



台灣內科醫學會112年會員大會暨學術演講會

節目介紹及內容摘要

2023年12月2-3日 星期六-日
臺大醫院國際會議中心



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2023 中華民國心臟學會慢性心臟衰竭藥物治療共識

2023 Consensus of Taiwan Society of Cardiology on the Pharmacological Treatment of Chronic Heart Failure

主持人：陳文鍾、吳懿哲、林幸榮、陳震寰、葉森洲

0830 引言 Opening remarks	陳文鍾(敏盛醫院)
0835 心臟衰竭之負擔 Burden of heart failure	洪崇烈(台北馬偕醫院心臟內科)
0855 心臟衰竭之影像研究 Image study for heart failure	吳彥雯(亞東醫院心血管中心)
0915 心臟衰竭之藥物治療 Pharmacological treatment	江晨恩(臺北榮民總醫院心臟內科)
0945 綜合討論 Panel discussion	陳震寰(臺北榮民總醫院心臟內科)
0955 結語 Closing remarks	葉森洲(林口長庚醫院心臟內科)

◆ 心臟衰竭之負擔

Heart failure (HF) is a significant public health problem worldwide with known high burden of all-cause death and rehospitalization rates similar across different HF phenotypes. The incidence of HF in Caucasians is about 3/1000 person-years (all age-groups) or about 5/1000 person-years in adults, and the prevalence rate appears to be 1-2%. It has been reported that HF burden in Taiwan may be close to those reported from the Western society. On the other hand, the modes of death may vary across different HF phenotypes, which likely lead to diverse therapeutic options and strategies. Except for high mortality and morbidity, HF would result in significant adverse events and poor quality of life. As HF burden is rapidly rising and emerging epidemically across countries, this has inevitably resulted in considerable economic burden on the healthcare system globally. However, most HF clinical epidemiology has been made on the basis of studies mainly enrolling a Caucasian population in America and Europe, and data about Asian patients were relatively lacking. Herein, we reviewed the incidence, prevalence, lifetime risk, and projected number of HF among Asians. Second, we investigated the annual risks of adverse events (AEs) among patients with HF from trials, registries and “National Health Insurance Research Database (NHIRD)” in Taiwan.

◆ 心臟衰竭之影像研究

心臟衰竭是一種複雜的臨床症候群，心臟結構或功能異常引起症狀，合併利鈉肽升高及肺充血等客觀證據。近年來，心臟衰竭發生率及盛行率不斷增加，除死亡率及再住院率的增加，病人生活品質下降、醫療及社會成本增加，因此值得注意。心臟衰竭分類可以依據左心室射出分率、舒張功能或結構變化，依據心臟衰竭的病因如冠心病、瓣膜性疾病或心肌病變，或是依據病生理如交感神經變化或類澱粉沉積等。隨著心臟疾病治療的進步，心衰的診斷跟治療非常具有挑戰性，確定風險因素和病因是實現最佳結果的必要條件，唯有正確分類針對病因治療，才能改善預後，因此選擇不同的影像檢查工具(包括心臟超音波，電腦斷層，磁共振影，或是核醫檢查)，作為診斷、決定治療策略及評估治療反應、以及短中長期的預後之用，至為重要。本次演講將介紹心臟衰竭影像的最新發展，包括各種影像工具的不同特性，以及整合多種影像檢查 (hybrid images) 等方式，可針對不同特定的心衰疾病進行靶向治療，以達到精準的個人化醫療。

◆ 心臟衰竭之藥物治療

Heart failure is a clinical syndrome characterized by cardinal symptoms of shortness of breath, ankle swelling, and fatigue, and commonly accompanied by typical signs of



elevated jugular venous pressure, lung rales, and peripheral edema. The prevalence of heart failure is around 1-2% of adults, but the clinical course of heart failure is grave, characterized by repetitive hospitalization and high cardiovascular mortality that casts a huge economic burden for the society. Mortality rate has been significantly decreased by several effective drugs in the past 3 decades, but it remains high in observational studies. More recently, several new classes of drugs emerged with significant efficacy in reducing mortality and hospitalization in patients with chronic heart failure with reduced ejection fraction (HFrEF) and preserved ejection fraction (HFpEF). How to integrate these effective therapies and prioritize them was unclear in recent heart failure guidelines and consensus. To integrate information in time and to achieve a streamline process for better patient care, Taiwan Society of Cardiology has recently appointed a working group to formulate a consensus pathway of pharmacological treatment in patients with chronic heart failure. This consensus pathway provides rather a single correct answer; instead, it is complementary to clinical guidelines, acting as a reference to improve patient care.



心肝寶貝－「非酒精性脂肪肝病(NAFLD)/代謝相關脂肪肝病(MAFLD)」與心血管 疾病最新進展：心臟科與肝膽腸胃科醫師的對話

Cross talk of Non-alcoholic fatty liver disease (NAFLD)/Metabolic Associated Fatty Liver Disease (MAFLD) between Cardiologists and Gastroenterologists

主持人：陳文鍾、劉俊人、余明隆、彭成元、趙庭興、李貽恆、侯嘉殷

1020	引言 Opening remarks	陳文鍾(敏盛醫院)
1023	介紹 Introduction	劉俊人(台大醫院胃腸肝膽科)
1025	非酒精性脂肪肝病與心血管疾病處置的台灣專家共識 Position Statement of Taiwan Consensus for management of NAFLD and cardiovascular disease	鄭斌男(成大醫院胃腸肝膽科)
1045	非酒精性脂肪肝病/代謝相關脂肪肝病」與心血管疾 病的交互作用 The interplay between NAFLD/MAFLD and CVD	張瑋婷(奇美醫院心臟血管內科)
1105	關於「非酒精性脂肪肝病/代謝相關脂肪肝病」患者 心血管疾病的診斷及處置 Identification and management of CV comorbidities in NAFLD/MAFLD patients	王朝永(林口長庚醫院心臟內科)
1125	「非酒精性脂肪肝病/代謝相關脂肪肝病」與心血管 疾病的全人整合照護 Linking care of NAFLD/MAFLD and CVD	吳彥雯(亞東醫院心血管中心)
1145	綜合討論 Panel discussion	主持人及全體講師
1155	結語 Closing remarks	侯嘉殷(台北馬偕醫院內科部)

◆ 非酒精性脂肪肝病與心血管疾病處置的台灣專家共識

Metabolic dysfunction associated fatty liver disease (MAFLD) is an increasingly important and common liver disease worldwide. The diagnosis of MAFLD is based on the presence of steatosis on image/histology/serum markers accompanied with presence of at least one of the three metabolic features that include overweight/obesity, type II diabetes mellitus, and metabolic risk factors. MAFLD is not only a liver disease but also a contributing or related factor of cardiovascular diseases (CVD) which lead to the major etiology of morbidity and mortality in patients with MAFLD. Hence, understanding the association of MAFLD and CVD, surveillance and risk stratification of MAFLD in patients with CVD, and current status of management of MAFLD are urgently needed for both hepatologist and cardiologist. The purpose of this Taiwan position statement is to review literature and provide suggestions that cover from epidemiology, etiology, risk factors, risk stratification, non-pharmacological intervention, and potential drug treatment of MAFLD, especially focusing on association with CVD.

