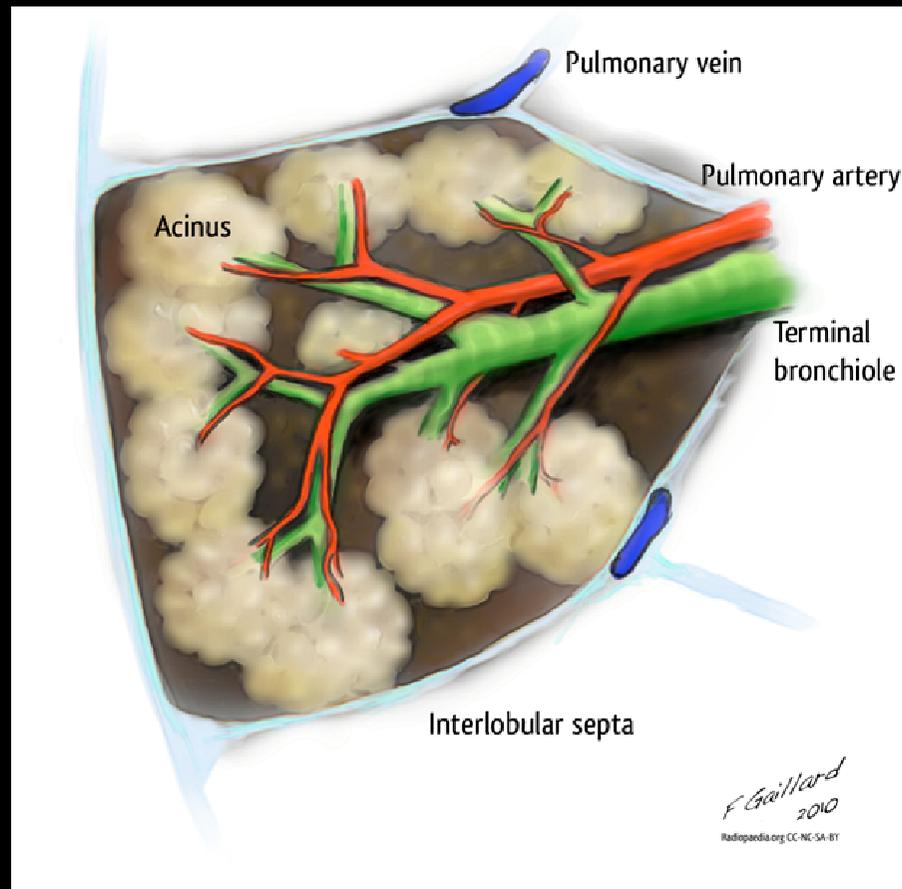
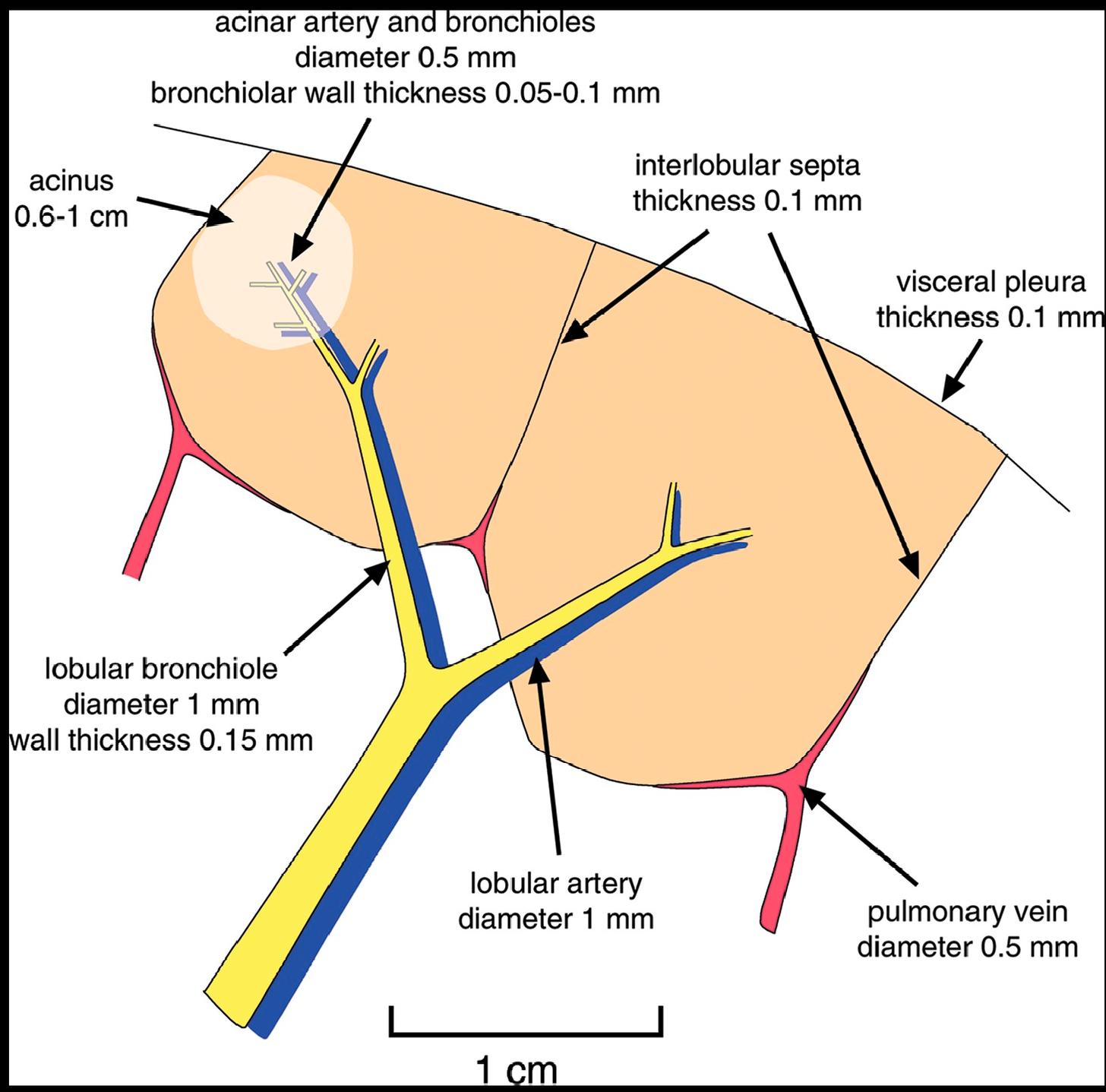


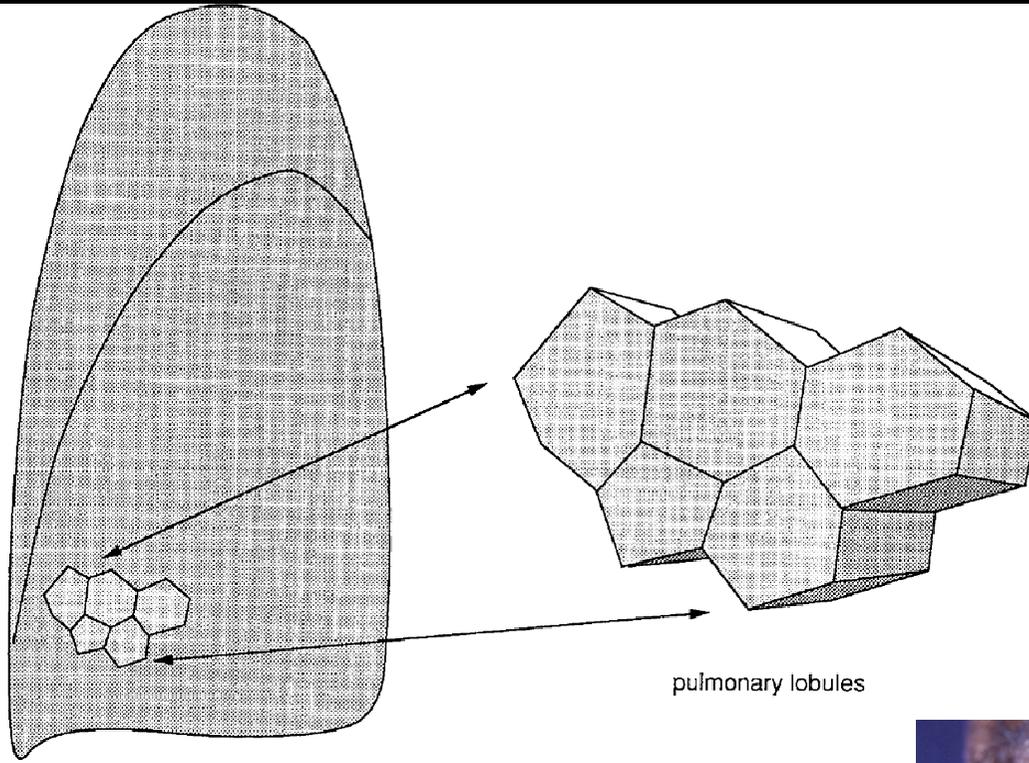
Alta resolución en TC de pulmón en las enfermedades intersticiales

María Montes Ruiz-Cabello
Neumología. Hospital La Inmaculada.

Lobulillo pulmonar secundario

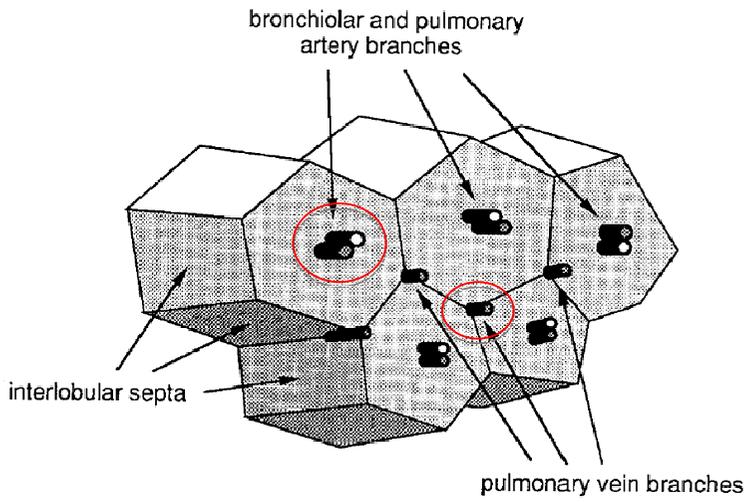






pulmonary lobules

A



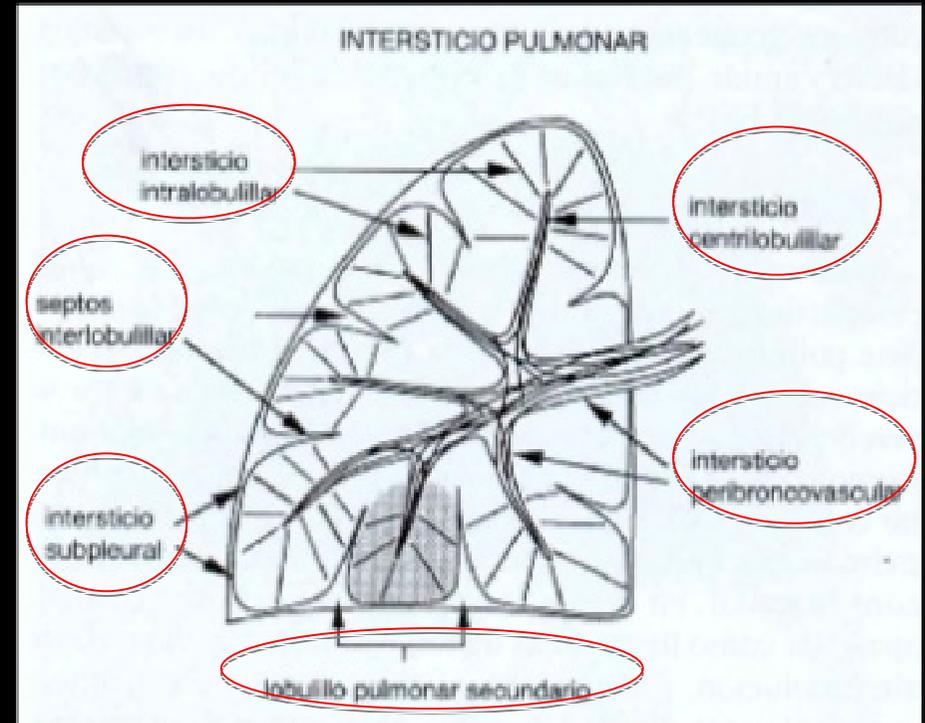
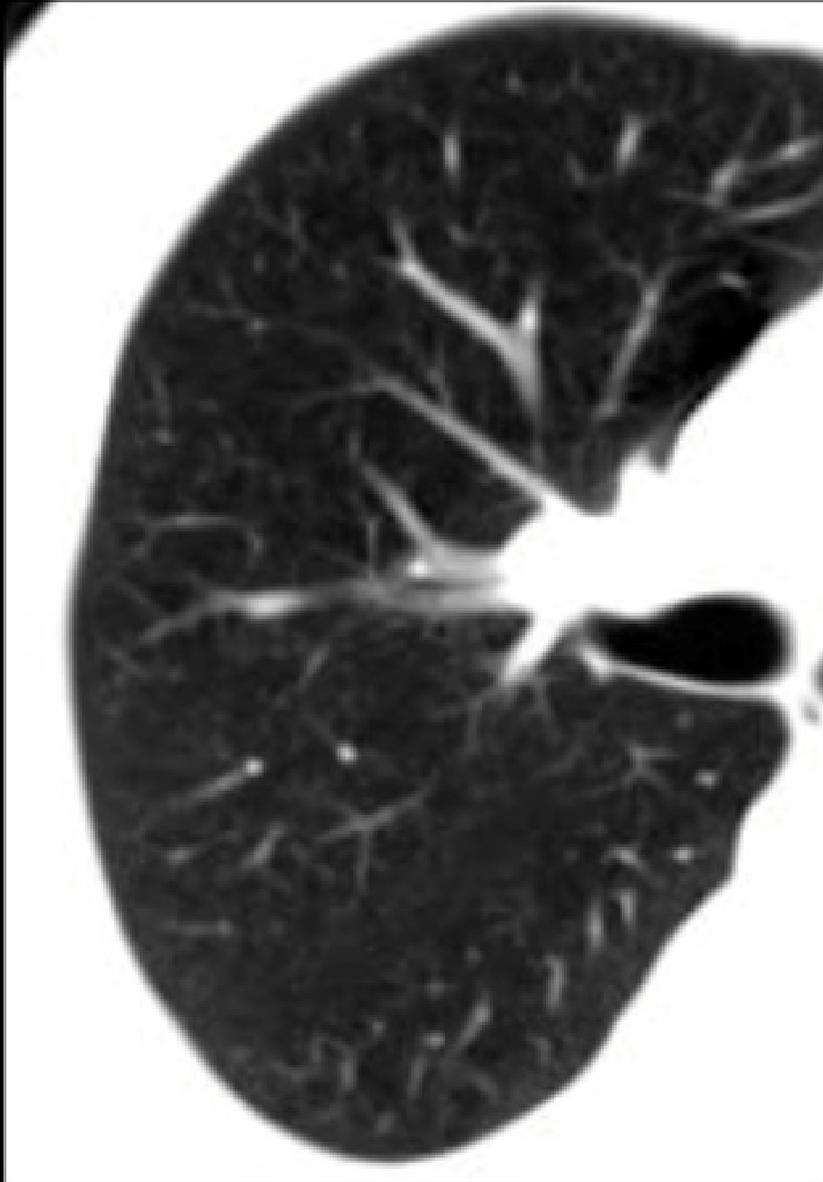
bronchiolar and pulmonary artery branches

interlobular septa

pulmonary vein branches

B





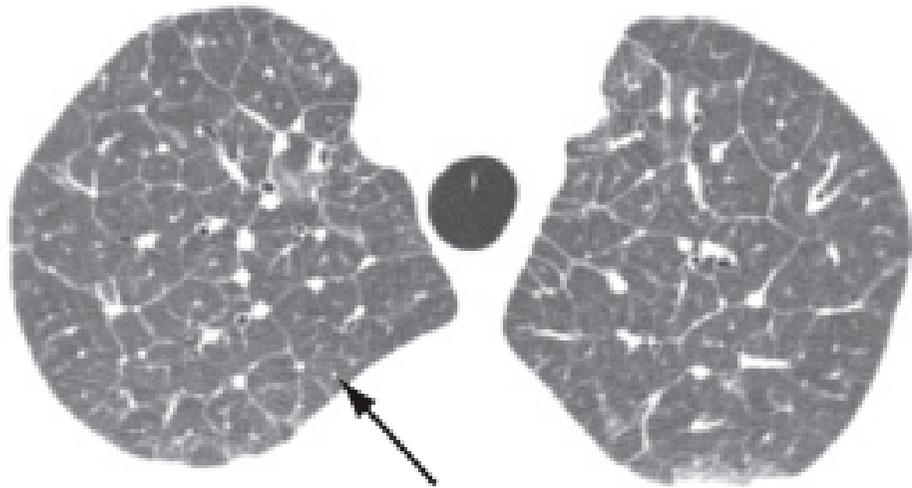
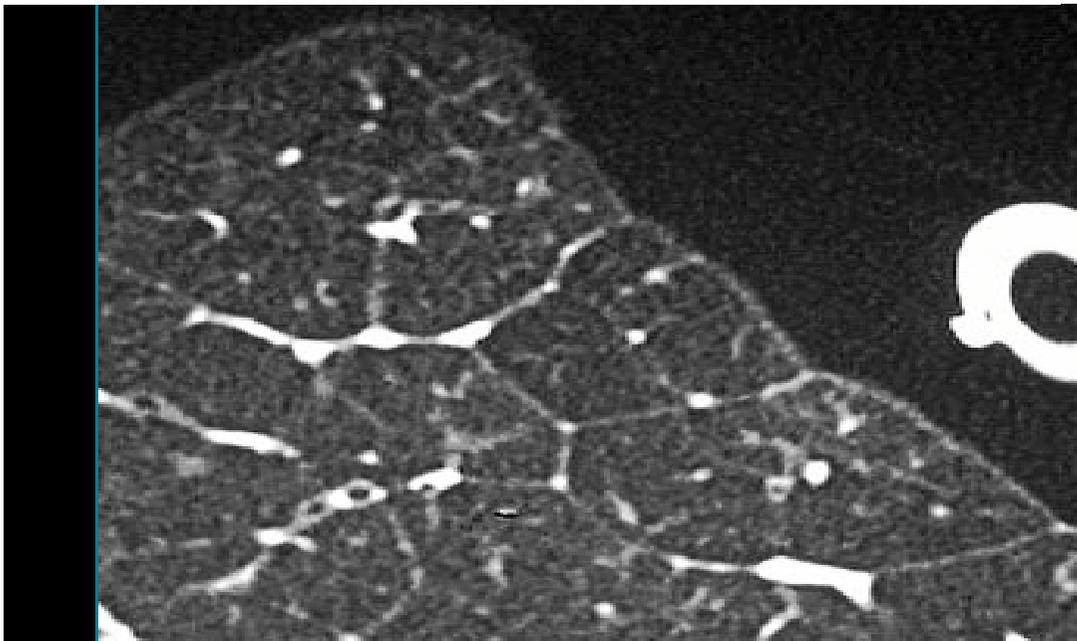
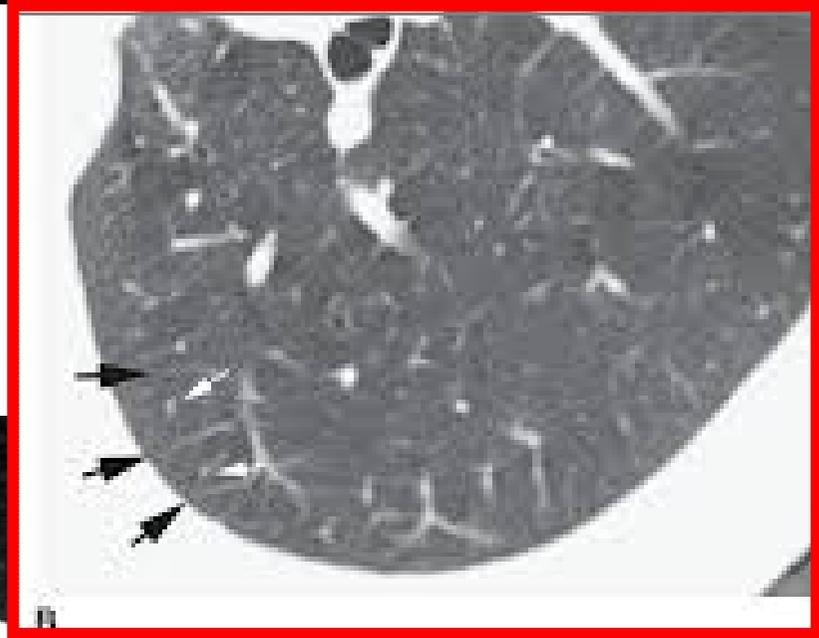


Figure 1 – Interlobular septal thickening in a patient with pulmonary edema. Note the thin, interconnecting lines forming polygonal shaped structures. The pulmonary arteries can be seen at the center of the lobules.

NORMAL



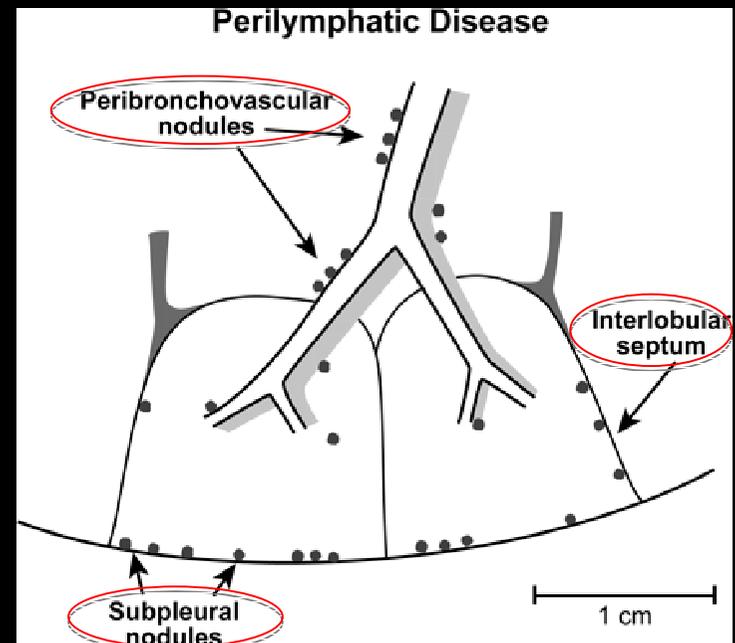
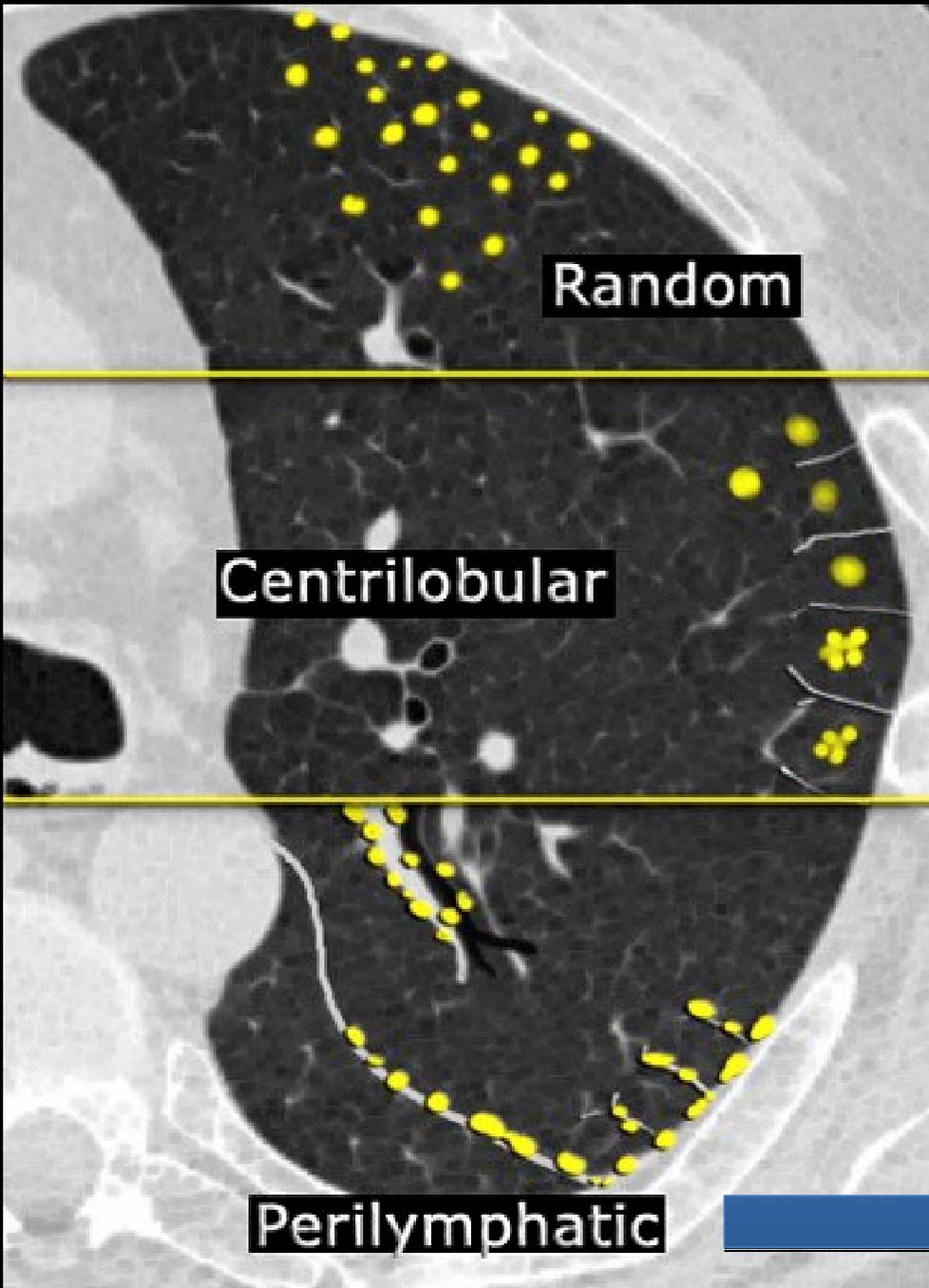
.....aire atrapado, enfisema, consolidación, quiste, opacidad en vidrio deslustrado, panal de miel, líneas intralobulillares, micronódulo, patrón en mosaico, reticulación, engrosamiento septal, árbol en brote,.....

Clasificación de la patología por grupos según patrones

- Patrón lineal y reticular → Fibrosis pulmonar....
- Opacidades nodulares o reticulonodulares → Sarcoidosis, AAE, BRI-EPID...
- Aumento de la atenuación pulmonar. Opacificación parenquimatosa → NID, NOC...
- Disminución de la atenuación pulmonar. Quistes. → Histiocitosis, Linfangoileiomatosis, NIL...

¿ CUAL ES EL PATRÓN RADIOLOGICO PREDOMINANTE?

