DCCM COVID-19 Town Hall

April 22th, 2020

Welcome/Ground Rules

- Welcome
- Webinar Format
  - Host and panelists
  - Audience participation/Chat

Agenda

- COVID-19 Dashboard
- Provincial CCSCN Update – Provincial Webinar
- “Just in Time” Emerging COVID literature
- COVID-19 Phenotypes and approaches
- Questions

COVID-19 Dashboard

Dan Niven

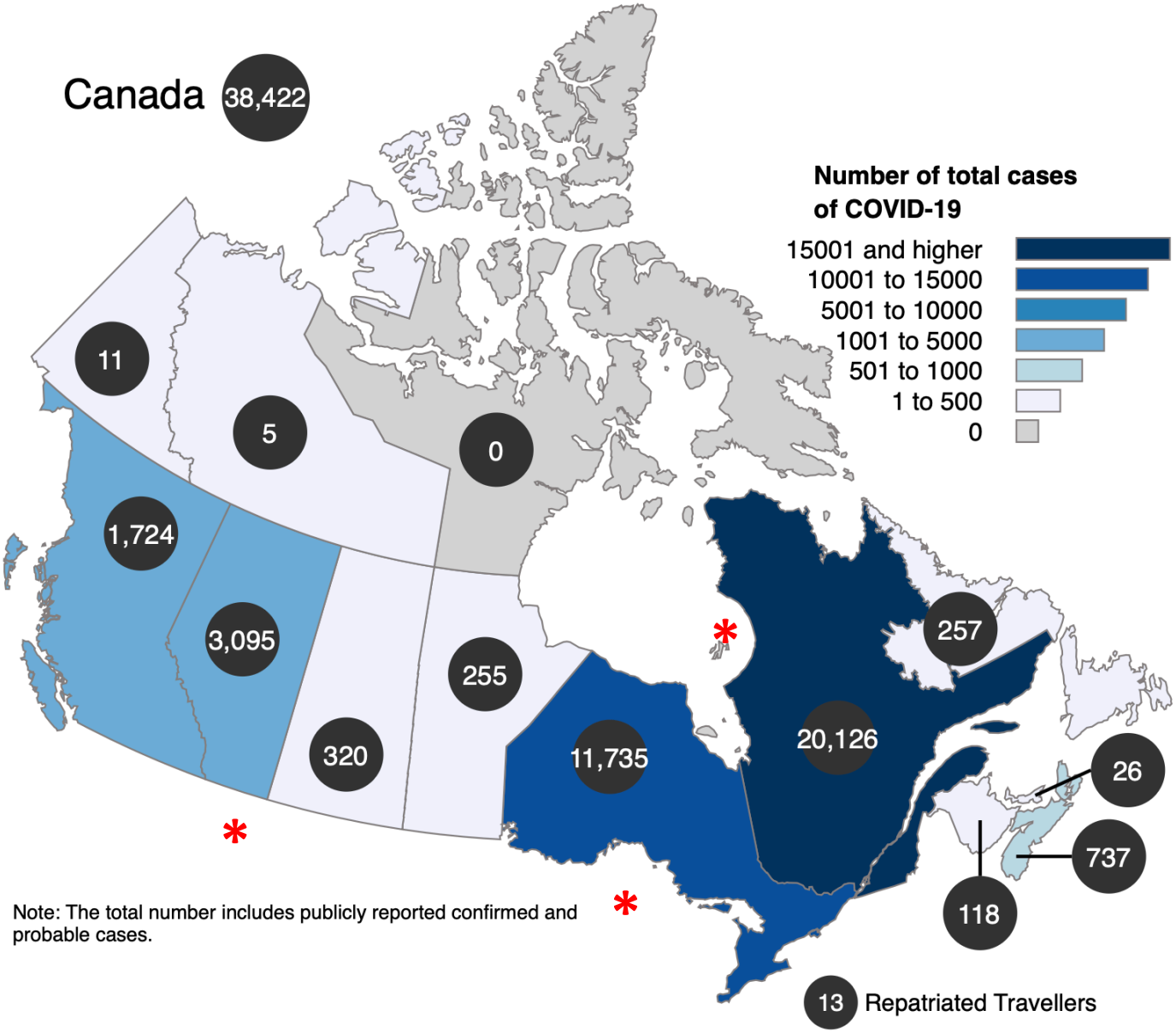
Sources of Information up to April 14:

