奇美醫學中心胸腔疾病與健康生活型態國際研討會

Internatonal Symposium of Chest Disease and Lifestyle Medicine

日期：2025 年 06 月 06 日

地點：奇美醫院 5 樓國際會議廳

主辦單位：奇美醫學中心內科部胸腔內科

Pulmonary Medicine,Department of Internal Medicine,Chi Mei Medical Center

時間	議程內容	主講人	主持人
08:30-08:50	報到		
08:50-09:00	致詞 林宏榮院長、胸腔內科蔣士仁主任		
09:00-09:40	Current Status and Challenges of Epidermal Growth Factor Factor Receptor (EGFR)-Mutated NSCLC Treatment in Taiwan	呼吸治療科 鄭舒帆主任	胸腔內科 蔣士仁主任
09:40-09:50	Discussion	All	
09:50-10:30	Home-Based Medical Care for COPD Patients: Enhancing Disease Management Beyond Hospital Walls	胸腔內科 張庭嘉醫師	胸腔內科 蔣士仁主任
10:30-10:40	Discussion	All	
10:40-11:00	Coffee Break		
11:00-11:40	Bridging Acute and Chronic: The Respiratory Therapist's Perspective in COPD Management in Singapore	新加坡 Candice Chee Qian Ying	胸腔內科 蔣士仁主任
11:40-11:50	Discussion	All	
11:50-12:50	午餐 & 休息		
12:50-13:30	Anti-IL5 when and how ? Using biomarkers and clinical characteristics to target T2 inflammation	德國 Dr. med. Stephanie Korn	胸腔內科 鄭高珍顧問醫師
13:30-13:40	Discussion	All	
13:40-14:20	Smoke and the Airways	胸腔內科 胡凱淇醫師	胸腔內科 鄭高珍顧問醫師
14:20-14:30	Discussion	All	
14:30-14:50	Coffee Break		
14:50-15:30	Low-Dose CT for Lung Cancer Screening	胸腔內科 楊皓文醫師	胸腔內科 鄭高珍顧問醫師
15:30-15:40	Discussion	All	
15:40~	閉幕/賦歸	胸腔內科 鄭高珍顧問醫師	

Summary:

Tittle: Current Status and Challenges of Epidermal Growth Factor Factor Receptor (EGFR)-Mutated NSCLC Treatment in Taiwan

Speaker: Dr. SHU-FARN TEY

Lung cancer has remained the leading cause of cancer-related deaths in Taiwan in recent years. Among East Asian populations, more than 50% of patients diagnosed with advanced non-small cell lung cancer (NSCLC) harbor EGFR mutations. The rapid development of EGFR-targeted therapies has not only significantly improved objective response rates but also markedly prolonged the survival of patients with EGFR-mutant NSCLC. In Taiwan, first-, second-, and third-generation EGFR tyrosine kinase inhibitors (TKIs) are now widely available for clinical use.

This presentation will focus on the current treatment landscape for patients with common EGFR mutations in Taiwan, and highlight the key clinical challenges encountered, especially the mechanisms of resistance following third-generation EGFR-TKI (Osimertinib) therapy and the strategies to overcome them.

The key topics include:

1. Treatment Outcomes of First- and Second-Generation EGFR-TKIs

First-generation EGFR-TKIs (such as erlotinib and gefitinib) achieved high objective response rates (~60–70%) and prolonged progression-free survival (PFS) to approximately 9–12 months. Second-generation agents (such as afatinib) offered broader inhibition across different EGFR mutations, extending PFS to around 11–13 months in some studies, with particularly favorable outcomes in patients with exon 19 deletions.

2. Advances and Challenges of Third-Generation EGFR-TKI (Osimertinib)

Osimertinib demonstrated superior efficacy compared to earlier generations, achieving a median PFS of 18.9 months in the FLAURA trial and effectively overcoming T790M-mediated resistance.

However, eventual resistance mechanisms—such as MET amplification, EGFR C797S mutation, and histologic transformation—still limit long-term disease control.

3. Strategies to Prolong the Duration of Osimertinib Efficacy

Combination approaches, such as adding chemotherapy in FLAURA2 studies.

