69-year-old male with 2-month history of intermittent left lower extremity weakness

Fabrizio Tropea, MS3

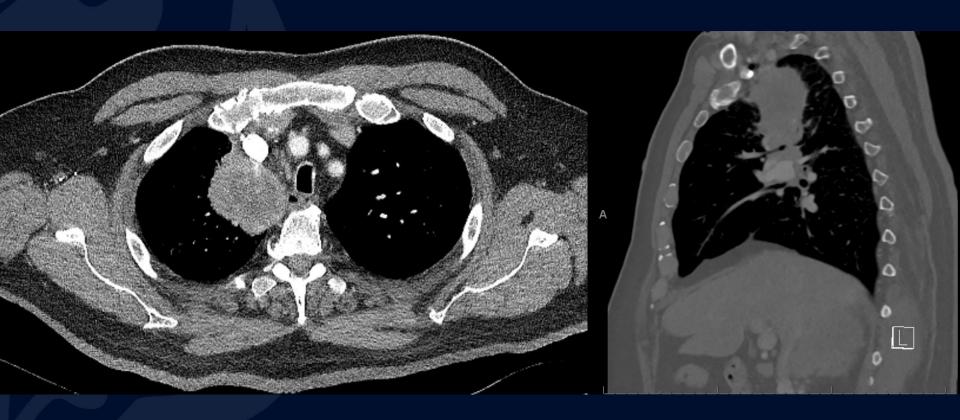


Radiographs

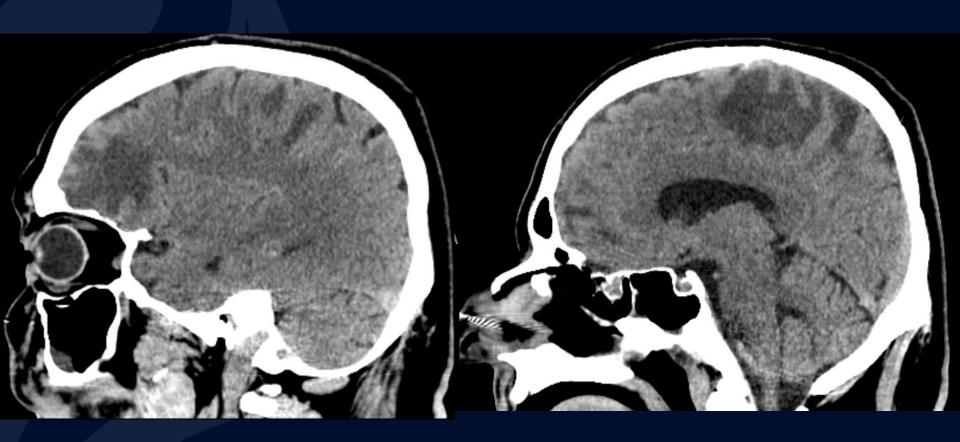




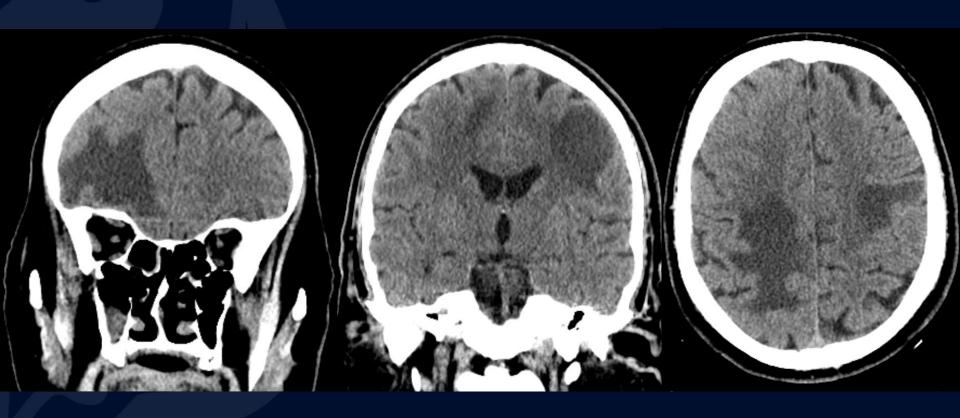
CT IV Contrast









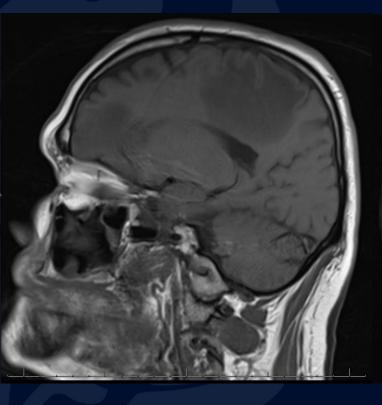


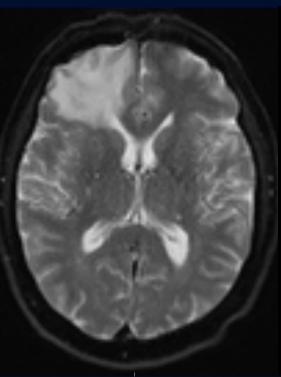


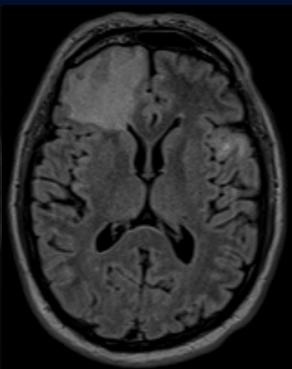
Sagittal T2

Axial T2 FS

Axial T2 FLAIR



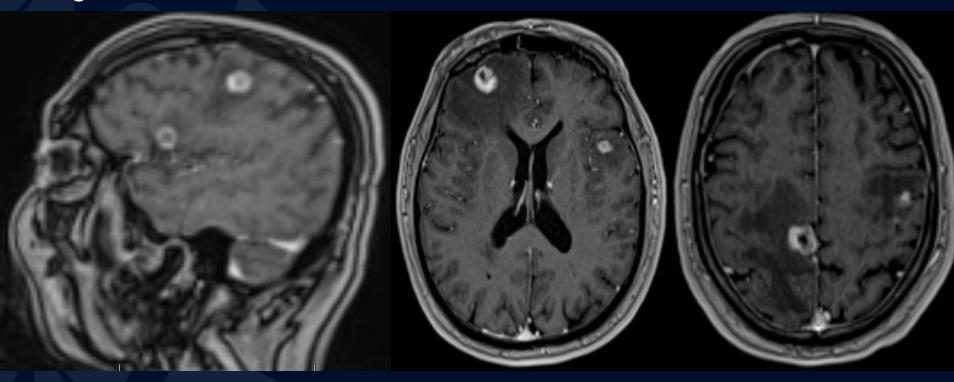






Sagittal T1 Post-contrast

Axial T1 Post-contrast





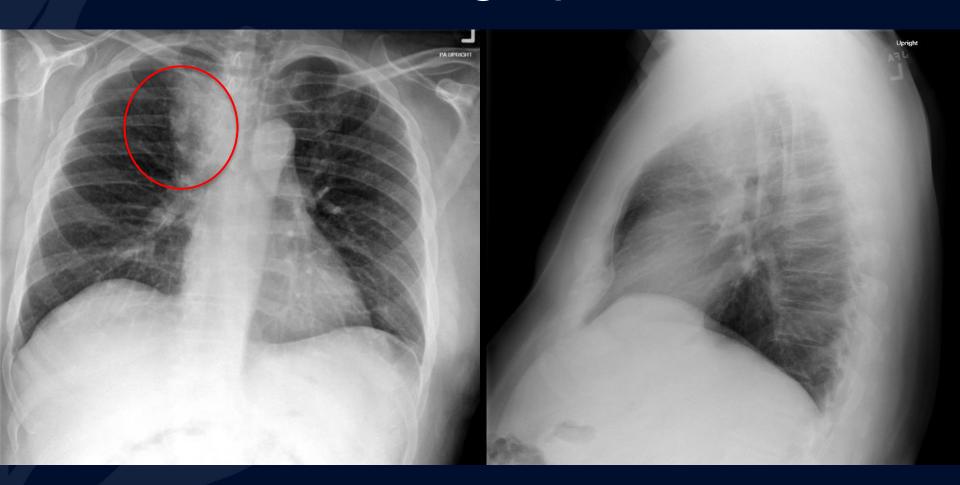




Metastatic Lung Cancer



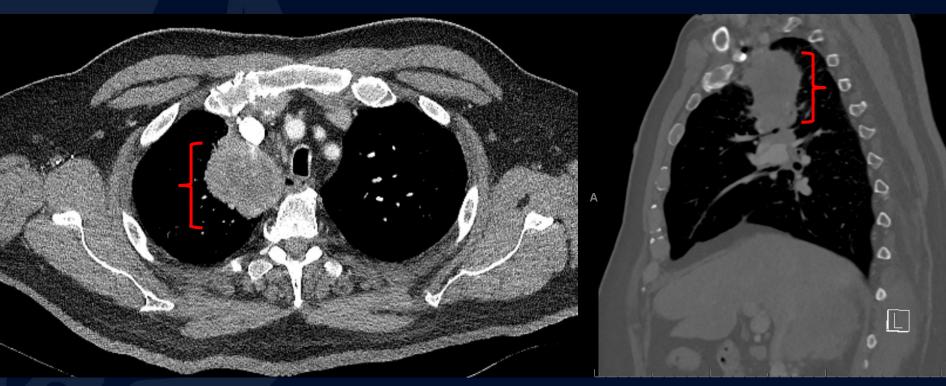
Radiographs



Right upper lobe opacity along the right paratracheal stripe



