

# Percutaneous localization of small lung nodules:

新光吳火獅紀念醫院的經驗分享

胸腔外科

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# 醫院簡介

■ 總病床數：833床

- 急性一般病床：518床
- 特殊病床：290床
- 精神病床：25床

■ 員工數：2,644人(108/10/31)

- 醫療：474人
- 護理：1,090人
- 醫技：699人
- 行政：381人
- 外包：280人



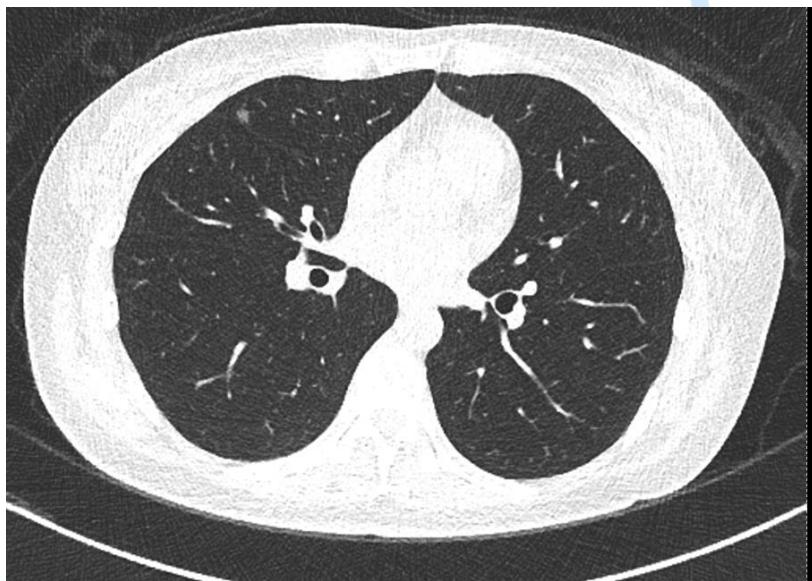
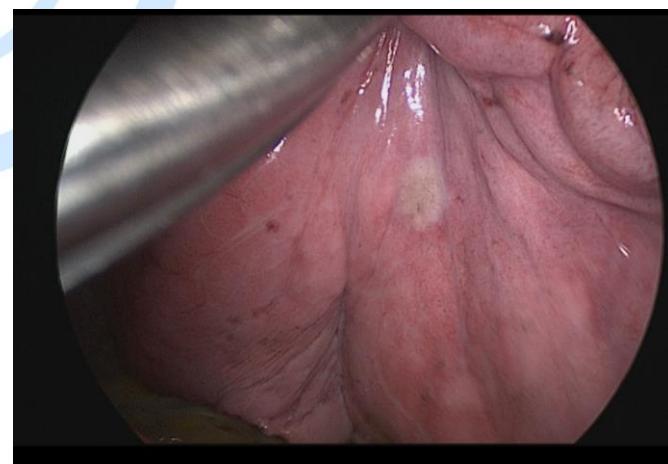
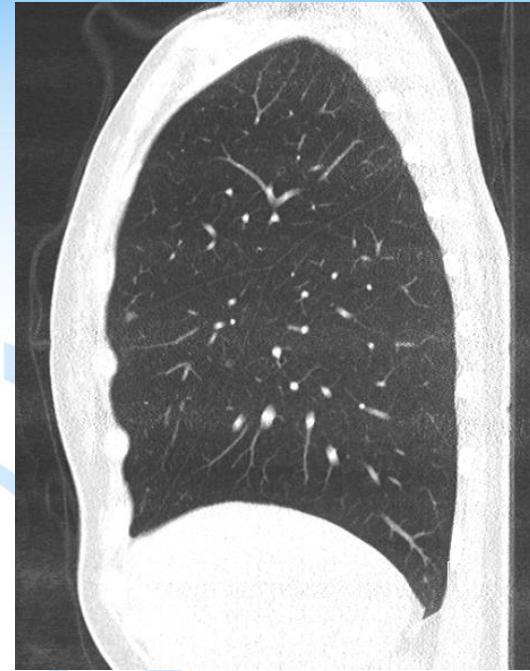
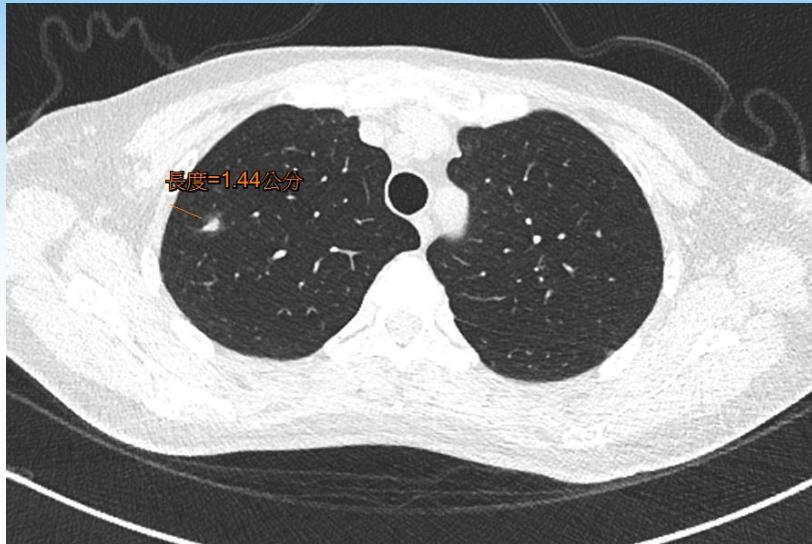
# 肺癌個案數

