2023 台灣胸腔暨重症加護醫學會夏季會

2023 Summer Workshop of Taiwan Society of Pulmonary and Critical Care Medicine

Jun.17 sat~18 sun

中山醫學大學誠愛樓9F

RYBREVANT®
(amivantamab)

EGFR EXON20 Insertion mutations

RYBREVANT® is the only bispecific antibody indicated for the treatment of EGFRm advanced NSCLC driven by ex20ins mutations

作用於EGFR Ex20ins晚期非小細胞肺癌的治療藥物

RYBREVANT®（肺倍恩）已取得衛福部核准，單一療法適用於罹患帶有表皮生長因子受體（EGFR）exon 20 插入突變之局部晚期或轉移性非小細胞肺癌（NSCLC）的成人病人，作為含鉑類化學療法治療失敗後之治療。

肺倍恩®注射劑 50 毫克 /毫升 Rybrevant Concentrate for Solution for Infusion 50 mg/ml 衛部菌疫字第 001177 號　　北市衛藥廣字第 112040235 號

[適應症]
單一療法適用於罹患帶有表皮生長因子受體 (EGFR) exon 20 插入突變之局部晚期或轉移性非小細胞肺癌 (NSCLC) 的成人病人，作為含鉑類化學療法治療失敗後之治療。
此適應症為依據替代指標 (整體反應率和反應持續期間) 採加速核准的方式，後續需執行確認性試驗以證明確實達到臨床上的效益。

[禁忌]
無。

[用法用量]
- **選擇病人：**應依據是否出現 EGFR exon 20 插入突變來選擇適合使用 RYBREVANT 治療的病人。
- **建議劑量：**以基礎期體重為依據的 RYBREVANT 建議劑量如表 1 所示以及給藥時程如表 2 所示。

表 1：以基礎期體重為依據的 RYBREVANT 建議劑量

基礎期體重*	建議劑量	RYBREVANT 350 毫克/7 毫升小瓶的支數
低於 80 公斤	1050 毫克	3
高於或等於 80 公斤	1400 毫克	4

* 不需因後續的體重變化而調整劑量。

表 2：RYBREVANT 給藥時程

週	時程
第 1 週至第 4 週	每週給藥一次 (總共 4 劑)
	第 1 週 – 第 1 天及第 2 天分劑輸注
	第 2 週至第 4 週 – 第 1 天輸注
第 5 週之後	第 5 週開始每 2 週給藥一次

建議於每次輸注 RYBREVANT 之前先投予前置用藥 [參見用法及用量 (3.1.3)]。應依據表 6 的輸注速率靜脈投予稀釋後的 RYBREVANT，並將第 1 週的初始劑量以分劑輸注的方式分別於第 1 天和第 2 天給藥 [參見用法及用量 (3.2.1)、(3.2.2)]。給藥 RYBREVANT 直到疾病惡化或出現無法接受的毒性反應為止。

[警語/注意事項]
- **輸注相關反應：**RYBREVANT 可能會引發輸注相關反應 (IRR)。
- **間質性肺病/肺炎 (Pneumonitis)：**RYBREVANT 可能會引發間質性肺病 (ILD)/肺炎。
- **皮膚不良反應：**RYBREVANT 可能會引發皮疹 (包括痤瘡樣皮膚炎)、搔癢和皮膚乾燥。
- **眼睛毒性：**RYBREVANT 可能會引發眼睛毒性反應，包括角膜炎、乾眼症狀、結膜發紅、視力模糊、視覺損害、眼睛搔癢、以及葡萄膜炎。
- **胚胎-胎兒毒性：**根據其作用機制和動物模型試驗的發現，對孕婦投予 RYBREVANT 可能會導致胎兒傷害。

[副作用]
臨床試驗的經驗
最常見的不良反應 (≥20%) 為皮疹、IRR、甲溝炎、肌肉骨骼疼痛、呼吸困難、噁心、疲倦、水腫、口炎、咳嗽、便秘、以及嘔吐。

[使用前請詳閱仿單警語及注意事項]
Reference: USPI Dec 2021_v2201

嬌生股份有限公司
楊森藥廠
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電話： 0800-211-688

Janssen PHARMACEUTICAL COMPANIES OF Johnson & Johnson

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APRC 2024 Taipei, Taiwan

2024年第九屆國際抗癆暨肺疾聯盟亞太區大會 暨 2024台灣胸腔暨重症加護醫學會夏季會

The 9th Asia Pacific Region Conference of the International Union Against Tuberculosis and Lung Disease And 2024 Summer Workshop of Taiwan Society of Pulmonary and Critical Care Medicine

April 26 - 29 2024 | Taipei International Convention Center

2024第九屆國際抗癆暨肺疾聯盟亞太區大會(APRC 2024) 暨 2024台灣胸腔暨重症加護醫學會夏季會

聯合徵稿中!

主辦單位 / Organizers

Taiwan Anti-Tuberculosis Association
中華民國防癆協會

Taiwan Society of Pulmonary and Critical Care Medicine
台灣胸腔暨重症加護醫學會

Taiwan Society of Tuberculosis and Lung Diseases
台灣結核暨肺部疾病醫學會

大會官網
https://aprc2024.org

摘要投稿
https://www.aprc2024.org/abstract-submission

重要日期 / Important Dates

論文提交截止日期 Abstract submission deadline ▶ **August 31, 2023**

投稿主題 / Submission Topics

01. Tuberculosis (TB)
- 1-1 Pediatric TB
- 1-2 Laboratory Diagnosis
- 1-3 Drug-Susceptible TB
- 1-4 Drug-Resistant TB
- 1-5 TB & Comorbidities
- 1-6 Management of LTBI
- 1-7 Others

02. COVID-19
- 2-1 COVID-19 Vaccine
- 2-2 Novel / Oral Drug Treatment of COVID-19
- 2-3 COVID-19 Pneumonia
- 2-4 Others

03. Respiratory Tract Infection
- 3-1 Viral Infection other than COVID-19
- 3-2 Bacterial Pneumonia
- 3-3 Nontuberculous Mycobacteria
- 3-4 Fungal Infection
- 3-5 Others

04. Critical Care Medicine
05. Respiratory Therapy
06. Thoracic Oncology
07. Intervention Bronchoscopy
08. Pulmonary Hypertension
09. Interstitial Lung Diseases
10. Sleep Medicine
11. COPD
12. Asthma
13. Environmental Lung Disease
14. Others

The Union
International Union Against Tuberculosis and Lung Disease

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10:30	報　到		
12:00 | 13:10		**Herpes zoster and pertussis vaccine introduction** Speaker: **黃玉成** 醫師　Moderator: **郭炳宏** 醫師 **Why herpes zoster and pertussis matters for pulmonologists?** Speaker: **郭炳宏** 醫師　Moderator: **黃玉成** 醫師 荷商葛蘭素史克藥廠股份有限公司台灣分公司	**The Dawn for Asthma Awareness in Taiwan** Speaker: **傅彬貴** 醫師　Moderator: **鍾飲文** 醫師 **Rethinking treatment goal in COPD: when is the best time to treat our patients?** Speaker: **林聖皓** 醫師　Moderator: **林慶雄** 醫師 **Severe asthma remission with biologics: What does the data tell us?** Speaker: **陳彥甫** 醫師　Moderator: **彭殿王** 醫師 臺灣阿斯特捷利康股份有限公司
13:20 | 14:00	**Effect of anti-fibrotic therapy in ILD: from bench to bedside** Speaker: **陽光耀** 醫師 Moderator: **王鶴健** 醫師、**林慶雄** 醫師		**Diagnosis of TB: where we are and where we are going** Speaker: **潘聖衛** 醫師 Moderator: **余忠仁** 醫師、**曹昌堯** 醫師、**黃明賢** 醫師
14:00 | 14:40	**The role of lung transplantation in end-stage idiopathic pulmonary fibrosis** Speaker: **胡漢忠** 醫師 Moderator: **徐武輝** 醫師、**高國晉** 醫師		**Clinical application of electronic nose in NTM lung disease** Speaker: **李孟叡** 醫師 Moderator: **余忠仁** 醫師、**曹昌堯** 醫師、**黃明賢** 醫師
14:40 15:00	Break		
15:00 | 15:40	15:00-15:20 **Personalized Treatment of Asthma: The Importance of Sex and Gender Differences** Speaker: **廖信閔** 醫師 Moderator: **鍾飲文** 醫師、**彭殿王** 醫師 15:20-15:40 **From COPD to Lung Cancer: Mechanisms Linking, Diagnosis, Treatment, and Prognosis** Speaker: **洪明輝** 醫師 Moderator: **鍾飲文** 醫師、**彭殿王** 醫師 15:40-16:00 **COPD: from an end-stage disease to lifelong lung health** Speaker: **黃俊凱** 醫師 Moderator: **鍾飲文** 醫師、**彭殿王** 醫師 16:00-16:20 **Discussion**	15:00-15:25 **如何順利通過國科會計畫 - 審查者的觀點** Speaker: **李岡遠** 醫師　Moderator: **林孟志** 醫師 15:25-15:50 **How to successfully get funding support from National Science and Technology Council? – perspectives and experience sharing from an applicant** Speaker: **鐘桂彬** 醫師　Moderator: **林孟志** 醫師 15:50-16:20 **Discussion**	
15:40 | 16:20			**Smart Air Pollution Clinic** Speaker: **吳大緯** 醫師　Moderator: **王金洲** 醫師
16:20 16:40	Break		
16:40 | 17:50	**Right treatment for the right patient: From dual to triple therapy, WHO & When** Speaker: **曾敬閔** 醫師　Moderator: **林鴻銓** 醫師 荷商葛蘭素史克藥廠股份有限公司台灣分公司	**Navigating First-Line Treatment Decisions for EGFRM+ NSCLC: Extrapolating from Asian Clinical Experience** Speaker: **林旻希** 醫師　Moderator: **賴俊良** 醫師 **Major Advances from 2022-2023: Focus on Target Therapy in NSCLC** Speaker: **蔡俊明** 醫師　Moderator: **張基晟** 醫師 台灣百靈佳殷格翰 (股) 公司	**New GOLD 2023 Recommendations: Are all LAMA/LABAs the same?** Speaker: **黃偉彰** 醫師　Moderator: **詹明澄** 醫師 **Current and future management of IPF and PPF** Speaker: **柯信國** 醫師　Moderator: **林慶雄** 醫師 台灣百靈佳殷格翰 (股) 公司
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06 / 18 (Sun) 請點選議程各欄前往連結頁面 AGENDA