https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html#a1

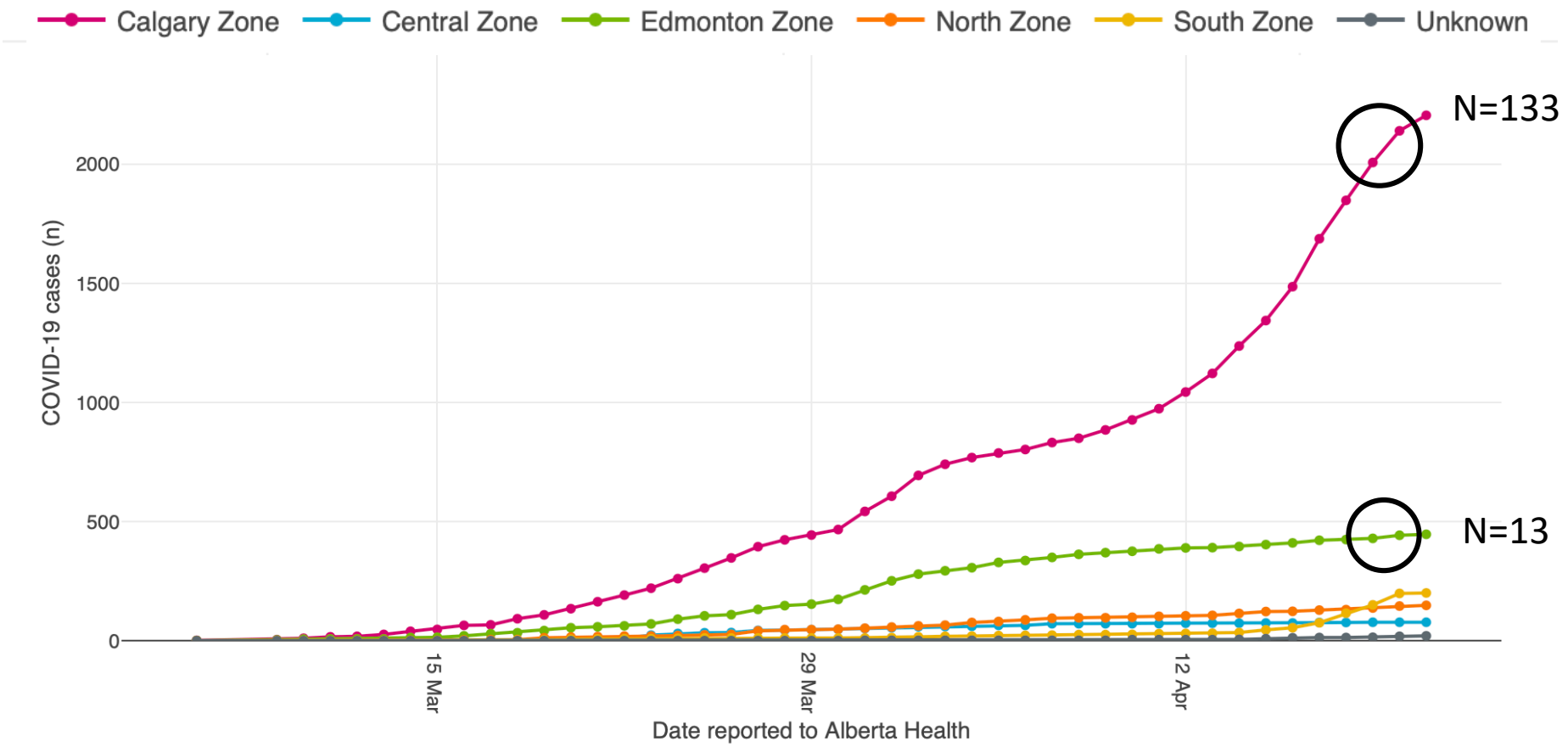
https://www.alberta.ca/covid-19-alberta-data.aspx