PATRON NODULAR



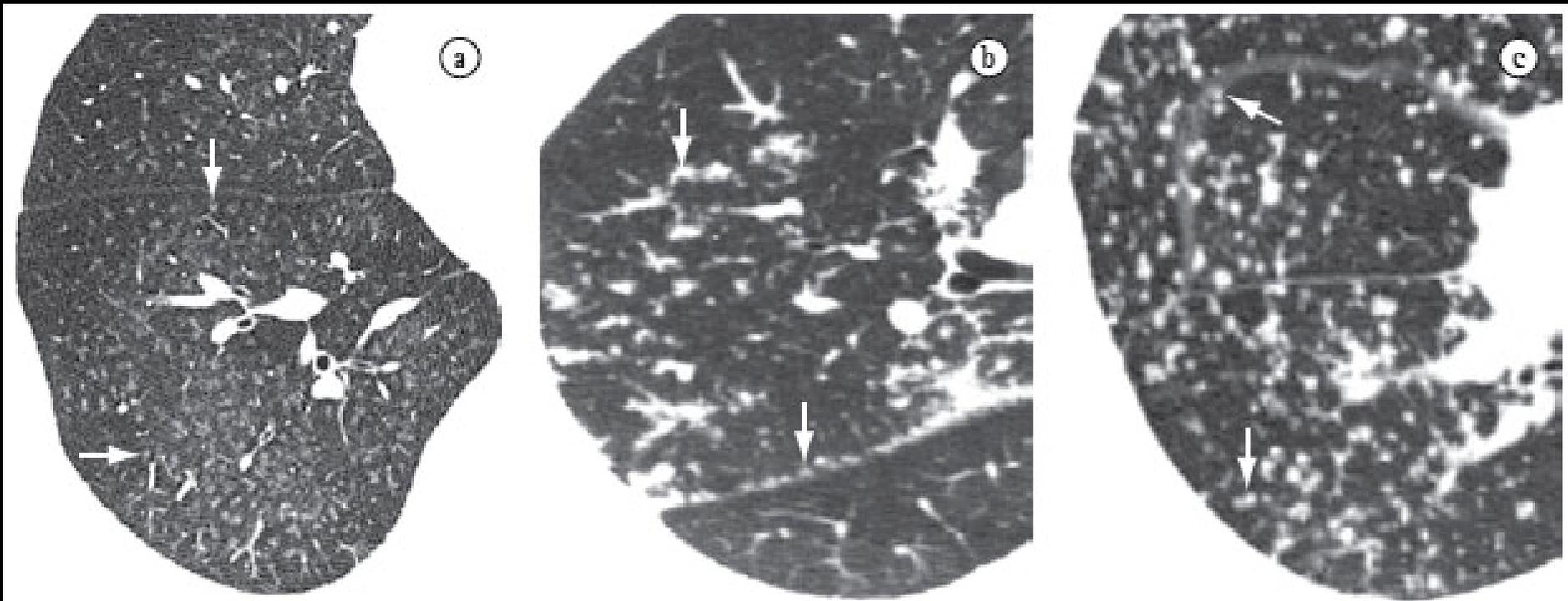
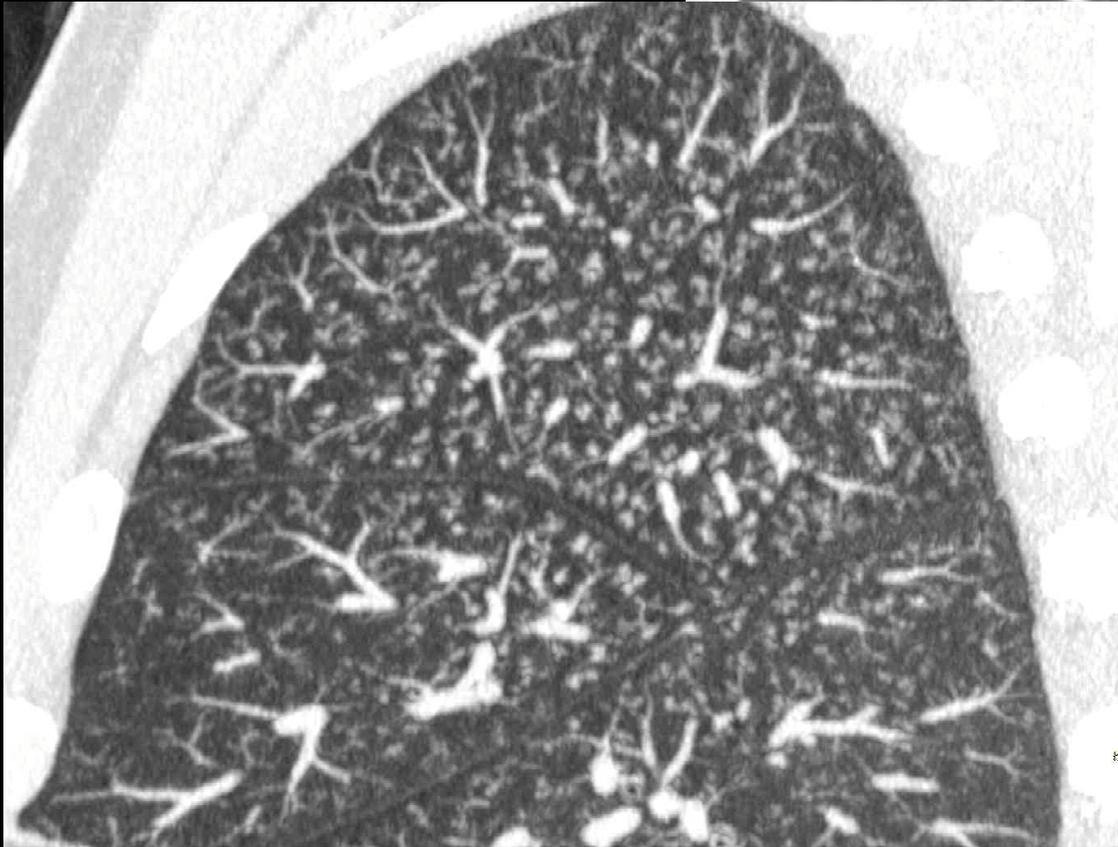


Figure 42 - Small nodules (arrows) with centrilobular (a), perilymphatic (b) and random (c) distribution.



Multiple nodules

pleural nodules

no pleural nodules

subpleural, septal,
peribronchovascular,

diffuse
no predominance

perilymphatic
distribution

random
distribution

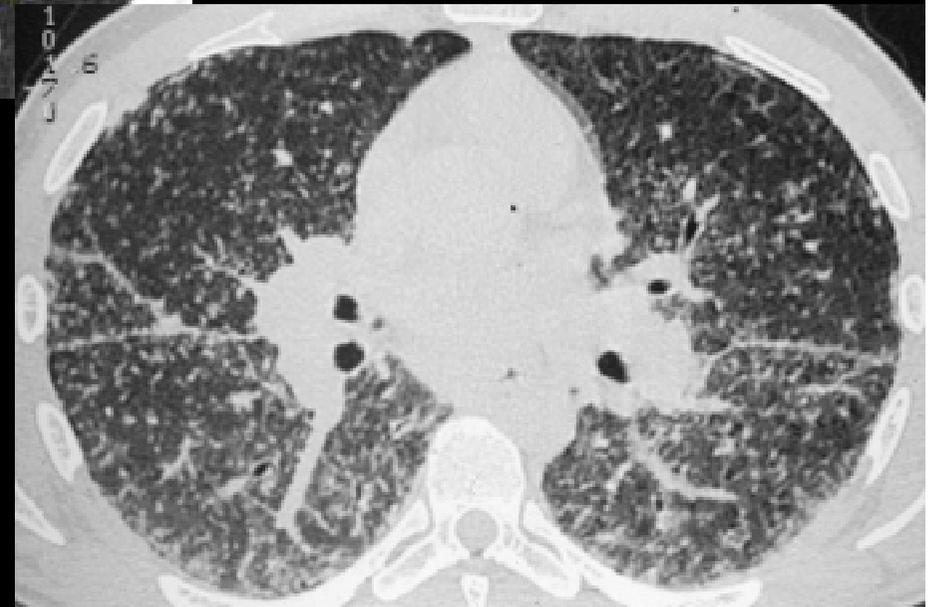
centrilobular
distribution

Sarcoid
silicosis
lymphangitic ca

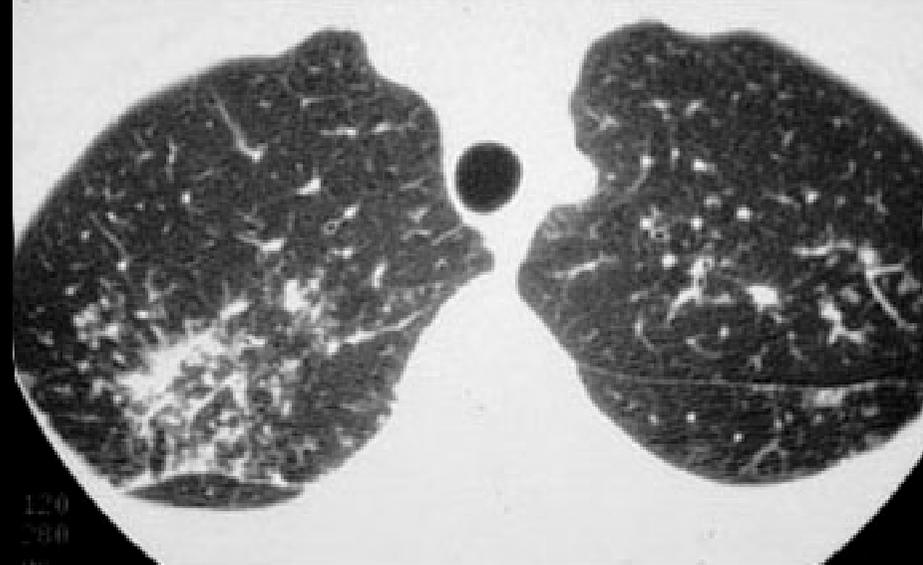
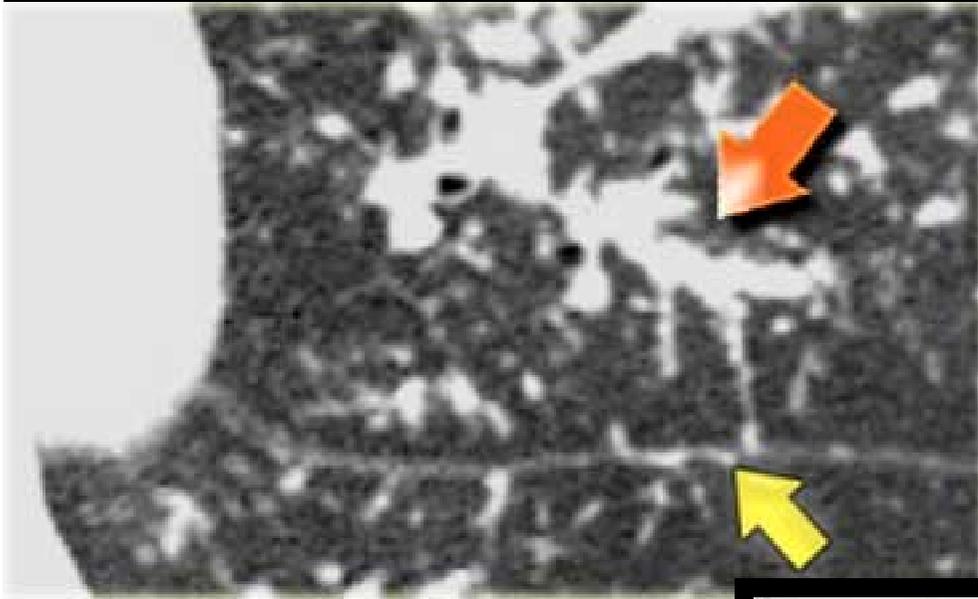
Miliary infect:
- TB, fungal
Metastases

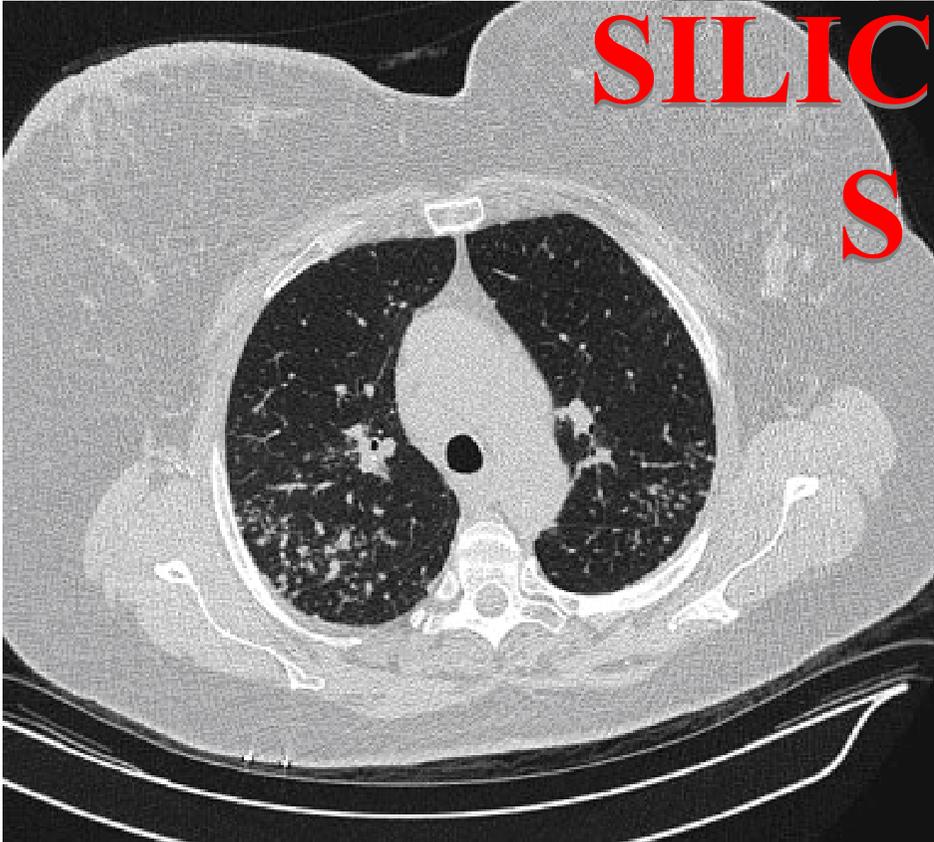
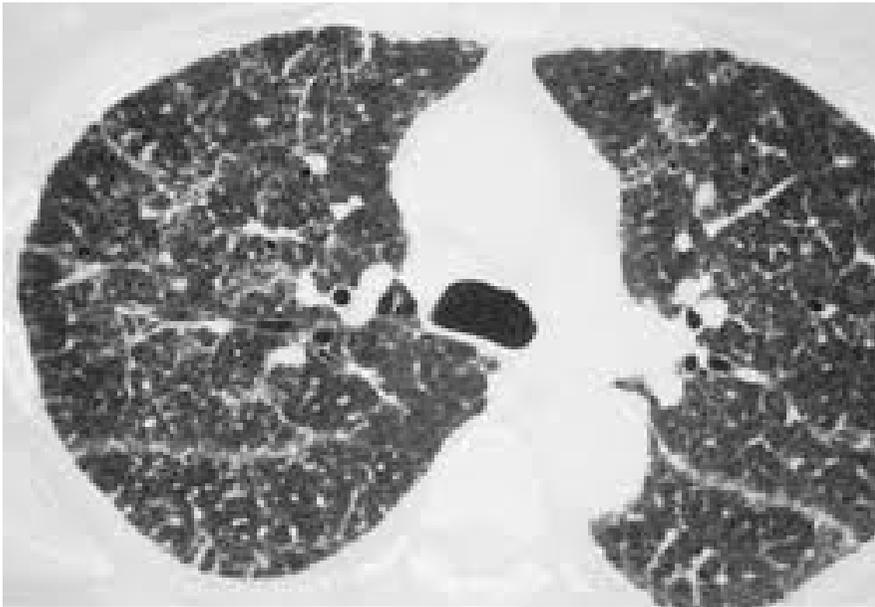
Hypersens. pneum
Resp bronchiolitis
Bronchioloalv ca
Infectious diseases

Sarcoidosis



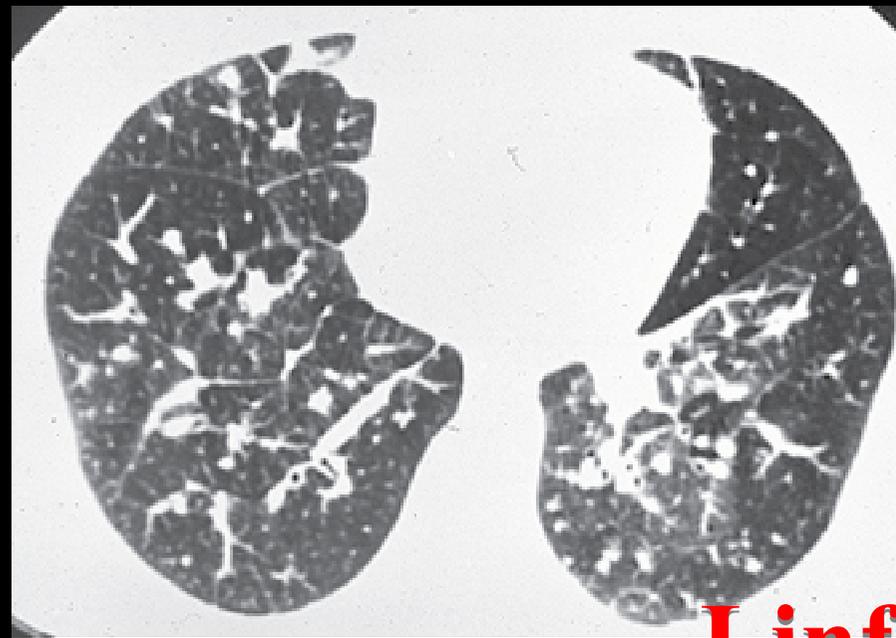
Sarcoidosis



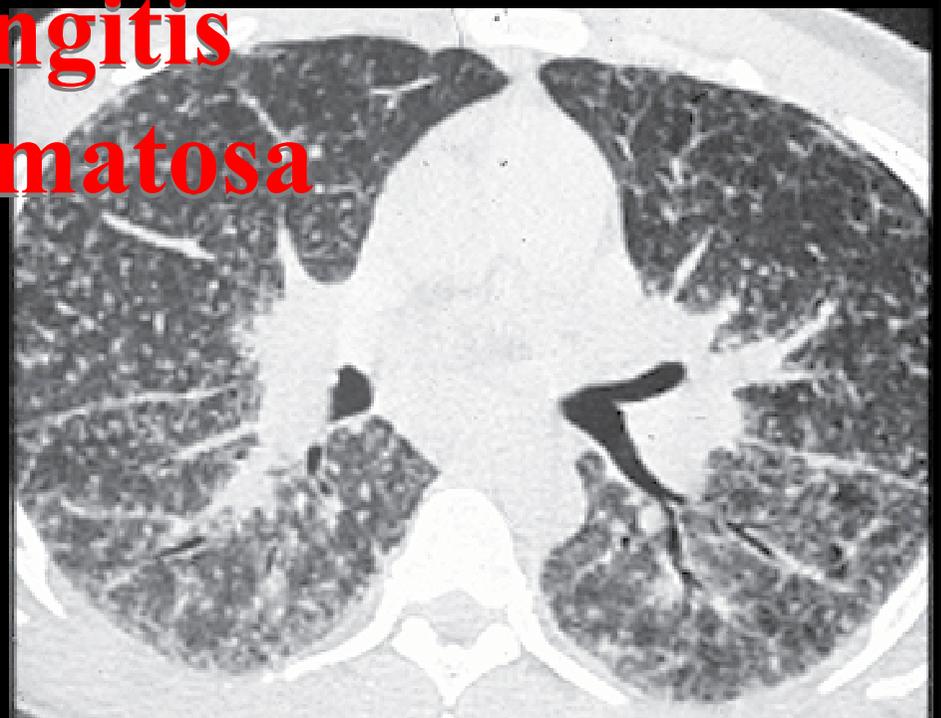


**SILICOSI
S**





**Linfangitis
carcinomatosa**



Patrón nodular centrolubulillares

- Neumonitis por hipersensibilidad
- Bronquiolitis respiratoria
- Distribución endobronquial de micobacterias
- Bronconeumonía
- Carcinoma Bronquioloalveolar

Neumonitis por Hipersensibilidad

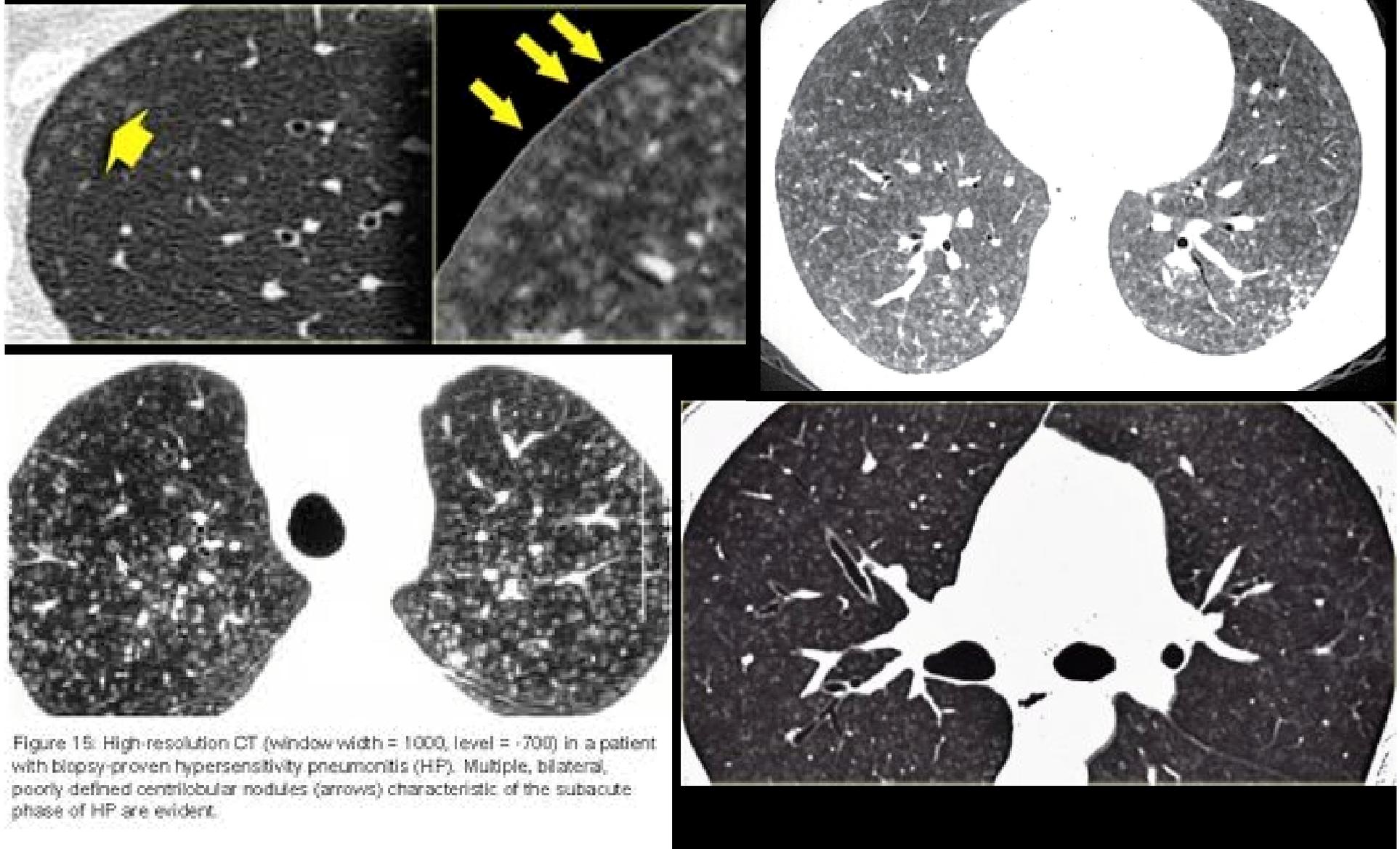
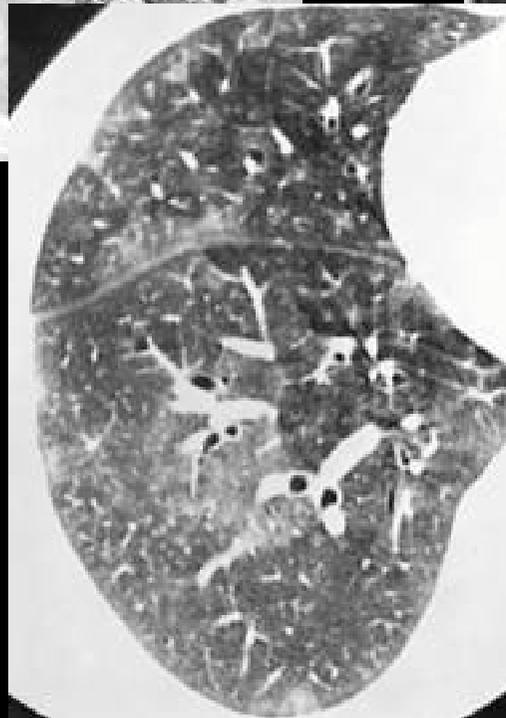
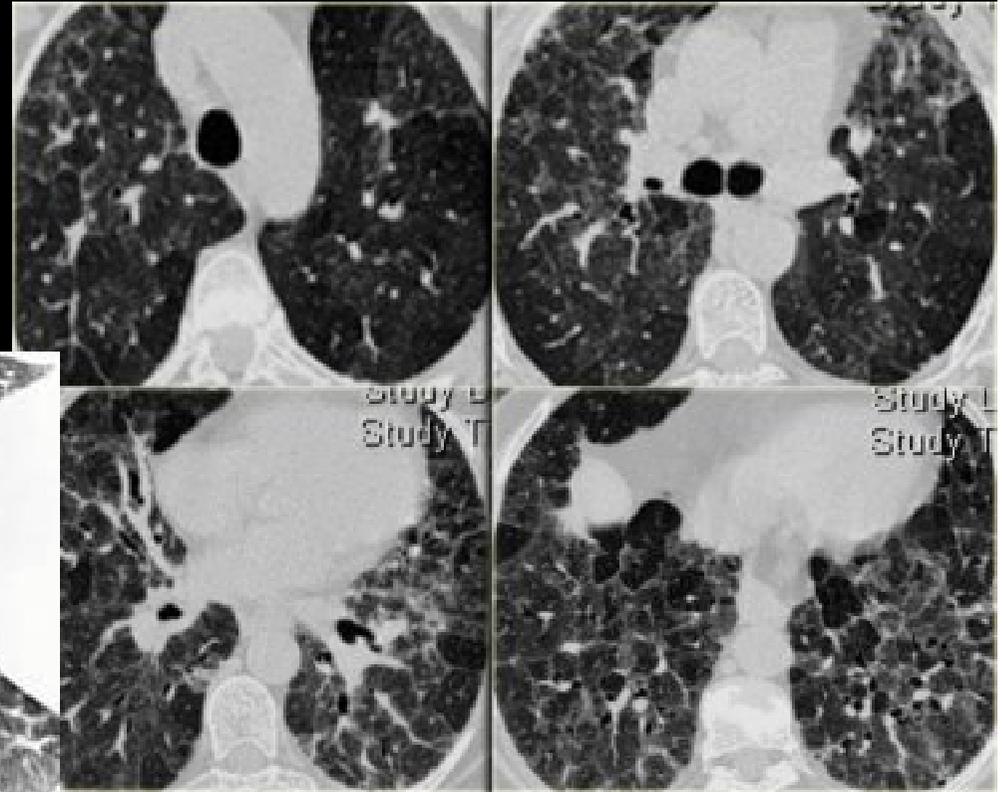
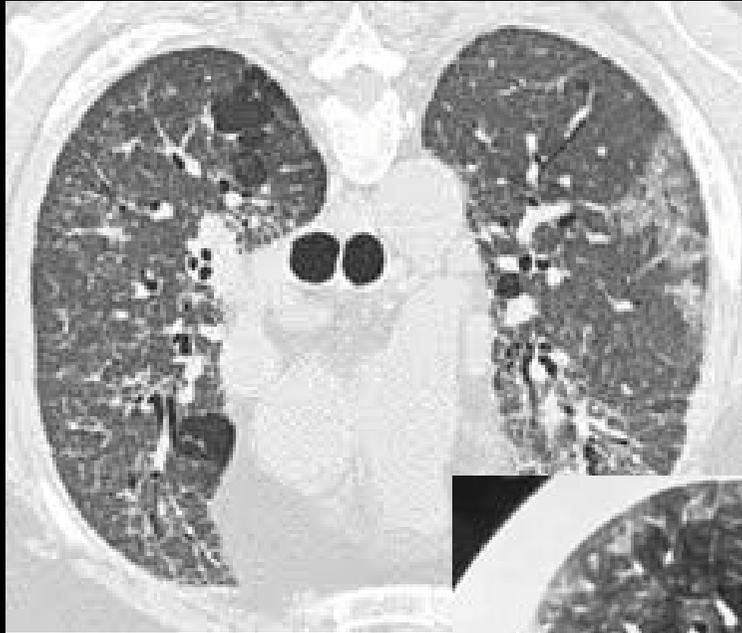
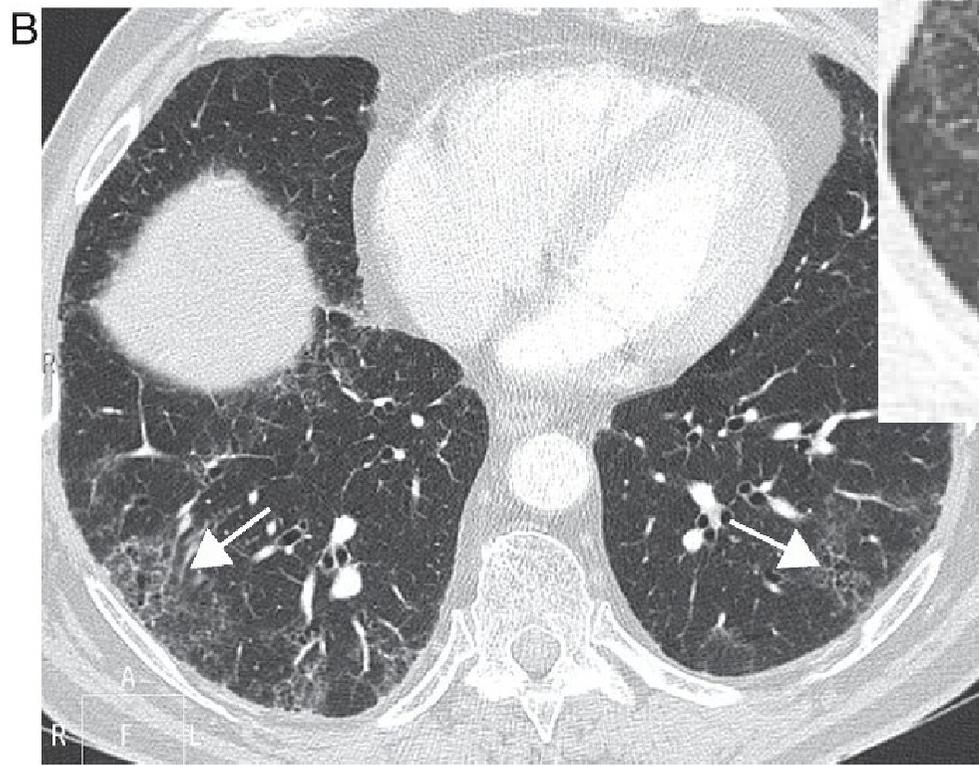


Figure 15: High-resolution CT (window width = 1000, level = -700) in a patient with biopsy-proven hypersensitivity pneumonitis (HP). Multiple, bilateral, poorly defined centrilobular nodules (arrows) characteristic of the subacute phase of HP are evident.