- 2019/01-2019/10
- Operation for lung cancer: 81
- No. of localization of small lung nodules: 22
  - CT- guided localization: 16
  - Endobroncial localization in hybrid OR: 6

# Indication of localization

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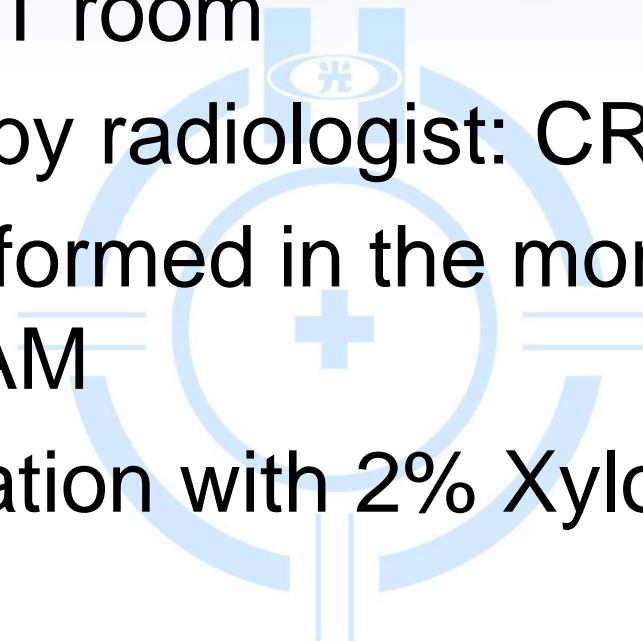
- Small nodules / sub-centimeter nodules
- Centrally located nodules
- Partially solid / mixed ground glass and solid nodules
- Ground-glass opacity (GGO)



# Method

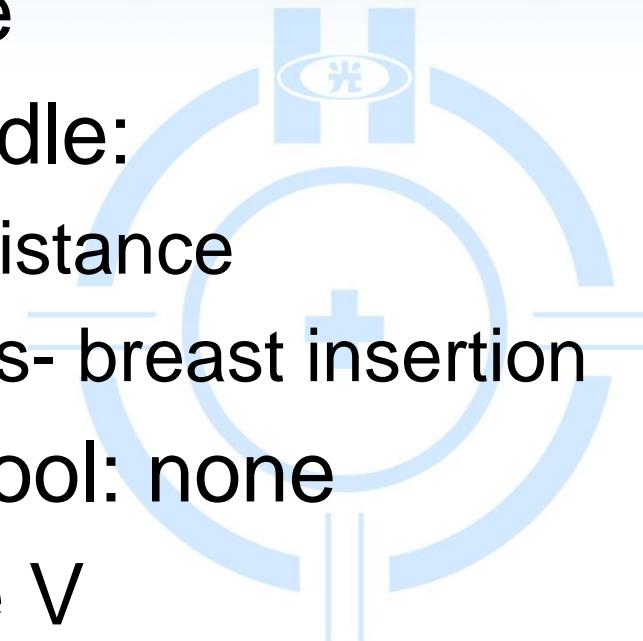
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- Location: CT room
- Performed by radiologist: CR
- Usually performed in the morning of OP day: 11:00 AM
- Local infiltration with 2% Xylocaine