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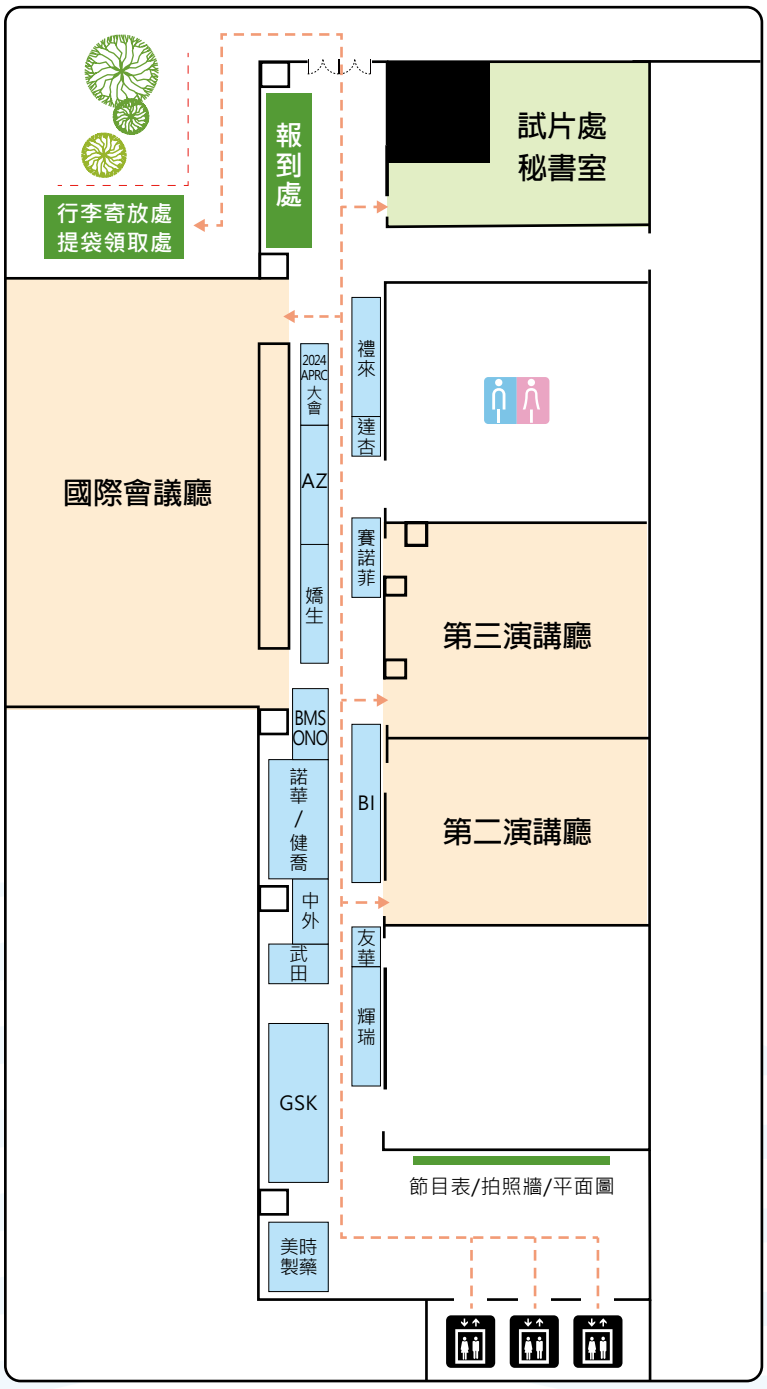
08:00 | 09:10	**Shifting the Treatment Landscape in Lung Cancer with Antibody-Drug Conjugates** Speaker: **柯皓文** 醫師　Moderator: **李岡遠** 醫師 臺灣阿斯特捷利康股份有限公司 台灣第一三共股份有限公司	**A New Standard of Care for *EGFR* Exon 20 Insertion mutations in NSCLC** Speaker: **廖唯昱** 醫師　Moderator: **施金元** 醫師 **Learning from Clinical Experience for ALK+ NSCLC** Speaker: **林彥廷** 醫師　Moderator: **施金元** 醫師 台灣武田藥品工業股份有限公司	
09:20 | 10:00	**Update on Therapeutic Options for MDR-GNB Infections** Speaker: **馮嘉毅** 醫師 Moderator: **吳杰亮** 醫師、**陽光耀** 醫師、**涂智彥** 醫師		**Salvage Surgery for Advanced Lung Adenocarcinoma after EGFR Tyrosine Kinase Inhibitor Treatment** Speaker: **林孟暐** 醫師 Moderator: **施金元** 醫師、**何肇基** 醫師、**李岡遠** 醫師
10:00 | 10:40	**Update on Therapeutic Options for MDR-GPC Infections** Speaker: **張維安** 醫師 Moderator: **吳杰亮** 醫師、**陽光耀** 醫師、**涂智彥** 醫師		**Incidence Trends, Spatial Distribution and Survival Prediction of Lung Adenocarcinoma and Squamous Cell Carcinoma in Taiwan** Speaker: **江濬如** 助理教授 Moderator: **賴俊良** 醫師、**陳育民** 醫師
10:40 10:55	Break		
10:55 | 11:35	**Smart and Precise Detection of Antimirobial Resistance** Speaker: **陳韋成** 醫師 Moderator: **林恒毅** 醫師、**黃崇旂** 醫師、**夏德椿** 醫師		10:55-11:15 **Sleep in critical illness** Speaker: **倪永倫** 醫師 Moderator: **杭良文** 醫師、**周昆達** 醫師 11:15-11:35 **Sleep and Circadian Disruption in ICU/RCC. Can we improve it?** Speaker: **陳昭賢** 醫師 Moderator: **杭良文** 醫師、**周昆達** 醫師
11:35 | 12:15	**Applying Design Thinking in Medicine** Speaker: **廖健宏** 醫師 Moderator: **林恒毅** 醫師、**黃崇旂** 醫師、**夏德椿** 醫師		11:35-11:55 **Association between pulmonary fibrosis and obstructive sleep apnea** Speaker: **鄭至宏** 醫師 Moderator: **陳濘宏** 醫師、**莊立邦** 醫師 11:55-12:15 **Polysomnography and home sleep apnea test on diagnosis and longitudinal follow of obstructive sleep apnea: AASM GRADE approach guideline** Speaker: **陳永瑄** 醫師 Moderator: **陳濘宏** 醫師、**莊立邦** 醫師
12:15 12:30	Break		
12:30 | 13:40		**Treatable traits in asthma management** Speaker: **陳家弘** 醫師　Moderator: **彭殿王** 醫師 **Therapeutic strategy and real-world evidence of mepolizumab on severe asthma patients** Speaker: **陳家弘** 醫師　Moderator: **彭殿王** 醫師 荷商葛蘭素史克藥廠股份有限公司台灣分公司	**The Impact of Extra-fine Particles on Uncontrolled Asthma: From The Perspective of SAD** Speaker: **傅彬貴** 醫師　Moderator: **鍾飲文** 醫師 **Artificial Intelligence and Machine Learning in Chronic Airway Diseases: Focus on Asthma and Chronic Obstructive Pulmonary Disease** Speaker: **黃建文** 醫師　Moderator: **徐武輝** 醫師 友華生技醫藥股份有限公司
13:40	大會結束		

會場平面圖

中山醫學大學誠愛樓 9F



大會接駁車

06/17 (六) 10:00-17:40
06/18 (日) 07:40-14:00

高鐵台中站 發車時間					
7:40	8:00	8:20	8:40	9:00	9:20
9:40	10:00	10:20	10:40	11:00	11:20
11:40	12:00	12:20	12:40	13:00	13:20
13:40	14:00	14:20	14:40	15:00	15:20
15:40	16:00	16:20			

中山醫大誠愛樓 發車時間					
8:20	8:40	9:00	9:20	9:40	10:00
10:20	10:40	11:00	11:20	11:40	12:00
12:20	12:40	13:00	13:20	13:40	14:00
14:20	14:40	15:00	15:20	15:40	16:00
16:20	16:40	17:00	17:20	17:40	

06 / 17 (六) 晚宴接駁車
17:50-18:20 中山醫大到女兒紅 (滿車出發)
20:00-20:30 女兒紅到高鐵台中站

□ 僅週日行駛，□ 僅週六行駛，其他兩天皆行駛

演講摘要

國際會議廳

06 / 17

13:20-14:00 從實驗室到臨床研究數據探討抗纖維化藥物在間質性肺疾病的作用 / Effect of anti-fibrotic therapy in ILD: from bench to bedside / **陽光耀 醫師** / **P.8**

14:00-14:40 IPF的最終治療策略 - 肺移植 / The role of lung transplantation in end-stage idiopathic pulmonary fibrosis / **胡漢忠 醫師** / **P.9**

15:00-15:20 Personalized Treatment of Asthma: The Importance of Sex and Gender Differences / **廖信閔 醫師** / **P.10**

15:20-15:40 在胸腔科的二大疾病COPD及肺癌中，重新檢視其共同的致病機轉，及早發現以及治療考量 / From COPD to Lung Cancer: Mechanisms Linking, Diagnosis, Treatment, and Prognosis / **洪明輝 醫師** / **P.11**

15:40-16:00 COPD - 從末期疾病到終生肺部健康 / COPD: from an end-stage disease to lifelong lung health / **黃俊凱 醫師** / **P.12**

16:40-17:50 Right treatment for the right patient: From dual to triple therapy, WHO & When / **曾敬閔 醫師** / **P.13** (Satellite Symposium_荷商葛蘭素史克藥廠股份有限公司台灣分公司)

06 / 18

08:00-09:10 Shifting the Treatment Landscape in Lung Cancer with Antibody-Drug Conjugates / **柯皓文 醫師** / **P.14** (Satellite Symposium_臺灣阿斯特捷利康股份有限公司 & 台灣第一三共股份有限公司)

09:20-10:00 多重抗藥性革蘭氏陰性菌感染的治療新進展 / Update on Therapeutic Options for MDR-GNB Infections / **馮嘉毅 醫師** / **P.15**

10:00-10:40 多重抗藥性革蘭氏陽性菌之治療進展 / Update on Therapeutic Options for MDR-GPC Infections / **張維安 醫師** / **P.16**

10:55-11:35 Smart and Precise Detection of Antimirobial Resistance / **陳韋成 醫師** / **P.17**

11:35-12:15 Applying Design Thinking in Medicine / **廖健宏 醫師** / **P.18**

06 / 17

從實驗室到臨床研究數據探討抗纖維化藥物在間質性肺疾病的作用
Effect of anti-fibrotic therapy in ILD: from bench to bedside

陽光耀 醫師 / Dr. Kuang-Yao Yang
台北榮總胸腔重症加護室 主任
國立陽明交通大學急重症醫學研究所 教授

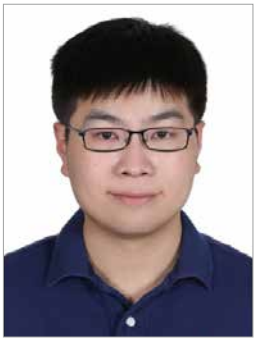
Idiopathic pulmonary fibrosis (IPF) is a chronic, progressive, and devastating interstitial lung disease (ILD). Although its etiology is not completely understood, multiple risk factors, including infection, inflammation, and environmental exposure, are closely associated with IPF, because they result in progressive fibrosing ILD. Bleomycin(BLM)-induced pulmonary fibrosis has been used for years as a model of fibrotic lung diseases in animal studies. It involves acute inflammation in the alveolar epithelium followed by fibrosis, which is also observed in IPF and ARDS. Fibroblasts and myofibroblasts play an important role in IPF development, including the release of proinflammatory cytokines and the production of the extracellular matrix. Emerging evidence indicates that endothelial cells could be the source of fibroblasts through endothelial mesenchymal transition (EndoMT). Nintedanib treatment inhibited BLM-induced FAK activation and thus suppressed both in vivo and in vitro BLM-induced EndoMT. Neutrophils are involved in the alveolitis of IPF. Nintedanib reduces neutrophil chemotaxis and endothelial cell activation to regulate the severity of BLM-induced pulmonary fibrosis. Therefore, developing an effective anti-fibrotic therapy to alleviate lung inflammation during the early stage of fibrosis and progressive fibroblast activation is an important issue. The anti-fibrotic drugs, such as nintedanib, are indicated for the treatment of IPF and PPF, and new anti-fibrotic therapies are being evaluated in clinical trials for IPF and fibrosing ILD.