3. Resistance Mechanisms and Treatment Strategies of Osimertinib

The patterns of resistance differ between first-line and second-line osimertinib use. In addition to C797S mutation, off-target alterations such as HER2 amplification and cell cycle gene abnormalities suggest the need for alternative approaches, including HER3-directed antibody-drug conjugates (ADCs) and Trophoblast cell surface antigen 2 (TROP2) Inhibitors.

4. Emerging Treatment Options after Osimertinib Failure

Amivantamab combined with chemotherapy, as demonstrated in the MARIPOSA-2 trial, has become a new standard of care. ADC therapies (such as Dato-Dxd, sacituzumab tirumotecan) represent potential future strategies.

For patients who undergo small cell transformation, immunotherapy combined with chemotherapy (IO+C/T) remains the preferred approach.

Conclusions and Future Perspectives

Treatment strategies for common EGFR mutated patients are becoming increasingly personalized and diversified, necessitating molecular-guided therapeutic decisions. Further clinical studies are essential to better address emerging resistance mechanisms and optimize outcomes.

Home-Based Medical Care for COPD Patients: Enhancing Disease Management Beyond Hospital Walls

胸腔內科
張庭嘉醫師

Chronic Obstructive Pulmonary Disease (COPD) is a progressive respiratory condition that significantly limits patients' functional capacity and quality of life. For many patients, frequent hospital visits pose logistical and physical challenges, especially during acute exacerbations. Home-based medical care, where physicians and nurses visit the patient's home to provide clinical evaluation, medication adjustments, blood tests, inhaler technique correction, and oxygen therapy guidance, has emerged as a patient-centered approach to bridge these gaps.

This presentation will highlight the key benefits of home-based care for COPD patients, including reduced hospital admissions, improved medication adherence, better oxygen therapy management, and enhanced patient education. We will also discuss the impact on caregiver confidence, long-term disease control, and the potential for advanced care planning within the home setting. Drawing on clinical experience and current evidence, this talk will advocate for integrating home-based care as a vital component of comprehensive COPD management.

Bridging Acute and Chronic: The Respiratory Therapist's Perspective in COPD Management in Singapore

Chronic Obstructive Pulmonary Disease (COPD) is the leading cause of respiratory morbidity. COPD exacerbation often results in hospital admissions requiring non-invasive ventilation (NIV). NIV is highly recommended for patients with COPD in managing the acute and chronic type 2 respiratory failure. While acute NIV has proven benefits to reduce mortality and intubation rates, some patients with severe exacerbations may still require invasive mechanical ventilation. In such cases, the use of Anaconda (an anesthetic conserving device) may offer additional benefits. This is a relatively new approach within Singapore General Hospital (SGH) and is being explored as a supportive option for severe cases to reduce the incidence of ICU delirium. Patients will then eventually be trialed for extubation to acute NIV.

A structured approach has been practiced within the institution to bridge acute to chronic NIV for these patients. This presentation explores the clinical rationale, patient selection criteria and implementation strategies for these transitions. This session highlights the key challenges faced by respiratory therapists which include timing, monitoring and promoting adherence to chronic NIV. SGH's framework for integrating chronic NIV into discharge planning and follow up care for these patients will be shared. This session hopes to provide multidisciplinary insights to improve patients' outcome, reduce hospital admissions and enhance their quality of life.

Anti-IL5 when and how ?

Using biomarkers and clinical characteristics to target T2 inflammation

Dr. med. Stephanie Korn

摘要

現今嚴重氣喘治療已進入精準標靶時代，透過辨識發炎表型與使用生物製劑，醫師能針對不同患者進行個人化治療。其中，常見的嚴重氣喘表型之一為嗜酸性型（Eosinophilic），此表型常合併嗜酸性肉芽腫性多血管炎（EGPA）與鼻息肉病（NP）等共病。

