Royal Brompton **NHS**
& Harefield
NHS Foundation Trust

Lung Ultrasound (LUS) for COVID-19 patients in critical care areas
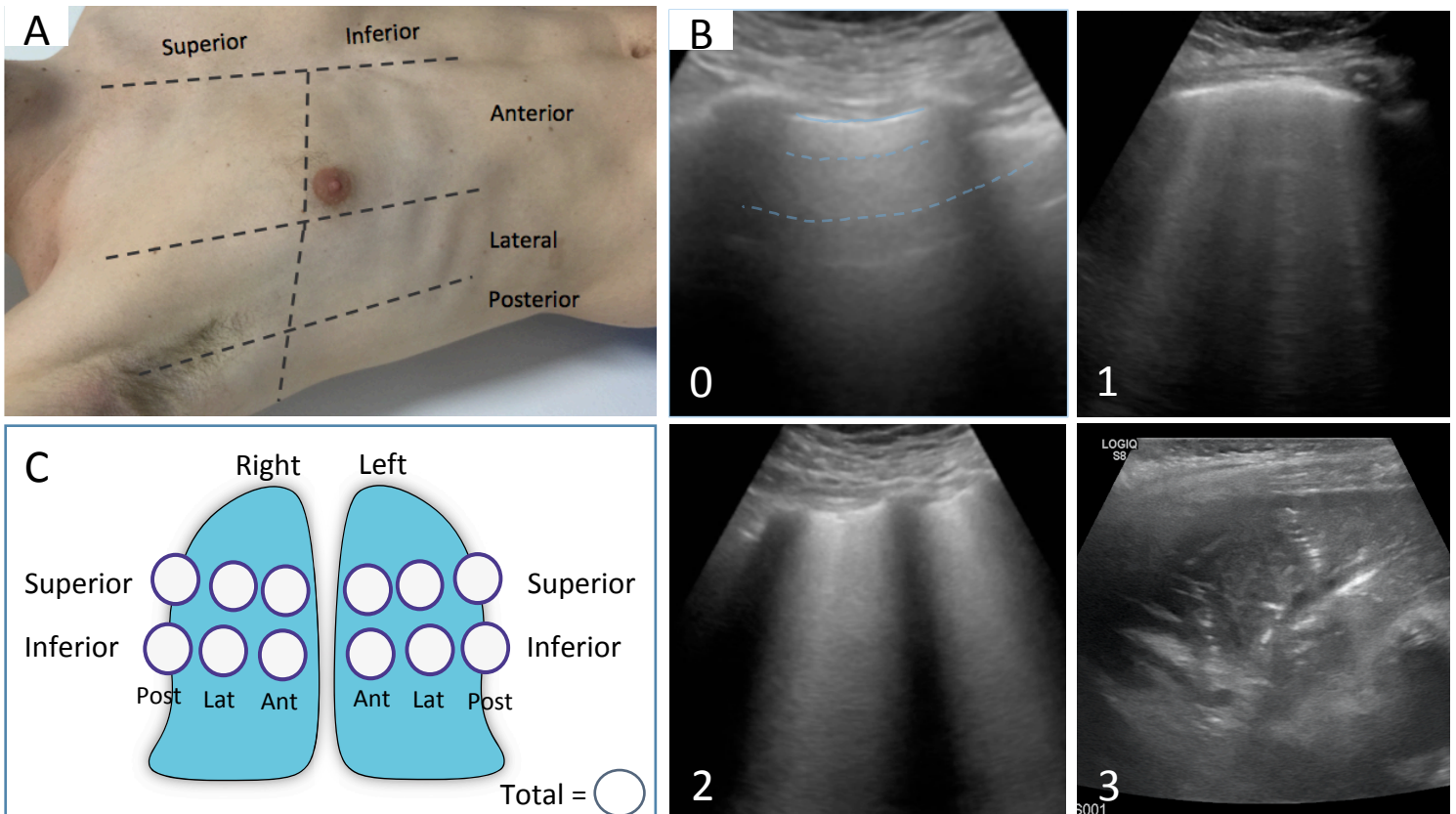
A lifetime of specialist care

Lung ultrasound should be considered as a daily monitoring tool in all patients in critical care and used in conjunction with and as an adjunct to aid decision making with: Clinical parameters / X-ray / CT imaging