IPF的最終治療策略 - 肺移植
The role of lung transplantation in end-stage idiopathic pulmonary fibrosis

胡漢忠 醫師 / Dr. Han-Chung Hu
林口長庚醫院胸腔科系肺感染暨免疫科主任
林口長庚醫院呼吸治療科主任

Idiopathic pulmonary fibrosis (IPF) is an unknown cause, progressive disease with poor prognosis. Despite the advances in the diagnosis and antifibrotic therapy in recent years, pulmonary function decline is still inevitable. In some end-stage patients, lung transplantation (LTx) is a treatment option. LTx has been proven benefit on quality of life and survival for patients with end-stage status. The first success of lung transplantation in human, a case of IPF, was performed in 1983 and this patient survived more than 7 years. IPF now is the main cause of lung transplantation, but the high mortality on the waiting list represents the timing of patients referred to the transplant unit should be re-consideration. In the section, we will review the current status of lung transplantation worldwide, the indication of referring and including on the waiting list of IPF and comprehensive care for these patients.

Personalized Treatment of Asthma: The Importance of Sex and Gender Differences



廖信閔 醫師 / Dr. Xin-Ming Liao
國立成功大學醫學院附設醫院內科部主治醫師

An individual's sex (nominally male or female, based on biological attributes) and gender (a complex term referring to socially constructed roles, behaviors, and expressions of identity) influence the clinical course of asthma in several ways. The physiologic development of the lungs and effects of sex hormones may explain why more boys than girls have asthma, and after puberty, more women than men have asthma. Female sex hormones have an impact throughout the life span and are associated with poor asthma control. Gender may influence exposure to asthma triggers, and sex and gender can influence the prevalence of comorbidities and interactions with health care professionals. Despite widely reported sex- and gender-based differences in asthma and asthma management, these issues frequently are not considered by health care professionals. There is also inconsistency regarding the use of "sex" and "gender" in scientific discourse; research is needed to define sex- and gender- based differences better and how they might interact to influence asthma outcomes. This topic focus on the impact an individual's sex and gender can have on the pathogenesis, clinical course, diagnosis, treatment, and management of asthma.

在胸腔科的二大疾病COPD及肺癌中，重新檢視其共同的致病機轉，及早發現以及治療考量

From COPD to Lung Cancer: Mechanisms Linking, Diagnosis, Treatment, and Prognosis

洪明輝 醫師 / Dr. Ming-Hui Hung
羅東博愛醫院胸腔科主治醫師

Aging and smoking are risk factors for both COPD and lung cancer. However, non-smoking COPD get the attention of the pneumologist in recent years cause it might outweigh populations of smoking COPD. In addition, it also increases risk of lung cancer. The underlying causes might be a combined influences of oxidative stress, telomere shortening, genetic and epigenetic factors.

Regular follow up images of COPD patient plays an important role in early detection of lung cancer, especially low dose CT. However, treatments for patients with both COPD and lung cancer are very mild-twisting. Surgeons might hesitate about lobectomy. Radio oncologist worry about radiation-induced lung injury. Poor prognosis is the bitter pill for the oncologist to swallow. Further research to elucidate the relationship of these two diseases might create new insight for COPD treatment and lung cancer prevention.

COPD - 從末期疾病到終生肺部健康
COPD: from an end-stage disease to lifelong lung health

黃俊凱 醫師 / Dr. Chun-Kai Huang
臺大醫院內科部胸腔科主治醫師

Chronic obstructive pulmonary disease (COPD) has long been seen as a self-inflicted progressive disorder of smokers with few treatment options beyond symptom control. The global burden of COPD is predicted to continue to increase in the future. Tobacco exposure is an important risk factor for COPD, causing most efforts devoted to the study of the pathogenetic mechanisms of only one major cause of COPD (cigarette smoking). However, this concept failed to expand the horizon about the heterogeneity of COPD clinical presentation.

The GOLD 2023 report expanded the classification of COPD to include non-smoking related COPD types, emphasizing the importance for these different types of COPD or etiotypes. The classification of COPD types according to the risk factors, such as genetics, early-life events, pulmonary infections, tobacco smoke exposure or air pollution might lead future specific studies designed for the potential of early intervention and prevention. Monitoring patients after the risk factor exposure could lead to new disease-modifying treatments, as well as form the basis of screening policies and risk prediction.

In this session, we will discuss the evolution of COPD treatment and the potential risk factors. By highlighting the risk factors across the life course and recommending far-reaching measures for prevention, early diagnosis, and changes in treatment, we could make COPD from an end-stage disease to lifelong lung health.

Satellite Symposium_ 荷商葛蘭素史克藥廠股份有限公司台灣分公司

Right treatment for the right patient: From dual to triple therapy, WHO & When

曾敬閔 醫師 / Dr. Ching-Min Tseng
振興醫院 胸腔內科主治醫師
國立陽明交通大學醫學系 內科系教師

隨著老年化社會的到來及生活環境的變化，慢性阻塞性肺病是近年持續增加的慢性疾病，隨著藥物不斷的演進，現行慢性阻塞性肺病治療有許多不同的藥物選項以及不同類型的吸入裝置可供選擇，要如何在臨床照護更加積極地介入，並精準地透過最合適的藥物進行治療，讓病患可以在控制症狀的同時也降低未來發生急性惡化或是死亡率的風險，一直是都相當熱門的話題。

2023 年COPD的治療指引已經進行更新，相較過往的建議，本次的更新有不小幅度的修改，本演講將會透過最新版本的GOLD guideline ，回顧過往發表的經典文獻並結合最新的治療建議，透過講者自身的使用Ellipta portfolio的臨床經驗，與聽眾進行交流，期待可以帶給病患更好的照護品質。

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Satellite Symposium_臺灣阿斯特捷利康股份有限公司 & 台灣第一三共股份有限公司

Shifting the Treatment Landscape in Lung Cancer with Antibody-Drug Conjugates

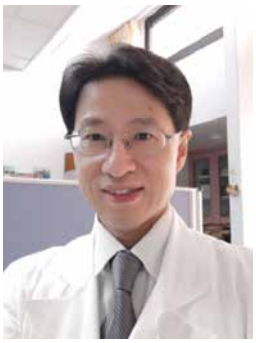
柯皓文 醫師 / Dr. How-Wen Ko
林口長庚紀念醫院 肺腫瘤及內視鏡科主治醫師

Antibody-drug conjugates (ADCs) are one of fastest growing classes of oncology drugs in modern drug development. With the powers of both cytotoxic chemotherapy and targeted therapy, ADCs are unique in offering the potential to deliver highly potent cytotoxic agents to cancer cells which express a pre-defined cell surface target. In recent years, the treatment paradigm has shifted dramatically in lung cancer, and now ADCs are now potential options for lung cancer patients.

Since the first ADC for NSCLC patients was FDA-approved (trastuzumab deruxtecan) in 2020 a number of ADCs have been granted FDA Breakthrough Therapy Designation, currently under evaluation, including patritumab deruxtecan and telisotuzumab vedotin. Furthermore, several early-phase trials are assessing various novel ADCs, either as monotherapy or in combinations with advanced lung cancer, and more selective and potent ADCs are expected to become therapeutic options in clinic soon.

In this presentation, the structure, mechanism of action, and preclinical studies of ADCs will be discussed, and the ADCs' recent clinical trial progress, including efficacy and toxicity, in lung cancer will be summarized.

多重抗藥性革蘭氏陰性菌感染的治療新進展
Update on Therapeutic Options for MDR-GNB Infections



馮嘉毅 醫師 / Dr. Jia-Yih Feng
台北榮民總醫院胸腔部呼吸感染免疫科科主任
國立陽明交通大學醫學院兼任副教授

Multi-drug resistant (MDR) Gram-negative bacteria are a significant global public health threat. These bacteria have developed resistance to multiple classes of antibiotics, making treatment difficult and sometimes impossible. Some of the most common MDR Gram-negative bacteria include *Pseudomonas aeruginosa, Klebsiella pneumoniae*, and *Acinetobacter baumannii*.

Treatment of MDR Gram-negative bacteria typically involves a combination of antibiotics, as well as the use of alternative therapies such as colistin, polymyxin B, and tigecycline. However, the efficacy of these treatments can be limited, and the use of some antibiotics can lead to adverse effects, such as kidney damage.

In recent years, new therapies have been developed to combat MDR Gram-negative bacteria. These include beta-lactamase inhibitors, which are used in combination with antibiotics to prevent the bacteria from breaking down the antibiotics; novel antibiotics, such as ceftazidime-avibactam and ceftolozane-tazobactam. Although without evidence from RCTs, these agents are currently the first-line therapy against pneumonia caused by CRE and DTR-*Pseudomonas*.

Prevention of MDR Gram-negative bacteria is also important. This can be achieved through the appropriate use of antibiotics, proper infection control measures, and the development of new vaccines. The management of MDR Gram-negative bacteria requires a multi-disciplinary approach involving infectious disease specialists, microbiologists, and infection prevention and control experts.

多重抗藥性革蘭氏陽性菌之治療進展
Update on Therapeutic Options for MDR-GPC Infections

張維安 醫師 / Dr. Wei-An Chang
高雄醫學大學附設中和紀念醫院胸腔內科主治醫師

The most common multi-Drug Resistant Gram-Positive Cocci (MDR-GPC) are Methicillin-Resistant Staphylococcus aureus (MRSA), Vancomycin-Resistant Enterococci (VRE), and Penicillin-Resistant Streptococcus pneumoniae (PRSP). These infections caused by MDR-GPC are a huge burden on healthcare systems worldwide.

The following methods could by applied for MDR-GPC infection.

New antibiotics: Recently, some new antibiotics have been approved by the FDA that can help treat MDR-GPC infections. These drugs, like dalbavancin, oritavancin, and ceftaroline fosamil, target different parts of the GPC.

Antibiotic combinations: Combining different antibiotics can also be effective against MDR-GPC infections. Combination with different antibiotics could be able to overcome resistance and improve treatment.

Alternative therapies: Besides antibiotics, there are other treatments being studied, like phage therapy, monoclonal antibodies, and antimicrobial peptides. These treatments can target specific parts of the bacteria or immune system and may work against antibiotic-resistant strains.

Prevention: Preventing MDR-GPC infections is very important. Ways to do this include getting vaccinated, care bundle of infection control, and making sure antibiotics are used correctly.

MDR-GPC infections are an increasing problem. It is one of the main challenges in treating infectious diseases. We need to develop more effective management for MDR-GPC infections.