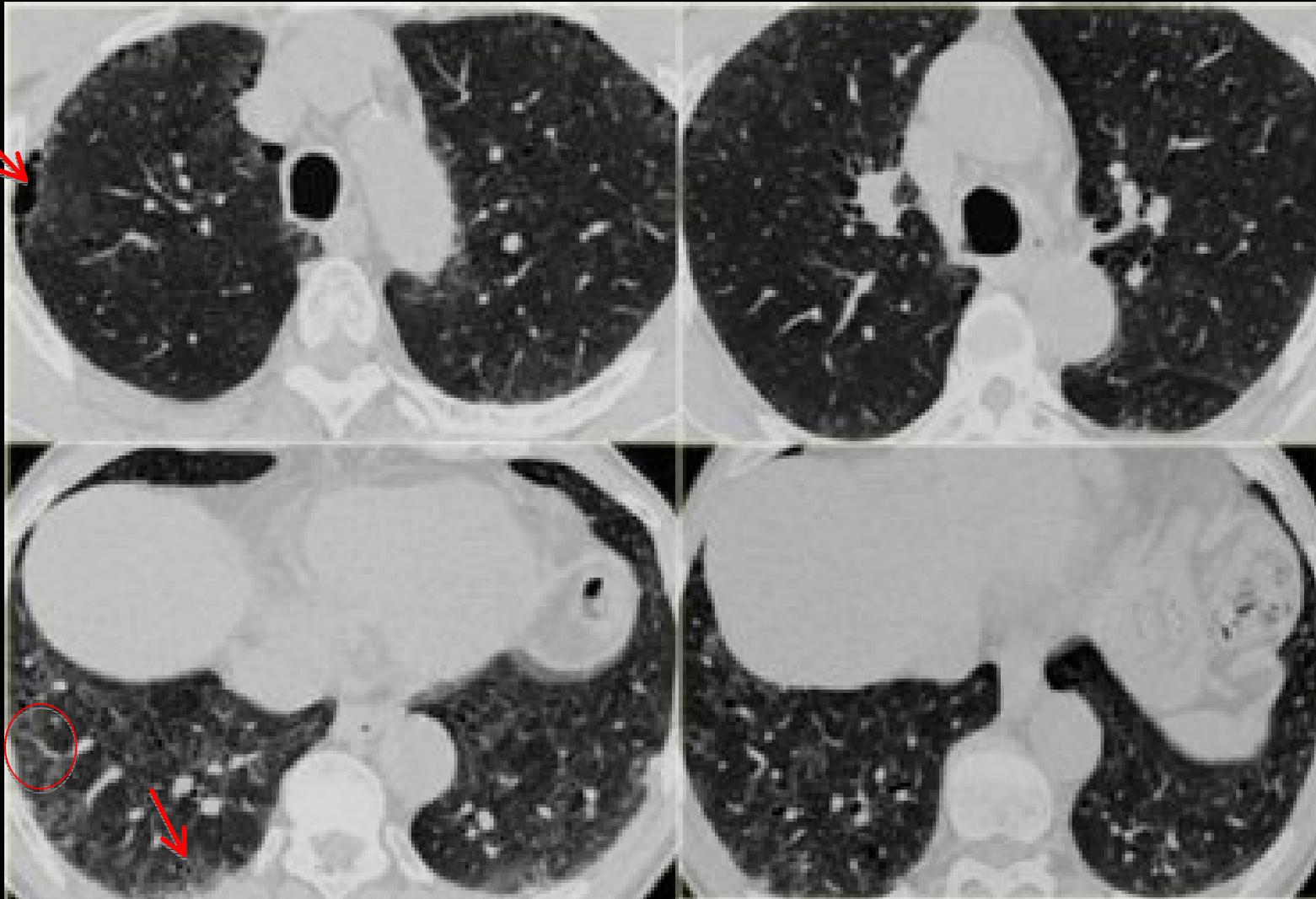
Neumonitis por Hipersensibilidad



BR-EPID



BR-EPID



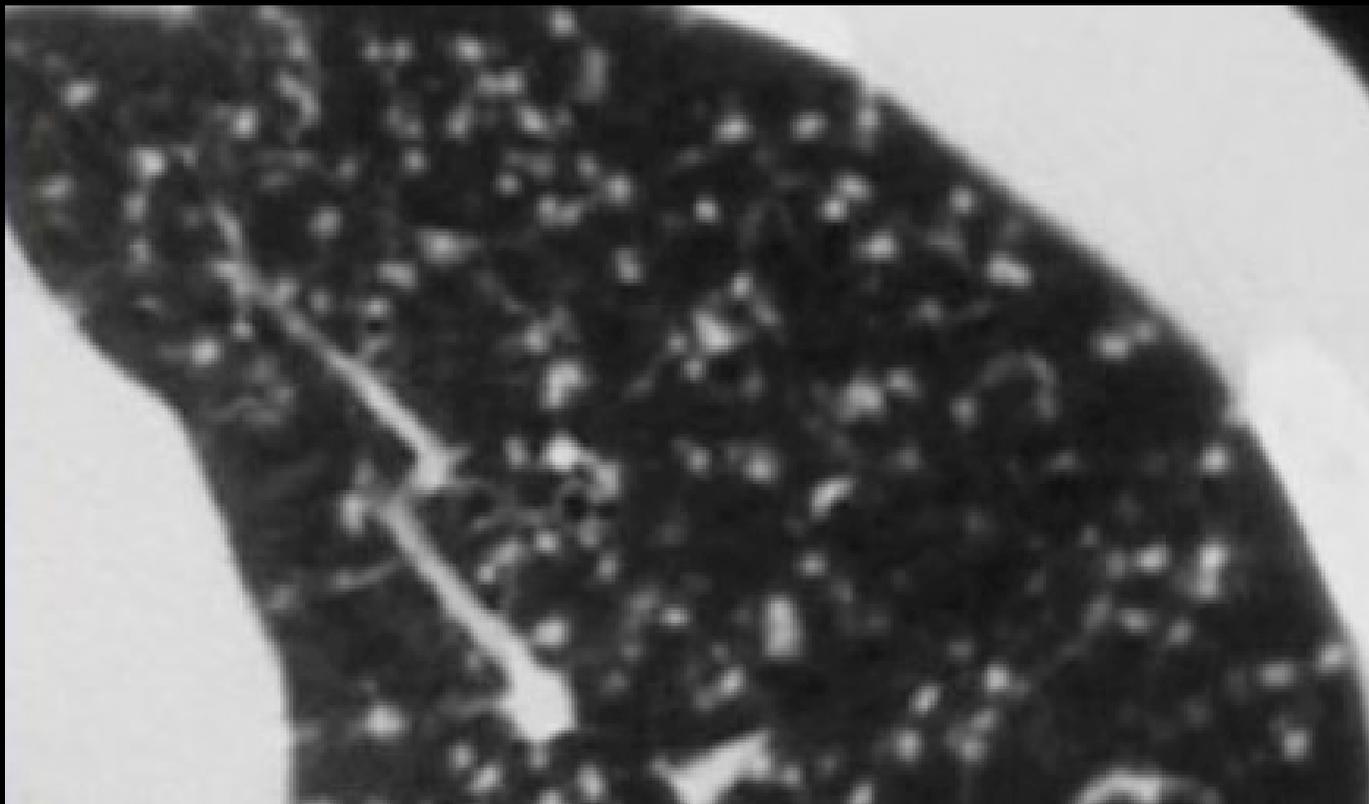
Tree in bud

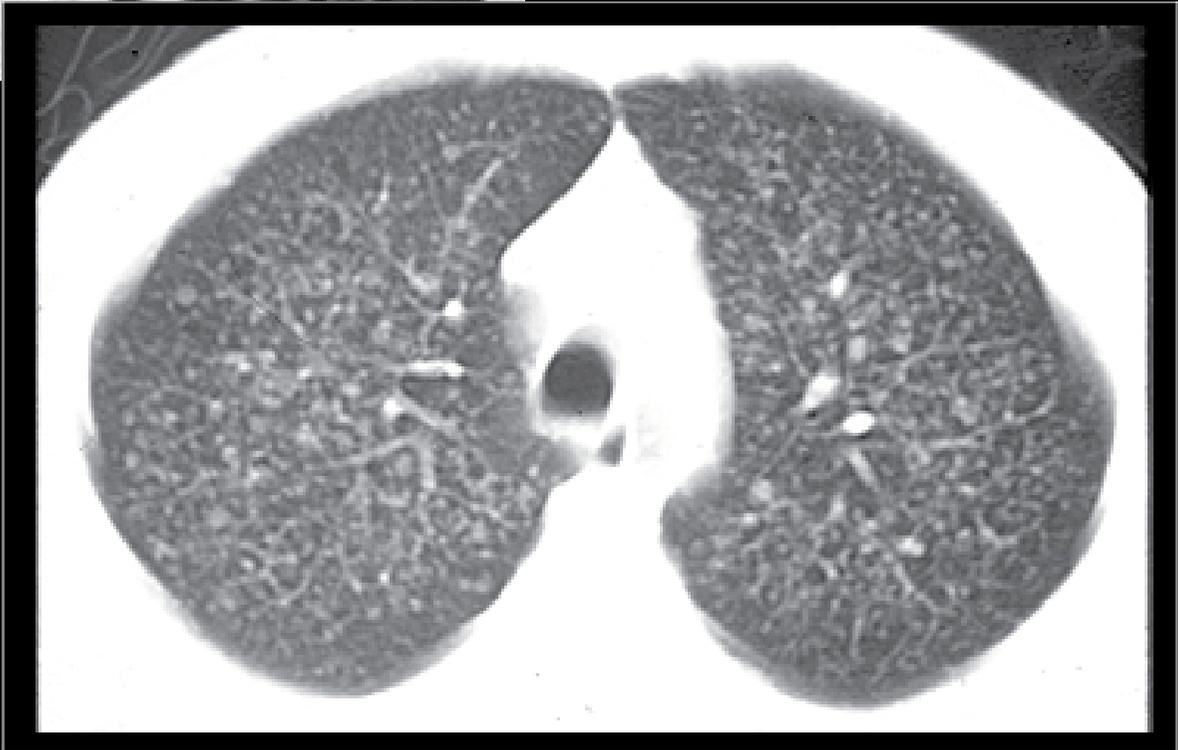
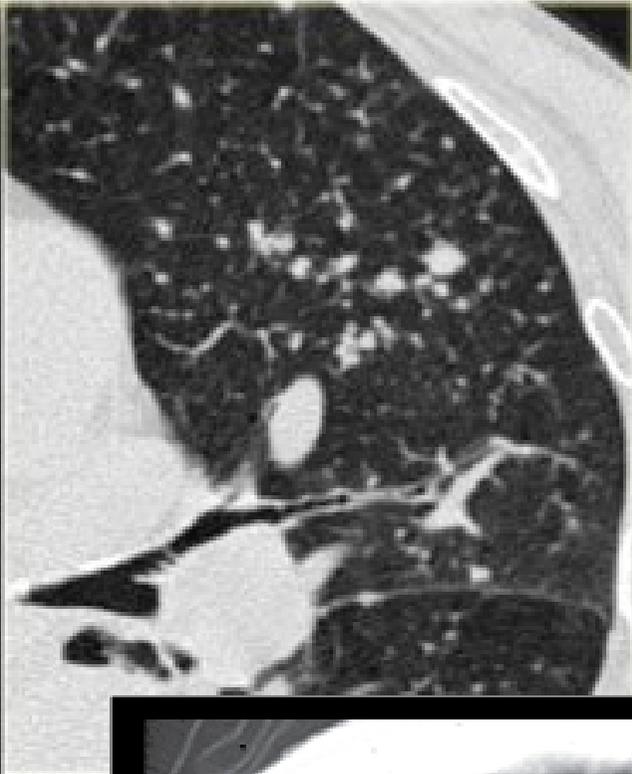
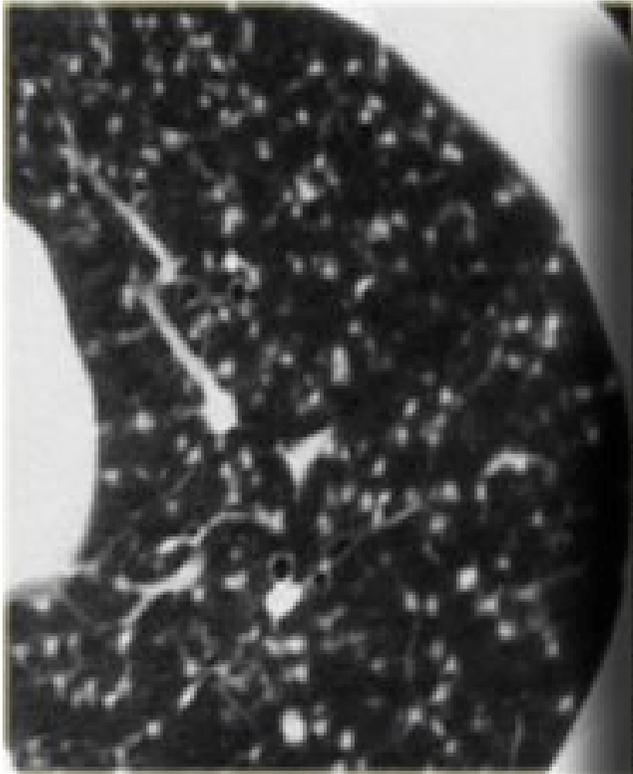
Infection *Tuberculosis*
MAC (mycobacterium avium)
bacterial, fungal

Airway disease (i.e. cystic fibrosis or bronchiectasis)
ABPA (Allergic bronchopulmonary aspergillosis (rare))



Distribución al azar





¿CUAL ES EL PATRÓN RADIOLOGICO PREDOMINANTE?

PATRON RETICULAR

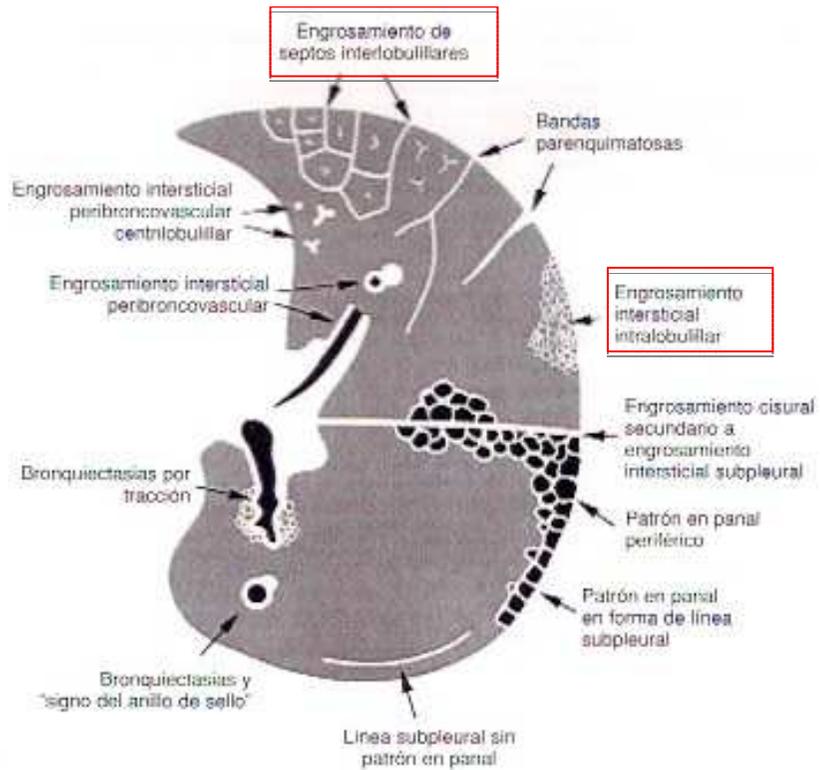
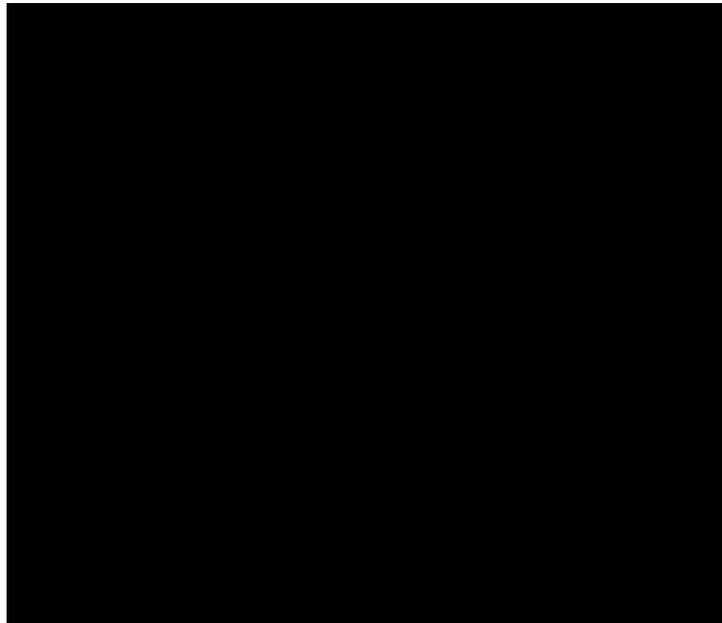
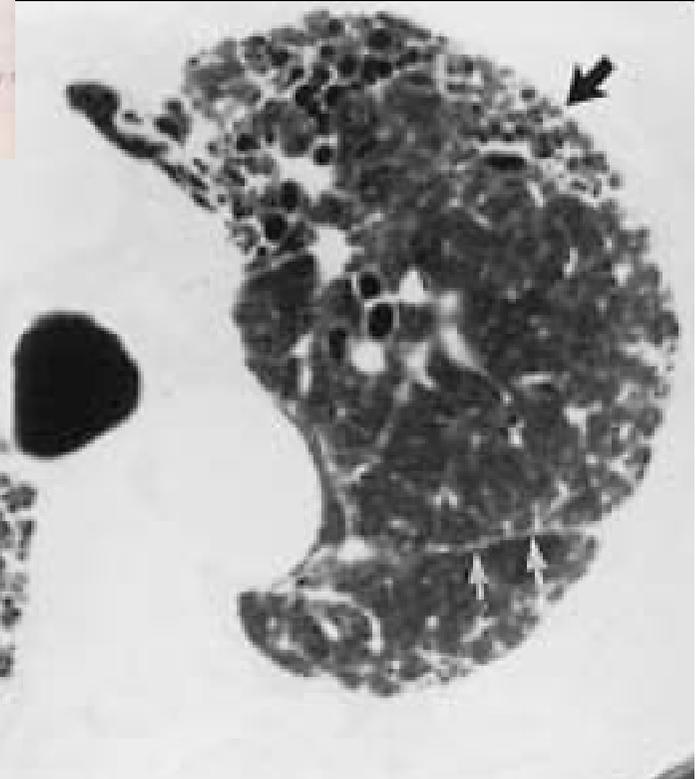
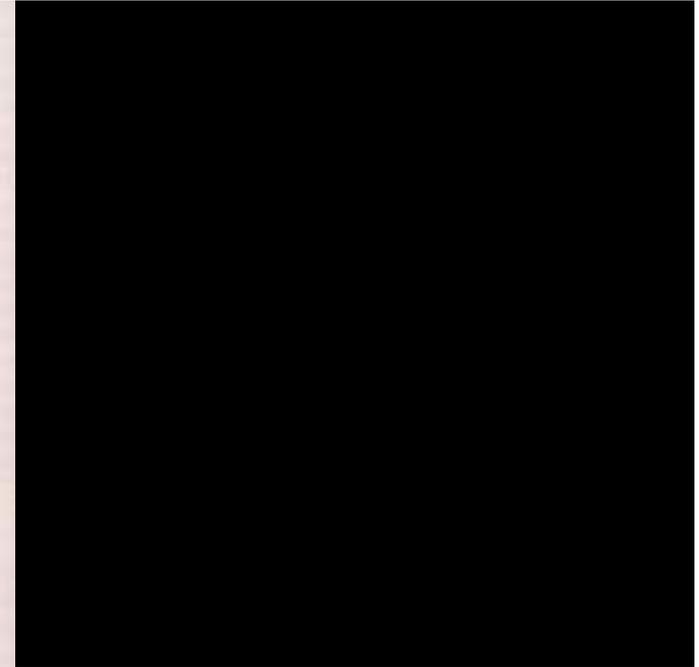
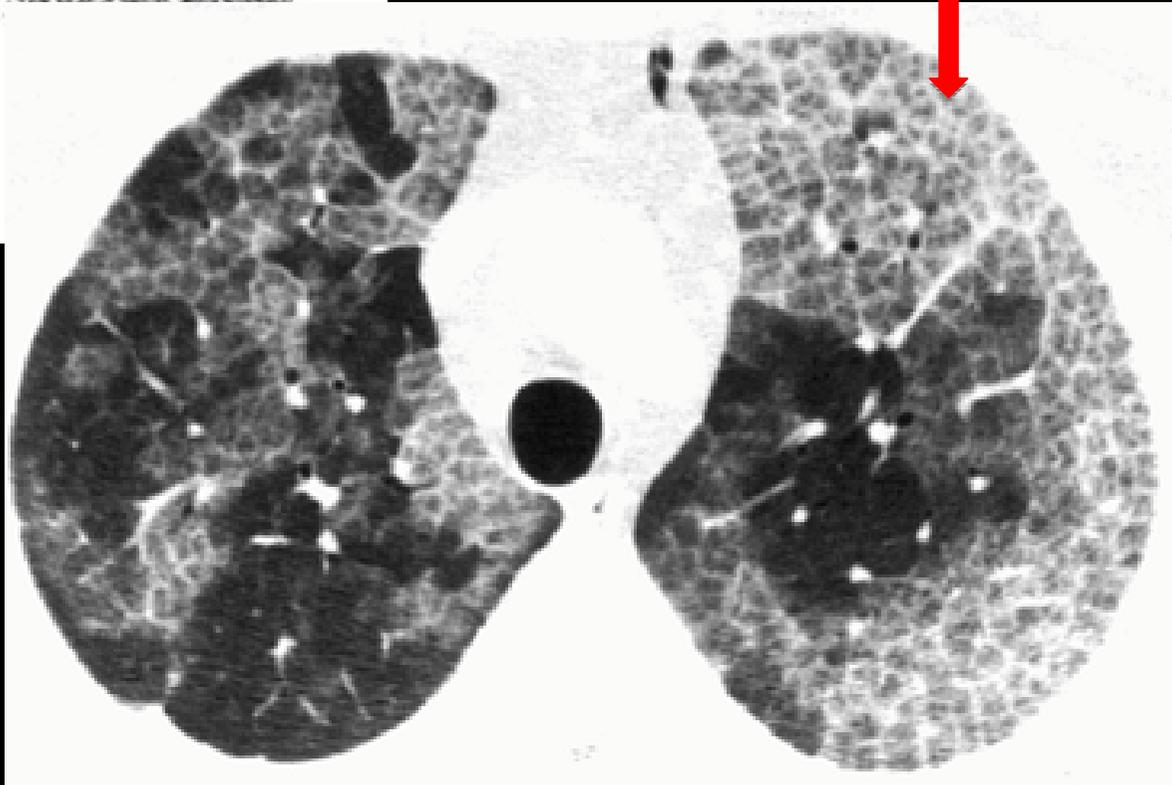
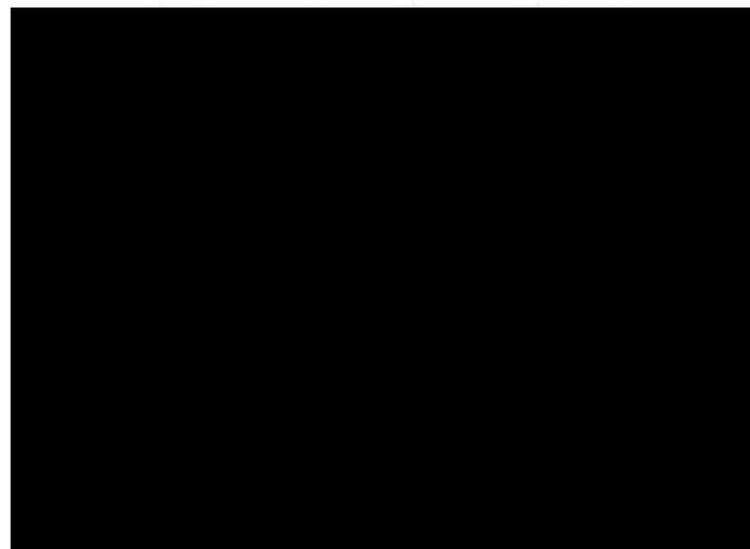
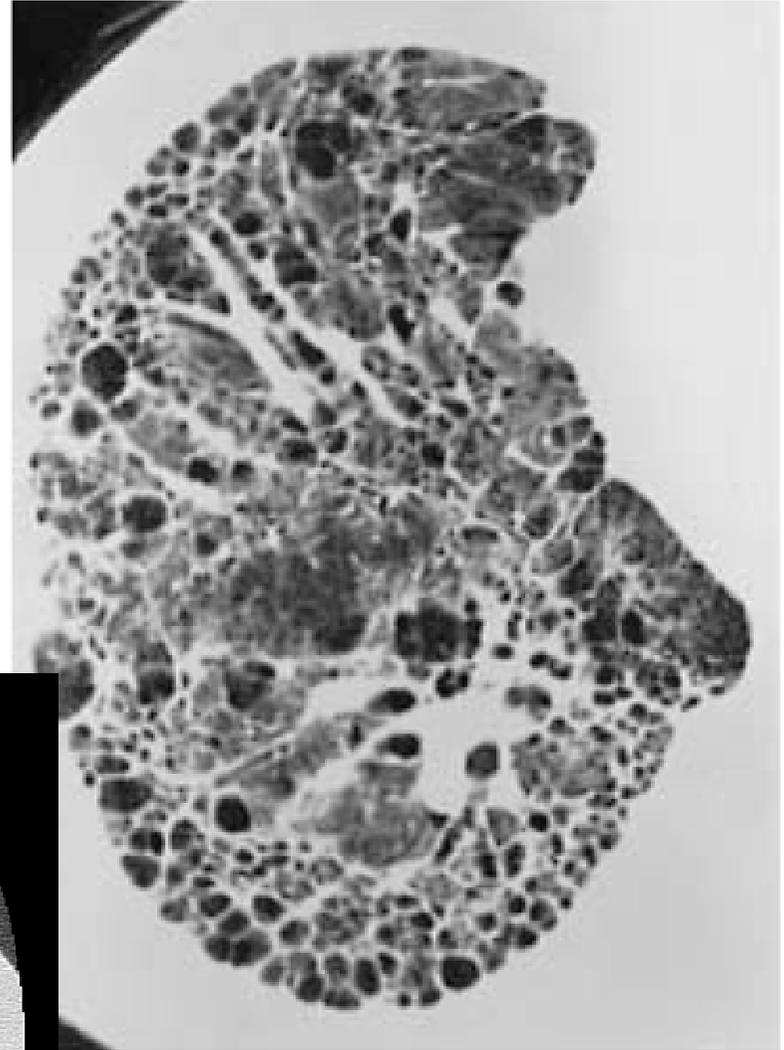
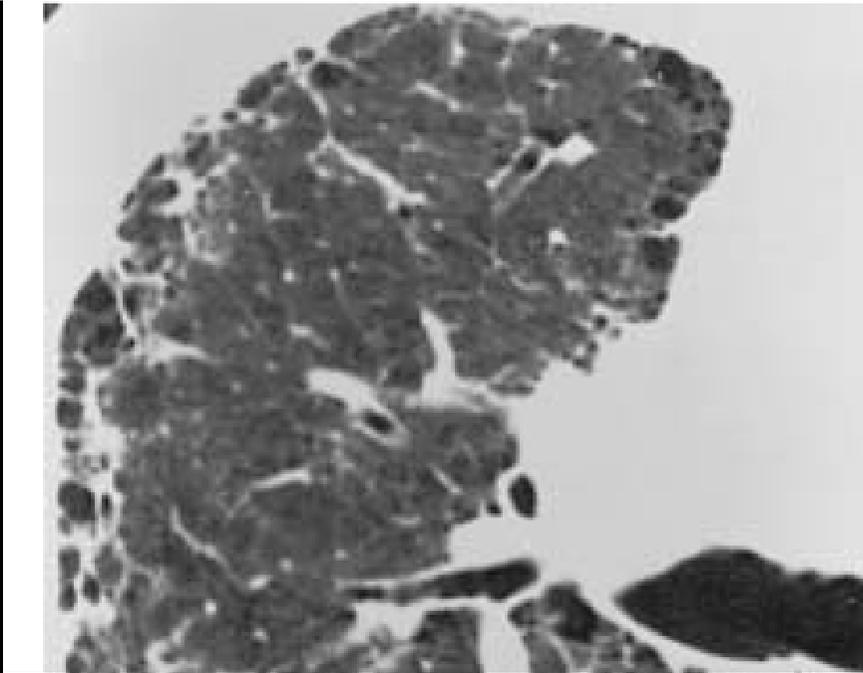


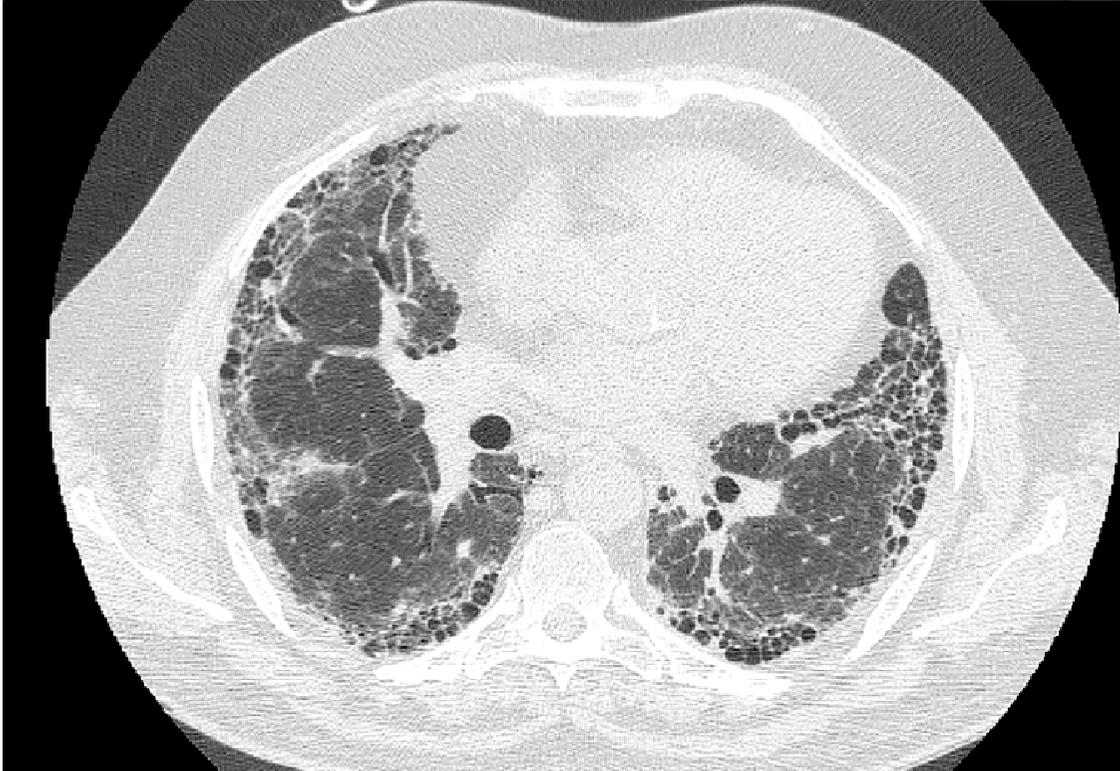
Figura 3-1. Densidades lineales y nódulos en TCAR.