本次醫院講座「抗 IL-5：何時以及如何？利用生物標記和臨床特徵針對 T2 發炎」，強調早期識別與個人化治療 2 型發炎高風險患者的重要性。2 型發炎疾病特徵為嗜酸性粒細胞與 IL-5 等關鍵細胞因子升高，透過生物標記與臨床特徵的早期識別，可及時介入，改善預後，減輕疾病負擔。

講座將聚焦 Anti-IL-5 生物製劑 NUCALA 在治療此類疾病中的關鍵角色。現實世界證據顯示，NUCALA 可有效降低 EGPA 復發率、改善 NP 症狀控制，並減少類固醇使用。藉由血中嗜酸性粒細胞計數與過去惡化次數等指標，醫師能更有效篩選適合抗 IL-5 治療的患者。

透過臨床案例與真實世界數據，與會者將深入了解抗 IL-5 生物製劑的最佳使用時機與策略，強化個人化治療能力，提升患者長期預後。

Smoke and the Airways

The Role of Smoking and Cessation in Respiratory Disease

胸腔內科 胡凱淇醫師

Abstract

Background: Cigarette smoking is a critical and modifiable risk factor in the pathogenesis and progression of chronic respiratory diseases, particularly chronic obstructive pulmonary disease (COPD) and asthma.

Objective: This review summarizes the mechanistic impact of smoking on airway inflammation and function, with emphasis on current evidence and clinical implications in both COPD and asthma, highlighting the importance of smoking cessation.

Discussion: In COPD, cigarette smoke induces airway inflammation primarily through oxidative stress and activation of neutrophilic pathways. This leads to epithelial damage, protease-antiprotease imbalance, mucus hypersecretion, and airway remodeling. Neutrophilic inflammation contributes to persistent airflow limitation and reduced responsiveness to anti-inflammatory therapies. The *GOLD* guidelines identify smoking cessation as the cornerstone of disease management. Epidemiological evidence, such as the Fletcher-Peto curve, demonstrates that smoking accelerates lung function decline and increases the frequency of acute exacerbations and hospitalizations, ultimately contributing to elevated long-term mortality.

In asthma, the classical immunopathogenesis involves activation of allergen-specific T-helper 2 (Th2) cells and immunoglobulin E (IgE) production. However, smoking induces a shift toward neutrophilic inflammation, which is associated with corticosteroid resistance and a more severe disease phenotype. In smoking asthmatics, the average annual rate of decline in FEV_1 is significantly higher than in non-smokers. Smoking cessation has been shown to slow this decline and partially restore lung function over time.

Conclusion: Smoking adversely affects both COPD and asthma through distinct but overlapping pathogenic mechanisms. The *GOLD* and *GINA* guidelines consistently recommend that all patients with COPD and asthma quit smoking. Regardless of the underlying condition, smoking cessation remains a core intervention that can significantly improve clinical outcomes and reduce mortality in patients with chronic respiratory diseases.

Low-Dose CT for Lung Cancer Screening

Presenter: Fellow Yang Hao-Wen

Date: June, 6, 2025

Lung cancer continues to be one of the leading causes of death in Taiwan. While smoking remains the primary risk factor, recent studies have also highlighted the role of air pollution, particularly among non-smokers. Recognizing the burden of disease, Taiwan launched a nationwide Lung Cancer Early Detection Program in July 2022. The program initially targeted high-risk individuals with a family history of lung cancer or a heavy smoking history. As of January 2025, the eligibility criteria have been expanded to include younger individuals and those with lighter smoking histories, reflecting the need for broader risk stratification.

The effectiveness of low-dose computed tomography (LDCT) in reducing lung cancer mortality has been well-established through several landmark trials. The National Lung Screening Trial (NLST) in 2011 demonstrated a 20% reduction in lung cancer mortality among heavy smokers aged 55 to 74 who underwent three annual LDCT scans. The number needed to screen (NNS) to prevent one death was 320, and nearly half of the detected cancers were at stage I.

