

COAST Project

Improving Lung Cancer Care in BC

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Introduction

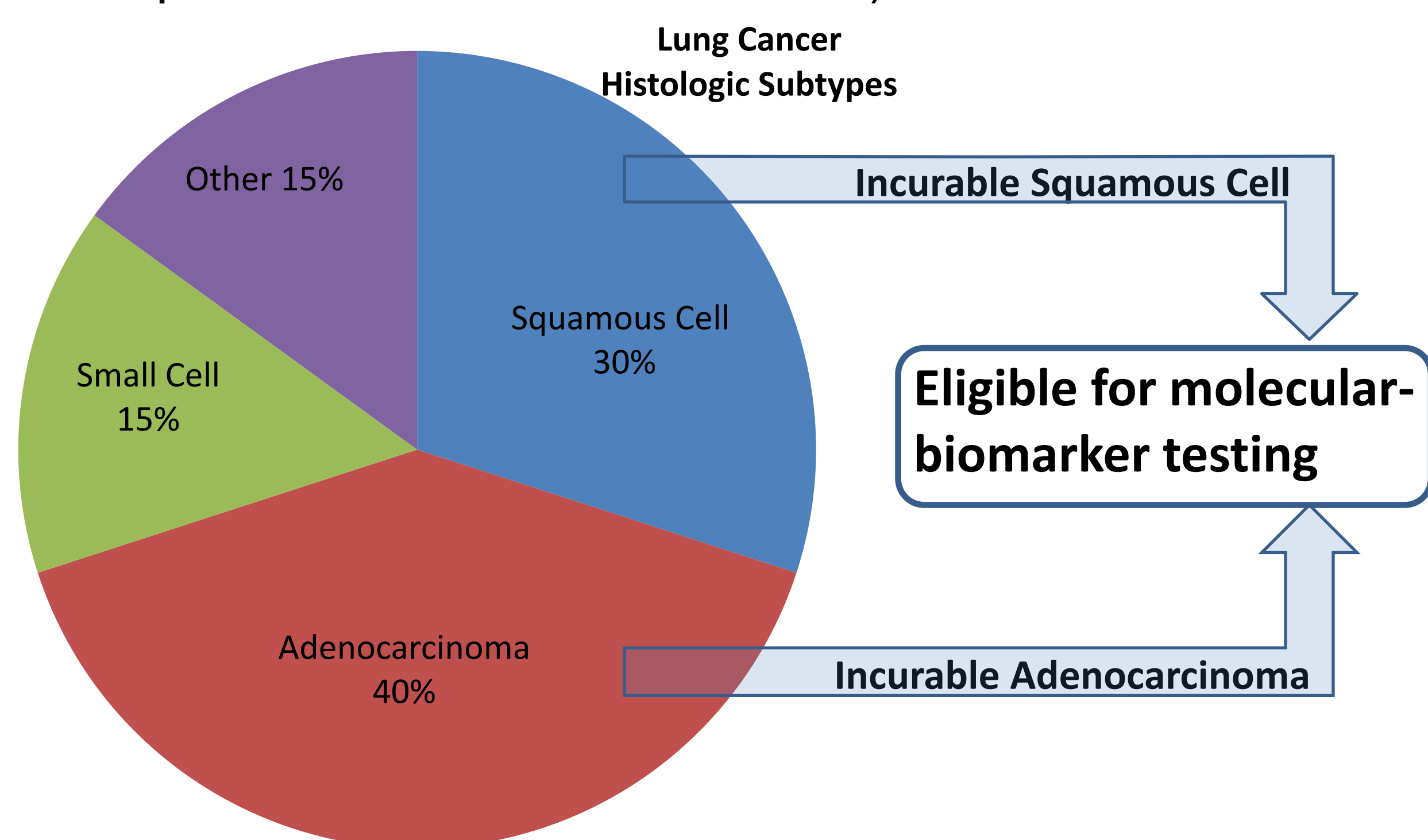
The COAST Project (Continuous Oncopanel & ALK Status Tracking) is a multi-phase, interdisciplinary endeavour to improve molecular-biomarker testing turnaround times for patients with non-small cell lung cancer. Testing is done at centralized pathology and genetics labs located at BC Cancer Vancouver (BCCV).

Aim

To ensure that 80% of pathology specimens for patients with advanced (incurable) non-small cell lung cancer (NSCLC) are received at BCCV pathology lab for molecular-biomarker testing within 3 business days by September 2020.

