL RESEARCH

VENIPUNCTURES

VENIPUNCTURES

VENIPUNCTURES

ECG

SEND-OUT TO CENTRAL LABORATORIES

GOALS ANATOMIC PATHOLOGY

- Establish a closer relationship with all tumor groups within BCC and ensure a pathologist is included in decision-making
- Review review request patterns and algorithm for each tumor type
- Introduce standardized and comprehensive biomarker reporting for each clinical indication (lung cancer, upper GI, endometrial, etc)

GOALS CLINICAL TRIALS

- Review and update fee schedule
- Streamline billing
- Increase collaboration with research studies/clinical investigators

Lymphoma Pathology by Dr. Graham Slack



BC CANCER

Lymphoma Pathology at BC Cancer

Dr. Graham W. Slack
February 24, 2024

Outline

- Overview of Lymphoma Pathology at BC Cancer – VCC
- Review current activities:
 - Clinical
 - Teaching
 - Research
- Describe new developments
- Discuss current needs and issues

Overview: Medical Staff

<p><u>PATHOLOGISTS</u></p> <p>Pedro Farinha Andrew Lyle Neval Ozkaya Brian Skinner Graham Slack Andrew Weng</p>	<p><u>CLINICAL SCIENTISTS</u></p> <p>Ian Bosdet Bahareh Mojarad Tracy Tucker Sean Young</p>
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Overview: Lab Interfaces

Overview: Activities

Activities: Clinical

- Objectives developed in conjunction with the **Lymphoma Tumour Group**
- **Objective:** provide a centralized lymphoma pathology service that serves all British Columbians
- **Objective:** provide accurate and precise diagnosis and classification for optimum therapy and research

Activities: Clinical

<p><u>Pathologists</u></p> <ul style="list-style-type: none"> • 2 services run concurrently • Surgical Pathology <ul style="list-style-type: none"> – Review (2 services in parallel) – Consults (pathologist advised) – 10 Hours • Bone Marrow Pathology <ul style="list-style-type: none"> – Review (2 services in parallel) – Consults (pathologist advised) – 10 Hours • Flow Cytometry • Molecular Genetics <ul style="list-style-type: none"> – B/T cell Clonality (BCL1/CLL) 	<p><u>Clinical Scientists</u></p> <ul style="list-style-type: none"> • Cytogenetics (FISH) <ul style="list-style-type: none"> – MYC, BCL2, BCL6 – CD20, MALT1 – DMRT2, PMA – t(11;14) – Mykavia Panel • Molecular Genetics <ul style="list-style-type: none"> – Affected Lymph – Diff. Gene Expression Profiling
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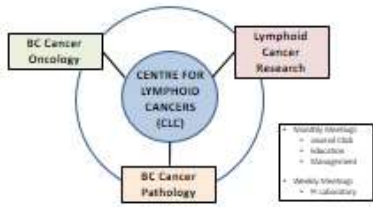
Activities: Teaching

- Support UBC PGME Programs
 - Anatomical Pathology
 - Hematopathology
- Pedro Farinha - Site Director for UBC Lymphoma Pathology
 - Member of the Hematopathology Residency Training Committee
- Clinical Teaching (2020/21 – 2023/24)
 - Residents Trained: 46
 - Weeks of Training: 263
 - “1.4 residents on service at all times”

Activities: Teaching

- BC Cancer Pathologists are authors in
 - Classification systems
 - WHO 5th Edition (2023)
 - International Consensus Classification (2023)
 - Textbook Chapters

Activities: Research



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Activities: Research

- **Clinical Lab**
 - Databanking
 - Databases - Lympho1, biopsy Table (>72,000 unique entries)
 - Biobanking
 - ICR Protocol (Histology)
 - Clinical specimens stored into Biobank after patient consent obtained
 - Fresh Frozen Tissue (Histology/Flow)
 - cDNA (RNA/CG)
 - Research Clerk (Deby Huzar) embedded in Department
 - Manages clinical pathology material used for research projects
 - slide packs, blocks, TMA

