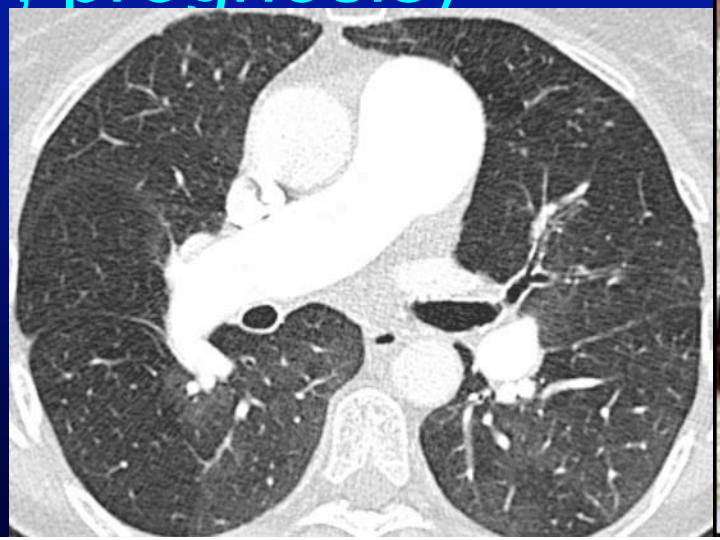
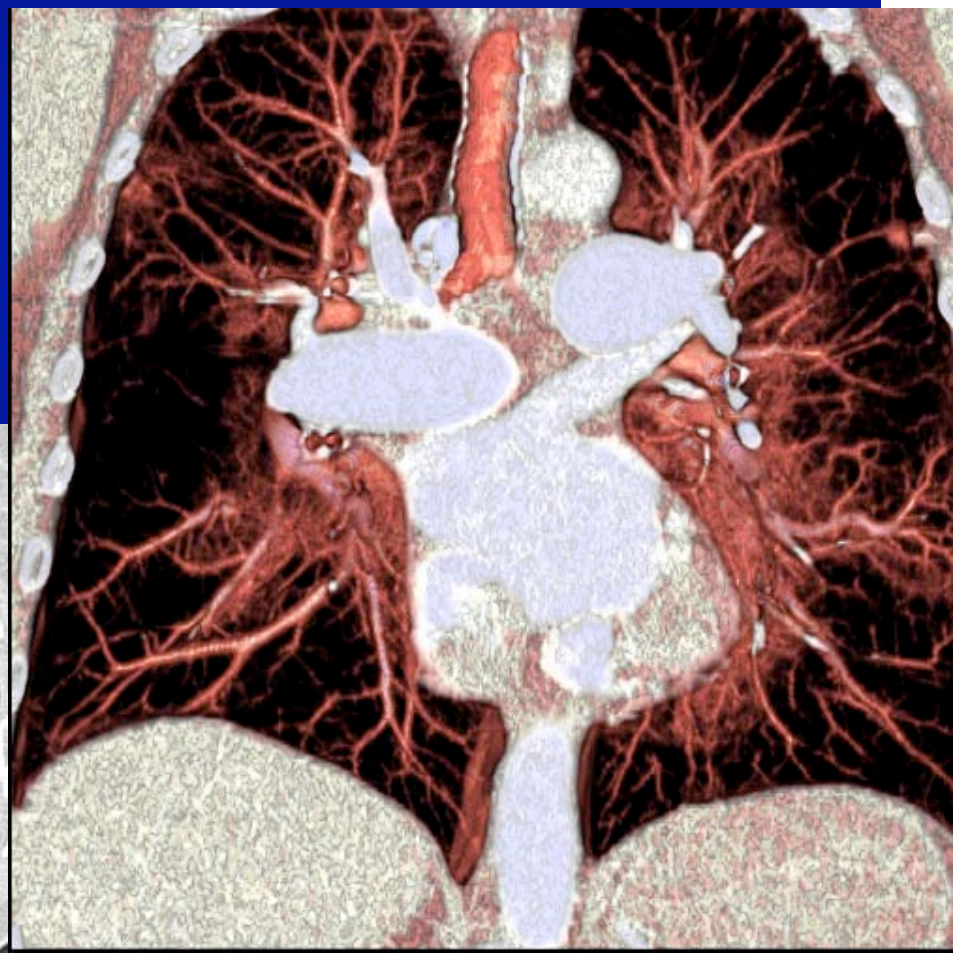
# CT INFORMATION IN PULMONARY HYPERTENSION