B

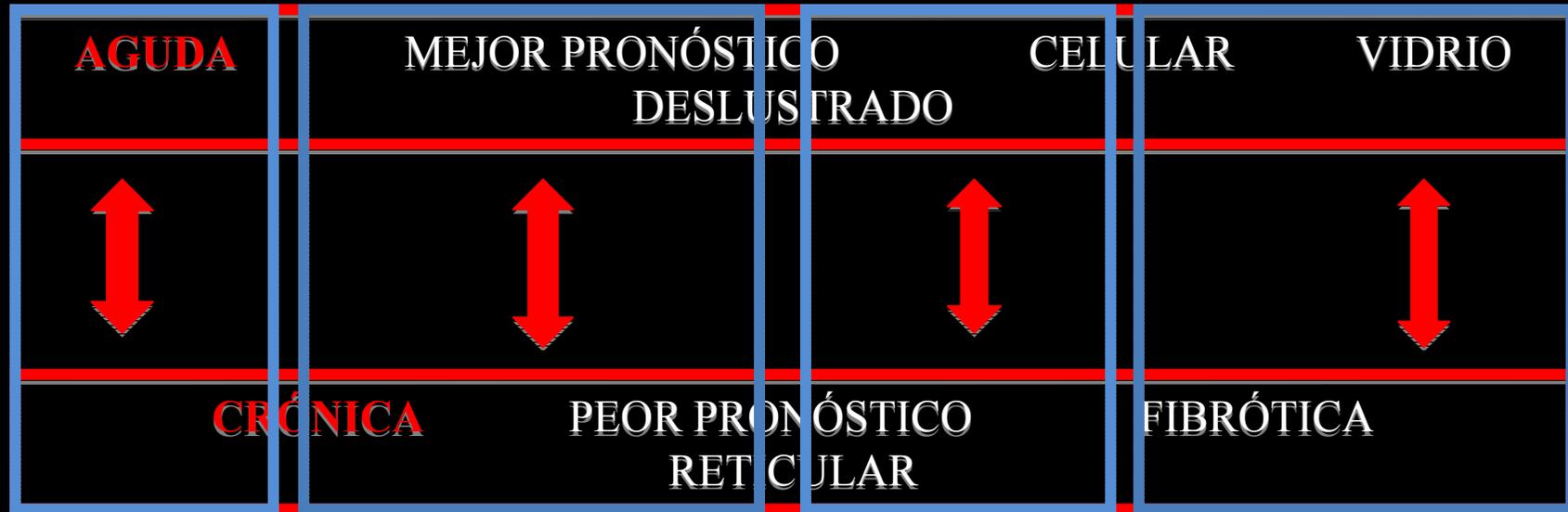


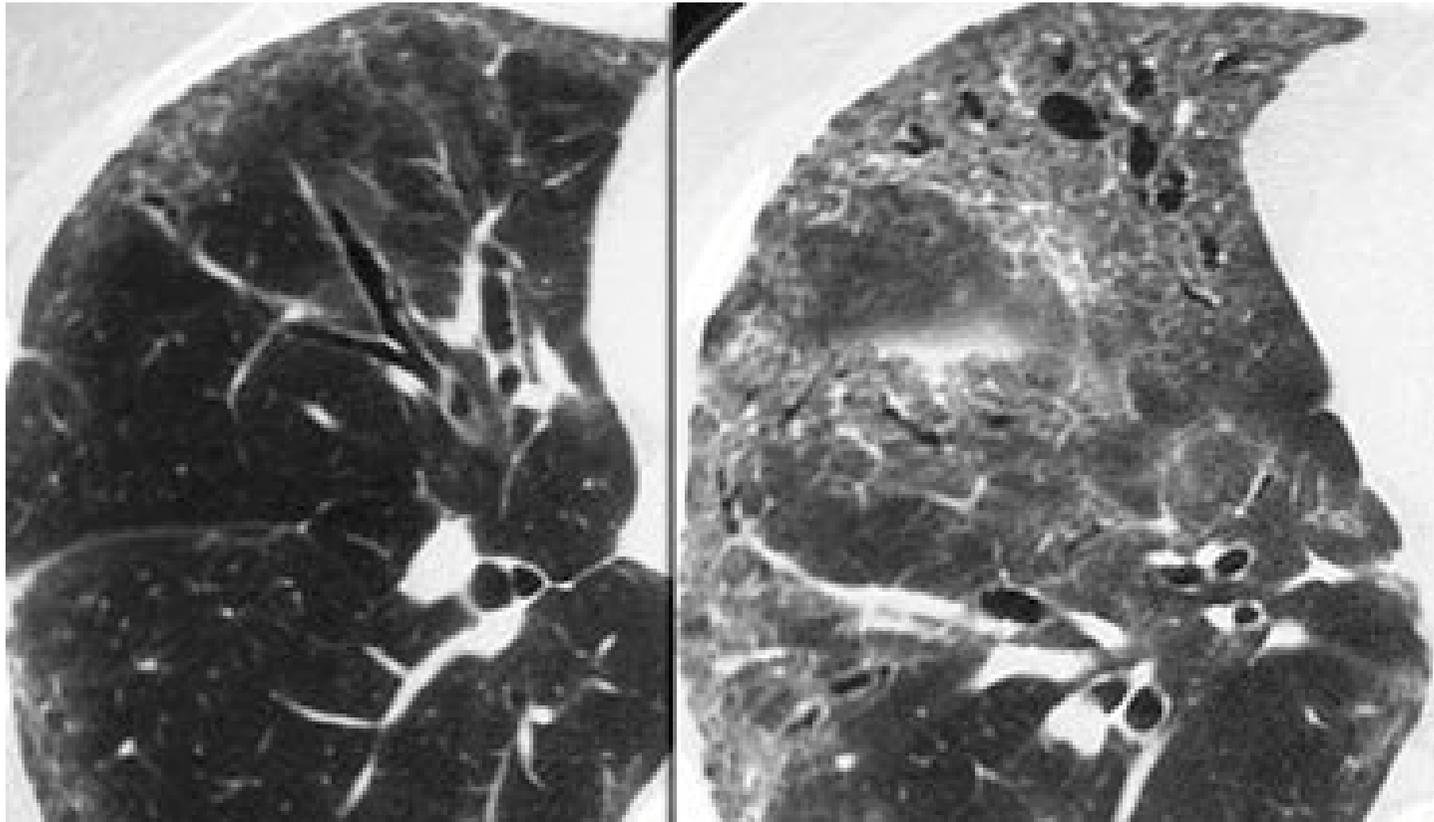
NIU/FPI

Diagnóstico diferencial de FPI

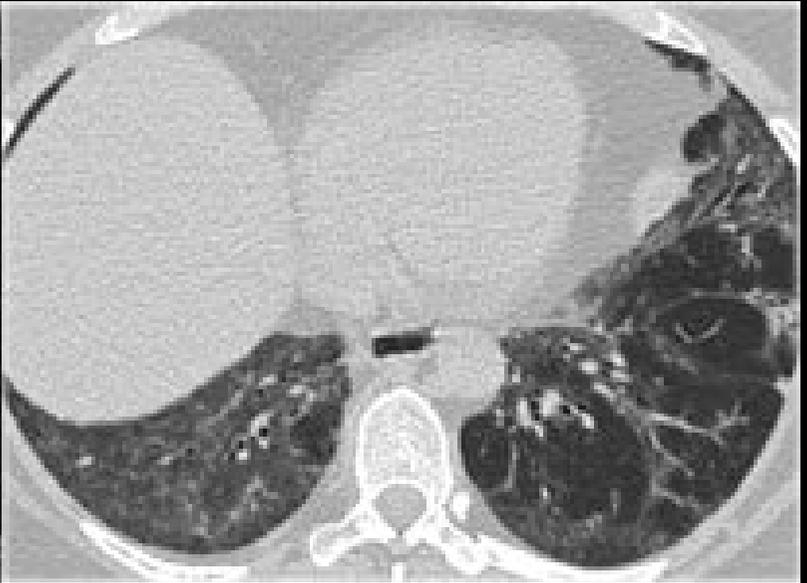
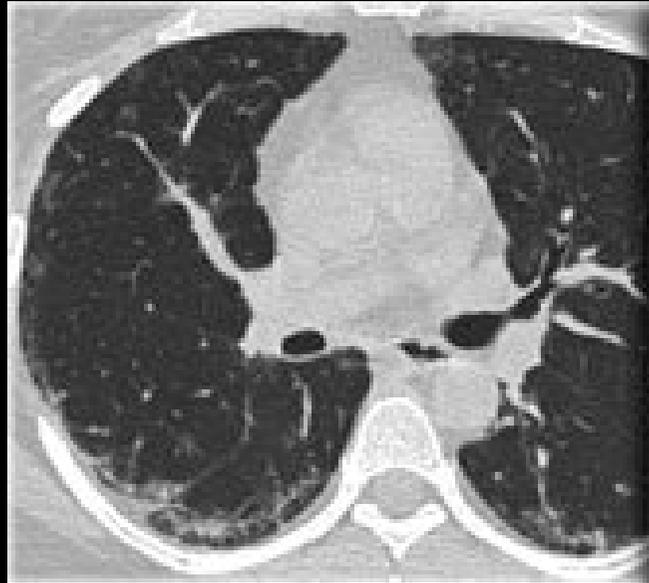
- NIU
- NINE tipo fibrótico
- Sarcoidosis, estadio avanzado
- Neumonitis por hipersensibilidad crónica

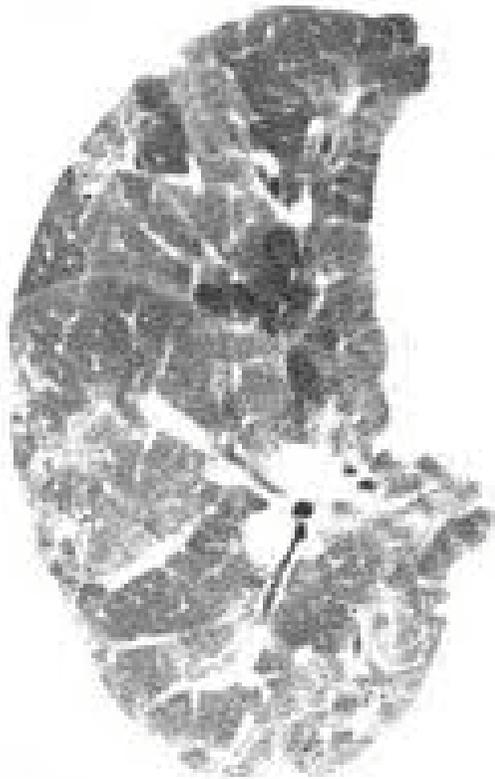
NINE



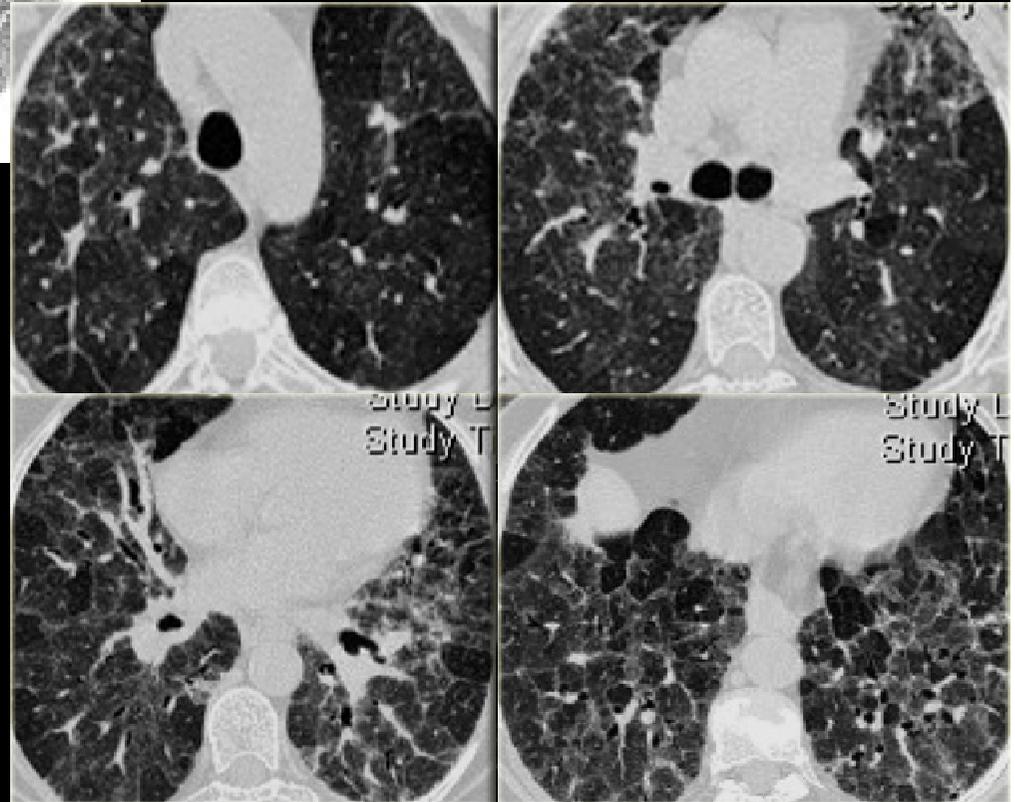


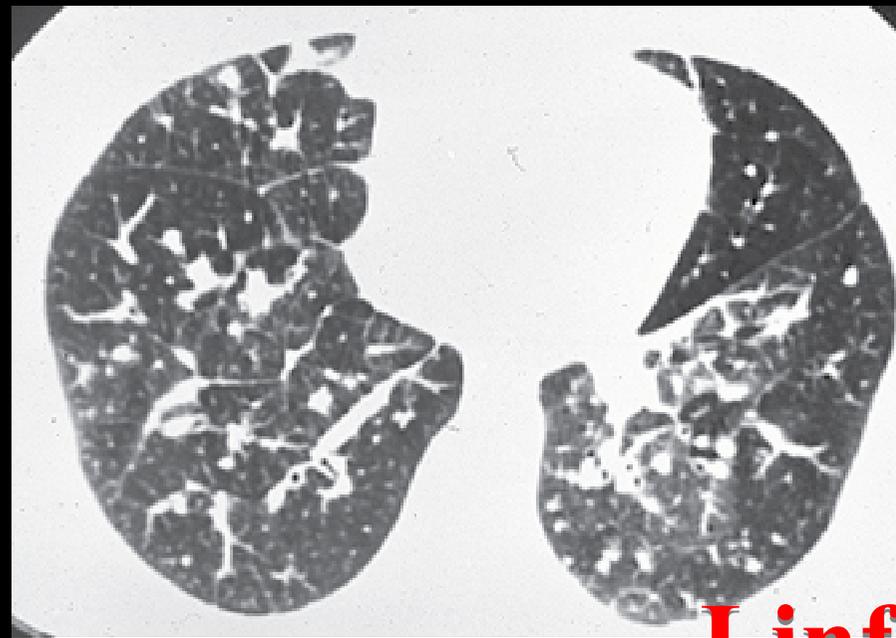
NINE



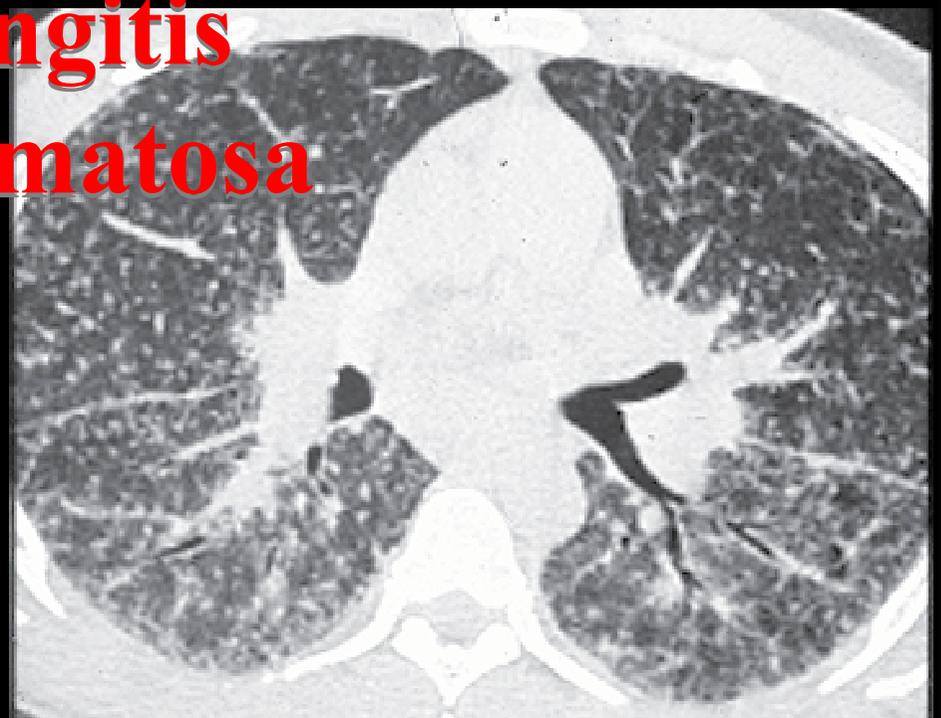


NEUMONITIS X HS CRÓNICA





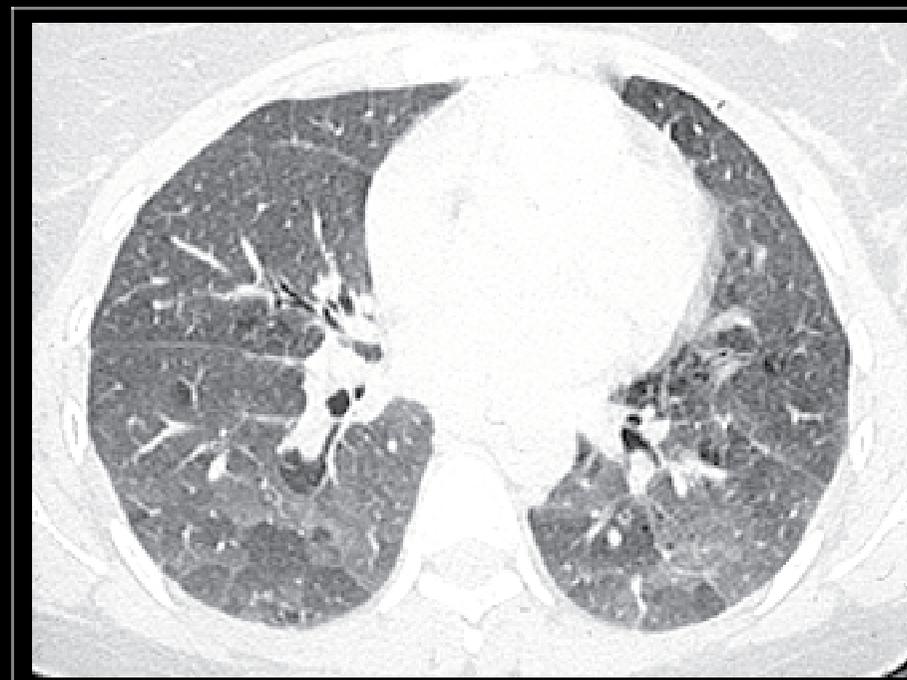
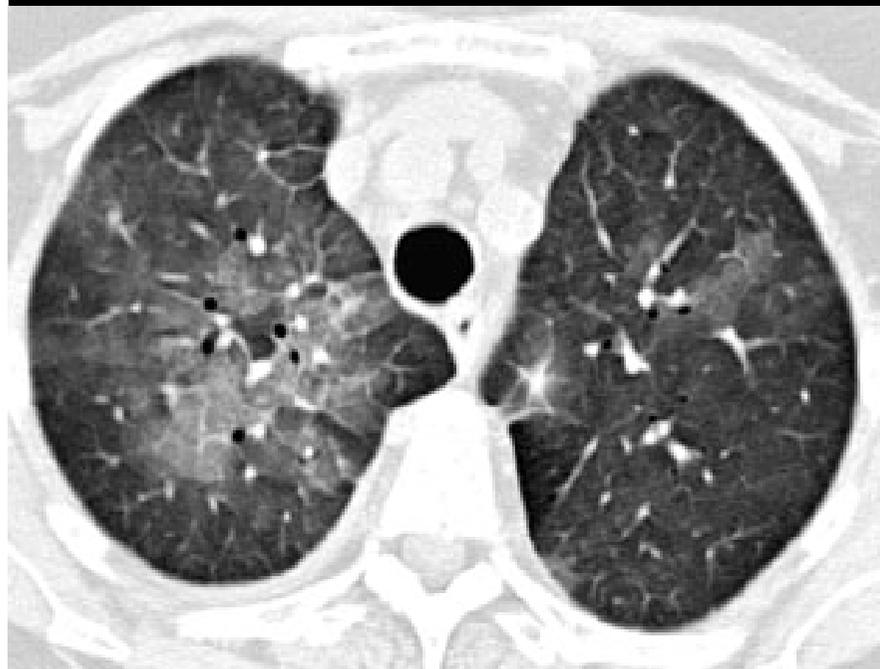
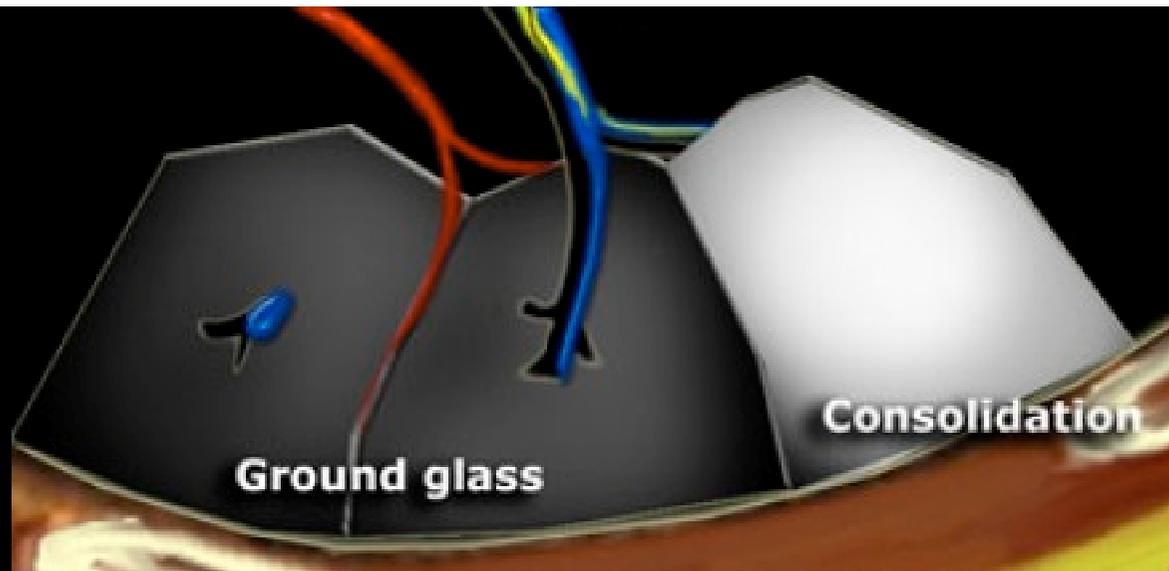
**Linfangitis
carcinomatosa**

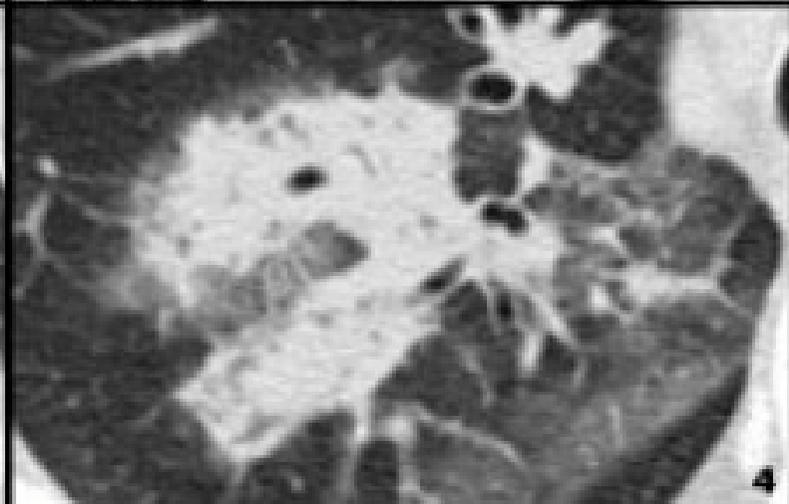
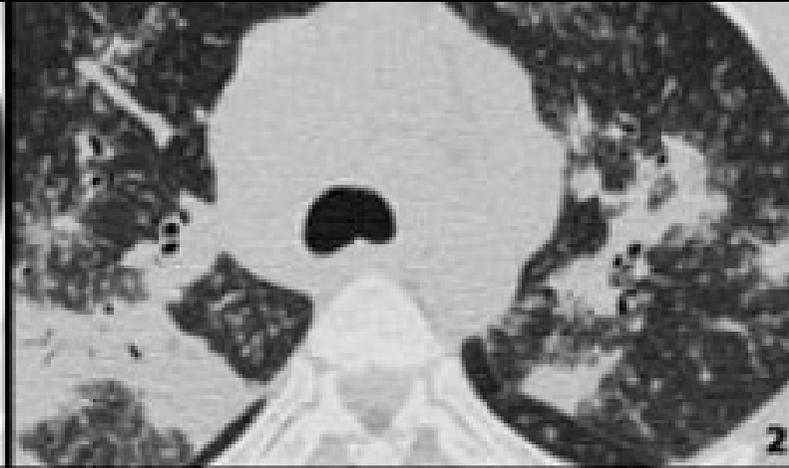
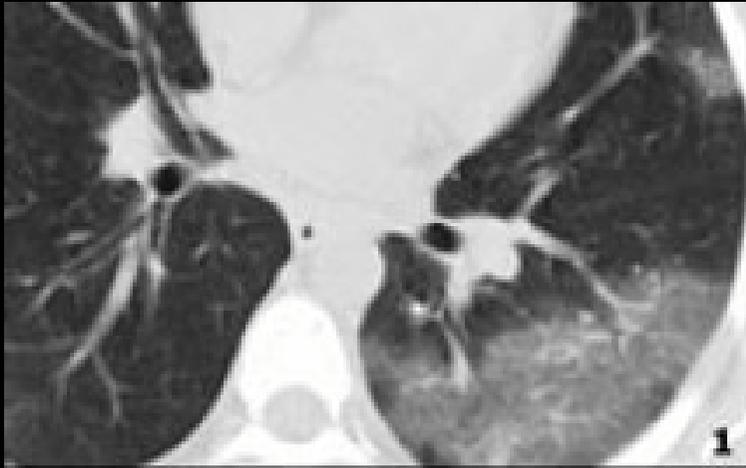


¿CUAL ES EL PATRÓN RADIOLÓGICO PREDOMINANTE?