Smart and Precise Detection of Antimirobial Resistance

陳韋成 醫師 / Dr. Wei-Cheng Chen
中國醫藥大學附設醫院胸腔暨重症系 主治醫師
中國醫藥大學附設醫院呼吸加護病房 主任
中國醫藥大學附設醫院院長室 主任秘書

Sepsis is a severe and rapidly progressing disease that requires timely and appropriate treatment. One of the most crucial measures to combat infection is to identify the source of the infection and use appropriate antibiotics as soon as possible. However, traditional antimicrobial susceptibility testing takes several days, which cannot keep up with the rapid progression of the disease. In recent years, emerging technologies such as PCR testing and NGS gene detection have provided faster and more accurate methods for identifying bacteria and detecting antimicrobial resistance, which are of great significance for the treatment of sepsis patients. The application of intelligent healthcare is rising, using technologies such as artificial intelligence to improve the efficiency of detecting antimicrobial resistance. The use of numerous emerging testing methods in critical care settings tests the wisdom of clinicians. This sharing aims to introduce emerging testing technologies and the application of intelligent healthcare, providing more precise and effective clinical strategies.

Applying Design Thinking in Medicine

廖健宏 醫師 / Dr. Chien-Hung Liao
林口長庚紀念醫院教授
林口長庚紀念醫院外傷急症外科主治醫師

專長
急診醫療、外傷急重症醫療、腹部急症、多重外傷、腹腔鏡微創手術（肝膽胰胃腸）

學歷
史丹佛 生物醫學設計、專利規劃、醫療市場分析
長庚大學醫學士

學會與認證
外科專科醫師
消化系外科專科醫師
外傷專科醫師
重症醫學專科醫師
重症醫學指導醫師
ATLS高級外傷救命術學員

第二演講廳

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12:00-13:10 Herpes zoster and pertussis vaccine introduction / **黃玉成 醫師** / **P.20** (Satellite Symposium_荷商葛蘭素史克藥廠股份有限公司台灣分公司)

Why herpes zoster and pertussis matters for pulmonologists? / **郭炳宏 醫師** / **P.20** (Satellite Symposium_荷商葛蘭素史克藥廠股份有限公司台灣分公司)

15:00-15:25 如何順利通過國科會計畫-審查者的觀點 / **李岡遠 醫師** / **P.21**

15:25-15:50 如何順利通過國科會計畫-申請者的觀點 / How to successfully get funding support from National Science and Technology Council? – perspectives and experience sharing from an applicant / **鐘桂彬 醫師** / **P.22**

16:40-17:50 Navigating First-Line Treatment Decisions for EGFRM+ NSCLC: Extrapolating from Asian Clinical Experience / **林旻希 醫師** / **P.23** (Satellite Symposium_台灣百靈佳殷格翰(股)公司)

Major Advances from 2022-2023: Focus on Target Therapy in NSCLC / **蔡俊明 醫師** / **P.24** (Satellite Symposium_台灣百靈佳殷格翰(股)公司)

06 / 18

08:00-09:10 A New Standard of Care for *EGFR* Exon 20 Insertion mutations in NSCLC / **廖唯昱 醫師** / **P.25** (Satellite Symposium_台灣武田藥品工業股份有限公司)

Learning from Clinical Experience for ALK+ NSCLC / **林彥廷 醫師** / **P.26** (Satellite Symposium_台灣武田藥品工業股份有限公司)

12:30-13:40 Treatable traits in asthma management / **陳家弘 醫師** / **P.27** (Satellite Symposium_荷商葛蘭素史克藥廠股份有限公司台灣分公司)

Therapeutic strategy and real-world evidence of mepolizumab on severe asthma patients / **陳家弘 醫師** / **P.27** (Satellite Symposium_荷商葛蘭素史克藥廠股份有限公司台灣分公司)

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Satellite Symposium_ 荷商葛蘭素史克藥廠股份有限公司台灣分公司

Herpes zoster and pertussis vaccine introduction

黃玉成 醫師 / Dr. Yhu-Chering Huang

林口長庚紀念醫院 兒童感染科教授級主治醫師

Why herpes zoster and pertussis matters for pulmonologists?

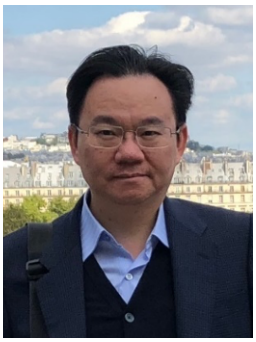
郭炳宏 醫師 / Dr. Ping-Hung Kuo

國立臺灣大學醫學院附設醫院 內科部胸腔科主治醫師

近年來隨著COVID-19疫情蔓延，疫苗的發展也愈發受到醫界關注，預防甚於治療的議題也持續發酵。過去文獻指出，COPD患者若罹患帶狀疱疹與百日咳都會較為嚴重、有較長的住院天數與門診用藥量，因此近年指引亦針對這群患者的罹病風險、疫苗施打給予建議。此外，肺癌患者亦為帶狀疱疹高風險族群，如何給予疫苗亦為近年的熱門議題。

本演講邀請到目前衛生福利部傳染病防治醫療網北區指揮官 黃玉成醫師演講帶狀疱疹、百日咳疾病與疫苗的發展，同時也邀請到台大醫院 郭炳宏醫師演講胸腔科患者罹患帶狀疱疹、百日咳的風險與相關的預後。透過跨科的交流與討論，相信此演講可以帶給聽眾對疫苗更多的認識。

如何順利通過國科會計畫-審查者的觀點



李岡遠 醫師 / Dr. Kang-Yun Lee
臺北醫學大學–衛生福利部雙和醫院主治醫師
臺北醫學大學研究發展處研發長

研究計畫當具研究主題之創新性與重要性，並應呈現可能產生對社會、經濟、學術發展等面向之預期影響性。計畫並須能展現主持人對文獻蒐集之完備性及對國內外相關研究現況瞭解清楚，同時最好能適度提供初步結果以佐證計畫成功之機會。主持人之研究表現亦為審查重點之一，故提出之計畫內容是否為主持人已有成果或口碑之領域更能取信於審查者。書寫架構應能提供合理充分之理論依據，能點出創新性與重要性之處，並據以提出研究之假說和所衍生之研究目標，再針對明確目標設計實驗及研究方法。本演講將以審查者觀點來論述如何撰寫博得審查者好感及青睞的研究計畫。

如何順利通過國科會計畫-申請者的觀點
How to successfully get funding support from National Science and Technology Council? – perspectives and experience sharing from an applicant

鐘桂彬 醫師 / Dr. Kuei-Pin Chung
臺灣大學附設醫院檢驗醫學部主治醫師
國立臺灣大學醫學院檢驗醫學科助理教授

Although grant proposal writing is time-consuming and challenging, it is crucial for scientists to summarize the current progress and to plan the next steps. An attractive proposal with novelty, practicability, scientific impact, and clinical applicability is the key to successful funding support under intense grant competition. Thorough literature review, preliminary data preparations, and hypothesis generation are all important aspects before writing a grant proposal, and suggestions from experienced scientists, mentors, and trusted peers or colleagues are also helpful to the process of grant proposal development. Realistic budget plan is also an important part of a successful grant proposal. A concise abstract clearly addressing the background, the hypothesis, and the research plan can help the reviewers quickly and efficiently to catchy the key points of the proposal, and shows your consideration to your reviewers. Meanwhile, even if the proposal is rejected, it is worthy to carefully review the reviewer comments, which may help you to refine your proposal and to successfully get the next funding support. Most importantly, the writing skills depend on non-stopping training through pursuing grants of all sizes. My personal scientific interest is to illustrate the metabolic reprogramming in various human pulmonary and critical diseases, and to develop the potential applications in clinical diagnosis and metabolic resuscitations. Funding support is indispensable for me to accomplish all the scientific projects in progress. In this talk, I will share my experience and perspectives in applying the grants from National Science and Technology Council.

Satellite Symposium_ 台灣百靈佳殷格翰 (股) 公司

Navigating First-Line Treatment Decisions for EGFRM+ NSCLC: Extrapolating from Asian Clinical Experience

林旻希 醫師 / Dr. Min-Hsi Lin
高雄榮民總醫院 胸腔內科主治醫師
癌症防治中心 癌症防治科主任

This speech will provide an insightful look into the challenges and optimization of treatment for patients with EGFRm+ NSCLC, from Asian to hypercare populations. Dr. Lin will offer a comprehensive overview of the current status of treatment options and explore their efficacy in different patient populations. The speech will also delve into the reasons why some patients need innovative strategies to overcome these hurdles. The ultimate goal is to provide healthcare professionals with cutting-edge knowledge to optimize patient outcomes and improve the quality of life for those living with EGFRm+ NSCLC. Hope all attendee will leave the speech enlightened and empowered, with a greater understanding of how to navigate the evolving landscape of EGFRm+ NSCLC treatment.

Satellite Symposium_ 台灣武田藥品工業股份有限公司

Major Advances from 2022-2023: Focus on Target Therapy in NSCLC

蔡俊明 醫師 / Dr. Chun-Ming Tsai
台北榮民總醫院 腫瘤醫學部教授級教職特約醫師
國泰綜合醫學中心 台北總院顧問醫師
好心肝診所 特聘胸腔內科教授醫師

Targeted therapy has revolutionized the approach to treating non-small cell lung cancer (NSCLC) over the past decade, and the years 2022-2023 are expected to bring even more significant advances in this field. Novel drugs under development, such as EGFR inhibitors and combination therapies that target multiple pathways, are showing promising results in clinical trials, offering hope to those with previously untreatable forms of NSCLC. Additionally, advancements in molecular profiling and the integration of artificial intelligence with precision medicine are set to further improve personalized treatment approaches, leading to better outcomes for patients with NSCLC. In this speech, Prof. Tsai will discusses the major advances expected in targeted therapy for NSCLC in the years 2022-2023 and their potential impact on the future of NSCLC treatment.

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Satellite Symposium_ 台灣武田藥品工業股份有限公司

A New Standard of Care for *EGFR* Exon 20 Insertion mutations in NSCLC

廖唯昱 醫師 / Dr. Wei-Yu Liao

Attending Physician, Department of Internal Medicine, National Taiwan University Hospital

Clinical Associate Professor, Department of Internal Medicine, National Taiwan University College of Medicine

The treatments for NSCLC have evolved with the discovery of emerging targetable oncogenic drivers, such as EGFR mutations and ALK fusions.[1] The EGFR exon 20 insertion mutations, is a distinct class of mutations that responds poorly to the current EGFR TKIs.[2] In patients with EGFR exon 20 insertion mutations, the ORR ranged from 0% to 20% and median PFS was less than 6 months with the use of first-, second- or third-generation EGFR TKIs.[3]

Recently, novel therapies specifically targeting EGFR exon 20 insertion mutations, such as mobocertinib and amivantamab, have demonstrated clinically meaningful activities in their early phase trials and were granted regulatory approvals across multiple countries. Mobocertinib's phase I/II trial demonstrated confirmed ORR of 28%, median PFS of 7.3 months, and median DoR of 15.8 months among the platinum-pretreated patients (PPP) cohort, per IRC assessment.[4] Responses were observed across all mutation subtypes regardless of variant type or mutation location.[5]

With the availability of the two novel therapies and emergence of new molecules to target for EGFR exon 20 insertion mutations, there is a rising need to correctly diagnose this type of uncommon mutations via the multiplex platforms such as NGS. In ASCO Annual Meeting this year, the mobocertinib efficacy data in EGFR exon 20 insertion-mutated NSCLC patients identified by NGS of circulating tumor DNA (ctDNA) will be published, to better characterize the role of liquid biopsy in such disease setting. New scientific evidence is also warranted to explore the real-world effectiveness, safety, and resistance mechanism of the two approved therapies, to maximize the clinical outcome in NSCLC patients harboring EGFR exon 20 insertion mutations.

