ACAC

華美聯誼協會

Alliance of Chinese American Communities

# 認識肺腺癌：早期發現、預防與治療新知

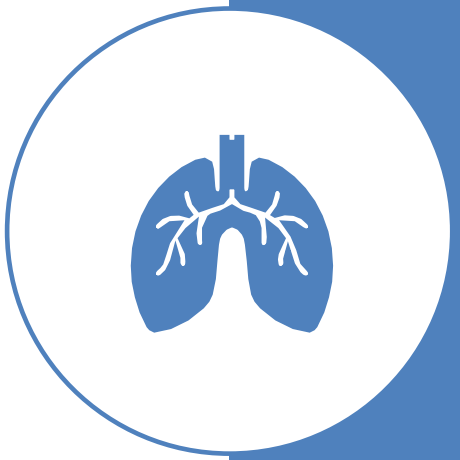
# Lung Adenocarcinoma: Early Detection, Prevention and Modern Treatments

張耀文 老人專科醫師

Dr. Alvin Chang MD

# Agenda / 今日內容

- What is lung adenocarcinoma? / 什麼是肺腺癌？
- Risk factors / 危險因子
- Symptoms / 常見症狀
- Early detection / 早期發現
- Modern treatments / 最新治療
- Prevention / 預防
- Summary / 總結



# What is Lung Adenocarcinoma?
# 什麼是肺腺癌？

肺癌分兩大類：
- **非小細胞肺癌（85%）**
  - 肺腺癌（最常見）
  - 鱗狀細胞癌
  - 大細胞癌
- **小細胞肺癌（15%）**

A common type of non-small cell lung cancer

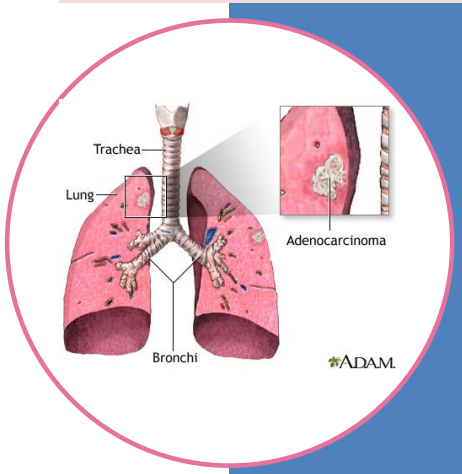
- 肺腺癌是非小細胞肺癌中最常見的一種 (40-50%)

Often develops in the outer part of the lung

- 常發生於肺部外圍

Can occur in smokers, non-smokers and women

- 吸菸者與不吸菸者及女性皆可能罹患



# Why Is Awareness Important?
# 為何要提高警覺？

Leading cause of cancer death worldwide

- 為全球癌症死亡主要原因之一

Women, Asians, and never-smokers are disproportionately affected

- 女性、亞洲人以及從未吸菸者罹患肺腺癌的比例較高

Some patients never smoked

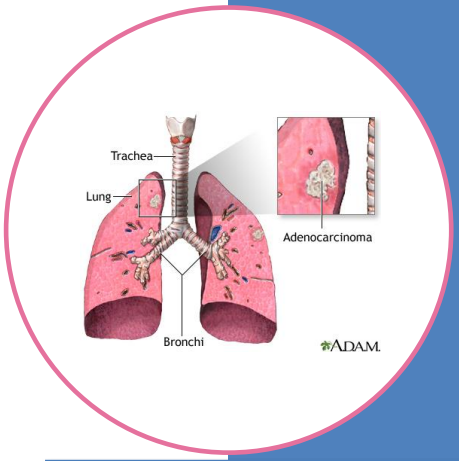
- 許多患者從未吸煙

Symptomless in early stage

- 早期沒有症狀

Early detection improves survival

- 早期發現可大幅提高存活率




腫瘤可能位於肺部周邊
不影響呼吸功能
往往健康檢查時偶然發現

# Risk Factors
# 危險因子

- Smoking and secondhand smoke
  吸菸與二手菸
- Air pollution 空氣污染
- Family history 家族病史
- Radon exposure 氡氣暴露
- Occupational exposure 職業暴露

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- 吸菸仍是第一危險因子
- 二手菸也會增加風險
- 戒菸任何年齡都不嫌晚

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柴油廢氣
工業污染
廚房油煙
野火煙霧
長期暴露增加風險