**Peter Vock, University of Bern**

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

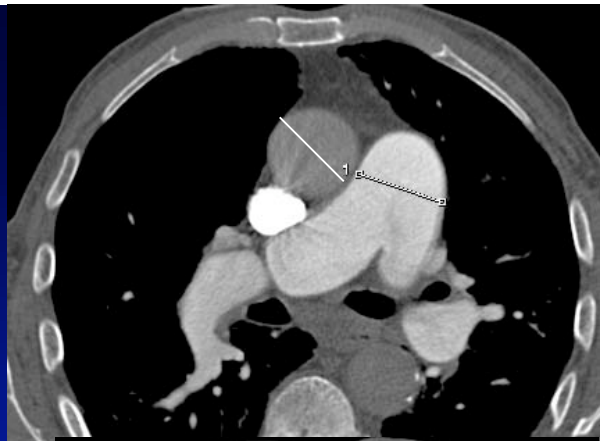
- dilated MPA (>28.6mm *[normal 24.2+-2.2m])

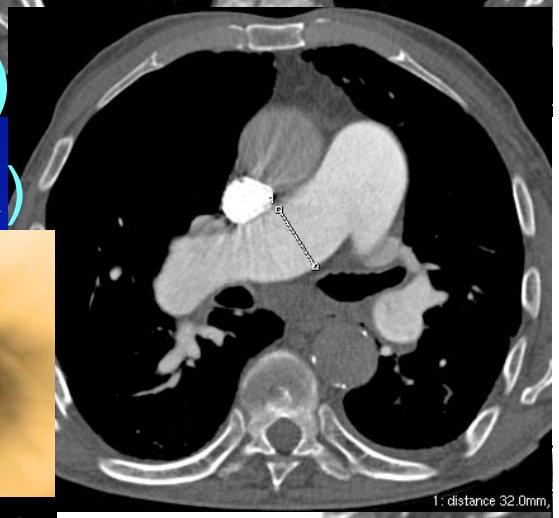
  (diameter of MPA > ascending aorta)

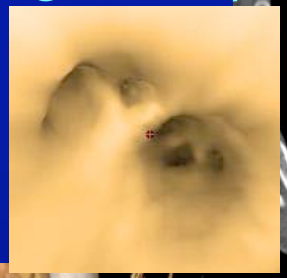
- dilated R/LPA (>25/24mm)

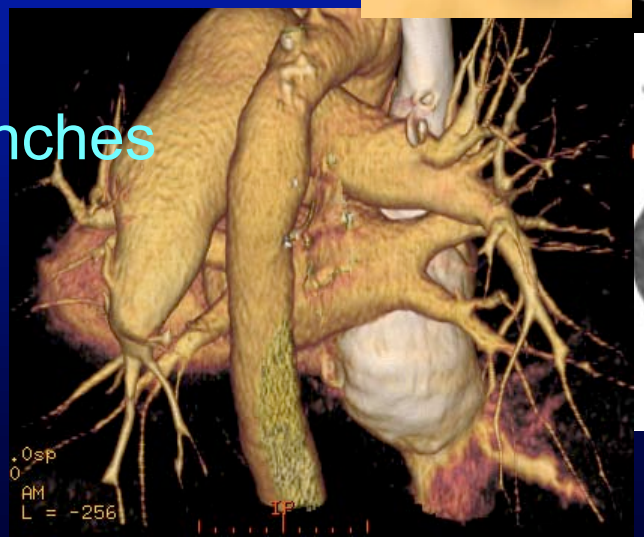
- pulm. art. branch > diameter of adjacent bronchus

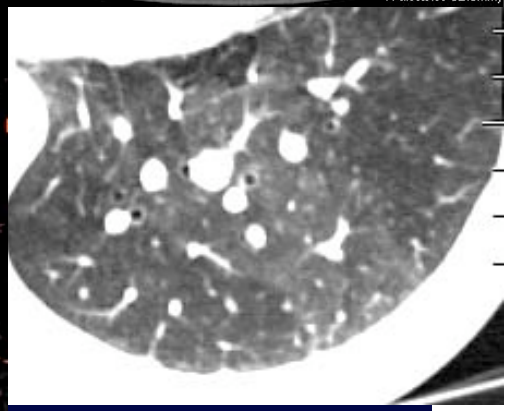
- peripheral pruning of pulm. a. branches