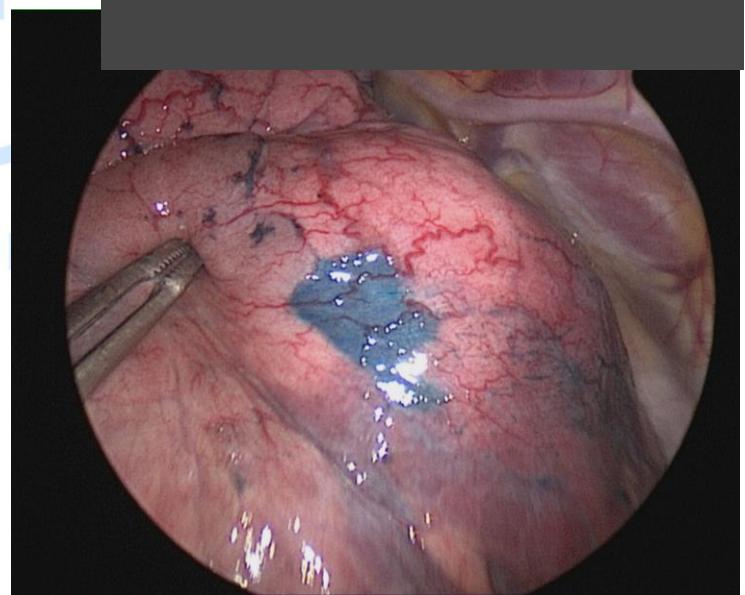
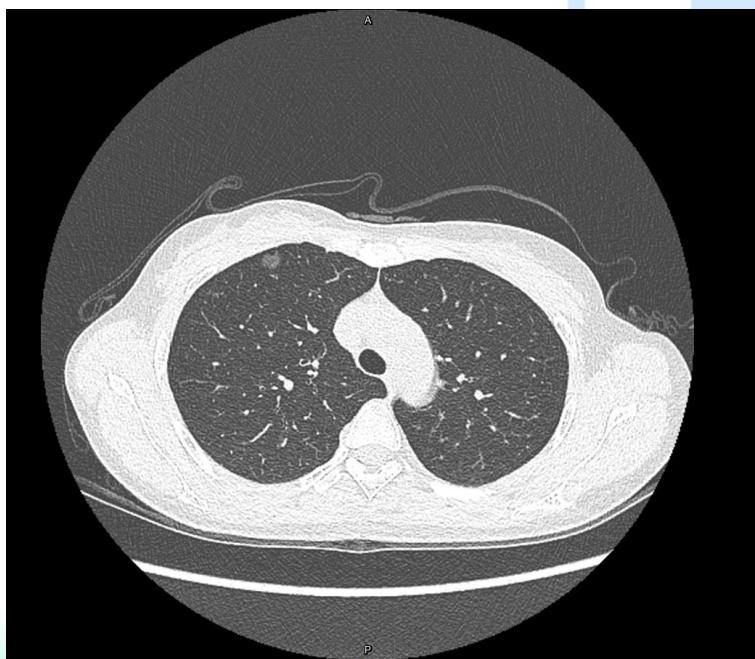
