

肺結節與腫瘤判讀

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References

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- Image of Disease of the Chest 5th edition
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- 實用胸腔X光診斷學；江自得，2003
- 圖解胸部X-光片（入門版），百島祐貴著，黃明賢教授譯。長年出版社，2004。
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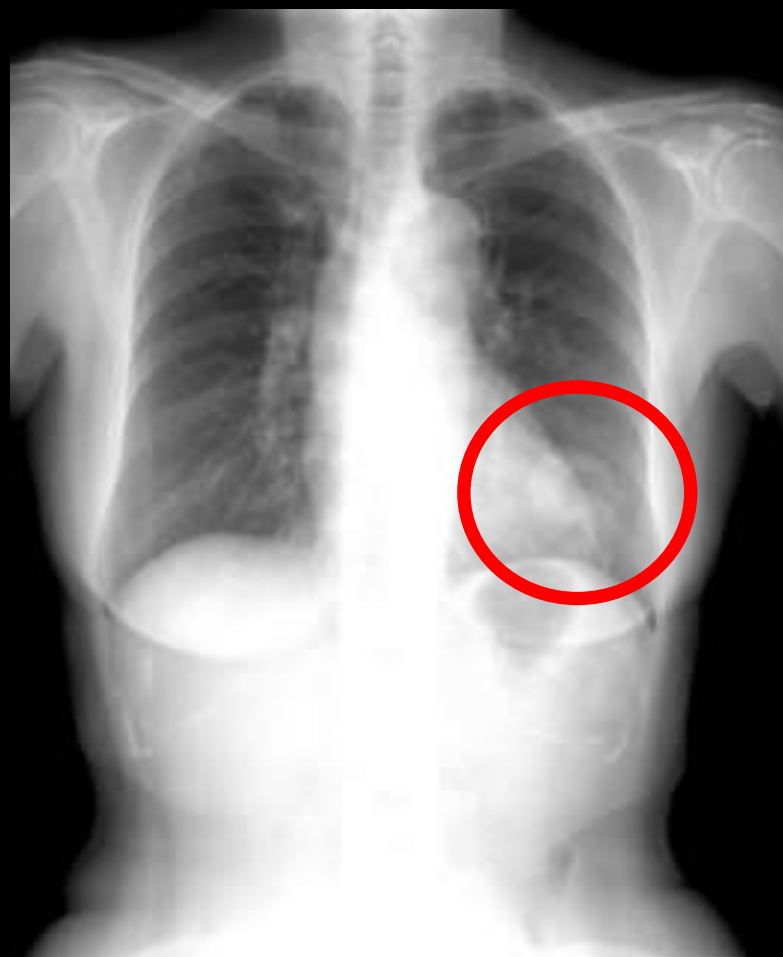
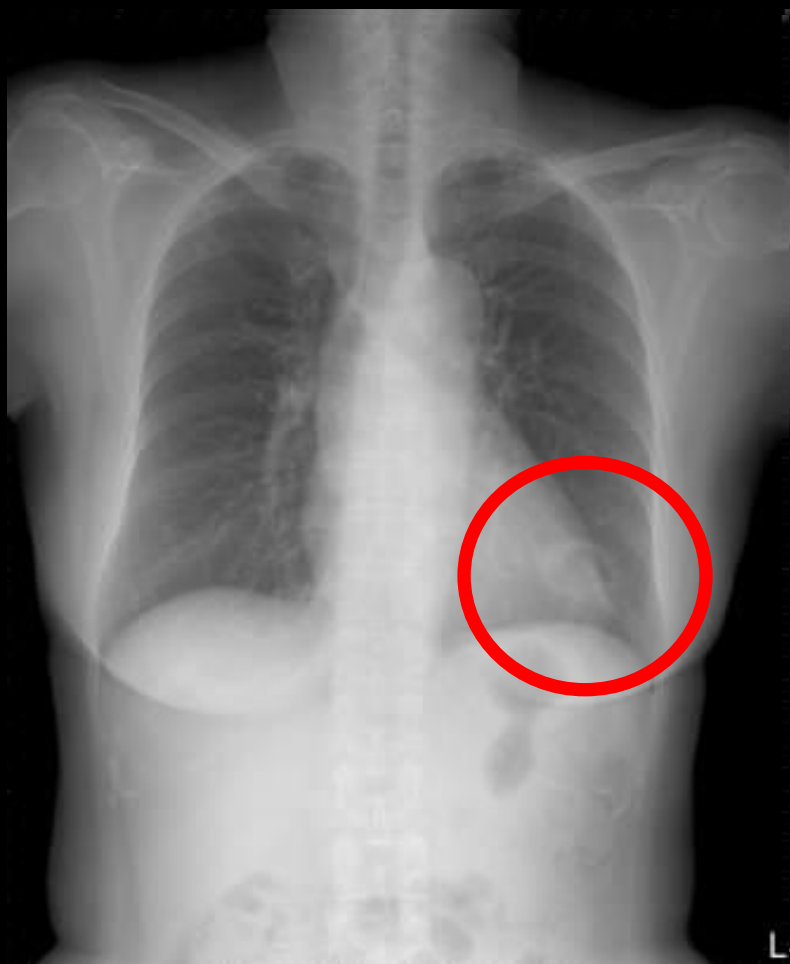
肺腫瘤

- Benign
 - Hamartomas, Granuloma, lipomas 、hemangiomas ,inflammatory pseudotumor ..
- Malignancy
 - Lung cancer
 1. Small cell lung cancer
 2. Non-Small cell lung cancer :Adenocarcinoma , Squamous cell carcinoma, large cell carcinoma, pleomorphic carcinoma, other rare malignancy
 - Metastatic lung cancer
 - Mesothelioma

Solitary Pulmonary Nodule (SPN) or Mass

- SPN, defined as an x-ray density completely surrounded by normal aerated lung, with circumscribed margins, of any shape, usually 1–6 cm in greatest diameter
- Generally speaking , **<3cm - nodule ; >3cm – Mass**
- Approximately 35% of all such lesions in adults are malignant, most being primary lung cancer, while <1% are malignant in nonsmokers <35 years of age

做了檢查一定要看...



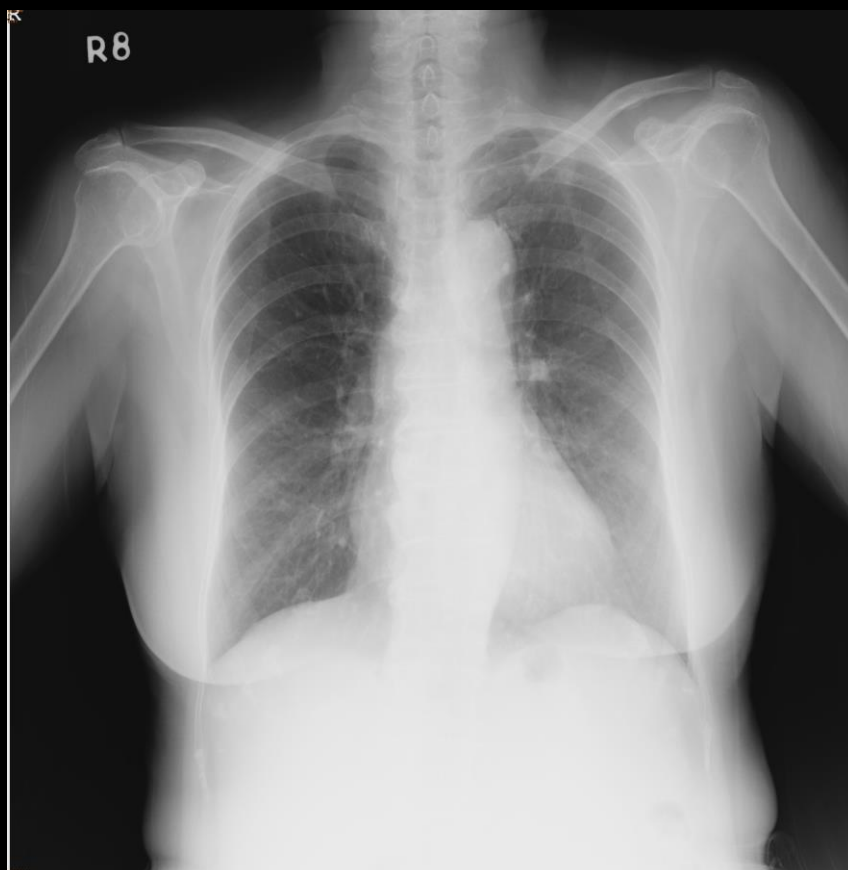
8 months later....



74歲女性, 體檢報告

2013

左上肺葉結節



2014

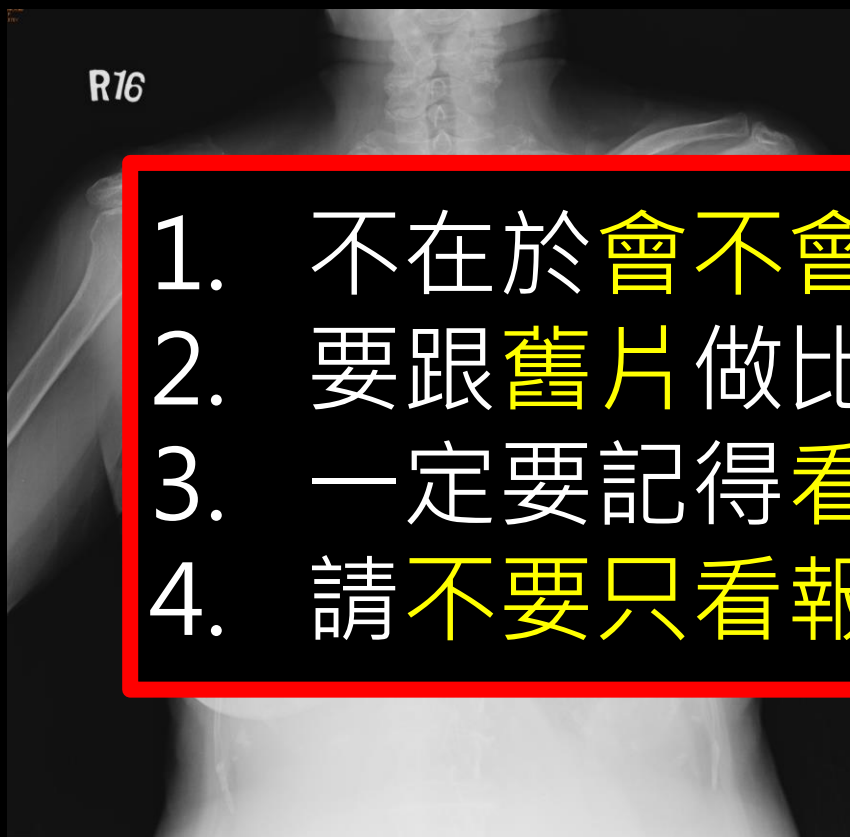
左上肺葉結節



74歲女性, 體檢報告

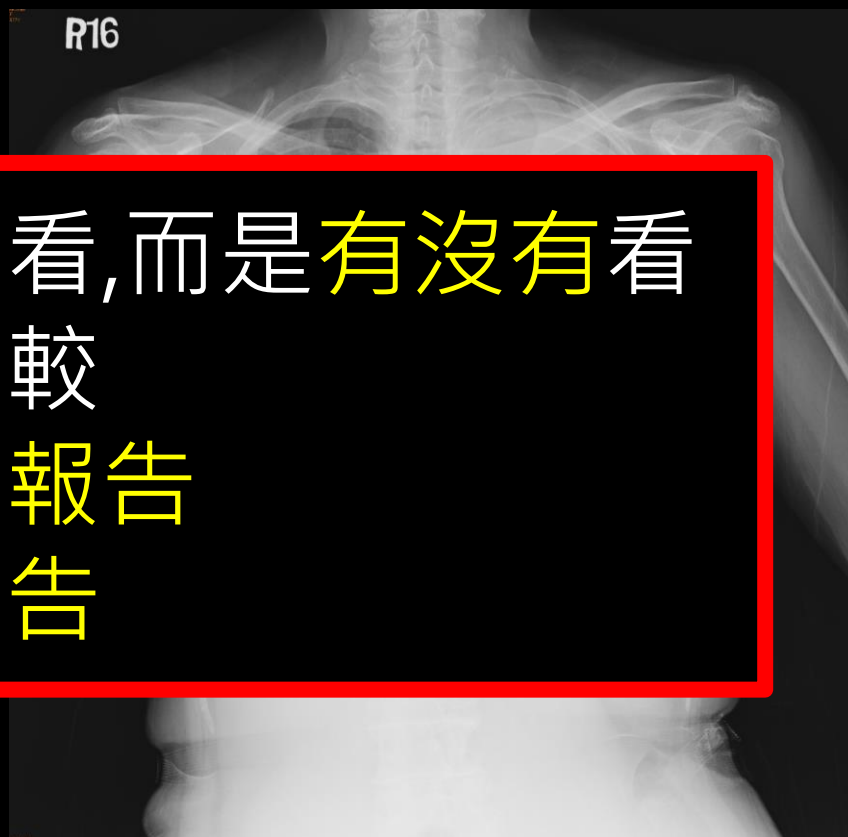
2014

左上肺葉結節



2015

左上肺葉腫瘤



1. 不在於會不會看,而是有沒有看
2. 要跟舊片做比較
3. 一定要記得看報告
4. 請不要只看報告

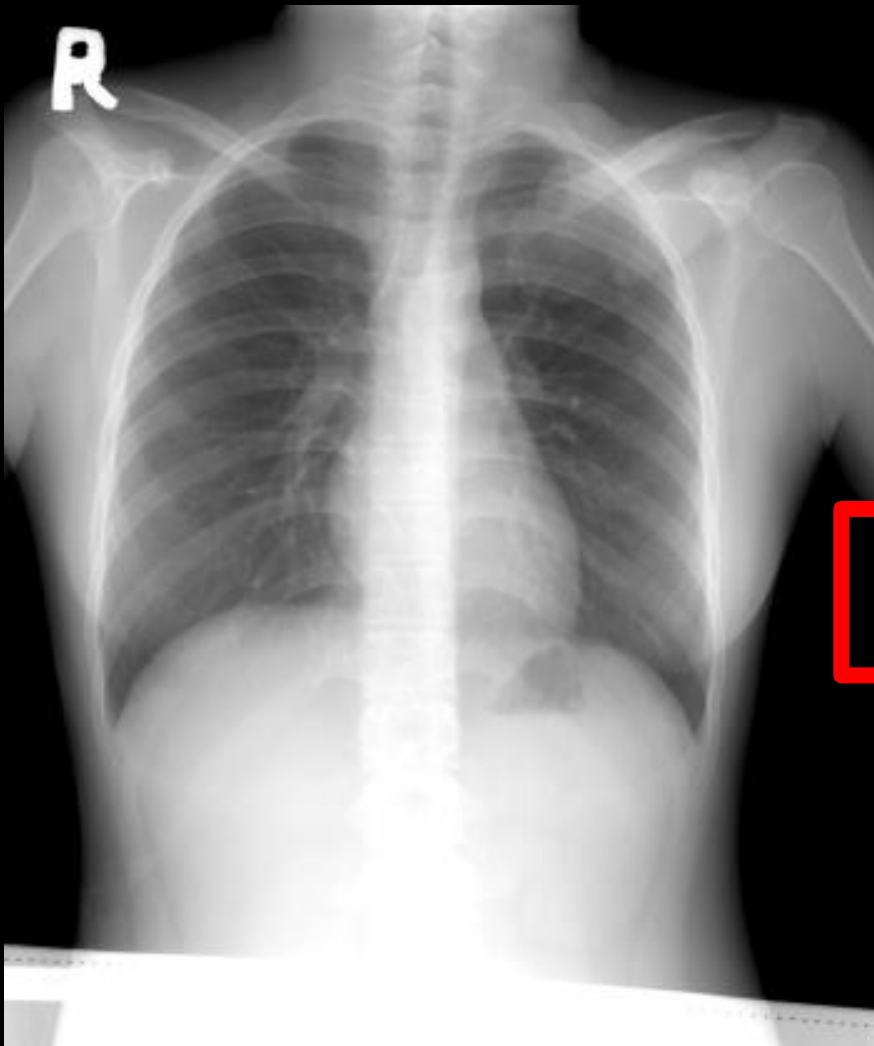
當我們在CXR上看見一塊白色陰影...

- 真的是肺內結節/腫瘤嗎？
- 病史
- 理學檢查
- 影像學檢查：胸部X光、電腦斷層、超音波、正子造影、核磁共振及支氣管鏡檢查
- 最終的答案還是須依賴切片之病理組織或細胞學檢查,不能只靠影像

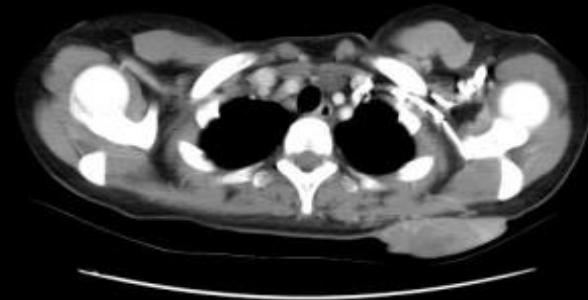
"Multiple pulmonary nodules"



體檢的影像報告說左上肺有白色陰影



"Crossing Chest Wall"

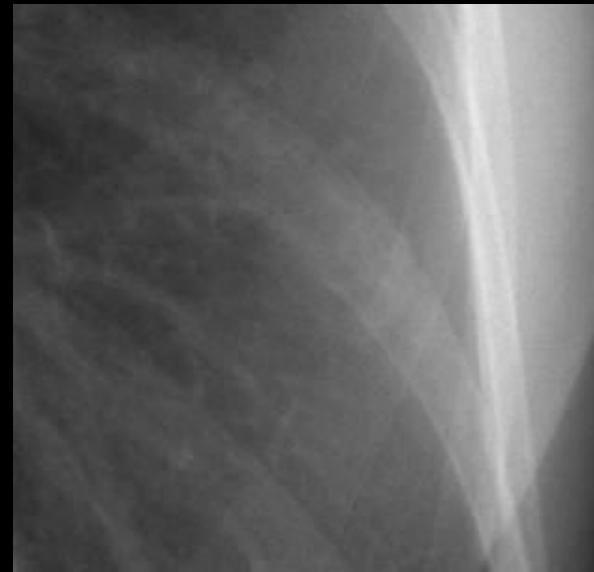
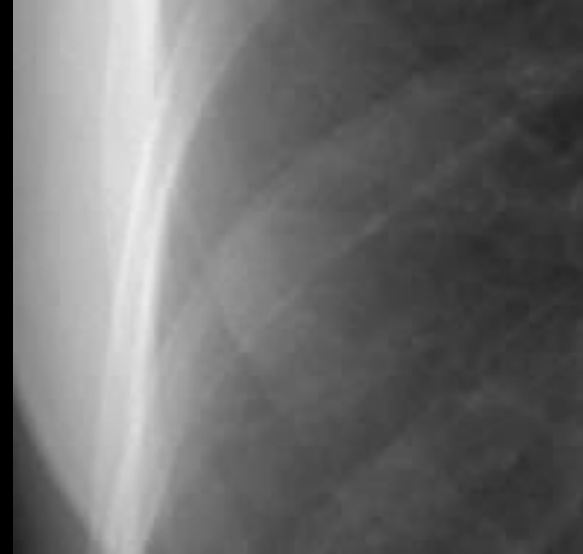
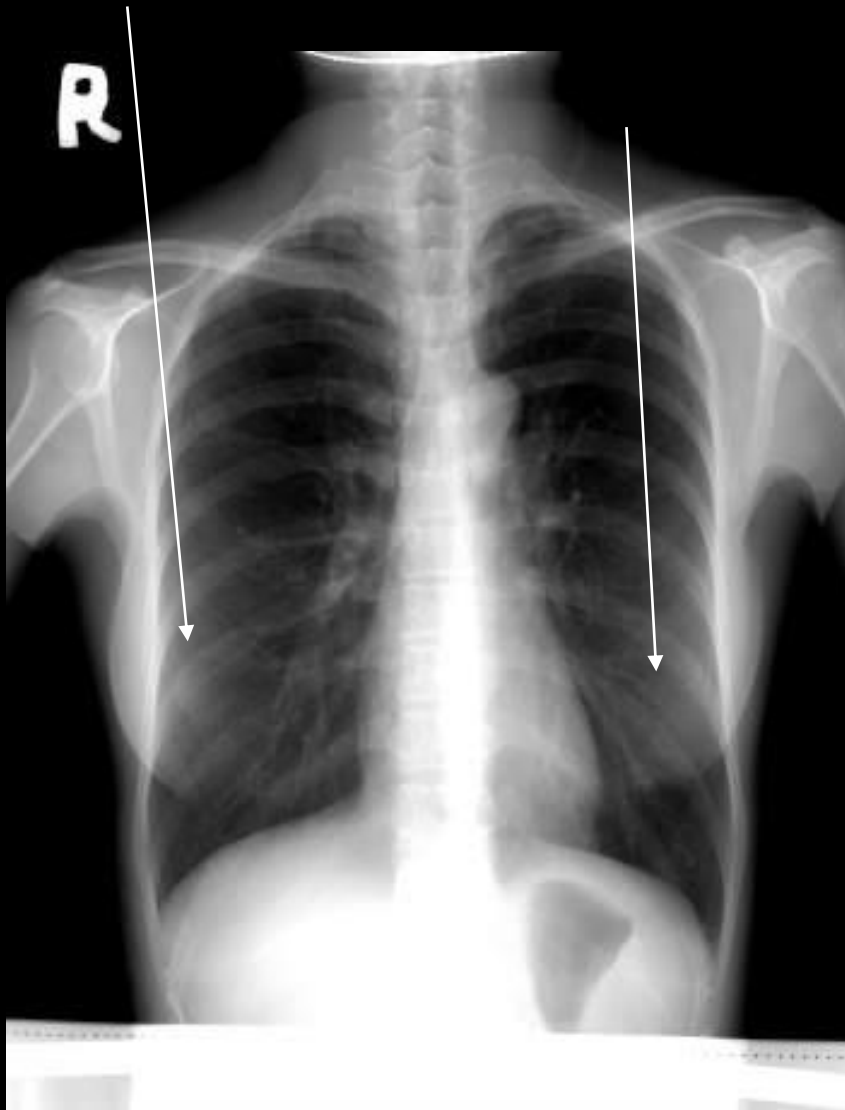


Soft tissue - Keloid

Hair braid "Crossing Chest Wall"



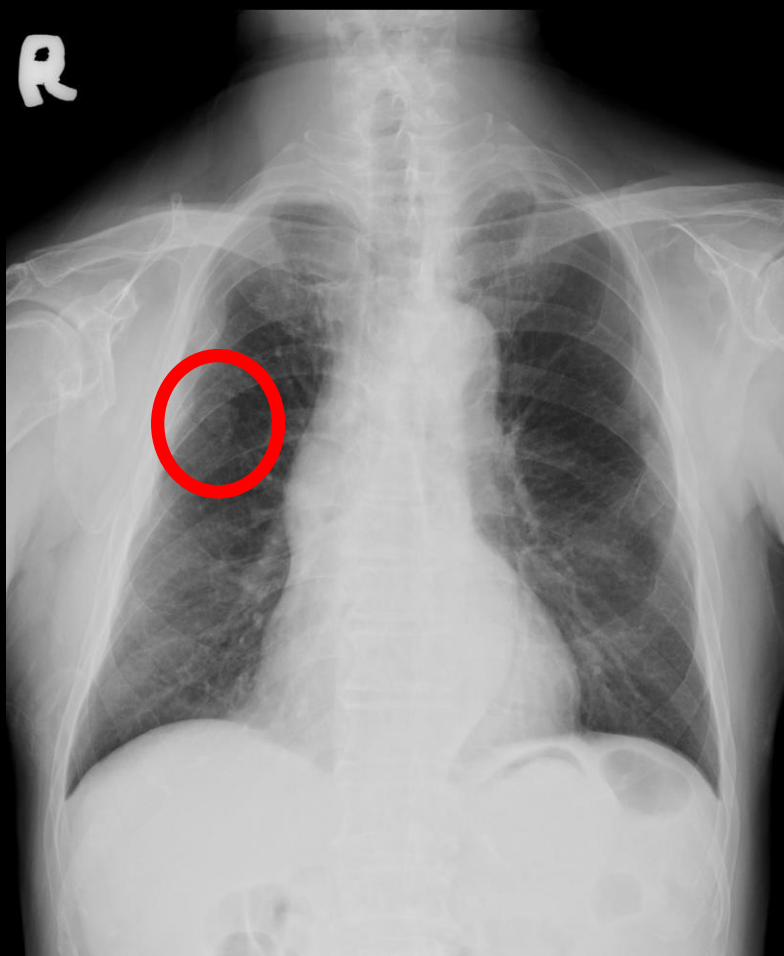
Bilateral symmetric nodules~ Nipples shadow



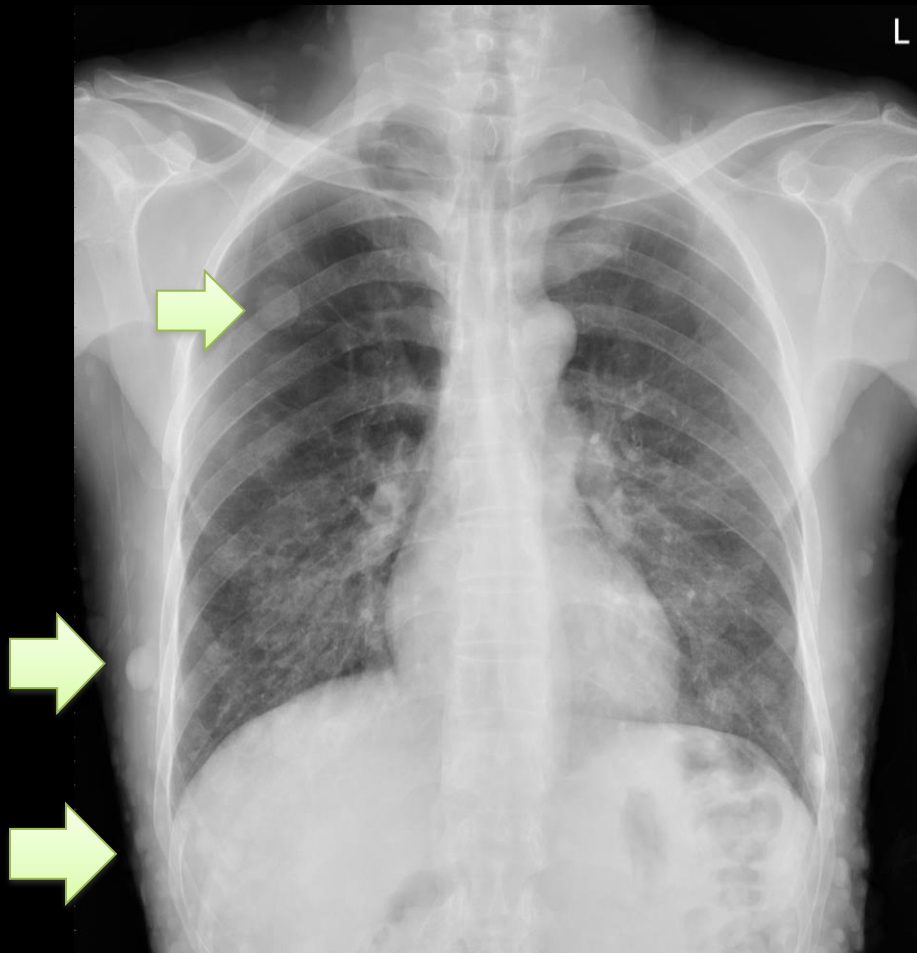
Nipples shadow

- Nipple shadows are apparent on ~7.5% (range 3.5-11%) of frontal chest x-rays
- bilateral and symmetric
- "fuzzy" margins or radiolucent "halo"
- sharp lateral border and poorly defined medial border (may be present only on PA projections)
- nodules are in a characteristic position:
 - male: between the 9th and 10th ribs posteriorly or the 5th and 6th ribs anteriorly
 - female: at the inferior aspect of the breast shadow.
- were not present on a very recent film

體檢報告顯示右肺有結節



Neurofibromatosis 神經纖維瘤



胸部X光的意義

- 便宜、簡單、快速
- 健檢照胸部X光有時候還是可以找到初期肺癌；但如果是有症狀才去照x ray, 大多數的肺癌已經不是初期
- 截至目前為止, 所有大型研究報告都指出, 定期照胸部X光並不能降低肺癌的死亡率, 因為70-80%發現都已經是無法開刀的病人了

在特定族群裡, 使用LDCT和常規使用CXR診斷及追蹤相比, 可以明顯降低肺癌死亡率

Screening for lung cancer (Review)

Manser R, Lethaby A, Irving LB, Stone C, Byrnes G, Abramson MJ, Campbell D



- 族群 : aged 55 to 74 years with 30 pack-years of smoking and who quit 15 years prior to entry if ex-smokers)
- LDCT : HR 0.80, 95% CI (0.70 to 0.92)

台灣低劑量電腦斷層肺癌篩檢共識宣言

104 年 5 月 2 日公告

109 年 4 月 22 日修改

1. 年齡介於 50-80 歲，抽菸史超過 30 包年，目前仍在抽菸或戒菸時間尚未超過 15 年的民眾，證據顯示可以接受低劑量電腦斷層以篩檢肺癌。尤以 60-75 歲者，最具成本效益。
2. 具有肺癌家族史的民眾，建議接受低劑量電腦斷層作為肺癌篩檢。^(註 1)
3. 有肺病史、氬暴露及特定職業暴露(如石綿)的民眾，可以諮詢醫師考慮進行肺癌篩檢。
4. 非吸菸，也無上述風險因子的民眾目前沒有證據支持肺癌篩檢。若擔心有罹患肺癌風險，建議諮詢醫師後，再進行肺癌篩檢。
5. 患有嚴重疾病或無法接受根治性癌症治療的民眾，不建議作肺癌篩檢。
6. 低劑量電腦斷層肺癌篩檢宜在具有篩檢經驗，並有多專科肺癌診治經驗的醫療機構進行。
7. 建議抽菸者應即早戒菸，低劑量電腦斷層篩檢並不能預防肺癌的發生。
8. 不建議使用其他方式，如肺部核磁共振、正子攝影或抽血檢驗腫瘤指數等方式篩檢肺癌。
9. 強烈建議政府應持續支持學界進行全國性臨床研究，以評估低劑量電腦斷層的篩檢效益。^{(註 2) (註 3)}

Benign or malignant solitary nodules ?

	Benign	Malignancy
Age	<35 y/o	>35 y/o
Symptoms	absent	May present
Past history	TB exposure, non-smoker	Smoker, exposure to carcinogens
Size	Small (<2cm)	Larger (>2cm)
Contour	Smooth margin	Spiculated margin
Calcification	Almost benign if laminated, diffuse or central	Rare, may be eccentric
No change over past 2 yrs	Almost benign	Most unlikely
Doubling time	<30 or > 490 days	Between the extremes
CT – fat	Hamartoma	absent
CT - Bubble like lucencies	Uncommon	Common, especially in adenocarcinoma
CT - enhancement	<15 HU	>15 HU

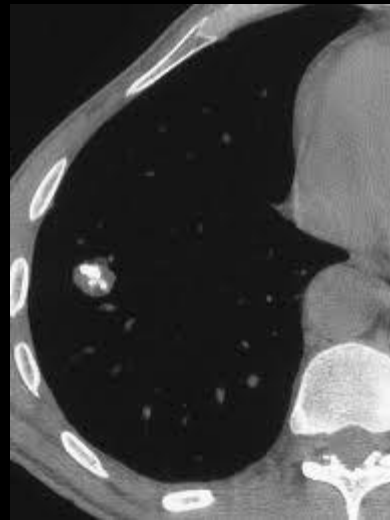
Calcification 鈣化

- On non-contrast CT an attenuation value of **>200 Hounsfield units (HU)** is used to determine the presence of calcification.
- Up to **6–10%** of primary lung cancers demonstrate **calcification on CT** and certain metastatic malignancies including **sarcomas** typically show calcification.
- The rate of calcification of **carcinoid** cancers is **8–35%**.