◆ 非酒精性脂肪肝病/代謝相關脂肪肝病」與心血管疾病的交互作用

The relationship between cardiovascular diseases (CVDs) and metabolic associated fatty liver disease (MAFLD) is complex. Despite overlapped risk factors for CVDs and MAFLD, patients with MAFLD can develop CVDs and vice versa. Beyond lifestyle, insulin resistance, systemic inflammation, cytokines, oxidative stress, adipokines, nowadays



intestinal microbiota and genetic disorders are also regarded as risk factors. To note, the complex interactions of genetic and environmental risk factors shed light on the disparity in genetic influence on NAFLD and its incident CVD. Recently published guidelines by Asian Pacific Association for the Study of the Liver (APASL), the American Heart Association (AHA), the American Association of Clinical Endocrinology (AACE) and the American Association for the Study of Liver Diseases (AASLD) encompass the fields of liver, heart, and endocrine health. The recommended non-pharmacological interventions include dietary control (Mediterranean diet), lifestyle changes, aerobic exercise, and weight loss surgery, with a suggested weight reduction of 7-10%. Regarding pharmacological interventions, randomized clinical trials and integrated analysis have confirmed that GLP-1 RA can improve liver fibrosis, while the effects of SGLT2 inhibitors on liver fibrosis require further research confirmation. Both GLP-1 RA and SGLT2 inhibitors can improve cardiovascular event risk in patients with type 2 diabetes. Although statins have not shown to improve liver histology, they can reduce the risk of cardiovascular death in MAFLD patients. Other drugs, including metformin and vitamin E, are also mentioned. In this talk, I will briefly introduce the proposed mechanism, risk factors, recommended workflow and management for CVDs and MAFLD.

◆ 「非酒精性脂肪肝病/代謝相關脂肪肝病」與心血管疾病的全人整合照護

代謝相關脂肪性肝病與心血管疾病關係密切，兩者間有密不可分的雙向關聯性，不僅是單純的共病，還有千絲萬縷的關係。大型統合分析跟流行病學就顯示，這類病人的心血管疾病發生率增加，而另一方面心血管病人的代謝相關脂肪性肝病亦不少見。可能機轉可能與上游的代謝異常或是全身炎症反應有關，而肝臟發炎或肝硬化後產生的全身血行動力學變化，也可能會加劇，包括高血壓、心房顫動、心衰竭等疾病。脂肪肝已成為全球關注的重要議題，包括亞太肝臟研究學會、美國心臟醫學會、美國臨床內分泌醫學會與美國肝臟研究學會分別發表相關指引，國內心臟與肝臟學門的專家近年成立對話機制制定國內指引，內容橫跨肝臟、心臟與內分泌領域，涵蓋流行病學、定義、診斷、風險因子、疾病進程、肝臟外表徵、非侵入性檢查、肝臟切片、治療以及肝硬化病人的處理等。基於全人照護的基礎，代謝相關脂肪性肝病患者都應接受心血管風險評估跟疾病篩檢，再依據患者的嚴重度進行初級或次級預防，並給予適當的治療。而針對不同心血管風險的患者，應擬定不同的篩檢與治療策略，鼓勵雙向的篩檢，生活型態的調整如運動減重，目前也有藥物臨床試驗進行，將有助於發展同時保護肝臟與心臟的照護良策。



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301 演講廳

台灣新冠疫情疾病負擔與未來展望

莫德納台灣股份有限公司贊助

主持人：張上淳

1215 Opening

1220 台灣新冠疫情疾病負擔與未來展望

1255 問題與討論

1310 Closing

張上淳(台灣內科醫學會)

方啟泰(台灣大學)

張上淳(台灣內科醫學會)

張上淳(台灣內科醫學會)

◆ 台灣新冠疫情疾病負擔與未來展望

此演講初步將探討台灣新冠疫情對公共衛生的影響，並將重點放在疾病的負擔上，透過量化這種負擔，並與全球其他國家進行比較，進而闡述台灣如何有效地管理這場危機，以及我們可以如何從這次疫情中將所學習到的展望成未來的防疫模式，討論未來如何應對可能的新冠疫情爆發，並將這些經驗應用於其他公共衛生挑戰中。



潛能未明的複製性造血(CHIP)在內科疾病的意義

Clonal hematopoiesis of indeterminate potential (CHIP)

主持人：柯博升、葉士芃

- | | | |
|------|--|-------------------|
| 1330 | 引言 Opening remarks | 柯博升(台大醫院內科部血液腫瘤科) |
| 1335 | 何謂「潛能未明的複製性造血(CHIP)」？
What is Clonal Hematopoiesis of Indeterminate Potential (CHIP)? | 陳志丞(嘉義長庚醫院血液腫瘤科) |
| 1405 | 「潛能未明的複製性造血 (CHIP)」在心臟疾病與其他良性疾病的病理意義
The pathological significance of CHIP in cardiovascular diseases and other benign diseases | 林建嶽(台大醫院檢驗醫學部) |
| 1435 | 「潛能未明的複製性造血 (CHIP)」在癌症的病理意義
The pathological significance of CHIP in cancers | 林建鴻(台北馬偕醫院血液腫瘤科) |
| 1455 | 結語 Closing remarks | 葉士芃(中國附醫內科部) |

◆ 何謂「潛能未明的複製性造血(CHIP)」

Clonal hematopoiesis (CH) is a condition characterized by the accumulation of blood cells arising from a single mutated hematopoietic stem cell, leading to a clonal, or genetically identical, population. As individuals age, hematopoietic stem cells amass somatic mutations. Some mutations may confer survival advantage, leading to expansion of the mutated cells. The process is also facilitated by changes in the microenvironmental niche. Age-driven CH may be detected in individuals without an explicit hematological malignancy diagnosis, and it is not limited to any symptomatic presentation. However, this clonality is evident in certain malignancies like myelodysplastic syndromes, acute leukemias, and myeloproliferative neoplasms, which exhibit significant hematologic anomalies. Notably, mutated hematopoietic stem cells also produce mutated immune effector cells, such as monocytes and lymphocytes. These cells can influence various diseases, particularly those with a chronic inflammatory nature. Multiple studies have confirmed an association between CH and an elevated risk of hematologic cancers. Furthermore, CH has been correlated with increased susceptibility to atherosclerotic cardiovascular disease and other non-hematologic ailments, hinting at its profound effect on immune function, inflammation, and aging-related non-malignant conditions. With more evidence supporting that CH plays an active role in these various pathophysiologies, efforts are ongoing to assess whether stalling CH is feasible and whether such an intervention could be beneficial for human health.

◆ 「潛能未明的複製性造血 (CHIP)」在心臟疾病與其他良性疾病的病理意義

Clonal Hematopoiesis of Indeterminate Potential (CHIP) has emerged as a compelling area of research in the context of cardiovascular disease. CHIP refers to the presence of genetically distinct populations of blood cells originating from a single mutated hematopoietic stem cell. While initially considered benign, recent studies have uncovered its significant implications for cardiovascular health.



CHIP is primarily associated with somatic mutations in genes such as DNMT3A, TET2, and ASXL1, which are involved in DNA methylation and epigenetic regulation. These mutations lead to clonal expansion of affected hematopoietic stem cells, resulting in a higher proportion of mutant cells within the bloodstream.