# Risk Factors
# 危險因子

- Smoking and secondhand smoke 吸菸與二手菸
- Air pollution 空氣污染
- Family history & genes 家族病史及基因
- Radon exposure 氡氣暴露
- Occupational exposure 職業暴露

基因因素:
EGFR ROS1 HER2 KRAS
亞洲女性 EGFR 突變比例較高

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美國第二大肺癌原因
無色無味放射性氣體
可從地基滲入室內
可用 Radon test kit 檢測

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石棉
矽塵
柴油廢氣
重金屬
化學溶劑

# Symptoms
# 常見症狀

Persistent cough
持續咳嗽

Blood in sputum
痰中帶血

Chest pain
胸痛

SOB
呼吸急促

Recurrent Pneumonia
反覆肺炎

Weight loss
體重減輕

# Who Should Be Screened?
# 哪些人需要篩檢？

American Cancer Society recommends 美國癌協篩檢建議

- **Age:** Between 50 and 80 years old.
- **Smoking History:** A history of at least **20 pack-year**. (A pack-year means smoking an average of one pack of cigarettes per day for one year; eg, 1 pack a day for 20 years, or 2 packs a day for 10 years).
- **Smoking Status:** Currently smoking or quit smoking < 15 years
- Medicare and Medicaid - 針對重度吸菸者搭配戒菸服務，提供每年1次LDCT肺癌篩檢

Discuss with physician
與醫師討論最適合的方案

# Low-Dose CT Screening
# 低劑量胸腔電腦斷層掃描篩檢

Currently recognized as the most effective tool for screening early-stage lung cancer.

目前醫學界公認篩檢「早期肺癌」最有效的工具

Detects cancer early: It can detect tiny, early-stage nodules and cancers that X-rays simply cannot see.

可提早發現肺癌: 它可以檢測 X光無法看到的微小早期結節和癌症。

Low radiation exposure and non-invasive

低輻射暴露且非侵入性

- **高解析度**：可偵測出小至 0.1 至 0.2 公分（1-2 mm）的微小肺結節或毛玻璃狀病變，遠優於傳統的胸部 X 光。
- **低輻射量**：輻射暴露僅約 1～1.5 mSv，約為傳統常規 CT 的五分之一。
- **過程安全快捷**：無須注射顯影劑、無須空腹、全程約 5 到 10 分鐘，無痛且無壓迫感。

# Why does lung cancer require "active screening"?
# 為什麼肺癌需要「主動篩檢」？

- **早期無聲無息 / Silent in the Early Stages**
  The lungs have no pain-sensing nerves, so an early tumor can grow with almost no discomfort. By the time persistent cough, cough up blood, or feel short of breath is developed, the disease has often already reached a late stage.
  肺臟內部沒有痛覺神經，當腫瘤初期在肺部生長時，患者幾乎沒有任何不適感。絕大多數人出現咳嗽、咳血或呼吸困難時，往往已經發展為晚期

- **傳統 X 光有盲區 / Conventional X-rays Have Blind Spots**
  Conventional chest X-rays are easily obscured by the heart, bones, and diaphragm, making it hard to spot early lung lesions smaller than 1 cm.
  傳統胸部 X 光容易受到心臟、骨骼與橫膈膜遮蔽，難以揪出< 1 公分的早期肺部病灶

- **LDCT 的超高敏感度 / The Ultra-high Sensitivity of LDCT**
  LDCT offers extremely high resolution, detecting tiny nodules of just 0.1 to 0.2 cm so doctors can remove them precisely before the cancer grows or spreads.
  LDCT 的解析度極高，能偵測到僅 0.1 到 0.2 公分的微小結節，讓醫師得以在癌細胞坐大或擴散前進行精準切除

- 早期發現與治療能提升存活率 **/ Early detection and treatment increases survival rate**
  Stage 1 5yr survival rate 第一期五年存活率：70～90%
  Stage 4 第四期：< 10%