**AUMENTO DE LA
ATENUACIÓN PULMONAR**

- Consolidación pulmonar
- Vidrio deslustrado
- Crazy paving
- Atenuación en mosaico





Diagnóstico diferencial del vidrio deslustrado

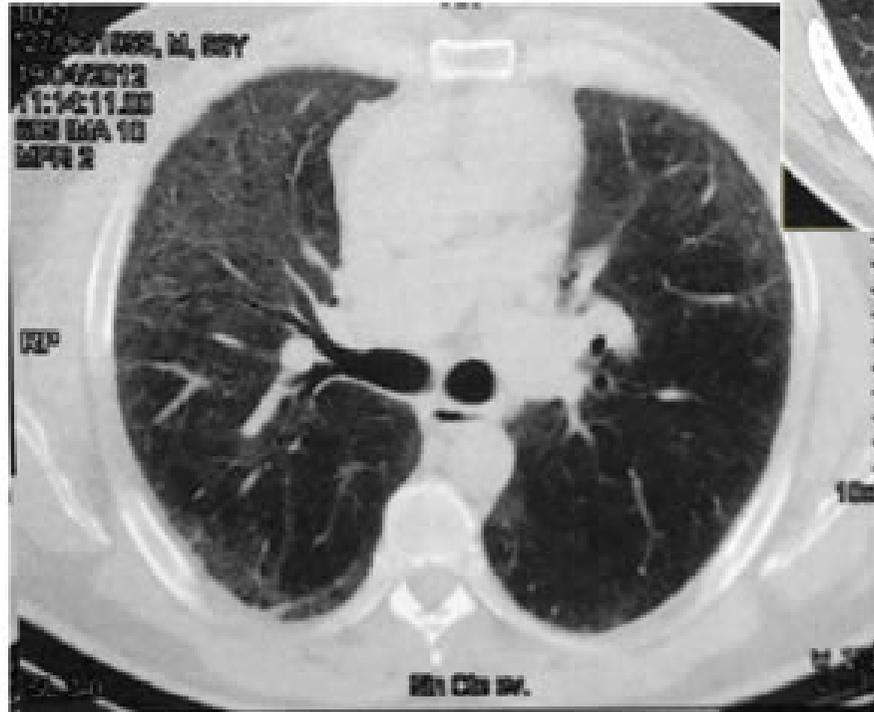
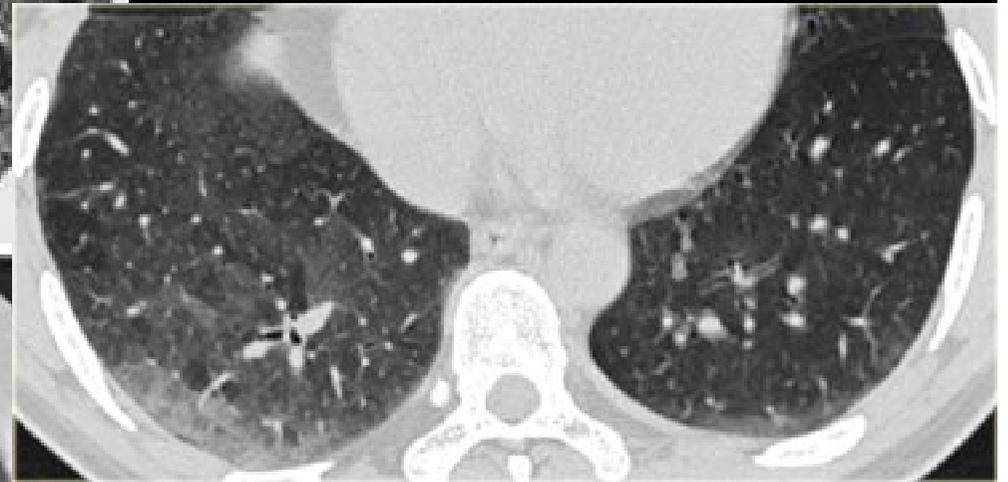
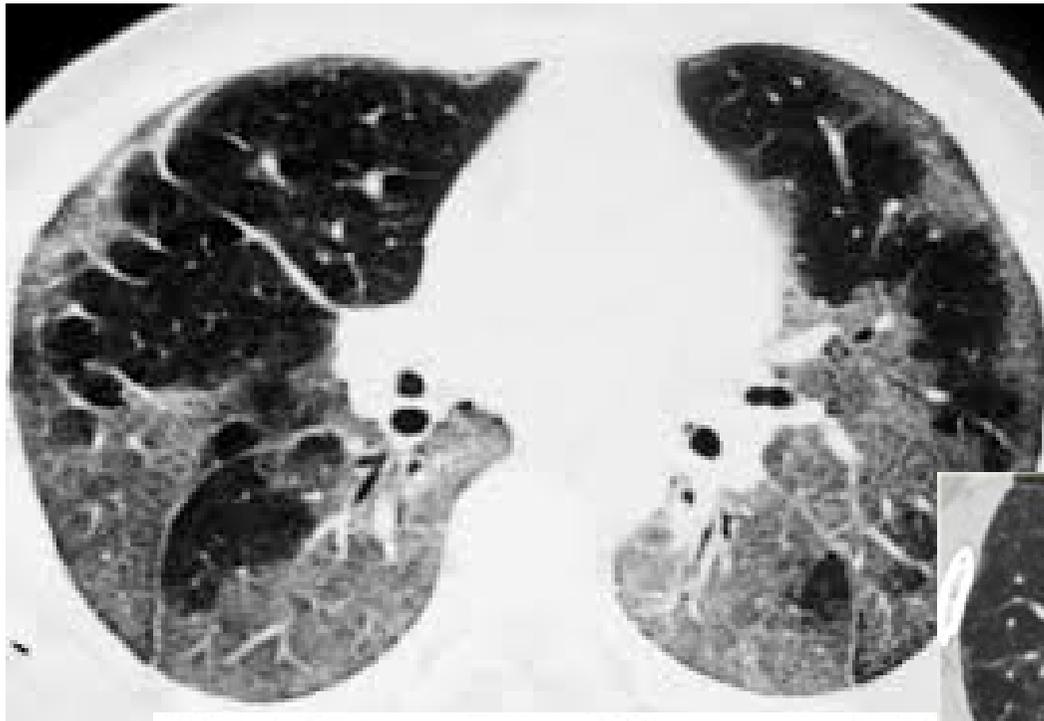
Agudo

- **SDRA/NIA**
- EAP
- Hemorragia pulmonar
- **Neumonía (CMV, P.Jirovecii)**
- **Neumonitis x HS**

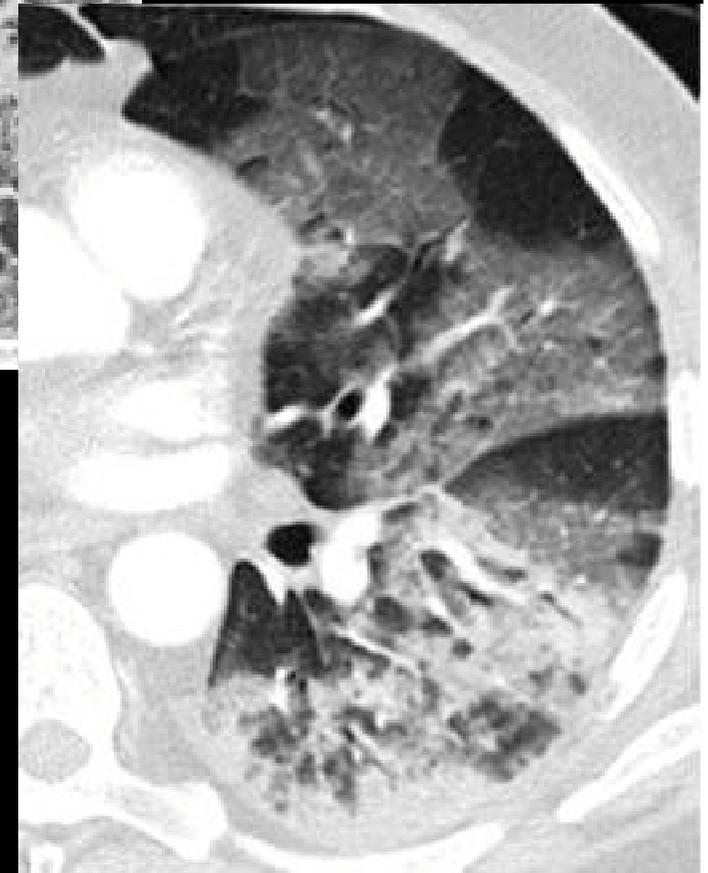
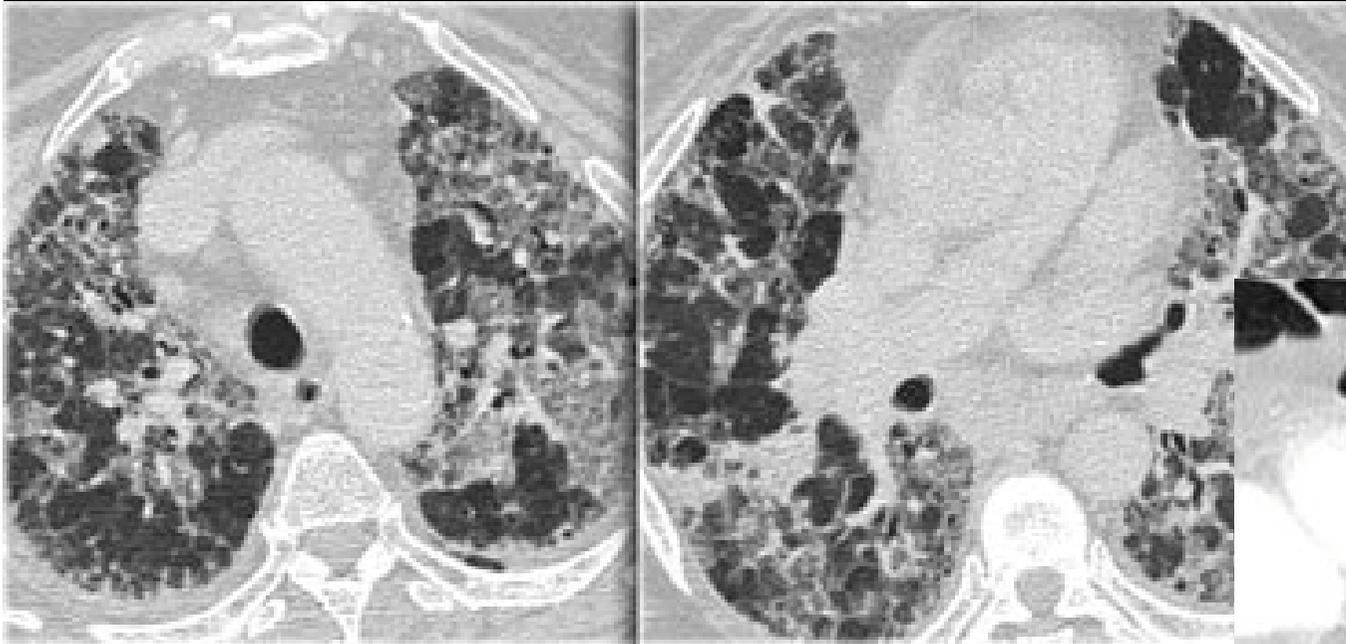
Subagudo/Crónico

- **NINE**
- NIU/FPI
- **Neumonitis x HS**
- **BR-EPID**
- **NID**
- NOC
- NIL
- Sarcoidosis
- Neumonía eosinófila crónica
- Churg Strauss
- Ca Bronquioloalveolar
- **Proteinosis alveolar**
- Neumonía Lipoidea

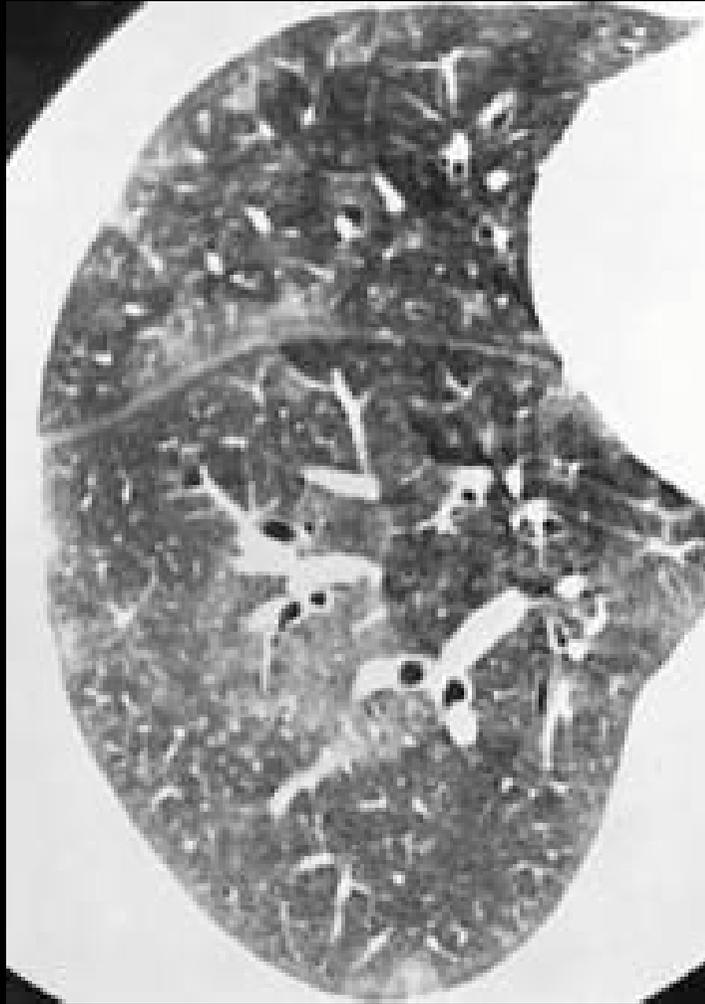
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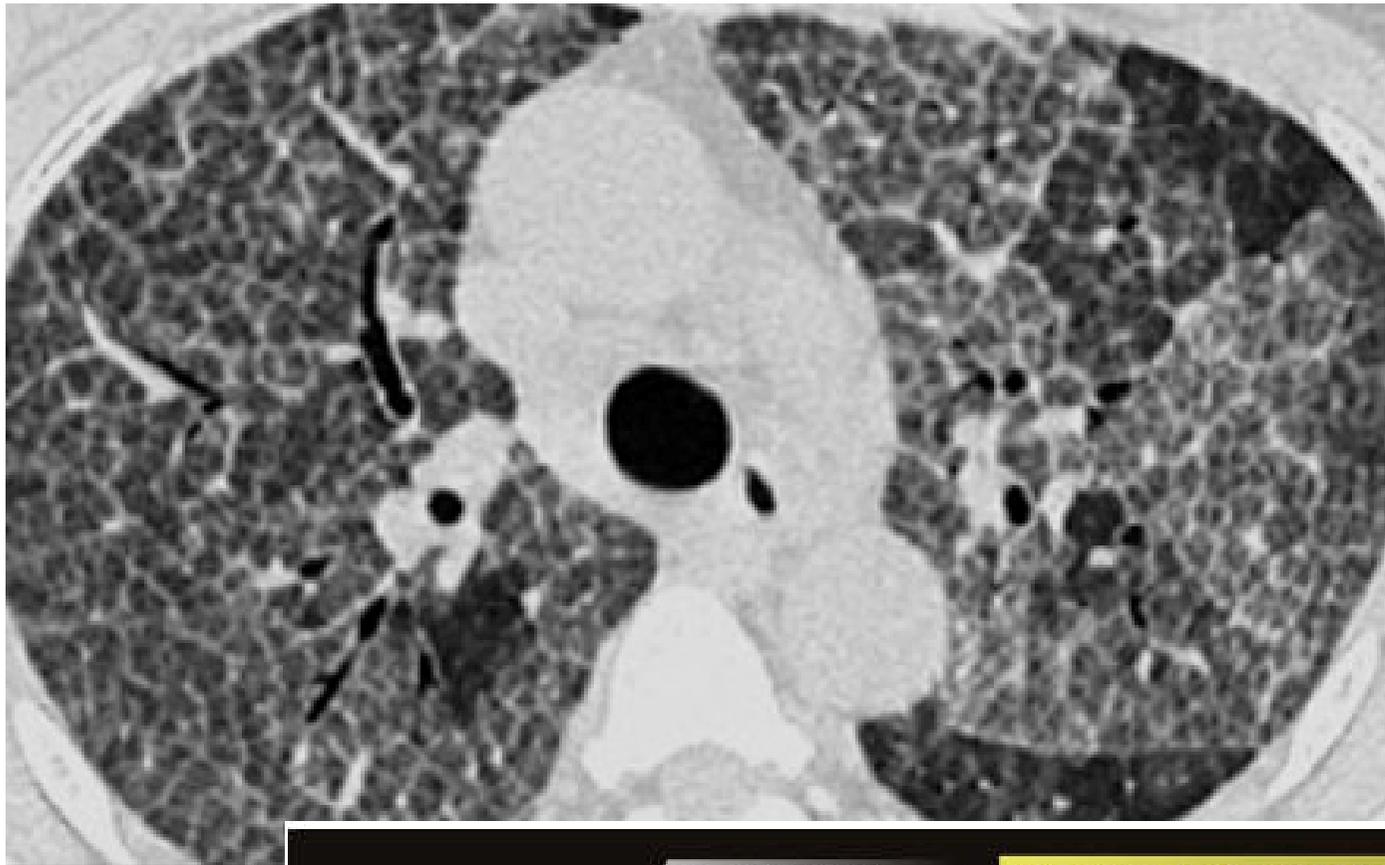


NIA



Neumonitis por hipersensibilidad fase aguda





Crazy paving

CAUSES

INFECTION

Pneumocystis carinii pneumonia (PCP)

NEOPLASM

Mucinous Bronchioloalveolar Carcinoma (BAC)

IDIOPATHIC

Pulmonary Alveolar Proteinosis (PAP)

Sarcoidosis

Nonspecific Interstitial Pneumonia (NSIP)

Organizing Pneumonia (OP)

INHALATION

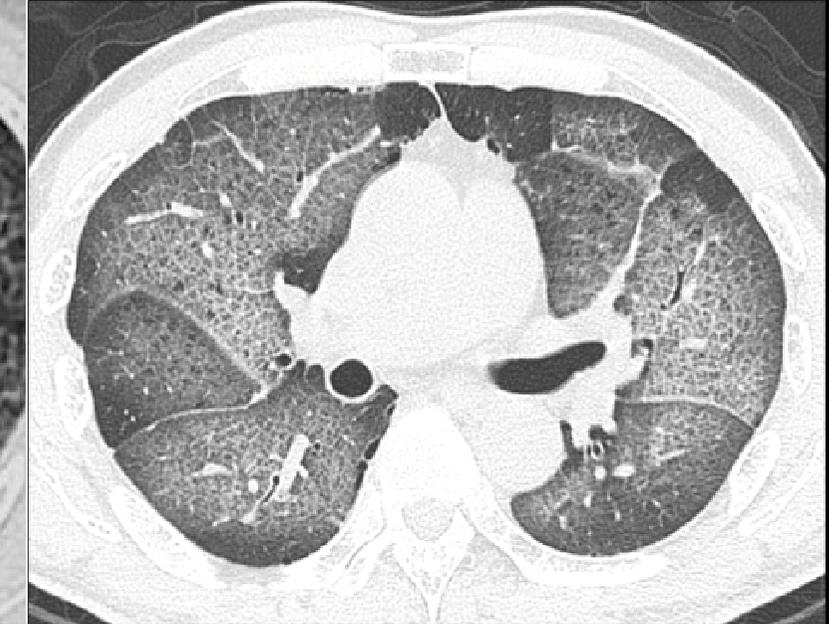
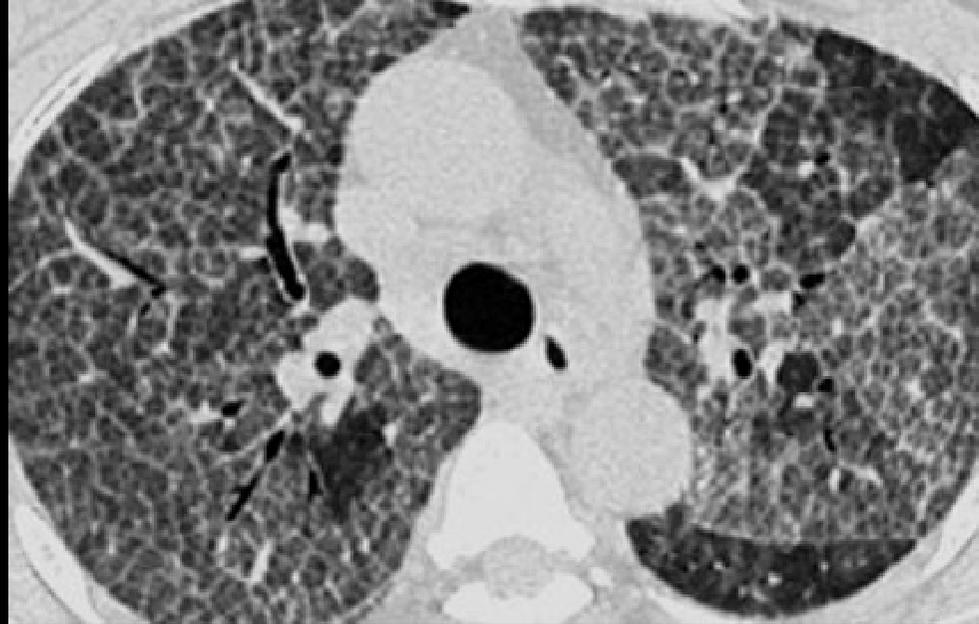
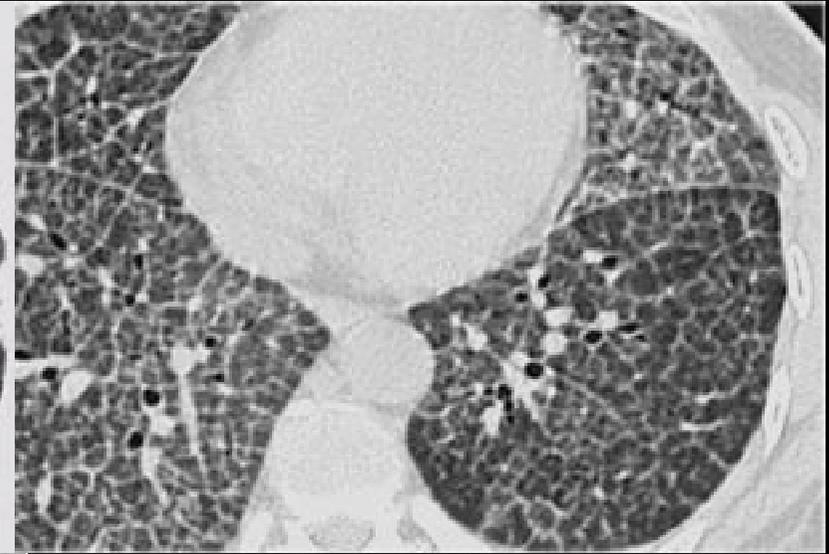
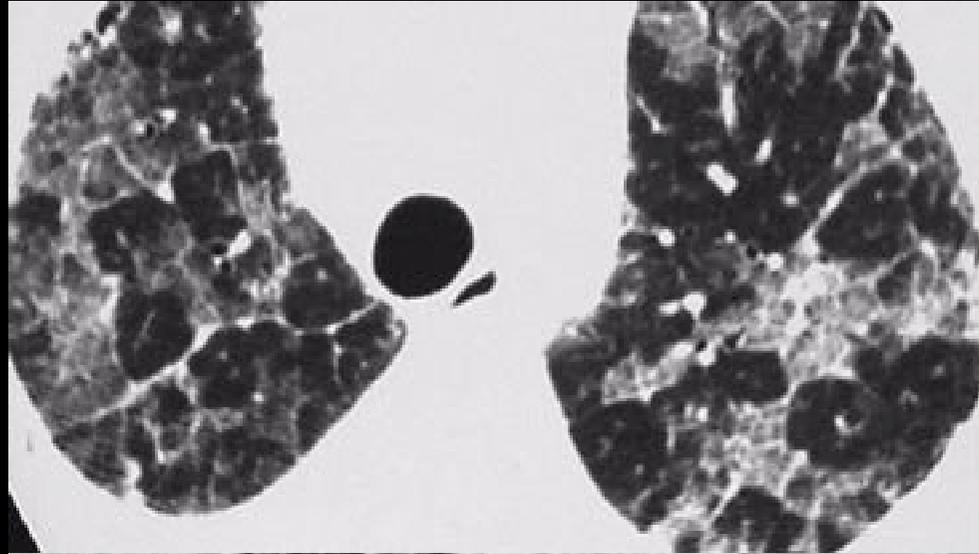
Lipoid Pneumonia

SANGUINEOUS

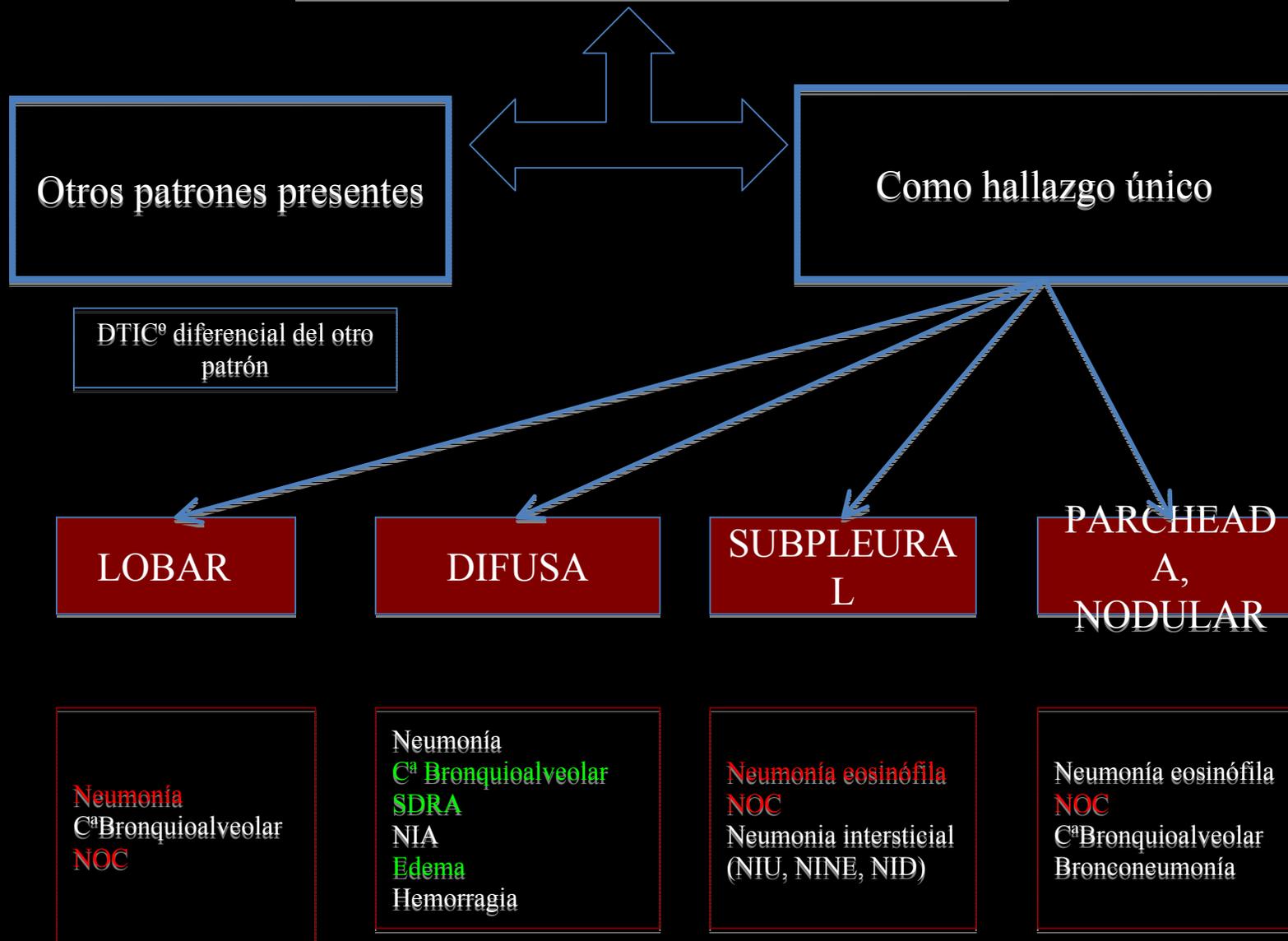
Adult respiratory distress syndrome (ARDS)