* sensitivity 87%, specificity 89%,

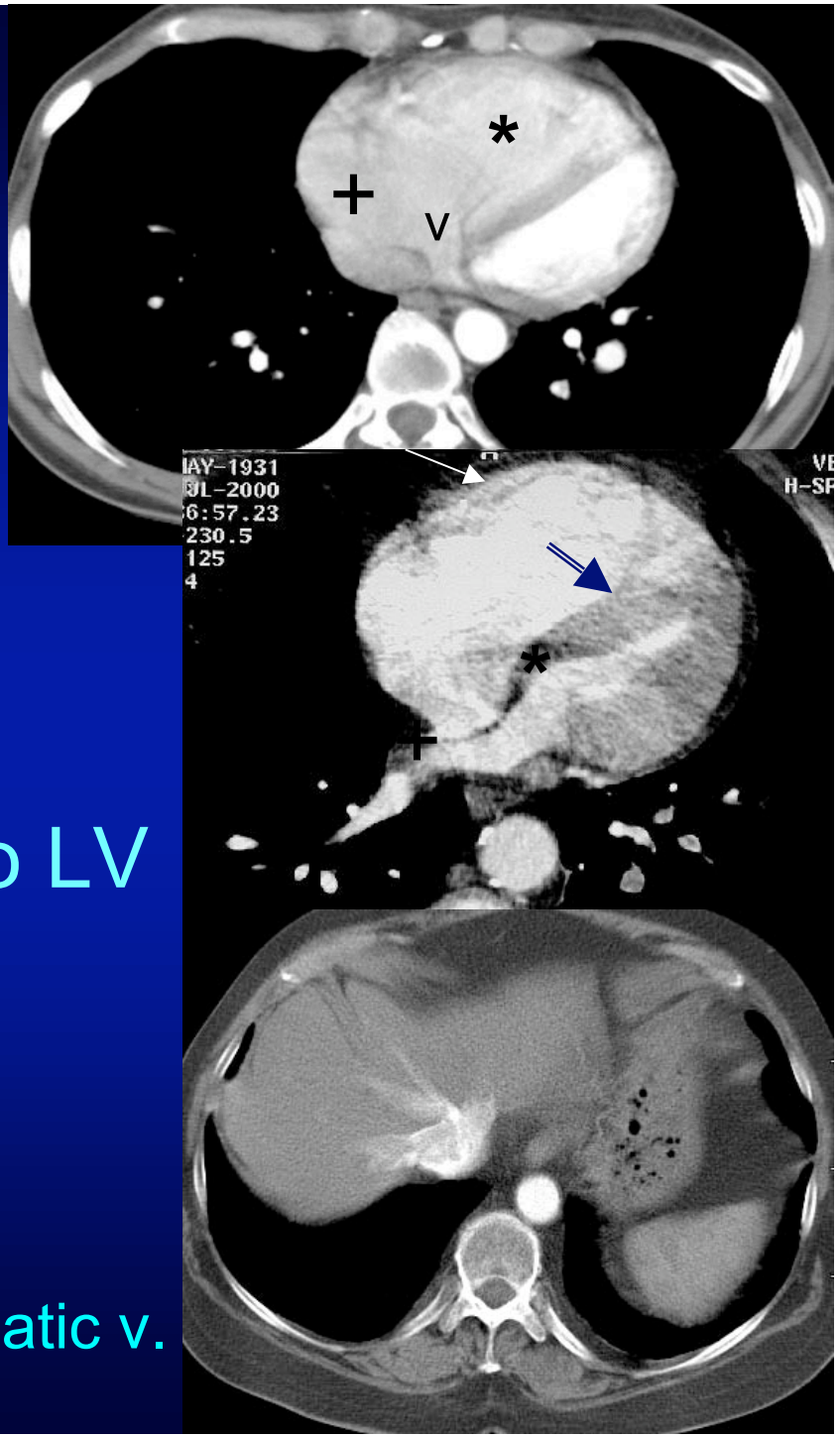
(Tan RT, Chest 1998;113:1250)

# 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

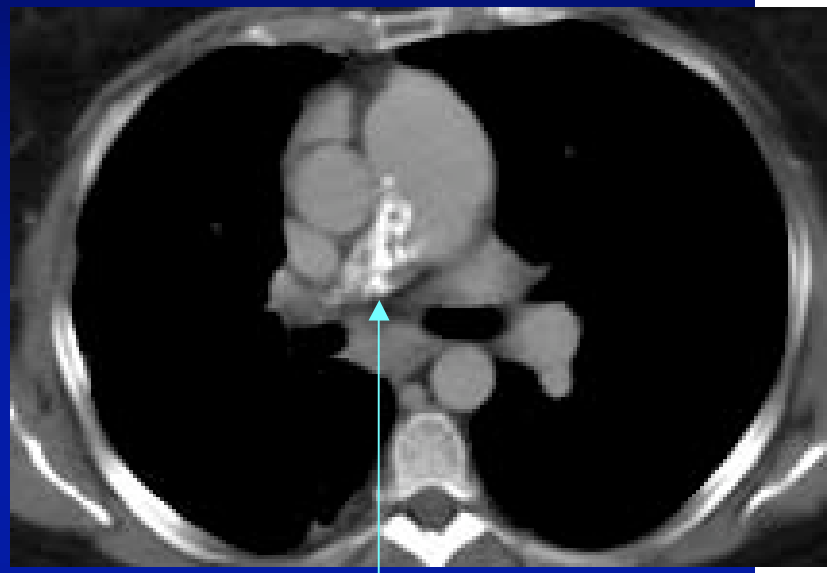
  (recanalized) intraluminal filling defects

