

# Tracheobronchial Papillomatosis

- Airway nodules (papillomas) due to human papilloma virus (HPV) infection
- Invasive papillomatosis: Dissemination to lungs.
- Infection with HPV; types 6 and 11 most common
- Larynx most commonly affected
- Diagnosis made by laryngoscopy and biopsy.
- Any portion of respiratory tract may be affected
  - 95% of cases involve larynx
  - Solitary papillomas more common in middle-aged male smokers
- Airway dissemination (invasive papillomatosis)
  - < 1% seed lung
  - Surgical manipulation of laryngeal papillomas increases risk of dissemination
  - Lung seeding usually apparent in children or young adults

# Demographics

- Age
  - Adults: 2 cases/100,000 population
  - Bimodal age distribution
    - Children: 18 months to 3 years of age
    - Adults: 4th decade of life
- Sex
  - Children: M = F
  - Adults: M > F

# Imaging

- Airway wall thickening or nodularity
- Multiple pulmonary nodules/masses
  - Larger nodules more likely to cavitate
  - Seeding of posterior dependent lungs
- Growth rate
  - Most nodules grow slowly
  - Rapid growth suspicious for squamous cell carcinoma
- Complications
  - Squamous cell carcinoma
  - Secondary infection
  - Airway obstruction: Atelectasis, postobstructive pneumon

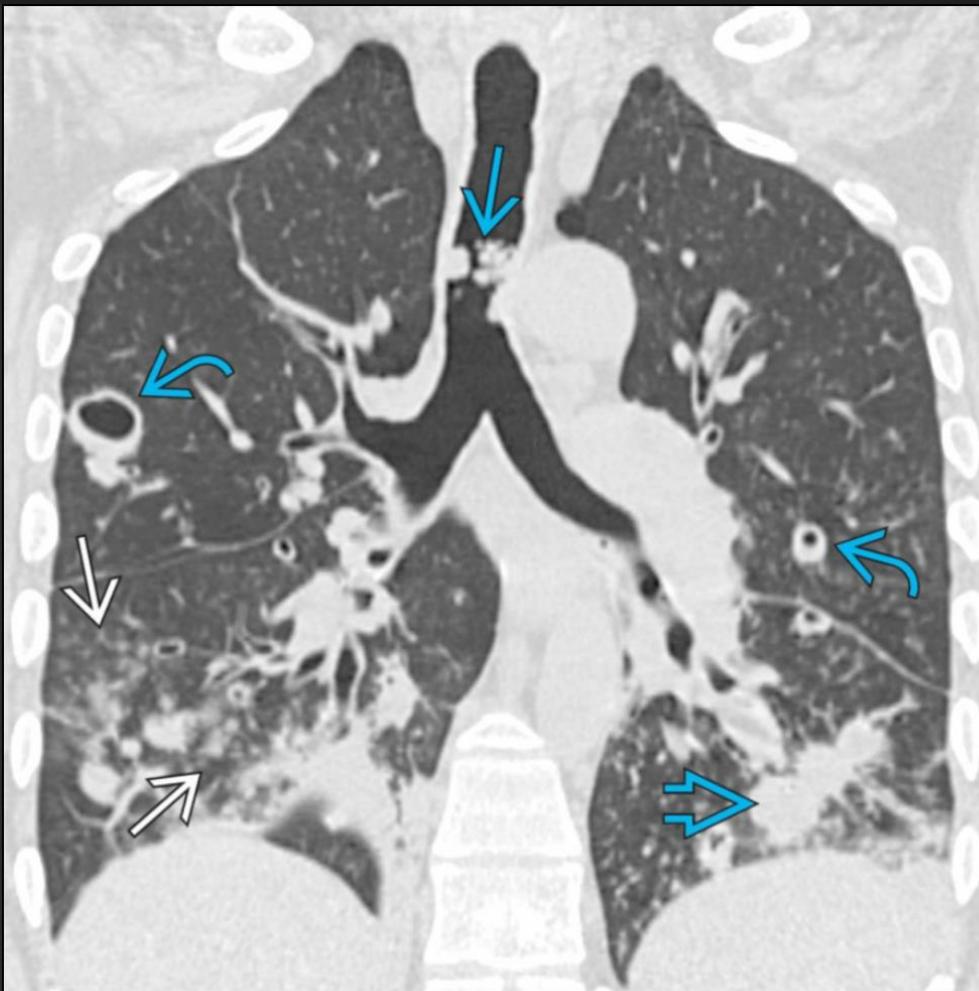
# DDx

- Tracheobronchopathia osteochondroplastica
- Granulomatosis with polyangiitis
- Tracheobronchial amyloidosis
- Relapsing polychondritis