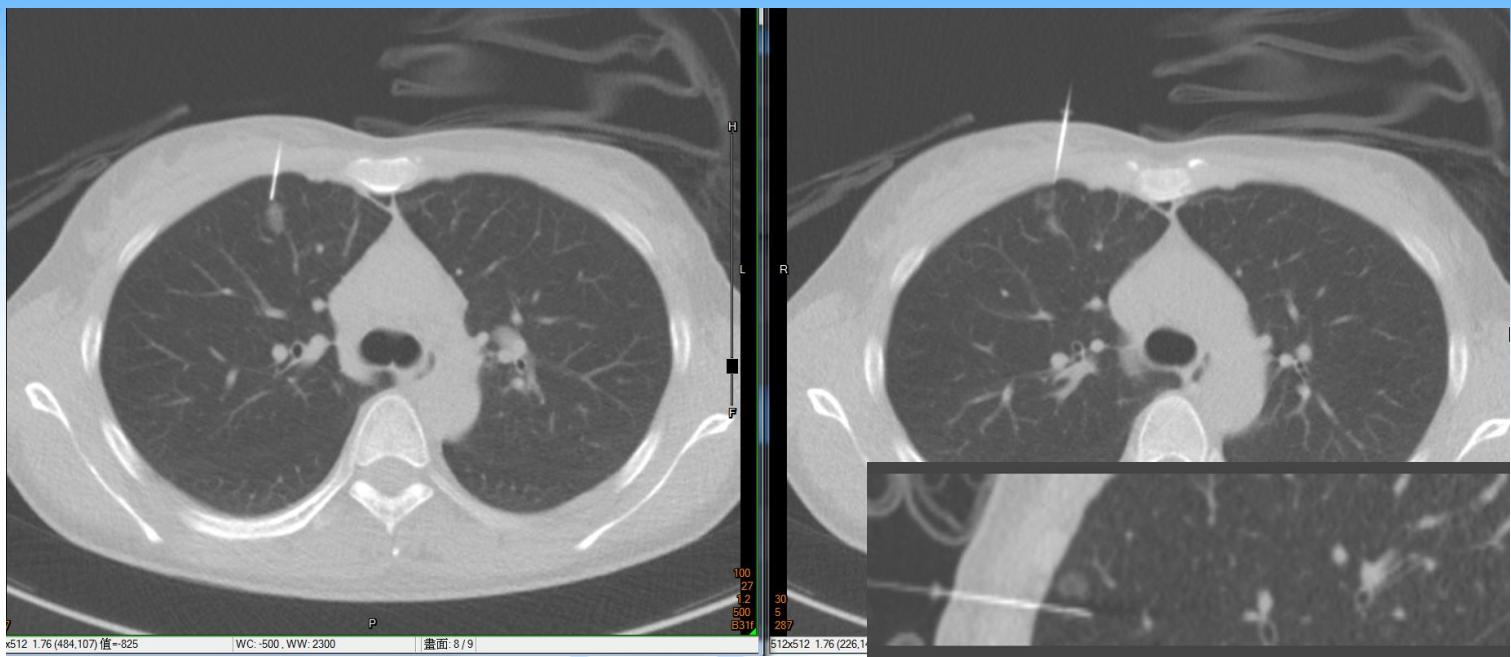
# Method