https://www.alberta.ca/assets/documents/covid-19-case-modelling-projection.pdf

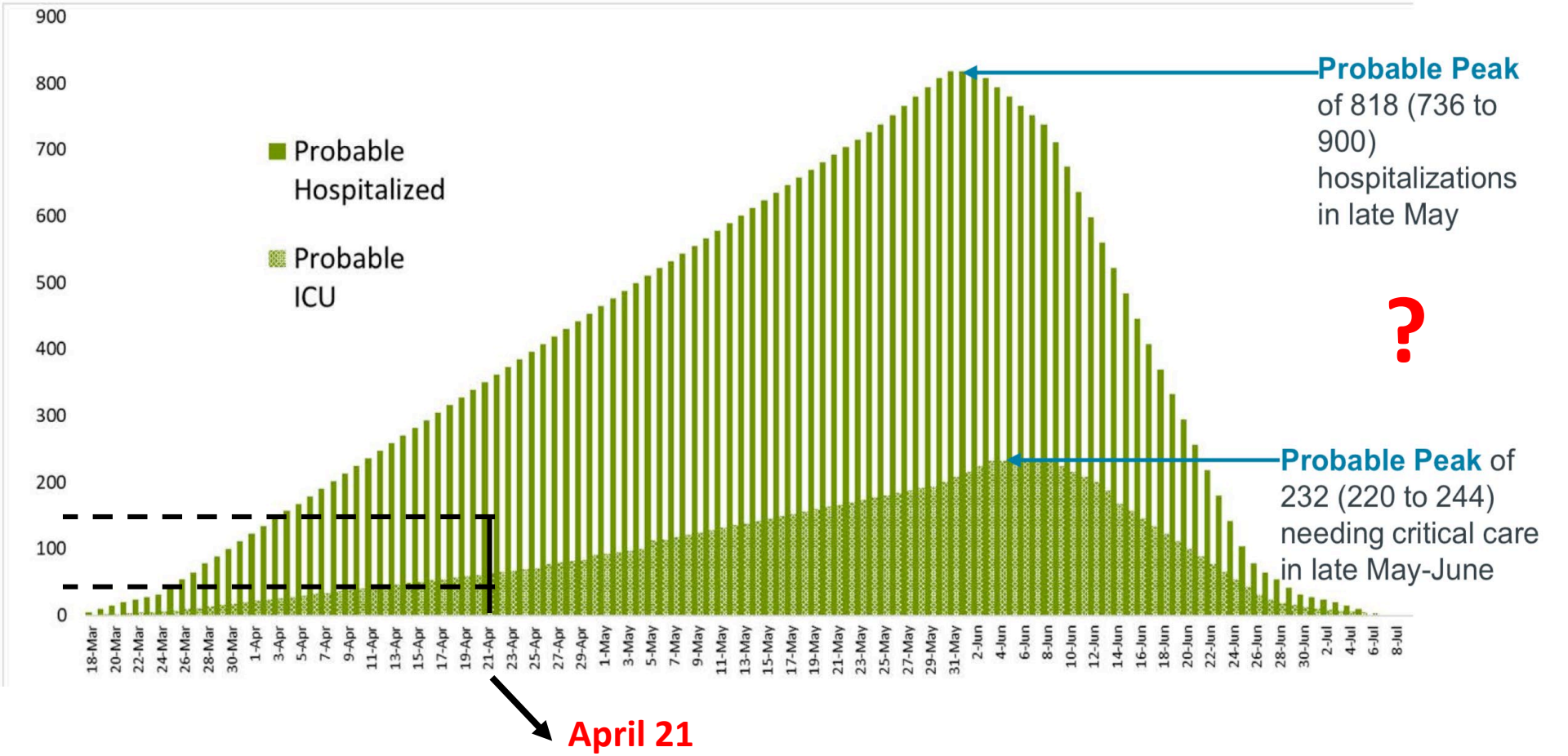
APRIL 21


Canada 38,422
Number of total cases of COVID-19
15001 and higher
10001 to 15000
5001 to 10000
1001 to 5000
501 to 1000
1 to 500
0
11
5
0
1,724
3,095
320
255
11,735
257
20,126
26
737
118
*
*
*
Note: The total number includes publicly reported confirmed and probable cases.
13 Repatriated Travellers

Alberta April 21 – 3,095 Cases



April 21 Data Mapped to Probable Scenario Model



Critical Care SCN

COVID Update

Critical Care Strategic Clinical Network.

Provincial Webinar

- **Date**: Thursday April 23rd
- **Time**: 2:30 -3:30
- Zoom – invitation sent via email last week
- Registration: https://albertahealthservices.zoom.us/webinar/register/WN_d-D5j_qCRtSRJSZtXacXFQ

COVID-19 Critical Care Literature Update

Literature published up to April 10, 2020

Dan Niven and Chip Doig

ST-Segment Elevation in COVID-19

- **Yes, we are presenting this again…there's new data intensivists need to be aware of**

- **Reminder of local experience**
  - **PLC ICU**
  - **3 COVID-19 admissions experienced ST-segment elevation (STE)** – all male > 50 years of age with comorbidities…**All 3 with died**

