

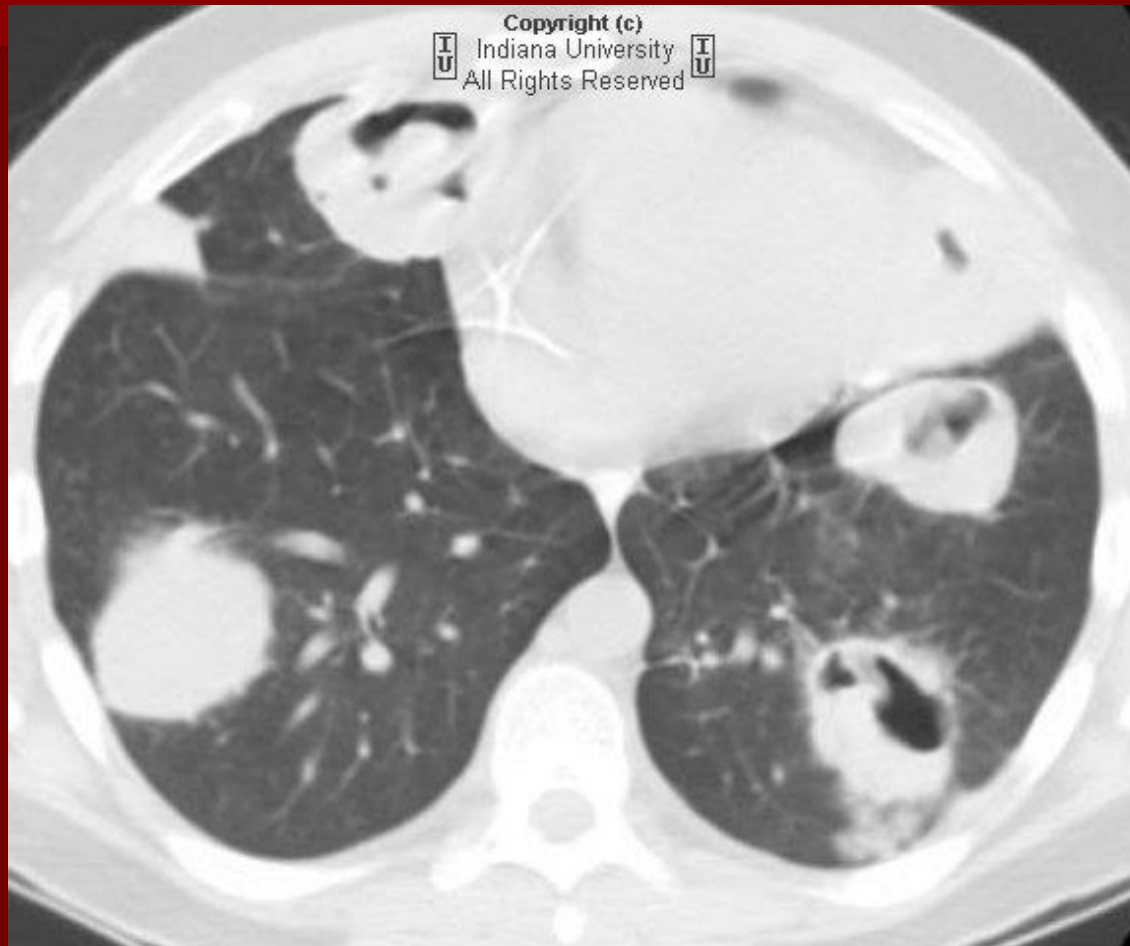
# Granulomatosis with polyangiitis (GPA)

