

CT INFORMATION IN PULMONARY HYPERTENSION

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1. diagnosis of pulm. art. hypertension (PAH)
2. R ventricular dysfunction
3. etiology of PAH
4. (operability, prognosis)

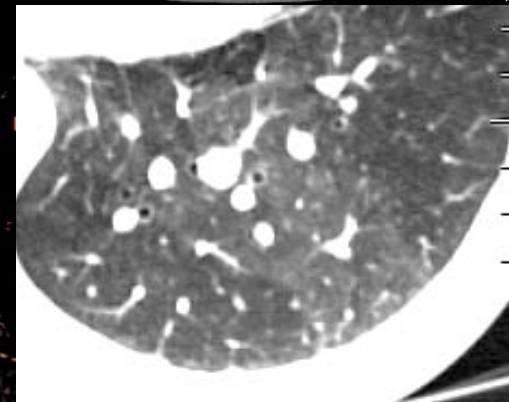
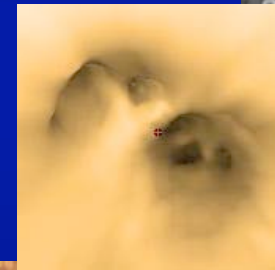
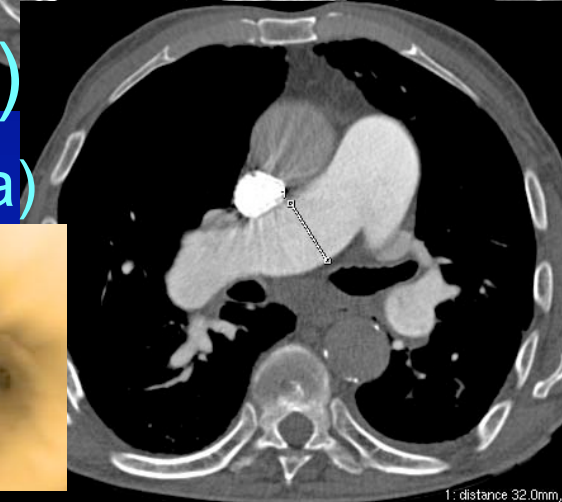


DIAGNOSIS OF PULM. ART. HYPERTENSION (PAH)

CRITERIA

- dilated MPA ($>28.6\text{mm}$ * [normal $24.2\pm 2.2\text{m}$])
(diameter of MPA $>$ ascending aorta)
- dilated R/LPA ($>25/24\text{mm}$)
- pulm. art. branch $>$ diameter of adjacent bronchus
- peripheral pruning of pulm. a. branches

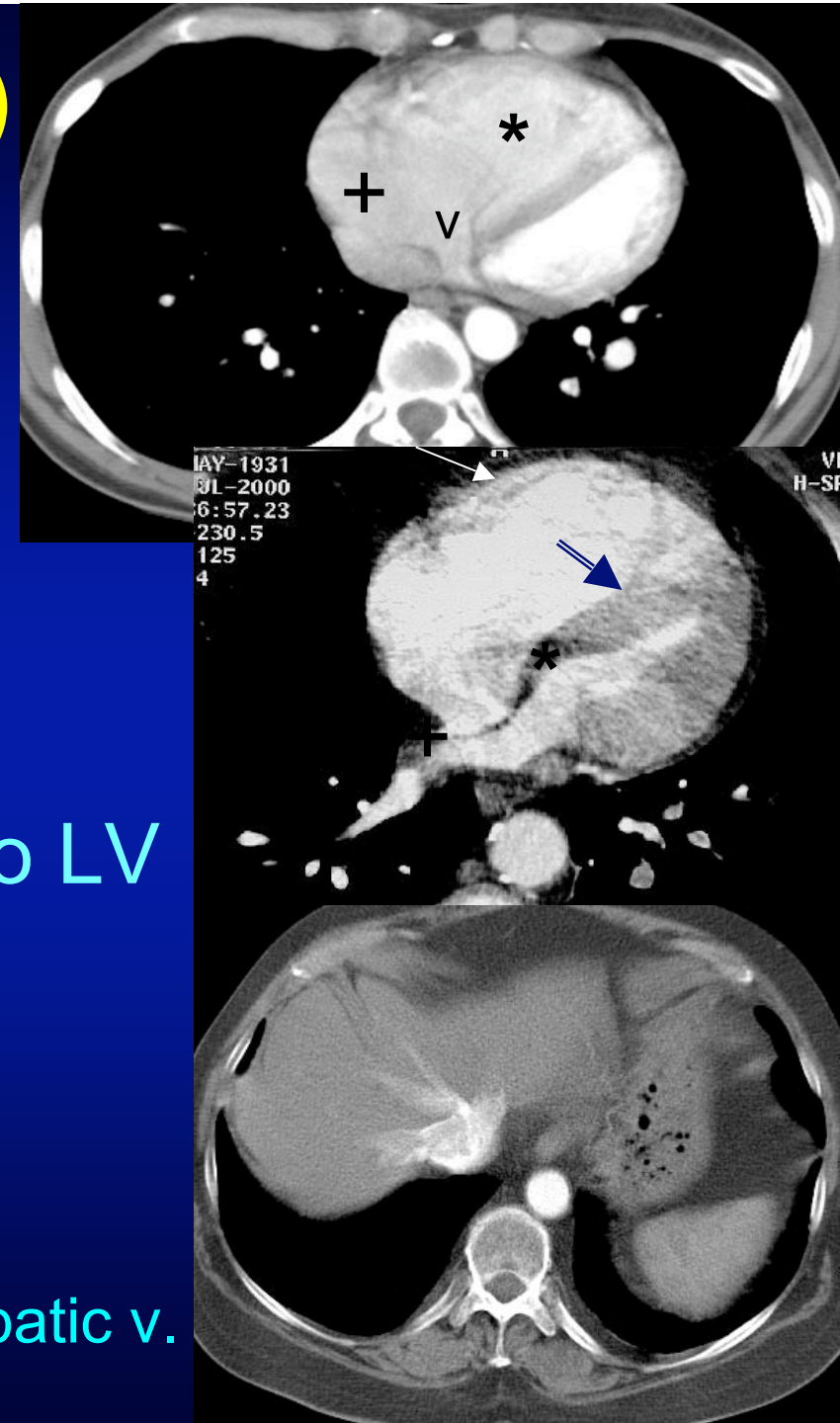
* sensitivity 87%, specificity 89%,
(Tan RT, Chest 1998;113:1250)