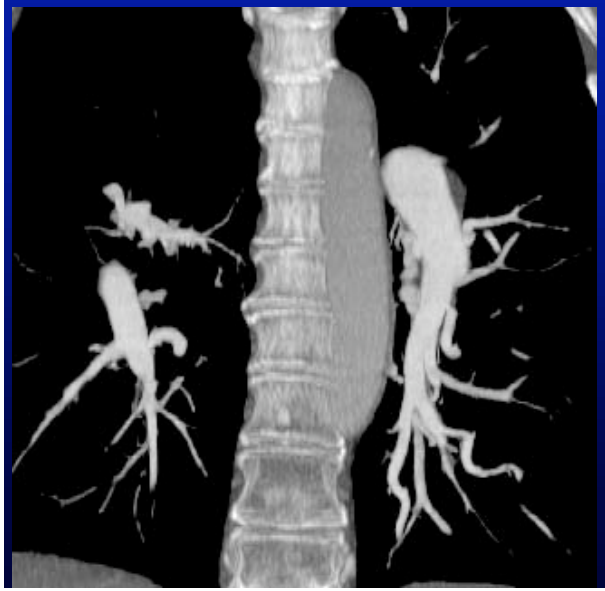
  organised thrombi adherent to wall

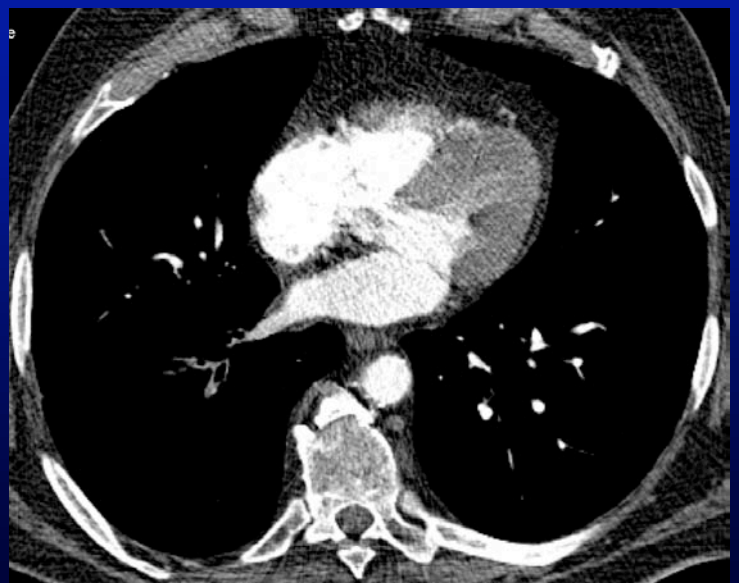
  luminal irregularities, webs, calcification
  abrupt narrowing + dilatation

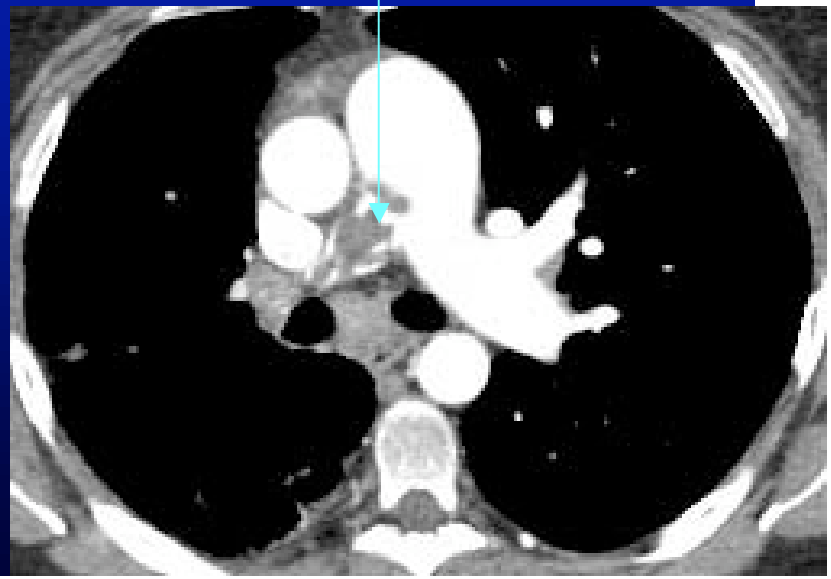
- collateral flow

- 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*