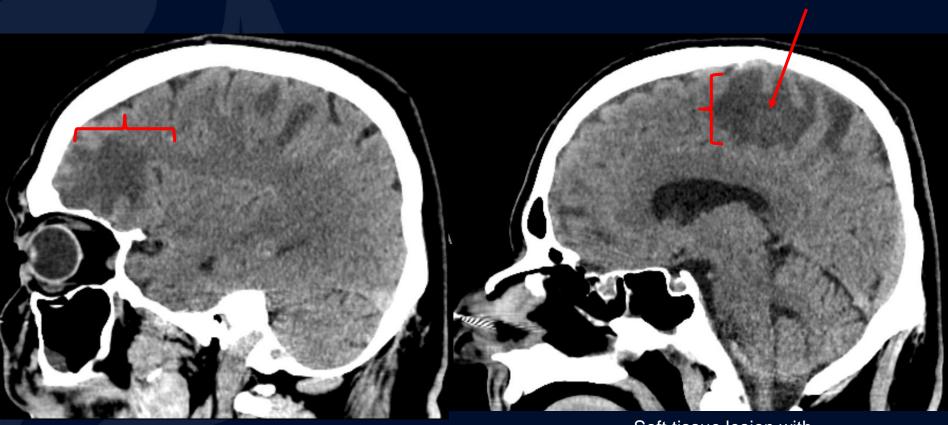
CT IV Contrast



Right upper lobe soft tissue mass abutting the upper mediastinum

Irregular right upper lobe soft tissue mass with spiculated borders

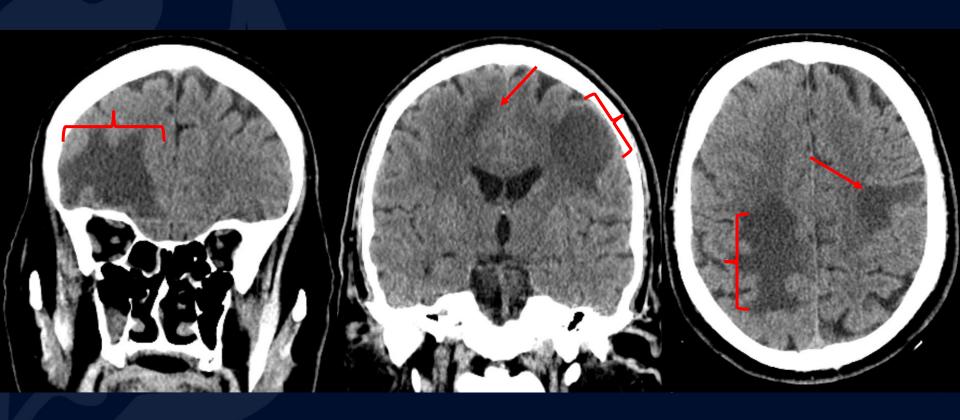




Vasogenic edema

Soft tissue lesion with surrounding vasogenic edema





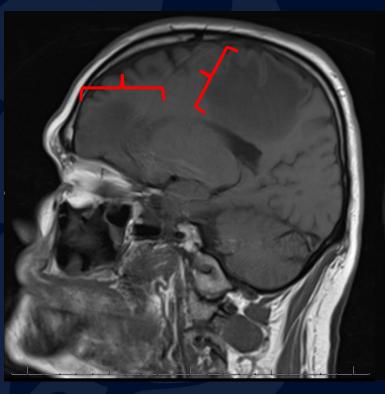
Vasogenic edema

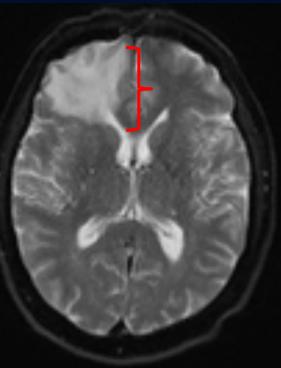


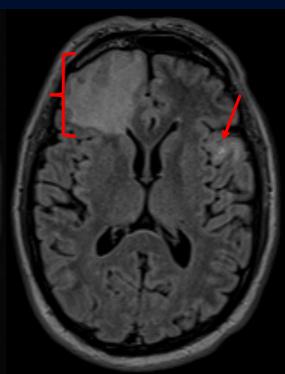
Sagittal T2

Axial T2

Axial T2 FLAIR







Vasogenic edema



Sagittal T1 Post-contrast Axial T1 Axial T1

Multiple intra-axial ring-enhancing centrally necrotic lesions within the frontal and parietal lobes with peritumoral vasogenic edema



Brain Metastasis