The NELSON trial, published in 2020, further supported these findings. Among over 15,000 European participants, LDCT screening led to a 24% reduction in lung cancer mortality, with two-thirds of cancers diagnosed at an early stage. More recently, the SUMMIT trial conducted in the UK and reported in 2025 assessed a real-world implementation of LDCT screening in high-risk individuals. The study found a cancer detection rate of 2.0%, with over 79% diagnosed at stage I or II. Notably, 77% of diagnosed patients underwent surgery, with a low postoperative mortality rate of 0.4%, highlighting the feasibility of curative treatment in this population.

Beyond early detection, LDCT screening also raises concerns about potential harms, such as overdiagnosis, false positives, and radiation exposure. In the SUMMIT trial, 11.6% of resected nodules were ultimately benign, serving as a rough estimate of overdiagnosis. Nevertheless, with structured follow-up protocols and careful risk assessment, these challenges can be mitigated.

Effective pulmonary nodule management is essential to the success of any screening program. Guidelines emphasize individualized follow-up strategies based on nodule characteristics—whether solid, part-solid, or ground-glass opacity. Referral to thoracic specialists is encouraged when malignancy is suspected.

In summary, LDCT screening is a powerful tool for reducing lung cancer mortality, especially when paired with well-defined management pathways. The evidence from large-scale trials consistently shows a shift toward early-stage diagnosis and improved treatment outcomes. Taiwan’s evolving screening criteria reflect the importance of adapting public health strategies to local epidemiologic trends, especially the high burden of lung cancer among non-smokers.

鄭舒帆醫師　Shu-Farn Tey

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- 奇美醫院胸腔內科主治醫師

學歷：

- 高雄醫學大學醫學系畢業

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- 奇美醫院胸腔內科總醫師
- 奇美醫院胸腔內科資深研究員

專長：

1. 胸腔內科
2. 胸腔腫瘤

專科醫師資格：

1. 內科專科醫師
2. 胸腔暨重症專科醫師
3. 台灣胸腔暨重症加護醫學會專科指導醫師
4. 台灣肺癌學會肺癌專科醫師

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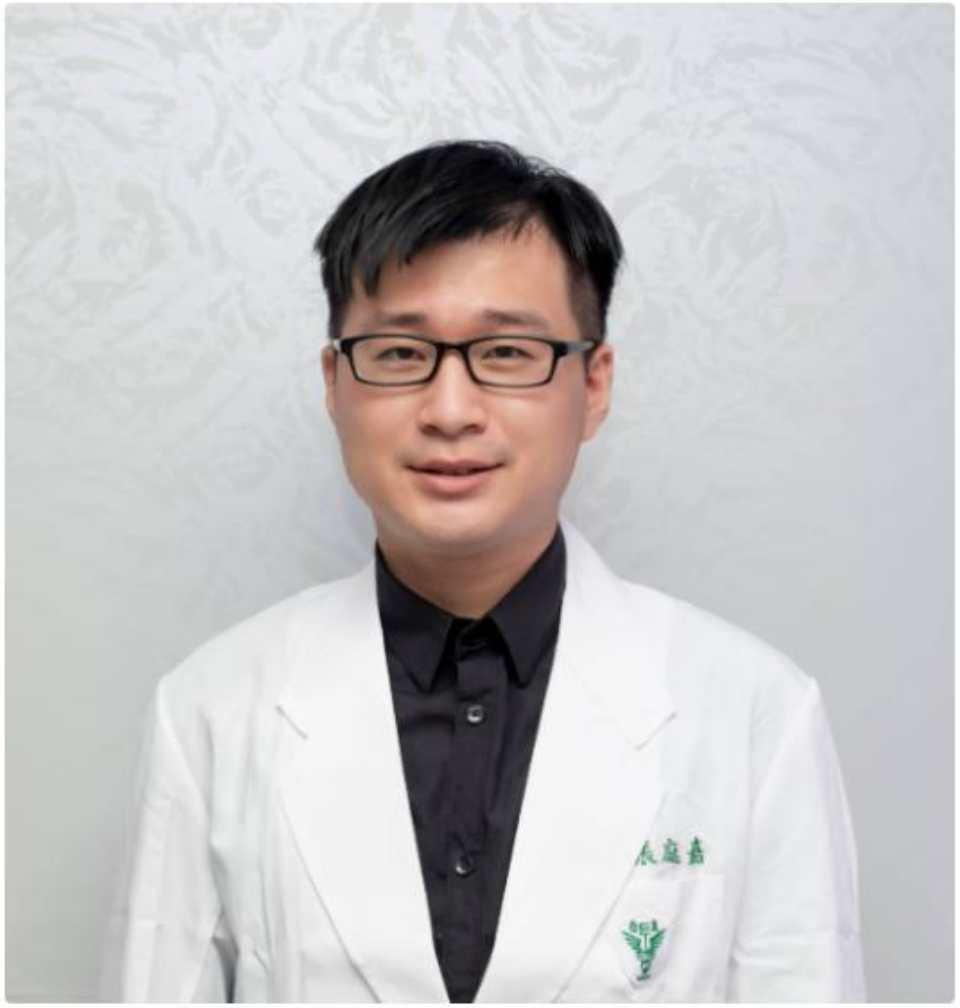