CORRESPONDENCE

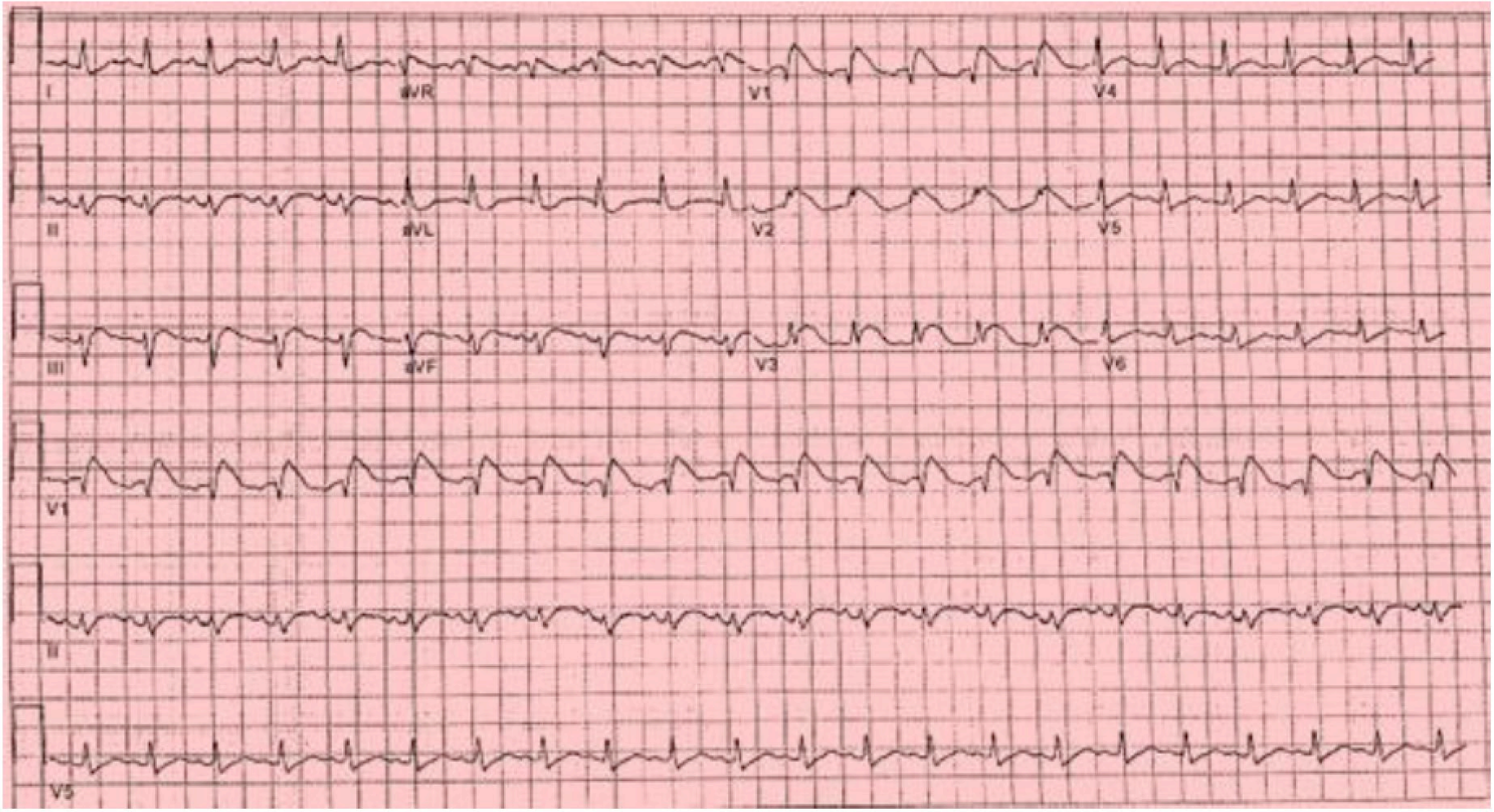
ST-Segment Elevation in Patients with Covid-19 — A Case Series

- **18 patients** with COVID-19 and **ST segment elevation**
- Admitted to one of 6 hospitals in NYC
- Median age 63; 15/18 (83%) male sex
- N = 12 intubated; n = 7 had shock

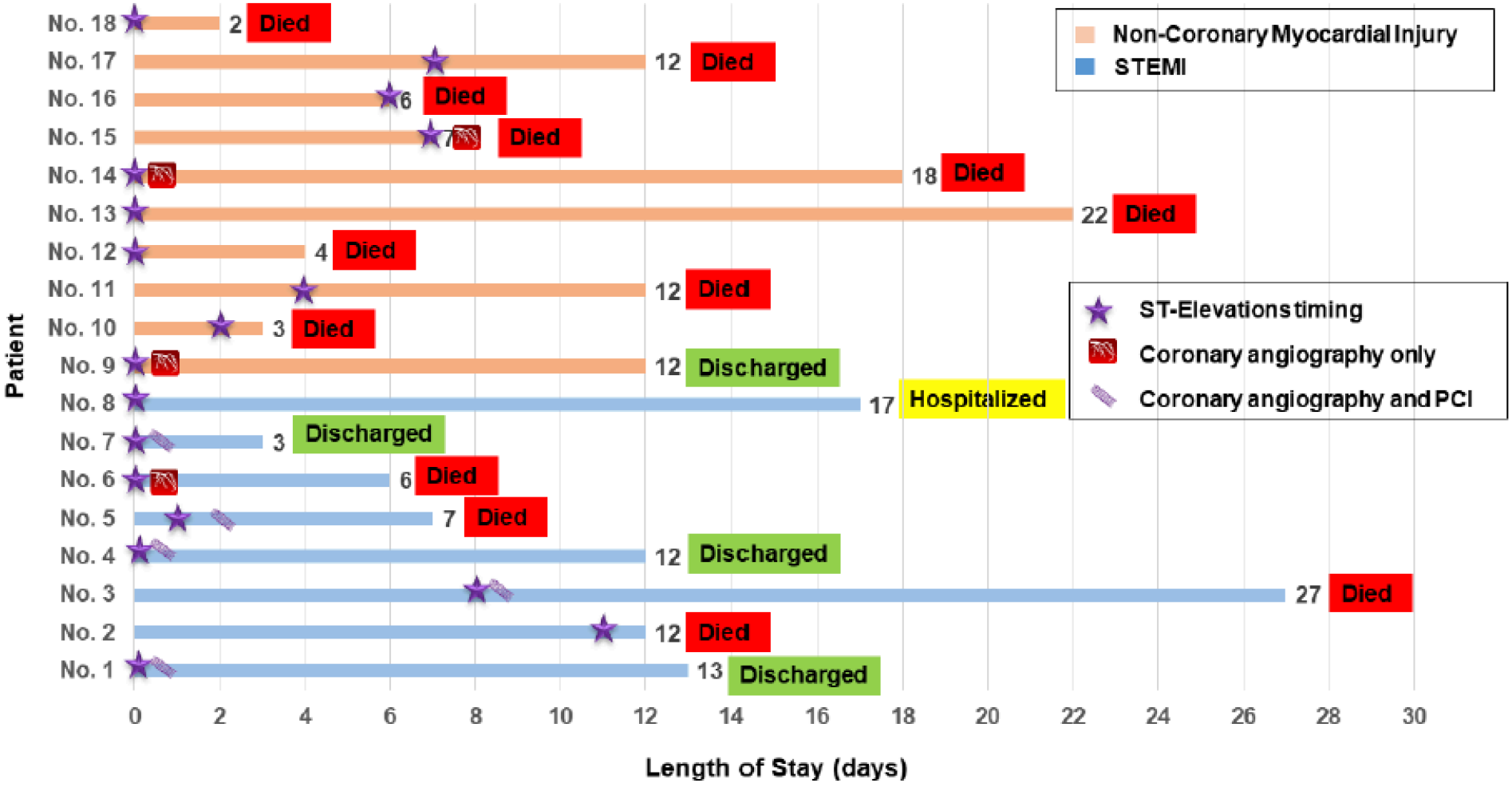
- **N = 14 (78%) focal ST segment elevation**