良性或惡性結節？

1. Calcification鈣化

- Nodule 內若有鈣化，良性居多(90%)，如呈 laminated (同心圓型)、Popcorn(爆米花型)、Diffuse(瀰漫型)、Central nidus(中心靶心型)
- Eccentric(離心型) calcification則有機會惡性

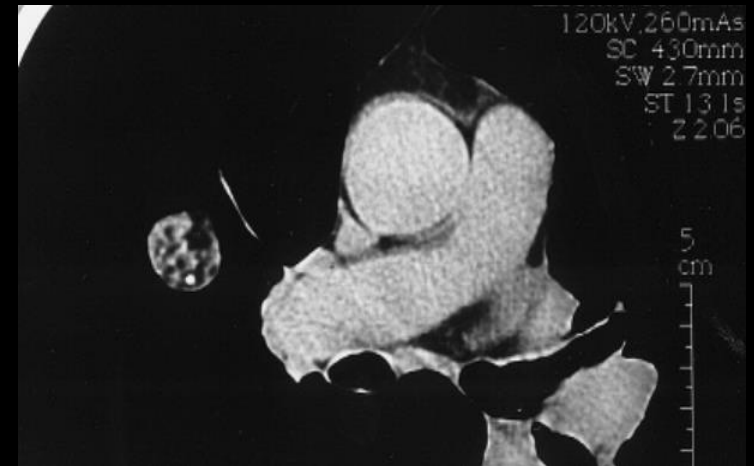


Imaging of the Chest, 2008

NEJM ,2009

Pulmonary hamartomas

- Made up of cartilage, connective tissue, fat, muscle and bone.
- **Fat -40 to -120 HU**
- Up to 50% of pulmonary hamartomas demonstrate **fat** attenuation on initial CT
- Differentials for fat attenuation in a SPN include **lipoid pneumonia** or pulmonary metastases in **liposarcoma** or **renal cell carcinoma**.



Lipoid pneumonia



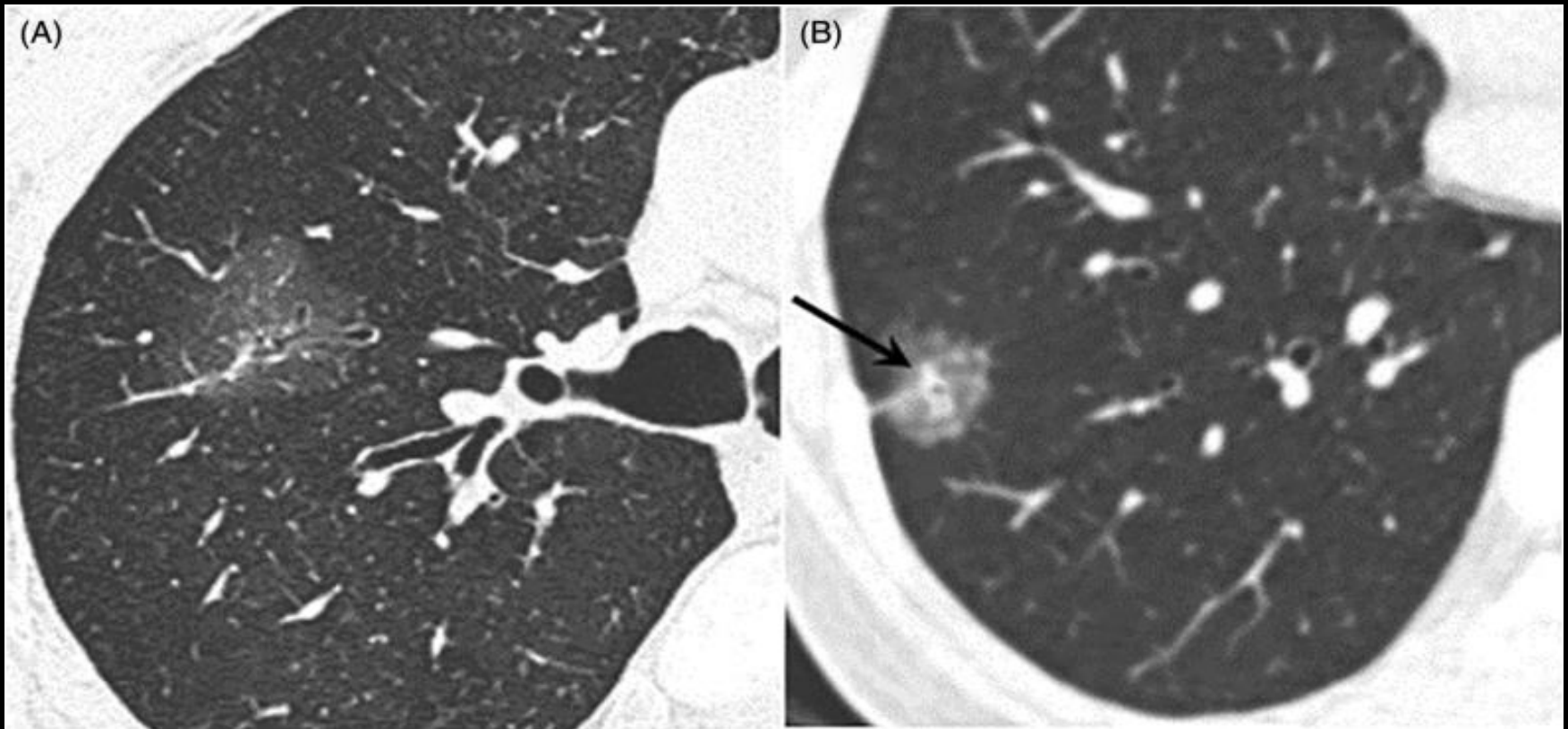
Sub-solid nodules includes part-solid and pure GGO

Pure GGO

lowest risk of malignancy

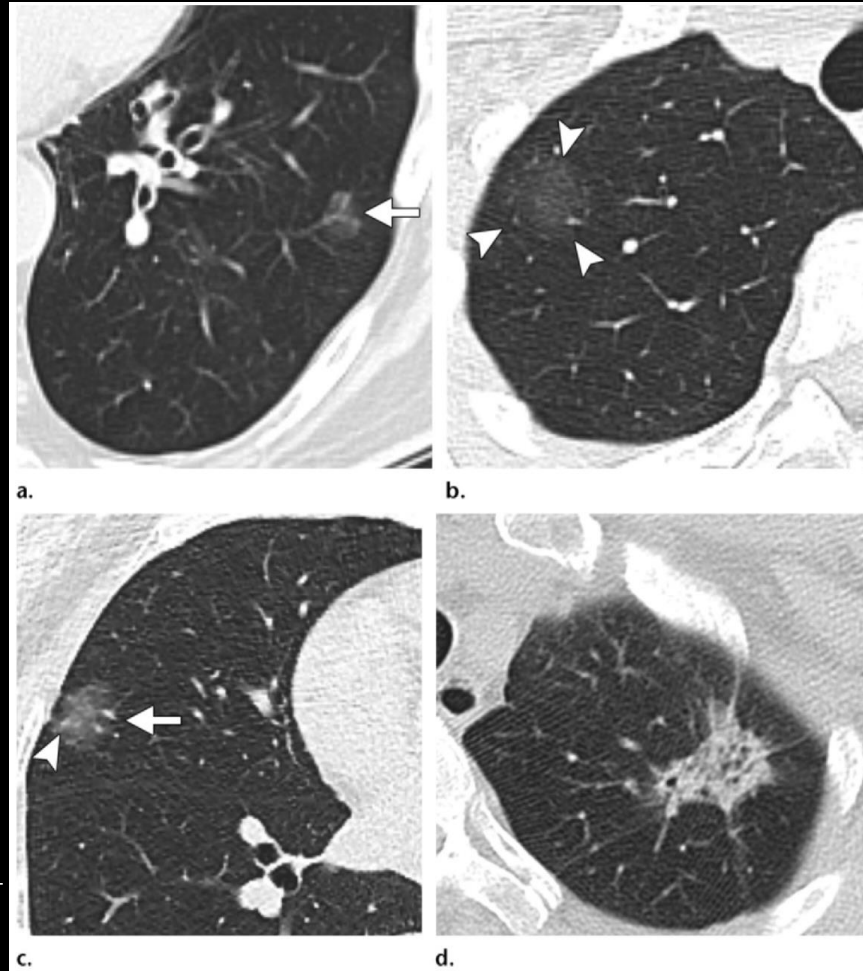
Part-Solid GGO

(Odds Ratio **1.4**(vs Solid nodule) for malignancy)



Preinvasive – AAH and AIS

Atypical
Adenomatous
hyperplasia
(**AAH**) : GGO <0.5-
1cm



Adenocarcinoma
in situ(**AIS**)
GGO <3cm

Lepidic-
Predominant
Adenocarcinoma
(**LPA**) : May
Necrosis, and the
focus of invasion of
lymphatics and
blood vessels >5mm

Minimal invasive
Adenocarcinoma
(**MIA**): <3cm/<0.5cm
lacks necrosis; does not
invade lymphatics, blood
vessels, or pleura

Solid part就是在病理上較具侵犯性(invasive)的腫瘤
: 要量最長徑

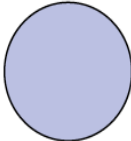
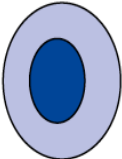
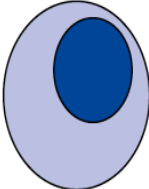
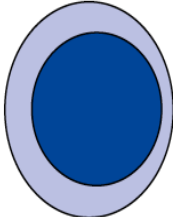
CT image on HRCT						
Invasive part	0	0 cm	≤0.5 cm	0.6–1.0 cm	1.1–2.0 cm	2.1–3.0 cm
Total tumor size including lepidic growth part	Usually ≤0.5 cm	≤3.0 cm	≤3.0 cm	0.6–3.0 cm	1.1–3.0 cm	2.1–3.0 cm
Pathology	AAH	AIS	MIA	Lepidic predominant AD or Invasive AD with lepidic compnent	Invasive AD with a lepidic component or lepidic predominant AD	Invasive AD with lepidic component
Pathologic Stage		pTis	pT1mi	pT1a	pT1b	pT1c



Table 4: Comparative presentation of currently published guidelines for the management of patients with lung nodules according to size and attenuation

Guidelines (references)	Nodule(s) size* and attenuation characteristics			
	Small (diameter/volume)	Intermediate solid (diameter/volume)	Larger solid (diameter/volume)	Larger subsolid (diameter/volume)
Fleischner Society ^[1]	<6 mm/<100 mm³ Discharge or optional CT at 12 months depending on risk assessment (subsolid nodules necessitate more extensive follow-up at 2 years and 4 years)	6-8 mm/100-250 mm³ Solitary nodules CT at 6-12 months and then at 18-24 months	>8 mm/250 mm³ Solitary nodules CT at 3 months or PET/CT scan, nonsurgical biopsy or surgical excision	>6 mm/100 mm³ Solitary pure ground-glass nodules CT at 6-12 months and then every 2 years for a total of 5 years Solitary part-solid nodules CT at 3-6 months and then annually for a total of 5 years, if solid component is stable and <6 mm. If solid component is ≥ 6 mm or growing, proceed to PET/CT scan, nonsurgical biopsy, or surgical excision

< 6mm
12 M

6-8mm
6-12 M

>8mm
3 M

Follow-up period
Solid nodule : 2Y
Subsolid : 5Y

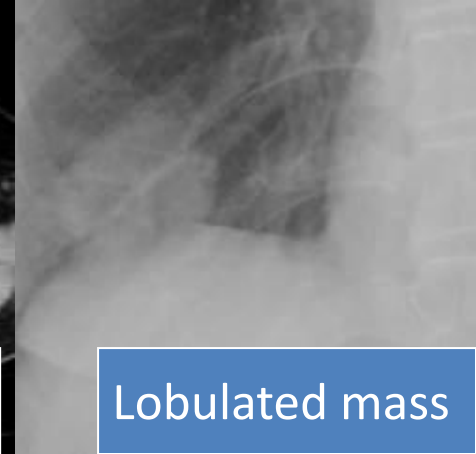
Subsolid >6mm
GGO : 6-12 M
Part-solid : 3-6M

良性或惡性結節？ Contour 輪廓

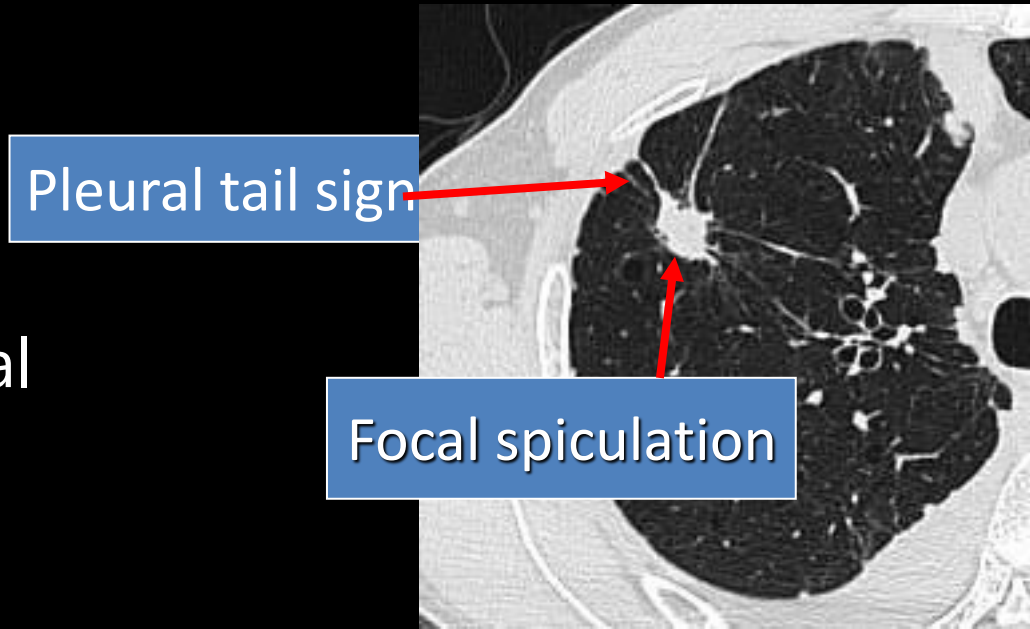
- 周緣是well defined則良性機率高，但仍約20%是惡性
- 周緣是lobulated (分葉狀) 的約60~80%是惡性
- 周緣是局部不規則針刺狀 (Focal spiculation) 80%為惡性
- 周緣是Coronary radiata (Diffuse spiculation)則約95%是惡性
- Pleural tail sign (or pleural tag) : 60~80%是惡性



bronchogenic cyst



Lobulated mass

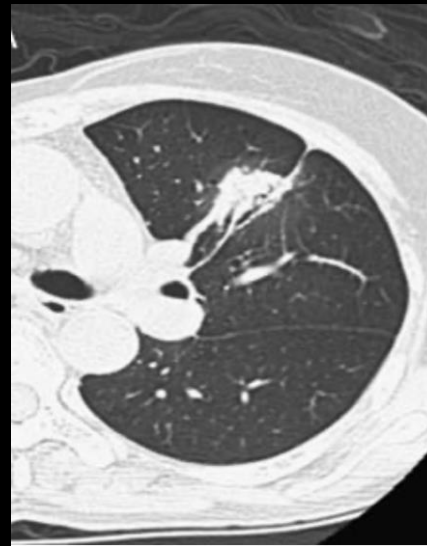
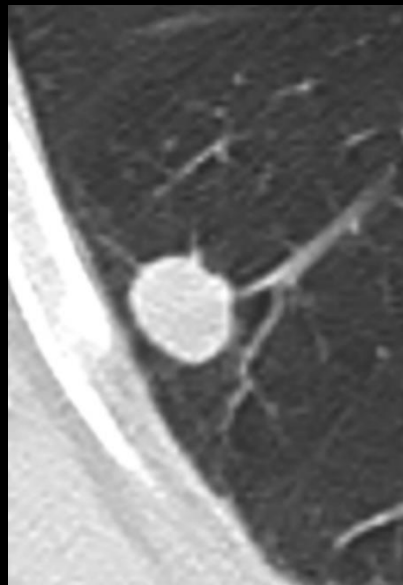
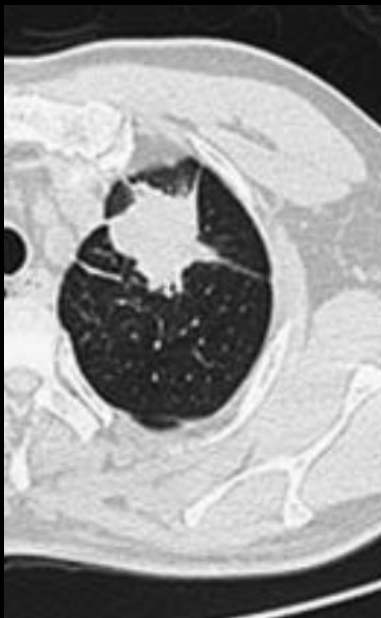


Pleural tail sign

Focal spiculation

Correlation Between EGFR Mutation Status and Computed Tomography Features in Patients With Advanced Pulmonary Adenocarcinoma

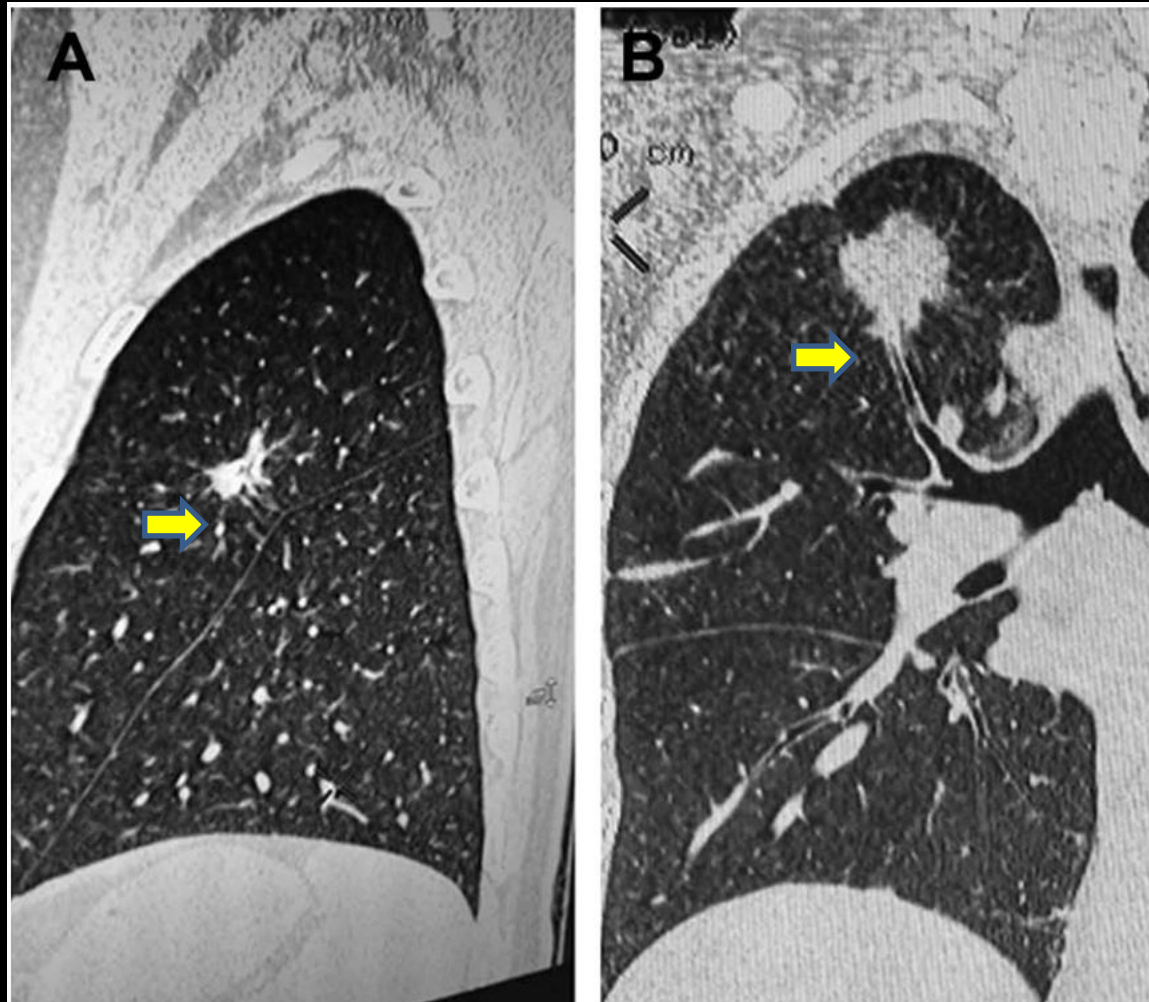
- An irregular shape : Wild-type EGFR *
- An oval shape : EGFR mutations*
- Air bronchogram – Exon 19*
- Calcification – Wild type*
- Larger Tumor size - Wild type*



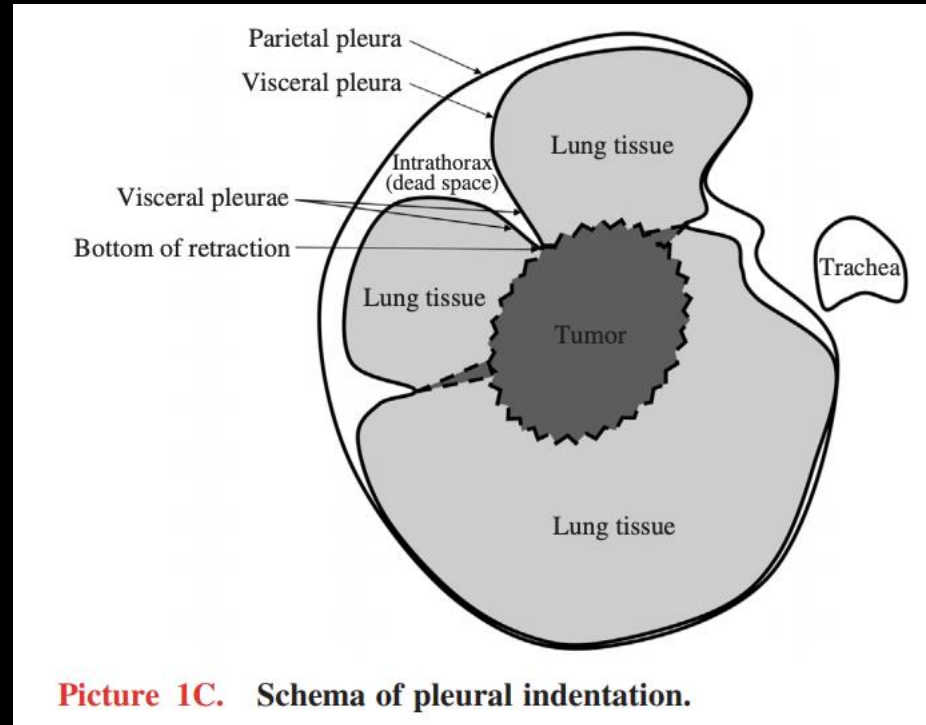
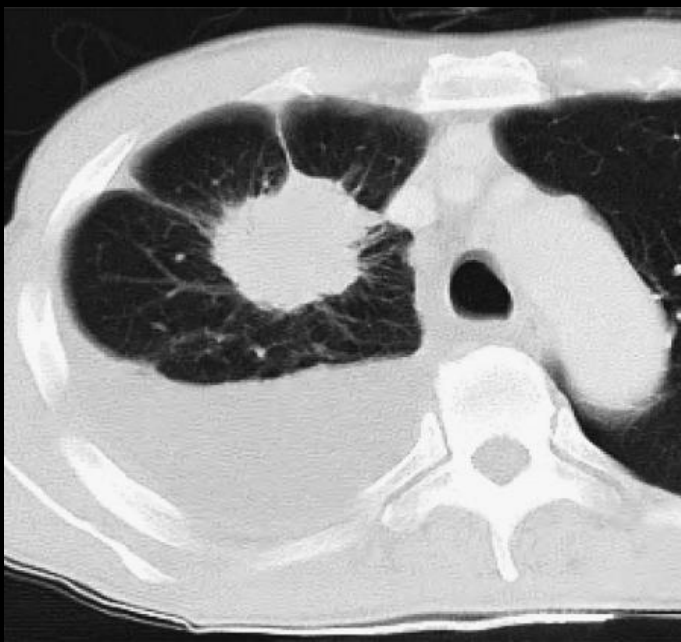
Higher EGFR mutation rate

Pleural indentation sign

Bronchus cutoff sign



Pleural indentation sign (肋膜凹陷)

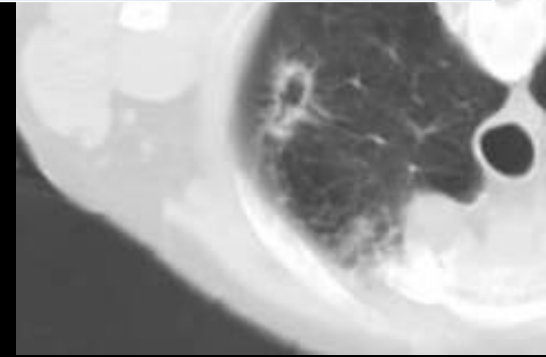


possible pleural invasion by
peripheral lung cancer,
especially adenocarcinoma

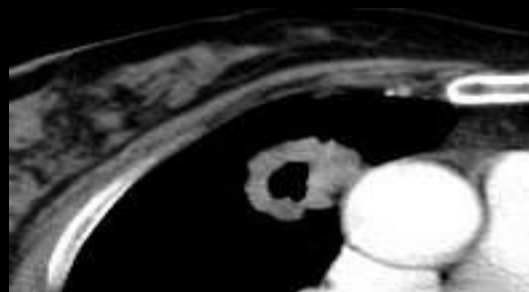
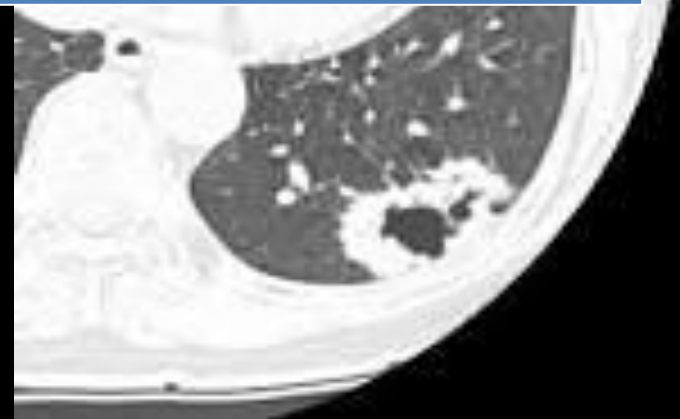
良性或惡性結節？ Cavitation 開洞

- 若呈eccentric(離心) 則惡性機率大
- 若腫瘤洞內緣不規則或呈鋸齒狀則惡性機率大
- 若空洞內緣平滑，壁薄均勻，則多為良性
- **壁厚<5mm, 92% 良性**
- **壁厚>15mm 95% 惡性**

Pulmonary TB



Lung adenocarcinoma

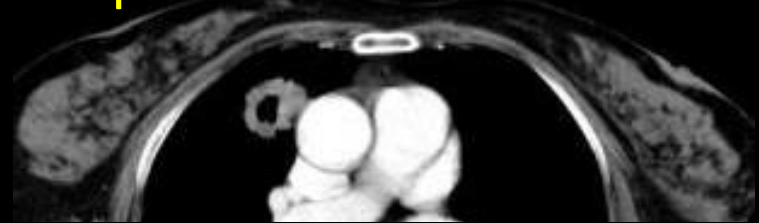


Lung squamous cell carcinoma

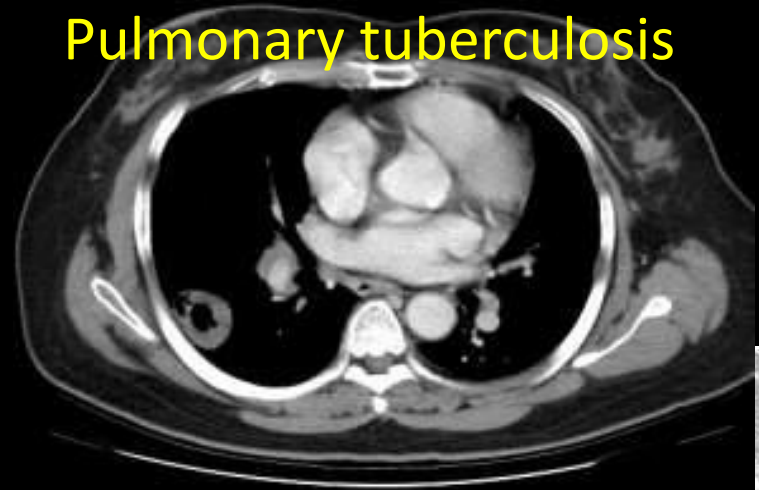
Cavitation

- Cavitation occurs in both benign and malignant conditions, including abscesses, infectious granulomas, vasculitis, pulmonary infarcts and primary and metastatic malignancies, classically **squamous cell carcinoma**

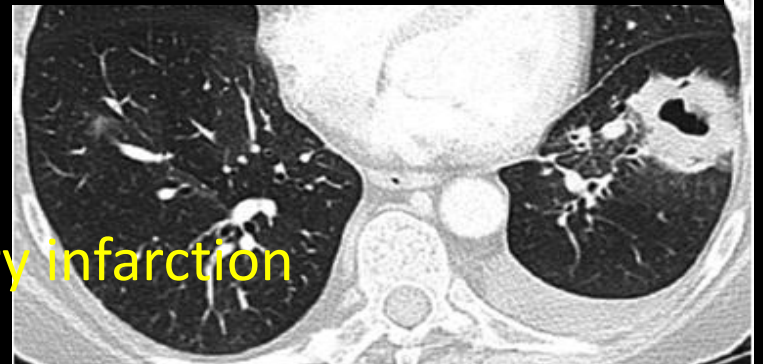
Squamous cell carcinoma



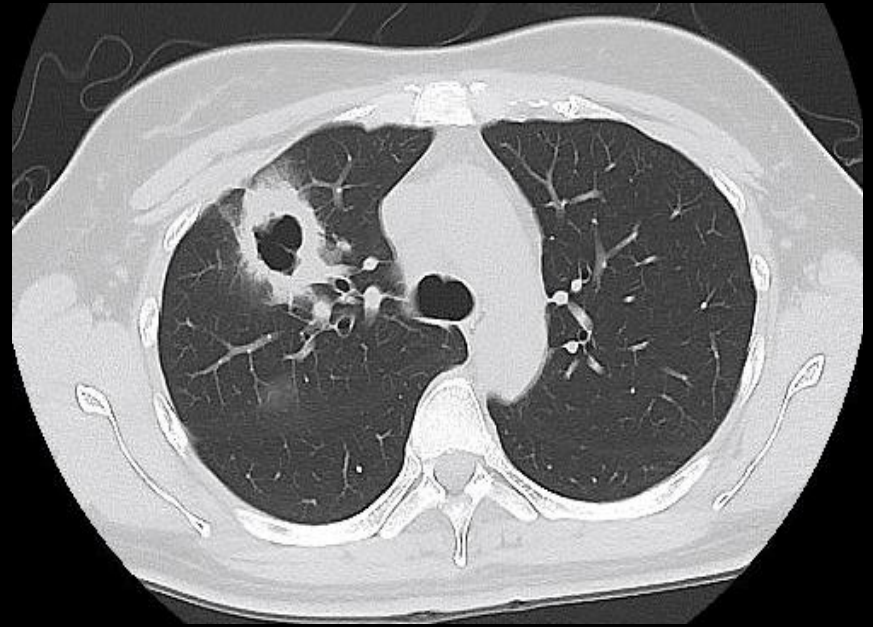
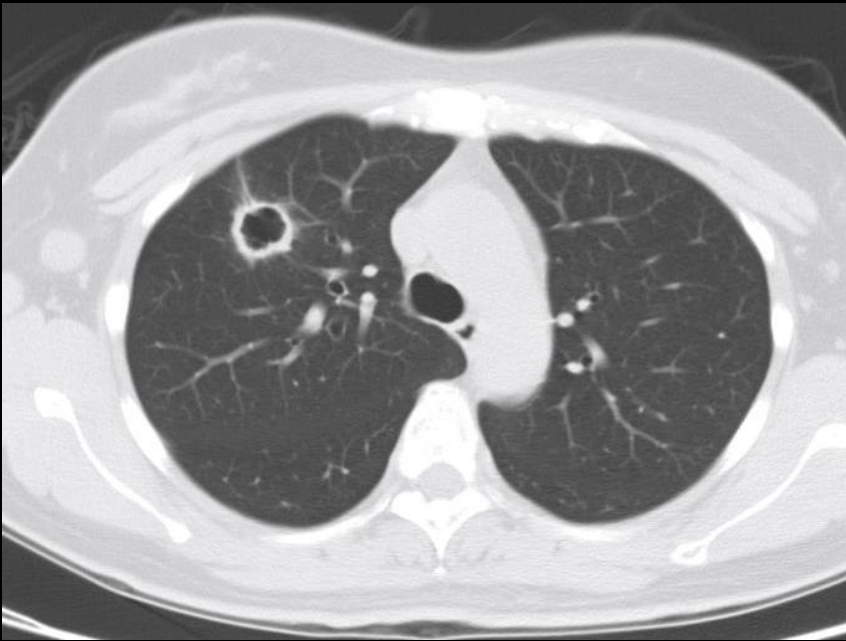
Pulmonary tuberculosis