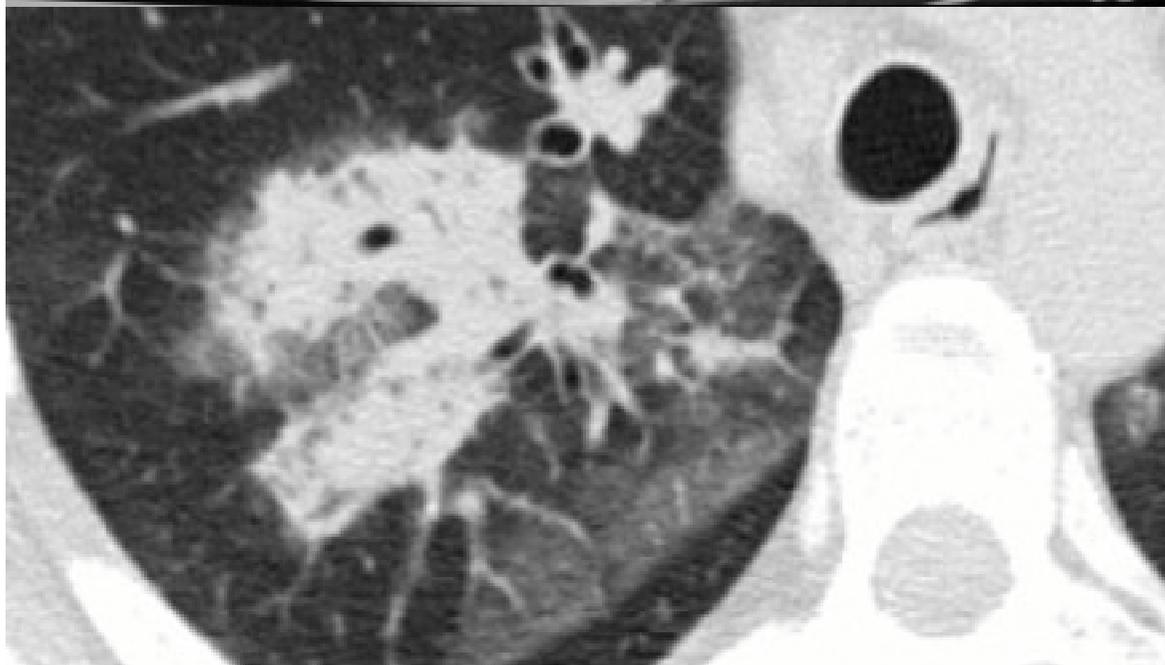
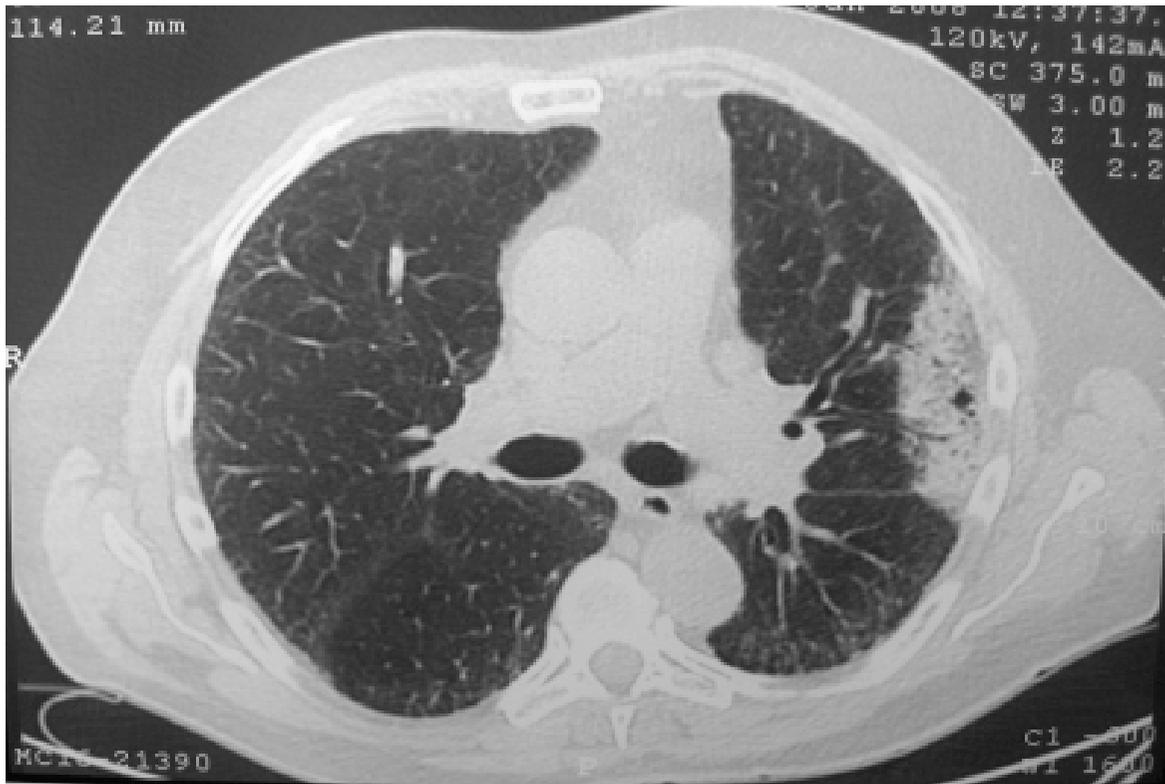
Pulmonary Hemorrhage Syndromes

Proteinosis alveolar



CONDENSACIÓN PULMONAR

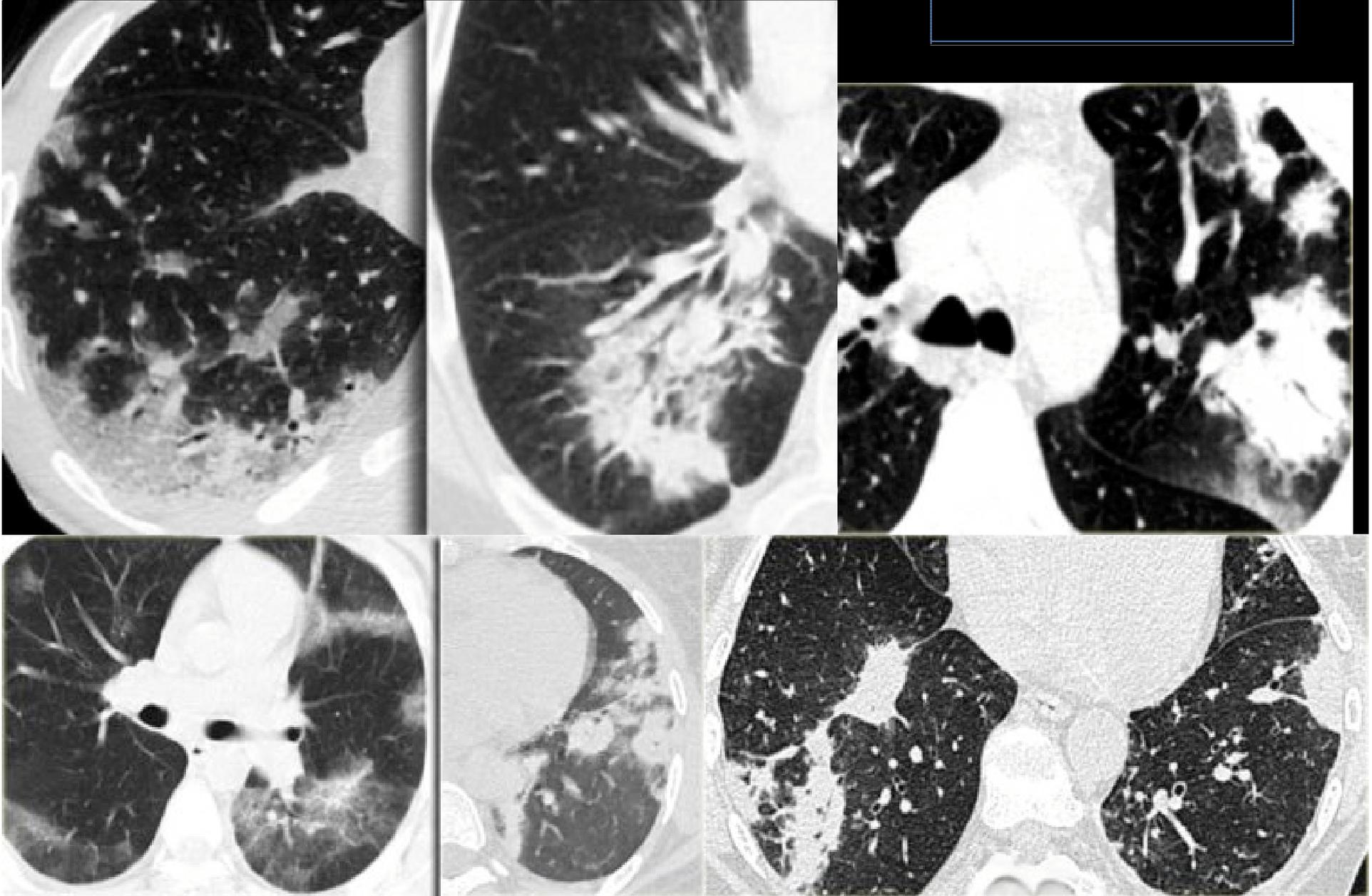


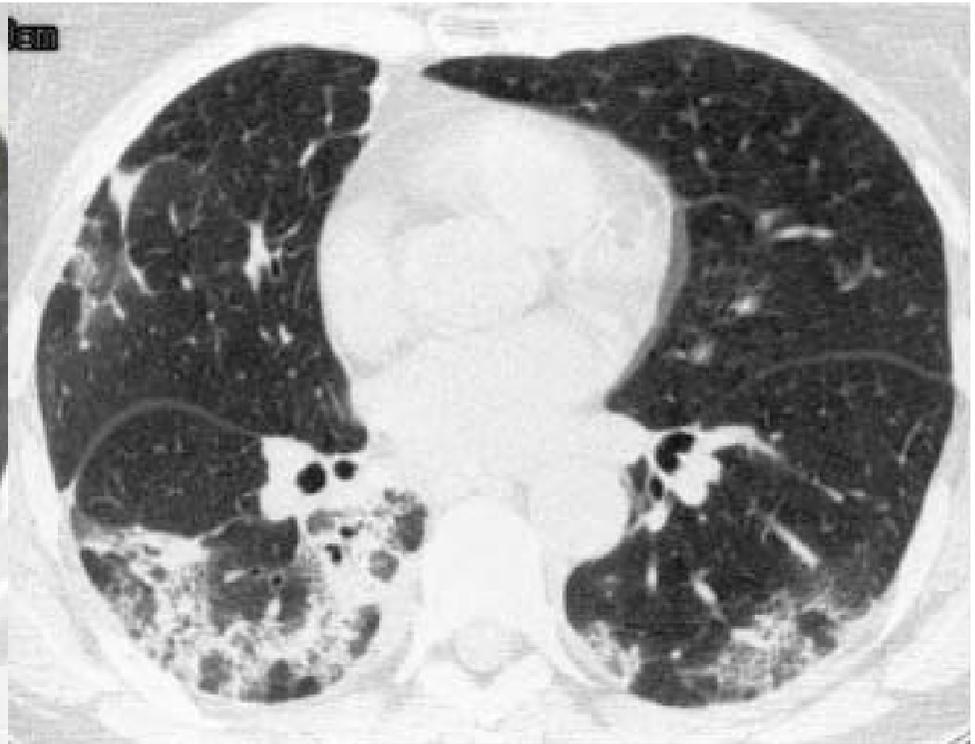
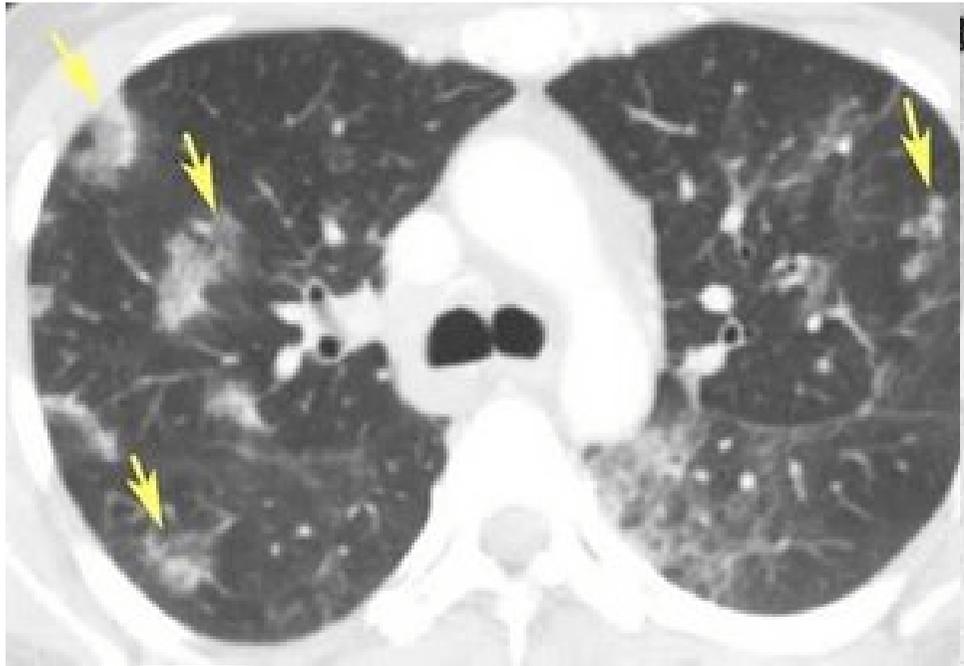


DIAGNÓSTICO
DEFINITIVO:

**CARCINOMA
BRONQUIOALVEOL
AR**

NOC





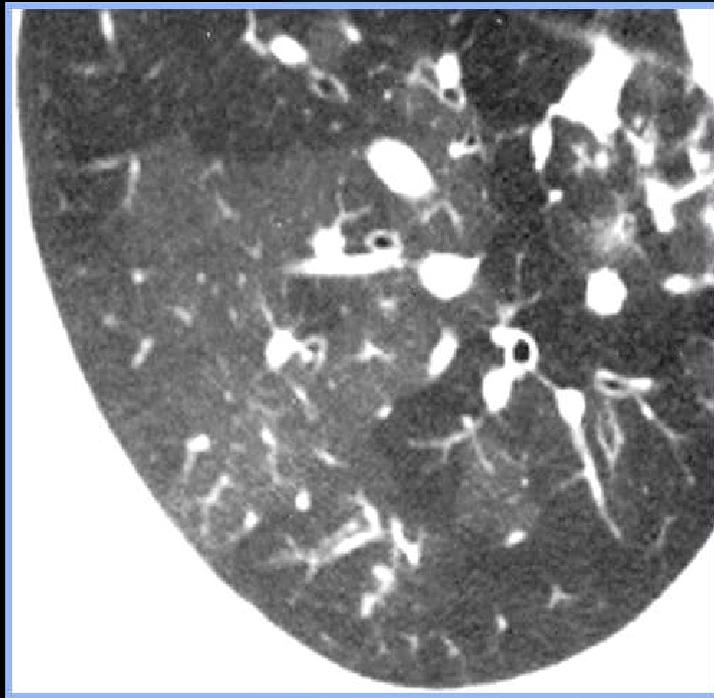
Neumonia
eosinófila

Patrón en mosaico

Tabla 4.4. Características discriminadoras entre las tres causas básicas de un patrón en mosaico

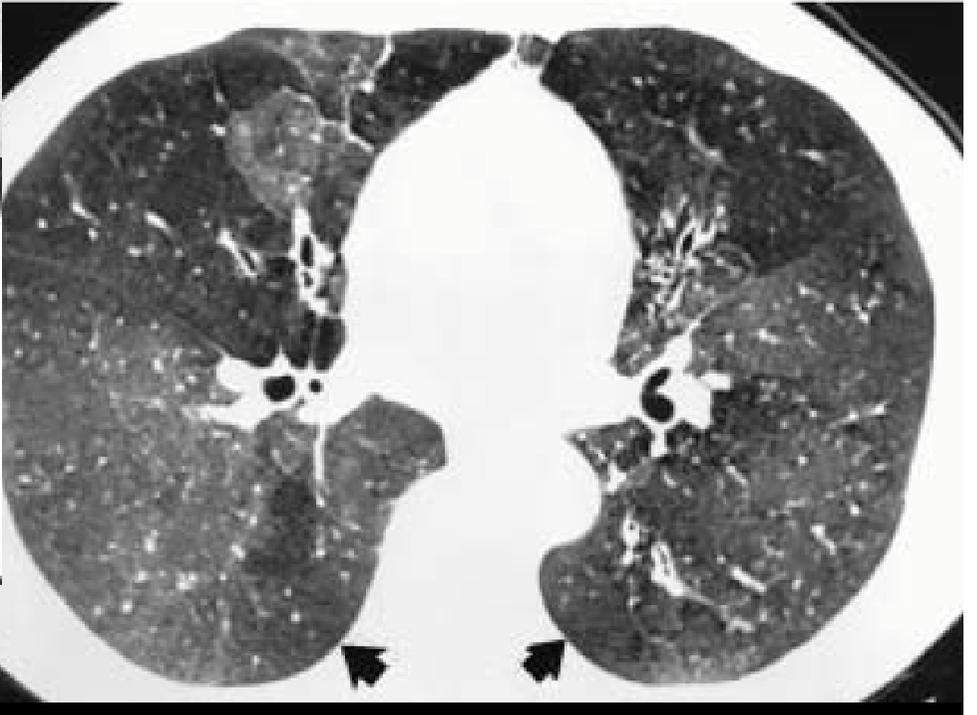
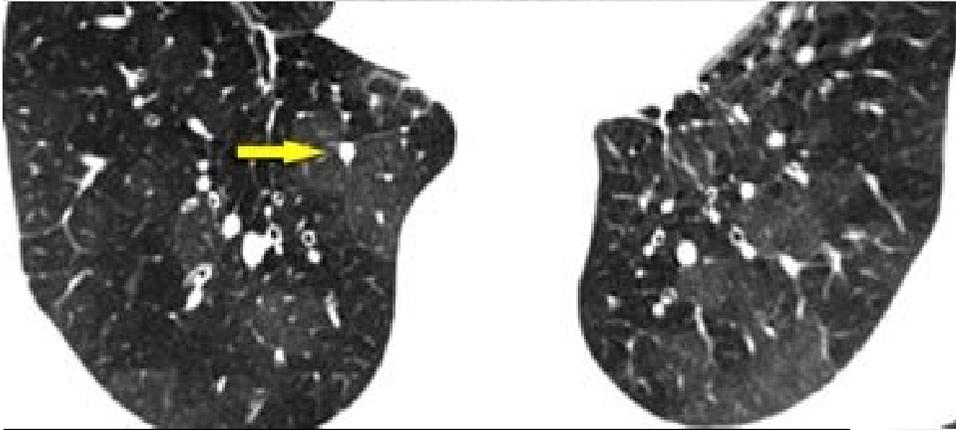
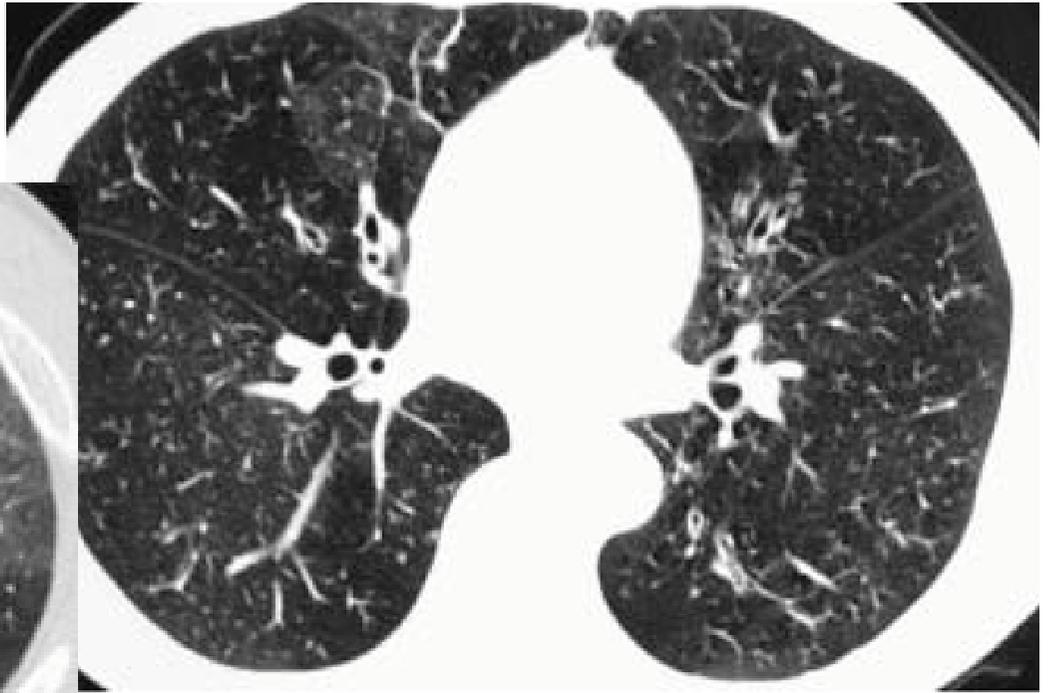
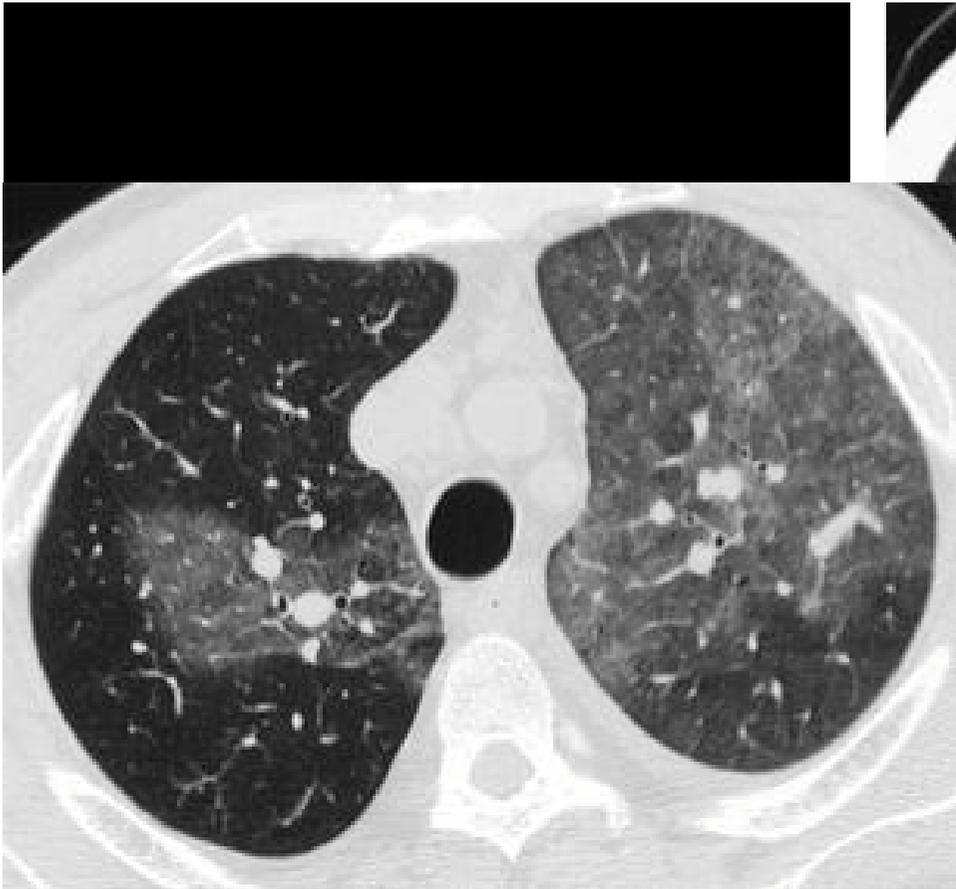
	Vasos en pulmón negro	Bronquios en pulmón negro	Arterias segmentarias	Otras características
Enfermedad pulmonar infiltrativa	Equivalente a aquellos en el pulmón gris	Normales	Normales (a menos que exista hipertensión pulmonar secundaria)	Bronquiectasia de tracción en pulmón gris (si hay fibrosis intersticial)
Enfermedad obliterante de las vías aéreas pequeñas	Reducidos	Dilatados y engrosados	Normales	Aire atrapado obvio en la TC espiratoria
Enfermedad vascular oclusiva	Reducidos	Normales (generalmente)	Dilatadas	Cicatriz periférica de infartos previos

Bronchial Dark Lung



Vascular Dark Lung





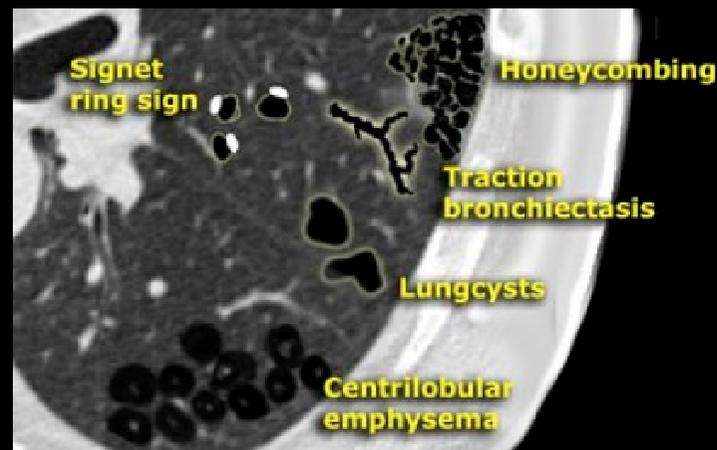
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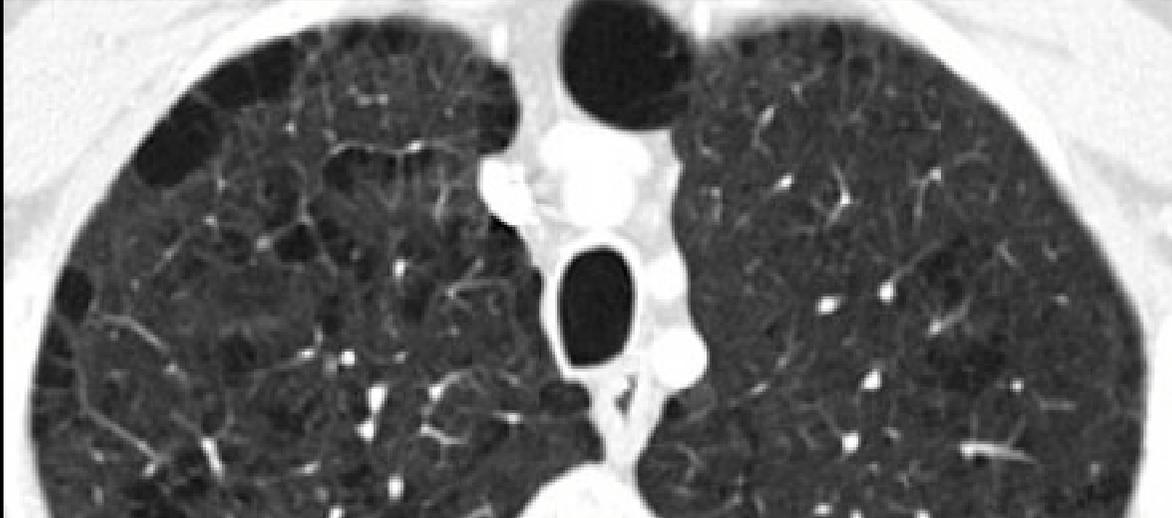
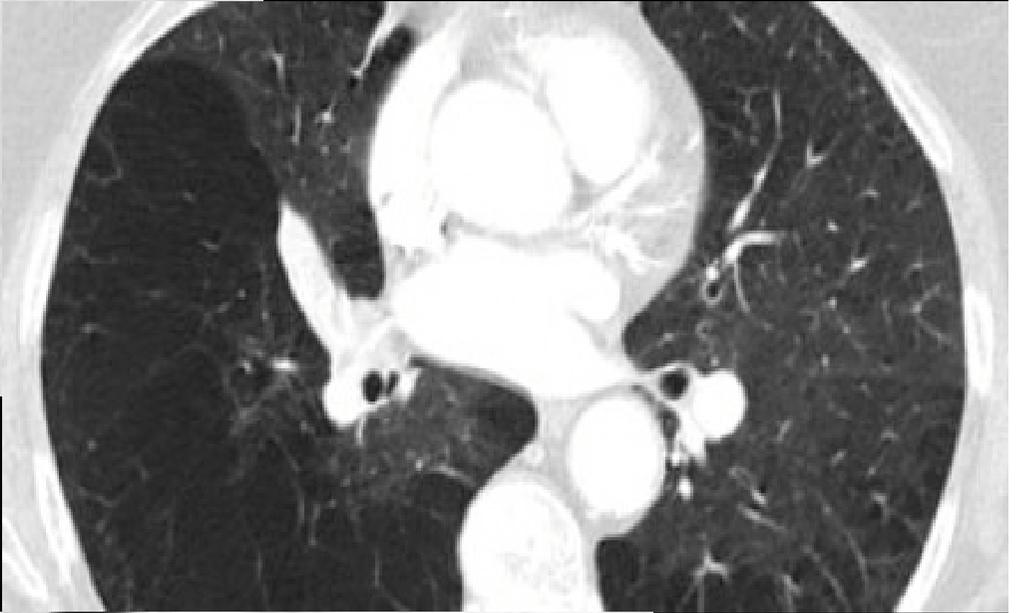
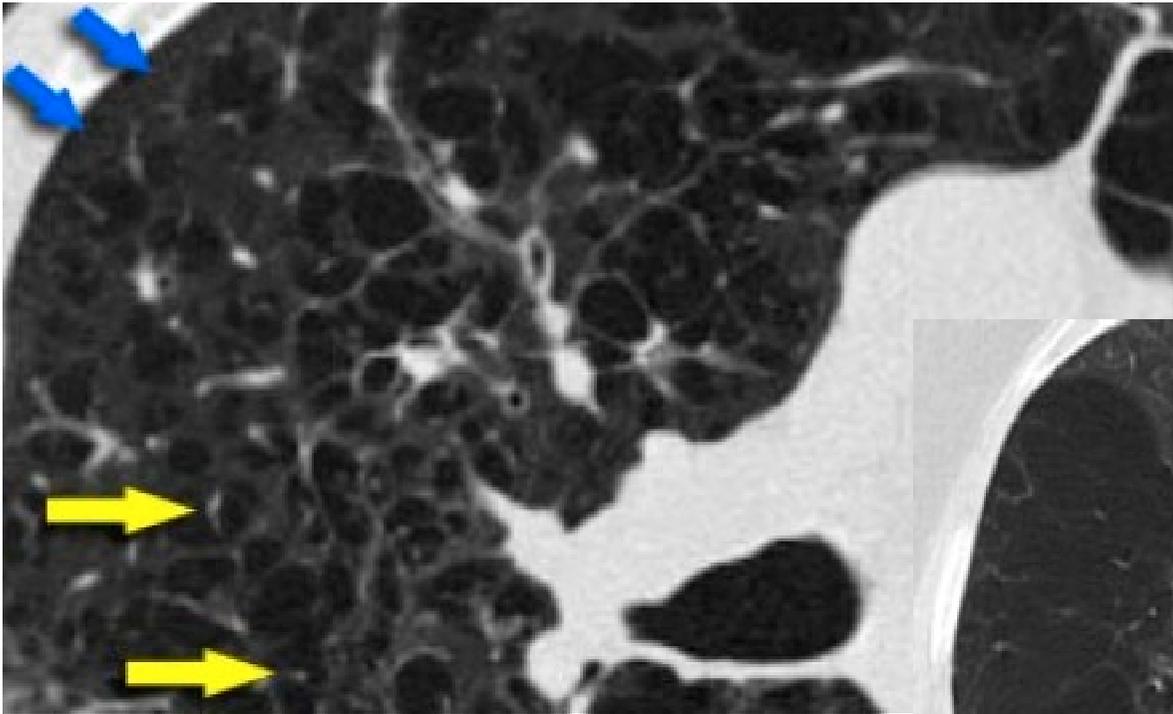
¿CUAL ES EL PATRÓN RADIOLOGICO PREDOMINANTE?

