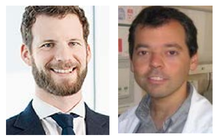
Réseau de cancérologie Rossy | Rossy Cancer Network

Streamlining the trajectory of care for lung cancer patients: a focus on diagnostic delays (molecular pathology), treatment delays (surgery, chemotherapy and radiotherapy) and end-of-life

RCN Lung Disease Site Group

LUNG DS CO-LEADS



Jonathan Spicer & Jason Agulnik

Support staff

Jida El Hajjar (Project Manager)
Alla'a Ali (Project Manager)
Sarita Benchimol (Facilitator)

OUR VISION is to create a collaborative group that will:

- Support each other in **clinical trial recruitment** by creating a Montreal-wide clinical research consortium to improve clinical trial awareness, reduce duplication of trials and enhance accrual. → first meeting planned January 2018
- **Standardize diagnosis procedures**, focusing on molecular pathology reflex testing and having clear indications for next gen sequencing and biobanking.
- Improve coordination of the lung cancer treatment trajectory **and decrease delays from the suspicion of lung cancer to treatment**.
- Quickly **assess quality** and the **effect of interventions** by maintaining a common clinical and biobanking database across the 3 sites.
- Review and submit research proposals as a group to ensure feasibility, true collaboration, improve funding success rates, and importantly **improve engagement and the success and sustainability of projects**.

2015 CQI Research – Jana Taylor
Texture Imaging: A novel technique to guide treatment and improve quality of life in patients with Non-Small Cell lung Carcinoma (NSCLC)

2016 CQI Research – Faiz Ahmad Khan
Lung cancer in Nunavik: how are we doing?

2016 CQI Research – Jonathan Spicer
Establishing QUALity CARE for patients with Malignant Pleural Mesothelioma (EQUAL CARE MPM)

2017 CQI recipient – Anne Gonzalez
PD-L1 testing of EBUS-TBNA samples acquired for diagnosis and staging of non-small cell lung cancer within the Rossy Cancer Network: feasibility, results, turnaround time and impact on patient management

STEERING COMMITTEE

The Lung steering, chaired by both co-leads will have met 4 times in 2017 (June, August, October, and December).

Name	Institution	Discipline
Dr. Carmela Pepe	JGH	Pulmonologist
Dr. Victor Cohen	JGH	Medical Oncologist
Dr. Lama Sakr	JGH	Pulmonologist
Dr. George Chong	JGH	Molecular Pathology
Dr. Hangjun Wang	JGH	Pathologist
Dr. Anne Gonzales	MUHC	Pulmonologist
Dr. Nicole Ezer	MUHC	Pulmonologist
Dr. Scott Owen	MUHC	Medical Oncologist
Dr. Sophie Camilleri	MUHC	Pathologist
Dr. Joan Zidulka	SMHC	Medical Oncologist
Jida El Hajjar	RCN	Project Manager
Sarita Benchimol	RCN	Facilitator

INDICATOR LG2: Molecular pathology turnaround time for EGFR testing

- Excessive delays for molecular pathology results can lead to treatment with cytotoxic chemotherapy in patients who may otherwise be eligible for targeted therapy. This increases toxicity and exposes patients to inferior cancer treatment (Lung Cancer Canada).
- The RCN Lung Group has observed a marked increase in delays for EGFR testing, ever since the lung cancer surgeries were centralized at the Montreal General Hospital, and EGFR testing centralized at the JGH.

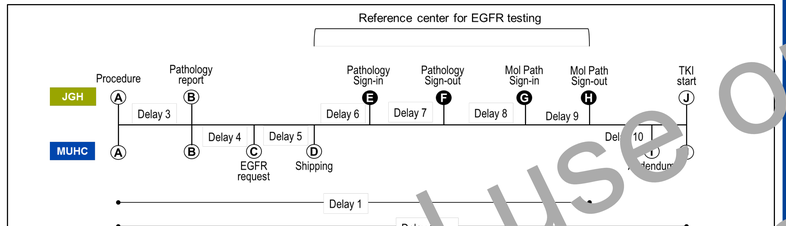


Fig 1: *Critical steps from procedure to start of appropriate targeted therapy for patients with NSCLC. The black circles represent steps done at the pathology and molecular pathology departments of the reference center for EGFR testing, respectively. Steps E and F involve a pathologist consult to mark tumor cell clusters and measure the tumour. Steps C, D and I are specific to MUHC only.*

Table 1: *Time from procedure to molecular pathology sign-out (Delay 1, A → H) by hospital.*

		N	Median (days)	Mean (days)	IQR (days)
2015	JGH	88	34	34	24-41
	MUHC	87	37	42	28-53
2016	JGH	51	21	25	18-25
	MUHC	154	32	37	27-44

- Patients treated at the JGH obtain an EGFR result significantly faster than at the MUHC.
- Since tracking and reporting the indicator results, efforts and improvement have been noted at both sites (2015 vs 2016).
  Not having reflex testing for EGFR is one factor that contributes to MUHC's delay when compared to JGH.