References:
1. J Clin Oncol JCO2101626 (2022) **2.** *Signal Transduct Target Ther* 4, 5 (2019) **3.** *PLoS One*. 2021;16:e0247620
4. Poster from ESMO, September 9-13, 2022 **5.** Poster from ASCO, June 4-8, 2021

Satellite Symposium_ 台灣武田藥品工業股份有限公司

Learning from Clinical Experience for ALK+ NSCLC

林彥廷 醫師 / Dr. Yen-Ting Lin

Visiting Physician, Department of Medicine, National Taiwan University Cancer Center
Adjunct Visiting Physician, Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, National Taiwan University Hospital
Clinical Assistant Professor, Department of Internal Medicine, National Taiwan University College of Medicine

Over the last decade, several new generations of ALK inhibitors have proved their superiority as first-line therapies against advanced lung cancer with ALK fusion. The ability to overcome resistant mutations and improved CNS activity have played a crucial role in enhancing efficacy.

Brigatinib is a 2nd generation ALK inhibitor approved for advanced ALK (+) non-small cell lung cancer. In its phase 2 ALTA trial, brigatinib demonstrated significant clinical efficacy post-crizotinib, with an IRC-assessed mPFS of 16.7 months . The phase 3 ALTA-1L final analysis confirmed brigatinib's superior efficacy in ALK inhibitor-naïve patients comparing to crizotinib (PFS HR 0.48 by independent review), and highlighted its overall survival benefit in patients with baseline brain metastases (OS HR 0.43) after a 4-year follow up.

To date, the advance in development of ALK inhibitors provides us more options for patient care. It also triggers the need of deciding optimal treatment, with the aim to provide improved overall outcome in patients.

Satellite Symposium_ 荷商葛蘭素史克藥廠股份有限公司台灣分公司

Topic I: Treatable traits in asthma management
Topic II: Therapeutic strategy and real-world evidence of mepolizumab on severe asthma patients

陳家弘 醫師 / Dr. Chia-Hung Chen
中國醫藥大學附設醫院 內科部胸腔暨重症系主治醫師
中國醫藥大學 呼吸治療學系助理教授

氣喘疾病機轉與治療複雜，不同類型、嚴重程度不一的氣喘，用藥的原則都不一樣，隨著醫學發展持續進步、氣喘治療武器豐富，也已進入精準化治療時代，嚴重型氣喘約占總氣喘人口的 3.7%，台灣數據推算，預計應有 1,850 名嚴重氣喘患者，但治療中只有 1,300 名，約逾 500 多名患者未得到妥善治療 。

根據研究，嚴重型氣喘病患的生活負擔比起一般氣喘高出 60%，需要花更多的時間精神在急性發作、急診、住院、並得要和口服類固醇長期抗爭，應積極控制疾病、維持生活品質。

本演講將會透過氣喘的treatable treat，回顧過往發表的經典文獻並結合2023 ATS 最新發表內容，透過講者自身的臨床經驗，與聽眾進行交流，期待可以帶給病患更好的照護品質。

第三演講廳

06 / 17

12:00-13:10 The Dawn for Asthma Awareness in Taiwan / **傅彬貴 醫師** / **P.29** (Satellite Symposium_臺灣阿斯特捷利康股份有限公司)

Rethinking treatment goal in COPD: when is the best time to treat our patients? / **林聖皓 醫師** / **P.29** (Satellite Symposium_臺灣阿斯特捷利康股份有限公司)

Severe asthma remission with biologics: What does the data tell us? / **陳彥甫 醫師** / **P.30** (Satellite Symposium_臺灣阿斯特捷利康股份有限公司)

13:20-14:00 結核病診斷的現況與未來 / Diagnosis of TB: where we are and where we are going / **潘聖衛 醫師** / **P.30**

14:00-14:40 電子鼻於非分枝桿菌肺部疾病的臨床運用 / Clinical application of electronic nose in NTM lung disease / **李孟叡 醫師** / **P.31**

15:40-16:20 智慧空污門診 / Smart Air Pollution Clinic / **吳大緯 醫師** / **P.32**

16:40-17:50 New GOLD 2023 Recommendations: Are all LAMA/LABAs the same? / **黃偉彰 醫師** / **P.33** (Satellite Symposium_台灣百靈佳殷格翰(股)公司)

Current and future management of IPF and PPF / **柯信國 醫師** / **P.34** (Satellite Symposium_台灣百靈佳殷格翰(股)公司)

06 / 18

09:20-10:00 晚期肺癌接受標靶藥物治療後的救援性手術 / Salvage Surgery for Advanced Lung Adenocarcinoma after EGFR Tyrosine Kinase Inhibitor Treatment / **林孟暐 醫師** / **P.36**

10:00-10:40 台灣肺腺癌與鱗狀細胞癌的發生率長期趨勢、空間分佈及生存預測 / Incidence Trends, Spatial Distribution and Survival Prediction of Lung Adenocarcinoma and Squamous Cell Carcinoma in Taiwan / **江濬如 助理教授** / **P.37**

10:55-11:15 Sleep in critical illness / **倪永倫 醫師** / **P.38**

11:15-11:35 加護病房中的睡眠與晝夜紊亂。我們可以改善它嗎？ / Sleep and Circadian Disruption in ICU/RCC. Can we improve it? / **陳昭賢 醫師** / **P.39**

11:35-11:55 肺纖維化與阻塞型睡眠呼吸中止的關係 / Association between pulmonary fibrosis and obstructive sleep apnea / **鄭至宏 醫師** / **P.40**

11:55-12:15 使用多項生理及居家睡眠檢查進行阻塞性睡眠呼吸中止症的診斷及追蹤：美國睡眠醫學會依據GRADE實證的準則 / Polysomnography and home sleep apnea test on diagnosis and longitudinal follow of obstructive sleep apnea: AASM GRADE approach guideline / **陳永瑄 醫師** / **P.41**

12:30-13:40 The Impact of Extra-fine Particles on Uncontrolled Asthma: From The Perspective of SAD / **傅彬貴 醫師** / **P. 42** (Satellite Symposium_友華生技醫藥股份有限公司)

Artificial Intelligence and Machine Learning in Chronic Airway Diseases: Focus on Asthma and Chronic Obstructive Pulmonary Disease / **黃建文 醫師** / **P.43** (Satellite Symposium_友華生技醫藥股份有限公司)

06 / 17

Satellite Symposium_ 臺灣阿斯特捷利康股份有限公司

The Dawn for Asthma Awareness in Taiwan

傅彬貴 醫師 / Dr. Pin-Kuei Fu
臺中榮民總醫院 醫學研究部臨床試驗科主任
臺中榮民總醫院 技術移轉中心主任
臺中榮民總醫院 間質性肺病整合照護中心主任
臺中榮民總醫院 胸腔內科主治醫師

新冠後氣喘病患逾半數面臨加劇的氣喘症狀，健康肺氣喘神盾計畫也於2023聚焦在氣喘疾病識能，針對台灣氣喘常見四大症狀推出希冀透過全體醫療院所推廣提升民眾識能及氣喘診斷。在氣喘控制上，SABINA Carbon的發表更指出了錯誤用藥除了增加氣喘惡化外更與碳排息息相關，氣喘照護政策又應該如何因應成為首要課題。

Satellite Symposium_臺灣阿斯特捷利康股份有限公司

Rethinking treatment goal in COPD: when is the best time to treat our patients?

林聖皓 醫師 / Dr. Sheng-Hao Lin
彰化基督教醫院 內科部副主任
彰化基督教醫院 胸腔內科主任
彰化基督教醫院 臨床試驗中心副主任
彰化基督教醫院 健檢暨健康管理科主任

現行慢性阻塞性肺病治療有許多不同藥物及吸入劑的選擇，然而整體疾病照護上仍未臻完善，隨著藥物通陳出新，何時才是最適當的時機介入治療?本演講將探討新的複方吸入劑Glycopyrronium/Formotero/Budesonide的科學實證，以期能在最適當之時機給予病患所需的治療，以幫助臨床治療之決策。

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Severe asthma remission with biologics: What does the data tell us?

陳彥甫 醫師 / Dr. Yen-Fu Chen
Director of Department of Outpatient, National Taiwan University Hospital Yun-Lin Branch, Yun-Lin, Taiwan

Clinical Remission對於嚴重氣喘治療至關重要，但對於臨床意義為何？提早介入生物製劑是否有其意義？讓我們從最新的研究來探討！

結核病診斷的現況與未來 Diagnosis of TB: where we are and where we are going

潘聖衛 醫師 / Dr. Sheng-Wei Pan
臺北榮民總醫院胸腔部專任主治醫師
國立陽明大學醫學院兼任助理教授

Tuberculosis (TB) is an airborne infectious disease caused by *Mycobacterium tuberculosis* (MTB) and it remains a major global cause of death. Early recognition of TB is crucial for providing prompt treatment to infected patients and reducing its burden. Diagnostic methods for TB and drug resistance include direct acid-fast bacilli microscopy, culture of MTB, culture-based drug sensitivity testing (phenotypic sensitivity), and biomolecular tests such as the Xpert MTB/RIF and Xpert MTB/RIF Ultra assays. Whole-genome sequencing of MTB DNA provides comprehensive genotype data (genotypic sensitivity) with a high degree of concordance for phenotypic sensitivity results. Recently, non-sputum blood-based diagnostic tests, such as assays to detect MTB-derived cell-free DNA, MTB-specific antigens, and protein biosignatures in serum, have also been investigated. They are rapid and effective in determining TB disease, but still need to be optimized for clinical use. Finally, regarding chest radiographs, computer-aided detection methods have shown improved sensitivity but limited specificity in identifying TB disease. In this talk, we will review the currently available diagnostic methods for TB and discuss future tests that can improve case identification and guide precision treatment.

電子鼻於非分枝桿菌肺部疾病的臨床運用
Clinical application of electronic nose in NTM lung disease

李孟叡 醫師 / Dr. Meng-Rui Lee
臺大醫院胸腔內科主治醫師
臺大醫學院臨床助理教授

Nontuberculous mycobacteria (NTM) are emerging clinical pathogens causing pulmonary diseases. While isolation of NTM from respiratory specimens does not equate to clinical NTM pulmonary disease, this causes substantial difficulty in clinical judgement and management. Practically, NTM could be colonized in a variety of patients, including bronchiectasis and old tuberculosis who had overlapping imaging features with nontuberculous mycobacterial pulmonary disease (NTM-PD). It could therefore be very difficult to distinguish active ongoing NTM infection from previously damaged lungs with or without other non-NTM infections.