# Diagnosis 診斷方式

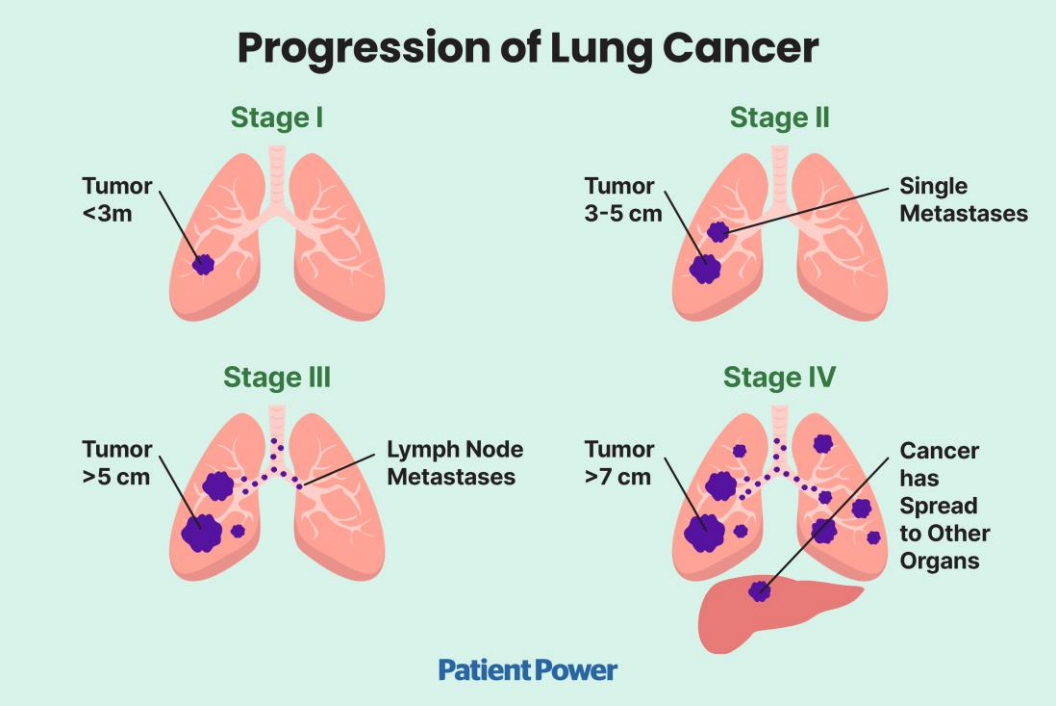
CT Scan 電腦斷層

PET Scan 正子攝影

Biopsy 組織切片

Molecular Testing 基因檢測

# Stages of Lung Cancer
# 肺癌分期



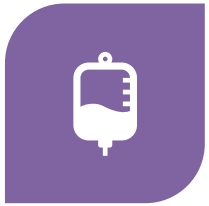

**Stage I–IV 第一期至第四期**

- 第一期：局限肺部
- 第二期：附近淋巴結
- 第三期：局部擴散
- 第四期：遠端轉移

# Modern Treatment Options
# 最新治療方式

SURGERY / 手術

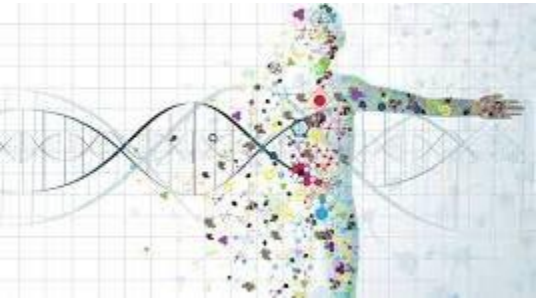
RADIATION
/ 放射線治療



CHEMOTHERAPY
/ 化學治療

TARGETED THERAPY
/ 標靶治療

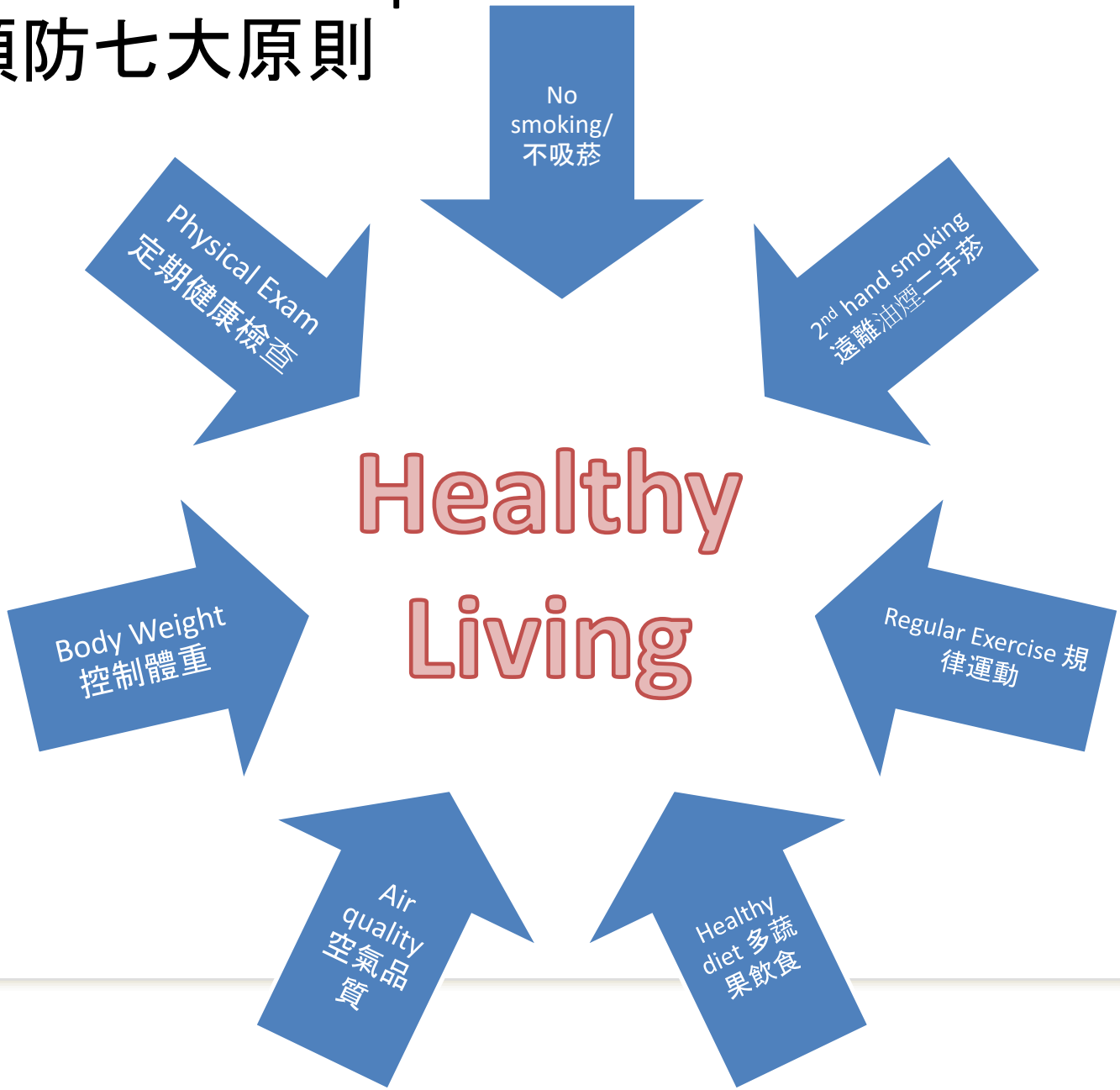
IMMUNOTHERAPY
/ 免疫治療



# Precision Medicine
# 精準醫療

- Precision medicine in lung adenocarcinoma involves tailoring treatments to the unique genetic and molecular profile of a patient's tumor