Pulmonary infarction



RUL cavitory lesion



8 months later

良性或惡性結節？

- Size大小

- 腫瘤越大，惡性的機會就越高
- 直徑小於0.7公分，惡性機率小於1%；直徑介於0.8~2公分之間，惡性機率約為18%；但是如果腫瘤超過2公分，惡性的機率就急速升高超過50%
- >3cm : 80% 為惡性

- Growth rate 生長速度

- Volume doubling time 體積增加為兩倍所需的時間，一般惡性腫瘤約為一個月到兩年。
- 肺癌中長最快的是小細胞肺癌，約一個月

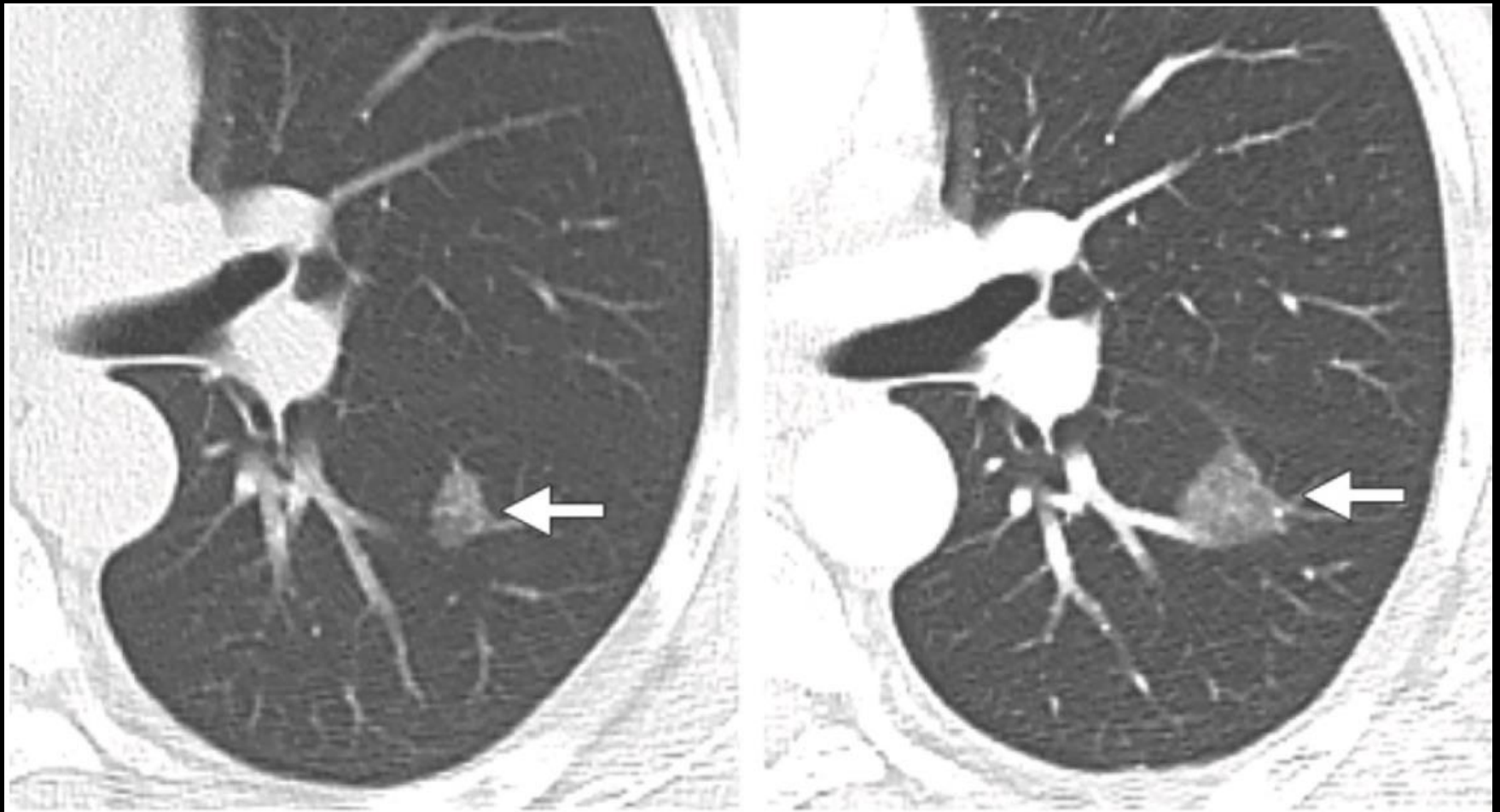
Nature growth rate of lung cancers

Cell type	26% increased in diameter	Malignancy to be detected (Years)		
	Volume doubling time (days)	1cm	3cm	10cm
Squamous	88 (about 3Ms)	7.1	8.4	9.6
Adenocarcinoma	161 (about 6Ms)	13.2	15.4	17.6
Un-differentiated	86 (about 3Ms)	7.1	8.2	9.4
Small cell carcinoma	29 (about 1M)	2.4	2.8	3.2

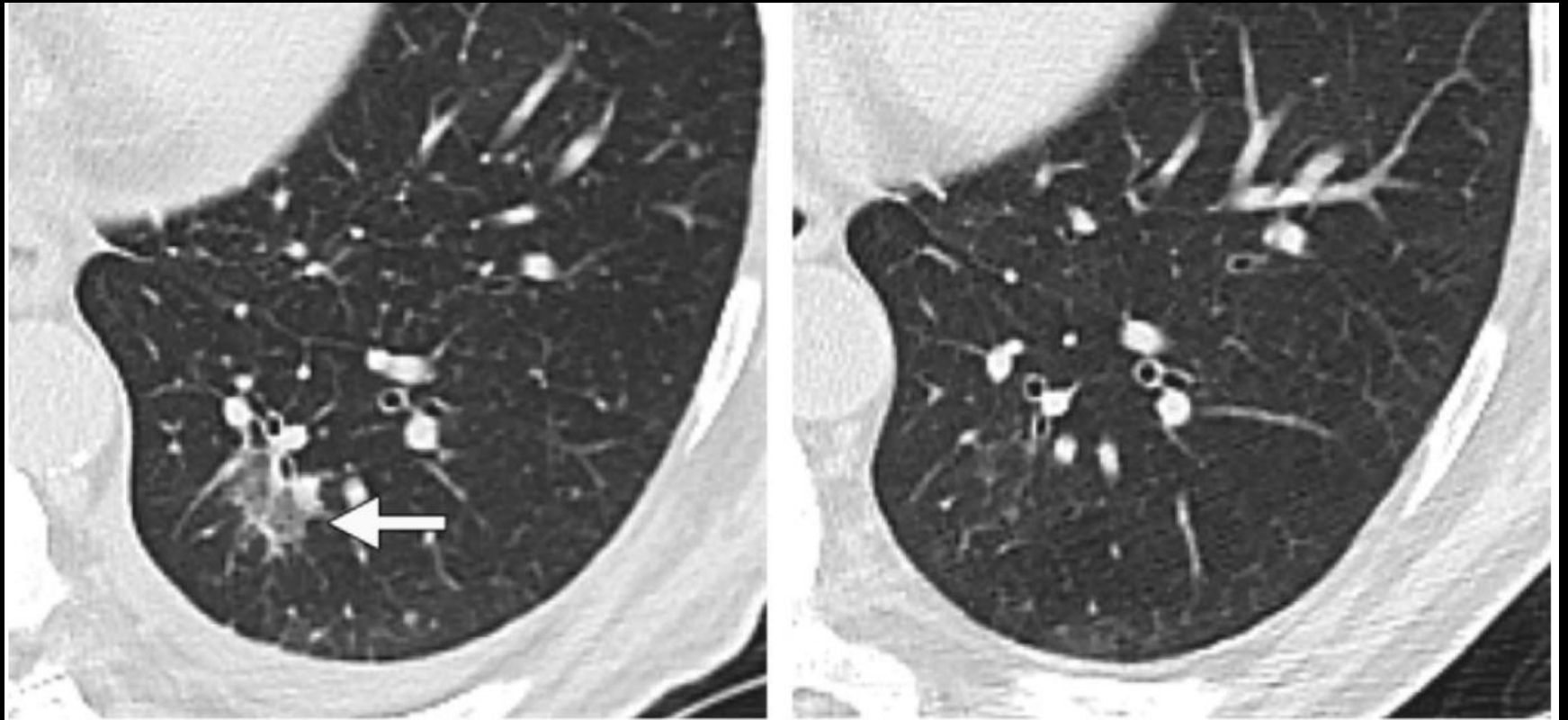
Nature growth rate of lung cancers

- The current consensus is that nodule growth stability at **2 years** for solid nodules is representative of benignity of the nodule.
- This cut-off is supported by the recent **NELSON screening trial**, which demonstrated that **<1%** of malignant nodules fell outside this **2-year** stability cut-off.
- Notably, **sub-solid nodules** can represent slower growing malignant processes such as AIS and MIA with VDTs of **457–813** days.

Subsolid nodule : Follow-up CT image obtained 3 years later – Adenocarcinoma



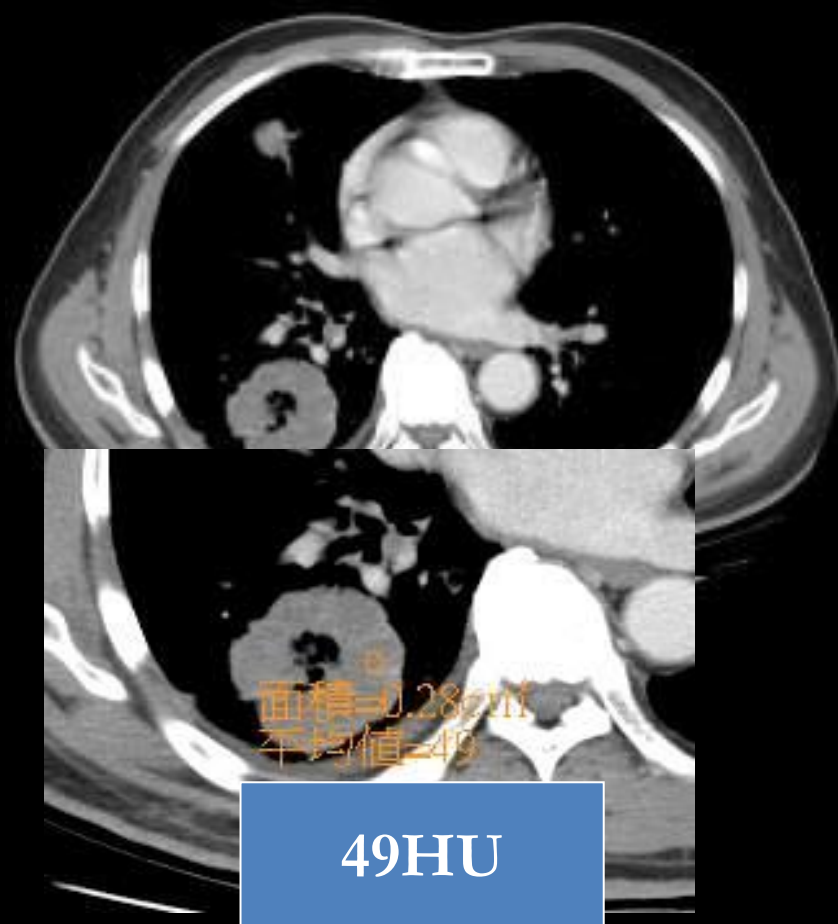
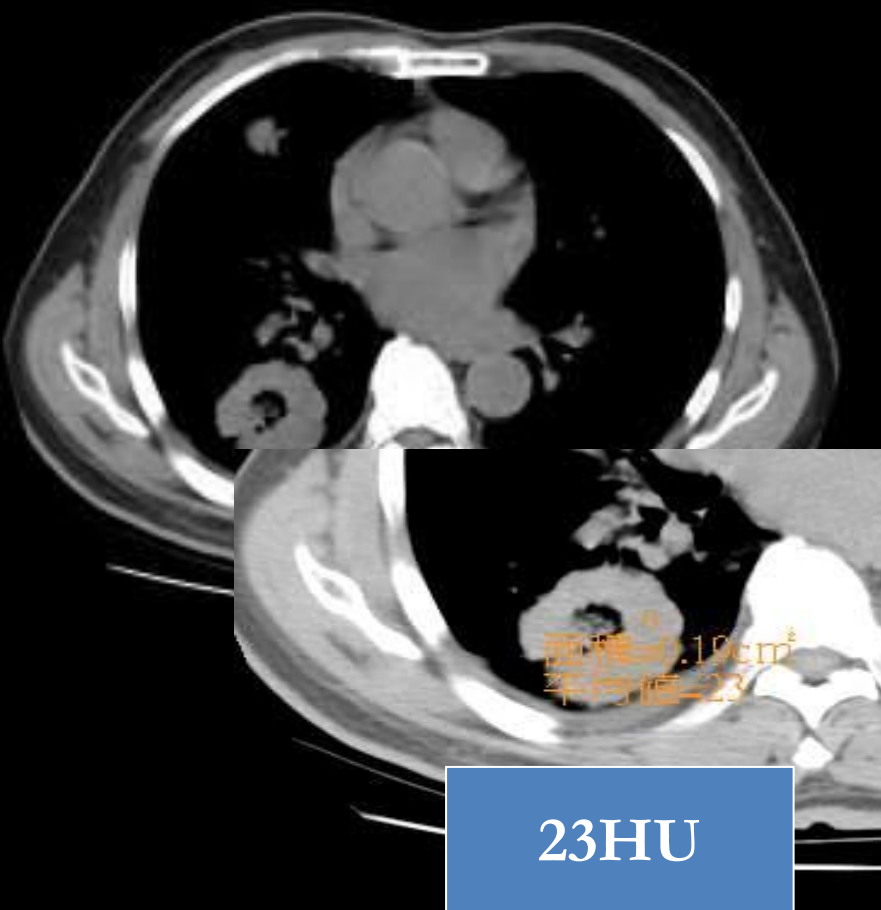
Leukemia with infection/inflammation process



3 months later

Density

Nodular enhancement after contrast
15HU as a cuff off value



Location

- **Upper lobe** distribution is associated with an increased risk of malignancy with an odds ratio of **1.9**
- Specifically, the **right upper lobe (RUL)** has the highest rate of malignancy with **45%** of all malignant nodules in one screening study localized to the RUL
- This is theorized to be a result of **increased airflow into the RUL during initial inspiration** and therefore increased exposure to inhaled carcinogens, especially in smokers

Perifissural nodules

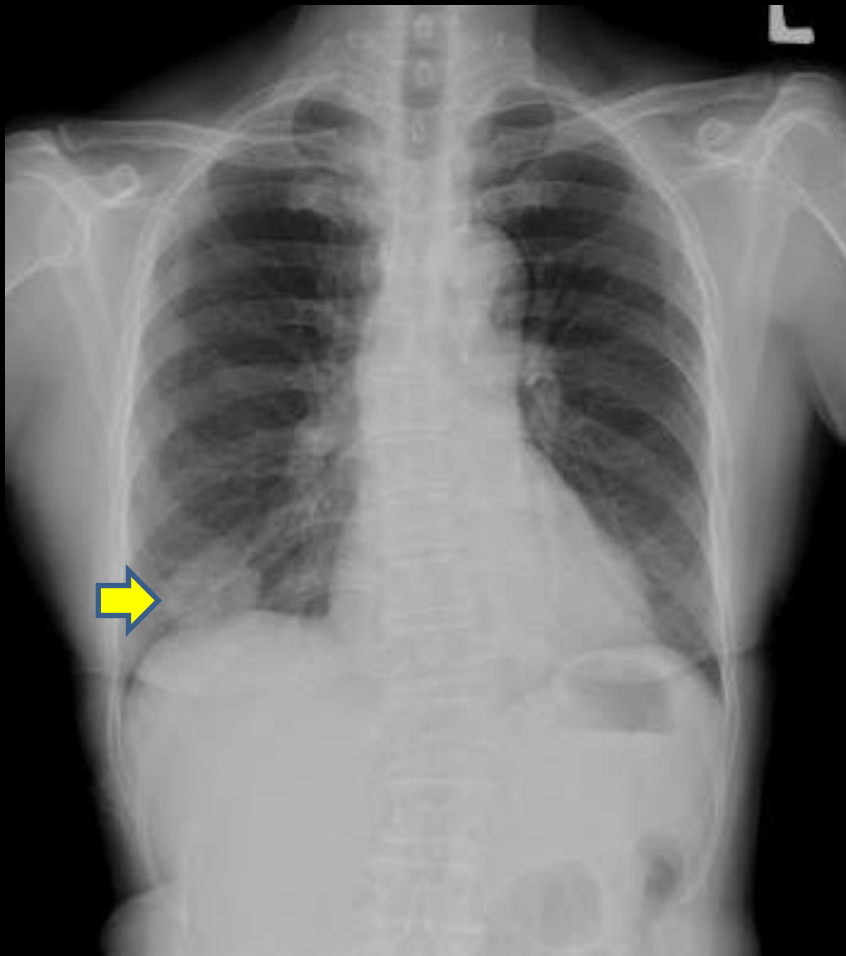
- Perifissural nodules, small solid nodules that on CT sit adjacent to the pleural fissure, predominately represent **perifissural lymph nodes**
- **Do not require** further imaging even if >6 mm
- **High-risk features**, such as a spiculated, irregular margin or distortion of the adjacent fissure

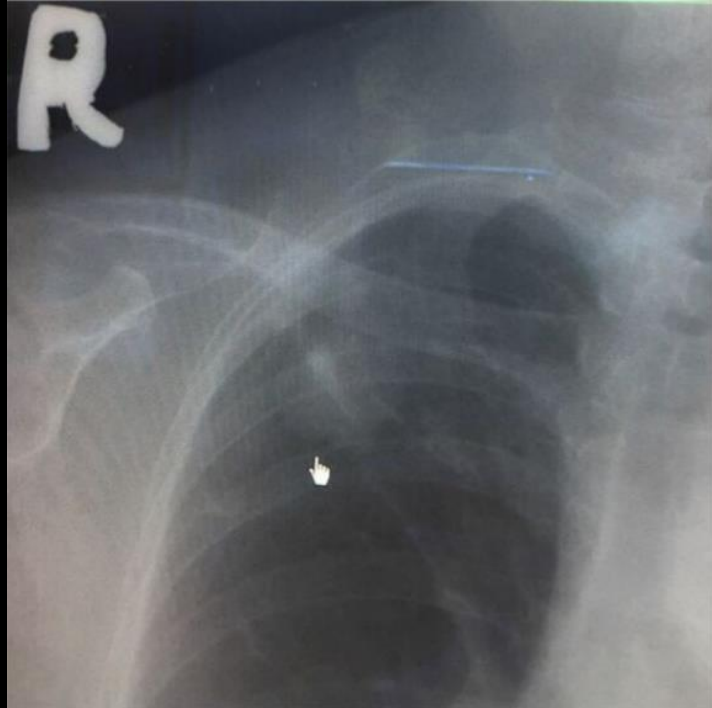


Solitary pulmonary nodules(單一肺結節)

- **Neoplastic**
 - Malignant : lung cancer, metastasis, rare tumors..
 - Benign : hamatoma, lipoma
- **Inflammatory**
 - Granuloma : Tuberculosis, Histoplasmosis, Cryptococcosis..
 - Abscess
 - Bronchogenic cyst
 - Fungal ball (Aspergilloma)
 - Organizing pneumonia
- **Vascular** : Infarction (pulmonary embolism), Arteriovenous (AV) malformation, Wegener' s granulomatosis, Rheumatoid nodules
- **Developmental** : Bronchogenic cyst, pulmonary sequestration..
- **Inhalation** : Aspirated foreign body, silicosis..
- **Others** : hematoma, extramedullary hematopoiesis(EMH), "phantom tumor"

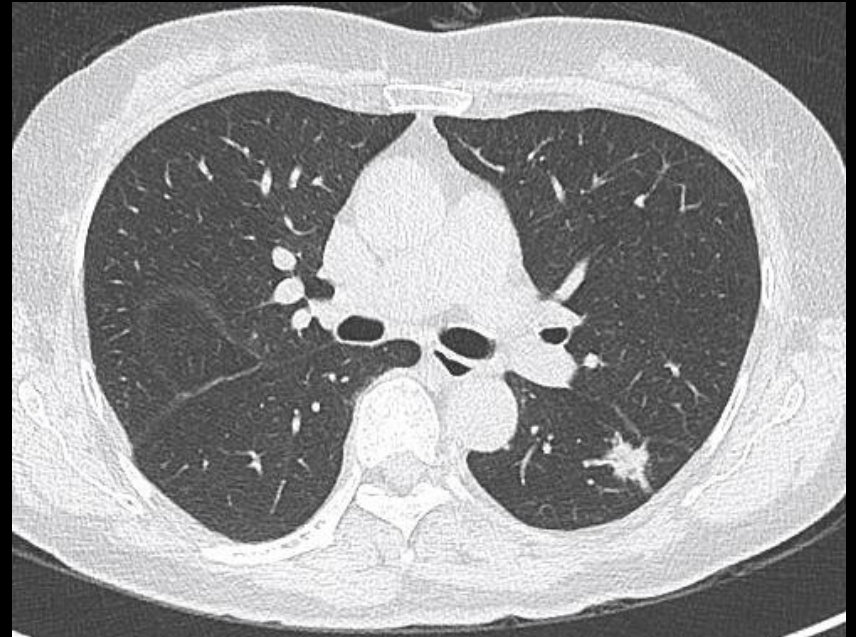
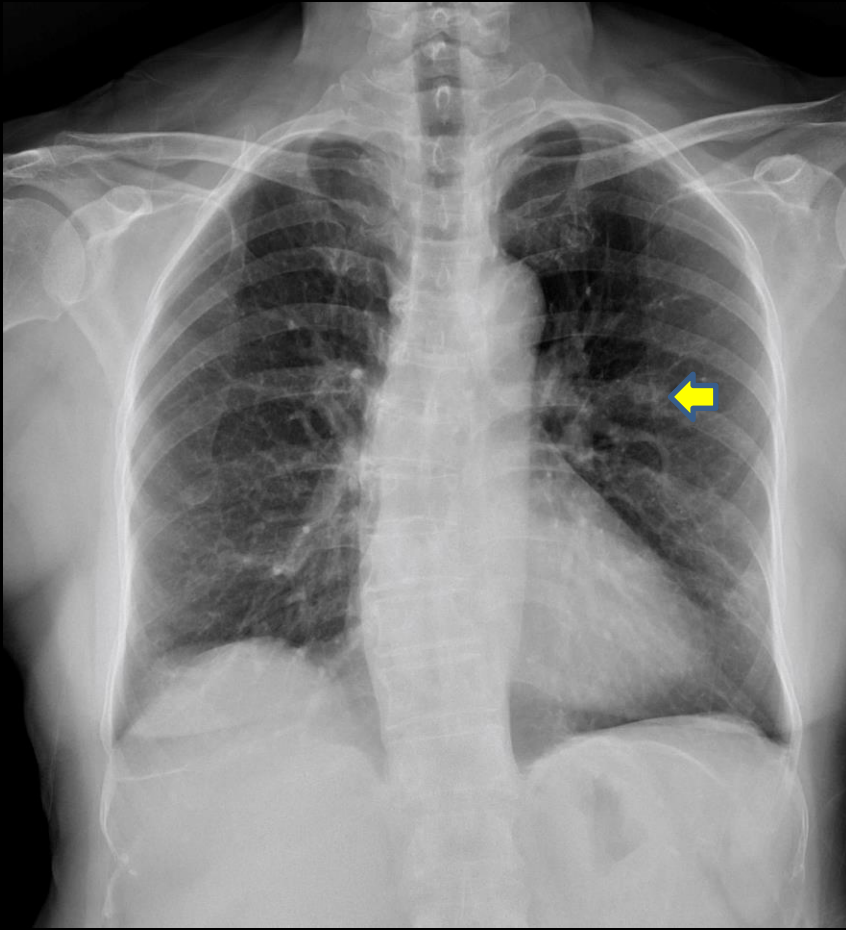
RLL lung lobulated mass ~ adenocarcinoma



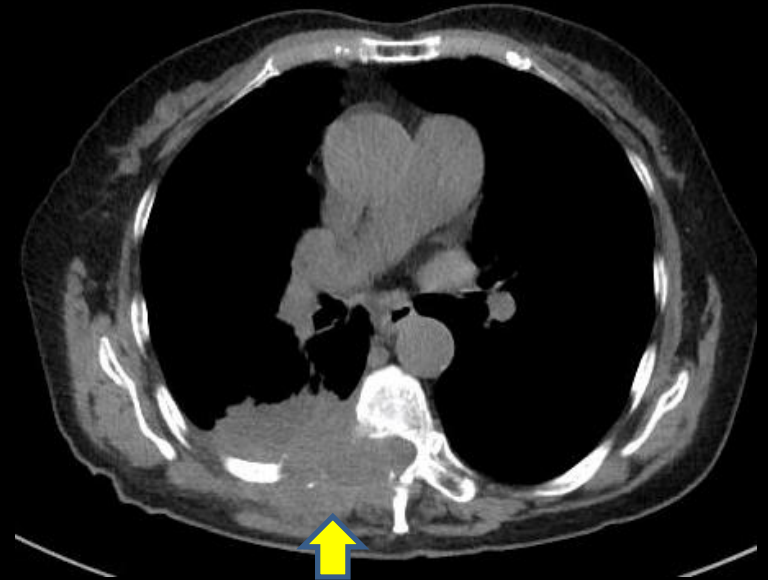
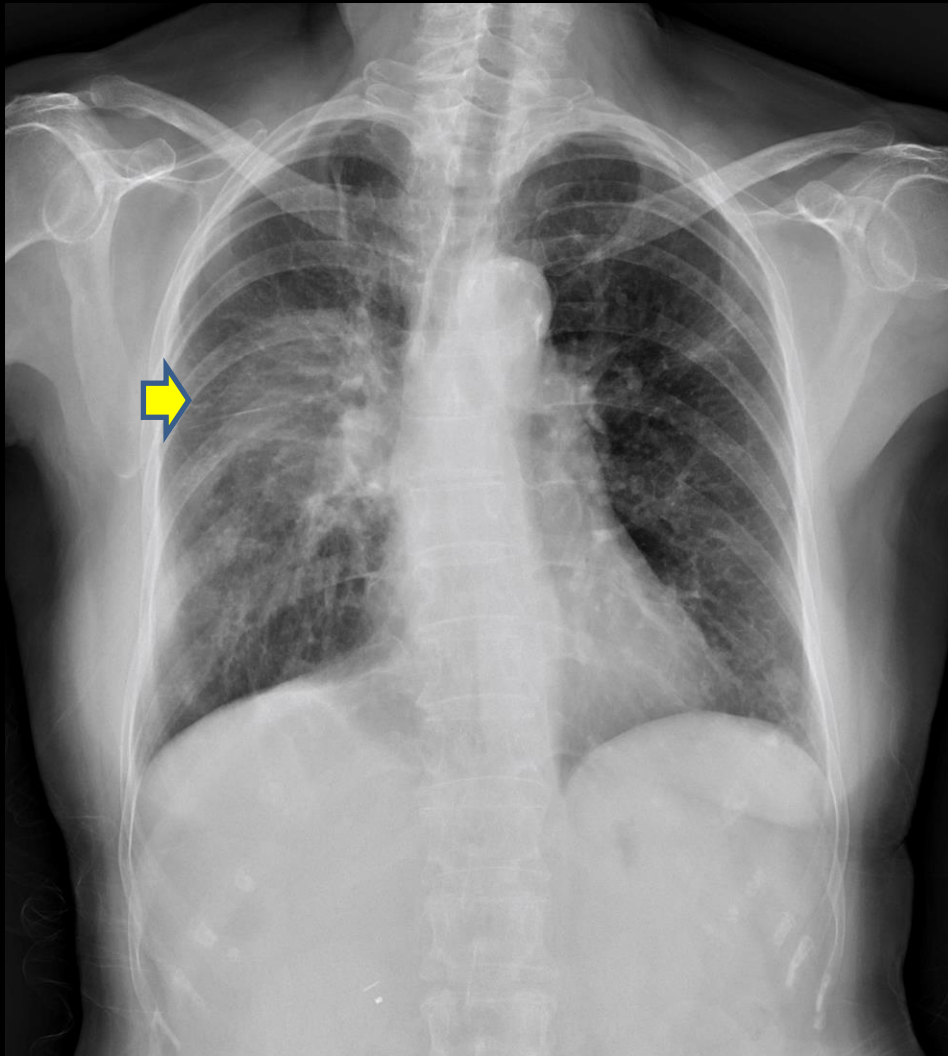


肺結節就在你眼前, 但你就是看
不到..
像極了愛情

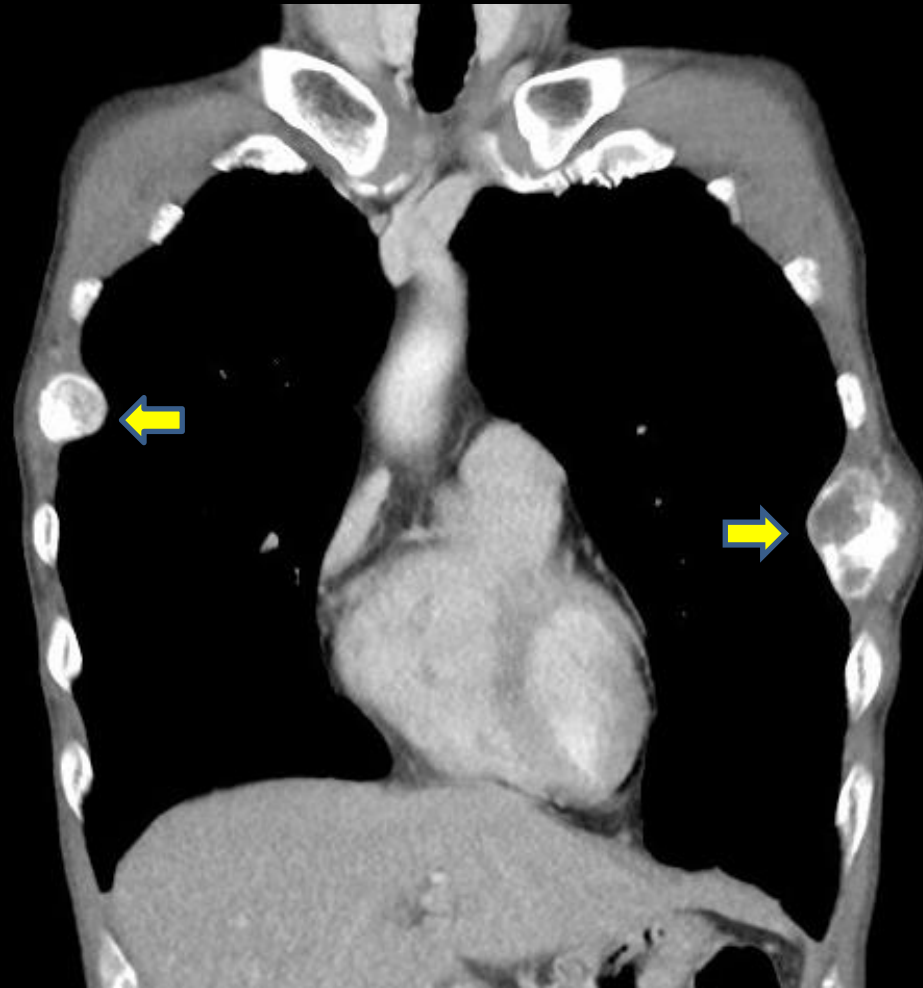
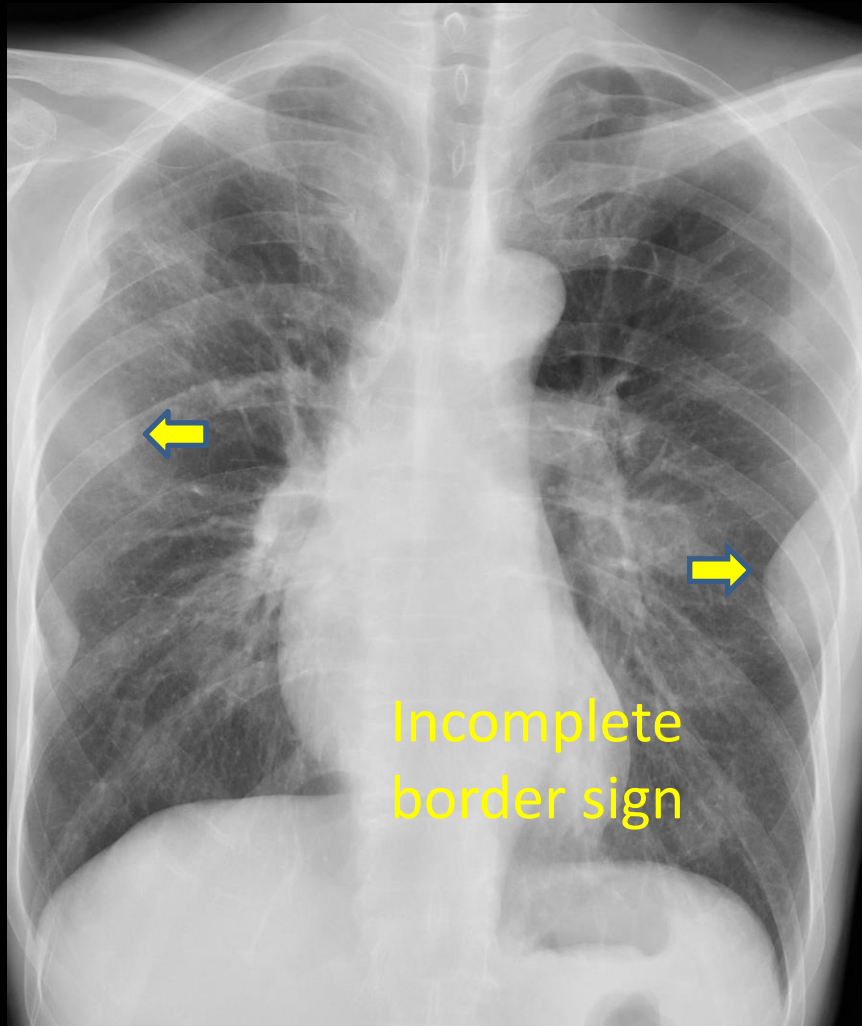
Lung nodule..