Electronic nose (eNose) is a new approach for breath analysis, which mimics the olfactory systems of humans with combination of chemosensors. While chemosensors reacted to the volatile organic compounds (VOC) in the exhaled breath, breathprint, but not a single quantification of specific VOC, would be generated akin to human smell. The breathprint then could be used to differentiate between various clinical diseases.

We investigated the feasibility of using a novel eNose to differentiate and ascertain clinical status of NTM isolation. Among NTM status-confirmed cohort, eNose has an AUC of 0.87-0.97 in the training cohort and 0.68-0.74 in the validation cohort while in the NTM status-unconfirmed cohort, the eNose can achieve an accuracy of 0.70.

Our study demonstrated that breathprints generated by eNose can differentiate NTM clinical status and predict outcome among patients with clinical uncertainty. Furthermore, its short turn-around time, noninvasiveness and discriminative power may make it a potential point-of-care assistive test in clinical settings.

智慧空污門診
Smart Air Pollution Clinic

吳大緯 醫師 / Dr. Da-Wei Wu
高雄醫學大學附設中和紀念醫院胸腔內科主治醫師
高雄醫學大學學士後醫學系臨床助理教授

Is the air pollution level within normal range harmless? Does different air pollution conditions in different regions lead to different disease risks? Is it possible to predict the impact of specific diseases under different air pollution conditions? Can artificial intelligence be used for analysis and prediction in the face of air pollution? Common sources of pollution in southern Taiwan include overseas air pollution, air pollution brought by the northeast monsoon in northern and central Taiwan, and pollution sources such as trucks, airplanes, and factories in Kaohsiung City. Air quality index (AQI) is a commonly used comprehensive indicator. If the value is greater than 100, it is necessary to be very careful for sensitive groups. According to government-provided data, air quality has improved in the past decade. However, is this really the case for people's perception? In the past, under the guidance of president of Kaohsiung Medical University Dr. Chun-Yuh Yang, the Department of Public Health at Kaohsiung Medical University conducted a series of studies on the harm of air pollution to the human body and found that the harm of air pollution to the human body in different cities such as Taipei and Kaohsiung is not the same. The most common air pollutants include $PM_{2.5}$, SO_2, and O_3. However, SO_2 is a very special substance. Its concentration has never exceeded the standard, but it often has a combined effect with $PM_{2.5}$ at low concentrations. Air pollution can affect the brain through inhalation through the nasal cavity or directly affect the lungs through inhalation through the lungs. It can even affect various organs of the body through blood flow and cause inflammatory reactions. Common diseases include dementia, cardiovascular or cerebrovascular diseases, and even liver, kidney, bladder. The most common are respiratory diseases. Previous studies have shown that the incidence of lung cancer in southern Taiwan and northern Taiwan has shown a cross-trend in the past decade, and the impact of air pollution in the south has gradually exceeded that in the north. Our research shows that SO_2, $PM_{2.5}$, PM_{10}, and NO_2 all have an impact on dementia; for chronic lung disease, we found that 24.6 degrees Celsius is a special temperature. The proportion of air pollution affecting the human body is certain for both too low or too high temperatures; we also found that diabetic patients are more likely to develop lung cancer, especially when exposed to air pollution for a long time. The rate of tuberculosis in patients who had pneumonia before will also increase when air pollution factors are combined; air pollution also affects osteoporosis, especially in women. Based on the harms of air pollution to the human body mentioned above, we have established a Smart Air Pollution Clinic that can provide information on the average exposure level of

air pollution per week or month. Additionally, we can predict the incidence of tuberculosis under these conditions. We are also collaborating with Wacare Company to develop a mobile app that detects air pollution levels at any location and continuously corrects possible factors using AI models. This collaboration will enable us to create disease prediction programs based on the gathered data.

Satellite Symposium_ 台灣百靈佳殷格翰 (股) 公司

New GOLD 2023 Recommendations: Are all LAMA/LABAs the same?

黃偉彰 醫師 / Dr. Wei-Chang Huang
臺中榮民總醫院 胸腔內科主治醫師

Chronic obstructive pulmonary disease (COPD) is ranked as the 3rd leading cause of death worldwide and the 8th leading cause of death in Taiwan in 2020, which represents an enormous burden to healthcare system and society.

GOLD COPD report 2023 provided new update include a revised definition of COPD, diagnosis, assessment and definition of a COPD exacerbation. The previous ABCD patient Assessment Tool has been changed to the ABE Assessment Tool.

Management of stable COPD, has been added that when initiating treatment with long-acting bronchodilators, the preferred choice is a combination of LAMA and LABA. Additionally, it states that the use of a LABA-ICS combination should not be encouraged in COPD. LABA-ICS has therefore been removed from recommended initial treatments, and LAMA-LABA should be initiated for patients in groups B and E.

The algorithm also recommends considering LABA–LAMA– ICS for patients in group E if blood eosinophil counts are ≥300 cells per μL, because of the positive effect of triple treatment on mortality in this patient subgroup. The enhanced definition of exacerbations of COPD emphasise the timecourse and offers a systematic framework for assessment and diagnosis of exacerbations, including a recommendation to understand the cause of events.

Dr. Huang will examine the importance of individual trajectories when making treatment decisions for patients with COPD and explore the latest guidelines and scientific evidence to find perfect treatment fit for COPD patient.

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Current and future management of IPF and PPF

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國立陽明交通大學醫學院 內科系兼任副教授

This year, ATS 2023 conference is an in-person format in Washington, DC. Each year, thousands of respiratory medicine professionals gather to present and learn about groundbreaking advancements in the field at this great annual respiratory event. With my greatest honor and greatest humbleness, I would like to share my learning with my dear colleagues. I will try my best to address the Current and future management of IPF and PPF in my presentation and hope it will be useful for your clinical practice reference.

First, I would like to share the NICEFIT study that is the first long-term, real-world study in Taiwan providing efficacy and safety outcomes for IPF under routine management. Data on 101 patients with IPF were collected over 2 years (2018—2020) from medical centers in Taiwan at baseline, 1 month, and subsequent 3-month intervals. Treated patients (n = 88) received the antifibrotics nintedanib or pirfenidone, compared with the untreated group (n = 13). The presence of respiratory comorbidities significantly increased the risk of both AE and death (with or without AE) over the full study duration. Furthermore, the decline of predicted FVC significantly increased with the risk of acute exacerbations (AE) in the second year. Overall, antifibrotic therapy stabilized lung function parameters in patients with IPF over 2 years of study without increasing mortality, while preserving quality of life, and no new safety issues.

Second, I would like to share my learning about key updates in current management IPF/PF-ILD/PPF. Nintedanib and pirfenidone are the recommended medicine to treat IPF. For other progressive fibrosing ILD, nintedanib has more comprehensive clinical evidence to support its role in PF-ILD/PPF. Thus, the new guideline 2022 only recommended nintedanib to treat IPF and PPF. For pirfenidone, it seems no more new clinical evidence to support its usage in ILD. Besides antifibrotics therapy, there are some remarkable findings in non-pharmacological therapy.

Finally, I will share the information on new pipelines and novel treatments of IPF/PF-ILD/PPF. We can see there are several pipelines ongoing. The most attractive pipeline is BI1015550, a phosphodiesterase 4 inhibitor (PDE4 inhibitor). In its phase 2 result, BI 1015550 is novel PDE4 inhibitor showing a preferential enzymatic inhibitor of PED4B. According to the just-published result, BI1015550 has a differentiated target profile from approved PDE4 inhibitors and works synergistically with nintedanib. FDA has granted BI1015550 as the breakthrough therapy designation for IPF this Freferary. In my presentation, I will demonstrate details of the BI 1015550 study design and its results.

06 / 18

晚期肺癌接受標靶藥物治療後的救援性手術
Salvage Surgery for Advanced Lung Adenocarcinoma after EGFR Tyrosine Kinase Inhibitor Treatment

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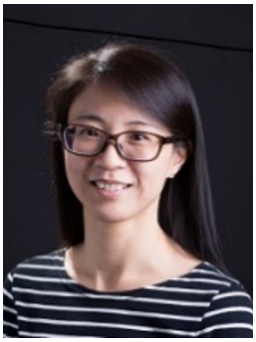
國立台灣大學醫學院 外科副教授

Lung cancer is the leading cause of cancer-related death, and more than 60% of cases are found to be stage III or IV at the time of initial diagnosis. Epidermal growth factor receptor (EGFR) mutation is the most common mutation found in patients with lung cancer in Asia, and tyrosine kinase inhibitors (TKIs) are the first-line treatment for those with advanced stages. Several retrospective studies showed the possible survival benefit associated with salvage surgery after TKI treatment in patients with stage III-IV non-small cell lung cancer (NSCLC).

In our recent published study, we reported the clinicopathological features of patients with lung adenocarcinoma that underwent TKI therapy followed by salvage surgery before clinical disease progression. Viable tumor cells in the tumor bed were categorized as morphologically treatment sensitive or morphologically treatment resistant. Acquired EGFR exon 20 T790M mutation, high-grade tumor with tumor necrosis, and histologic transformation were present only in regions of the tumor that were morphologically tumor resistant. Tumor heterogeneity raises the possibility of sampling error when patients undergo tumor re-biopsy to analyze the drug-resistant mechanisms. The presence of morphologically treatment resistant tumor regions signaled the emergence of resistant subclones before clinical disease progression.

In conclusion, salvage surgery after EGFR TKI treatment in selected advanced-stage lung adenocarcinoma patients before clinical disease progression may contribute to disease control by removing residual viable tumor cells and preventing the progression of TKI-resistant tumor subclones.

台灣肺腺癌與鱗狀細胞癌的發生率長期趨勢、空間分佈及生存預測
Incidence Trends, Spatial Distribution and Survival Prediction of Lung Adenocarcinoma and Squamous Cell Carcinoma in Taiwan



江濬如 助理教授 / RuRu Chun-Ju Chiang
臺灣大學公共衛生學院流行病學與預防醫學研究所助理教授
衛福部國民健康署台灣癌症登記中心研究員

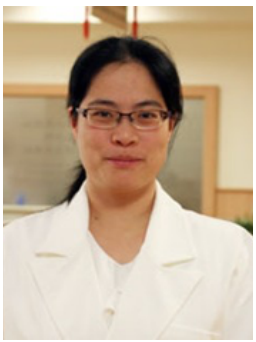
Lung cancer is the second most common cancer in Taiwan, and smoking is a major risk factor. Despite the continued decline in smoking rates resulting from the implementation of the Tobacco Harm Prevention Act of 1997, lung cancer rates in both men and women have continued to rise, suggesting the presence of other risk factors. To further explore this issue, we used lung cancer data from the Taiwan Cancer Registry Database using the age-period-cohort analysis to examine the secular trends of lung cancer incidence rates according to histological types in Taiwan. We also applied the stabilized kriging method to map the incidence of lung cancer according to histological types, as well as the survivorship-period-cohort model to predict the future survival of lung cancer patients.