Background

- Lung cancer is the leading cause of cancer-related death worldwide.¹
- British Columbia ~2,400 deaths/year
~3,600 new diagnoses/year²
- Non-Small Cell Lung Cancer (NSCLC) represents ~ 85% lung cancer diagnoses (adenocarcinoma 40% squamous cell 30% other 15%).³



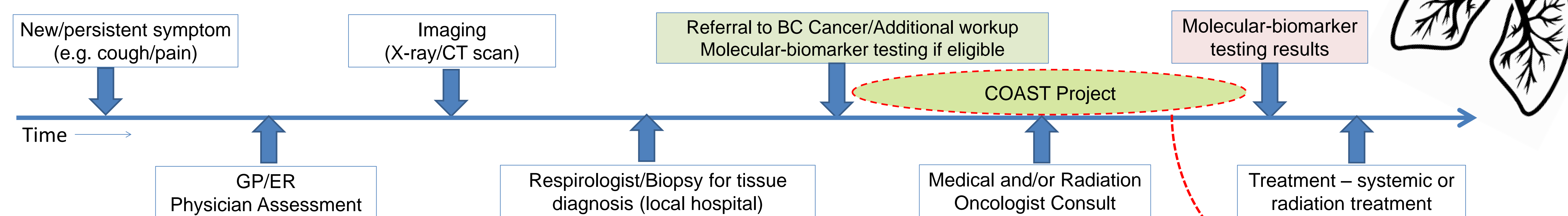
- 40% patients present with advanced (incurable) disease; 5-year survival rate is <5% and median survival 6-8 months with no systemic therapy.³
- Advanced NSCLC patients are eligible for molecular-biomarker testing which can:
 - Identify prognostic/predictive targetable mutations
 - Diversify systemic treatment options
 - Improve survival outcomes and quality of life

Problem

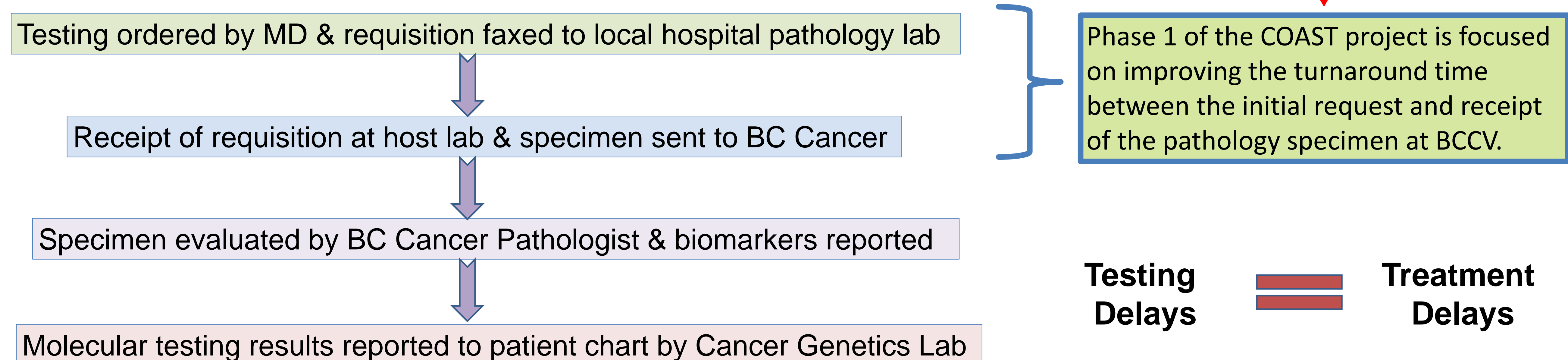
- Turnaround times between request and receipt of pathology specimens for molecular-biomarker testing at BCCV exceed the current international expert proposed standard of 3 working days.⁴

Why? Delays are multifactorial: failed/lost faxes, increased lab workload, testing requires coordination between 4 different departments, no clear system to track or communicate status of testing in progress.

Typical Patient Events from Diagnosis to Treatment at BCCV



Overview: Molecular – Biomarker Testing Process



Methods

We conducted a retrospective chart review of new patients (n=143) with advanced NSCLC referred to BCCV and triaged by the lung Nurse Navigator between June 2018 – May 2019 to elicit the current interdepartmental turnaround times for molecular-biomarker testing.