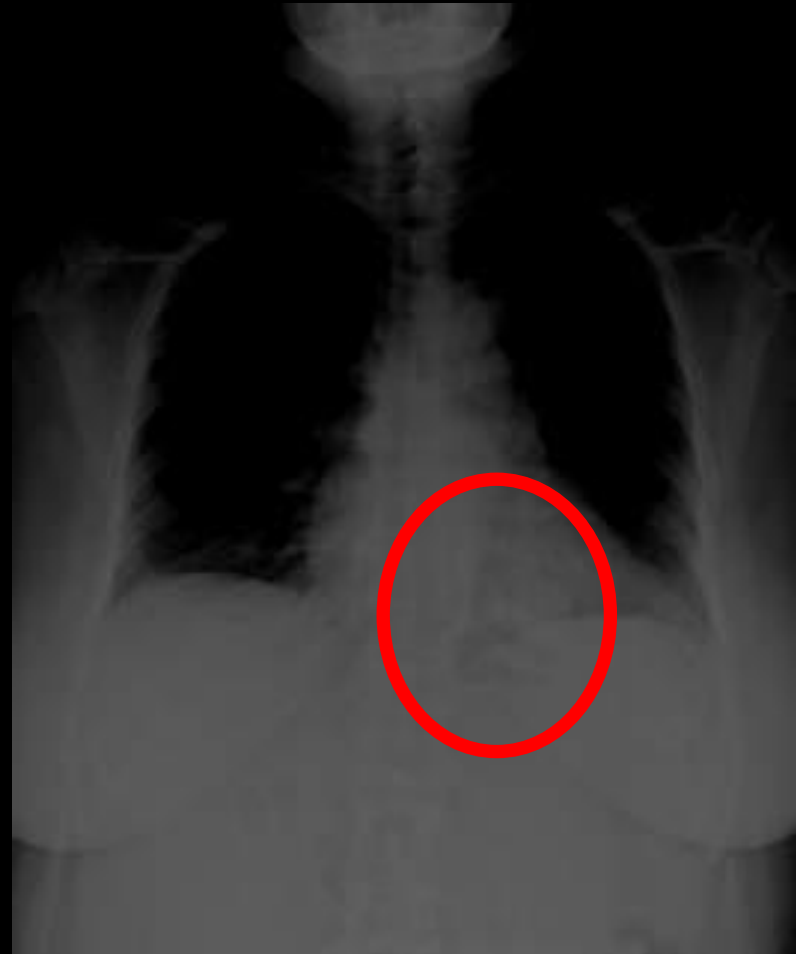
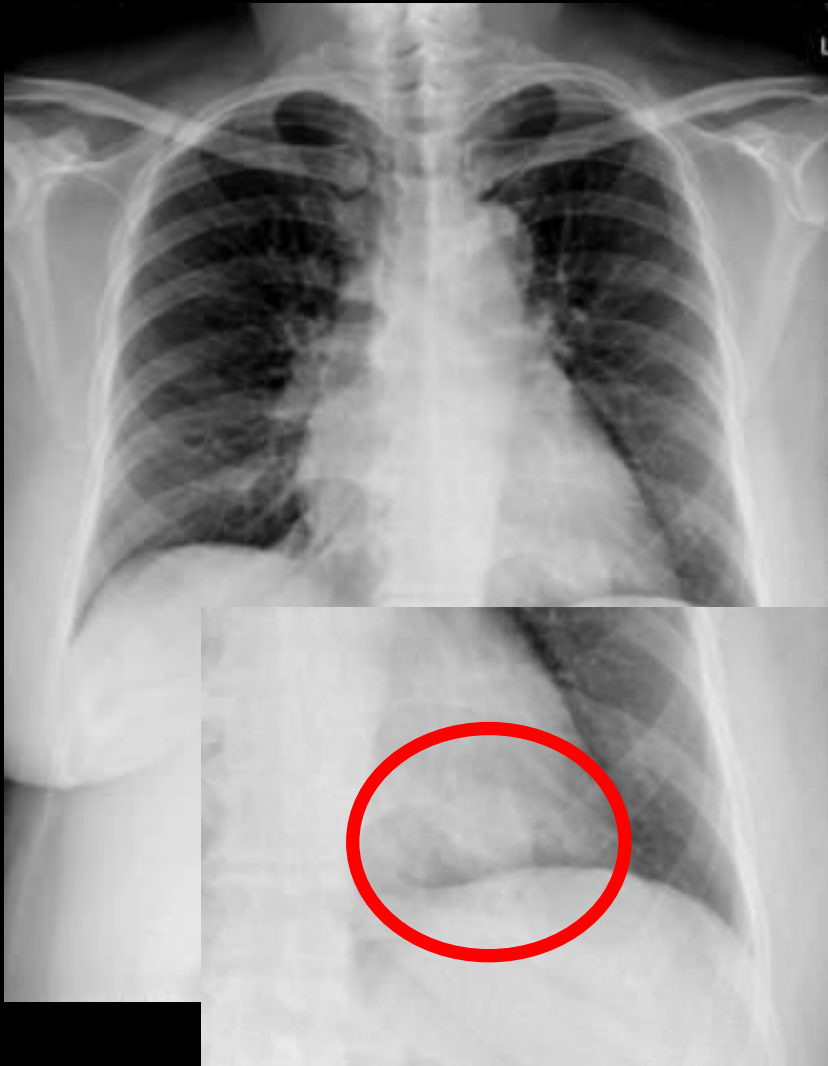
Opacity ? Mass ?



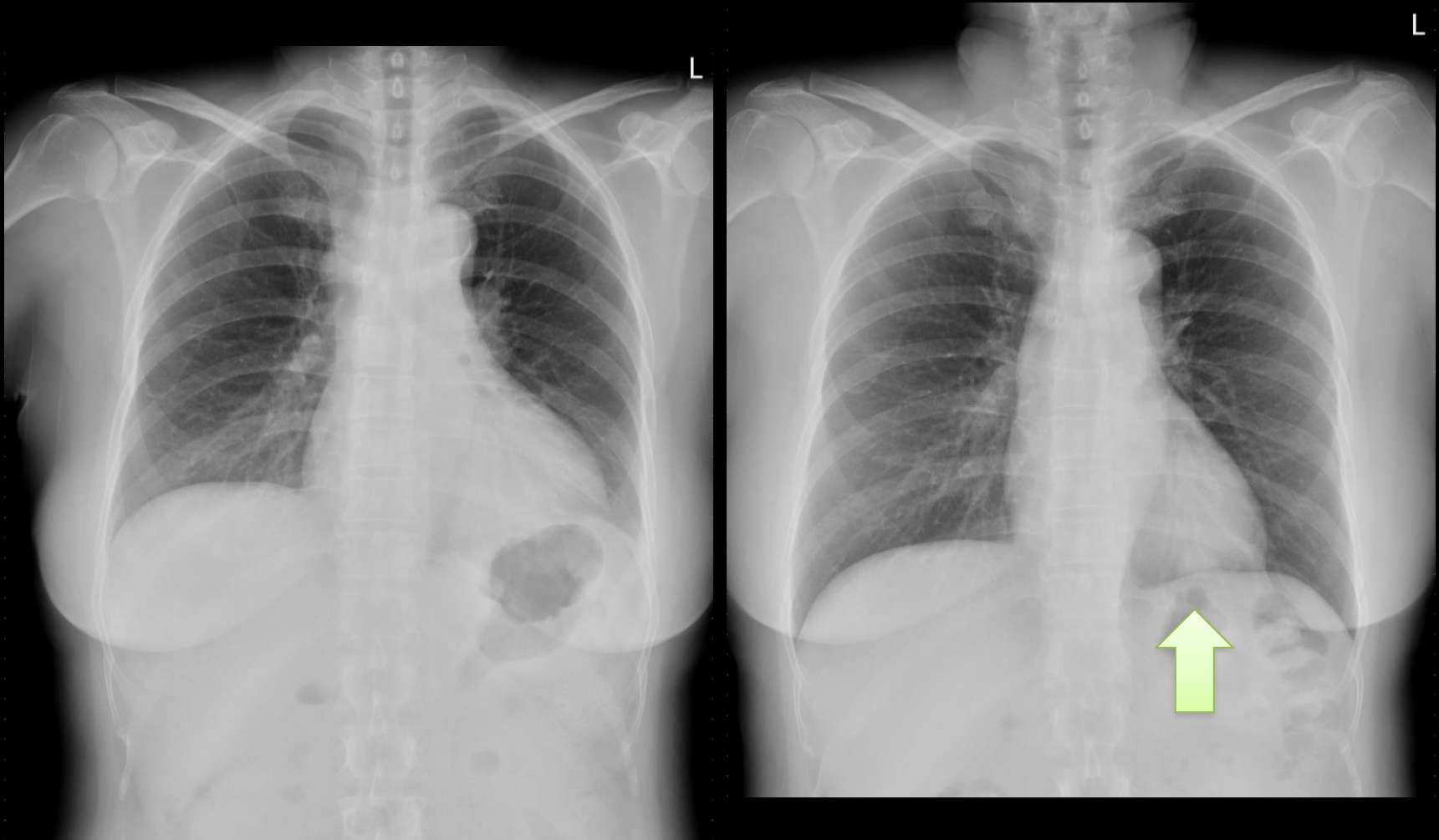
Bone metastasis – incomplete border sign



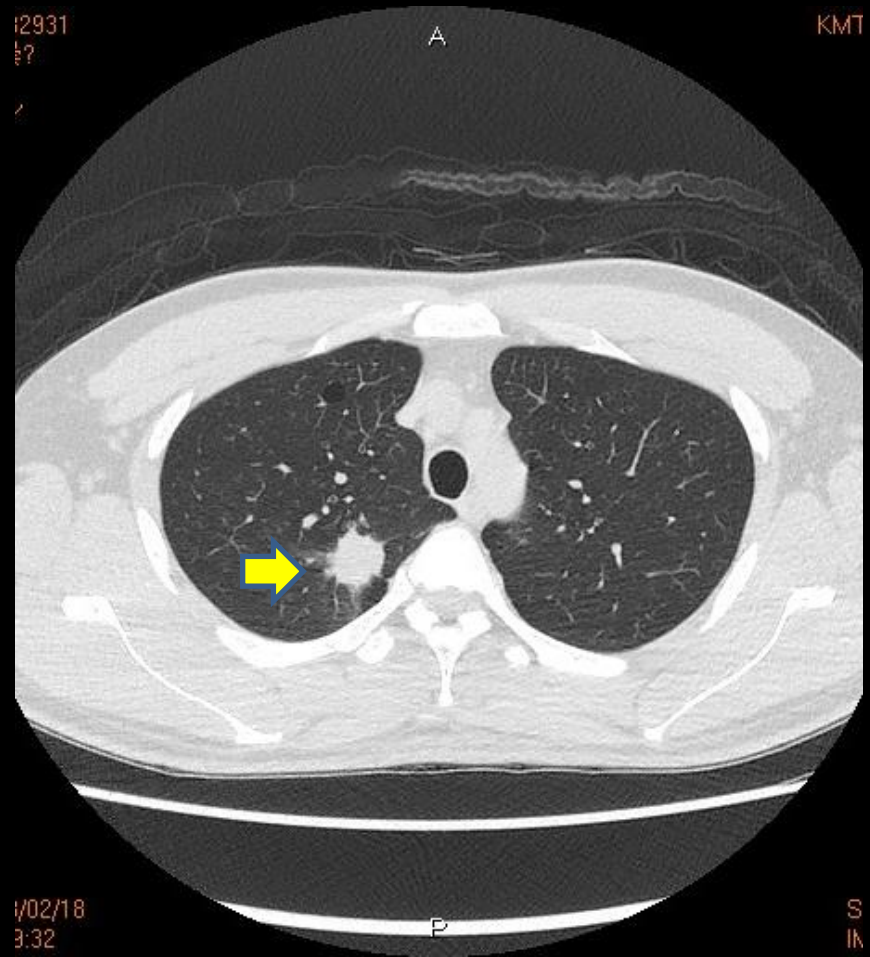
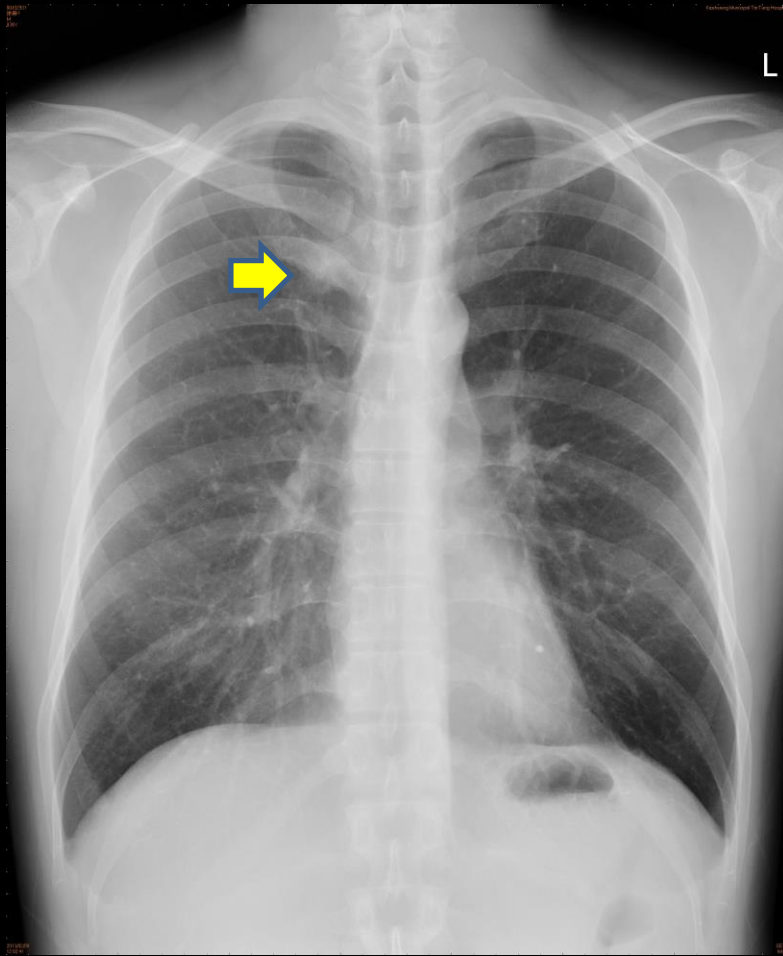
LLL nodule ~ lung Adenocarcinoma



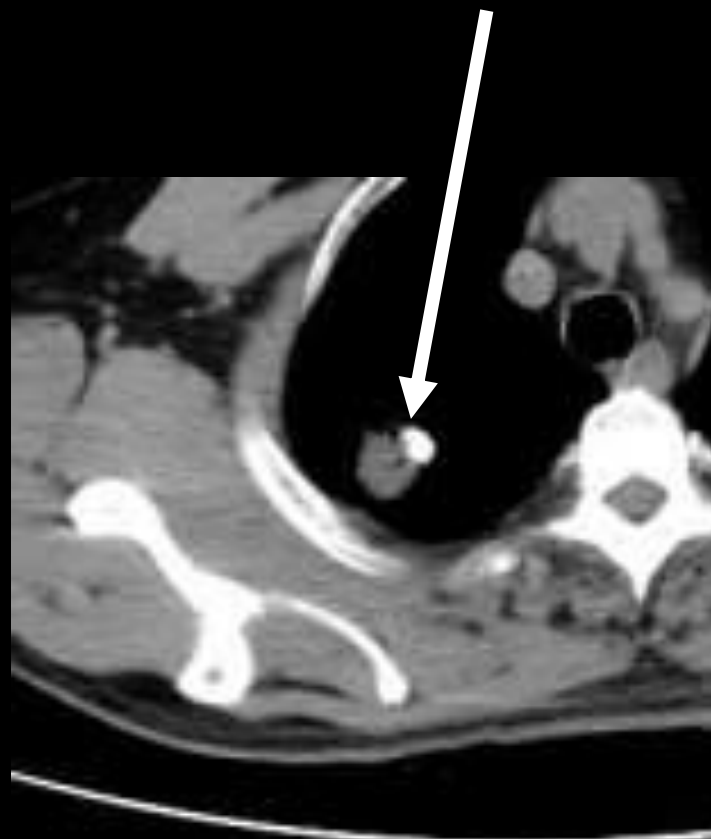
LLL nodule - Lung adenocarcinoma



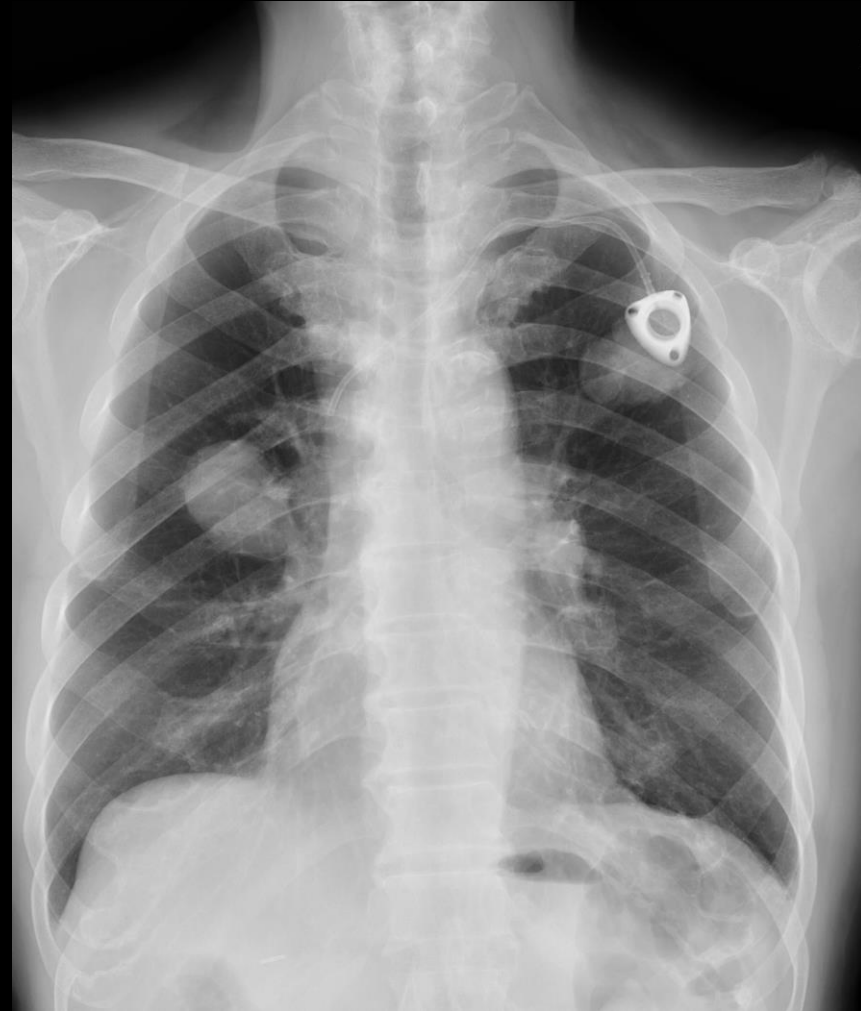
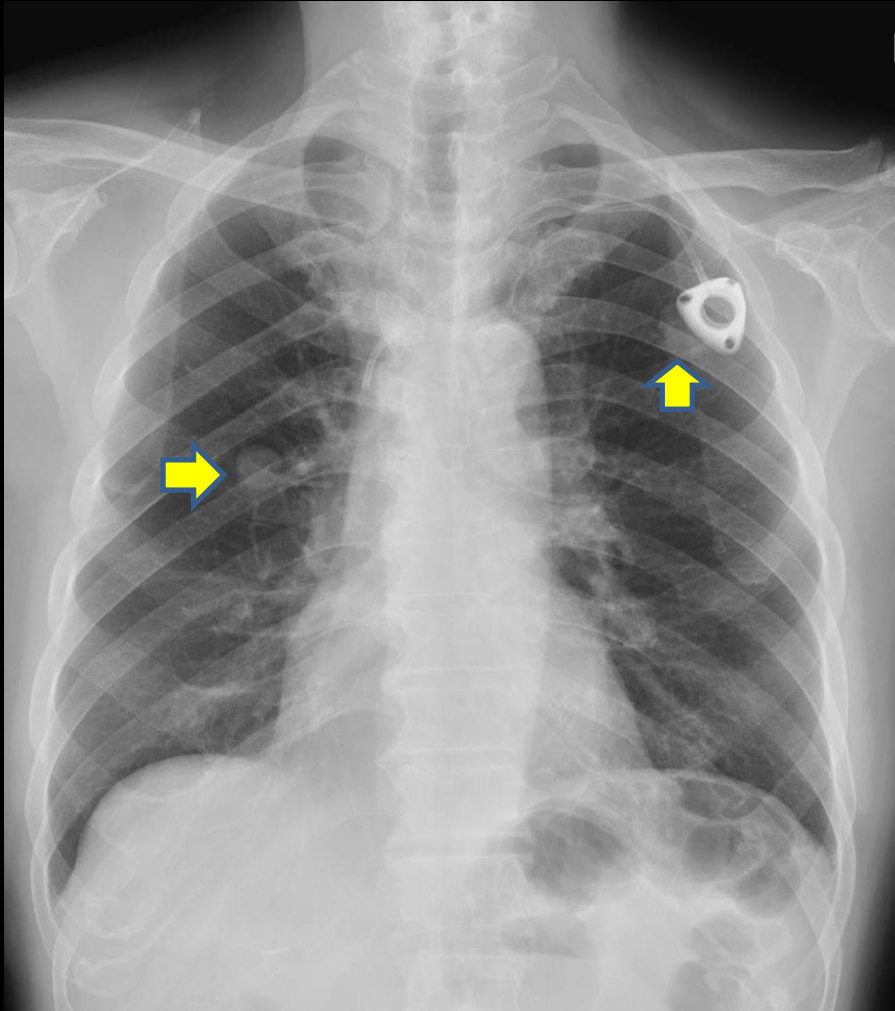
Lung nodule ?



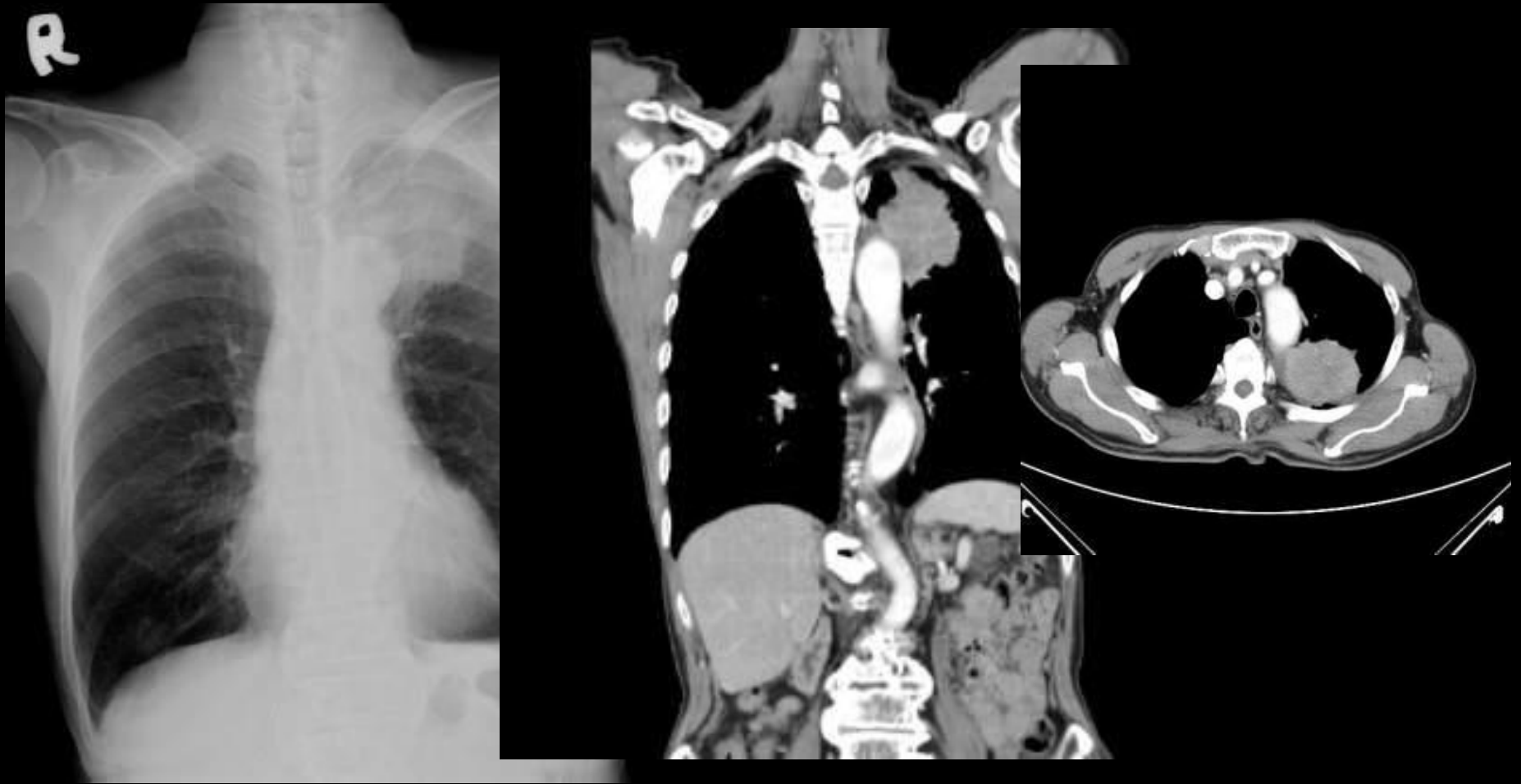
45 y/o man, no symptom..
Lung nodule was noted in a health exam