LUS protocol (Identify: diaphragm / pleura) adjust depth, gain and focus

A — Superior / Inferior / Anterior / Lateral / Posterior

B — 0, 1, 2, 3

C

Right   Left

Superior   Superior
Inferior   Inferior

Post Lat Ant   Ant Lat Post

Total = ◯

Adapted from Bouhemad et al. (2015) Ultrasound for "Lung Monitoring" of Ventilated Patients. Anesthesiology 2 2015, Vol.122, 437-447.
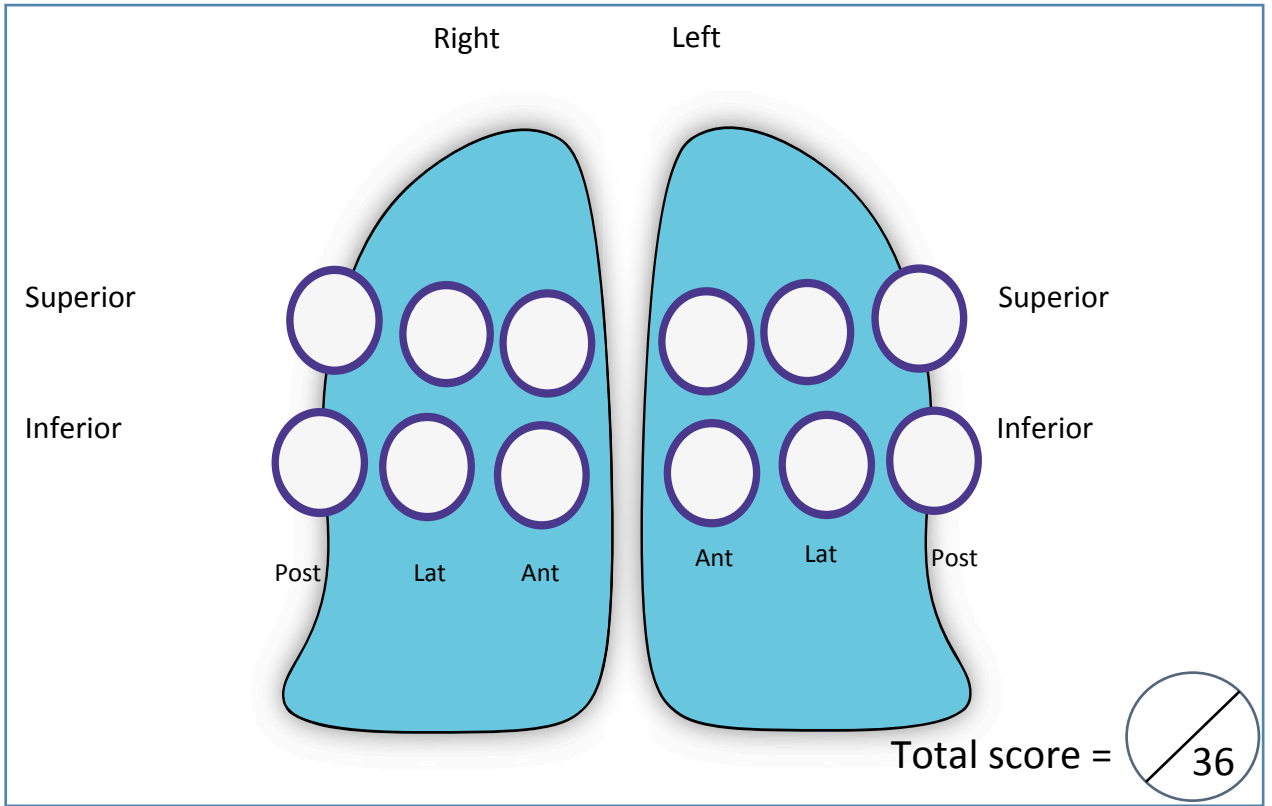
A - Acquire images in 6 regions on the right and left
        All rib spaces in a segment should be examined
        The highest score in each quadrant should be recorded
B – Images in each section are scored 0 – 3
        0 - Normal (Lung sliding and A lines present)
        1 - Well separated B lines
        2 - Coalescent B lines
        3 - Consolidation
C- Scores are documented for each quadrant using the diagram (n/36) and recorded on a daily basis

Other features:
Pneumothorax:
No lung sliding / lung point (interface between sliding and non-sliding pleural contour) – CXR indicated

Pleural Effusion:
Anechoic or Hypoechoic region between pleural layers. Collapsed lung may be seen floating

Consider looking at changes in score at a certain relevant / accessible region in response to recruitment / PEEP/ proning

If in doubt or clinical concern ask for help from an experienced operator and consider ordering an urgent CXR

Control

Right   Left

Superior

Inferior

Post   Lat   Ant   Ant   Lat   Post

Superior

Inferior

Total score = /36

Post PEEP increase

Right   Left

Superior

Inferior

Post   Lat   Ant   Ant   Lat   Post

Superior

Inferior

Total score = /36