Yatskar et al. 2020 NEJM; doi: 10.1056/NEJMc2009020

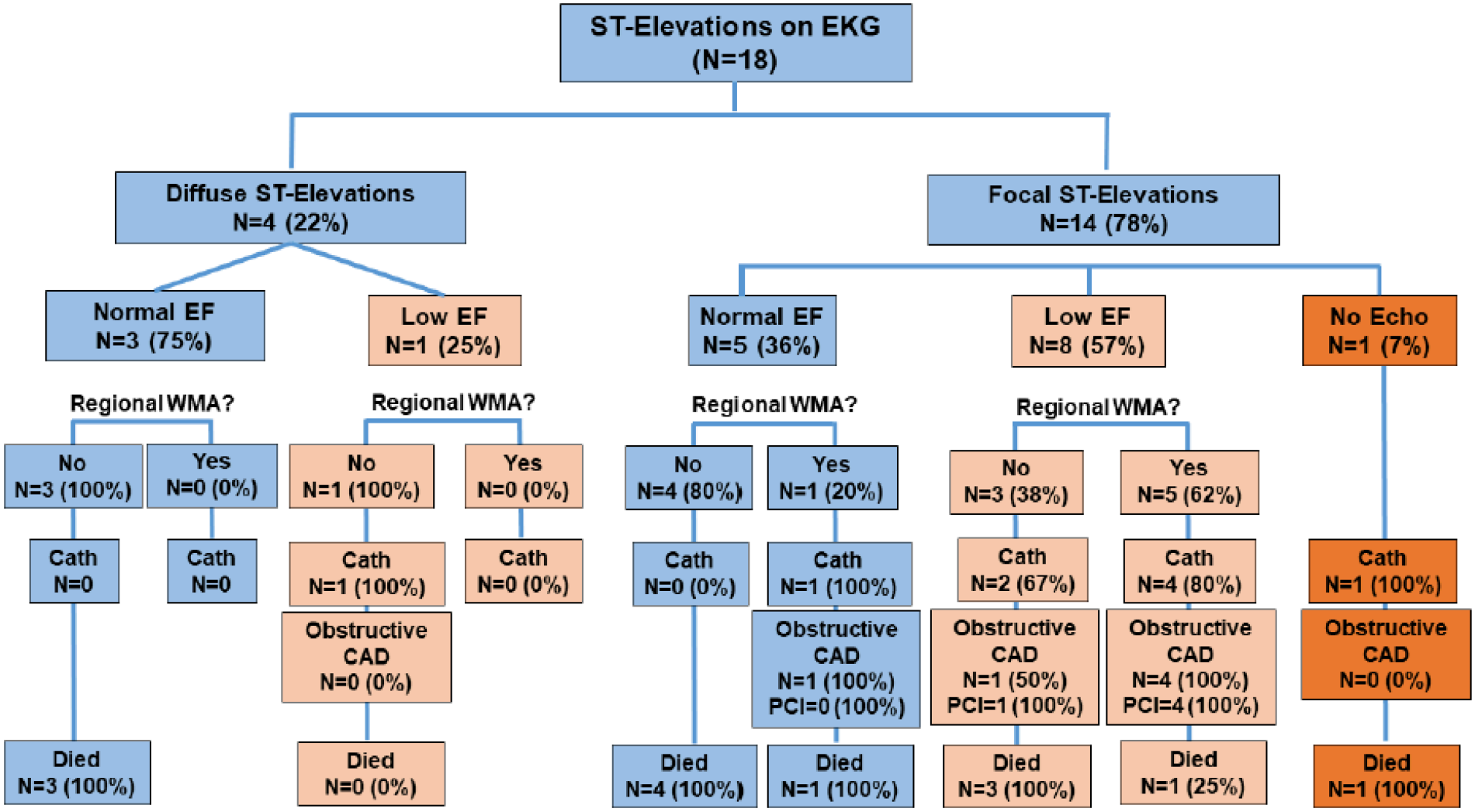
Patient #16



Yatskar et al. 2020 NEJM; doi: 10.1056/NEJMc2009020



Yatskar et al. 2020 NEJM; doi: 10.1056/NEJMc2009020



Normal EF: 8/8 died (100%)