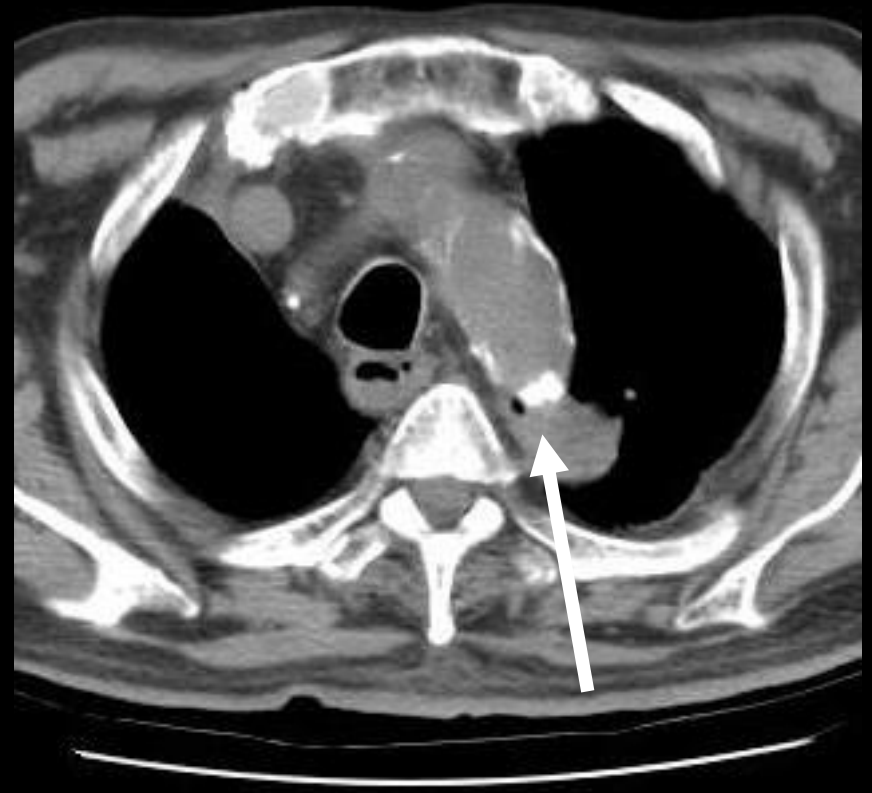
Bladder cancer with lung metastasis



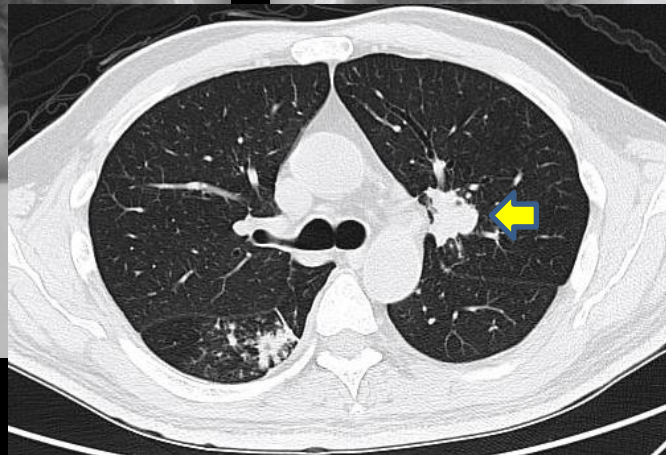
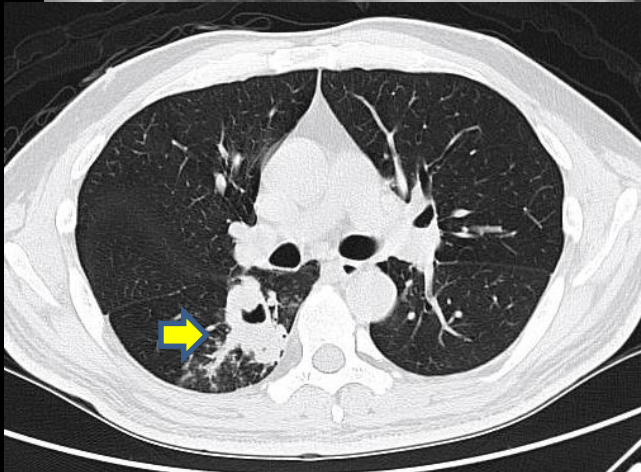
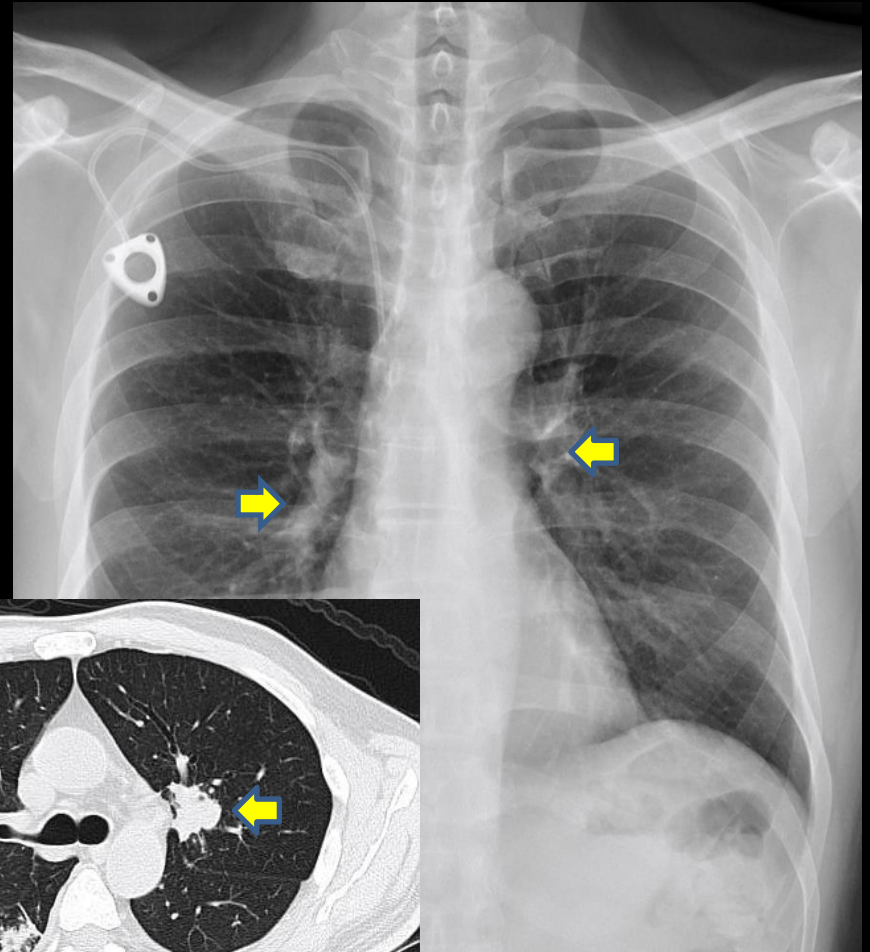
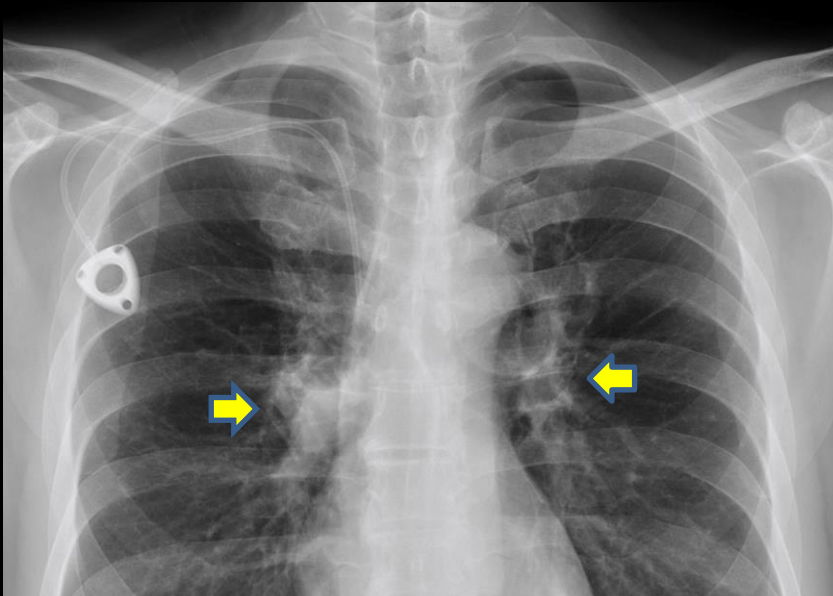
Squamous cell carcinoma Near Aortic arch



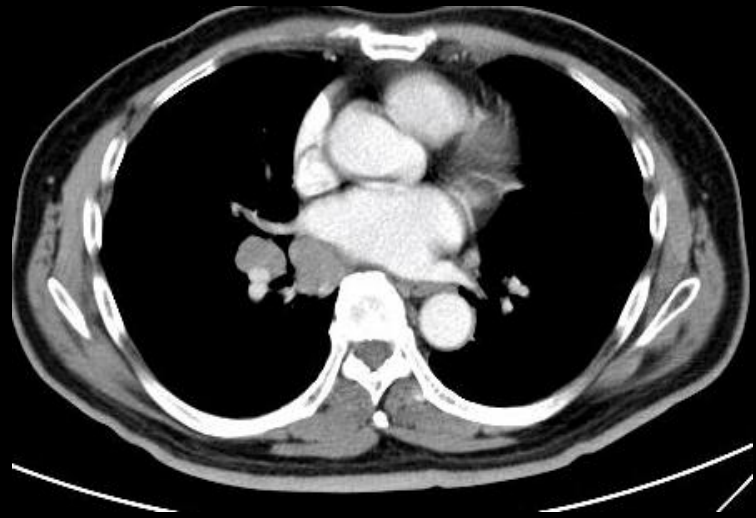
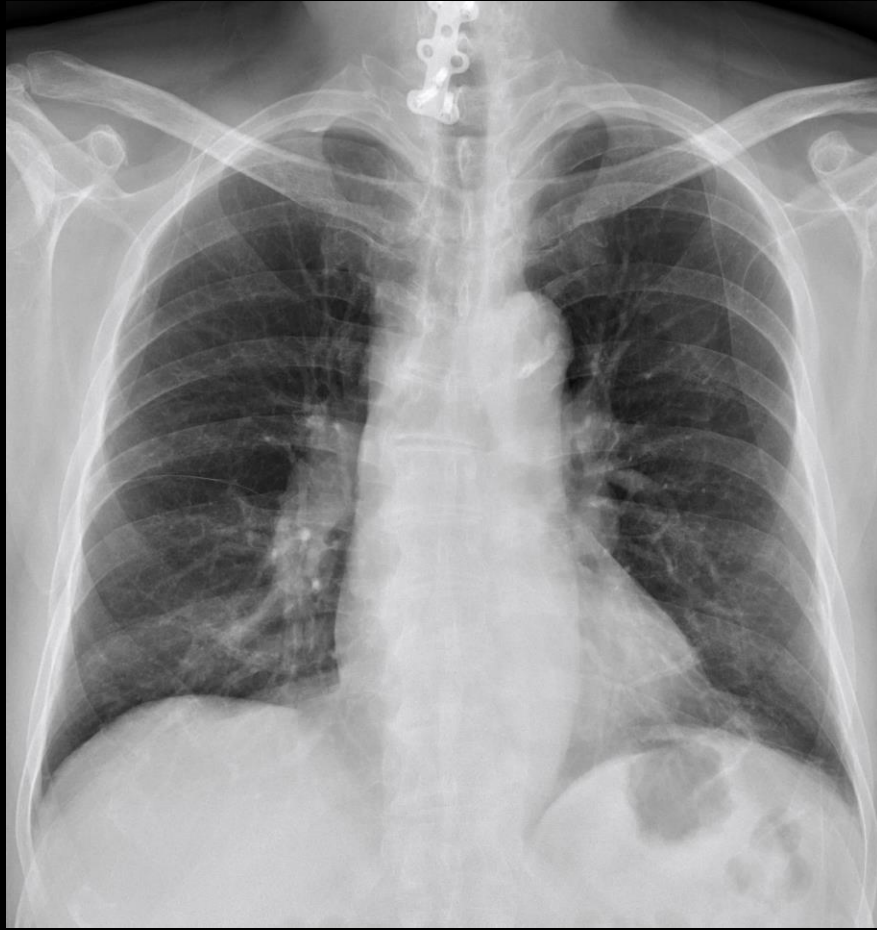
Squamous cell carcinoma, recurrence



Hilar lesion



Hilar lesion



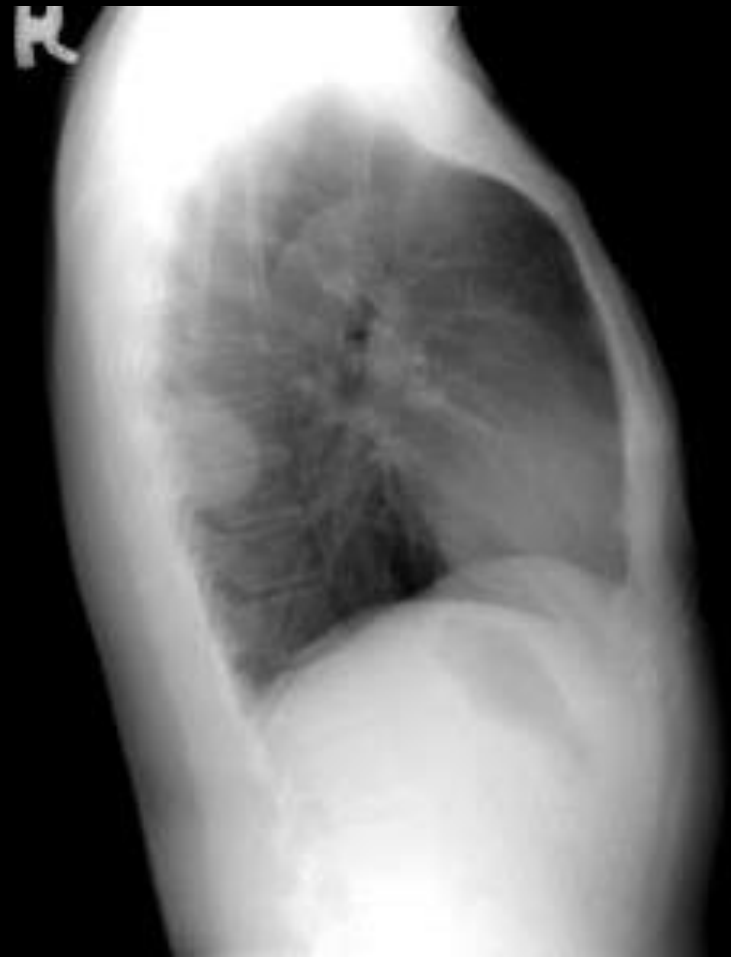
Pulmonary hypertension

- Hilum Convergence Sign



Posterior mediastinum(Schwannoma)

- Hilum overlay sign



Chest lateral view 有時也有幫助

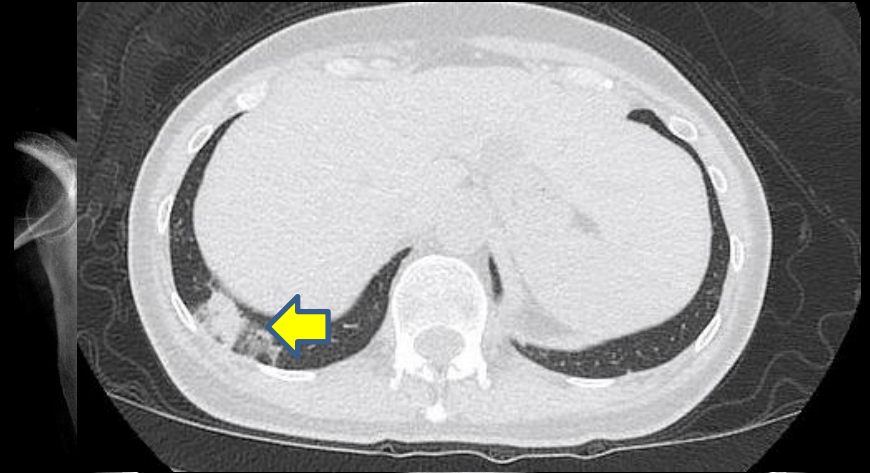
This is the reason why we should take X-rays in different angles.



Chest PA and lateral view



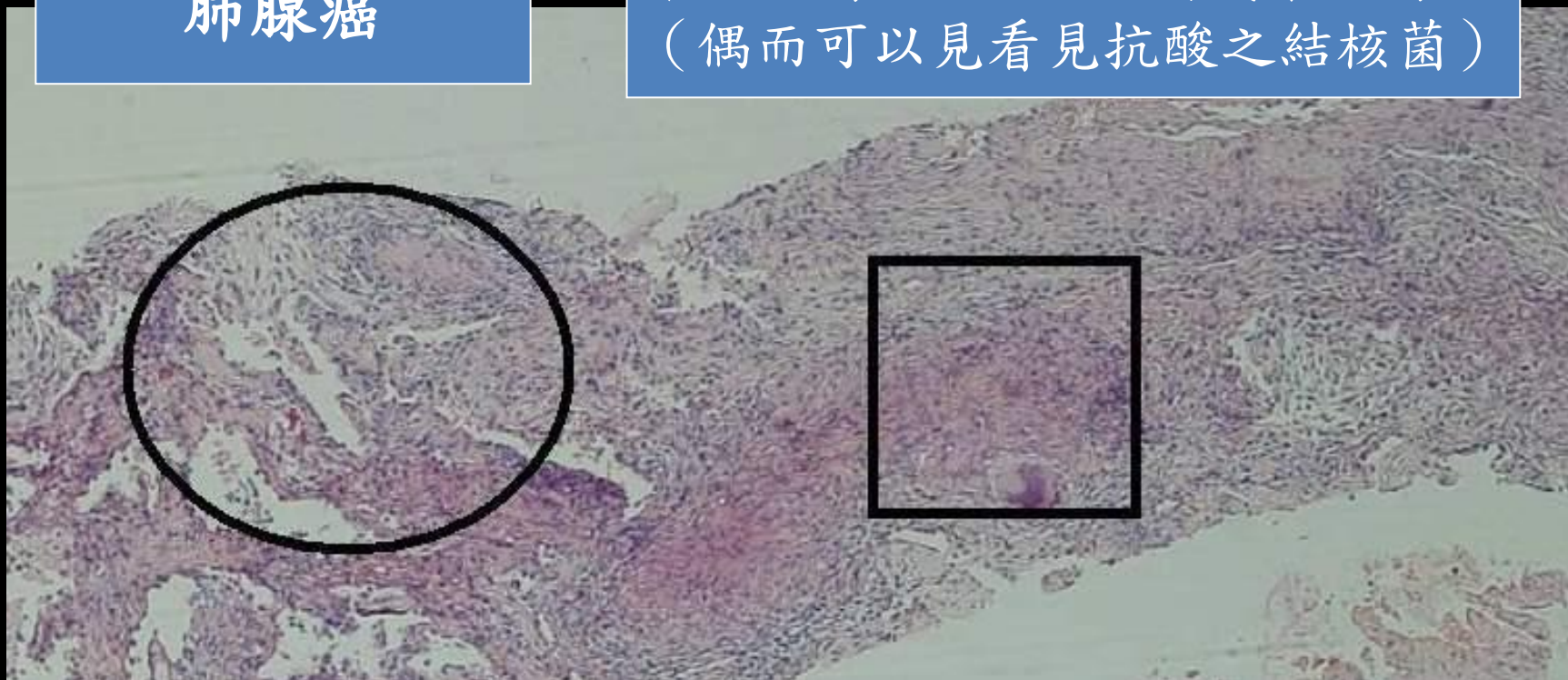
Lung nodule in LDCT, but where?



同時合併肺結核及肺癌，同時在切片之檢體
被看見－要治療肺癌還是肺結核呢？

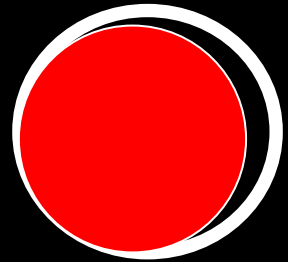
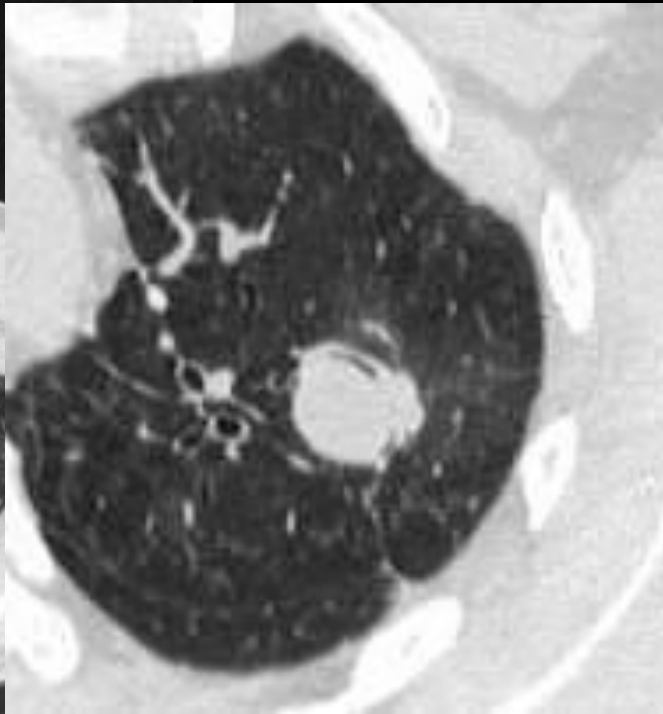
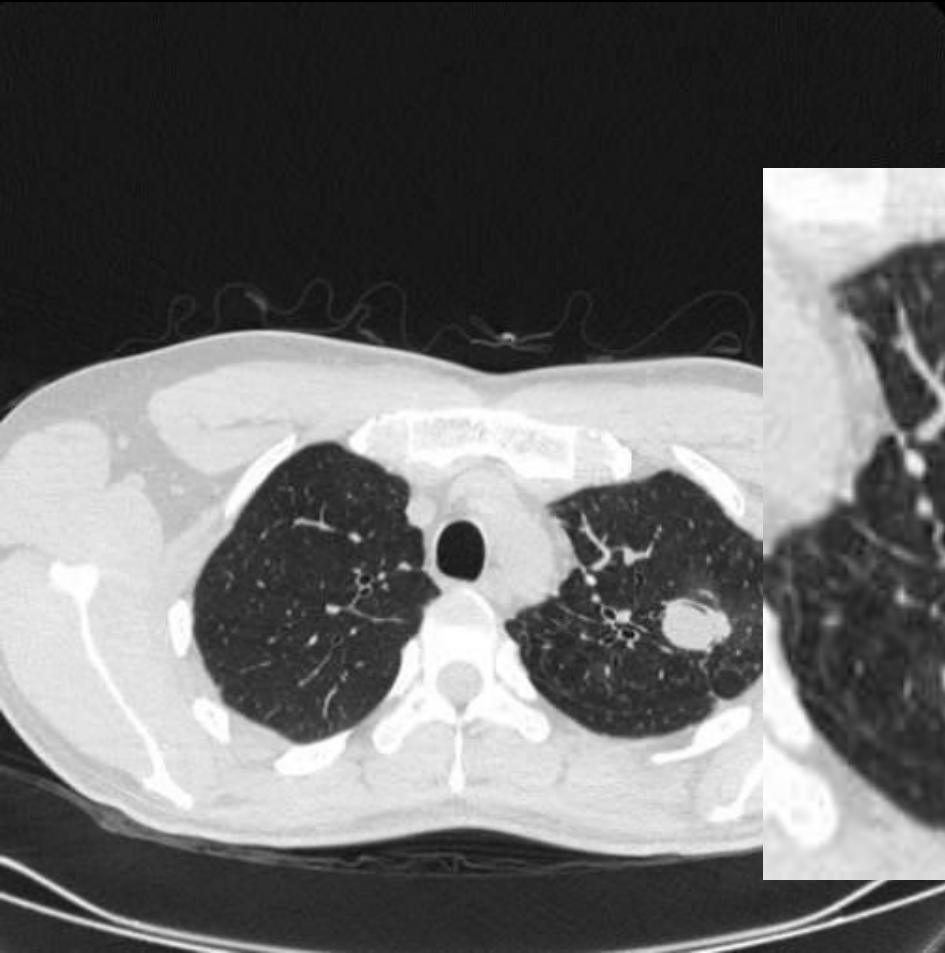
肺腺癌

乾酪性壞死－結核菌感染的特徵
(偶而可以見看見抗酸之結核菌)



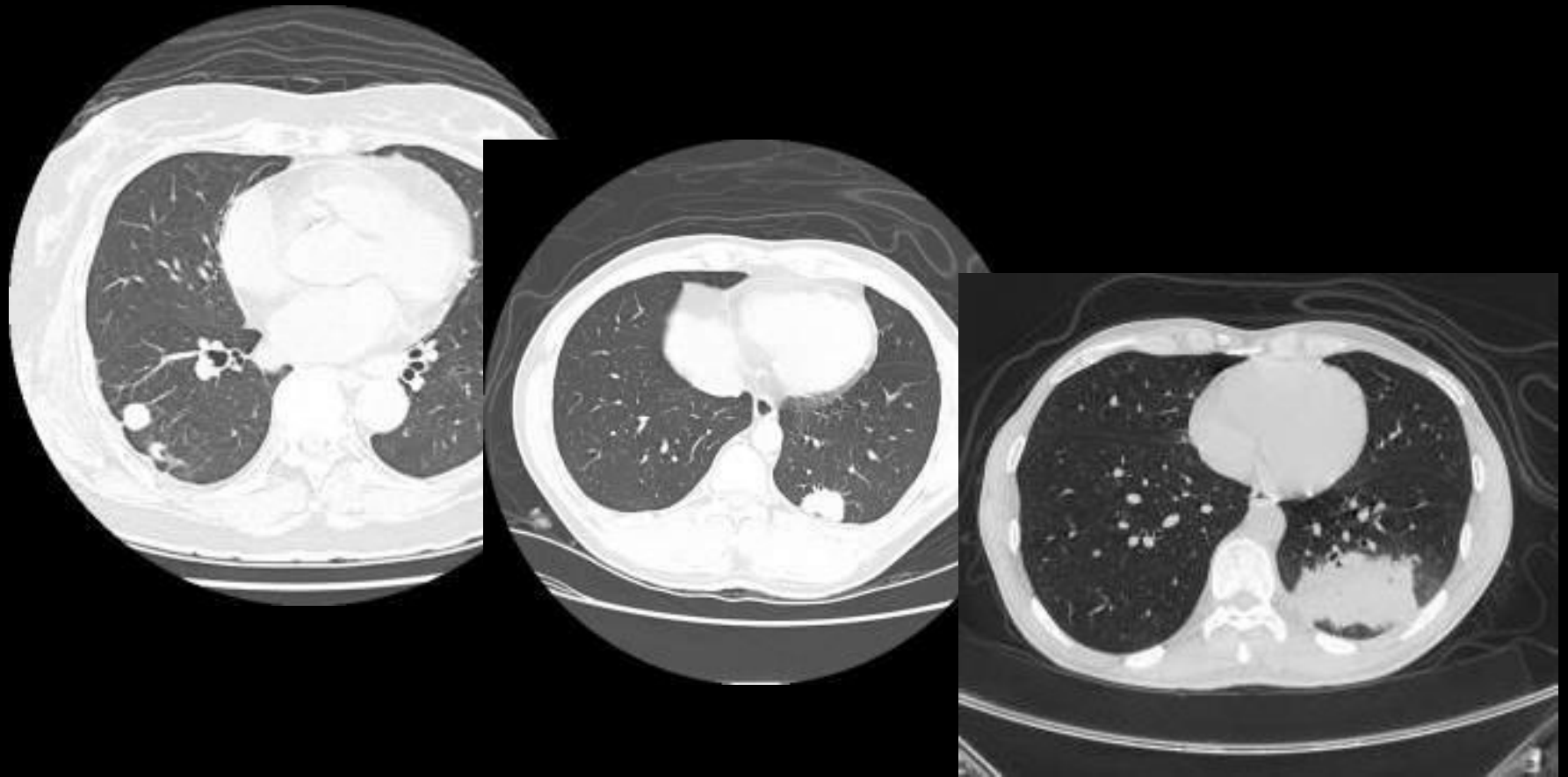
Aspergilloma (fungal ball)

常常是Aspergillus長進去原本結核菌造成的空洞裡



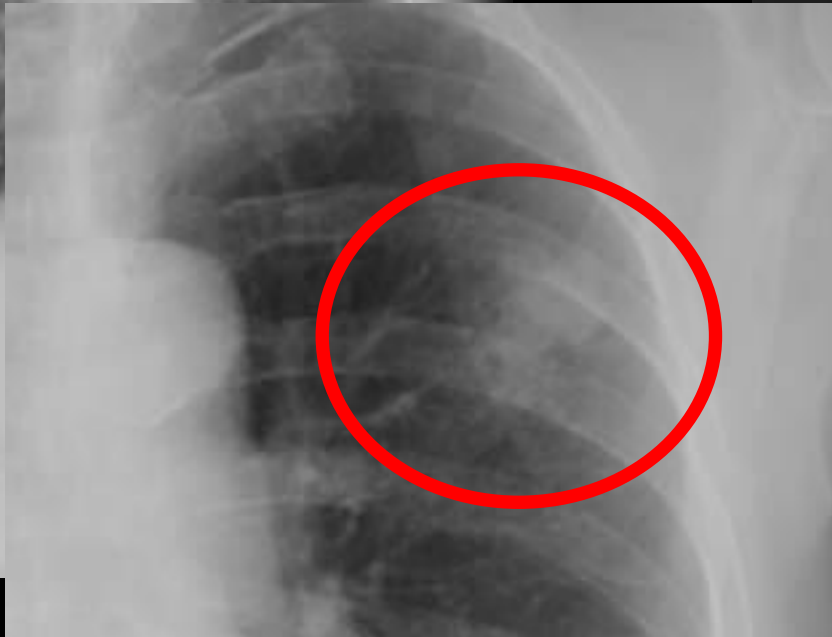
Solitary pulmonary nodule in immunocompetent pts

輕度發燒、乾咳、Serum Cryptococcus Ag (+)
最後切片證實為 Pulmonary Cryptococcosis 隱球菌



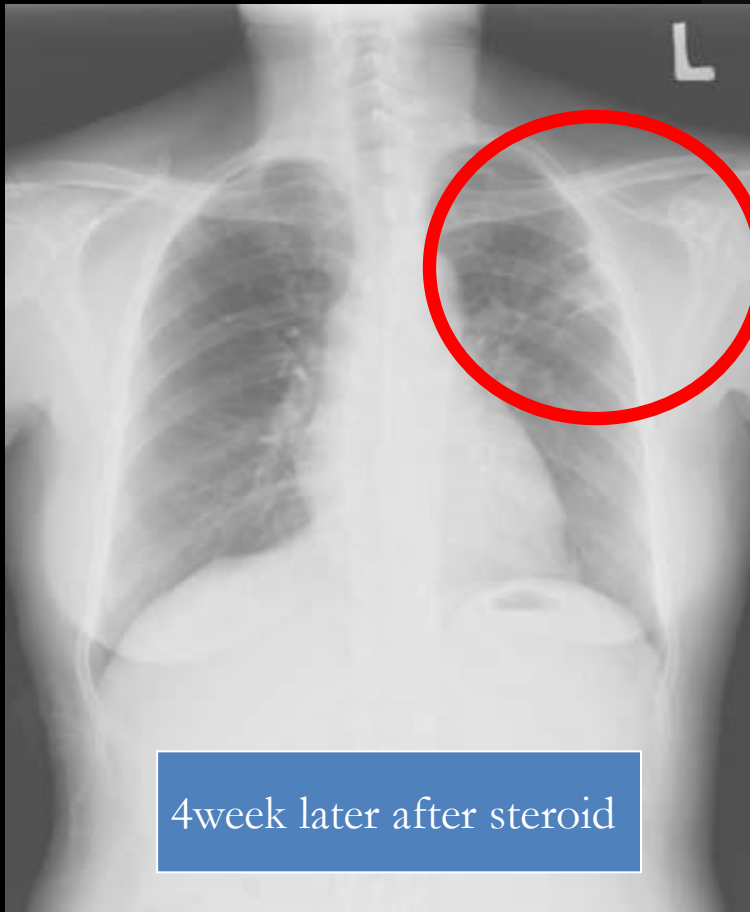
Nocardia(努卡菌)_

Nocardia spp.是屬需氧性放線菌目，為革蘭氏陽性，染色具部份抗酸性，侵犯途徑是吸入形成肺炎或傷口感染。治療藥物以磺胺類藥物為主

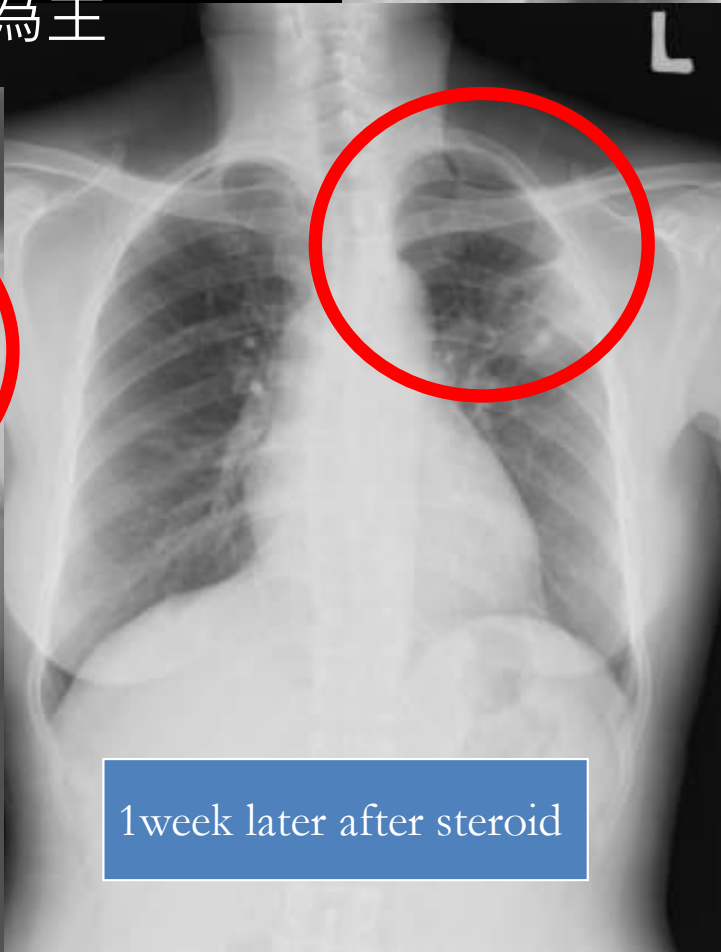


Organizing pneumonia

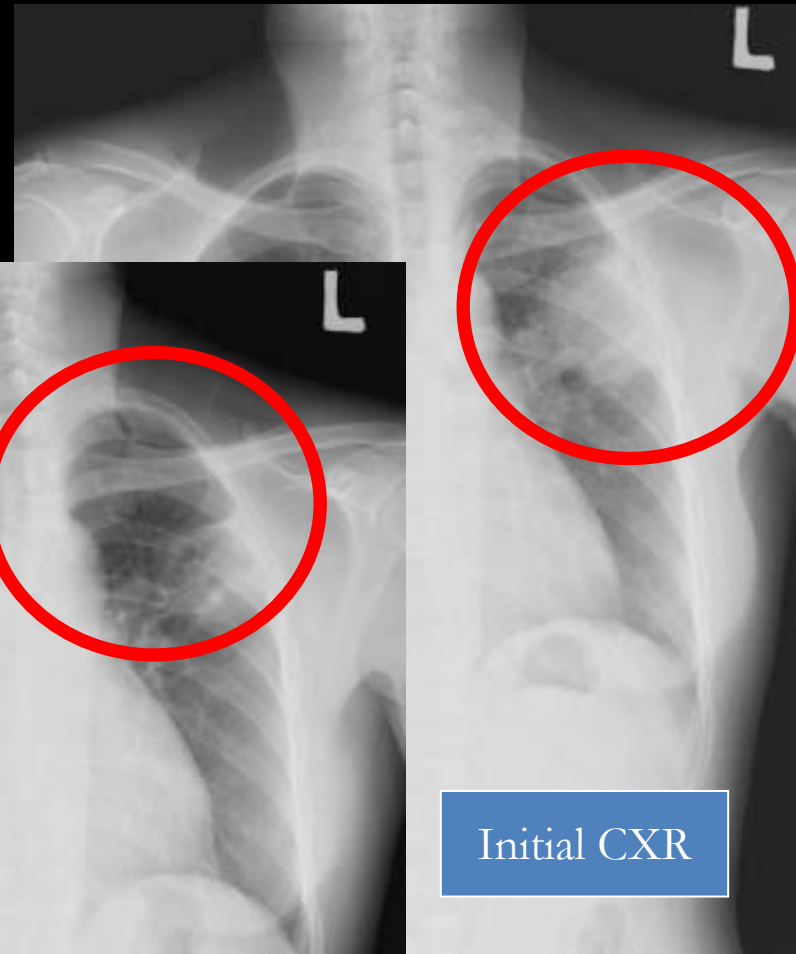
器質化肺炎是肺臟針對許多不同病因所造成急性修護反應，病變多侷限於小氣道、肺泡管、及細支氣管旁肺泡 治療方面以類固醇為主