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- 奇美醫院加護醫學部研究員

專長：

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PROFESSIONAL EXPERIENCES

Respiratory Therapist, RRT-ACCS November 2020 - Present
Full Time Position, Singapore General Hospital

Adult Critical Care Experience

- Provide comprehensive respiratory care therapy to patients in the Medical and Isolation Care Units during Covid-19 pandemic
- Tasks in the Intensive Care Unit consist of Arterial Blood Gas sampling, interpretation of ABG results, discussion of respiratory care plans with the ICU team, assisting in intubation of critically ill patients, initiating mechanical ventilation and applying appropriate titration of ventilator settings, management of ventilation of patients on ECMO, performing weaning trials prior to extubation, extubation to various oxygen delivery systems including nasal cannula, High Flow Oxygen Therapy (HFOT) and Non-Invasive Ventilation (NIV), transporting patients in the ICU, assisting in bronchoscopy procedures such as bronchoscopy inspection.
- Tasks in the Intensive Care Area consist of managing patients on NIV, HFOT and chronic NIV
- Initiation and management of patients on oxygen therapy such as HFOT and NIV

Chronic Care Experience

- Management of patients on chronic NIV, transition to long term home ventilators, coverage of Chronic NIV clinics with the Sleep Disorder Physicians
- Management of patients on long-term tracheostomy, weekly rounding with the multidisciplinary Tracheostomy team to discuss about the long-term weaning plans for patients, assisting in the change of tracheostomy tubes, speaking valve trials and leak speech, spigotting trials as well as decannulation of tracheostomy.
- Arranging for home respiratory equipments with the suppliers and providing caregiver training for patients with long-term ventilation prior to discharge

Additional Tasks

- Preparation and Assisting in bronchoscopy procedures such as Bronchoavelolar lavage, Biopsy, Percutaneous Tracheostomy
- Calibration and maintenance of ventilators and ABG machine
- Providing Critical Care beyond the ICU and ICA, assisting in ventilator management in other ICU referrals, participating in code blue and rapid response team activations
- Providing Hands-on simulation for Medical Officers on the Mechanical Ventilation management on different ventilators and transport ventilators
- Participating in-hospital trainings such as Code Blue Simulation and ECMO Training
- Assisting in the creation of RT Handbook
- Participating in Quality Improvement Projects to reduce caregiver training time for chronic NIV via video educational aid

Singhealth Respiratory Therapy EPIC Lead April 2024 - Present

Secretary, Association of Respiratory Therapists Singapore (ARTS) April 2023 - April 2025

EDUCATION

University of Missouri- Columbia, United States August 2016 –May 2020

- Bachelor in Respiratory Therapy
  Award: Summa Cum Laude
  Program Cumulative GPA: 3.981

Clinical Rotation Experiences

- Adult Critical Care in University Hospital (Columbia, Missouri) and Singapore General Hospital
- Neonatal and Pediatric Care rotation in Women's and Children's Hospital (Columbia, Missouri) and Children Mercy Hospital Kansas

- Intubation rotation in Mercy Hospital Jefferson (Festus, Missouri)