Table 2: *Time between the pathology report and request for EGFR testing for patients treated at the MUHC (B→C) in 2015.*

	Q1-Q3 2105	Q4 2015
N	63	24
Mean (days)	16	5.6

IMPROVEMENT EFFORT: In September 2015, Dr. Sophie Camilleri began pathologist-led request for EGFR testing for cases where advanced stage is suspected. As a result, the time between a patient's pathology report and request for EGFR testing was reduced from 16 days to **5.6 days** ($p<0.05$).

- Since it is not always possible for pathologists to identify stage 4 disease through a specimen sample, the lung group proposed to **implement reflex testing for all biopsies**, as these are more likely to represent advanced disease.
- An analysis of the number of lung biopsies submitted to the pathology department in one month and the absence of any biopsy specimens for early stage disease confirmed that the proposal to perform reflex testing for EGFR on all biopsies was feasible.
- As of **March 2017**, **reflex testing for EGFR was implemented at the MUHC for all specimens from patients with advance stage NSCLC (non-squamous histology), and for all biopsy specimens with eligible histology**. An algorithm for molecular testing was also developed with Drs Hangjun Wang, Sophie Camilleri and George Chong. The time from procedure to molecular pathology results will be re-evaluated one year post-implementation, as data becomes available.
- We thank Dr Gurdip Singh (pathology resident) for his implication in this quality initiative.

INDICATOR LG3: Wait time intervals from diagnosis to surgery (Part I) to adjuvant chemotherapy (Part II) in patients with resectable lung cancer

- Prolonged waiting times to definitive therapy affect patient's outcome, anxiety, and psychological status.
- After a suspicious imaging result, patients will usually have series of assessments until surgery. Depending on stage, adjuvant therapy may be given.

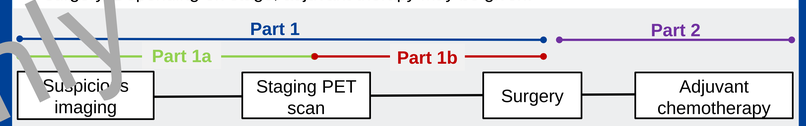


Fig 3: *Trajectory for early stage lung cancer patient*

Part 1: Data collected from July-Dec 2016 (N=112). Median wait times from suspicious imaging to surgery was 105 days (IQR: 77-152 days) (Fig 4). Excessive delays (> 6 months) were caused by patient hospitalizations and unrelated complications.

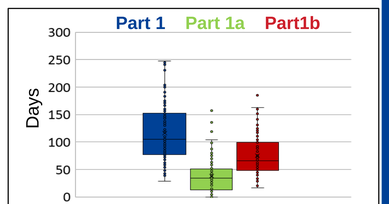


Fig 4: *Delays from suspicious imaging to staging PET to surgery for stage I and II lung cancer patients*

Part 2: Data collected from stage II lung cancer patients receiving chemotherapy in RCN partner hospital. 45 patients had complete clinical information and were included in the analysis. Median time was 70 days (IQR: 54-86 days) (Fig 5). Although more cases should be evaluated, preliminary data show that delay from surgery to adjuvant chemotherapy is shorter than the Cancer Care Ontario target, which is at 120 days.

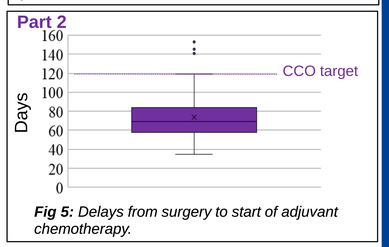
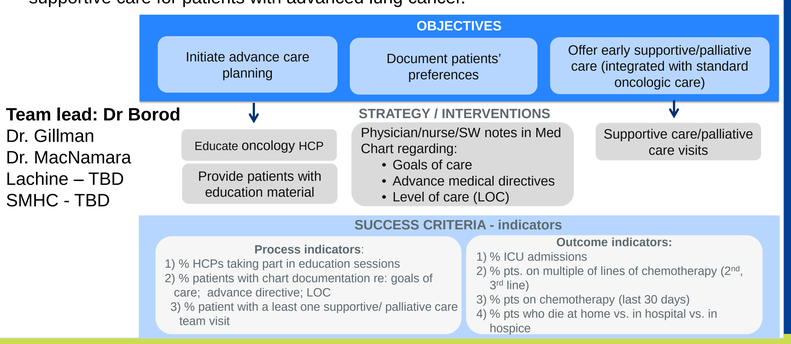


Fig 5: *Delays from surgery to start of adjuvant chemotherapy.*

QI Project: Early supportive/palliative care for metastatic lung cancer patients

- Studies have shown that stage IV lung cancer patients referred earlier to palliative care have better prognosis.
- The Supportive Care group with the assistance of the DS lung leads, aim to improve supportive care for patients with advanced lung cancer.



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