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Activities: Research

- **Grants**
 - Pathologists
 - PI, Co-PI, Collaborator
 - Funding Agencies
 - BC Cancer, Canadian Cancer Society, CIHR, Genome Canada, Leukemia and Lymphoma Society of Canada, Lymphoma Research Foundation, Terry Fox Research Institute
 - Grand Funding
 - >\$22,000,000

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Activities: Research

- **Projects**
 - B-cell lymphomas, T-cell lymphomas, Hodgkin lymphomas, Myeloid diseases
- **Technologies**
 - Genomics, epigenomics, phenotypic/high-parameter flow cytometry, single cell multiomics, spatial multiomics, artificial intelligence
- **Collaborations**
 - Leukemia/Lymphoma Molecular Profiling Project (LLMPP), Luburung Lymphoma Biomarker Consortium
- **Pathologists Publications**
 - 139 authorships (2018-2023)
 - 81 peer reviewed scientific papers (2018-2023)

New Development: Flow Cytometry

New Development: LExA

- **Lymphoma Expression Assay**
- **Nanostring nCounter platform**
 - Gene Expression Profiling on FFPE
 - Documented utility in lymphoma
 - DLBCL Cell of Origin (Lymph01)
 - PMBCL vs. DLBCL (Lymph03a)
 - DLBCL vs. T-cell lymphoma
 - DLBCL vs. T-cell lymphoma

- LExA combines all of these assays in the clinical laboratory
- Has the potential to replace some lymphoma IHC and FISH
- Went live October 2023
- 90 samples tested as of Feb 6, 2024 (see page for ~300 in 2024)

Future & Issues: NGS Testing

- Lymphoma **urgently** needs an NGS-based targeted panel assay
 - Currently the standard of care in most centres in N. America and Europe
 - Provides diagnostic, prognostic, and predictive information in a variety of lymphomas
 - DLBCL - prognostic and predictive molecular subtyping
 - PTCL - diagnostic disease associated mutations, predictive mutations
 - HSTCL vs. IGL - diagnostic disease associated mutations
 - CLL - prognostic and predictive mutations
 - TP53 mutations - predictive in CLL, MCL, PTCL

Future & Issues: NGS Testing

- BC Cancer has an assay
 - **lySeq66**
 - 66-gene panel developed at BC/CC/CCG as part of Genome Canada LSAP Project
 - Has undergone multi-site clinical cross validation
 - Clinicians and Pathologists request this assay be deployed for clinical use ASAP
-

Future & Issues: Pathologist Workload

	2014	2023	10yr Change (%)
Biopsy	1201	2420	100%
Non-Malignant	731	911	+25%
Flow Cytometry	1138	838	-26%
B/T Clonality	150	99	-33%
TOT	1990	2928	+48%
BC Population	4,712,995	5,149,254	+9%
labory (actual)	\$1.01	\$1.35	34%
labory (projected)	\$2.00	\$8.88	344%

Provincial Laboratory Medicine Services (PLMS) Updates by Dr. Ivany



BC Cancer Planning Day Ivany.pptx



The image displays a grid of 12 presentation slides from a PowerPoint presentation. The slides are arranged in two rows of six. The top row includes slides 1 through 6, and the bottom row includes slides 7 through 12. Each slide contains text, bullet points, and some include small graphics or maps. The slides cover various aspects of Provincial Laboratory Medicine Services (PLMS) updates, including cross-sector planning, inherent risks, autonomous multi-provider environments, ministry objectives, laboratory reform, partnership models, risk factors, and provincial integrator roles.

Cross-Sector Planning: Work To-Date and Path-Forward

Keynotes highlight the importance of digital and operations in a broader context, for example, the 2017-18 Strategic Plan for the Ministry of Health, and the 2018-2022 Strategic Plan for the Province of British Columbia.