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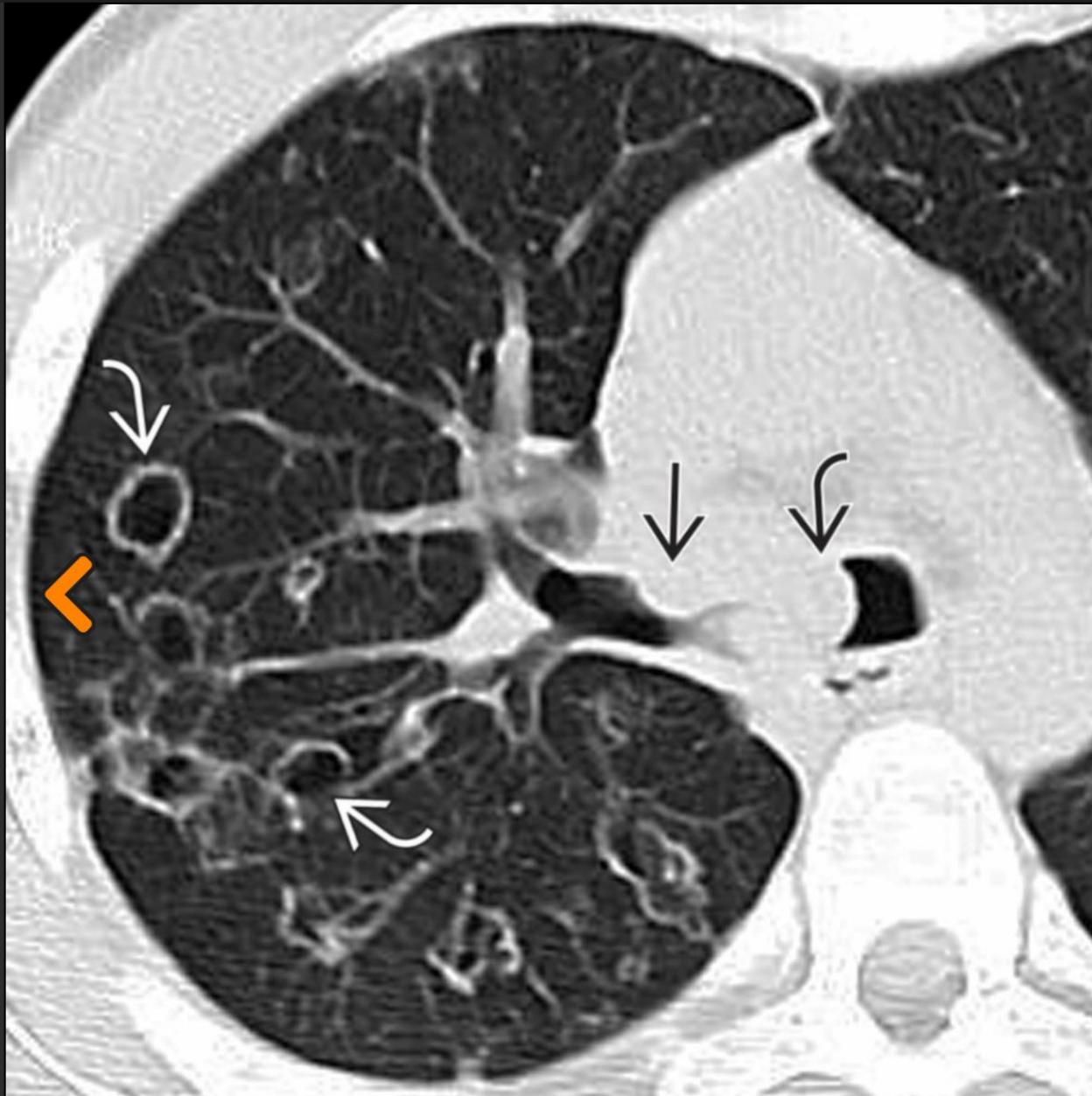
Graphic shows the morphologic features of invasive tracheobronchial papillomatosis with characteristic central airway nodules →, peribronchovascular cavitary lesions ⇨, and scattered small solid nodules ↗.



