Medical Image of the Week: Dual Primary Lung Cancers

Figure 1A. Chest x-ray showing mass-like consolidation of the **right upper lobe**.

Figure 1B. Thoracic CT showing abrupt cutoff of the apical and posterior segments of the right **upper** lobe bronchus and encasement of the anterior segment.

Figure 1C. Endobronchial mass with obstruction of the right **upper** lobe bronchus.

Figure 1D. H&E stain of **right upper lobe mass** consistent with small cell lung cancer.

Figure 1E. Positive CD56 staining of the right upper lobe mass.

Figure 1F. Positive chromogranin staining of the right upper lobe mass.

Figure 2A. Thoracic CT showing second lesion (red arrow) at the **right lower lobe lateral segment bifurcation**.

Figure 2B. Endobronchial mass at the lateral segment of the right **lower** lobe.

Figure 2C. H&E stain of right **lower** lobe mass consistent with squamous cell carcinoma.

A 73 year old man was admitted to the hospital with complaints of right upper quadrant pain and was found to have consolidation in the right upper lobe (Figure 1A). He was started on antibiotics but failed to have any improvement. A chest CT scan showed a mass-like consolidation with possible mass at the right upper lobe bronchus (Figure 1B). Pulmonary was consulted for bronchoscopy which revealed an endobronchial lesion at the right upper lobe takeoff (Figure 1C) as well as a second endobronchial lesion at the right lower lobe (Figures 2A and 2B). Pathology of the right **upper** lobe lesion was consistent with small cell carcinoma (Figures 1D-F) while histology for the right **lower** lobe lesion showed squamous cell carcinoma (Figure 2C). CD56 and chromogranin are important stains used to diagnose small cell lung cancer (1). Data is scarce regarding “synchronous” primary tumors. Though not applicable to our patient, it is estimated that the incidence of dual primary lung cancers is around 16 percent in a patient whose first tumor was surgically resected (2). Our patient opted for hospice care in light of multiple metastases to the brain and abdomen.

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2. Johnson BE. Second lung cancers in patients after treatment for an initial lung cancer. J Natl Cancer Inst. 1998;90(18):1335-45. [\[CrossRef\]](#) [\[PubMed\]](#)