The connection between CHIP and cardiovascular disease lies in the inflammatory and prothrombotic changes it induces. CHIP-associated mutations can promote a chronic state of inflammation, contributing to the development of atherosclerosis and increasing the risk of acute cardiovascular events, including heart attacks and strokes. Additionally, CHIP has been linked to an elevated risk of congestive heart failure.

Understanding CHIP's role in cardiovascular disease has opened new avenues for research and potential therapeutic interventions. Targeting the inflammatory and prothrombotic pathways activated by CHIP mutations may offer strategies for preventing or managing cardiovascular conditions in affected individuals.

In conclusion, CHIP, once considered inconsequential, has emerged as a significant factor in cardiovascular disease. Its association with inflammation and thrombosis underscores its potential as a valuable target for future research and therapeutic development in the ongoing battle against cardiovascular ailments.

◆ 潛能未明的複製性造血 (CHIP) 在癌症的病理意義

Clonal hematopoiesis of indeterminate potential (CHIP) is a condition characterized by the presence of genetically distinct populations of blood cells originating from a single mutated hematopoietic stem cell. These mutations are frequently located in genes associated with hematological malignancies, such as DNMT3A, TET2, and ASXL1, and are commonly observed in the aging population. It's important to note that CHIP is not a cancer itself but rather a precursor state that carries an elevated risk of developing certain types of blood cancers and, more recently, some solid cancers.

CHIP is strongly linked to an increased risk of hematological malignancies, particularly acute myeloid leukemia, myelodysplastic syndromes, and other myeloid neoplasms. These mutations can disrupt normal blood cell production, potentially leading to the development of full-blown blood cancers.

Emerging research has suggested a potential association between CHIP and certain solid cancers, including colorectal, lung, and breast cancers. One potential mechanism through which CHIP may contribute to cancer risk is chronic inflammation and immune system alterations induced by the mutated blood cells. These changes can create a favorable environment for cancer development.

The presence of CHIP, especially in older individuals, indicates a higher risk of certain cancers. Careful monitoring, management, and regular cancer screenings for those with CHIP are vital for early detection and intervention and may lead to better outcomes for those affected.



偉大的模仿者：血管炎新知

The Great Mimicker: An Update of the Vasculitis Syndrome

主持人：陳怡行、陳得源

1520	簡介 Introduction	陳怡行(臺中榮民總醫院過敏免疫風濕科)
1525	自體抗體及其他與血管炎相關的生物標記 Autoantibodies and other vasculitis-associated biomarkers	李克仁(台大醫院免疫風濕過敏科)
1545	血管炎的皮膚表現和內臟侵犯 Skin manifestation and internal organ involvement in vasculitis	吳建陞(亞東醫院過敏免疫風濕科)
1605	血管炎的最新診斷和治療方式 Updated diagnosis and management of vasculitis	謝祖怡(臺中榮民總醫院過敏免疫風濕科)
1635	結論與結語 Closing remarks	陳得源(中國附醫過敏免疫風濕科)

◆ 血管炎的皮膚表現和內臟侵犯

Vasculitis is a group of diseases with various clinical manifestations resulting from blood vessel inflammation. Different vasculitis has its distinctive distribution of specific sizes or types of blood vessels. Vasculitis can cause the blood vessels' walls to thicken, reducing the blood flow. If blood flow is restricted, it can result in organ and tissue damage. Not all vasculitis presents with visible skin lesions. For example, large vessel vasculitis is not usually presented with palpable purpura. The vasculitis presented as cutaneous vasculitis usually belongs to medium to small vessel vasculitis, including Henoch-Schoenlein purpura, anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis, et al. Another consideration in diagnosis is whether the vasculitis is primary or secondary, such as secondary cutaneous vasculitis associated with hepatitis B or C, or autoimmune disease-associated cutaneous vasculitis, including SLE or Sjogren's syndrome. When cutaneous vasculitis is suspected clinically, try not to be fooled by the mimickers. In clinical practice, many rashes are described as 'vasculitis'. Cutaneous vasculitis is described as palpable purpura, which is usually painful and does not disappear after compression. Unfortunately, patients easily confuse the wording palpable 'purpura' with thrombocytopenic 'purpura'. Also, common cherry angioma, interface dermatitis, or telangiectasis may be described as 'vasculitis.' When vasculitis of the skin is diagnosed, systemic involvement should be evaluated. The diagnoses of specific vasculitis could be established by history taking, physical examination, laboratory tests, and image/pathology study. Systemic review of different organ systems is essential. Systemic manifestations accompany some, but not all, cutaneous vasculitis; an accurate diagnosis and comprehensive explanation will be helpful for the management of patients.



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401 演講廳

Oral presentation

主持人：

時間	講題	報告者
0830	Sex-differences in Asian populations with hemodynamically-significant chronic aortic regurgitation	張有慶
0842	探討新冠肺炎後對於甲狀腺疾病之影響——一項多中心回顧性世代研究	黃立安
0854	針對接受過內視鏡逆行性膽胰管攝影術治療的總膽管結石患者，分析後續發展出肝膿瘍的臨床表現 - 17 年追蹤調查	楊承燁
0906	機器學習模型預測顯著肝纖維化於非酒精性脂肪肝疾病之病態肥胖性患者	呂建宏
0918	煙氣奎寧降低 C 型肝炎患者罹患肝細胞癌之風險：回溯性研究	林俊亨
0930	Bioactivity of pleural fluid in improving early wound healing with keratinocyte and fibroblast proliferation through PI3K/Akt/pS6 and VEGFR2 signaling	張簡芝穎
0942	維生素 D 缺乏症與結核病及隨後的長期死亡風險之相關性：美國以群體為基礎之世代研究	徐瑋
0954	利用卷積神經網絡預測食道巴瑞特症的內視鏡方法	黃裕凱
1006	口服抗病毒藥物對於慢性腎臟病的非住院 COVID-19 患者之臨床效益	黃琪雅
1018	生物可吸收性抗菌袋用於預防心臟植入式電子裝置感染之效果分析	何昆霖
1030	比較 COVID-19 期間接受急性心臟後期照護監督式到院與居家復健的臨床效果	翁郁傑
1042	類風濕性關節炎之光譜學檢測與機器學習應用	高敬翔
1054	探討第一型升糖素受體致效劑及鈉-葡萄糖共同轉運器-2 抑制劑和重大不良心血管事件的相關性:一篇網路統合分析	林裕民
1106	探討台灣南部某醫學中心使用 Per-oral endoscopic myotomy (POEM)治療 Chicago classification 分型 type I 和 type II achalasia 之術後短期結果比較：一項單中心回顧性研究。	陳建廷
1118	2023 年烏克蘭義診臨床報告	韓明榮 蔡維德
1140	綜合討論	



Jardiance SUPER CARE Your Patients from Protecting Kidney, Heart and Metabolic Diseases

台灣禮來股份有限公司贊助

主持人：胡啟民

1215	引言 Opening remarks	胡啟民(台北榮總)
1220	Jardiance SUPER CARE Your Patients from Protecting Kidney, Heart and Metabolic Diseases	林志弘(台大醫院)
1310	結語 Closing remarks	胡啟民(台北榮總)

◆ Jardiance SUPER CARE Your Patients from Protecting Kidney, Heart and Metabolic Diseases

