#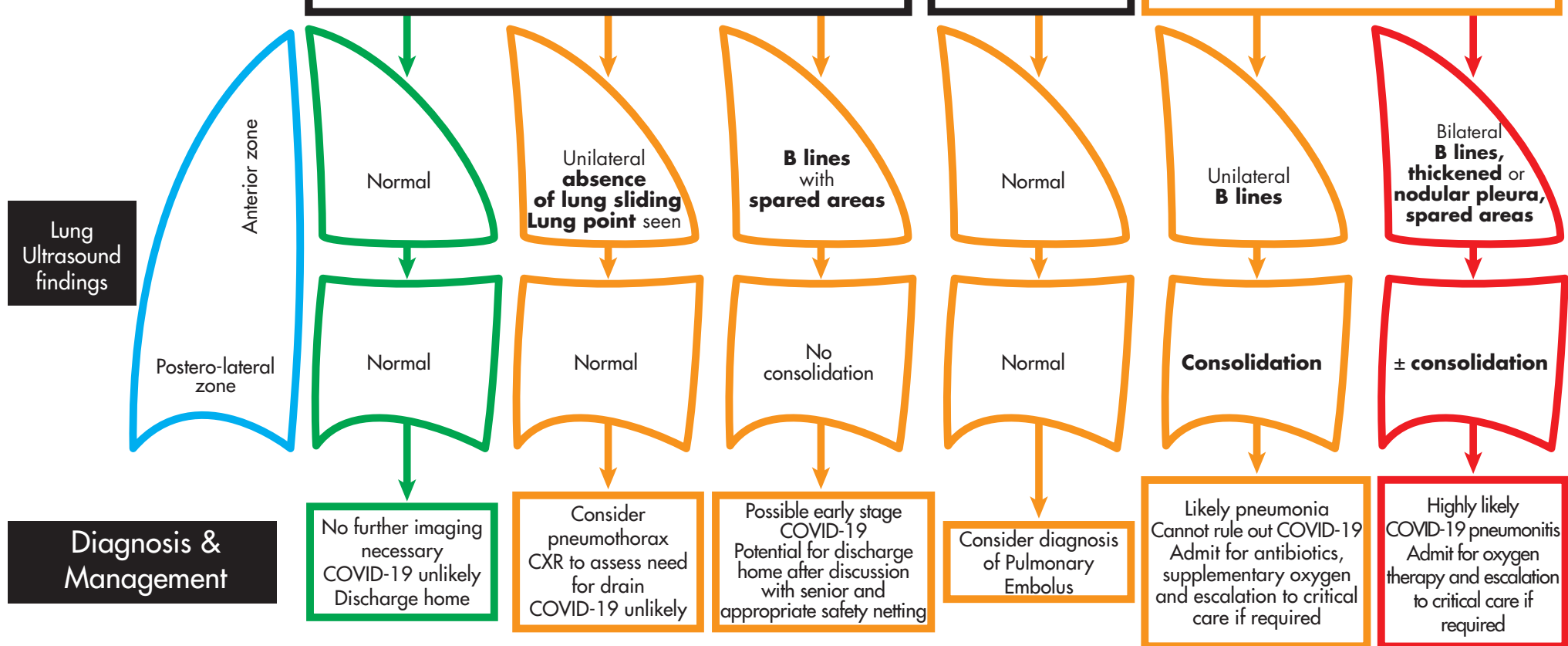 Lung ultrasound decision tree for newly presenting patients with suspected COVID-19 and no significant past medical history

References:
1. Lichtenstein DA, Mezière GA. Relevance of lung ultrasound in the diagnosis of acute respiratory failure the BLUE protocol. Chest 2008;
2. Huang Y, Liu T, Zhang Y, et al. A preliminary study on the ultrasonic manifestations of peripulmonary lesions of non-critical novel coronavirus pneumonia (COVID-19). Soc Sci Res New 2020;
3. Peng QY, Wang XT, Zhang LN. Findings of lung ultrasonography of novel corona virus pneumonia during the 2019-2020 epidemic. Intensive Care Med 2020;.

Both lungs should be scanned using a total of at least 6 zones

Patient with shortness of breath / cough / fever
No significant past medical history and satisfies triage criteria for full escalation

Oxygen saturations ≥94% on minimal exertion

Wells score ≥2

Oxygen saturations ≤94% on minimal exertion

Lung Ultrasound findings

Anterior zone

Postero-lateral zone

Diagnosis & Management

Anterior zone	Normal	Unilateral **absence of lung sliding** **Lung point** seen	**B lines** with **spared areas**	Normal	Unilateral **B lines**	Bilateral **B lines, thickened** or **nodular pleura, spared areas**
Postero-lateral zone	Normal	Normal	No consolidation	Normal	**Consolidation**	± **consolidation**

| No further imaging necessary COVID-19 unlikely Discharge home | Consider pneumothorax CXR to assess need for drain COVID-19 unlikely | Possible early stage COVID-19 Potential for discharge home after discussion with senior and appropriate safety netting | Consider diagnosis of Pulmonary Embolus | Likely pneumonia Cannot rule out COVID-19 Admit for antibiotics, supplementary oxygen and escalation to critical care if required | Highly likely COVID-19 pneumonitis Admit for oxygen therapy and escalation to critical care if required |

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