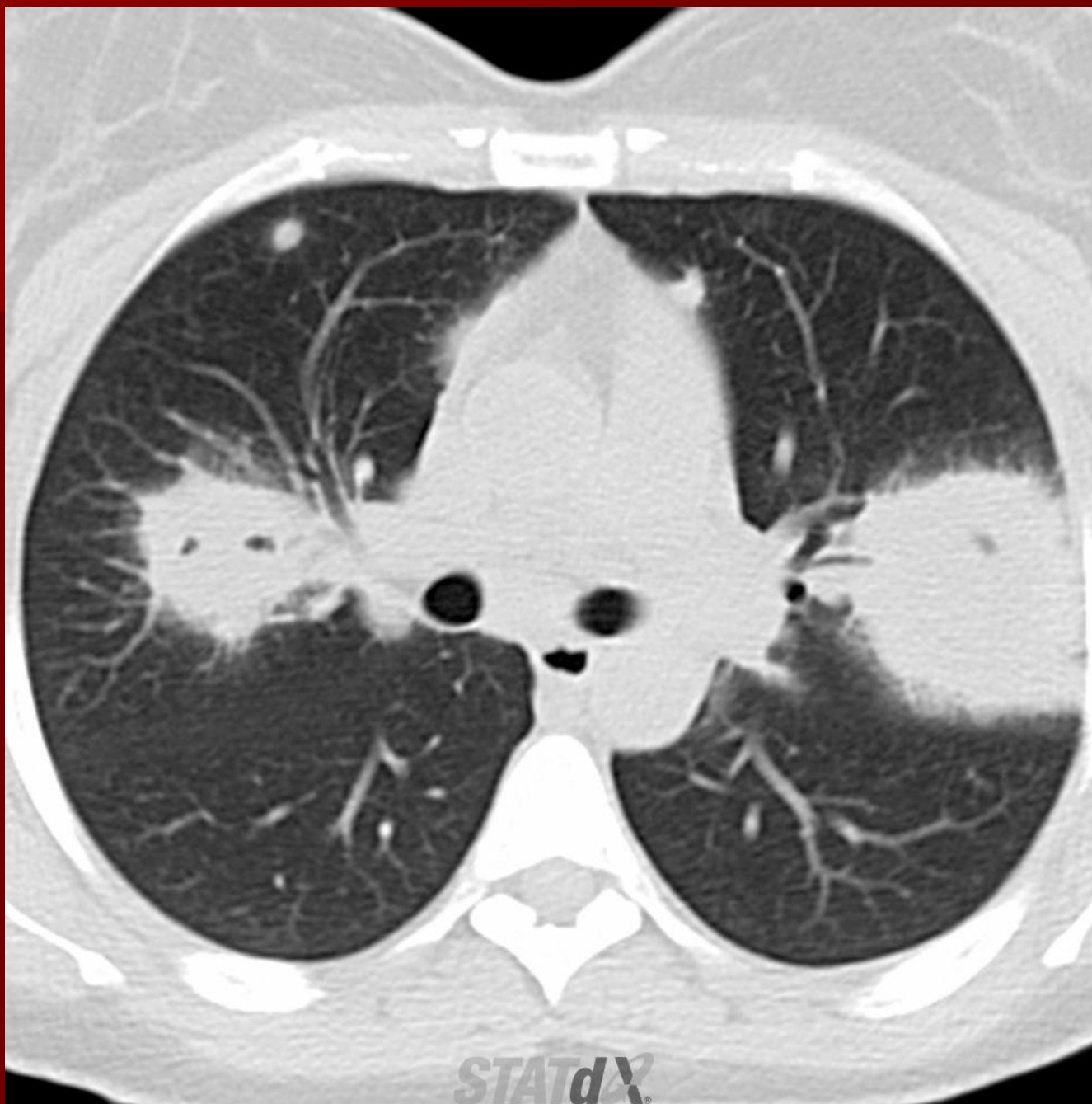
- Previously known as **Wegener granulomatosis**
- Multisystem systemic necrotizing non-caseating granulomatous vasculitis affecting small to medium sized arteries, capillaries and veins
- Predilection for the respiratory system and kidneys.