4week later after steroid



1week later after steroid

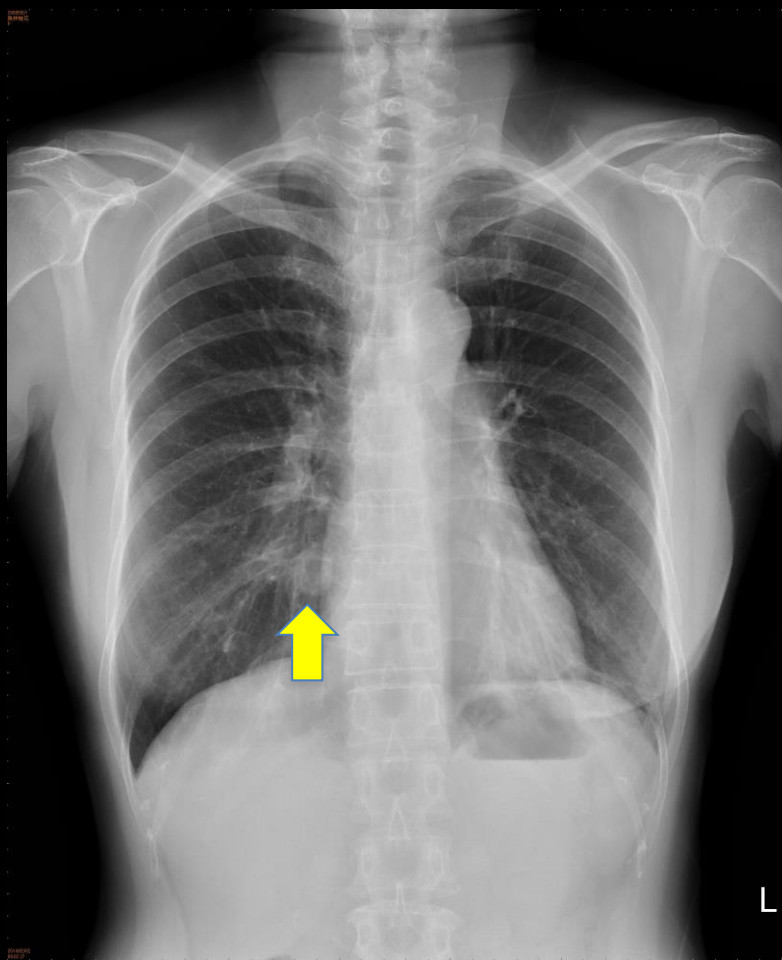


Initial CXR

Empiric anti-tuberculosis treatment is not always a right way in patients who had have poorly controlled diabetes mellitus and presented with pulmonary cavities over upper lungs in tuberculosis endemic countries

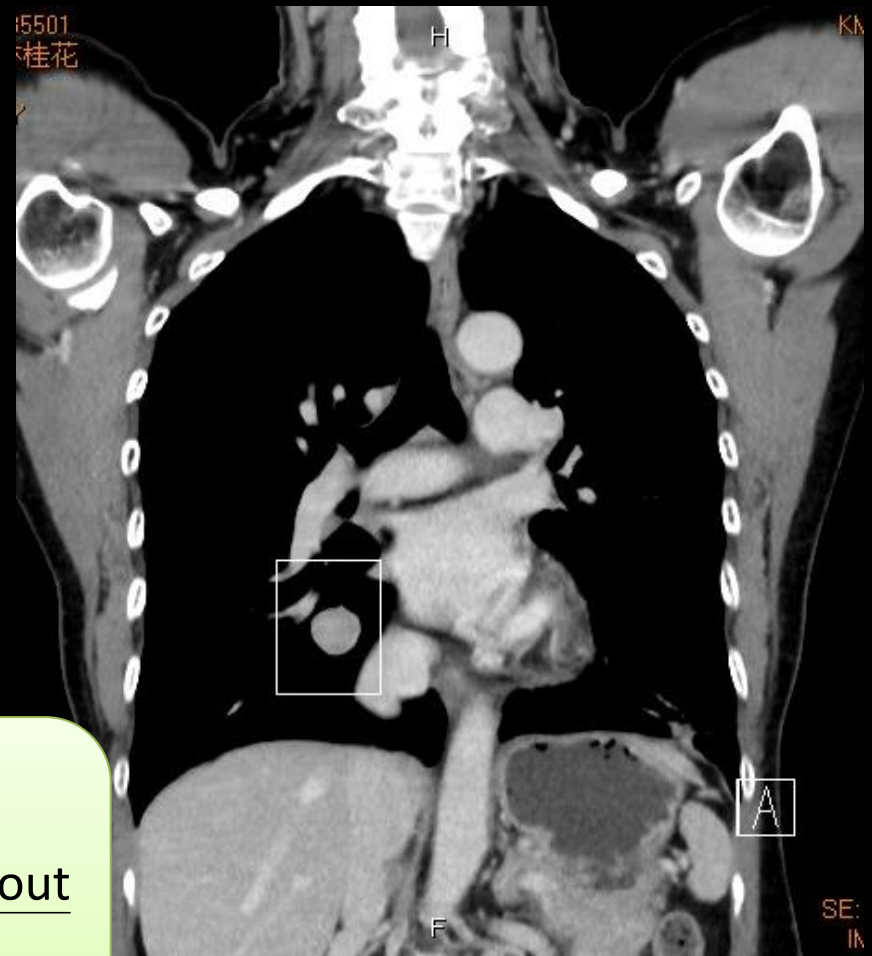
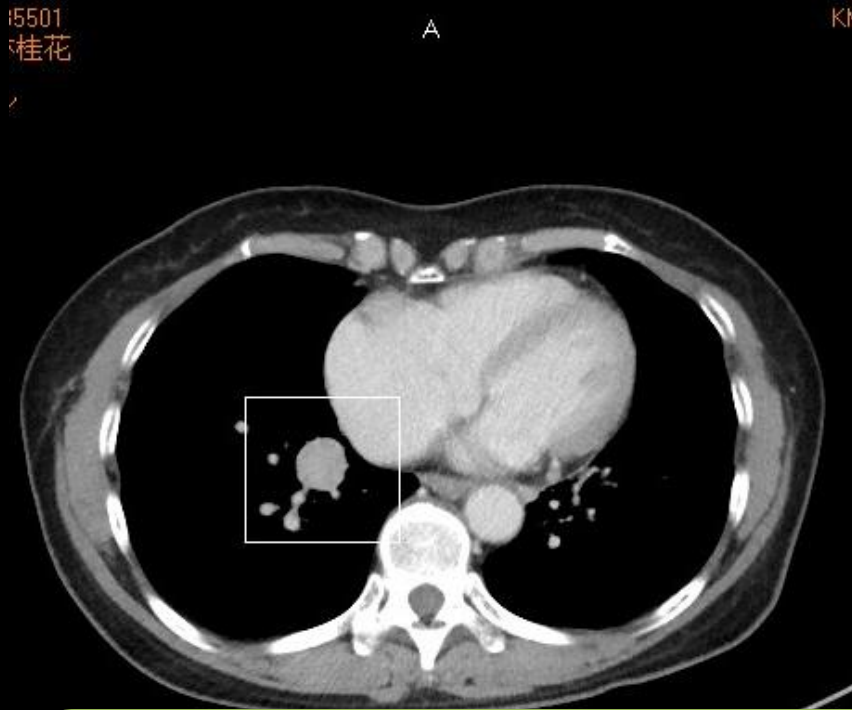


體檢意外看到右下肺有個很圓的結節



Sclerosing hemangioma

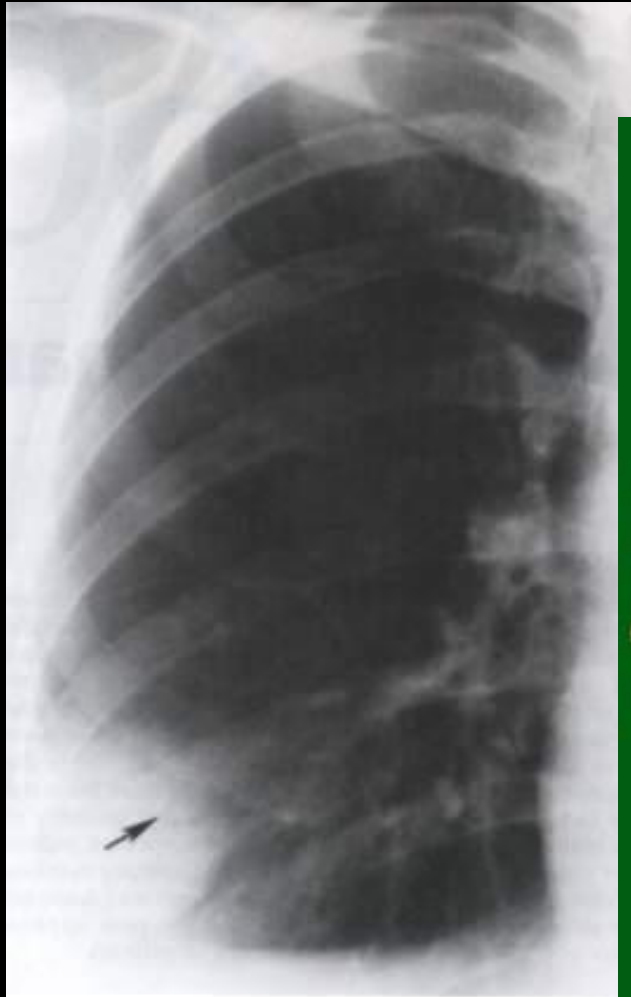
肺硬化性血管瘤



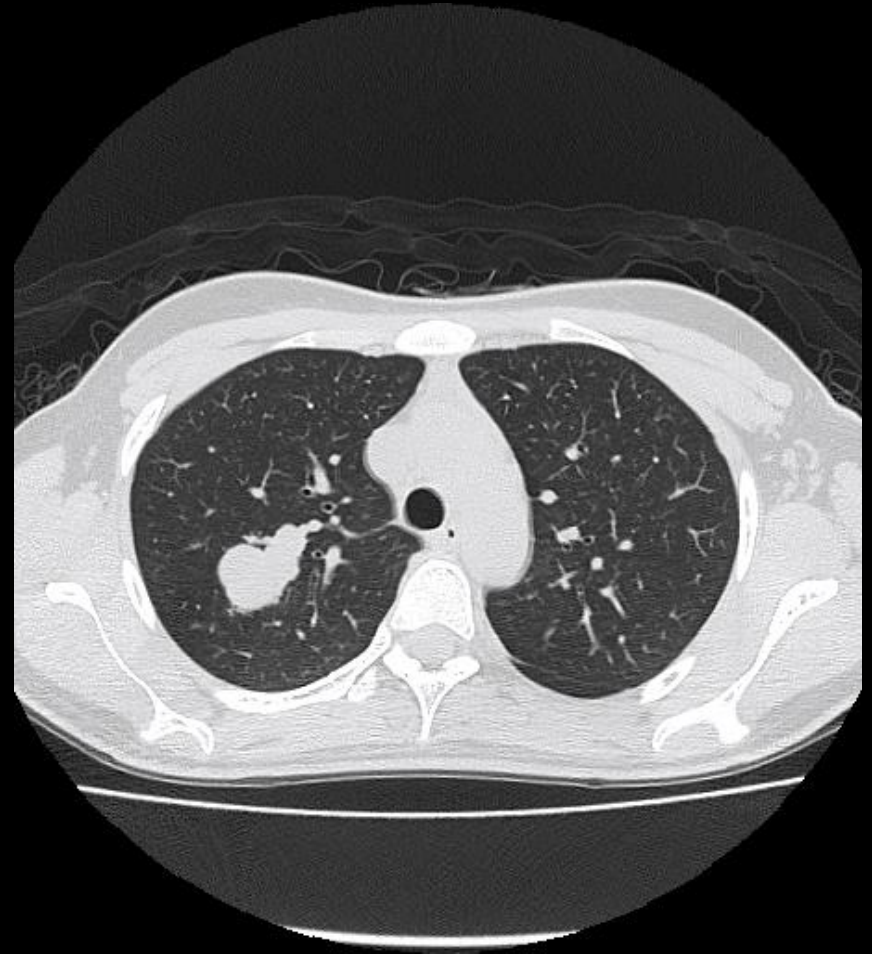
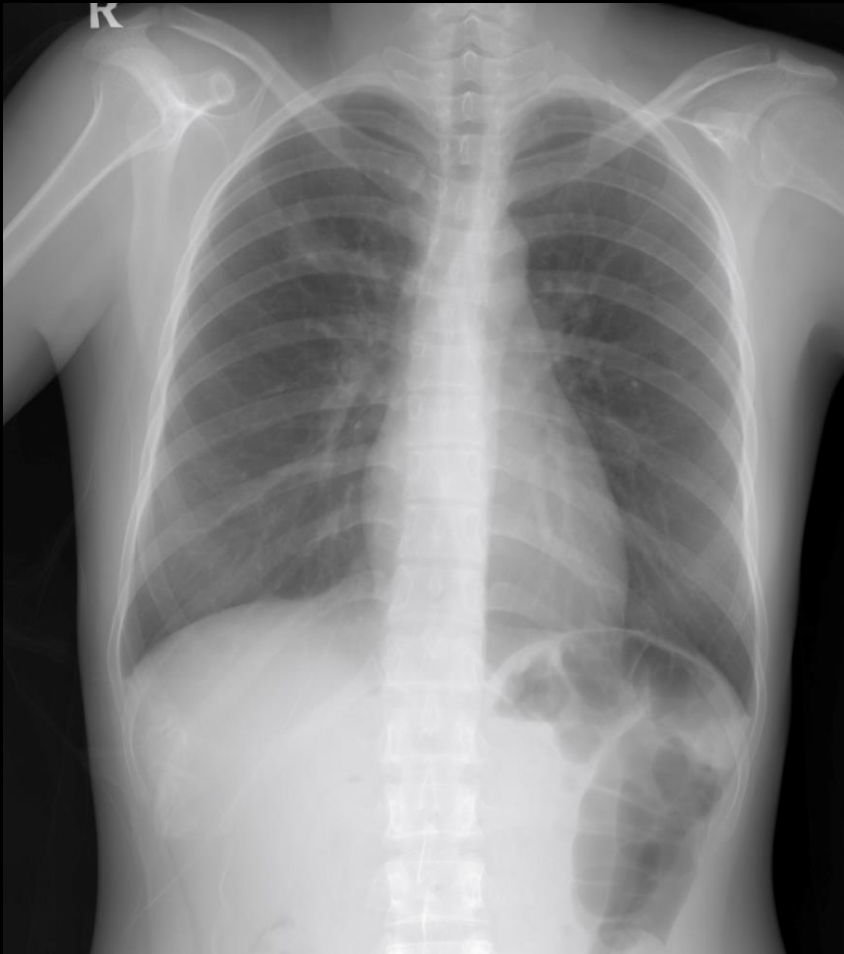
- Middle aged female
- A peripheral, solitary, well-defined, homogeneous nodule or mass without predilection for a particular lobe.
- Sometimes calcification
- No cavity



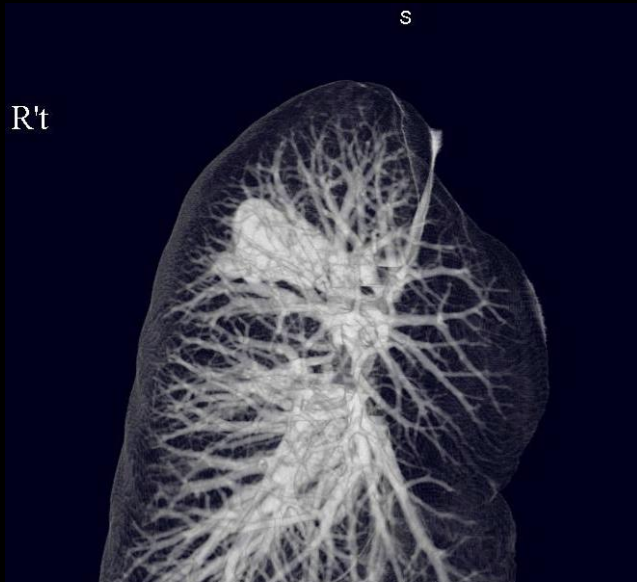
Pulmonary embolism 肺栓塞造成肺梗塞
(pulmonary infarction)
~ Hampton hump(駝峰)



Pulmonary arterio-venous fistula (Malformation, 肺動靜脈瘻管)

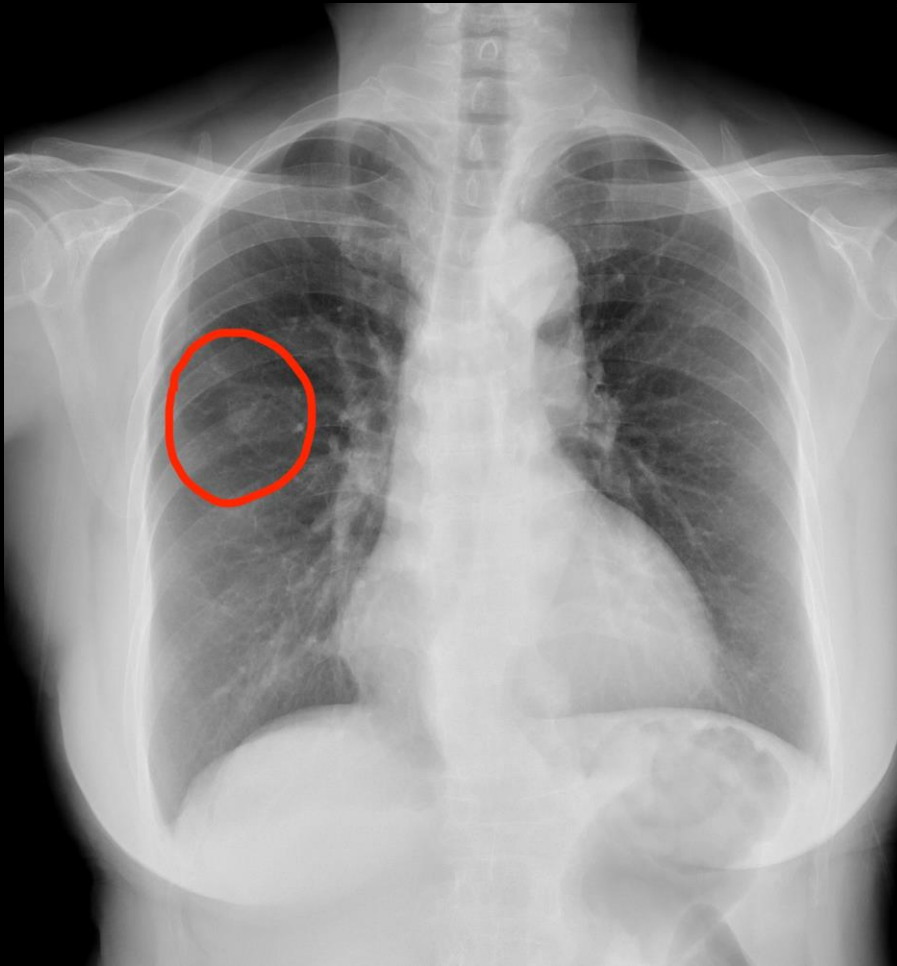


Pulmonary arterio-venous fistula(Malformation) (肺動靜脈瘻管)



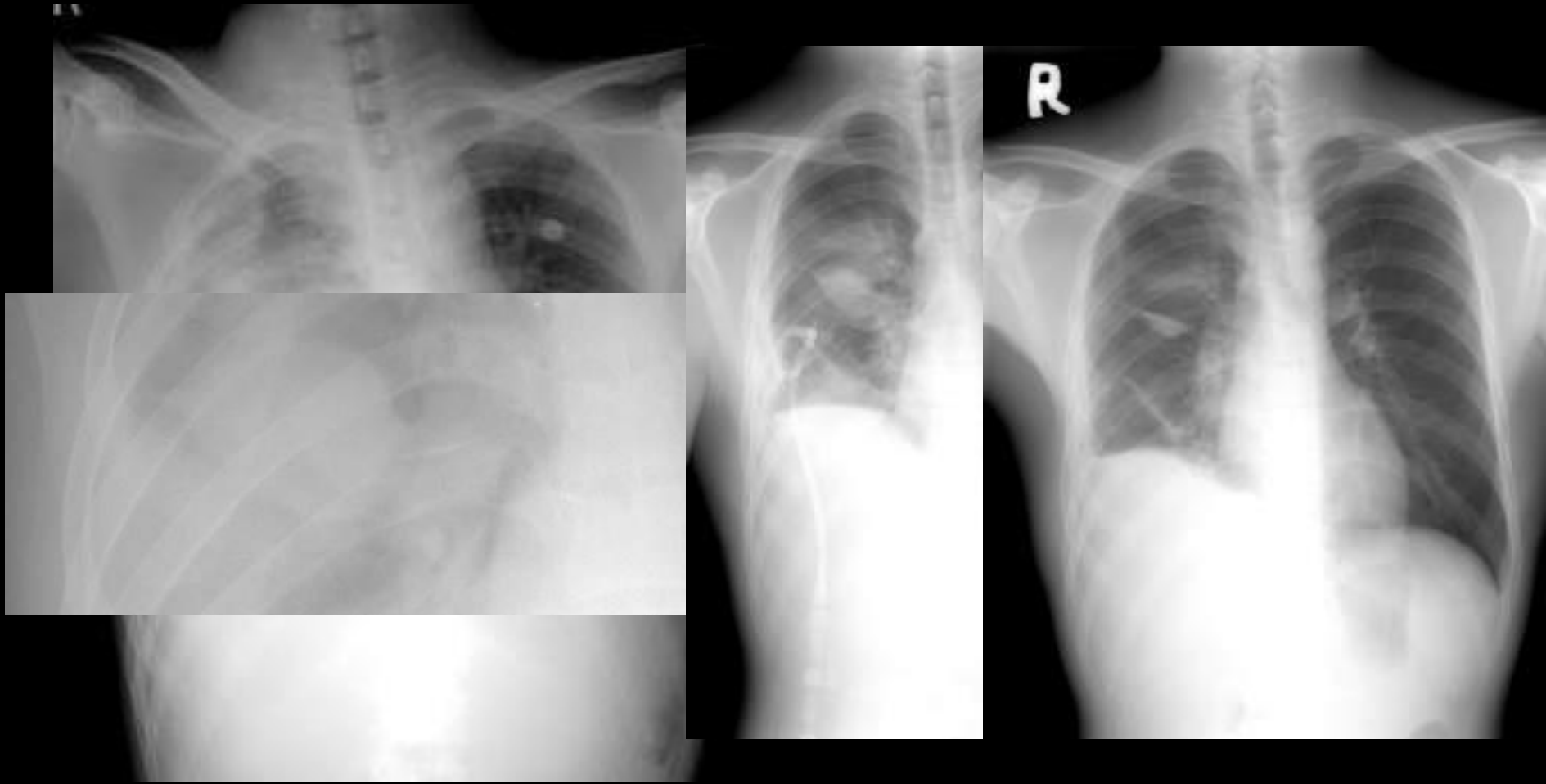
- Abnormal dilated vessels provide a right-to-left shunt between the pulmonary artery and vein.
- F:M ratios : 1.5 to 1.8:1.
- 2-3 / 100,000

Solitary nodule - Rib fracture



Lobulated pleural effusion

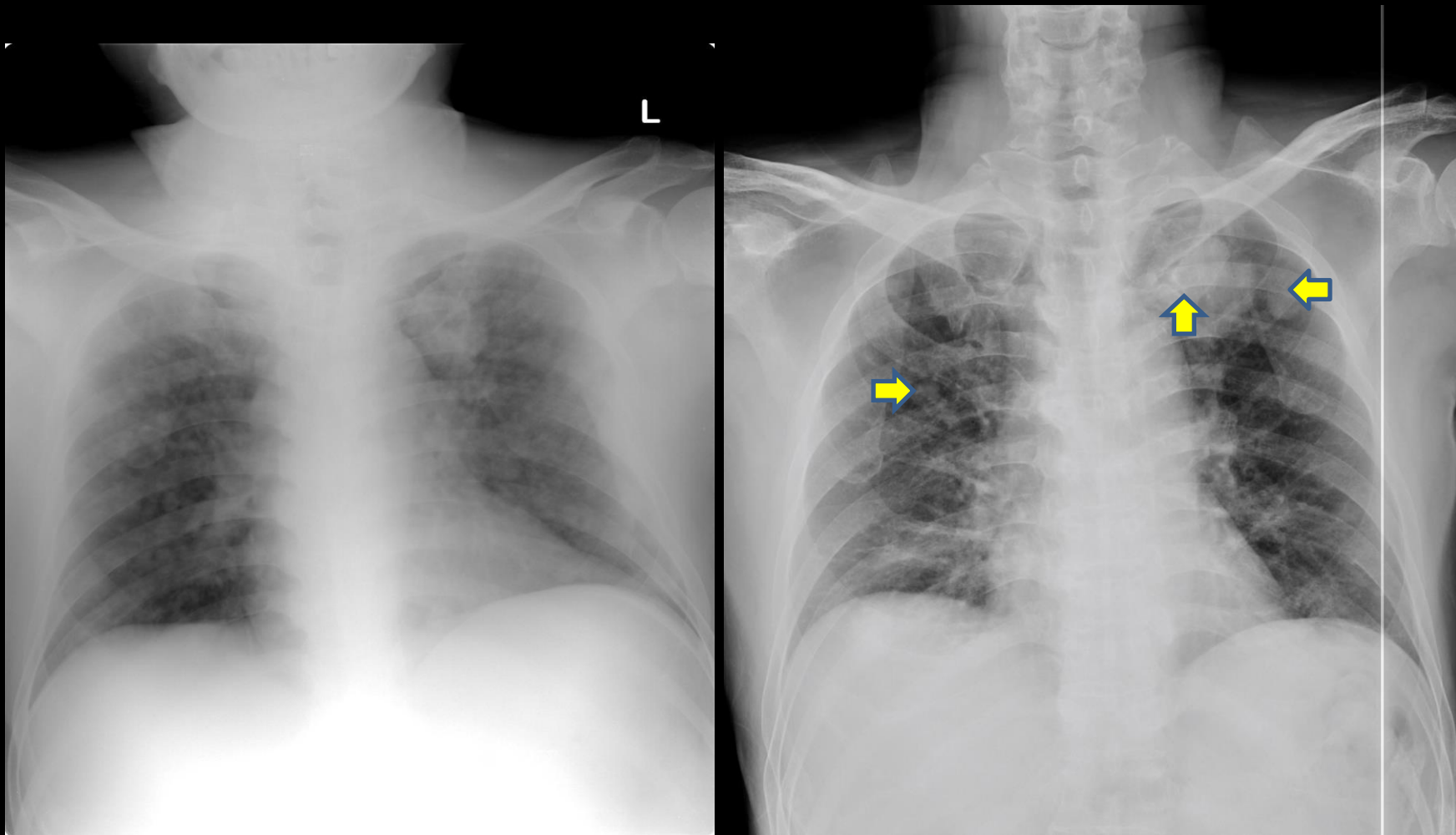
~ Phantom tumor 不是真正的腫瘤 !!!