近年來糖尿病的治療進展飛速，糖尿病的治療策略不再僅限於血糖控制，心腎共病的照護及預防已經是必然的趨勢，2023 ADA 治療指引建議，第二型糖尿病患者應同時控制好血糖、血壓、血脂，並挑選有器官保護實證的藥物來減少糖尿病的共病症產生，且同時也更清楚定義，只要 55 歲以上的糖尿病患者，同時合併肥胖、高血壓、抽菸、血脂異常、蛋白尿五項中的兩項，就屬於高心血管風險患者，應及早介入含有器官保護效果的治療藥物。在 2022 年 ADA 和 KDIGO 的共識報告建議中，也有明確點出 SGLT2i 等藥物可作為一線治療的選擇，藉以改善整體糖尿病合併 CKD 患者的預後。



甲狀腺結節及甲狀腺癌之臨床診療

Thyroid nodules and thyroid cancer

主持人：林宏達、李亭儀

1330	引言 Opening remarks	林宏達(臺北榮民總醫院內分泌新陳代謝科)
1335	甲狀腺結節之診斷及治療 Diagnosis and treatment of thyroid nodules	陳瑜忻(台北國泰綜合醫院細胞學科)
1400	甲狀腺結節之非手術性治療 Non-surgical treatment of thyroid nodules	李宇璇(臺中榮民總醫院內分泌新陳代謝科)
1425	放射碘難治性分化型甲狀腺癌之治療 Medical Treatment of Advanced Thyroid Cancer	林冠宇(台大醫院雲林分院新陳代謝暨內分泌科)
1450	結語 Closing remarks	李亭儀(萬芳醫院)

◆ 甲狀腺結節之診斷及治療

甲狀腺結節大多數都屬於良性，可藉由甲狀腺掃描、超音波、細胞穿刺來評估甲狀腺結節。甲狀腺掃描可診斷毒性甲狀腺結節，超音波上從低危險性到高危險性的影像特性，可幫助評估哪些結節需要做細胞穿刺，良性或惡性，在細胞學表現也不一樣。甲狀腺結節可因其良惡性，而有不同的追蹤與治療方向。

甲狀腺乳突癌是甲狀腺最常見的癌症，在超音波上有其特殊的影像特性，也能在細胞學上就作出診斷，其診斷率可高達 95%以上，手術為治療之首選，視情況再搭配放射性碘的給予，預後良好。

◆ 甲狀腺結節之非手術性治療

Thyroid nodules, commonly encountered in clinical practice, often pose the question: "To operate or not?" While surgery remains definitive, non-surgical approaches have gained traction for certain scenarios.

1. When to consider Non-surgical Treatment for thyroid nodule:

- Asymptomatic benign nodules causing cosmetic concerns.
- Recurrent cystic nodules post fine-needle aspiration.
- Surgery-refractory patients due to comorbidities or preference.

2. Non-surgical Modalities:

Thyroid Nodule Ablation: This technique utilizes high-frequency current delivered through a fine needle to heat and ablate the nodule. It's apt for solid nodules, aiming to reduce size and alleviate symptoms.

Ethanol Injection for Thyroid Cysts: For cystic or partly-cystic thyroid nodules, ethanol injection serves as a beneficial tool. By directly injecting alcohol, the cyst gradually shrinks.

Microwave Ablation: Employing microwave energy to ablate the nodule, this modality shares similarities with thyroid nodule ablation but with a different energy source. It's fast, effective, and has fewer complications.

3. The Future Landscape:

Advancements in imaging and molecular diagnostics are refining our approach towards thyroid nodules. The quest is on for techniques with higher efficacy, minimal invasiveness, and fewer side-effects. Collaboration and interdisciplinary dialogue remain paramount



for optimal patient care.

◆ 放射碘難治性分化型甲狀腺癌之治療

The definition of advanced thyroid cancer, as recently defined by International Thyroid Oncology Group, included structural/surgical, biochemical, histological/molecular features, and clinician prerogative. All anaplastic thyroid cancer, and advanced differentiated thyroid cancer (DTC) should be considered for molecular profiling. Several kinase inhibitors had been developed for driver mutations and fusions in thyroid cancer. There are hierarchies of treatment for advanced thyroid cancer. For potentially curable patients, surgical excision of loco-regional diseases is recommended. Other local therapies include external beam radiation, cryoablation and embolization. Radioactive iodine (RAI) therapy should be given for RAI-sensitive DTC. Currently there's no recommendations about the superiority of dosimetric approach over empiric fixed dose radioiodine. Bone remodeling agents may be considered in patients with bone metastases, in addition to radioiodine therapy and local therapy. Radiotherapy and surgery are mainstay treatments for brain metastases before starting systemic therapy. For patients with stable or slowly progressive asymptomatic diseases, a period of observation with TSH-suppressive thyroid hormone therapy may be sufficient. The kinase inhibitors are reserved for patients who have failed other non-systemic therapies, who are radioiodine refractory, and had imminently threatening disease progression, symptomatic diseases or diffuse disease progression.

The kinase inhibitors could be classified into anti-angiogenic drugs and mutation/fusion-directed drugs. The former exerts anti-tumoral effects by targeting VEGFRs. Detailed history taking and shared decision making are necessary before initiating anti-angiogenic drugs considering their common side effects, especially when relative contraindications are present. FDA approved mutation/fusion-directed drugs included pralsetinib and selpercatinib for RET fusion/mutations, larotrectinib and entrectinib for NTRK fusions, dabrafenib plus trametinib for BRAF-mutated RAI-resistant DTC. Targeting with BRAF and MEK inhibitors could suppress MAPK pathway, restore the expression of sodium-iodine symporter (NIS) and ability to uptake RAI in RAI-refractory DTC. These so-called redifferentiation therapy had been shown to be partial responsive in some of the patients. In conclusion, in the new era of thyroid cancer treatment, clinicians should be familiar with molecular testing of tumors and differences between kinase inhibitors as well as their side effect profiles. Meanwhile, multidisciplinary approach and good communications between endocrinologist, oncologist, nuclear radiologists and surgeon were utmost important.



甲狀腺毒血症治療進展

Advance in the treatment of thyrotoxicosis

主持人：黃兆山、盧介祥

1520	引言 Introduction	黃兆山(林口長庚醫院新陳代謝科)
1525	甲狀腺毒血症之治療 Management of thyrotoxicosis and hyperthyroidism	陳怡文(林口長庚醫院新陳代謝科)
1555	甲狀腺眼病變之藥物治療新進展 Medical management of Graves' orbitopathy	陳冠樺(義大醫院新陳代謝科)
1625	亞臨床甲狀腺機能亢進 Subclinical hyperthyroidism	周宣鈺(成大醫院內科部)
1655	結語 Closing remarks	盧介祥(高雄基督教醫院)

◆ 甲狀腺毒血症之治療

甲狀腺毒症是甲狀腺激素過量引起的臨床狀態，症狀從無症狀到嚴重的甲狀腺風暴不一。症狀主要是由於甲狀腺激素過多引起的代謝亢進狀態，如體重減輕、耐熱性差和心悸等症狀，未控制的甲狀腺毒症可能導致嚴重的併發症，包括譫妄、精神狀態改變、骨質疏鬆、肌肉無力、心房顫動、充血性心力衰竭、血栓栓塞性疾病、心血管衰竭甚至死亡。甲狀腺毒症的成因有許多種，針對甲狀腺毒症，建議的治療方法取決於其根本原因。主要的治療方法，主要包括三種：使用硫脲類藥物、放射性碘治療和進行甲狀腺手術，另外也可考慮同時使用β-受體阻滯劑，以緩解出汗、焦慮和心悸等腎上腺刺激症狀。

◆ 甲狀腺眼病變之藥物治療新進展

Graves' orbitopathy is a major extrathyroidal manifestation of Graves' disease. Early identification and referral to specialized centers are fundamental for treatment. Clinical therapy should be individualized based on the severity and activity of the disease. Removal of risk factors is crucial for most patients, which includes smoking, thyroid dysfunction, a high serum level of thyrotropin receptor antibodies, radioactive iodine treatment, and hypercholesterolemia.