Low EF: 4/9 died (44%)

Yatskar et al. 2020 NEJM; doi: 10.1056/NEJMc2009020

Implications of ST-Segment Elevation in COVID-19

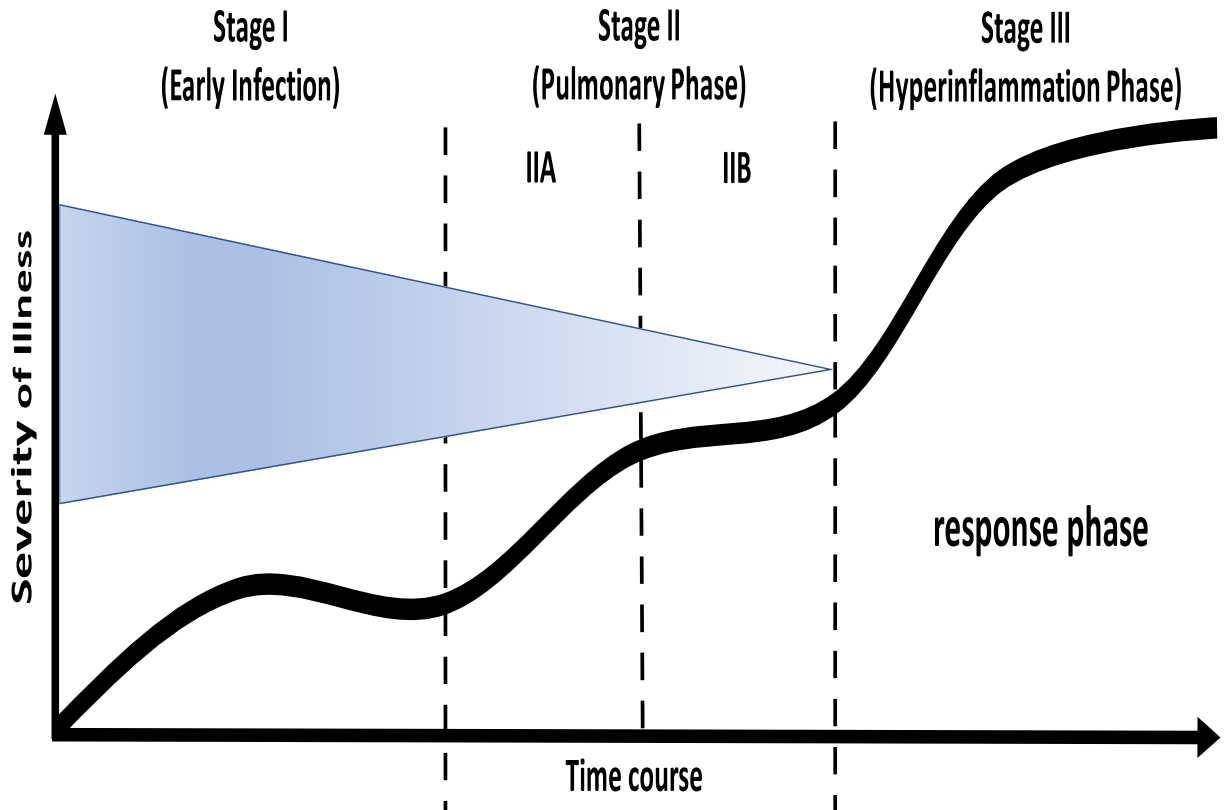
- Mechanism of STE in COVID-19 not clear, but not an uncommon complication esp. in severe illness

- **Focal STE is most common observation**
  - Traditional STEMI vs noncoronary myocardial injury

- **HIGH MORTALITY!**...13/18 died (**72%**)
  - Normal EF NOT protective – all 8 died…