Korea University August 2017- December 2017

- Study Abroad Program in Fall Semester 2017
- Courses include Health Inequality Studies, Brain Imaging, Introduction to Epidemiology under the Department of Health Policy and Management

CERTIFICATIONS

National Board of Respiratory Care
Adult Critical Care Specialist March 2025 - Present
- Registered Respiratory Therapist September 2020- October 2025

Advanced Cardiac Life Support April 2023 - Present

Basic Cardiac Life Support January 2023 - Present

SCHOLARSHIPS

Ministry of Health Holdings, Healthcare Merit Award (Overseas) August 2016 – May 2020

LANGUAGE ABILITIES

- **Languages:** Strong fluency and written skills in English and Chinese (Mandarin).
- **Technical Skills:** Good working knowledge of Microsoft Office (Excel and Powerpoint), Adobe Photoshop

REFERENCES

Available upon request.

Prof. Dr. med. Stephanie Korn

Physisican, management economist

Medical studies
Johannes-Gutenberg-University Mainz, graduated in 2006

Clinical experience

2006-2020	University Hospital Mainz in Mainz/Germany, Pulmonary Dept. (Head: Prof. Roland Buhl), III. Medical Department
since 2020	Clinical Research Centre Respiratory Medicine in Mainz, Germany

Qualifications

2009	Management economist
2013	Habilitation

Clinical trials

since 2003	Study coordinator in several clinical trials (phase II-IV)
since 2006	Investigator (principle and coordinating investigator) in several (>50) clinical trials (phase I-IV): asthma, COPD, IPF, bronchiectasis

Doctoral thesis
„Nasal and bronchial allergen provocation testing in patients with mild asthma and allergic rhinitis – similarities und differences" („magna cum laude")

Habilitation
„Cellular and clinical phenotyping of severe ashtma for diagnosis and targeted therapy"

Memberships
- German Pulmonary Society
- German Society for Allergy and Clinical Immunology
- German Asthma Net e.V.
- National Lead for Germany as part of the ERS SHARP Initiative (The Severe Heterogeneous Asthma Research collaboration, Patient-centred (European Respiratory Society))

Awards

09/2004	ERS (European Respiratory Society) Young Scientist Sponsorship Award 2004
03/2005	Award oft he German Lung Foundation for the best clinical doctoral thesis in pulmonary medicine
07/2005	Procter & Gamble stipend to participate at the Annual Conference of the European Respiratory Society
10/2013	Research Award 2013 of the South German Pulmonary Society in Heilbronn
11/2013	Dagmar Eißner Award 2013

Scientific focus
Pathogenesis, diagnosis and therapy of severe asthma, allergy and asthma, COPD, asthma and COPD overlap, non-invasive monitoring of airway inflammation, design of clinical studies

Publications
Dr. Korn is an author and co-author of numerous publications and has given lots of lectures and presentations at national and international congresses of pulnonary and allergy societies. She advises international pharmaceutical companies and consulting companies.

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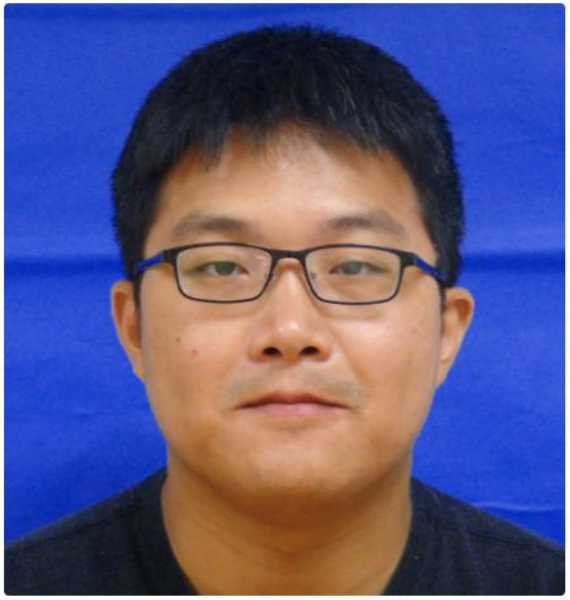

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