Treatment of Graves' orbitopathy depends on clinical severity and activity. The measurement of the severity of Graves' orbitopathy includes assessment of lid aperture, exophthalmos, ocular motility, and assessment of optic nerve status. For patients with mild and active Graves' disease, local treatment and selenium (especially in selenium-deficient areas) are usually sufficient. As for moderate-to-severe patients, first-line therapy should consist of steroid treatment with or without mycophenolate on a weekly basis. If the patient responds poorly, 2nd-line treatment is then considered, including a high dose of prednisolone, immunosuppressants, orbital radiotherapy, and novel agents such as Teprotumumab, Rituximab, and Tocilizumab. Last but not least, sight-threatening orbitopathy should be treated with daily intravenous methylprednisolone for three consecutive days, while orbital decompression surgery should be considered based on the patients' response.

◆ 亞臨床甲狀腺機能亢進

亞臨床甲狀腺功能亢進症的定義是血清促甲狀腺激素低或檢測不到，而游離甲狀腺素和總或游離三碘甲狀腺原氨酸正常。它可能是由於甲狀腺激素內源性產生增加、使用甲狀腺激素治療惡性甲狀腺疾病或甲狀腺低下時無意的過度補充引起。亞臨床甲狀腺功能亢進症的盛行率取決於年齡、



性別和碘攝入量。多見於缺碘地區。臨床表現為心悸、怕熱等輕度甲狀腺毒症症狀，但老年患者的症狀多不明顯。此外，亞臨床甲狀腺功能亢進症與死亡率、骨質疏鬆症和心血管疾病有關。亞臨床甲狀腺功能亢進症的治療存在爭議，因為目前很少研究顯示其有益。目前，是否治療是根據年齡和心臟病或骨質疏鬆症的風險來決定的。



“糖尿病的數位革命”：對新興科技的深入探討

“Transforming Diabetes Treatment”: A Closer Look at the Impact of New Technology in Patient with Diabetes

主持人：黃建寧、林慶齡

0830	引言 Opening remarks	黃建寧(中山醫院內分泌新陳代謝科)
0835	利用 ChatGPT 改善糖尿病患者的護理 Utilizing ChatGPT for Improved Care in Patients with Diabetes	曾耀賢(童綜合醫院新陳代謝科)
0900	精通與改變糖尿病管理：連續性血糖監測的策略、影響和創新 Mastering and Transforming Diabetes Management: Strategies, Impact, and Innovations in Continuous Glucose Monitoring	黃峻偉(禾馨民權內科診所新陳代謝科)
0925	胰島素幫浦技術的進步：新型胰島素幫浦系統的評論 Advancements in Insulin Pump Technology: A Review of the New Insulin Pump System	林世鐸(彰化基督教醫院新陳代謝科)
0950	綜合討論 Panel discussion	主持人及全體講師
1005	結語 Closing remarks	林慶齡(台北國泰綜合醫院內科部)

◆ 利用 ChatGPT 改善糖尿病患者的護理

Diabetes mellitus, a pervasive chronic disease affecting millions worldwide, requires an intricate blend of continuous surveillance, precise control, and sustained care. In the evolving landscape of healthcare, Artificial Intelligence (AI) has emerged as a transformative force. OpenAI's innovative language model, ChatGPT, epitomizes this transformation, harboring the potential to fundamentally alter diabetes management paradigms.

Utilizing state-of-the-art natural language processing and machine learning algorithms, ChatGPT facilitates a multitude of enhancements in diabetes care. These encompass personalized intervention, meticulous data interpretation, and fostering a profound self-awareness, enabling individuals with diabetes to achieve more efficacious control over their condition.

One of the paramount challenges in diabetes care is the necessity for uninterrupted support and surveillance. ChatGPT's omnipresent availability serves as an essential adjunct, providing unceasing guidance. Patients may solicit information regarding symptoms, therapeutic regimens, or dietary concerns, to which ChatGPT responds with accurate and prompt feedback.

Furthermore, maintaining nutritional equilibrium is integral for individuals with diabetes. ChatGPT's role as a "virtual nutritionist" permits personalized dietary planning in alignment with unique needs and predilections. In a collaborative healthcare environment, ChatGPT contributes to decision support among interdisciplinary teams, encompassing physicians, health educators, pharmacists, and dietitians.

The voluminous and intricate data produced by diabetes patients, such as blood glucose



readings, insulin administration, exercise logs, and nutritional intake, could be abstruse. ChatGPT's proficiency in manipulating and deciphering this multifaceted information augments its value as an indispensable instrument in diabetes management. Its capacity to analyze continuous glucose monitoring data, supplemented by graphical representation, further fortifies its utility.

In conclusion, the application of ChatGPT in diabetes management elucidates a novel interdisciplinary nexus, marrying technological advancement with human-centered care. Its multifarious benefits, ranging from personalized counseling to research facilitation, endorse its significance as a superb auxiliary tool in clinical practice. This convergence of AI and healthcare, exemplified by ChatGPT, underscores a promising horizon in chronic disease management.

◆ 精通與改變糖尿病管理：連續性血糖監測的策略、影響和創新

從 1980 年代血糖機發明之後，對於血糖高低的檢測，不再是需要抽血或是驗尿才能知道血糖高低，一般民眾也能在家透過血糖機立即知道當下血糖值。然而血糖值的檢測只能知道當下的血糖，無法持續監控血糖變化。

在 2000 年之後，開始出現連續血糖監控這種儀器。可以透過監測皮下組織間液葡萄糖濃度去隨時得知當下血糖值。但是礙於當時技術限制，連續血糖監控在一開始需要由醫療人員操作，並且搭配血糖機才能知道血糖數值。

過去五年，連續血糖監控技術不斷進步，開始出現可由病人自行回家操作的連續血糖監控，也結合胰島素幫浦開始出現自動遞送胰島素的系統。這讓糖尿病的血糖管理更往上近一步。

這場演講回顧過去的演進，現在已有的技術，展望接下來可能的變化，期待能對於內科醫師有更多幫助。

◆ 胰島素幫浦技術的進步：新型胰島素幫浦系統的評論

Insulin pump therapy has revolutionized diabetes care by providing more precise and flexible insulin dosing with fewer injections. In recent years, there have been several advancements in insulin pump technology. One of the most notable advancements is the development of hybrid closed-loop systems, consisting three components: a continuous glucose monitoring (CGM), an insulin pump, and a control algorithm. The algorithm uses data from the CGM to adjust insulin delivery automatically, mimicking the function of a healthy pancreas. There are several commercial closed-loop systems available, including Medtronic's MiniMed 780G and Tandem's Control-IQ. These systems have been shown to improve glycemic control and reduce hypoglycemia. In addition to commercial products, there are also open-source closed-loop systems available, such as OpenAPS and Loop. These systems allow for greater customization and flexibility but require more technical expertise to set up and maintain. Another advancement is the development of patch pumps, which are small, discreet, and can be worn directly on the skin. In conclusion, advancements in insulin pump technology have improved the lives of people with diabetes. The development of automated insulin delivery systems and patch pumps, has expanded treatment options for people with diabetes.