Highlight and Emerging Priorities/Initiatives

Identifying emerging priority areas and initiatives that align with the province's strategic plan and the health system's vision.

Priority Area	Strategic Plan	Health System Vision	Key Initiatives
Digital Health
Operational Excellence
Workforce
Quality
Financial Sustainability

Engagement to Advance Cross-sector Planning

Keynotes and Working Paper on engagement, and the engagement process.

- Keynotes and Working Paper on engagement:**
 - Keynote: Digital Health and Operations
 - Keynote: Workforce
 - Keynote: Quality
 - Keynote: Financial Sustainability
- Engagement Process:**
 - Engagement Process
 - Engagement Process
 - Engagement Process

Insights from Cross-Sector Engagement

Insights from cross-sector engagement, including the importance of digital health and operations, and the role of the health system.

Better Support at Provincial Level

Keynotes and Working Paper on engagement, and the engagement process.

- Keynotes and Working Paper on engagement:**
 - Keynote: Digital Health and Operations
 - Keynote: Workforce
 - Keynote: Quality
 - Keynote: Financial Sustainability
- Engagement Process:**
 - Engagement Process
 - Engagement Process
 - Engagement Process

Next Steps

Next steps for the engagement process, including the importance of digital health and operations, and the role of the health system.

1. Review the engagement process and the health system's vision.
2. Develop a plan for engagement with the health system and the Province of British Columbia.
3. Engage the health system and the Province of British Columbia.
4. Review the engagement process and the health system's vision.

Digital Pathology Solution Project

Digital Pathology Solution Project, including the importance of digital health and operations, and the role of the health system.

Provincial Connected Digital Pathology Reference Architecture

Provincial Connected Digital Pathology Reference Architecture, including the importance of digital health and operations, and the role of the health system.

Provincial Digital Pathology Project

Provincial Digital Pathology Project, including the importance of digital health and operations, and the role of the health system.

Digital Pathology Solution Project Update

Digital Pathology Solution Project Update, including the importance of digital health and operations, and the role of the health system.

Innovate BC Funding

Innovate BC Funding, including the importance of digital health and operations, and the role of the health system.

Thank You

Thank You, including the importance of digital health and operations, and the role of the health system.