Multiple nodules and masses

- **Neoplastic :**
 - Malignant : metastasis (kidney, GI tract, uterus, testis, melanoma, sarcoma), lung cancer with lung to lung metastasis
 - Benign : Hematoma, AV malformation..
- **Inflammatory :** Fungal infection, Nocardia, Tuberculosis, parasites, inflammatory pseudotumors (Pulmonary Hyalinizing Granuloma)
- **Vascular :** Wegeners granulomatosis, Rheumatoid nodules, septic embolism
- **Posttraumatic :** organizing hematoma

肺癌：有一個明顯較大的腫瘤為主，散布其他大小差不多的小結節 (肺癌之肺對肺轉移)



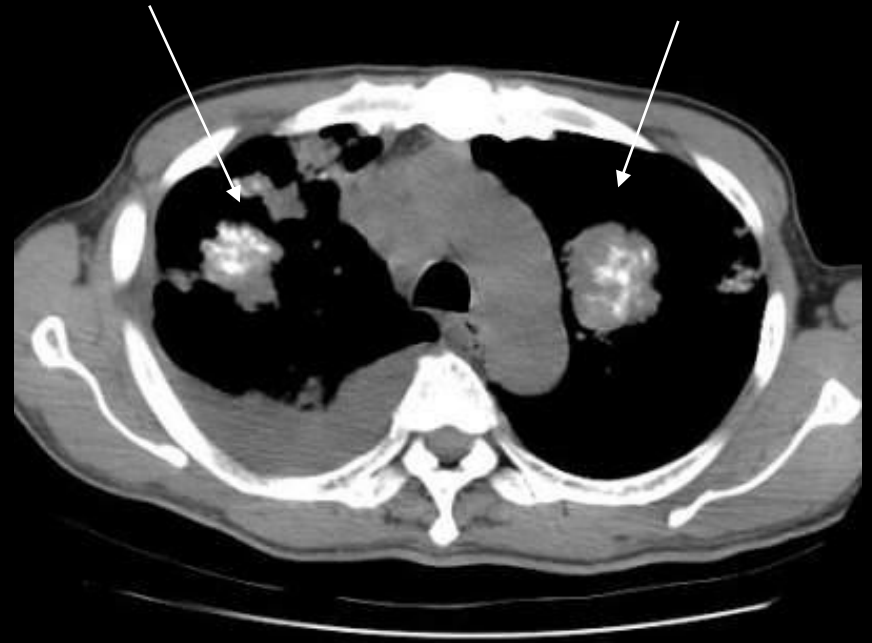
Adenocarcinoma

轉移到肺的癌症，常見如大腸癌等
一顆或很多顆，兩側大小差不多- Cannon ball

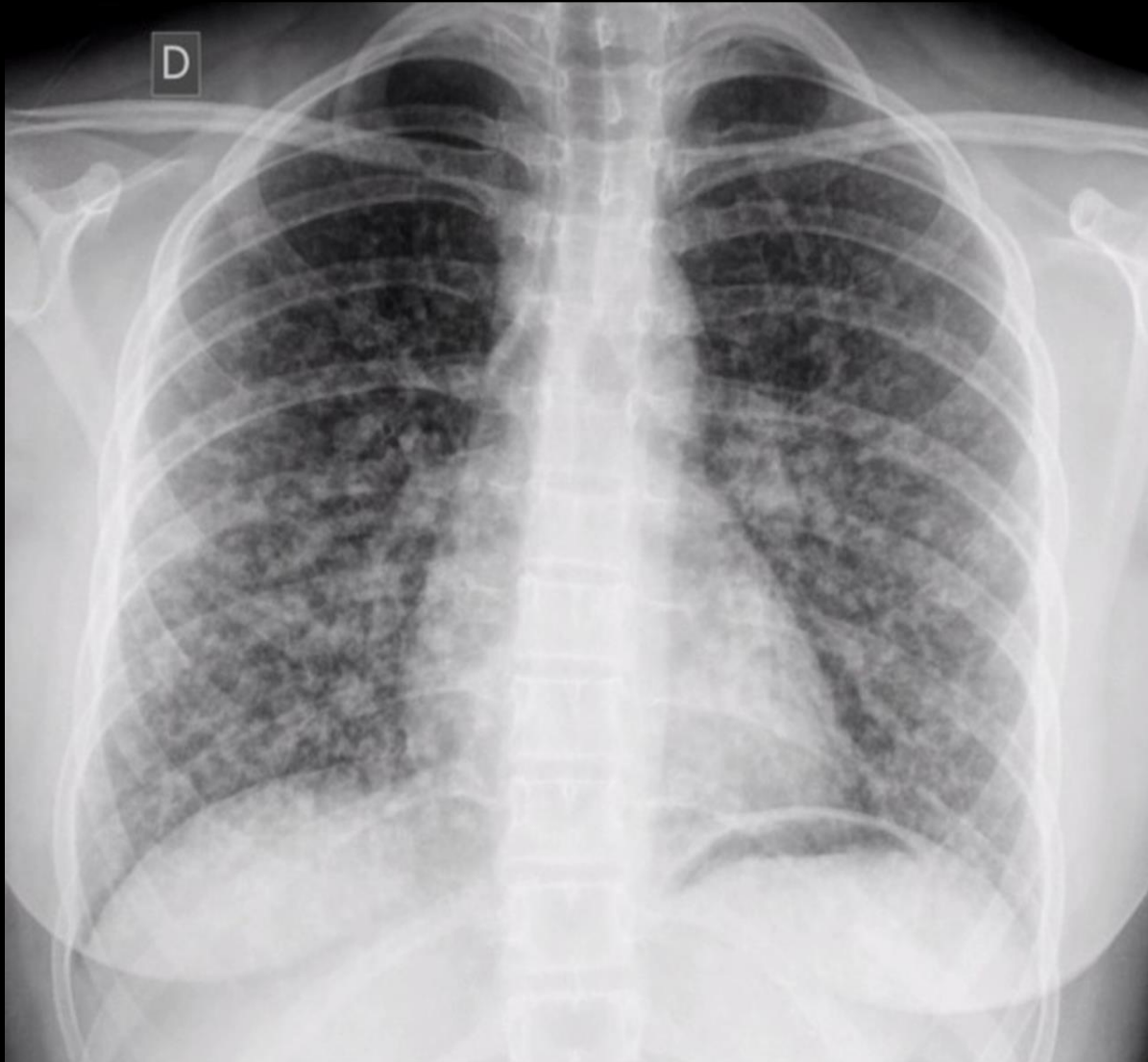


Osteosarcoma with lung metastasis

Calcified Cannon ball



Thyroid cancer with bilateral lung metastasis with/without calcification

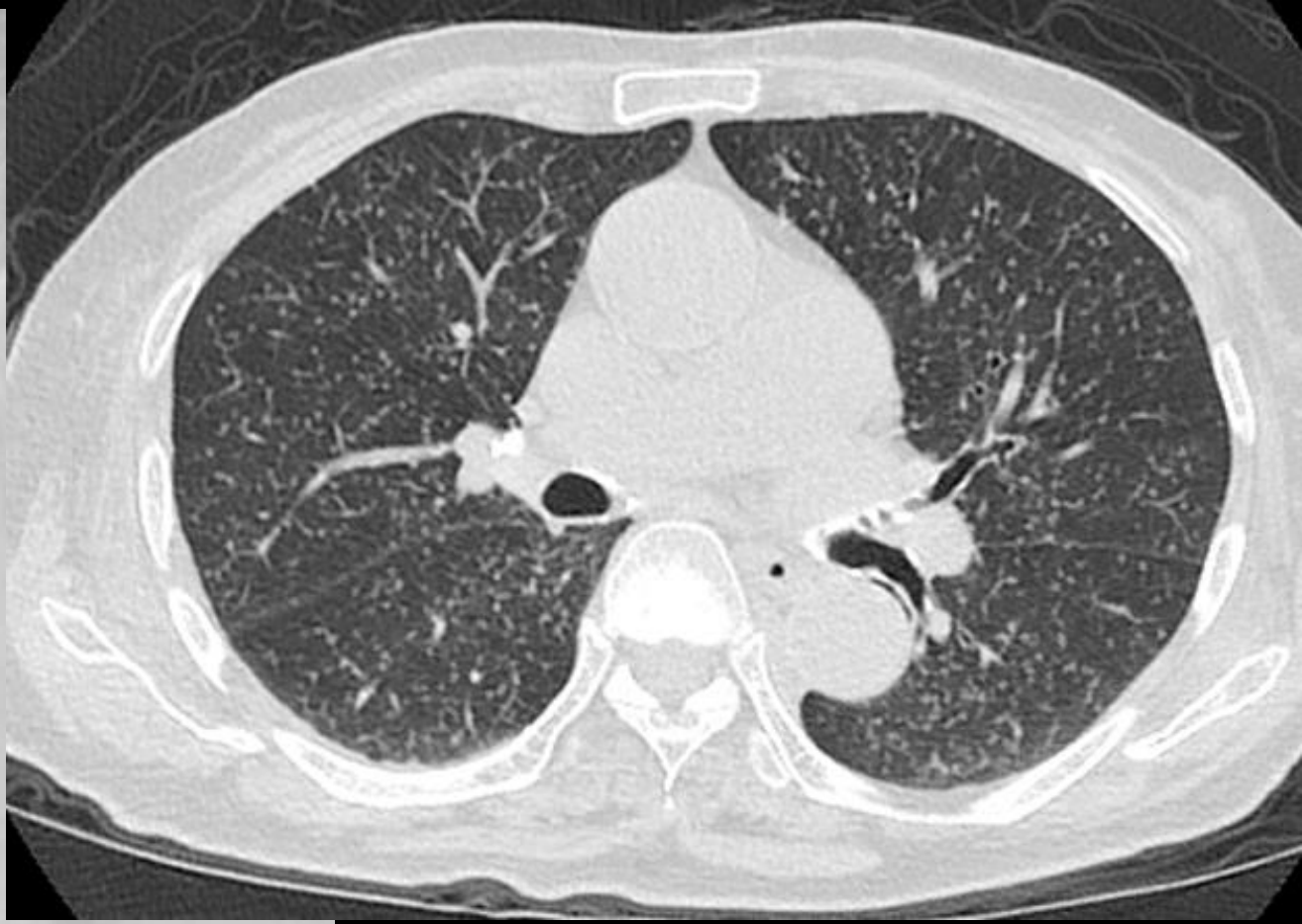


Varicella pneumonia

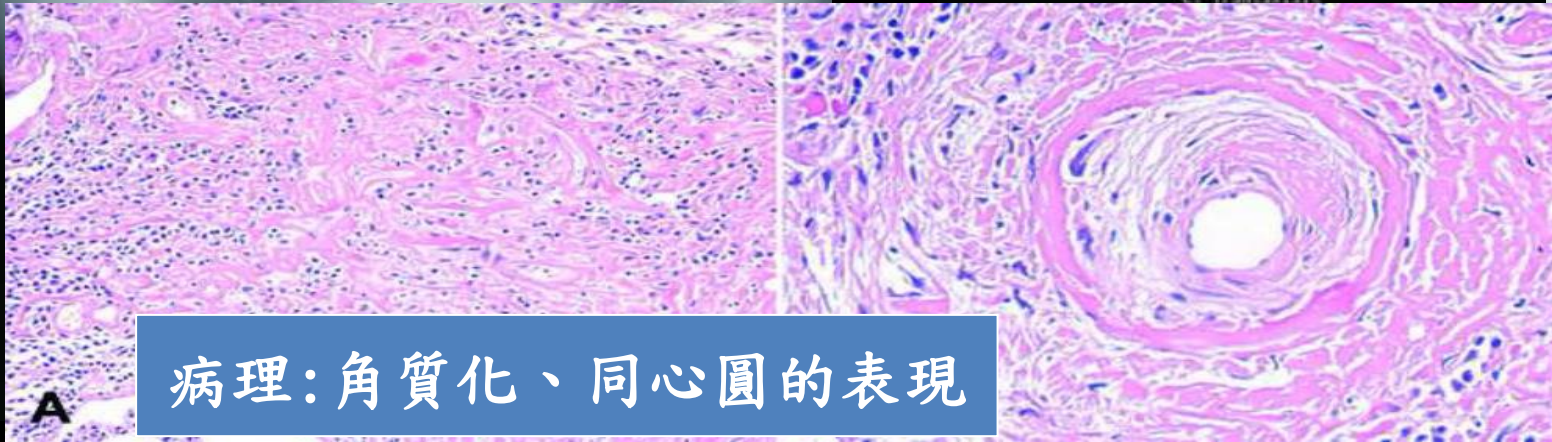
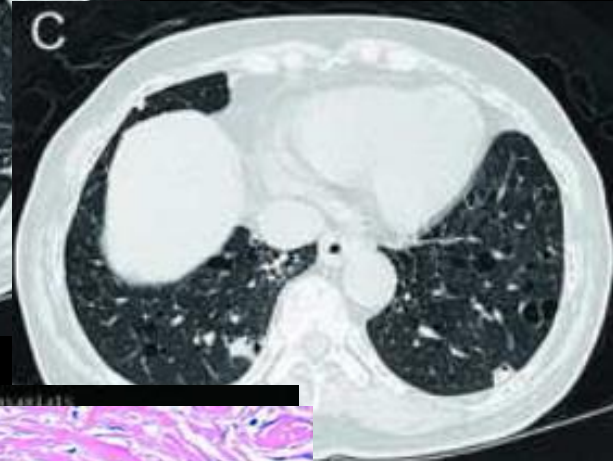


Multiple tiny nodules - Miliary TB

瀰漫散在性之約2mm獨立小結節，多合併全身症狀
如發燒、意識不清等



Pulmonary Hyalinizing Granuloma (PHG)



病理：角質化、同心圓的表現

A rare disease characterized by multiple bilateral pulmonary nodules of uncertain etiology.

High SUVmax in PET scan

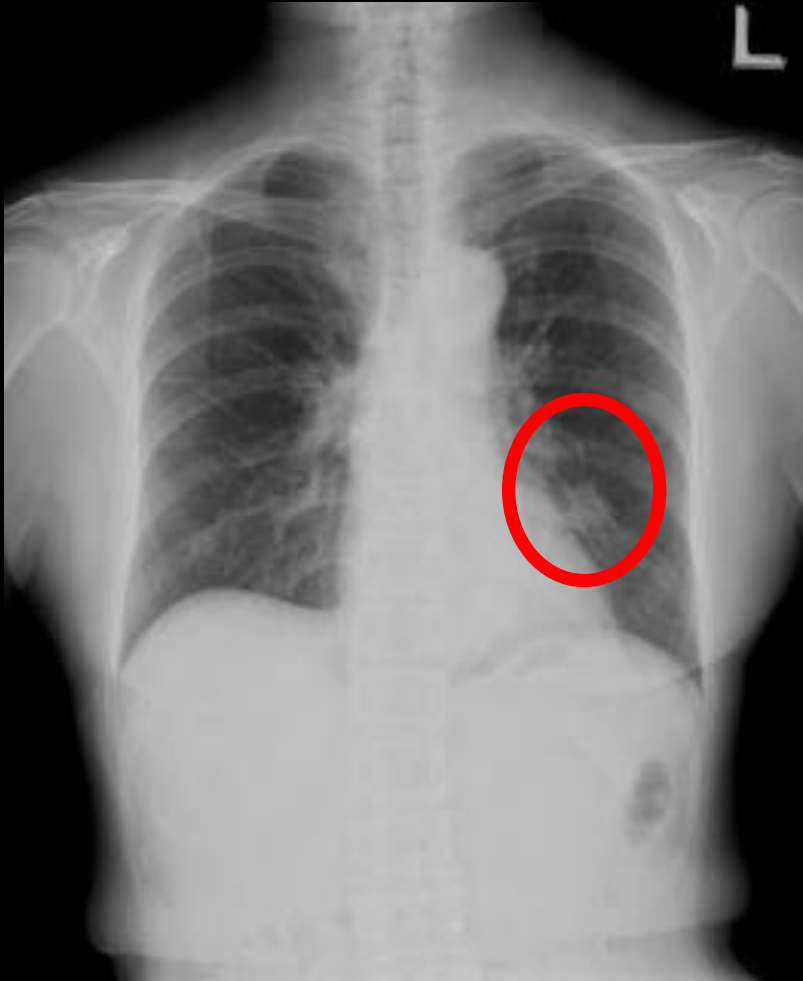
~ Lien, Yang et al, Journal of thoracic image, 2010

比較傾向惡性，需要進一步檢查

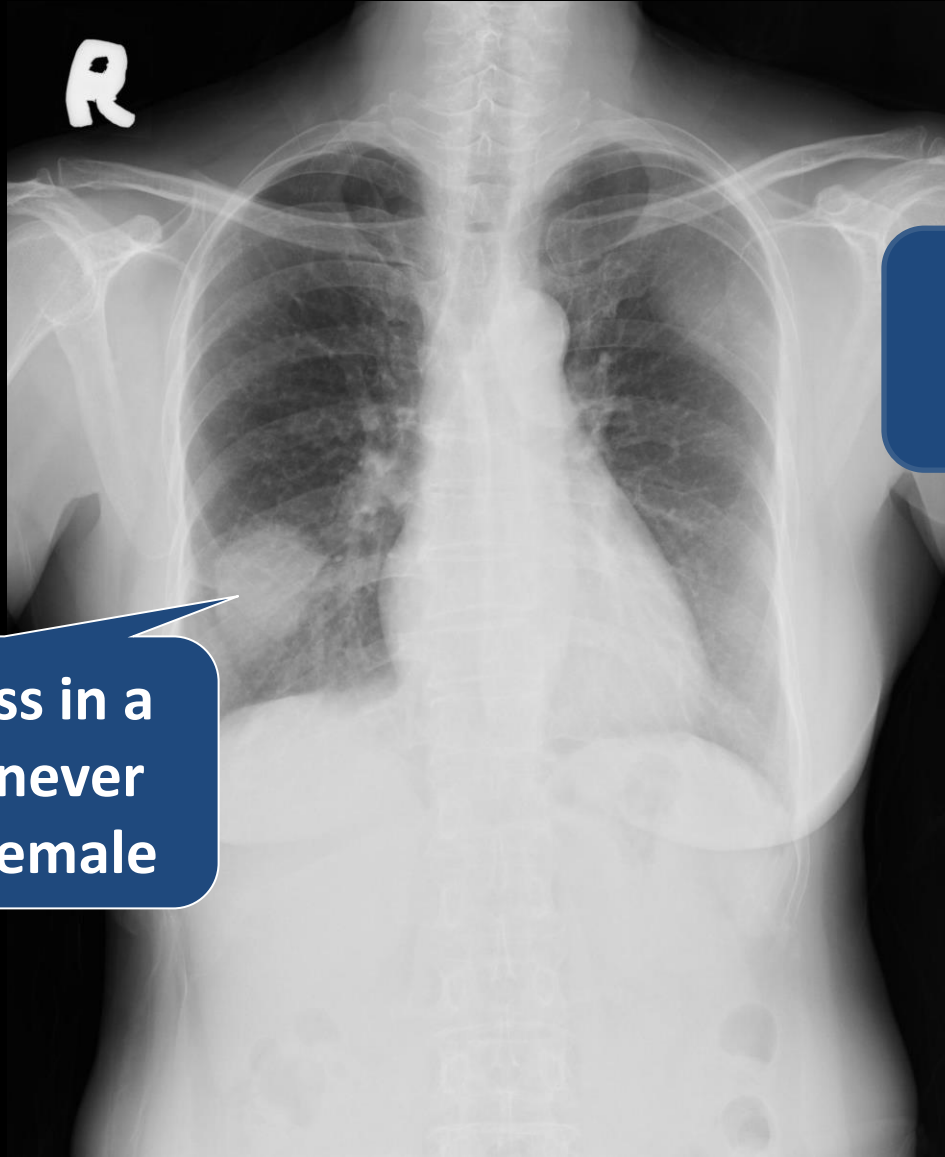
- A history of cigarette smoking;
- Age >35 years
- A relatively large lesion
- Lack of calcification
- Chest symptoms
- Associated atelectasis, obstructive pneumonitis, or lymphadenopathy
- Growth of the lesion revealed by comparison with old x-rays/CT scans
- a positive PET scan.



LLL lung nodule left supraclavicular LAP



Body weight loss and left post chest pain..



**Lung mass in a
56 y/o , never
smoker female**

**Left 5th rib bone
destruction**

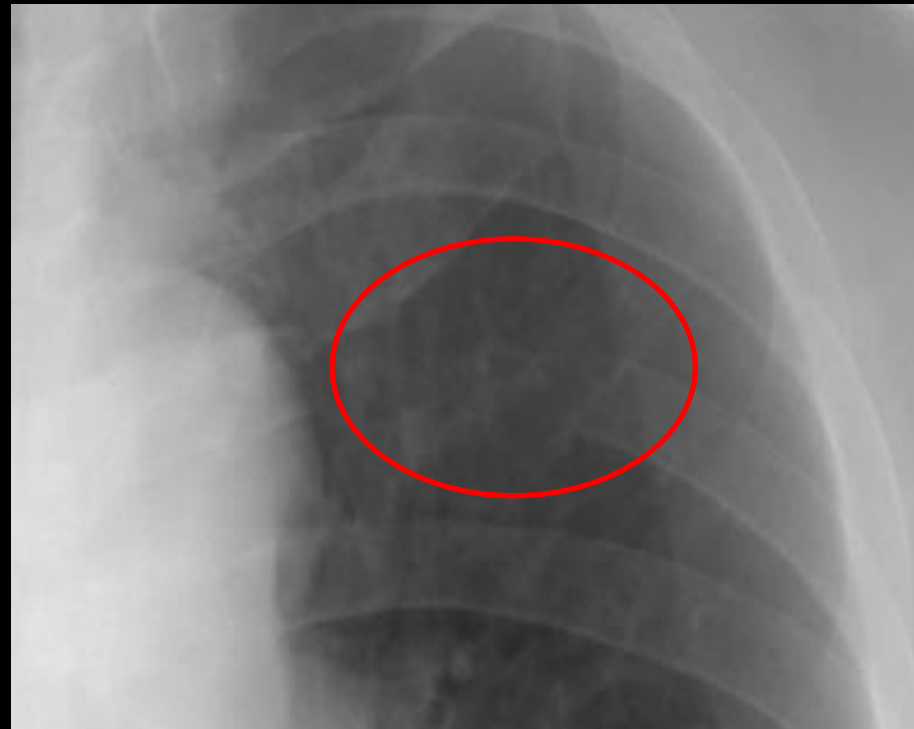
Left upper back pain

Lung cancer with rib metastasis

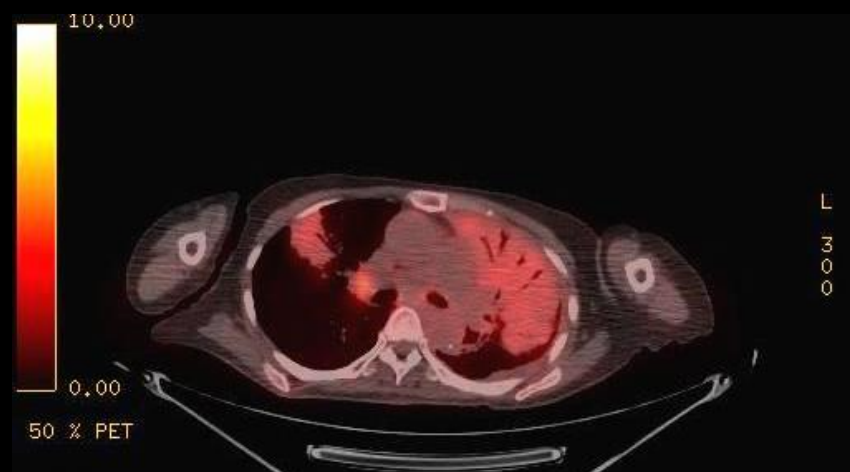
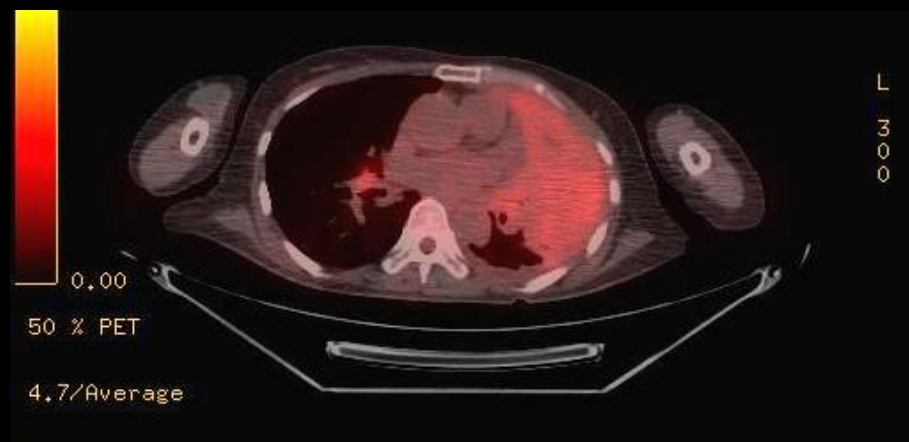


Multiple myeloma with bone osteolytic metastasis

Left posterior back pain for 3 months



非常像肺炎的肺腫瘤-淋巴瘤



Pulmonary carcinoma

- Classification
 1. Small cell lung cancer (小細胞肺癌)
 2. Non-Small cell lung cancer (非小細胞肺癌) :
Adenocarcinoma(肺腺癌) 、 squamous cell carcinoma(鱗狀細胞癌) 、 large cell carcinoma(大細胞癌) 及其他較罕見之非小細胞肺癌(spindel cell carcinoma, Langerhans cell carcinoma..)
 - Metastatic lung cancer (轉移癌) : colon, bone..
- Location (But not always) :
 - Central type : Squamous cell carcinoma and small cell carcinoma
 - Peripheral type : Adenocarcinoma

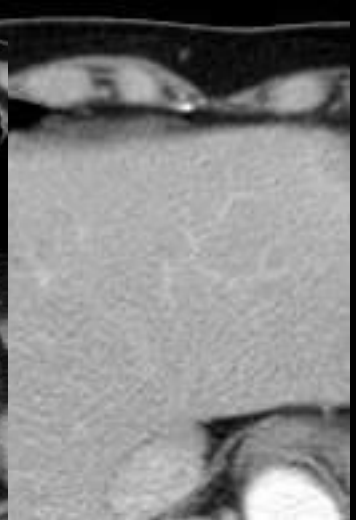
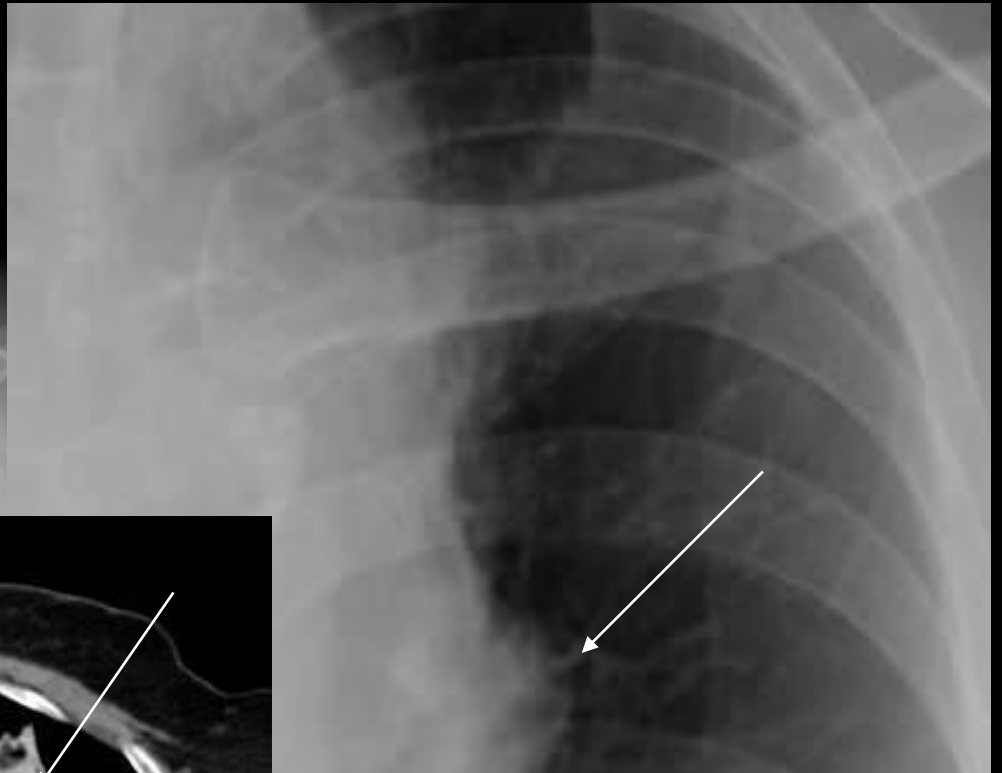
Pulmonary carcinoma – Radiologic manifestation

- Lung nodules or masses
 - Usually **spiculated** or **lobulated**
 - Enhanced more than **15HU** following iv contrast
- Obstructive pneumonitis and atelectasis
 - A segment, a lobe or the entire lung
 - **Squamous cell carcinoma** or **small cell carcinoma**
- Apical mass(Pancoast tumor) : Adeno or Squamous cell cancer
- Cavitated mass : **squamous cell carcinoma**
- Nodule or mass associated LAP : all cell types
- Unilateral hilar or mediastinal LAP alone : **small cell carcinoma**

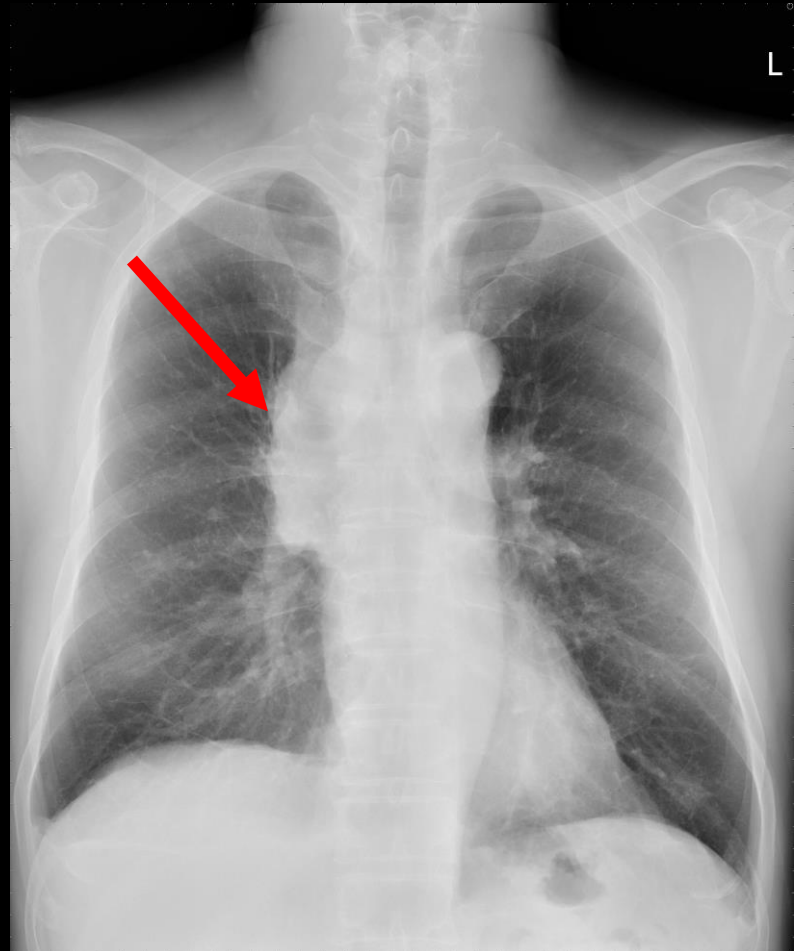
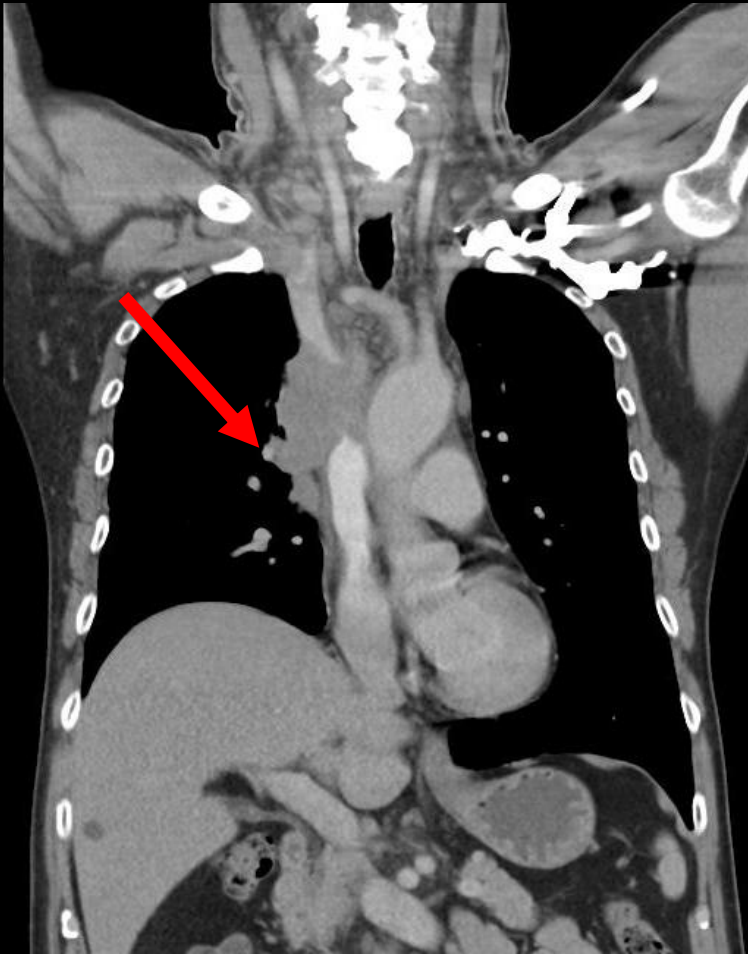
Small cell lung cancer

- 小細胞肺癌初期的典型表現是肺門腫塊合併縱膈淋巴結腫大，導致咳嗽、氣促、體重下降與衰弱，有時會造成阻塞性肺炎。
- 偶而也會以周邊結節表現，但沒有合併縱膈淋巴結腫大的孤立性肺結節並不常見，以細針抽取的細胞學檢查很難區別是小細胞肺癌、類癌，或其它分化良好的神經內分泌腫瘤。
- 小細胞肺癌可分為兩期：
 - 局限期，侷限在單側胸廓內的病灶，可被涵蓋入單一放療照野；
 - 擴散期，出現遠端轉移病灶。

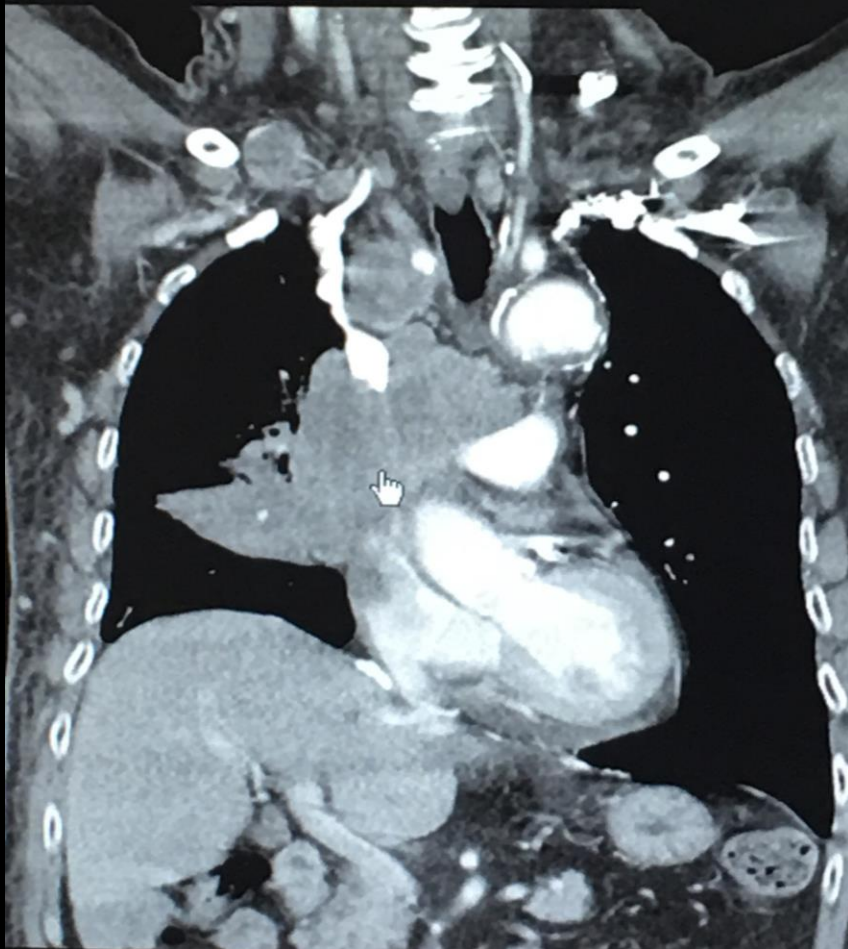
Small cell lung cancer ~ Central type



SCLC in a 60 y/o man, heavy smoker



小細胞肺癌(SCLC)往往長得靠近內側, 侵犯上腔靜脈, 造成上腔靜脈症候群(SVC syndrome)



SVC syndrome



s/p CCRT
SVC syndrome
had resolved.