第 2 型糖尿病的緩解：神話還是現實？

Remission From Type 2 Diabetes: Myth or Reality?

主持人：李弘元、陳榮福

1020	引言 Opening remarks 第 2 型糖尿病的緩解：神話還是現實？	李弘元(台大醫院內分泌新陳代謝科) 廖國盟(臺北市立聯合醫院忠孝院區內分泌新陳代謝科)
1025	Remission From Type 2 Diabetes: Myth or Reality?	
1050	生活型態改變的介入與第 2 型糖尿病的緩解 lifestyle intervention and diabetes remission	范綱志(國立臺灣大學醫學院附設醫院新竹臺大分院內分泌新陳代謝科)
1115	降血糖藥物/減重藥物與第 2 型糖尿病的緩解 anti-diabetic drugs and anti-obesity drugs and diabetes remission	沈峰志(高雄長庚紀念醫院內分泌暨新陳代謝科)
1140	綜合討論 Panel discussion	主持人及全體講師
1155	結語 Closing remarks	陳榮福(高雄長庚紀念醫院內分泌暨新陳代謝科糖尿病中心)

◆ 第 2 型糖尿病的緩解：神話還是現實

糖尿病緩解，是近年來逐漸受到重視的議題。尤其在減肥手術及新型腸泌素治療之下，體重可以下降達 10%-15% 以上。使得糖尿病緩解機會大增。本次演講主要針對糖尿病緩解的定義及臨床意義來做解說。關於糖尿病緩解定義，主要會介紹 2009 ADA 對於糖尿病緩解的定義，及 2021 新版的共識。並呈現兩個版本的不同。另外，臨床上能夠達成緩解的手段，不外降低胰島素阻抗及保護胰島功能。而降低胰島素阻抗最重要的方法，就是減少體重。而保護胰島最重要的方法，大概就是及早穩定血糖及特定藥物治療 包括腸泌素相關的藥物及胰島素增敏劑。最後會談到緩解之後復發的問題，及可能的處置。

◆ 生活型態改變的介入與第 2 型糖尿病的緩解

第 2 型糖尿病 (T2DM) 是一種異質性疾病，佔糖尿病 (DM) 病例的 90-95%，其主要特徵是 β 細胞功能下降，導致胰島素分泌進行性下降和胰島素阻抗。

肥胖是 T2DM 發生和進展過程中一個重要的獨立危險因素，眾所周知，適度持續減重 5-10% 可以通過降低胰島素阻抗、改善葡萄糖耐受性和血糖控制來降低 T2DM 風險，體重減輕和隨之而來的內臟脂肪減少是緩解 T2DM 的關鍵。近年來，眾多臨床證據顯示減重超過 15% 有更能增加 T2DM 緩解的機會，生活型態改變的介入其中包括運動、及飲食。過去，Look AHEAD 研究，通過實施易於使用的生活型態改變介入來解決肥胖問題，可以逆轉 T2DM，降低其風險並延遲其併發症，從而引起我們對 T2DM 治療型式轉變的關注。

由於肥胖和相關 T2DM 代謝疾病的全球流行，人們更加重視成功的生活型態改變的介入。本講題旨在介紹，多重生活型態改變的介入對第 2 型糖尿病緩解的影響。

◆ 降血糖藥物/減重藥物與第 2 型糖尿病的緩解

Type 2 diabetes remission represents a significant achievement in diabetes management, signifying that blood sugar levels have dropped below the diabetic threshold without the ongoing need for diabetes medications. The following criteria to help clinicians and researchers evaluate and study diabetes remission using more consistent terminology and methods:

1. Remission should be characterized as the return of HbA1c to below 6.5%, either spontaneously or following an intervention, and it should persist for a minimum of three



months without the use of regular glucose-lowering medications.

2. In cases where HbA1c is deemed an unreliable indicator of sustained glycemic control over time, alternative criteria can include a fasting plasma glucose level below 126 mg/dL (<7.0 mmol/L) or an estimated HbA1c below 6.5%, calculated from continuous glucose monitoring data.

3. To confirm remission, HbA1c testing should be conducted immediately before an intervention and no sooner than three months after the commencement of the intervention or discontinuation of any glucose-lowering medications.

4. Subsequent assessments to ascertain the long-term maintenance of remission should be performed at least once a year, concurrently with the routine tests recommended for monitoring potential diabetes-related complications.



2023 糖尿病腎病

Diabetic kidney disease

主持人：宋俊明

1330	引言 Opening remarks	宋俊明(成大醫院腎臟科)
1335	獨上高樓望盡天涯路—減緩透析的頭號成因：糖尿病腎病 Atop the towering heights and looking into boundless paths to contain the leading cause of dialysis: diabetic kidney disease	楊皇煜(林口長庚醫院腎臟科)
1400	衣帶漸寬終不悔—瘦瘦針對糖尿病腎病的幫助 No regrets with the slackening belt: the benefits of slendering needles to diabetic kidney disease	楊智超(高雄長庚醫院腎臟科)
1425	驀然回首 那人卻在燈火闌珊處—SGLT2i 面面觀 Turning unexpectedly to find the one amidst fading lights: the multifaceted view of SGLT2i	洪思群(台北慈濟醫院內科部)
1450	綜合討論 Panel discussion	主持人及全體講師
1455	結語 Closing remarks	宋俊明(成大醫院腎臟科)

◆ 衣帶漸寬終不悔—瘦瘦針對糖尿病腎病的幫助

Diabetes with CKD (diabetic kidney disease, DKD) is a progressive condition that may cause kidney failure and contributes significantly to the excess cardiovascular(CV) morbidity and mortality. DKD is treated with direct disease-targeting therapies like blockers of the renin-angiotensin system, sodium-glucose cotransporter-2 (SGLT-2) inhibitors and non-steroidal mineralocorticoid receptor antagonists as well as indirect therapies impacting hyperglycaemia, dyslipidaemia, obesity and hypertension, which all together reduce disease progression. Growing evidence has shown glucagon-like peptide-1 (GLP-1) receptor agonists (RAs) have potential beneficial effects on improving CV and kidney outcomes in people with DKD, and these beneficial effects of GLP-1 RAs are now suggested in international treatment guidelines. GLP-1 RAs are also approved for weight management which is crucially related to the outcomes of patients with T2D. In this lecture, these issues will be reviewed and discussed.