RIGHT VENTRICULAR (RV) DYSFUNCTION

CRITERIA

- RV wall thickening (>4mm) →
- dilated RV (>LV, >45mm) *
- interventricular septal deviation to LV ⇒
- dilated RA (tricuspid valve regurgitation) +
- dilated SVC, IVC, coronary sinus v
- reflux of contrast agent to IVC, azygous/hepatic v.



PRECAPILLARY PAH: chronic thromboembolism

- arterial signs

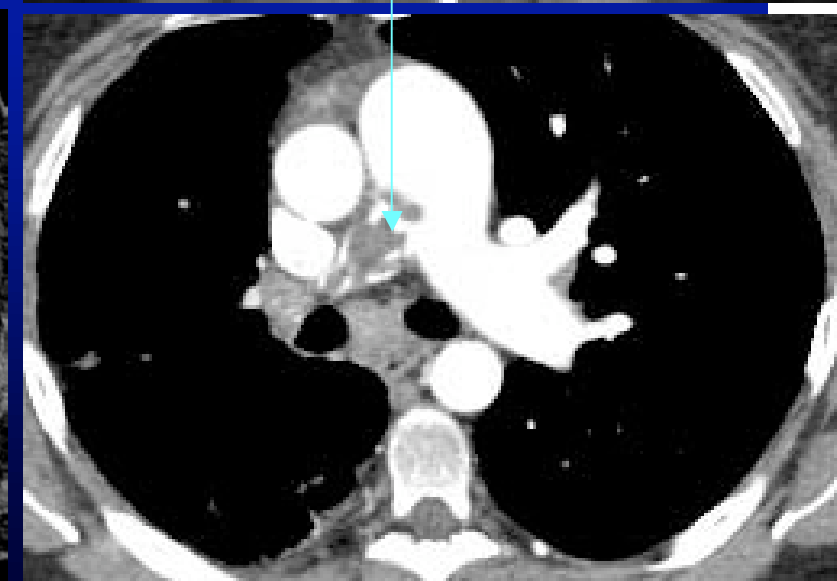
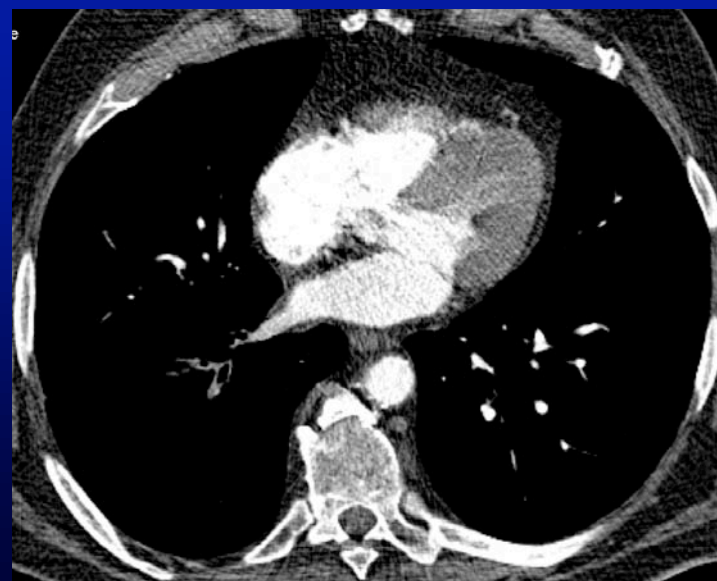
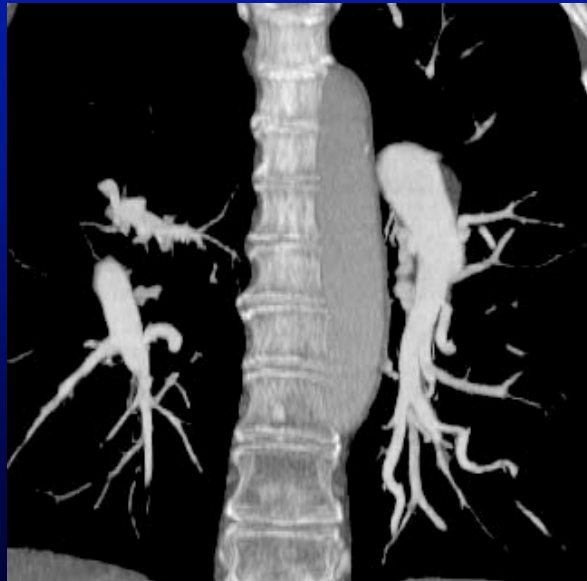
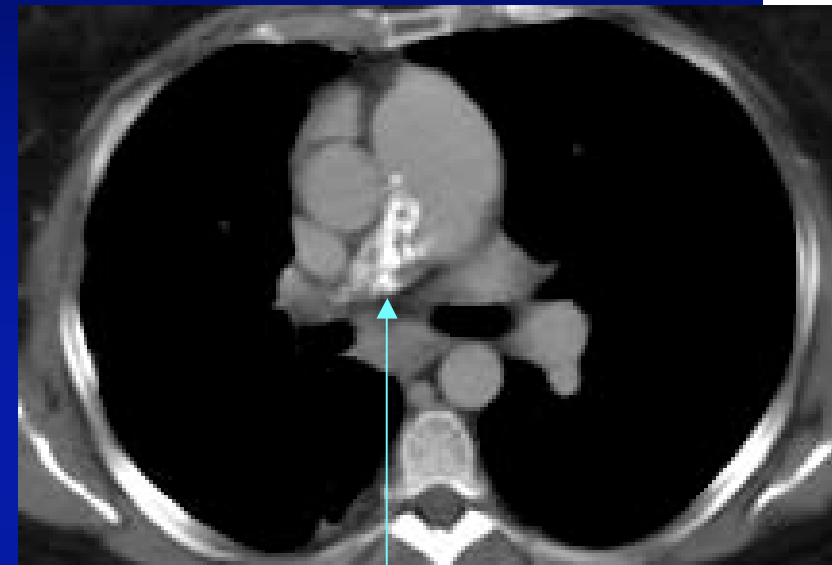