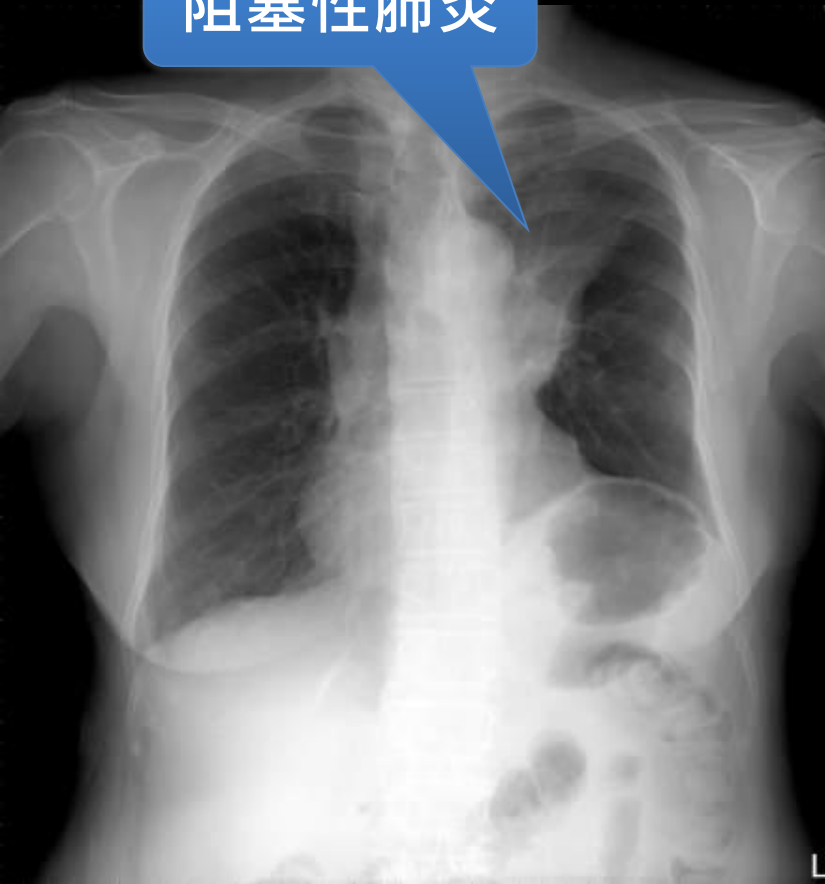
鱗狀上皮細胞癌

- 又叫扁平細胞癌
- 目前約佔臺灣肺癌之20~25%左右
- 多見於抽煙男性
- 大多起源於較大的支氣管，亦即常為中央型肺癌。
- 傾向於管腔內生長，常早期引起支氣管狹窄，導致肺塌陷或阻塞性肺炎。
- 癌組織易發生壞死和形成空洞。
- 一般生長較為緩慢，病程較長，較晚發生轉移，且通常首先經淋巴管轉移，到晚期才發生血管轉移。
- 對放射及化學療法的敏感度不及小細胞癌

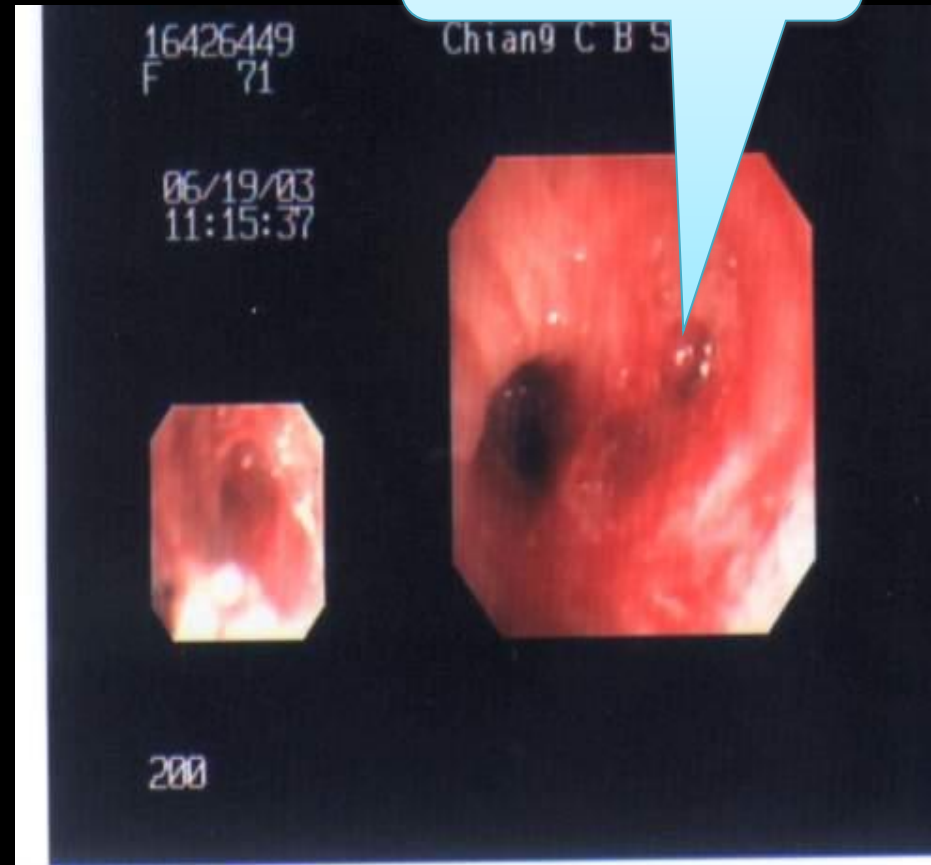
Squamous cell carcinoma

Central type

阻塞性肺炎

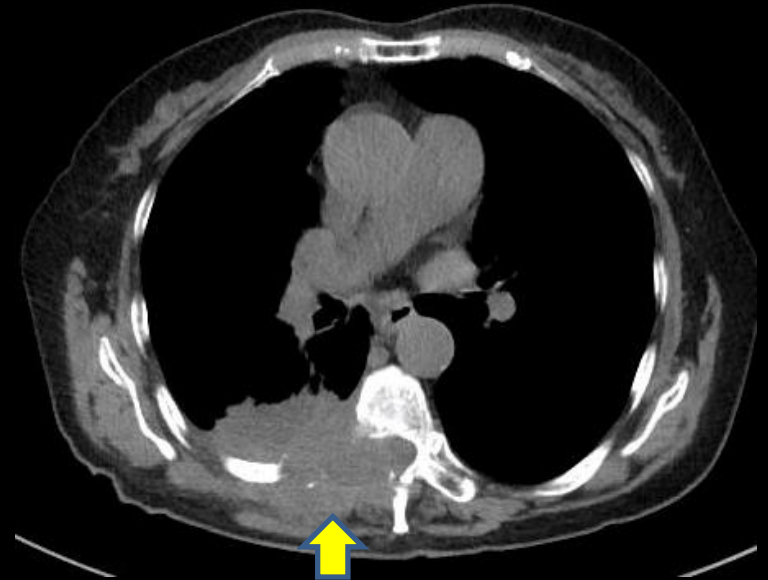
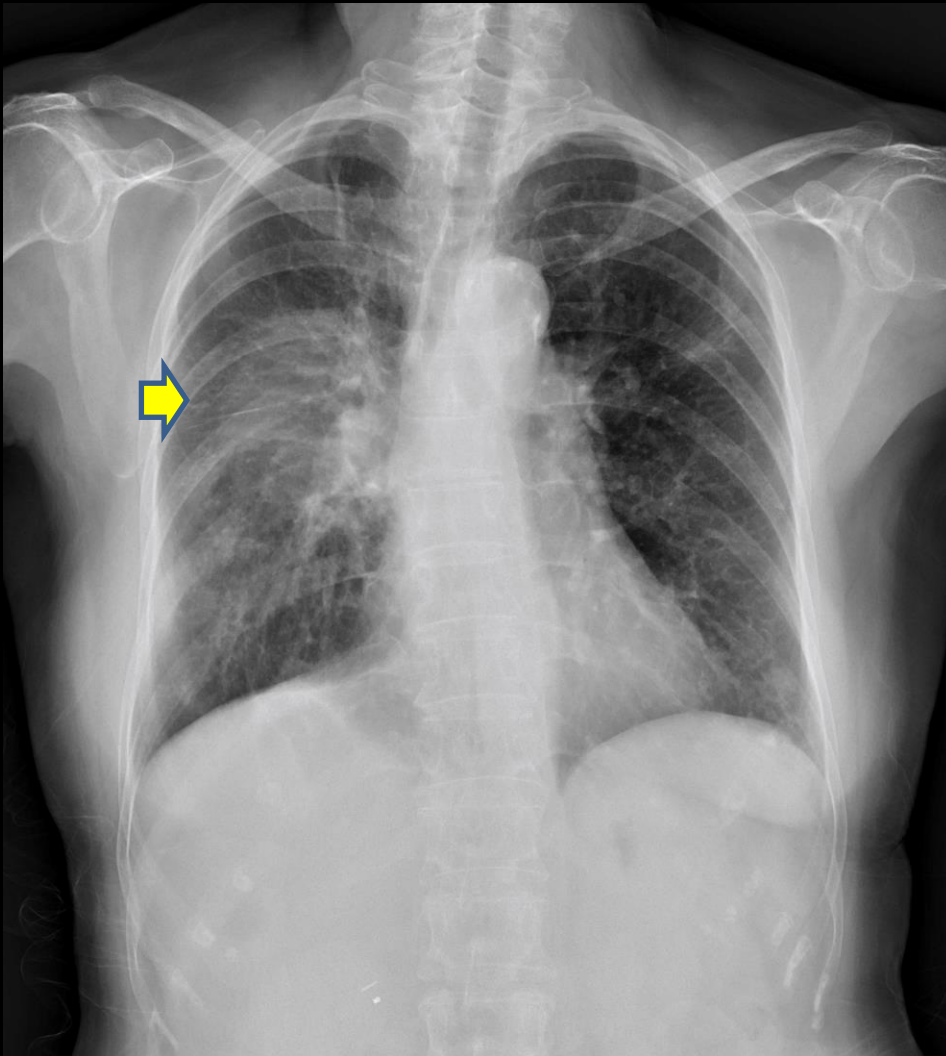


左上肺出口堵住了!!!



Bronchoscopy :left upper bronchus total occlusion

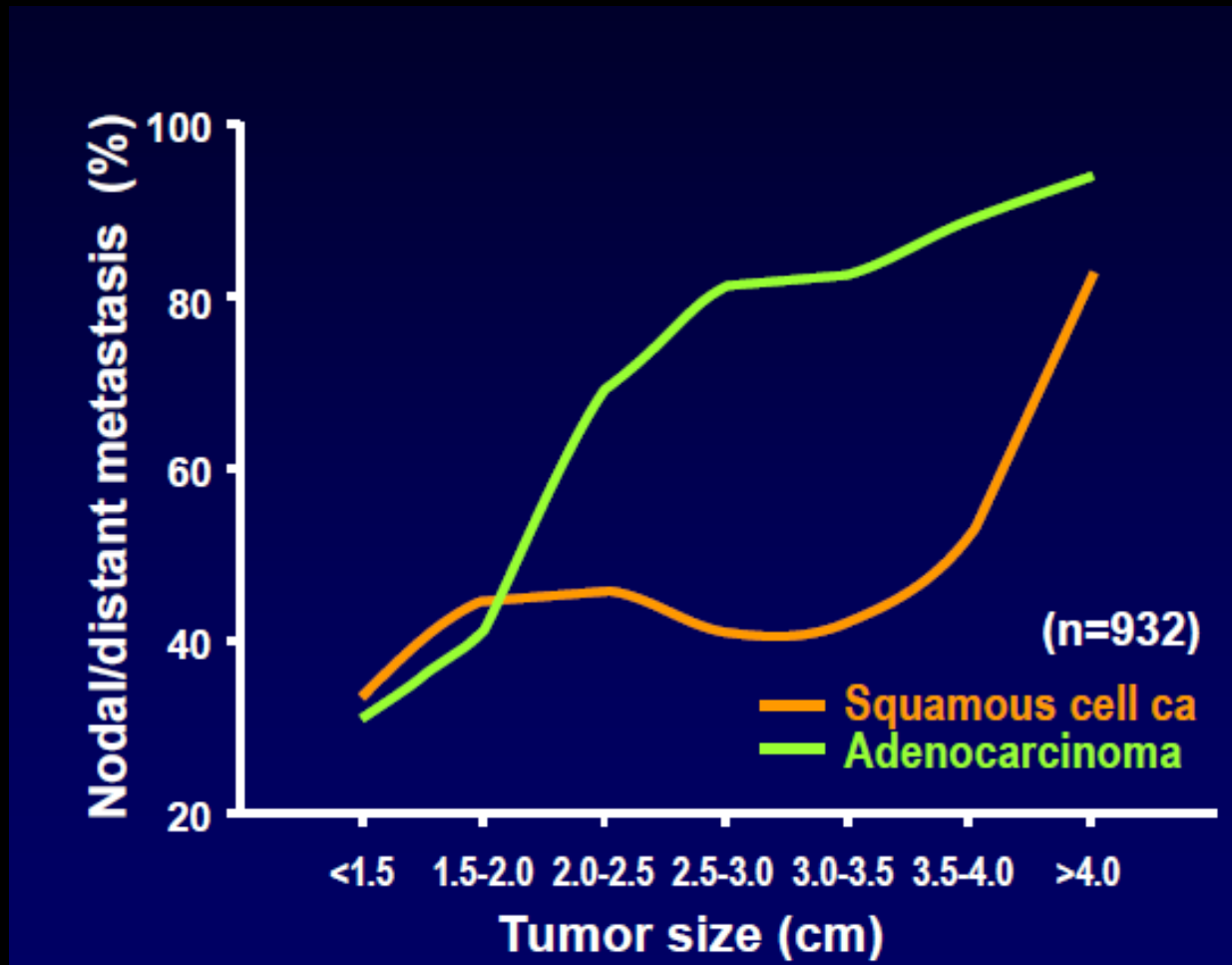
Squamous cell carcinoma



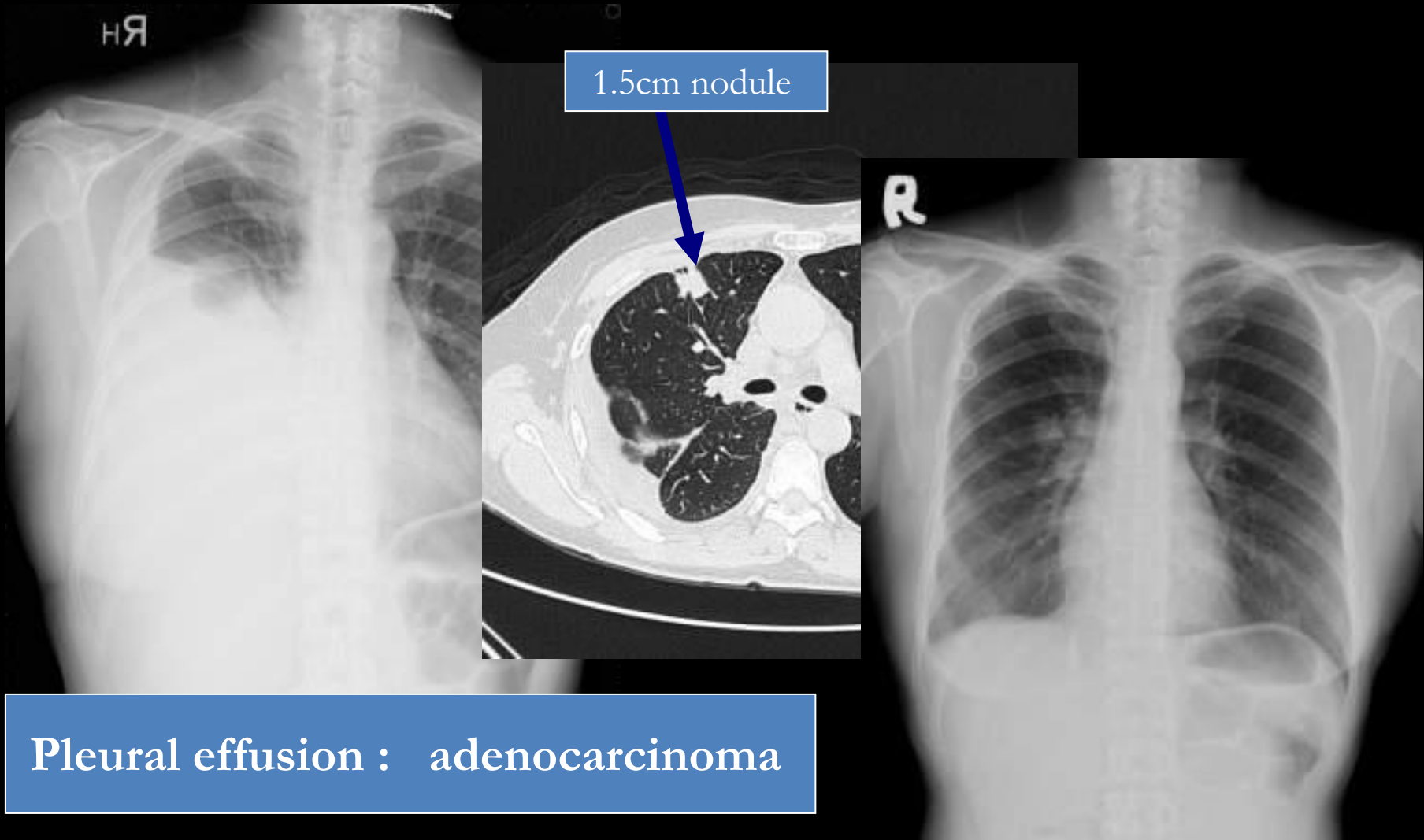
肺腺癌adenocarcinoma

- 在台灣肺癌中是最常見的一種(在臺灣佔超過50%)
- 女性多見，與吸煙無密切關係。
- 大多數腺癌位於肺的周圍、比較沒有症狀。
- 腺癌大多起源於較小的支氣管粘膜分泌黏液的上皮細胞，腺癌傾向於管外生長，常在肺邊緣部形成腫塊。
- 富含血管，故局部浸潤和血行轉移較早，易轉移肋膜引起胸腔積液。
- 在早期一般沒有明顯的臨床症狀，往往在胸部X線檢查時意外發現。
- 生長較緩慢，但有的病例較早即發生血管轉移。
- 常在呈現腦轉移症狀後才發現肺部原發的肺腺癌。

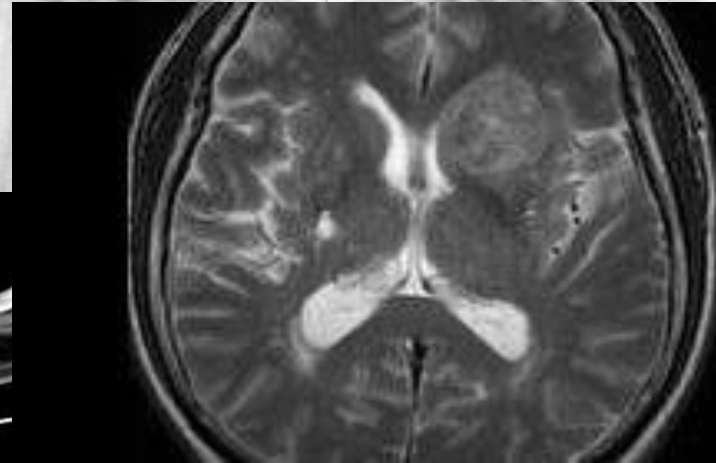
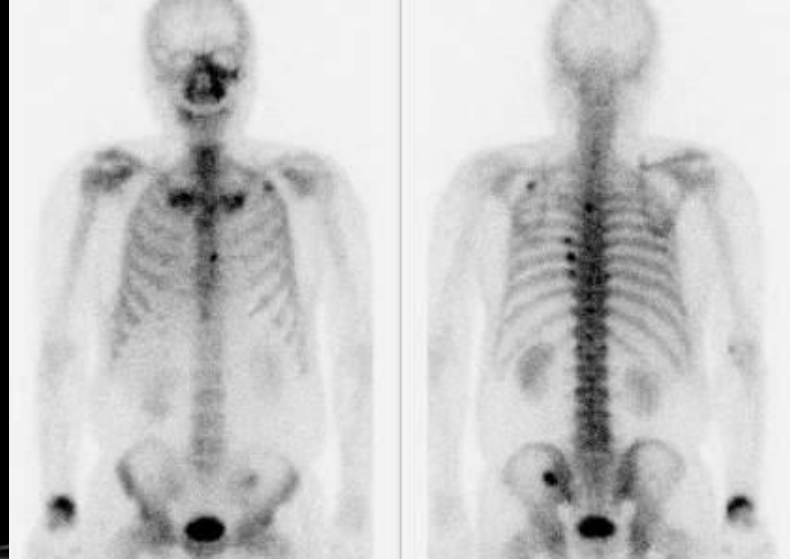
肺腺癌的特徵是常小小的就會轉移出去
鱗狀細胞癌則夠大才會轉移



Lung adenocarcinoma

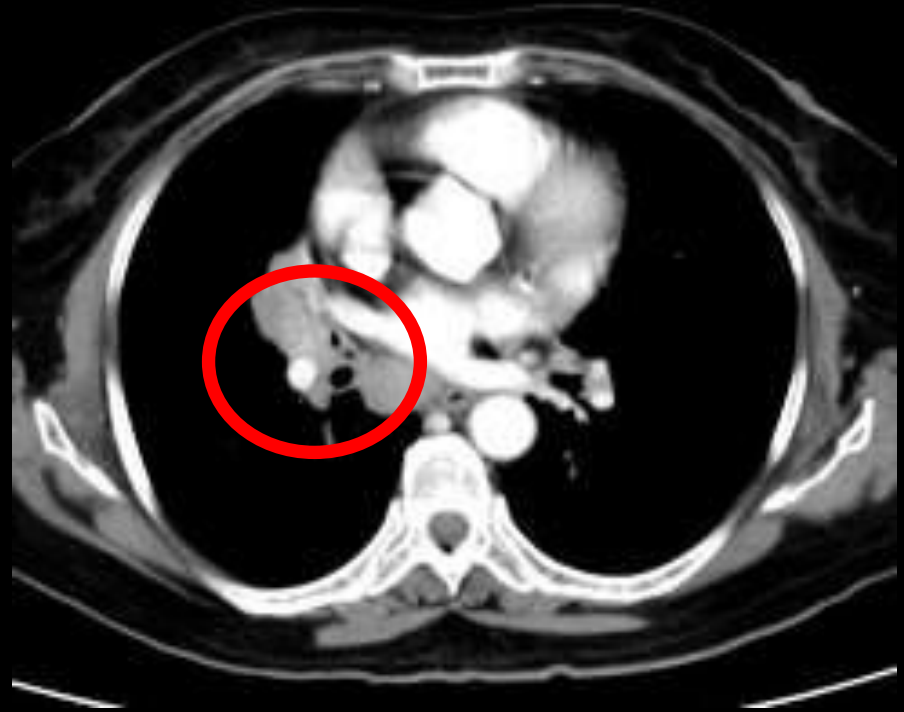


Lung adenocarcinoma with bone and brain metastasis



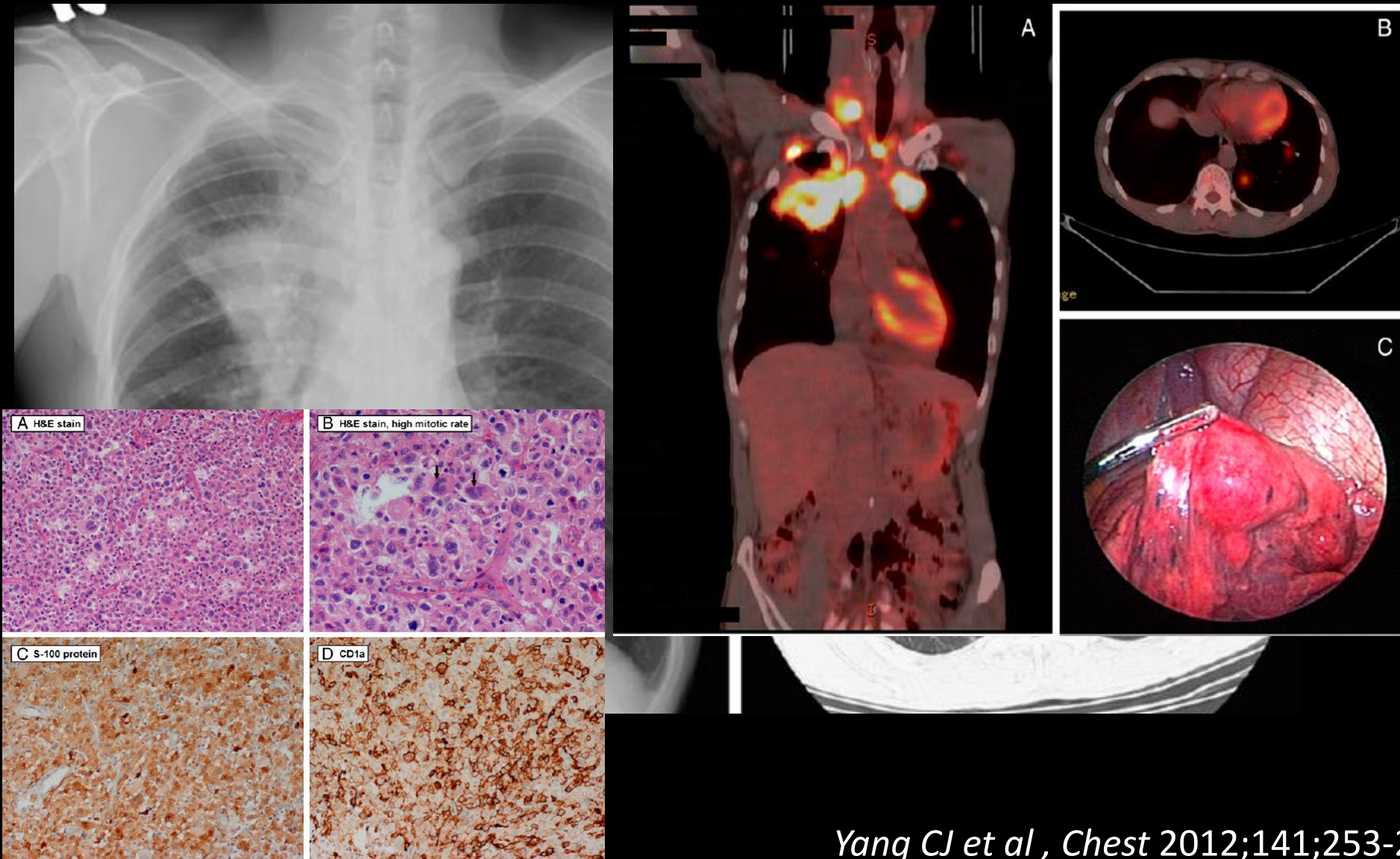
Lung Adenocarcinoma

並非一定在周邊，長在肺部中央也不少見

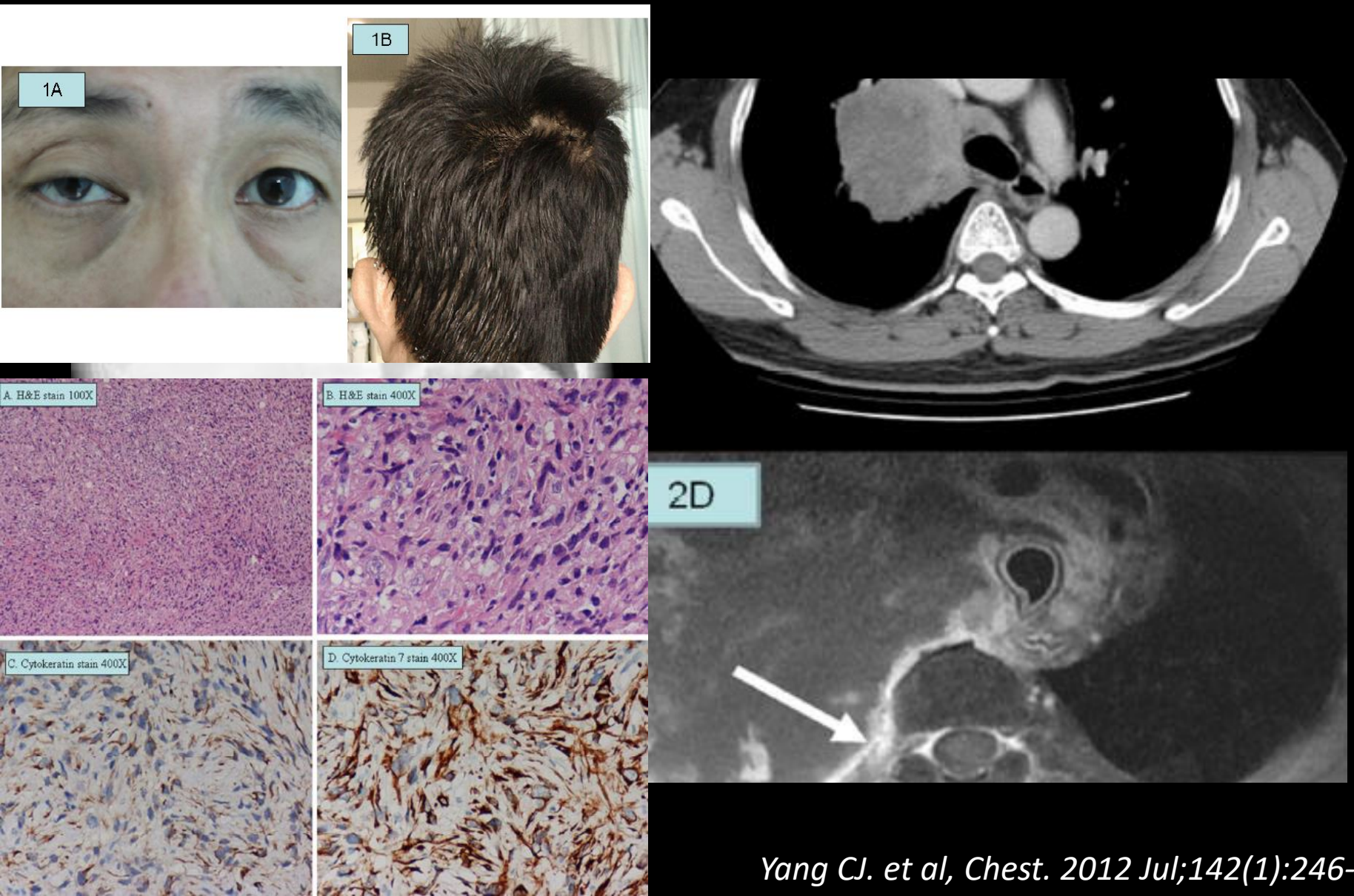


其他較罕見之非小細胞肺癌

Pulmonary Langerhans cell sarcoma



Spindle cell carcinoma



Thanks for your attention ~