Our findings indicate that the incidence rates of lung adenocarcinoma increased in males and females in recent birth cohorts, especially in females. In contrast to adenocarcinoma, lung squamous cell carcinoma incidence rates in males and females decreased, especially in females. The hot spots of incidence rates of lung adenocarcinoma in males and females were in the northern, east-northern, and western coastal areas. They increased rapidly in the western and southern coastal regions and southern mountain areas. The hot spots of incidence rates of lung squamous cell carcinoma in males were in the west-southern and east-northern coastal regions and increased rapidly in the central and southern coastal and mountain areas. For lung cancer survival, the relative survival decreased before 2004 and increased after that. By 2025, the 5-year survival of lung cancer will increase from 23.8% to 38.7%, an absolute increase of 14.9%, and a 1.6-fold increase.

In summary, lung squamous cell carcinoma incidence rates have declined, but the incidence rates of lung adenocarcinoma have increased continuously for both sexes in

Taiwan. The incidence rates of lung squamous cell carcinoma may continue to reduce. Some areas in Taiwan where lung cancer incidence rates were low but were increasing rapidly, such as the west-northern coasts and the southern coasts and mountains of Taiwan, should be given special attention. The increase in survival after 2004 coincided with when National Health Insurance paid for the targeted drugs and positron emission tomography. Lung cancer screening with low-dose computed tomography has also improved lung cancer survival.

Sleep in critical illness



倪永倫 醫師 / Dr. Yung-Lun Ni
台中慈濟醫院胸腔內科檢查室主任

專長
急慢性咳嗽、上呼吸道感染、肺炎、肺結核、氣喘、肺氣腫、
慢性阻塞性肺病、呼吸治療與復健、肺癌診斷與治療、睡眠障礙及睡眠呼吸中止症、
急重症呼吸胸腔疾病、胸腔影像學、超音波與支氣管鏡檢查

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林口長庚紀念醫院內科部醫師

加護病房中的睡眠與晝夜紊亂。我們可以改善它嗎？
Sleep and Circadian Disruption in ICU/RCC. Can we improve it?

陳昭賢 醫師 / Dr. Chao-Hsien Chen
馬偕紀念醫院胸腔內科主治醫師
馬偕醫學院 醫學系兼任助理教授

Good sleep and regular circadian rhythm are fundamental to human health and recovery from disease. Although there remained no consensus on the definition, attention to sleep and circadian disruption (SCD) in ICU patients increased. Observational studies showed shortened sleep duration, a high proportion of daytime sleep, highly fragmented sleep, and paucity of stage N3/REM sleep in critical patients in the ICU. Sleep disturbances may impair their respiratory function and prolonged mechanical ventilation. The critical illness-related factors, environmental factors, including light, noise and bedside care, mechanical ventilation, and medications, contributed to the development of SCD. Although the cause of SCD is complex, some strategies, like environmental control, clustered care, zeitgeber optimization, mechanical ventilation adjustment, avoiding medications that disturb sleep, and relaxation therapies, have some benefits to improving SCD. Combining some of these strategies with our ICU routines may improve SCD in critical illness patients. In conclusion, SCD in ICU/RCC is complex and has muti-factorial causes. Improving SCD in ICU will be a potential target to achieve better outcomes for critical illness patients.

肺纖維化與阻塞型睡眠呼吸中止的關係
Association between pulmonary fibrosis and obstructive sleep apnea

鄭至宏 醫師 / Dr. Chih-Hung Cheng
高雄市立小港醫院胸腔內科主治醫師

Obstructive sleep apnea (OSA) and pulmonary fibrosis seem to be two different diseases. In recent years, studies have found that the incidence of pulmonary fibrosis has gradually increased in the OSA patient population. In the recent guidelines for pulmonary fibrosis, OSA was also considered an important associated comorbidity. Severe OSA can lead to hypoxia during sleep, leading to an increase in oxidative stress. Studies have also pointed out that intermittent hypoxia and increased oxidative stress may lead to pulmonary fibrosis. Recent studies have found that moderate to severe OSA is associated with subclinical ILD and is associated with alveolar epithelial damage and evidence of extracellular matrix remodeling, findings that support the hypothesis that OSA may lead to early ILD.

使用多項生理及居家睡眠檢查進行阻塞性睡眠呼吸中止症的診斷及追蹤：美國睡眠醫學會依據GRADE實證的準則

Polysomnography and home sleep apnea test on diagnosis and longitudinal follow of obstructive sleep apnea: AASM GRADE approach guideline

陳永瑄 醫師 / Dr. Yung-hsuan Chen
台大醫院內科部主治醫師
台大醫學院內科臨床講師

Obstructive sleep apnea (OSA) is a prevalent sleep disorder that can significantly affect the quality of life and lead to comorbidities. The American Academy of Sleep Medicine (AASM) has provided evidence-based guidelines for the treatment of OSA using positive airway pressure (PAP) therapy, along with recommendations for follow-up testing.

The AASM recommends PAP therapy as the primary treatment option for adults with excessive sleepiness or impaired sleep-related quality of life. It is also recommended for adults with comorbid hypertension. Either CPAP or APAP can be used for ongoing treatment of OSA in adults. Educational interventions should be provided with initiation of PAP therapy, while behavioral and troubleshooting interventions may be considered during the initial period of therapy.

Routine follow-up polysomnography (PSG) or home sleep apnea testing (HSAT) is not recommended for asymptomatic patients on PAP therapy. However, follow-up testing can be used to reassess patients with persistent or recurrent symptoms despite good PAP adherence. PSG reassessment may be considered in cases of unexplained PAP device failure or suboptimal response to PAP therapy. Follow-up PSG or HSAT is recommended to assess the response to treatment with non-PAP interventions and may also be used in cases of clinically significant weight gain or loss since diagnosis or initiation of treatment.

These AASM recommendations provide further guidance for clinicians on the use of PAP therapy and follow-up testing in patients with OSA, taking into account specific patient characteristics and comorbidities.

Satellite Symposium_ 友華生技醫藥股份有限公司

The Impact of Extra-fine Particles on Uncontrolled Asthma: From The Perspective of SAD

傅彬貴 醫師 / Dr. Pin-Kuei Fu
臺中榮民總醫院 醫學研究部臨床試驗科主任
臺中榮民總醫院 技術移轉中心主任
臺中榮民總醫院 間質性肺病整合照護中心主任
臺中榮民總醫院 胸腔內科主治醫師

近年來肺部小呼吸道的疾病(Small Airway Dysfunction)一直受到國際間的重視，而吸入劑藥物的顆粒大小與肺部小呼吸道的藥物沉積率息息相關，本次演講透過台中榮總傅彬貴醫師從臨床試驗到真實世界上使用超細微粒(Extra-fine particle)的ICS/LABA與其他吸入劑的比較及Extrafine針對於控制不佳氣喘病患之相關臨床文獻證據分享，來讓各位醫師了解更多Extra-fine particle的吸入型藥物對於台灣病人臨床上的益處。

Satellite Symposium_ 友華生技醫藥股份有限公司

Artificial Intelligence and Machine Learning in Chronic Airway Diseases: Focus on Asthma and Chronic Obstructive Pulmonary Disease

黃建文 醫師 / Dr. Chien-Wen Huang
亞洲大學附屬醫院 主任秘書

Chronic airway diseases are characterized by airway inflammation, obstruction, and remodeling and show high prevalence, especially in developing countries. Among them, asthma and chronic obstructive pulmonary disease (COPD) show the highest morbidity and socioeconomic burden worldwide. Although there are extensive guidelines for the prevention, early diagnosis, and rational treatment of these lifelong diseases, their value in precision medicine is very limited.

Artificial intelligence (AI) and machine learning (ML) techniques have emerged as effective methods for mining and integrating large-scale, heterogeneous medical data for clinical practice, and several AI and ML methods have recently been applied to asthma and COPD.

However, very few methods have significantly contributed to clinical practice. Here, we use machine learning algorithms to analyze the clinical assessment data of patients with COPD and the collected impulse oscillometry data to build a clinical decision support system for obstructive airway diseases.

sanofi

患有嗜酸性白血球表現型或口服皮質類固醇依賴型之
中重度氣喘病人（6 歲以上）的附加維持治療

控制氣喘的康莊大道†

† DUPIXENT significantly reduced the annualised rate of severe exacerbations and improved FEV1 at Week 12 vs placebo (both P<0.001). DUPIXENT significantly reduced OCS use at Week 24 vs placebo (P<0.001).

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DUPIXENT® (dupilumab)

適應症 氣喘：可作為 6 歲（含）以上患有中度至重度嗜酸性白血球表現型氣喘或口服皮質類固醇依賴型氣喘之成人病人及兒童病人的附加維持治療 (add-on maintenance therapy)。

【品　名】杜避炎注射劑 300 毫克 (DUPIXENT solution for injection 300mg) 杜避炎注射劑 200 毫克 (DUPIXENT solution for injection 200mg)

【包　裝】其包裝為附有針頭防護套的單劑量預填注射器。每支附有針頭防護套的單劑量預填注射器內含 DUPIXENT 300 mg 的 2 mL 溶液或 DUPIXENT 200 mg 的 1.14 mL 溶液的單劑量預填注射器。每支附有針頭防護套的單劑量預填注射器內含 DUPIXENT 300 mg 的 2 mL 溶液或 DUPIXENT 200 mg 的 1.14 mL 溶液。

【適應症】異位性皮膚炎：可用於治療患有中度至重度異位性皮膚炎且對局部處方治療控制不佳或不適合使用該療法的成人病人及 6 個月以上的兒童病人。可併用或不併用局部皮質類固醇治療。氣喘：可作為 6 歲（含）以上患有中度至重度嗜酸性白血球表現型氣喘或口服皮質類固醇依賴型氣喘之成人病人及兒童病人的附加維持治療 (add-on maintenance therapy)。使用限制：不適用於緩解急性支氣管痙攣或重積性氣喘 (status asthmaticus)。慢性鼻竇炎合併鼻息肉：可作為患有慢性鼻竇炎合併鼻息肉 (CRSwNP) 之成人病人在鼻內皮質類固醇治療下仍控制不佳的附加維持治療 (add-on maintenance therapy)。

【劑　量】異位性皮膚炎 成人劑量 DUPIXENT 於成人病人的建議劑量為一劑起始劑量 600 毫克 (300 毫克注射兩劑)，接著以 300 毫克隔週 (every other week) 注射一次。

異位性皮膚炎兒童（6 個月 - 5 歲）病人之 DUPIXENT 劑量

體重	起始*及後續劑量
5 - < 15 公斤	200 毫克 (200 毫克注射一劑) 每 4 週一次 (Q4W)
15 - < 30 公斤	300 毫克 (300 毫克注射一劑) 每 4 週一次 (Q4W)

*6 個月 - 5 歲的異位性皮膚炎兒童病人不建議給予起始負荷劑量。

異位性皮膚炎兒童（6 - 17 歲）病人之 DUPIXENT 劑量

體重	起始劑量	後續劑量
15 - < 30 公斤	600 毫克 (300 毫克注射兩劑)	300 毫克，每 4 週一次 (Q4W)
30 - < 60 公斤	400 毫克 (200 毫克注射兩劑)	200 毫克，每 2 週一次 (Q2W)
≥60 公斤	600 毫克 (300 毫克注射兩劑)	300 毫克，每 2 週一次 (Q2W)