◆ 驀然回首 那人卻在燈火闌珊處—SGLT2i 面面觀

基於大型臨床試驗的優異表現，第二型鈉糖協同轉運蛋白抑制劑(SGLT2i)已成為臨床指引一致建議用於減緩糖尿病或非糖尿病患者慢性腎臟病進展的藥物。SGLT2i 的主要作用導致尿糖和尿鈉排泄，伴隨而來的血流動力學和代謝變化則介導腎臟保護的作用，包括：(1)降低血壓和體液容積過量；(2)減少近端腎小管細胞工作負荷降低急性腎損傷的風險；(3)活化腎小管腎絲球回饋進而收縮入球小動脈降低絲球內壓力，減少尿蛋白的濾出；(4)啟動類似飢餓的營養感應途徑活化生酮作用；(5)減輕體重減少有害脂肪因子的釋放；(6)降低尿酸並改善貧血。當用藥之後 eGFR 下降>30%時，需重新評估病人體液狀況，減少或停用利尿劑和 NSAIDs。基於長期的心腎保護效果，臨床上盡可能維持 SGLT2i 的使用，除非有急性病況導致食物攝取減少，會增加正常血糖酮酸中毒的風險。



糖尿病患者 C 型肝炎篩檢及處置之共識

Consensus for the screening and management of hepatitis C in patients with diabetes

主持人：余明隆、林漢傑

1520	開場 Opening remarks	余明隆(國立中山大學醫學院)
1525	糖尿病患者 C 型肝炎篩檢、診斷及評估之策略 Strategy for screening, diagnosis, and evaluation of HCV in patients with diabetes	王治元(台大醫院新陳代謝科)
1545	糖尿病患者 C 型肝炎之簡易治療策略 A simplified anti-HCV treatment algorithm for patients with diabetes	葉明倫(高醫附設醫院肝膽胰內科)
1605	糖尿病患者 C 型肝炎治療前之評估及治療中之監測 Pre-treatment assessment and on-treatment monitoring for patients with diabetes	歐弘毅(成大醫院新陳代謝科)
1625	糖尿病患者 C 型肝炎治療後之長期追蹤 Post-DAA treatment long-term follow-up among patients with diabetes and chronic hepatitis C	鄭斌男(成大醫院胃腸肝膽科)
1645	綜合討論 Panel discussion	主持人及全體講師
1655	結語 Closing remarks	林漢傑(臺北榮民總醫院內科部胃腸肝膽科)

◆ 糖尿病患者 C 型肝炎之簡易治療策略

C 型肝炎直接作用抗病毒藥物(direct-acting antivirals, DAAs)具有相當高 C 型肝炎治療成功率，且可以顯著降低 C 型肝炎短期及長期併發症風險。因此是現今 C 型肝炎治療之首選。糖尿病合併 C 肝病毒血症患者應接受 C 肝抗病毒治療。若符合 C 肝簡易治療條件可由非肝膽腸胃科醫師進行 C 肝治療。條件主要包括預期壽命超過一年，未曾治療過或曾接受干擾素治療，無晚期肝纖維化。建議使用之藥物包括宜譜莎(Sofosbuvir/Velpatasvir)1 顆，每日一次持續 12 週或艾百樂(Glecaprevir/Pibrentasvir) 3 顆，每日一次持續 8 週。治療期間須維持病患服藥遵從性，監測腎臟及代謝功能與藥物交互作用才能確保療效及安全性。

◆ 糖尿病患者 C 型肝炎治療後之長期追蹤

Direct acting antiviral agents (DAA) treatment result in excellent sustained virological response (SVR) and safety, however, several issues should be noticed in patients with diabetes mellitus (DM) following clearance of hepatitis C virus (HCV). They are management of HCV recurrence and reinfection, monitoring for hepatic and extrahepatic complications, and adjustments in DM medications. For early identification and prevention of reinfection, patients should be informed that the chances of HCV recurrence are higher in high-risk groups, HCV RNA retesting should be performed annually in high-risk groups, and diabetes who failed DAA therapy should be referred to a GI/hepatologist. Monitoring for hepatic and extrahepatic complications include HCV patients with diabetes especially those in the high-risk groups should be monitored for major hepatic complications following SVR; recommended tests for HCC surveillance; risk mitigation education and services should be made accessible to HCV patients with high-risk behaviors; referring to the corresponding specialist if extrahepatic complications occur. For DM patients, following SVR, DM patients should be assessed whether they



need dose adjustments in medications for diabetes and related comorbidities and should be continuously monitored for diabetes-related complications.



C-R-M 風險管理

Cardiovascular-Renal-Metabolic risk management

台灣百靈佳殷格翰股份有限公司贊助

主持人：楊偉勛、李龍騰

1330	引言 Opening remarks	楊偉勛(臺大醫院新陳代謝科)
1335	Dilemma & intersecting barriers of disease management in diabetes with chronic kidney disease	鄭玉堂(東元醫院腎臟科)
1405	New frontiers in the treatment of chronic kidney disease	陳俊宇(基隆長庚腎臟科)
1435	C-R-M approaching in patient with HF regardless diabetes	張鴻猷(振興醫院心臟內科)
1505	總結 Closing remarks	李龍騰(仁濟醫院家庭醫學科)

◆ Dilemma & intersecting barriers of disease management in diabetes with chronic kidney disease

糖尿病腎病變是造成尿毒症主要的原因，佔所有初次洗腎病人的 47%。糖尿病腎病變的定義為糖尿病人出現白蛋白尿，合併腎功能的惡化，是糖尿病常見的併發症之一。由於病人血糖控制不好，全身大、小血管會產生病變，而腎臟微血管受到傷害，影響腎臟功能，早期以出現微白蛋白尿為主要特徵。有 40% 以上的糖尿病病人，會產生糖尿病腎病變，糖尿病腎病變的發生與血糖管理、血壓控制、微白蛋白尿的出現有關，而糖尿病時間的長短，可能會和產生其他相關的併發症，如：糖尿病神經病變、心血管疾病，及視網膜病變等，而遺傳因素可能會有家族傾向。糖尿病腎病變是引起腎衰竭最常見的原因，初期病狀不明顯，必需經過超音波的檢查才能發現腎臟變大，因此常錯失治療先機，最後演變為尿毒症，需接受透析治療，也就是所謂的「洗腎」，不僅增加健保的負擔，病人及家屬的生活品質也大受影響。因此定期篩檢尿蛋白、良好的血糖、血壓控制，維持適當的體重與運動，定期的追蹤檢查都是非常重要，可減少糖尿病腎病變發生的機會。

◆ New frontiers in the treatment of chronic kidney disease

糖尿病治療關鍵一直是共病治療，如何預防共病的發生能提供糖尿病病患更好的未來，其中糖尿病腎病變是大家關注重點，尤其台灣洗腎率一直高居世界第一，對於患者、家屬以及醫療資源都造成巨大的衝擊，主要原因其中之一即是：過去針對腎臟病缺乏有效的治療選擇，即使診斷患者罹患慢性腎病，卻無法給予能延緩腎功能下降，或是延緩洗腎的方案，舊有的 ACEI、ARB 等選擇僅能減少患者的蛋白尿，卻無法有效阻止腎功能的衰退。直到 2015 Empa-Reg Outcome 臨床試驗的發表，初次在糖尿病患者身上看到了 SGLT2i 的腎臟保護效果，而 2022 EMPA-Kidney 的發表，更強化 SGLT2i 的腎臟療效，證實於未罹患糖尿病的腎臟病患者，依然展現出顯著的療效。此課程從 KDIGO 治療指引出發，回顧腎臟病的治療演進，並探討如何結合臨床試驗資料、治療指引，為不同共病症的腎臟病患者提供更適合的治療。