COVID-19 Phenotypes and Proning

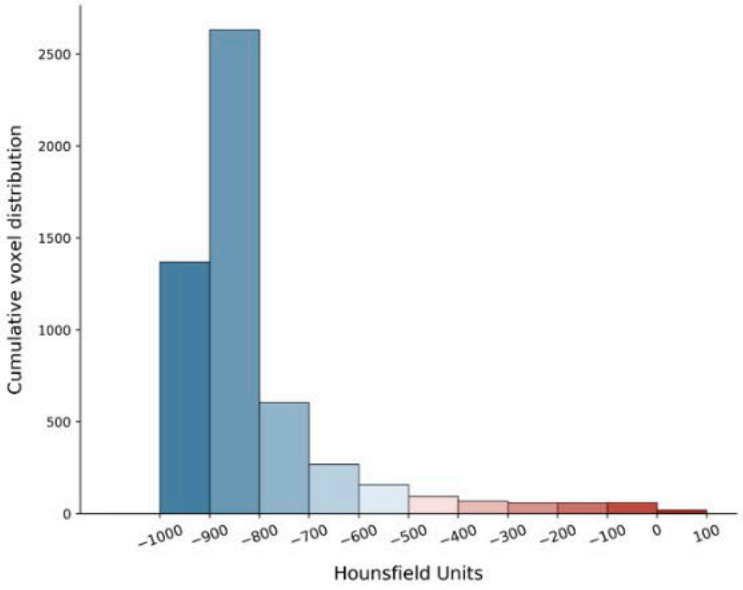
Jonathan Gaudet and Ken Parhar



Clinical Symptoms	Mild constitutional symptoms Fever >99.6˚F Dry Cough, diarrhea, headache	Shortness of Breath Hypoxia (PaO2/FiO2≤300mmHg)	ARDS SIRS/Shock Cardiac Failure
Clinical Signs	Lymphopenia, increased prothrombin time, increased D-Dimer and LDH (mild)	Abnormal chest imaging Transaminitis Low-normal procalcitonin	Elevated inflammatory markers (CRP, LDH, IL-6, D-dimer, ferritin) Troponin, NT-proBNP elevation
Potential Therapies	Remdesivir, chloroquine, hydroxychloroquine, convalescent plasma transfusions		
	Reduce immunosuppression	Corticosteroids, human immunoglobulin, IL-6 inhibitors, IL-2 inhibitors, JAK inhibitors	

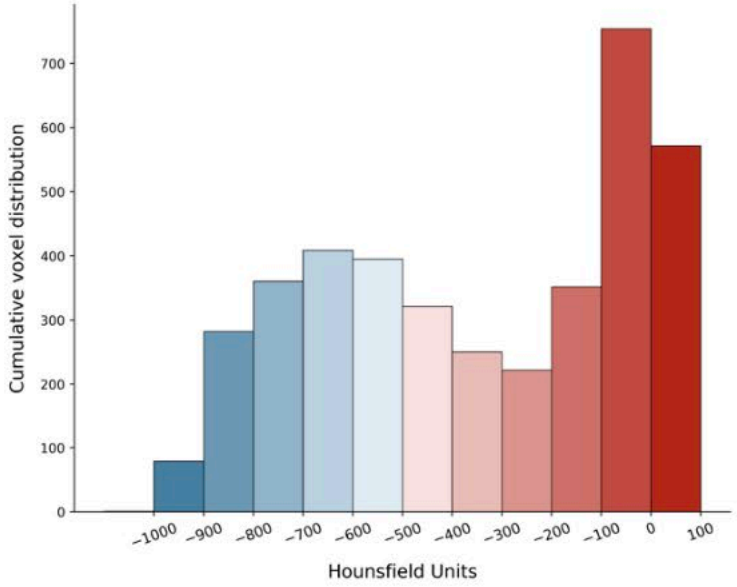
A

PaO_2/FiO_2
95 mmHg



B

PaO_2/FiO_2
84 mmHg

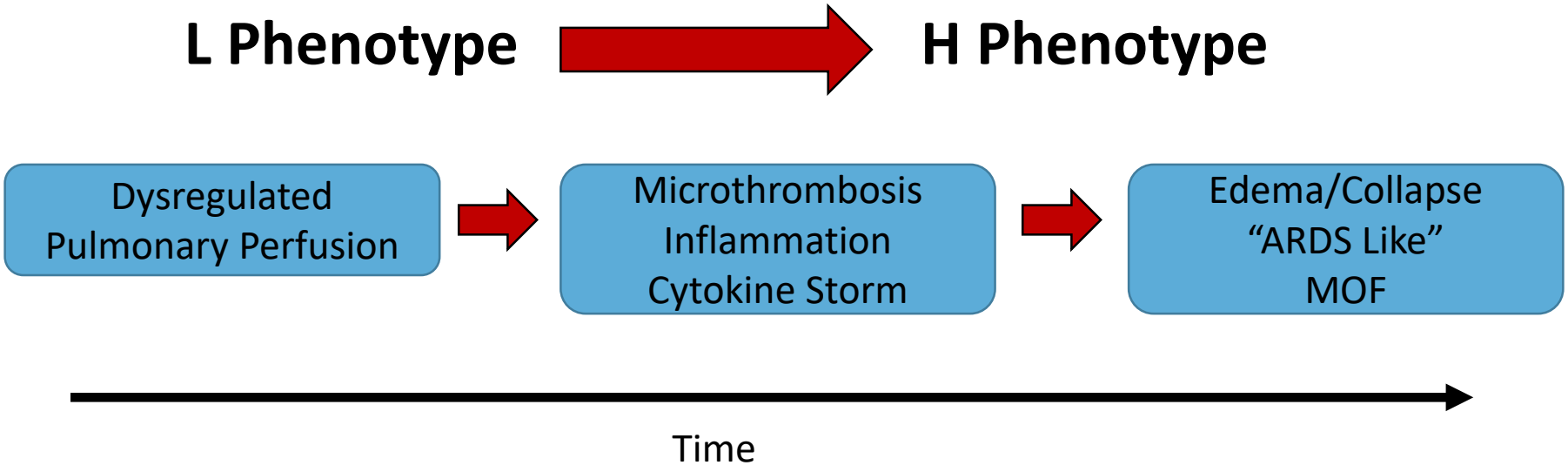


Gattinoni L. et al. *Intensive Care Medicine 2020* DOI: 10.1007/s00134-020-06033-2

