

A Cadaveric Case of Metastatic Pulmonary Adenocarcinoma and Subsequent Neuroendocrine Tumor Findings

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Gross cadaveric dissection as part of first year medical school curriculum can reveal an array of abnormalities and pathologies with the potential to enhance medical education. During routine, cadaveric dissection in first year anatomy lab, on a 73-year-old male, a suspected primary lung adenocarcinoma with metastasis was observed. Histopathological evaluation was performed to characterize and evaluate the potential pattern of metastasis. Tissue samples were taken from grossly lesioned structures in the donor, fixed in formalin, embedded in paraffin, and sectioned using a microtome. Sections were then mounted onto glass slides and stained with hematoxylin and eosin (H&E). Slides were visualized using light microscopy and revealed pulmonary adenocarcinoma with a lepidic growth pattern on the right lung suspected primary tumor indicating active and growing cells. Samples of the right phrenic nerve and left diaphragm exhibited metastatic adenocarcinoma. Histological findings consistent with a neuroendocrine tumor on the right vagus nerve indicated a different origin than previously thought. Analysis of the liver revealed a potential collision tumor with morphology suggestive of both adenocarcinoma and neuroendocrine tumor. This case highlights the value of pathological evaluation of metastasis not only in clinical spaces for accurate patient treatment, but also in academia. Immunohistochemical stains would be needed to provide insight to the source of the primary tumor. Pathologic analysis of advanced understanding of disease progression within the human body highlighted a physician's critical role in diagnosing and treating disease early and allowed for application of anatomical knowledge.