DUPIXENT 可併用或不併用局部皮質類固醇治療。亦可併用局部鈣調神經磷酸酶抑制劑 (topical calcineurin inhibitors)，但應限用於臉部、頸部、腹股溝及會陰部等特殊患部。

氣喘 **成人及 12 歲（含）以上兒童氣喘病人之 DUPIXENT 劑量**

6-11 歲氣喘兒童病人之 DUPIXENT 劑量

體重	起始*及後續劑量
15 至 < 30 公斤	100 毫克，每 2 週一次 (Q2W) 或 300 毫克，每 4 週一次 (Q4W)
≥30 公斤	200 毫克，每 2 週一次 (Q2W)

*氣喘兒童病人 (6 - 11 歲) 不建議給予起始負荷劑量。

起始負荷劑量	後續劑量
400 毫克 (200 毫克注射兩劑)	200 毫克，每 2 週一次 (Q2W)
患有口服皮質類固醇依賴型氣喘的病人 或合併有中度至重度異位性皮膚炎的病人 或合併有慢性鼻竇炎合併鼻息肉的成人病人之使用劑量	
600 毫克 (300 毫克注射兩劑)	300 毫克，每 2 週一次 (Q2W)

患有氣喘且合併有中度至重度異位性皮膚炎的兒童病人 (6 - 11 歲)，應按照異位性皮膚炎兒童 (6 - 17 歲) 病人之 DUPIXENT劑量包括起始負荷劑量在內的建議劑量給藥。

慢性鼻竇炎合併鼻息肉 DUPIXENT 於成人病人的建議劑量為 300 毫克，每隔週一次。若漏打每週給藥一次之劑量，盡快補打該劑量，並從最後一個給藥日開始一個新的注射時程。若漏打每 2 週給藥一次之劑量，應在漏打劑量後的 7 天內補行注射，之後則按照病人的原有時程給藥。若漏打的劑量沒有在 7 天內注射，則應依照原有時程等到下次劑量再給藥。若漏打每 4 週給藥一次之劑量，應在漏打劑量後的 7 天內補行注射，之後則按照病人的原有時程給藥。若漏打的劑量沒有在 7 天內注射，應注射該劑量，之後則以該注射日期為準，開始新的注射時程。

【禁　忌】DUPIXENT 禁用於已知對 dupilumab 或其任何賦形劑過敏的病人。

【警語及注意事項】1. 過敏反應：曾通報的過敏反應包括過敏性休克、血清疾病 (serum sickness) 或類血清疾病反應 (serum sickness-like reaction)、血管性水腫、全身性蕁麻疹、皮疹、結節性紅斑及多形性紅斑。若出現臨床上重大過敏反應，DUPIXENT 應停藥並給予適當治療［見仿單不良反應］。2. 結膜炎和角膜炎：接受 DUPIXENT 治療的異位性皮膚炎受試者有較高的結膜炎和角膜炎發生率。結膜炎為最常被通報的眼睛疾患。大多數出現結膜炎的受試者其結膜炎在治療期間疼癒或逐漸康復。氣喘受試者接受 DUPIXENT 和安慰劑治療之結膜炎與角膜炎發生率相當［見仿單不良反應］。慢性鼻竇炎合併鼻息肉 (CRSwNP) 的受試者在 24 週的安全性彙整資料中，DUPIXENT 治療組的結膜炎發生率為 2% 相對於安慰劑組為 1%；這些受試者的結膜炎後來皆疼癒。慢性鼻竇炎合併鼻息肉 (CRSwNP) 的臨床研究中並無角膜炎之通報個案［見仿單不良反應］。請告知病人，當眼睛出現新的症狀或原有症狀惡化時，應告訴醫護人員。3. 嗜酸性白血球相關狀況：接受氣喘治療的病人可能有嚴重的全身性嗜酸性白血球增多症，有時會出現嗜酸性白血球肺炎或類似嗜酸性韋格納肉芽腫 (granulomatosis with polyangiitis) 之血管炎的臨床表徵，這種病況通常會給予全身性皮質類固醇治療。這些事件可能與口服皮質類固醇劑量降低有關。醫師應對嗜酸性白血球增多症病人的血管炎性皮疹、肺部症狀惡化、心臟併發症及/或神經病變保持警覺。DUPIXENT 治療與這些病況之因果關係尚未建立［見仿單不良反應］。4. 急性氣喘症狀或氣喘惡化：DUPIXENT 不應用於治療急性氣喘症狀或急性氣喘惡化。DUPIXENT 不可用於治療急性支氣管痙攣或重積性氣喘。若在 DUPIXENT 開始治療後氣喘未能獲得控制或惡化，則病人應尋求醫療建議［見仿單不良反應］。5. 突然降低皮質類固醇劑量：DUPIXENT 開始治療後，不可突然停用全身性、局部性或吸入性皮質類固醇。如果可行，皮質類固醇的劑量應逐漸降低並在醫護人員的直接監督下執行。降低皮質類固醇劑量有可能引起全身性戒斷症狀及/或使得先前被全身性皮質類固醇壓抑的病況再度出現。［見仿單不良反應］。6. 併有氣喘的異位性皮膚炎病人：應告知併有氣喘的的異位性皮膚炎病人，在尚未諮詢醫師前，不得擅自調整或停止氣喘治療［見仿單不良反應］。7. 關節痛 使用 DUPIXENT 曾有出現關節痛之報告，有些病人曾發生與關節症狀相關的步態障礙或活動力下降；有些個案導致住院。在上市後報告中，關節痛的發作時間並不一定，從 DUPIXENT 首次給藥後數天至數個月不等。有些病人的關節症狀在緩解時仍持續接受 DUPIXENT 治療，其他病人則在 DUPIXENT 停藥後才康復或逐漸康復［見仿單不良反應］。8. 寄生蟲 (蠕蟲) 感染：在 DUPIXENT 的臨床試驗中排除已知有蠕蟲感染的病人，因此 DUPIXENT 是否會影響對抗蠕蟲感染的免疫反應尚不清楚。病人應先治療蠕蟲感染，才能開始接受 DUPIXENT 治療。若病人在 DUPIXENT 治療期間感染蠕蟲且對抗蠕蟲治療無反應，則應停用 DUPIXENT 直到感染解除為止。參與兒童氣喘發展計畫的 6-11 歲兒童病人曾通報出現蠕蟲感染 (5 例蛔蟲感染及 1 例蝦蟲感染) 之不良反應［見仿單不良反應］。9. 疫苗接種 在 DUPIXENT 開始治療前，應考慮按照當前接種指南之建議，完成所有適齡的疫苗接種。接受 DUPIXENT 治療的病人應避免接種活性疫苗。目前尚不清楚在 DUPIXENT 治療期間接種活性疫苗，這些疫苗的安全性或有效性是否受到影響。關於 DUPIXENT 與非活性疫苗同時使用的資料相當有限［見仿單不良反應］。

【藥物交互作用】目前尚無正式的藥物交互作用研究。

【懷孕或哺乳】懷孕：根據 DUPIXENT 使用於懷孕婦女的個案報告及一連串個案之現有資料，並未發現有重大出生缺陷、流產，或對母體或胎兒造成不良影響的藥物相關風險。臨床考量：母體及/或胚胎-胎兒的疾病相關風險 氣喘控制差或中度控制的婦女，有證據顯示會增加母體子癲前症及新生兒早產、低出生體重和胎兒/小於妊娠年齡的風險。應嚴密監測懷孕婦女的氣喘控制狀況，且必要時應調整治療以維持最適控制。哺乳：當考量哺乳對嬰兒發育及健康的益處時，應同時考慮母親對 DUPIXENT 之臨床需求，以及 DUPIXENT 或母親的潛在病況對吸吮母乳的幼兒可能造成的任何不良影響。

【不良反應】異位性皮膚炎試驗：結膜炎、角膜炎、眼瞼炎、乾眼症、注射部位反應、口腔皰疹、眼睛癢、其他單純皰疹病毒感染。氣喘試驗：注射部位反應、口咽疼痛、嗜酸性白血球增多症。慢性鼻竇炎合併鼻息肉試驗：注射部位反應、結膜炎、關節痛、胃炎、失眠、嗜酸性白血球增多症、牙痛。其他不常見之不良反應請詳閱藥品仿單。

【過　量】DUPIXENT 過量無特定的療法。當過量發生時，請聯絡毒物管控中心 以尋求最新建議並應監測病人是否出現任何不良反應的徵兆或症狀，並立刻給予適當的症狀性治療。

【藥理學特性】Dupilumab 是一種 IgG4 人類單株抗體，它能專一性地結合於介白素-4 (IL-4) 及介白素-13 (IL-13) 受體複合體上的 IL-4Rα 次單位，進而抑制介白素-4 (IL-4) 及介白素-13 (IL-13) 的訊息傳遞。

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適應症：適用於有 NTRK 基因融合的實體腫瘤之成人和兒童病人，並應符合以下三項條件：
1. 具 NTRK 基因融合且無已知的後天阻抗性突變 (acquired resistance mutation)
2. 為轉移性實體腫瘤，或手術切除極可能造成嚴重病症 (severe morbidity)
3. 沒有合適的替代治療選項，或於治療後發生疾病惡化。

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VITRAKVI 的建議劑量是口服 100 mg，每天兩次，搭配或不搭配食物皆可，直至疾病惡化或直至出現不可接受的毒性。
- 體表面積不到 1.0 平方公尺之兒童病人的建議劑量
VITRAKVI 的建議劑量是口服 100 mg/m^2，每天兩次，搭配或不搭配食物皆可，直至疾病惡化或直至出現不可接受的毒性。

禁忌症：無。
警語及注意事項：- 建議病人在發生神經不良反應時，不得開車或操作具有危險性的機械。根據嚴重度，暫時或永久停用 VITRAKVI。若暫時停用，請在重新使用 VITRAKVI 時調整劑量 [請參見用法用量 (2.3)]。
- 在治療第一個月內每 2 週監測一次肝功能 (包括 ALT 和 AST)，其後每個月一次，並於臨床上有必要時監測。根據嚴重度，暫時或永久停用 VITRAKVI。若暫時停用，請在重新使用 VITRAKVI 時調整劑量 [請參見用法用量 (2.3)]。
- 建議具有生育能力的女性，在治療期間及接受最後一劑 VITRAKVI 後 1 週內使用有效的避孕方法 [請參見使用於特殊族群 (8.1, 8.3)]。

常見不良反應：- 神經毒性 [請參閱警語與注意事項 (5.1)]
- 肝毒性 [請參閱警語與注意事項 (5.2)]

更多產品資訊請參詳產品包裝內完整仿單內容 (USPI March 2021/TW03) MA-LAR-TW-0074-1　Approved data:2021.11

1. VITRAKVI 完整仿單 (USPI March 2021/TW03) 2. Amatu A, Sartore-Bianchi A, Siena S. NTRK gene fusions as novel targets of cancer therapy across multiple tumour types. ESMO Open. 2016;1(2):e000023.
3. Laetsch TW, DuBois SG,Mascarenhas L, et al. Larotrectinib for paediatric solid tumours harbouring NTRK gene fusions: phase 1 results from a multicentre, open-label, phase 1/2 study. Lancet. 2018;19(5):705-714.

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