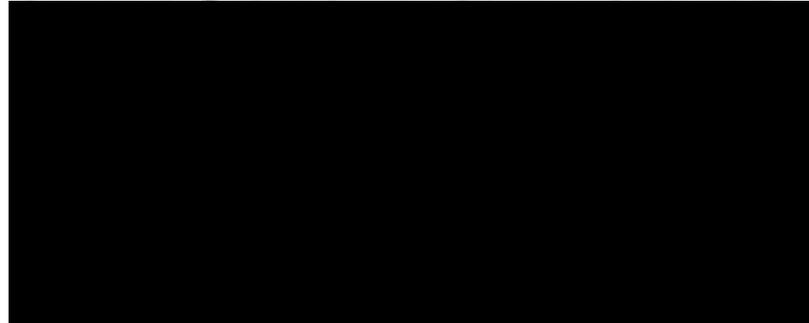
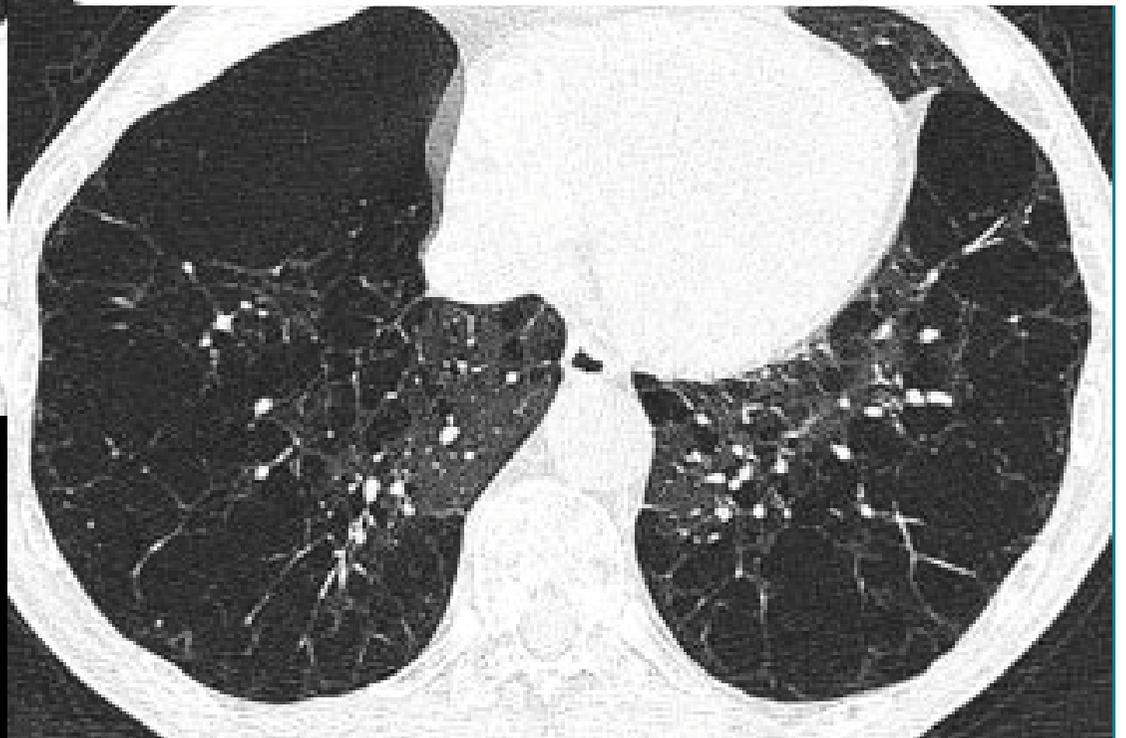
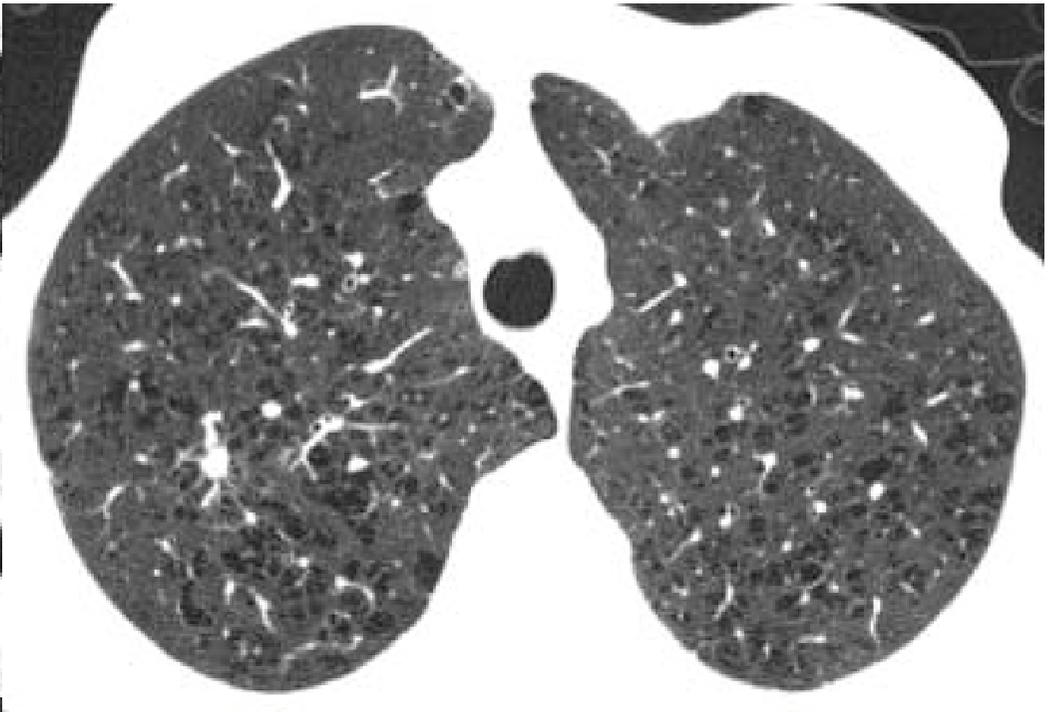
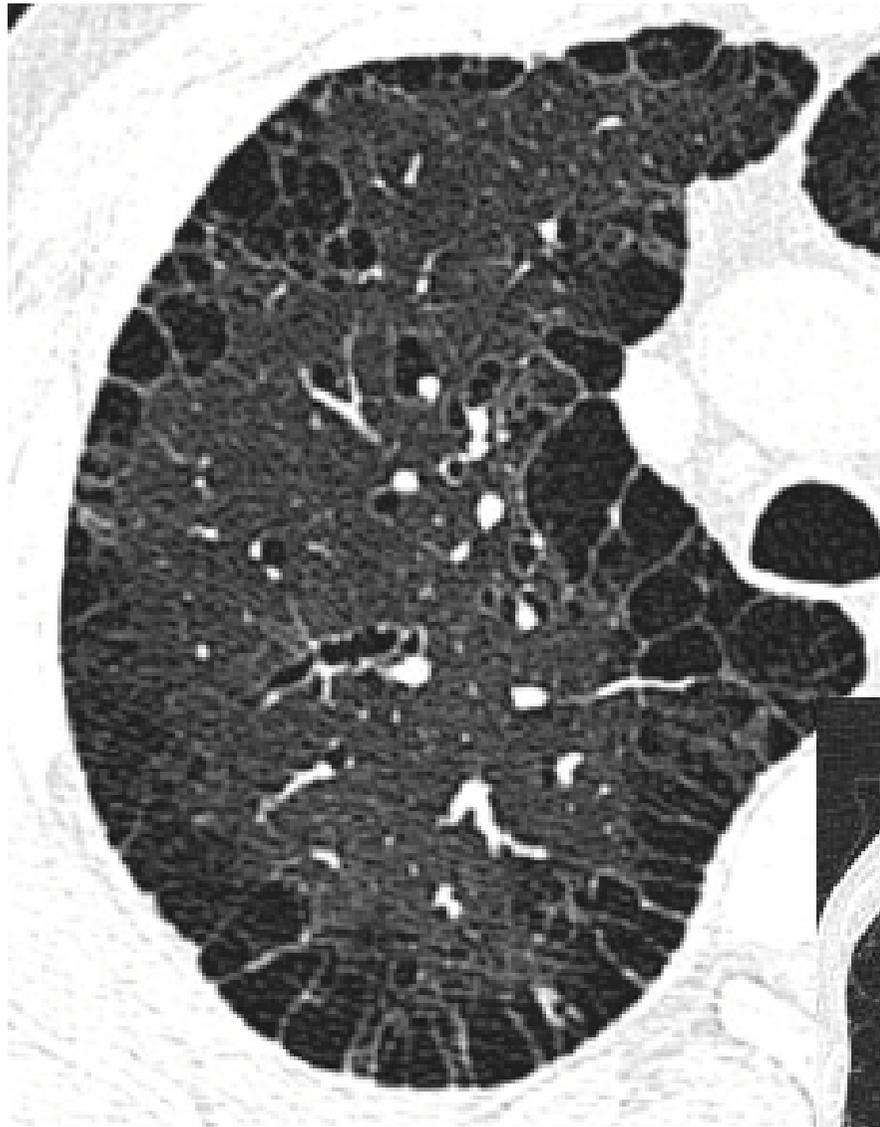
**DISMINUCIÓN DE LA
ATENUACIÓN PULMONAR**

Disminución de la atenuación pulmonar

- Perfusión en mosaico
- Enfisema
 - Panlobular
 - Paraseptal
 - Centrilobular
- Bulla
- Neumatocele
- Quiste
- Cavitación
- Panel de abejas
- Bronquiectasias





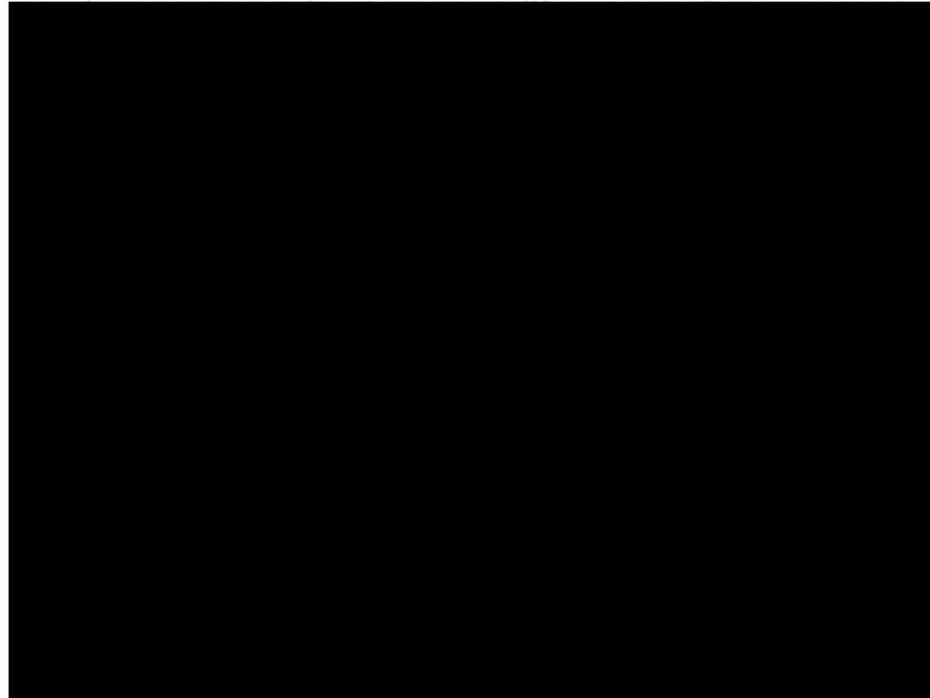


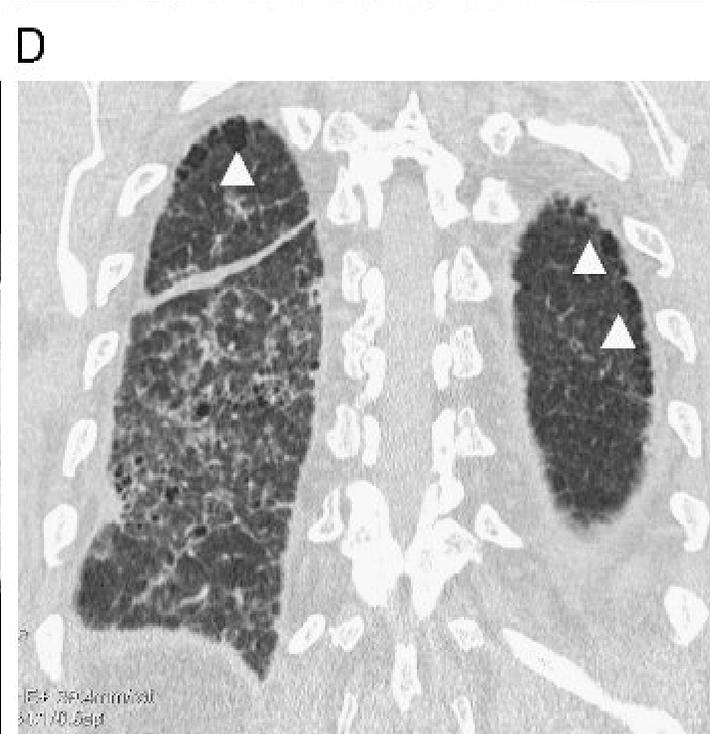
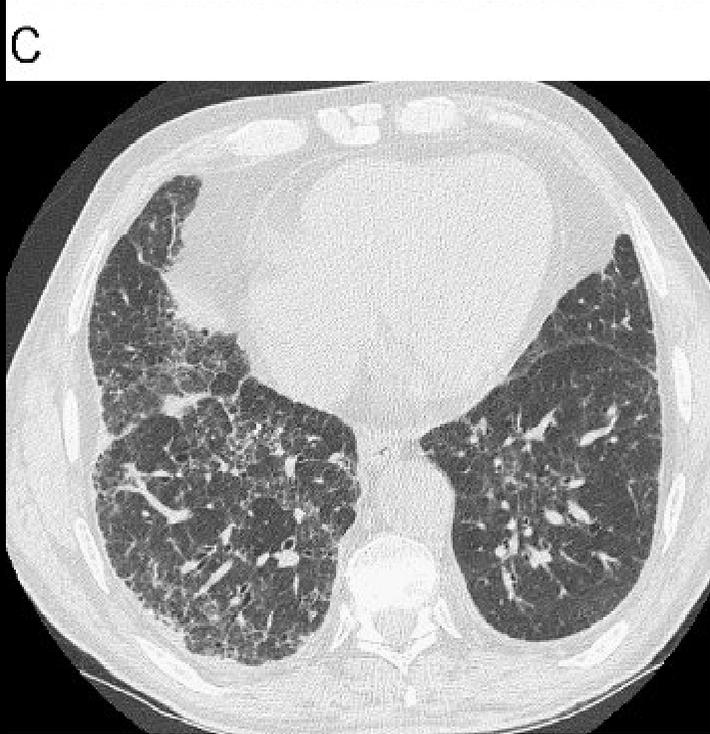
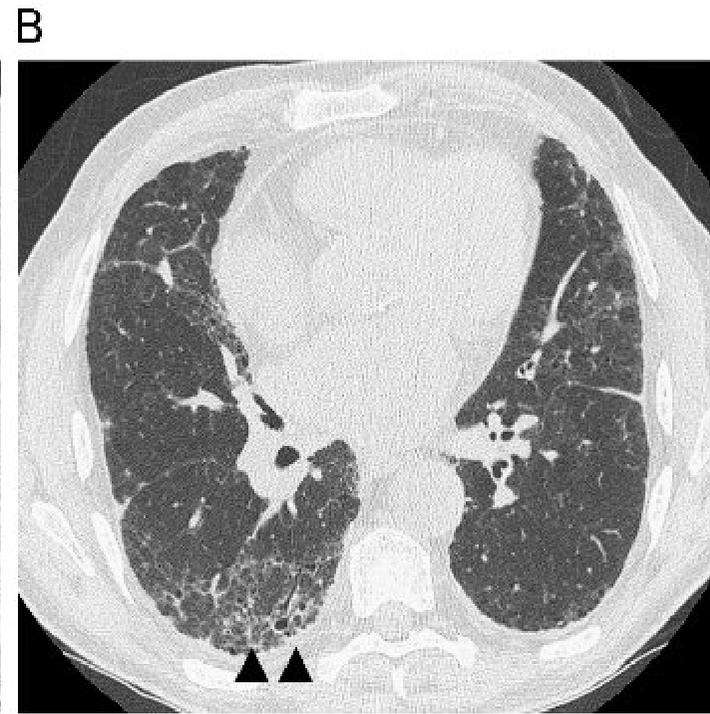
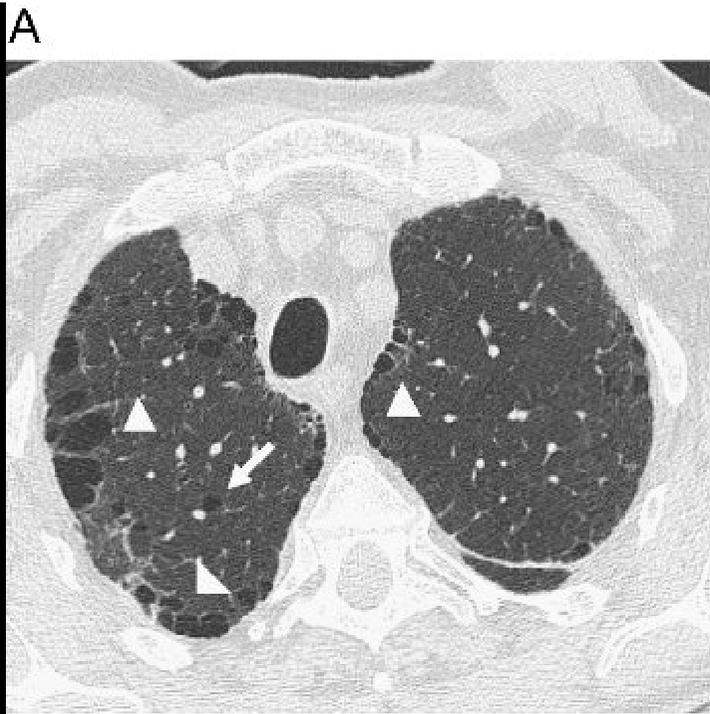


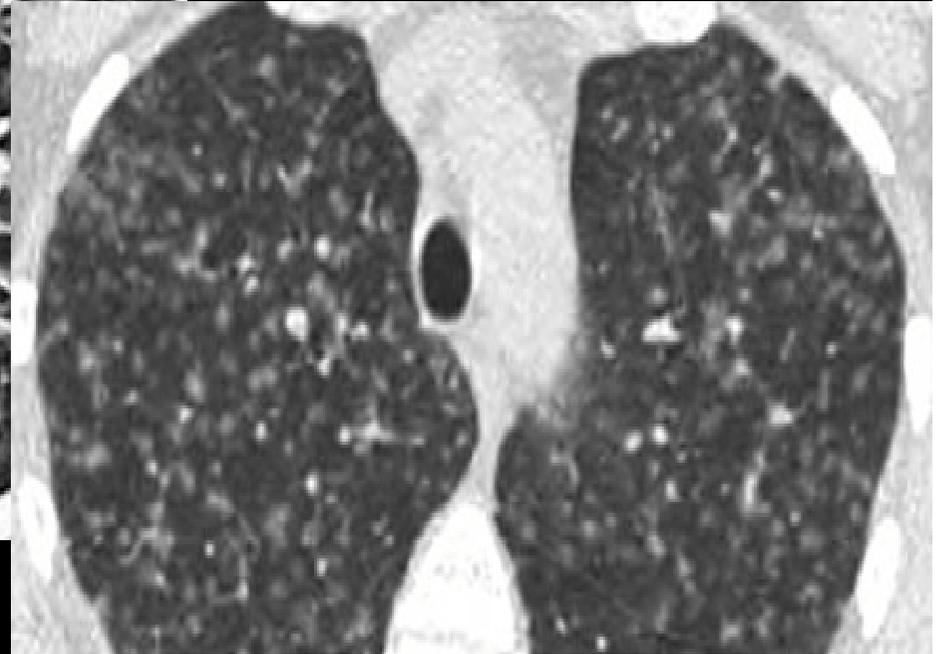
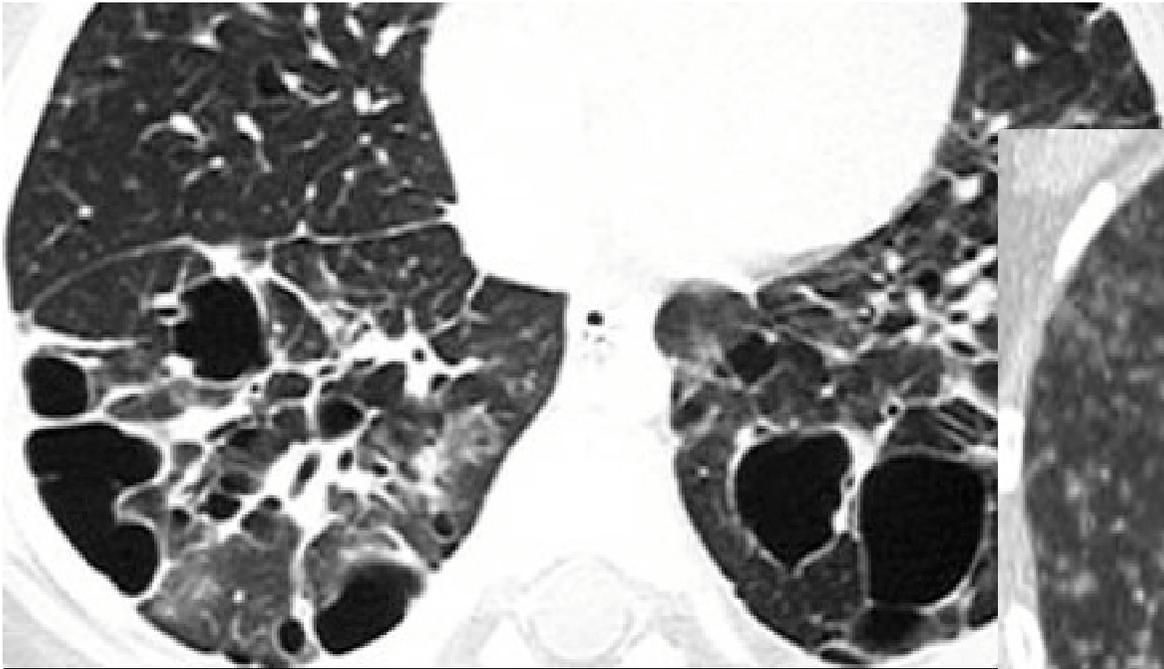
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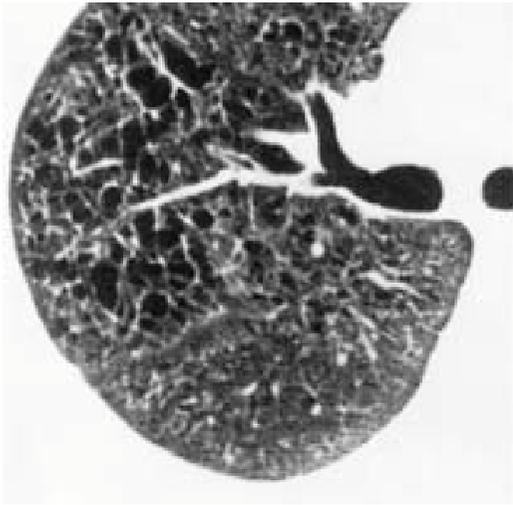
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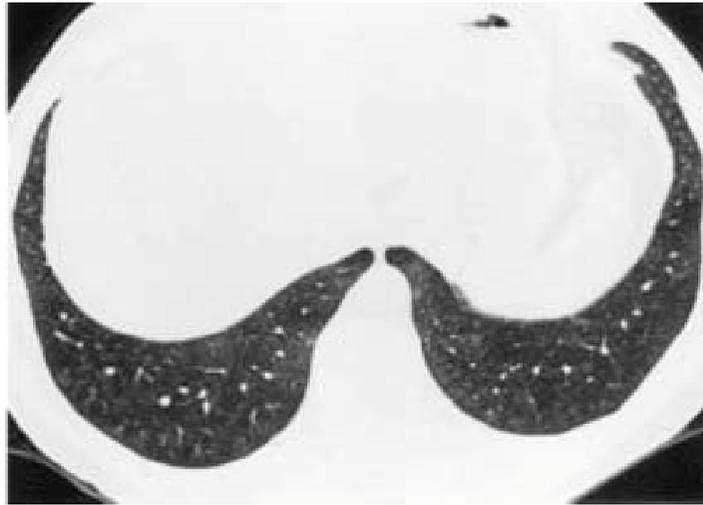




HISTIOCITOSIS DE CÉLULAS DE
LANGERHANS

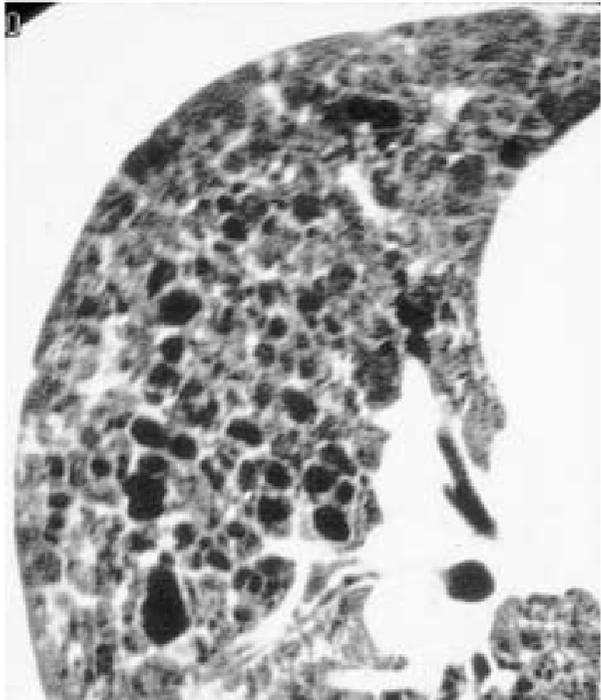


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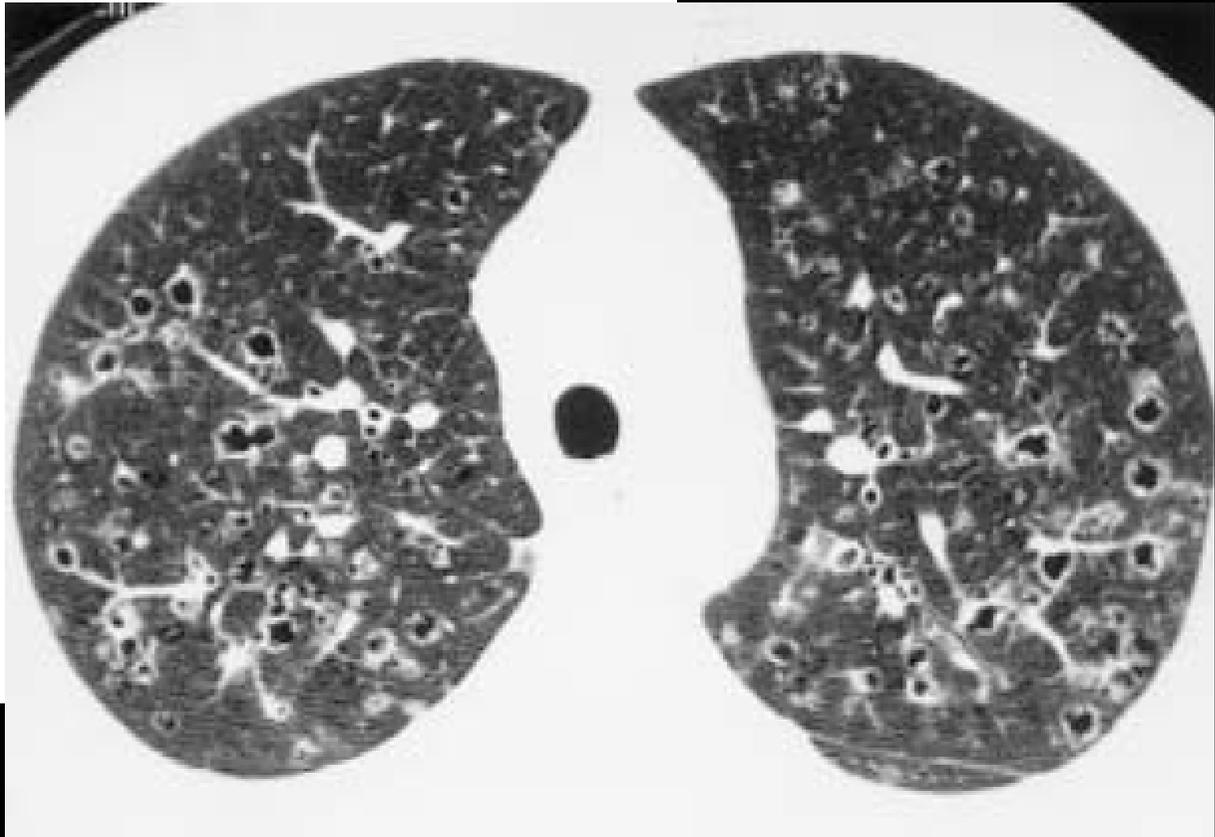