- 22G needle
- Inlet of needle:
  - Shortest distance
  - Avoid trans- breast insertion
- Guidance tool: none
- Patent blue V
  - 0.1-0.3 ml, 0.5-1.0 cm beneath the visceral pleura
  - Deep seated nodule: another dose

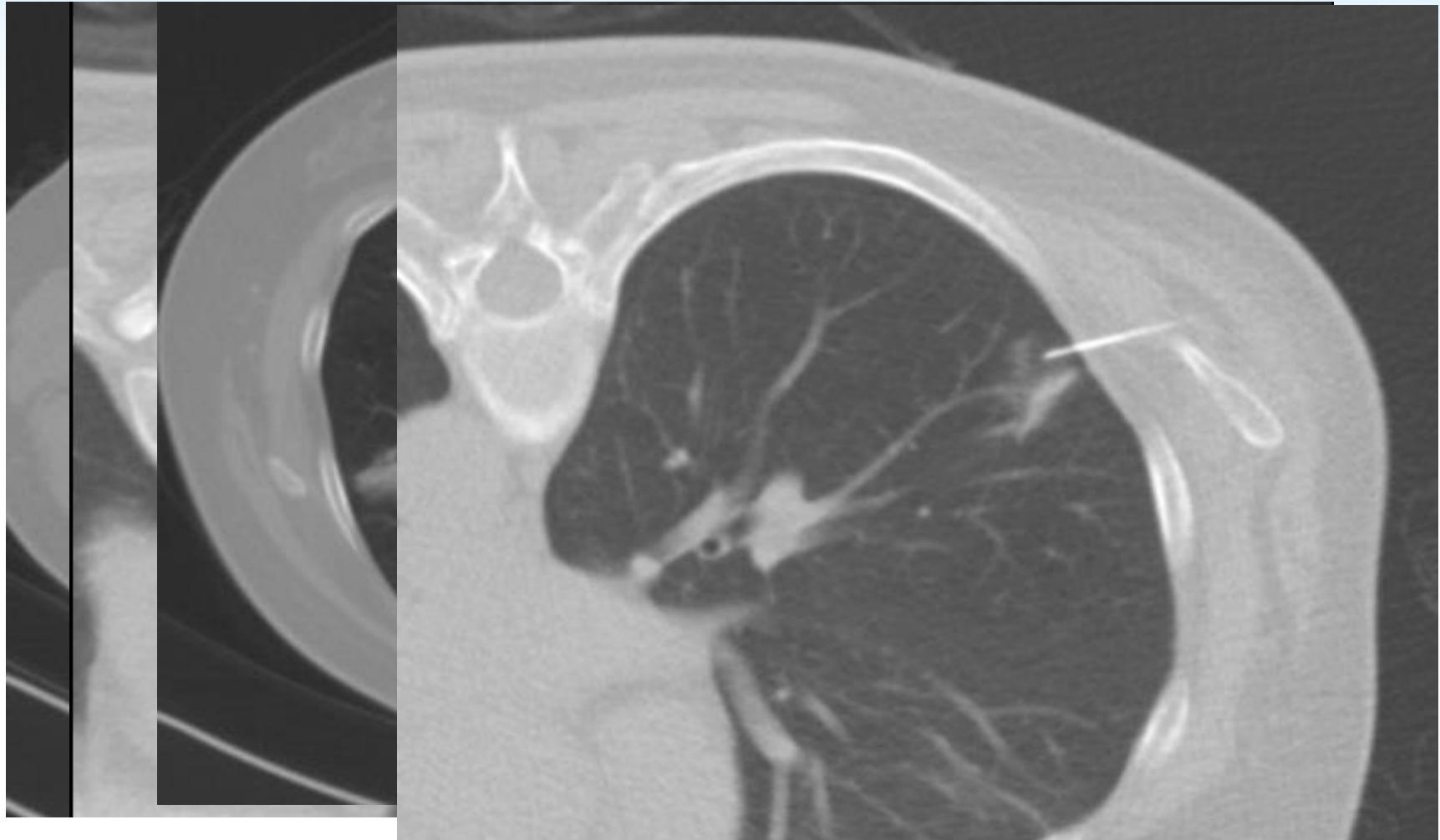


# Method

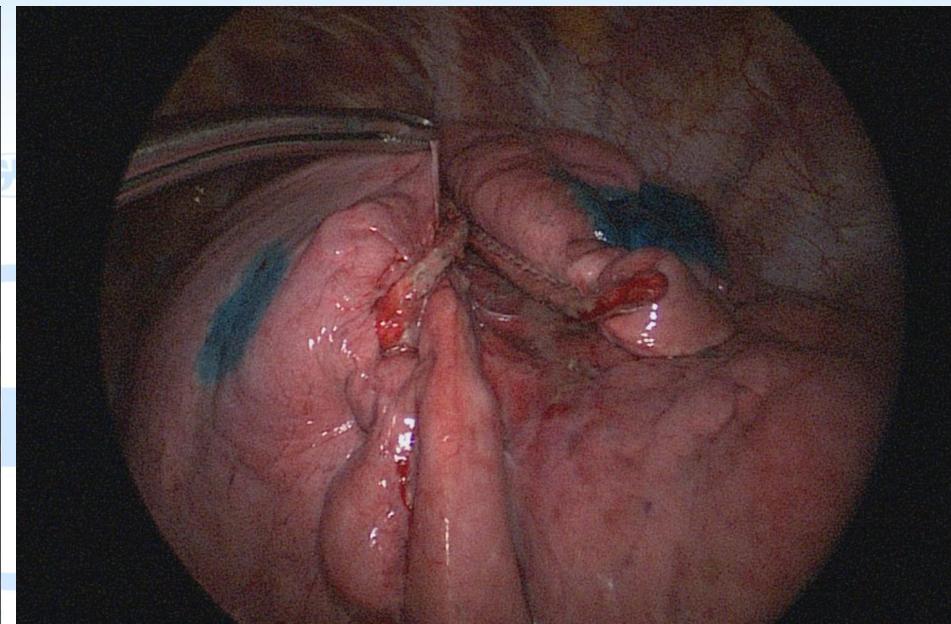
- It takes 20 minutes to complete the procedure
- Multiple nodules localization is possible
- Sometimes we did localization in the afternoon of the day before operation