# Granulomatosis with polyangiitis

- Multifocal lung nodules/masses/consolidations
  - Cavitation more common in larger nodules
  - Air-fluid levels suggest secondary infection
- Ground-glass opacity (pulmonary hemorrhage)
- Halo sign, reversed halo sign, feeding vessel sign
- Pulmonary fibrosis may occur
- Pleural effusion
- Airway wall thickening (50-60%)

# Wegener's Granulomatosis

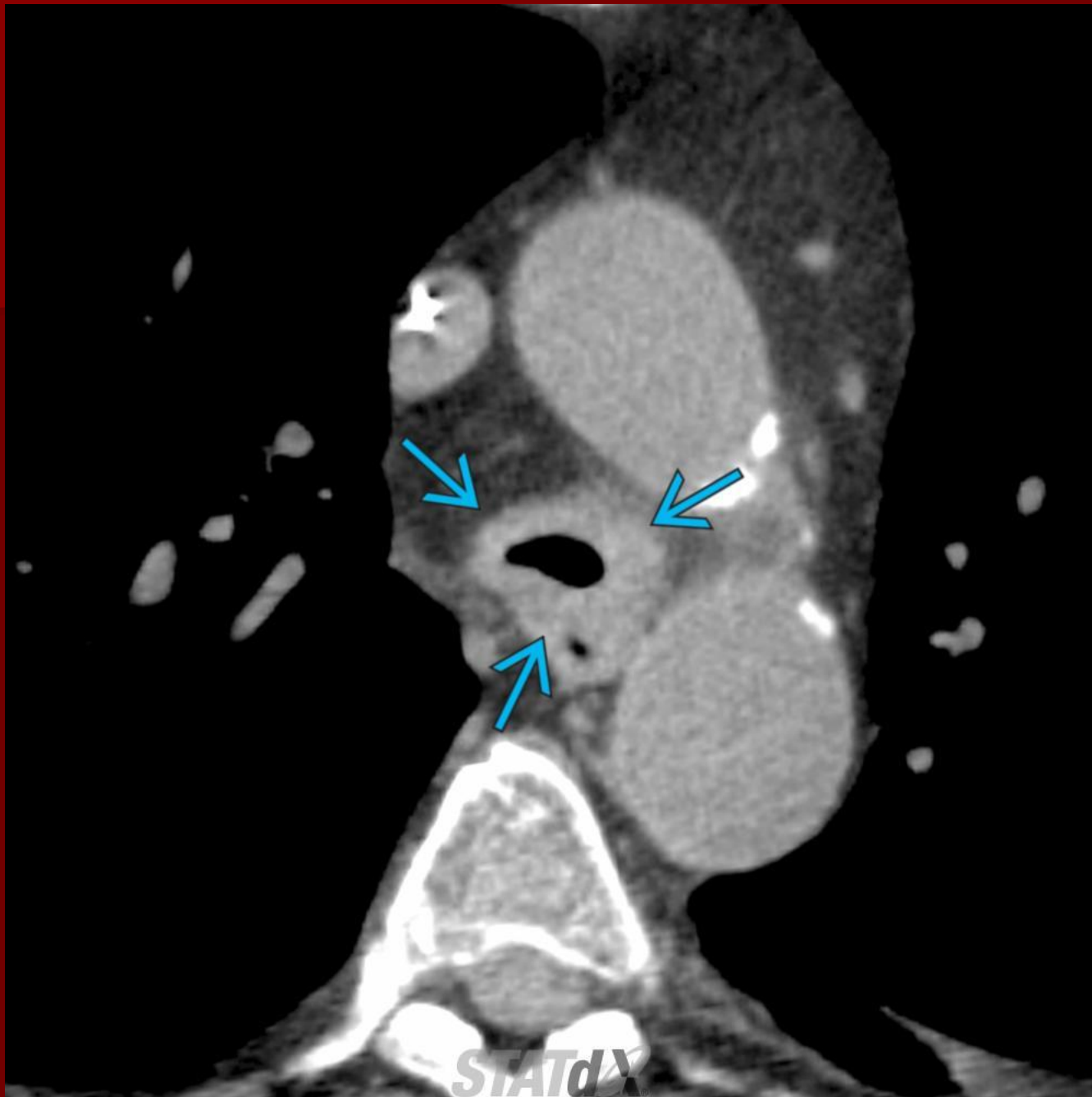




Axial NECT of the same patient shows multiple lung nodules and masses with intrinsic cavitation consistent with necrosis. The combination of cavitary nodules, masses, and consolidations is one of the most common imaging appearances of granulomatosis with polyangiitis.