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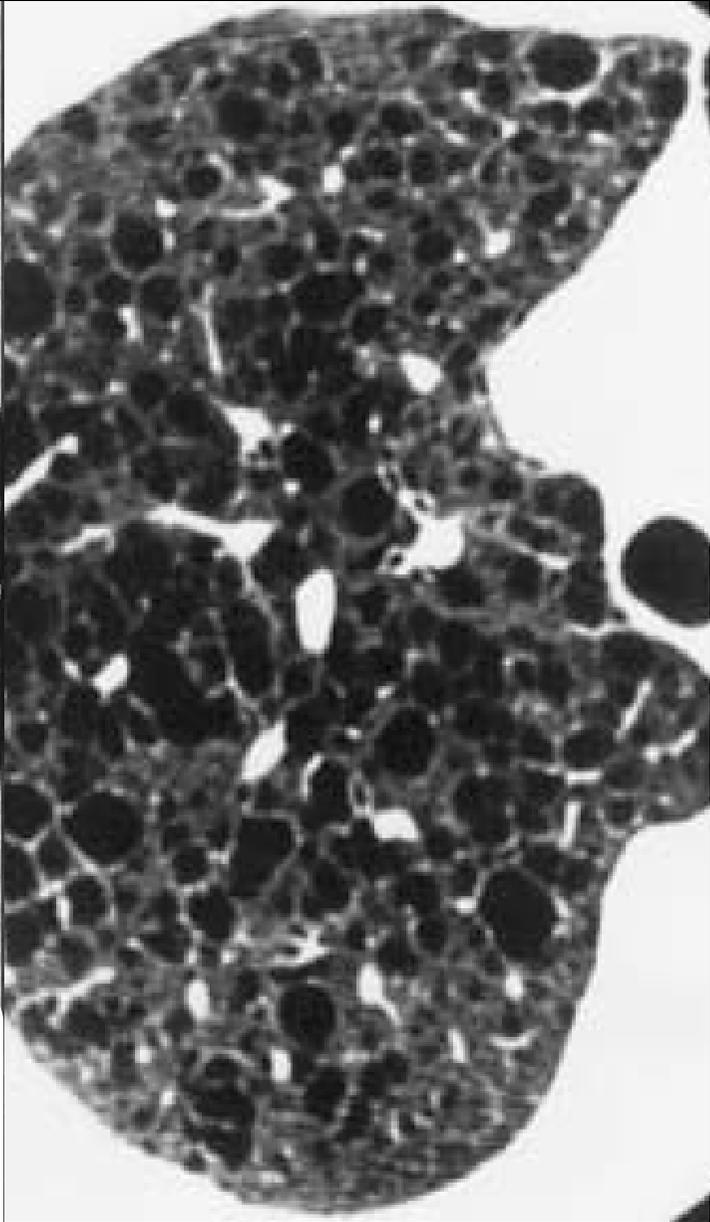
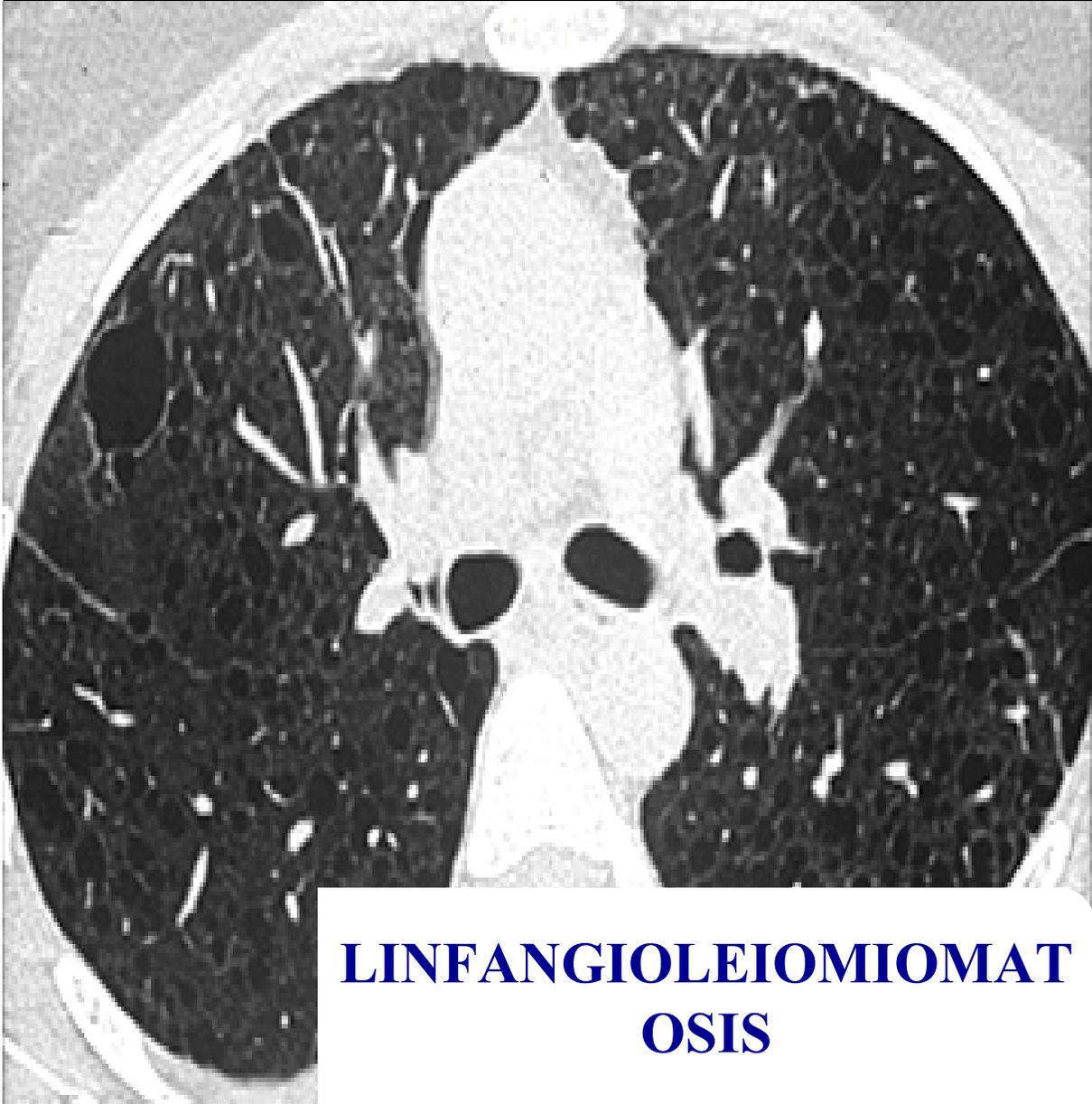
HISTIOCITOSIS DE CÉLULAS DE LANGERHANS



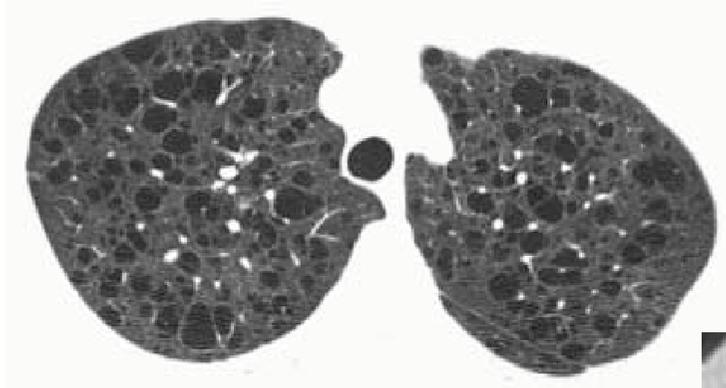
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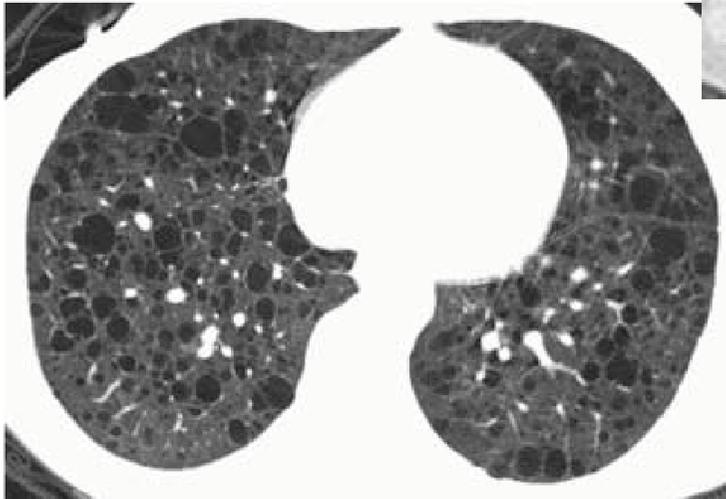
LINFANGIOLEIOMIOMATOSIS



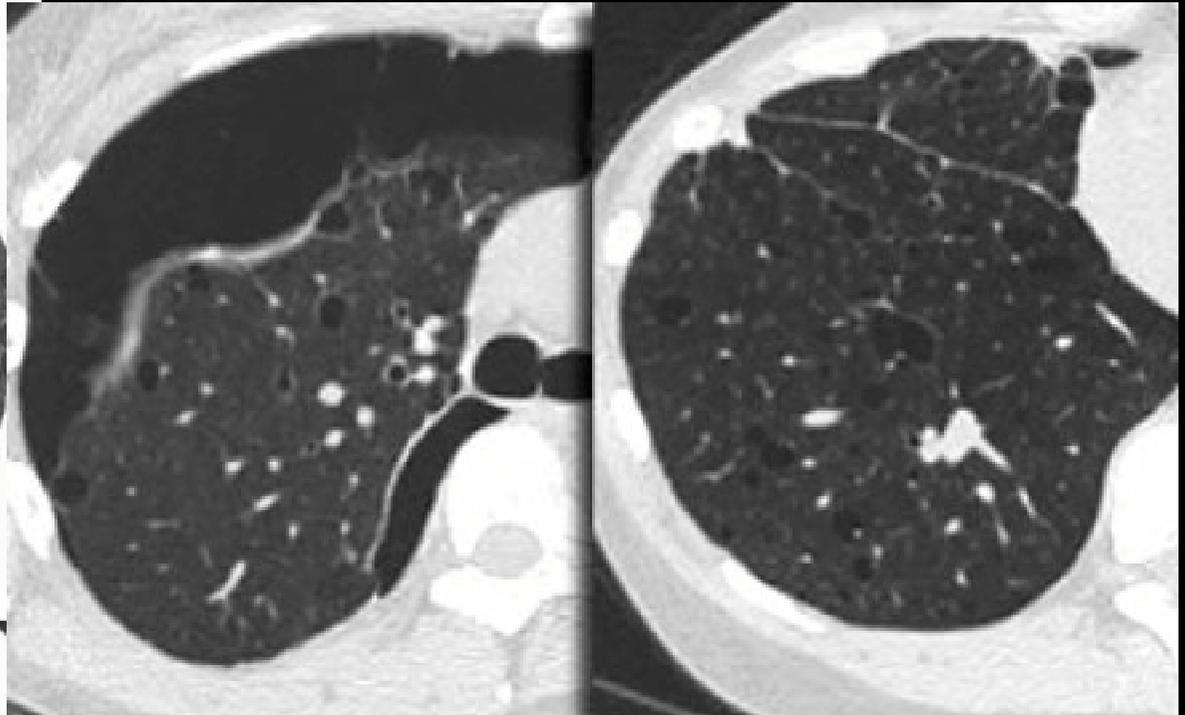
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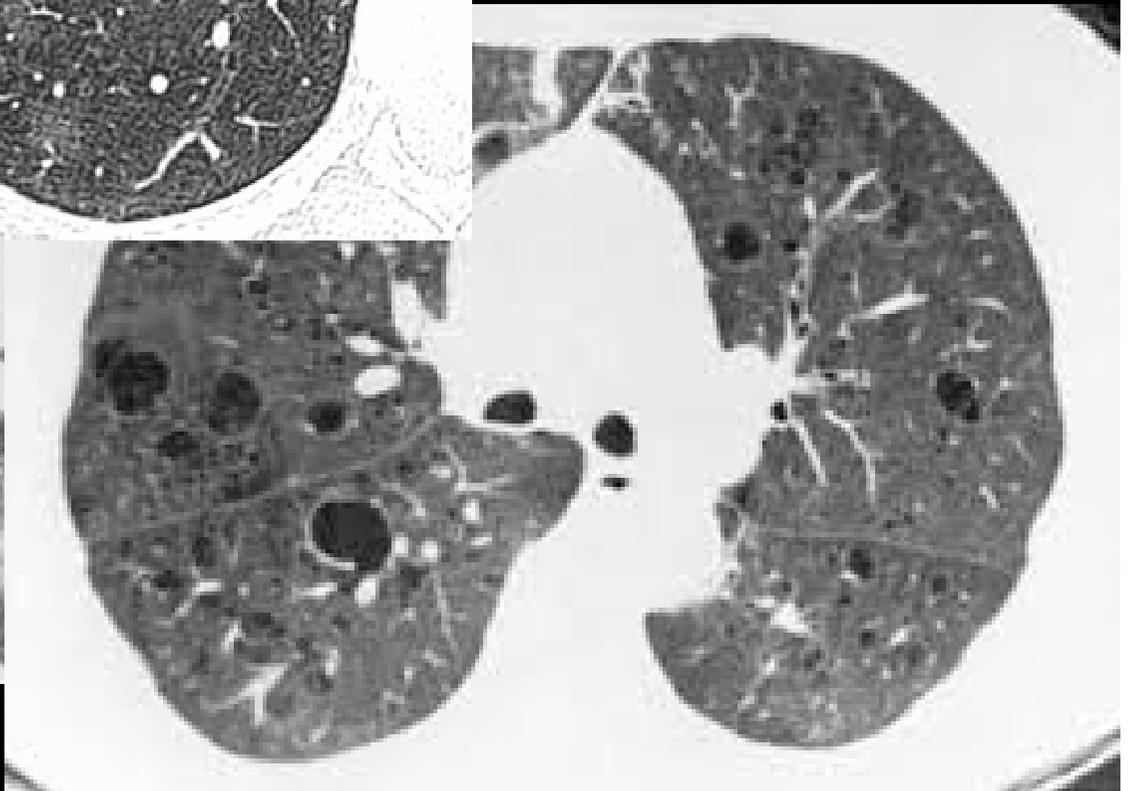
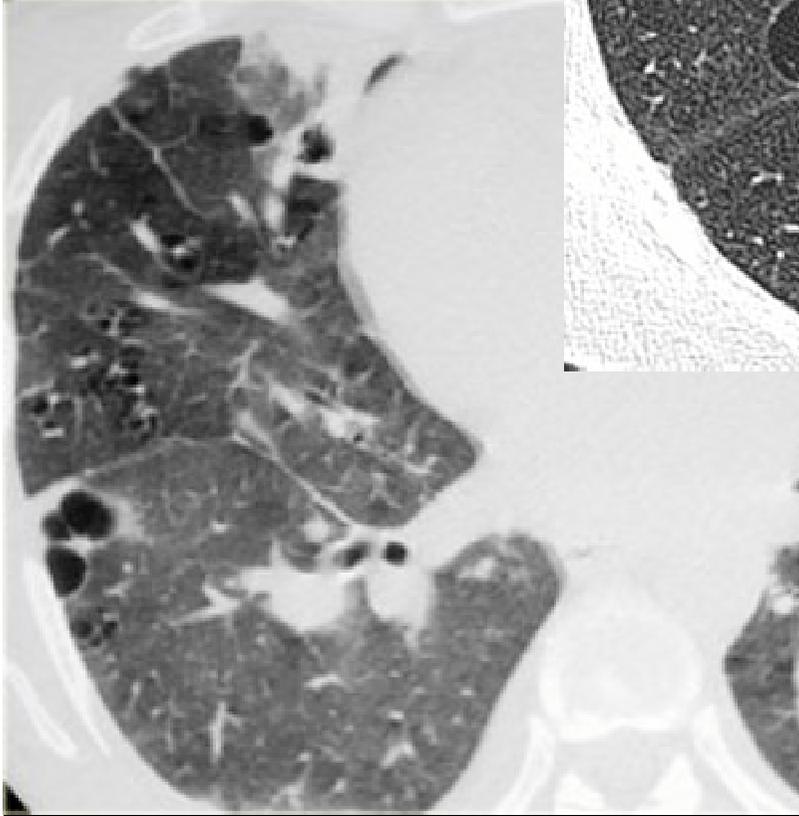
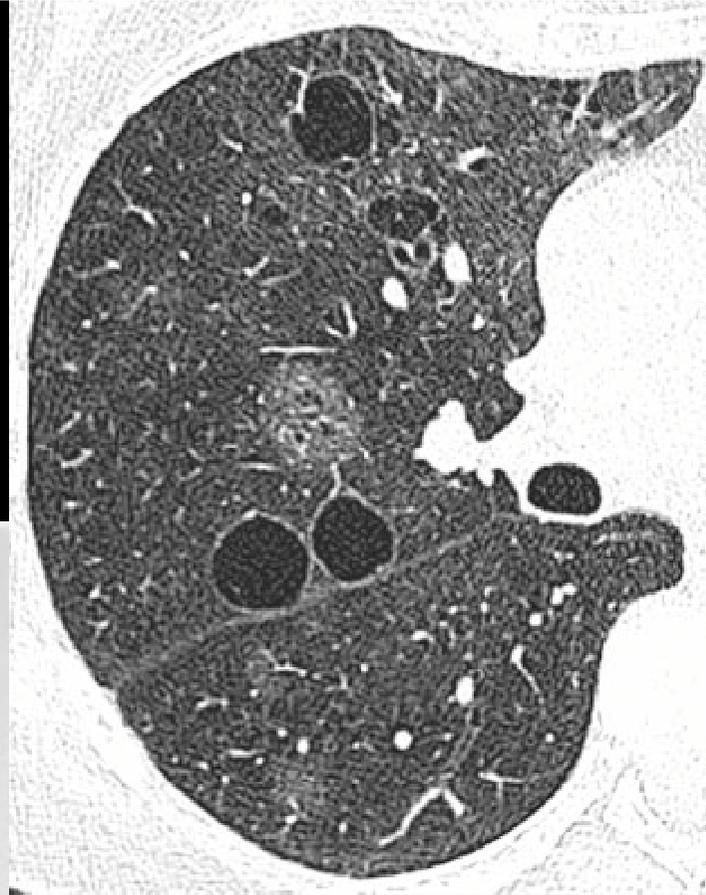


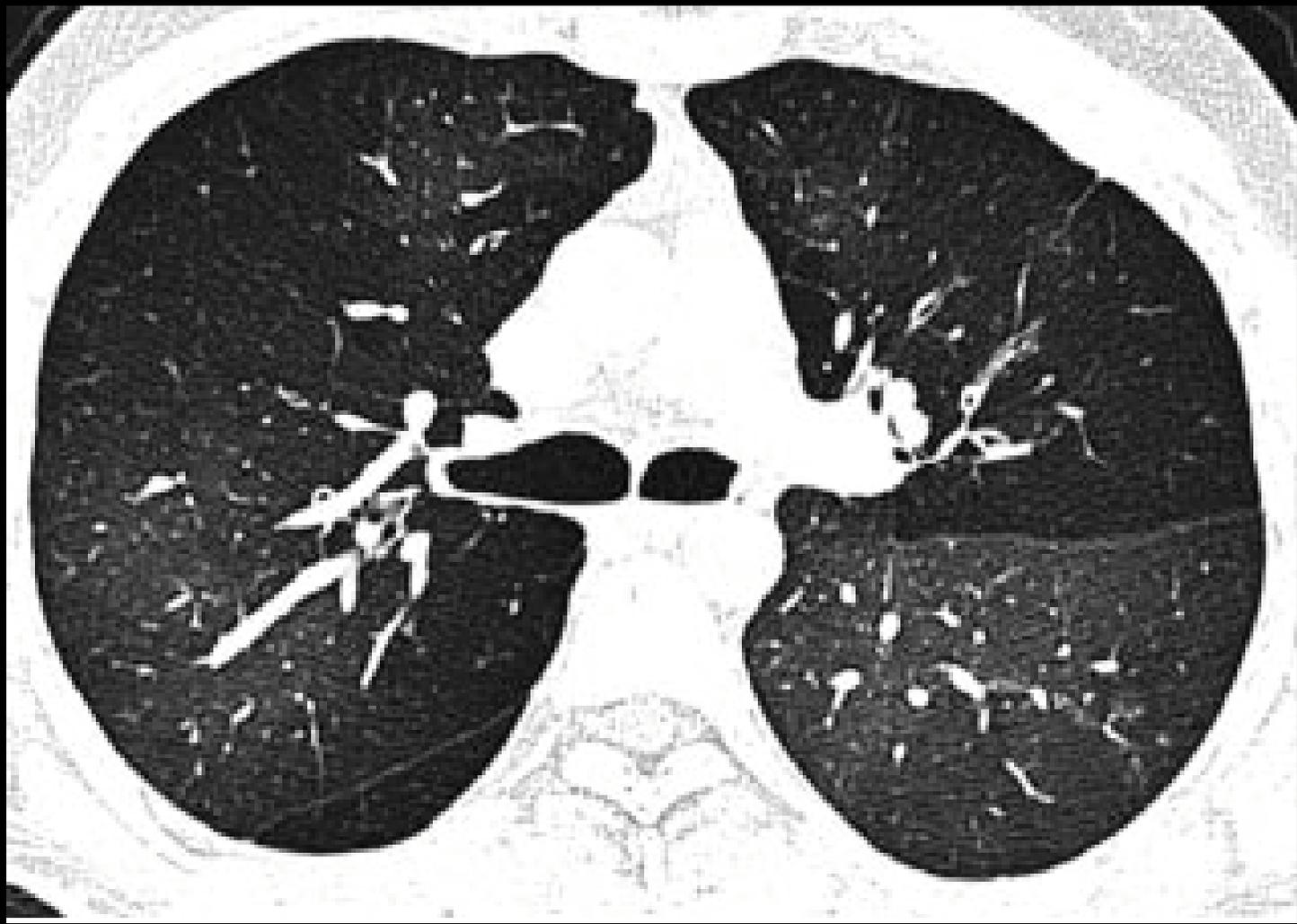
C



LINFANGIOLEIOMIOMATOSIS

NIL





Cuadro 4.8. Características principales y complementarias de bronquiectasia en la TCAR

Signos mayores

Dilatación bronquial

- Signo del anillo de sello (bronquio vertical)
- Bronquio no adelgazado o prominente (bronquio horizontal)

Identificación del bronquio a menos de 1 cm de la pleura
(no adyacente al mediastino)

Impactación mucoide en el bronquio quístico

Signos suplementarios

Engrosamiento de la pared bronquial

Taponamiento de los bronquiolos centrilobulillares

Pérdida de volumen del lóbulo afectado

Área de atenuación disminuida (patrón en mosaico)

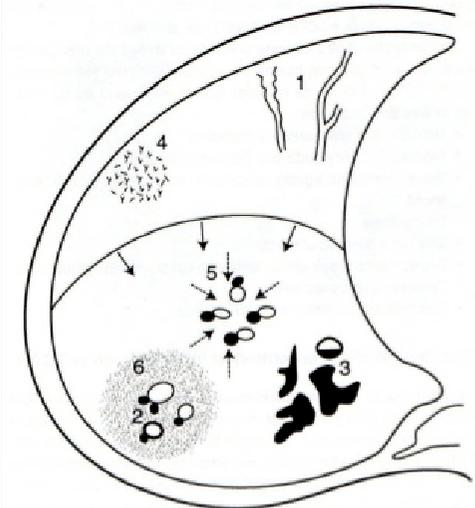


Figura 4.45. Signos principales y auxiliares de bronquiectasia: (1) no hay adelgazamiento o prominencia del bronquio; (2) signo del anillo de sello; (3) bronquio dilatado lleno de moco (signo de la "llama y la burbuja"); (4) bronquiolos centrilobulillares taponados y engrosados ("signo del árbol con brotes"); (5) bronquios amontonados con asociadas con pérdida de volumen; (6) áreas de atenuación disminuida que reflejan la obliteración de las vías aéreas pequeñas.

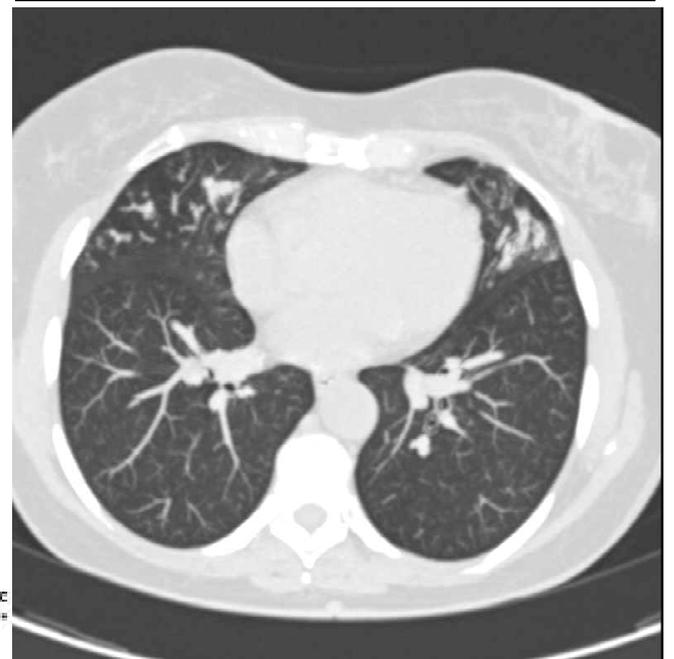
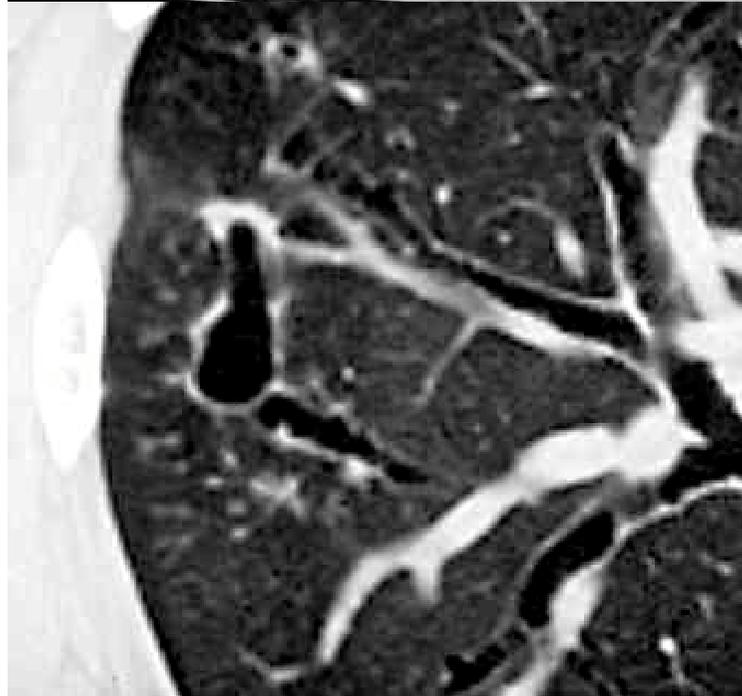
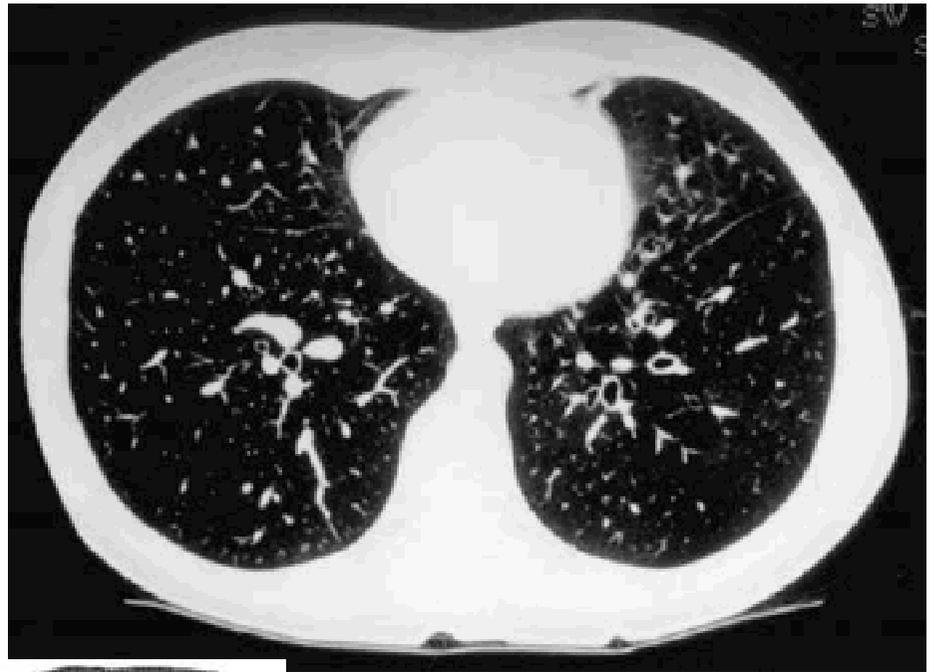


Figure 12 - Bronchiectasis characterized by the "signet-ring sign" (long arrow) and "tram tracks" appearance (short arrow).

**GRACIAS
POR
VUESTRA
ATENCIÓN**