  肺腺癌的精準醫療涉及根據患者腫瘤獨特的遺傳與分子特徵量身打造治療方案
- By utilizing Next-Generation Sequencing (NGS) and comprehensive biomarker testing, oncologists can identify specific targetable alterations to select highly effective, personalized therapies
  **透過利用次世代定序(NGS)及全面生物標記檢測, 腫瘤科醫師能識別特定可標靶的改變, 以選擇高效且個人化的治療方案**
- EGFR, ALK, KRAS testing  can help in choosing the right treatment
  EGFR、ALK、KRAS等基因檢測有助選擇高效治療

# Prevention: 7 Principles
# 預防七大原則

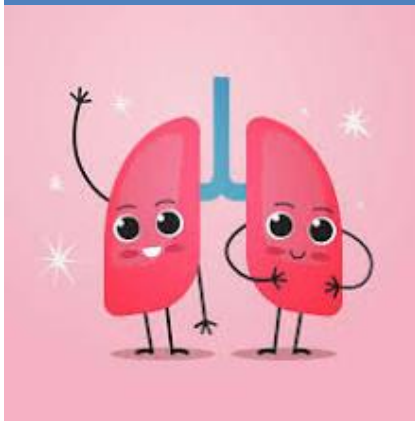


# Key Messages
# 重點摘要

- Early detection saves lives

  早期發現、早期治療
- Treatment continues to improve

  新療法持續提升存活率



**關心肺部健康，從今天開始及早篩檢**
**守護自己與家人的未來**

# Thank You
# 謝謝