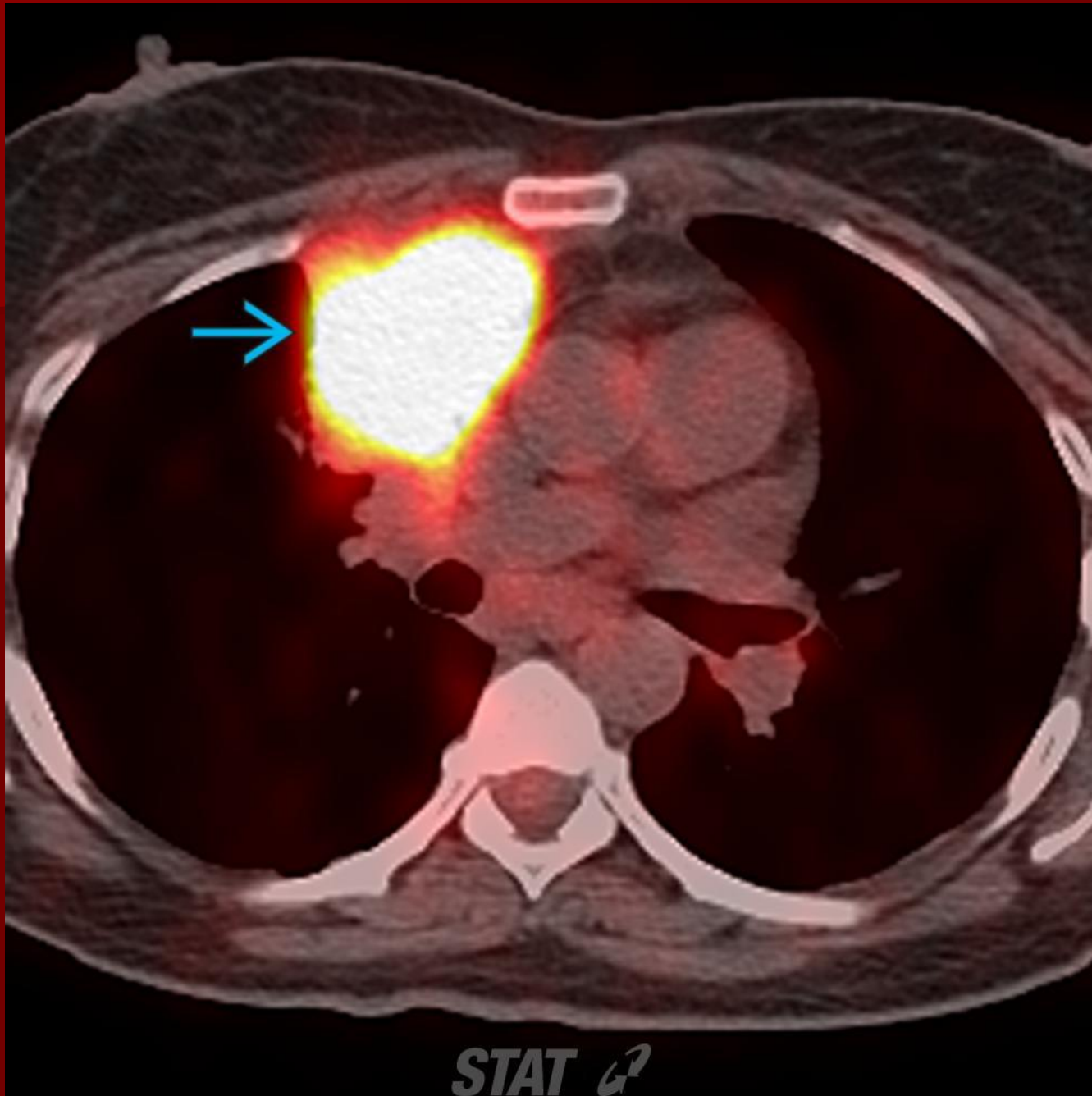
# Wegener granulomatosis with pulmonary hemorrhage





Axial NECT of a patient with granulomatosis with polyangiitis demonstrates marked circumferential soft tissue thickening of the tracheal walls (cyan solid arrow).





Axial fused FDG PET/CT of the same patient shows marked FDG avidity in the mass (cyan solid arrow). The metabolic behavior of this lesion mimics that of primary lung cancer.