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Coronal NECT of a patient with **tracheobronchial papillomatosis** shows mid tracheal papillomas →, multiple solid □ and cavitary → nodules, and tree-in-bud opacities →.

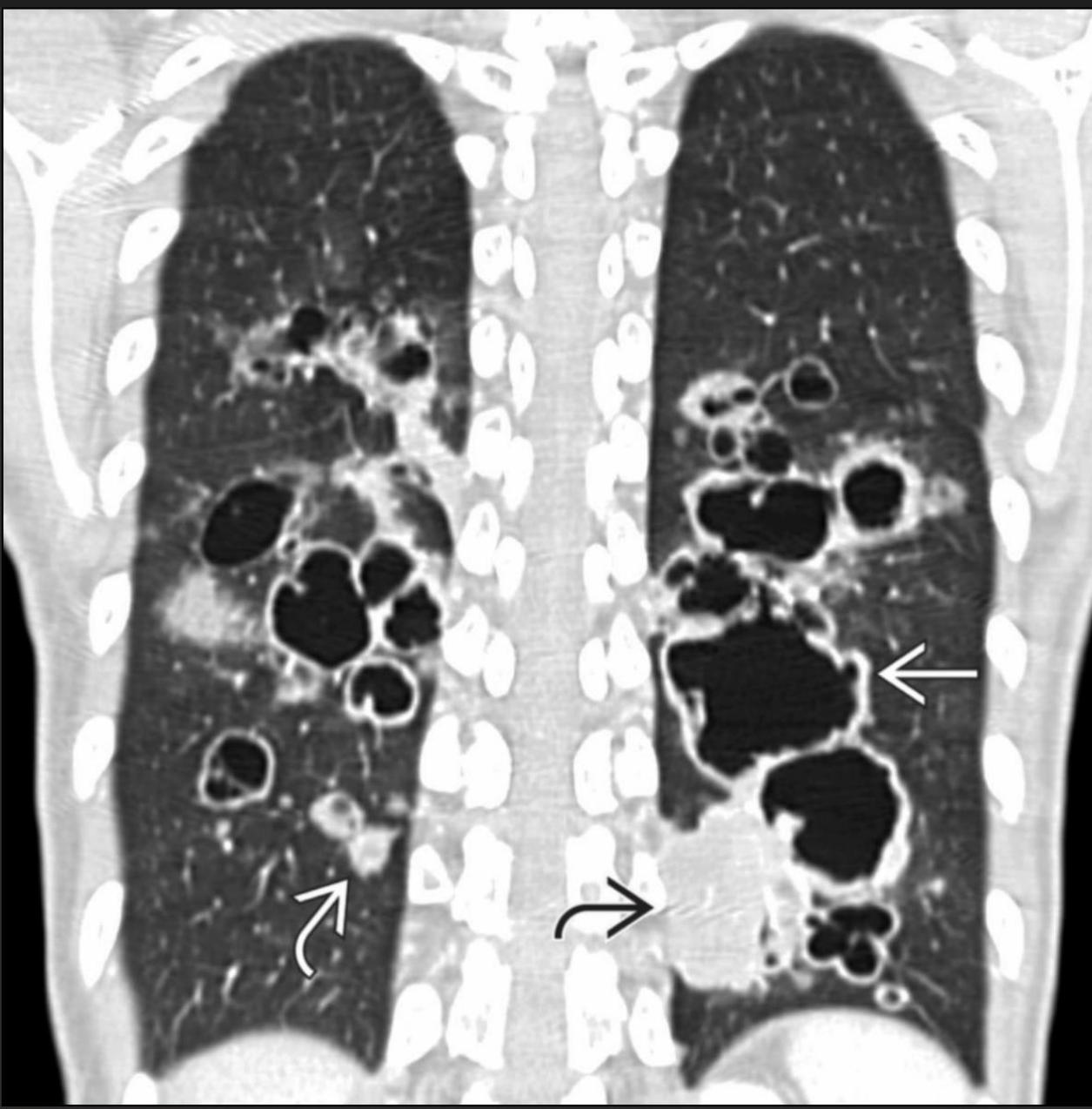
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Axial NECT of the same patient shows a lobulated endoluminal carinal nodule that extends into the right upper lobe bronchus and multiple right lung cysts with thin irregular walls .

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Coronal NECT of the same patient shows multiple bilateral solid and cavitary nodules and masses. Larger nodules are more likely to cavitate. The left lower lobe mass is suspicious for developing squamous cell carcinoma, a known complication.

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