COVID-19 Phenotypes

- Low Elastance
- Low V/Q
- Low recruitability
- Limited “PEEP response”

- High Lung Elastance
- Higher Recruitability
- High R to L Shunt
- Higher “PEEP Response”



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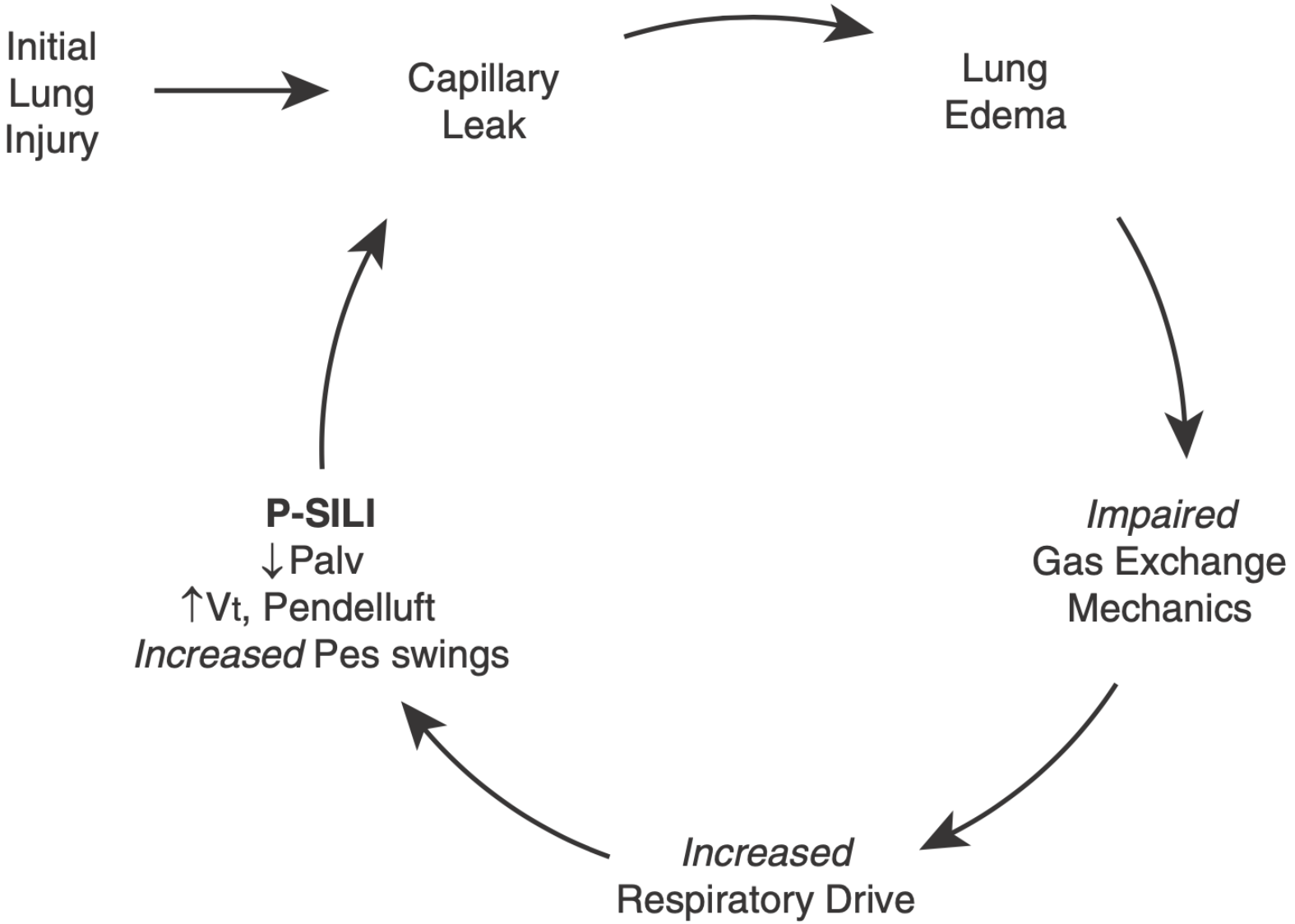

Brochard L. et al. *Am J Resp Crit Care Med 2017; 195(4): 438-42.*

Implications of COVID Phenotypes

- Hypothesis
- Spectrum of disease exists
- Evolution over time
- Individualized care:
  - Understand patient physiology
  - Clinical trajectory important
  - Not a “one-size-fits-all” approach

Upcoming Town Halls…

- What do you want to learn next?
  - Autopsy case series
- What are the emerging issues we need to address as a Department?
- Send ideas and thoughts to:
  - Jon Gaudet, Dan Niven, Chip Doig, Amanda Roze

Care for all patients

We aim to provide all patients

with the care they need

Safety for all staff

We aim to protect all team members

from SARS-CoV-2