Clinical Presentation

Headaches, seizures, mental status alterations, ataxia, nausea, vomiting and visual disturbances

Five primary malignancies account for 80% of brain metastasis

Lung cancer, renal cell carcinoma, breast cancer, melanoma, gastrointestinal adenocarcinomas

Features

- Relatively well-demarcated from surrounding parenchyma, usually with a zone of peritumoral edema out of proportion to tumor size
- Often found at the grey-white matter junction or arterial watershed areas
- Certain malignancies are more susceptible to hemorrhage
 - Metastases that classically hemorrhage include melanoma, renal cell carcinoma, choriocarcinoma and thyroid cancer
 - Lung and breast cancer can also hemorrhage and are far more common then the classically hemorrhagic tumors

Differential diagnosis

- CNS neoplasm
- Brain abscess
- Post-treatment effects (post-surgical or post-radiation)



References

Bokhari, Maria R, and Fassil B Mesfin. "Brain Abscess." *NIH*, https://www.ncbi.nlm.nih.gov/books/NBK441841/.

Michinaga, Shotaro, and Yutaka Koyama. "Pathogenesis of Brain Edema and Investigation into Anti-Edema Drugs." *International Journal of Molecular Sciences*, U.S. National Library of Medicine, 30 Apr. 2015, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4463627/#:~:text=Vasogenic%20edema%20is%20due%20to,of%20brain%20volume%20and%20ICP.

Sharma, Rohit. "Brain Metastases." *Radiopaedia*, https://radiopaedia.org/articles/brain-metastases?lang=us.