(recanalized) intraluminal filling defects

organised thrombi adherent to wall

luminal irregularities, webs, calcification
abrupt narrowing + dilatation

- collateral flow

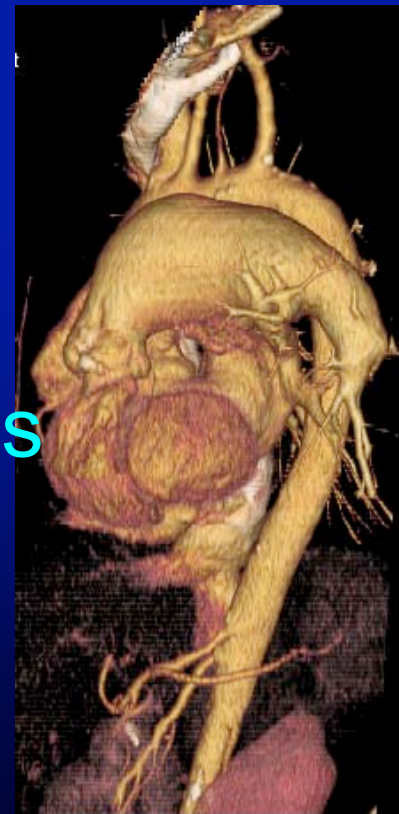
- parenchymal changes



CT IN PULMONARY HYPERTENSION

CONCLUSION / Take home:

- primarily based on morphology
- limited indirect functional information (radiation expo.)
- inferior to angiography for tiny arteries
- superior to functional methods for lung parenchyma (differential diagnosis)



Glion, 21 April 2005