# RUL GGN S1 and RLL GGN S9, Both adenocarcinoma



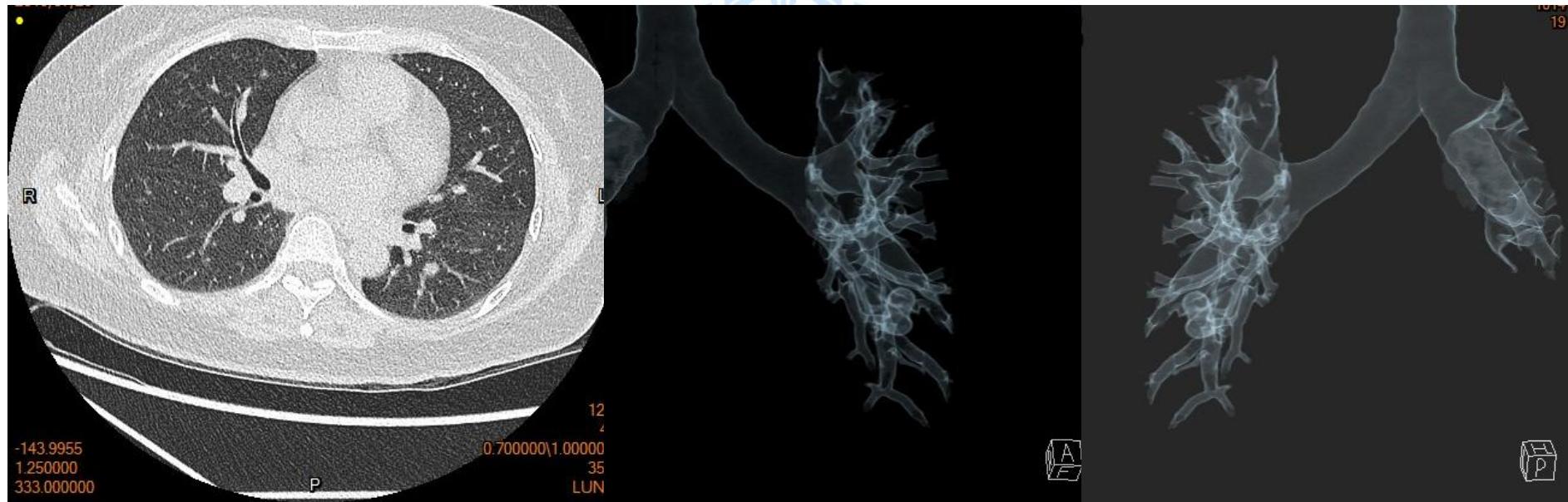
# LUL GGN x 2



# Results:

- No hemothorax, no massive pneumothorax
- Poor tattoo of the nodule: 1 case
  - Identify the location by pin hole
- **Weakness** of percutaneous localization at our hospital: deep seated tumor
  - The depth of resection was difficult to recognize during operation

# Deep seated tumor



# Advantage and Disadvantage of current CT guided localization at our hospital

- Advantage :
  - 節省開刀房時間
- Disadvantage:
  - 跨單位服務: 時間需互相配合，一天只做一例，運送浪費時間，跨科溝通
  - 病人疼痛



