

CONTOURING ATLAS FOR WHOLE LUNG IRRADIATION

Figure 1. Evaluate the diagnostic CT scan to determine the anatomic location of the inferior pleural extent. The inferior pleural extent includes the costophrenic angles, which could extend to the level of L2 – L4. As such, it is required that the inferior lung sulcus is identified and defined by CT at full inspiration to determine the inferior border of the lung field. For this patient, the lung sulcus extends inferiorly to T12 / level of kidney based on sagittal view of the diagnostic CT scan.



Figure 2. The bilateral lungs and pleural space are contoured on the simulation scan as the clinical target volume (CTV4; pink). Also, fuse the diagnostic CT chest in full inspiration with the planning CT scan to assist with contouring the most inferior sulcus, included in CTV4. ITV encompasses respiratory motion either with free-breathing based on all the phases of a 4D scan or with breath hold using 2-3 breath hold scans. PTV4 is a 0.5-1 cm geometric expansion from ITV4 to account for day-to-day set-up uncertainty.