Tumour Group Initiatives by Dr. Christine Simmons, Shaifa Nanji, Amilya Ladak



Pathology Retreat
2024_CPP Overview_



<p>BC CAN CER</p> <p>Tumour Group Initiatives</p> <p>Executive Director Tumour Group Clinical/Molecular Diagnostic</p> <p>Health Lead Manager, Senior Clinician, Molecular Imaging & Pathology</p> <p>Amilya Ladak Pathology Specialist, Senior Clinician</p> <p>BC Cancer Pathology Network - February 15, 2024</p>	<p>BC CAN CER</p> <p>Rapid Diagnostic and Assessment Units (RDAU)</p>	<p>Background</p> <p>Agreed with the Ministry of Health and BC Health Services</p> <p>2024-2025 Strategic Plan: Clinical Care & Support</p> <p>Goals:</p> <ul style="list-style-type: none"> Improve patient experience Reduce diagnostic turnaround time Improve diagnostic accuracy Reduce diagnostic costs <p>Key Outcomes:</p> <ul style="list-style-type: none"> Reduce diagnostic turnaround time Improve diagnostic accuracy Reduce diagnostic costs 	<p>Timeline</p>
<p>Outcomes</p> <ul style="list-style-type: none"> Improvement of T2a, T2b, T2c, T2d, T2e, T2f, T2g, T2h, T2i, T2j, T2k, T2l, T2m, T2n, T2o, T2p, T2q, T2r, T2s, T2t, T2u, T2v, T2w, T2x, T2y, T2z 15 new initiatives 3 leading initiatives (ongoing) 	<p>BC CAN CER</p> <p>Enhancing Quality of Care Through Clinical Pathways</p>	<p>Discussions</p> <ul style="list-style-type: none"> Dr. Christine Simmons - Head, Senior Clinician, Molecular Imaging & Pathology Shaifa Nanji - Health Lead Amilya Ladak - Health Lead <p>Presented to the Health System Strategic Program</p>	<p>Outline</p> <ul style="list-style-type: none"> 1. Introduction 2. Objectives 3. Key Messages 4. Implementation Plan 5. Monitoring & Evaluation 6. Summary
<p>What is a Pathway?</p>	<p>Pathway Examples</p>	<p>Why are clinical care pathways important?</p>	<p>Work Completed: Identifying Clinical Care Pathways</p> <p>Clinical Care Pathways</p> <ul style="list-style-type: none"> Identify clinical pathways Review clinical pathways Update clinical pathways Implement clinical pathways Monitor clinical pathways Evaluate clinical pathways
<p>Work Completed: Identifying Clinically Relevant Benchmarks</p>	<p>Work Ongoing: Tumour Group Clinical Care Pathways</p>	<p>Work Ongoing: Tumour Group Clinically Relevant Benchmarks</p>	<p>ASCO Checklist</p>
<p>Accomplishments to Date</p> <ul style="list-style-type: none"> Identified clinical pathways Reviewed clinical pathways Updated clinical pathways Implemented clinical pathways Monitored clinical pathways Evaluated clinical pathways 	<p>Consultation on Tumour-Specific Pathways</p>	<p>ASCO Checklist</p>	<p>How does this work create transformational change for BC?</p> <ul style="list-style-type: none"> Identified clinical pathways to guide practice work and report back A greater proportion of patients receiving all elements of care including supportive care services Clear communication when health care teams do not have a patient in their care responsibility and what the next step is in their journey
<p>Pathology Engagement with Pathways</p>	<p>Goals for TD Clinical Care Pathways</p> <ul style="list-style-type: none"> Improve patient experience Reduce diagnostic turnaround time Improve diagnostic accuracy Reduce diagnostic costs 	<p>Conclusions</p> <ul style="list-style-type: none"> Greater patient visibility Regional monthly Authority variability Clinically relevant benchmarks Appropriateness of reference materials if requested to the pathway Related educational materials 	<p>Thank You!</p>

Transform Ideas to Action presented by Zu-hua Gao



BC Cancer Retreat
Presentation 2.pptx

Transform ideas to action

A goal without a plan is just a wish.
—Antoine de Saint-Exupéry

Moving from reactive zone to creative zone

The chart shows a positive correlation between value for the employee and value for the organization. 'Fruits' has the lowest value for both, while 'Innovations' has the highest. 'Innovate' and 'Suggestions' fall in between, with 'Suggestions' showing a slightly higher value for the organization than for the employee.

Select our priorities

The matrix plots 'Impact' (High/Low) against 'Urgency' (High/Low). The quadrants are: High Impact/High Urgency (red), High Impact/Low Urgency (yellow), Low Impact/High Urgency (blue), and Low Impact/Low Urgency (grey).

Develop an action plan

- What needs to be done?
- Who will be doing it?
- What resources do we need in order to get it done?
- When will be done?
- How do we monitor progress?
- How do we measure success?

Survey responses

- "To achieve the goal of being a world-leading cancer diagnosis and treatment department, the department requires tight synergy with relevant existing partner departments to bring sufficient number of medical staff as an organizational team across its large network of primary diagnosis (base hospitals, support & referral) and treatment (diagnosis, treatment, and follow-up) departments and enhance existing working relationship."
 - (1) The most needed KPI criteria to monitor the progress diagnosis of many BMO patients that receive genomic characterization that are not yet available in BC for some tumor types.
 - (2) The key factor for department staff to share their clinical information in shared genomic diagnosis BMO classification network.
 - (3) A robust digital platform.
 - (4) Promotes, in a timely manner, the technical expertise transfer for staff across technologies to each.