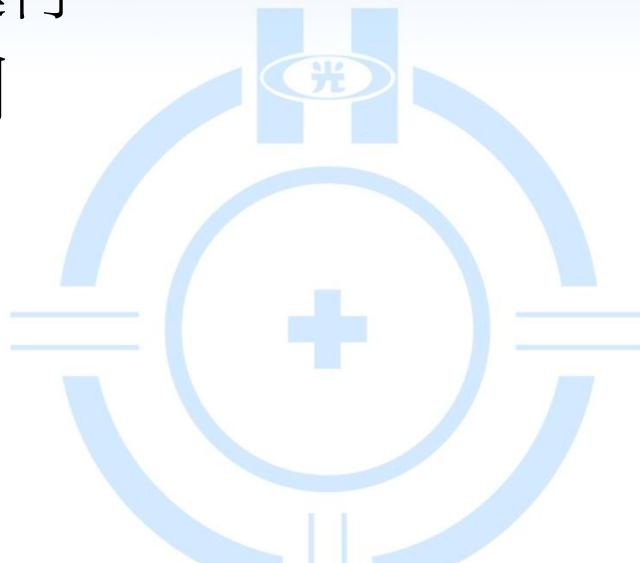
# 流程改造



一站式: Hybrid room, Siemens Zeego

無痛: 麻醉後進行

氣管鏡: 無穿刺



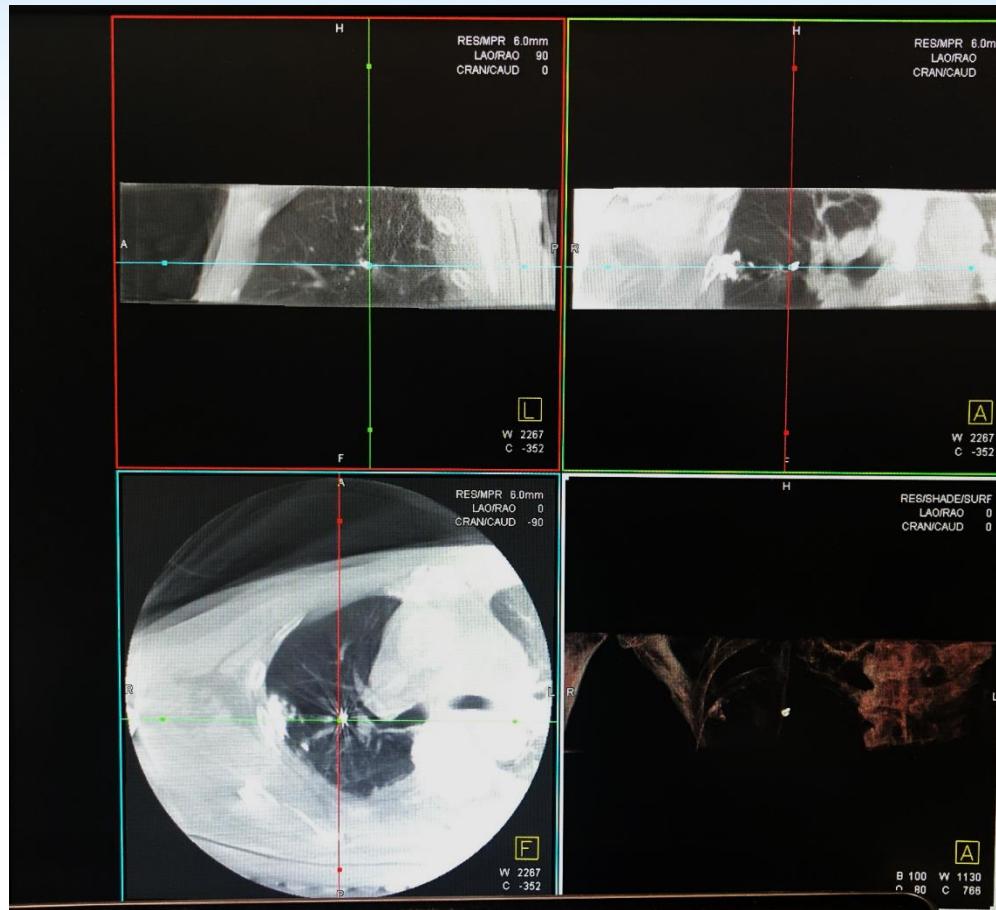
一站式無痛氣管鏡定位手術

# 操作步驟

1. 確定機器手臂運轉順暢: 需小心管路
2. 獲取CT影像，並與原斷層影像比較確認目標
3. 利用軟體標記目標處並與fluoroscope 同步
4. 在fluoroscope導引下，以支氣管鏡進行定位(注射染料: Indigocarmine + Xenetix 350)
5. 再次獲取CT影像，並與原斷層影像比較確認目標與染料間之相對位置







# Results:

- 6 patients had transbronchial localization since March 2019
- 4 個案例定位清晰易判讀
- 1 個案例染色不清楚
- 1 個案例 Coil 脫落



# 結論

- 肺癌篩檢發現早期肺癌，改善存活率
- 早期肺癌搭配良好腫瘤定位及亞肺葉切除，提升生活品質
- 「定位方法」許多種，依院內設備及經驗選取最適合方式





Thanks for your attention

謝謝聆聽