Molecular-biomarker test types ordered:

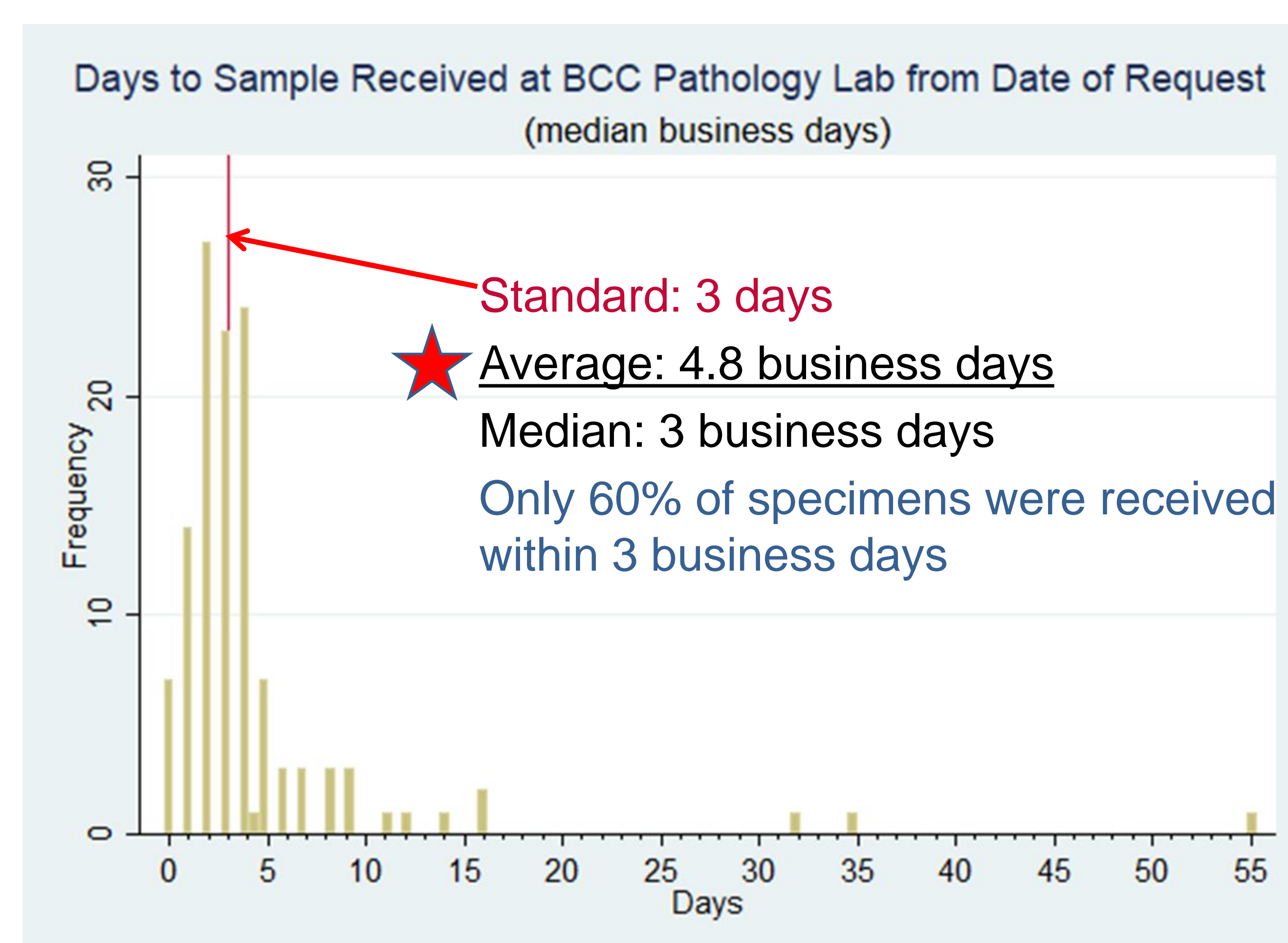
- Oncopanel - 117 (81%)
- PD-L1 (squamous cell) – 22 (15%)
- EGFR hotspot only – 4 (3%)

Originating host hospital pathology labs in decreasing order of frequency: VGH (Vancouver General Hospital, SPH (St. Paul's Hospital), BCCV, other.

Strategy For Change

From Nov. 2019 to Jan. 2020, we engaged with key stakeholders within BCCV and VGH pathology laboratories to complete process mapping of molecular-biomarker workflow and specimen handling, and generate change ideas.

Current State Analysis



PDSA Cycle # 1

Our first PDSA (Plan, Do, Study, Act) cycle was implemented on January 20, 2020. Change idea #1: to test if emailing molecular-biomarker requisitions to VGH impacts the turnaround time between request and receipt of pathology specimens. Data collection in progress.

Lessons Learned & Next Steps

Providing regular project updates to members of our multi-disciplinary team and stakeholders has been key in highlighting challenges, securing inter-departmental support, and generating buy-in to participate in this project. We plan to engage with other local pathology labs to discuss possible change ideas and conduct additional PDSA cycles. Subsequent phases of the project will target turnaround time improvements within BCCV pathology/cancer genetics labs and development of a transparent system to communicate the status of in-progress molecular-biomarker testing requests.