其中慢性腎臟病患最常見的死亡原因為心血管疾病。心臟跟腎臟兩大器官之間的病理交互影響持續受到關注。但隨著患者共病變多，甚至合併糖尿病，除了使的患者更加虛弱之外，同時又



必須合併更多的用藥，讓患者暴露在更高的藥物副作用風險之下。但是，自從 SGLT2i 問世以來，第一個里程碑—Empa-Reg Outcome 中，看到同一個藥物成分，可以同時帶來糖尿病的血糖控制、減少心衰竭住院、延緩腎功能下降、甚至最重要的，減少患者的心血管死亡風險。似乎對於共病的照顧看到了全新面貌，過去幾年間，隨著 SGLT2i 在不同治療領域臨床試驗的發表，證實了 SGLT2i 的全能性。目前在糖尿病的 ADA、心衰竭的 ACC/AHA、腎臟病的 KDIGO 這些國際治療指引，SGLT2i 對於共病的治療已經都提升到最高等級的 1A 治療建議。此次課程帶來不同共病下患者的特徵及臨床受到的限制，並探討 SGLT2i 如何突破這些限制，提供患者更完善的治療預後。

◆ C-R-M approaching in patient with HF regardless diabetes

在台灣心衰竭的病人約 20 萬，有一半的病人合併有糖尿病，被診斷出心衰竭的五年內會有將近一半的病人死亡，死亡率之高可謂是心臟科裡的癌症，而目前即使在沒有禁忌症的情況之下，Guideline 建議用藥仍有相當大比例未被用上。

國際治療指引將 SGLT2i 加入心衰竭的一線標準治療後，讓心衰竭治療進入了新紀元，從 Empa-Reg outcome 證實 Jardiance 在治療糖尿病病患具有心血管保護的效果，

到 EMPEROR-Reduced 以及 EMPEROR-Preserved 試驗數據也再驗證 empagliflozin 在治療心衰竭的療效，不論病人 LVEF 多少，不論是否有糖尿病，都能降低患者的心血管死亡或心衰竭住院的風險，同時減少 eGFR 的下降，

此講題會介紹心衰竭疾病負擔和尚未滿足的治療需求，心衰竭治療藥物臨床試驗設計，主要和次要的試驗終點結果，以及其安全性數據，探討 SGLT2i 在心衰竭臨床治療上的角色，以及做為第一線標準治療的可行性。



肺部疾病的診斷與治療

Diagnosis and treatment of lung diseases

台灣百靈佳殷格翰股份有限公司贊助

主持人：郭炳宏、柯景塘

1520	引言 Opening remarks	郭炳宏(台大醫院胸腔內科)
1525	LABA/LAMA combination: The Golden standard in symptomatic COPD management	陳彥甫(台大雲林分院胸腔內科)
1555	Early detection of IPF: Signs and symptoms introduction	黃俊凱(台大醫院胸腔內科)
1625	Strategies to Optimize the treatment of DVT/PE	蔡承烜(台大醫院心臟內科)
1655	結語 Closing remarks	柯景塘(仁濟醫院心臟內科)

◆ LABA/LAMA combination: The Golden standard in symptomatic COPD management
慢性阻塞性肺病(chronic obstructive pulmonary disease; COPD) 肺阻塞為一慢性疾病，隨著病情進展，肺部功能會不斷衰退，急性惡化的機會就越來越高。依據衛福部統計資料顯示，民國 97-106 年之間，每年有約 5 千人因罹患肺阻塞而死亡，直至民國 111 年位居國人十大死因第九位。

肺阻塞並非罕見的疾病，亦是可經由穩定治療而控制，但死亡率卻為何逐年攀升且居高不下？可以綜歸幾個原因，包括民眾疾病認知不足而對於症狀警覺性低、病程進展緩慢未能被即時確診或是病患即便接受治療，卻因症狀緩解而自行停藥…等，進而錯過黃金治療期，導致不可逆的肺功能下降。

彙整 GOLD 2023 最新指南及具顯著症狀的肺阻塞病患使用 LABA/LAMA 的治療優勢，提供許多臨床醫師及護理人員作為第一線醫療照護參考。

◆ Early detection of IPF: Signs and symptoms introduction
肺纖維化(俗稱菜瓜布肺)致死率相當的高，之前平均存活時間為 0.9 年，比許多癌症來的高，推測可能跟之前沒有藥物有關，演講中會跟大家介紹菜瓜布肺早期徵狀，也就是後背下肺葉聽診有細螺音(Fine crackles)，以及相關疾病的資訊，跟最新的治療方式。

◆ Strategies to Optimize the treatment of DVT/PE
This lecture explores the strategies to optimize the treatment of venous thromboembolism (VTE) including deep vein thrombosis (DVT) and pulmonary embolism (PE). VTE is a critical medical condition that demand timely and effective intervention. The presentation delves into various approaches aimed at enhancing the efficacy of DVT/PE treatment, encompassing both pharmacological and non-pharmacological modalities. The management of VTE involves a delicate balance between preventing thrombus propagation and minimizing the risk of bleeding complications. The lecture covers advancements in anticoagulant therapy, personalized treatment plans, and the timing for invasive management. Additionally, the lecture emphasizes the importance of a multidisciplinary approach, involving healthcare professionals across various specialties to ensure comprehensive patient care. Attendees will gain insights into cutting-edge developments in the field, fostering a deeper understanding of strategies that can significantly improve outcomes in the management of DVT/PE. The optimal strategies aimed at optimizing the management of VTE, acknowledging the evolving landscape of



medical advancements and the critical importance of tailored care for improved patient outcomes.



12/3(日)

301 演講廳

支氣管擴張症的診斷和治療

Diagnosis and Treatment in Bronchiectasis

主持人：簡榮彥、陽光耀、林鴻銓

0830	引言 Opening remarks	簡榮彥(台大醫院內科部胸腔科)
0835	成人支氣管擴張症的流行病學與病理生理學 Pathophysiology and epidemiology of bronchiectasis	謝孟亨(林口長庚醫院胸腔內科)
0900	支氣管擴張的非藥物治療策略 Non-Pharmacologic management of bronchiectasis	藍胃進(台北慈濟醫院內科部胸腔科)
0925	成人支氣管擴張症的藥物治療 Pharmacologic management of adult bronchiectasis	陳彥甫(台大雲林分院內科部胸腔科)
0950	綜合討論 Panel discussion	陽光耀(臺北榮民總醫院胸腔部呼吸 治療科)
0955	結語 Closing remarks	林鴻銓(林口長庚醫院胸腔內科)

◆ 支氣管擴張的非藥物治療策略

Bronchiectasis, characterized by the irreversible bronchial tube dilation, recurrent infections, and compromised lung function, necessitates a holistic approach to management. Pulmonary rehabilitation stands as a cornerstone, offering a multifaceted strategy to enhance the overall well-being of individuals with bronchiectasis. Within this comprehensive approach, education, breathing exercises, airway clearance techniques, and limb exercise training play pivotal roles. Tailored exercise programs encompass both aerobic and resistance training, aiming to boost cardiovascular fitness, respiratory muscle strength, and endurance. These programs are adaptable to individual fitness levels and evolving needs. Breathing techniques, including pursed lip and diaphragmatic breathing, are integral components of bronchiectasis management. Pursed lip breathing, through controlled exhalation, improves ventilation and alleviates breathlessness. Diaphragmatic breathing engages the diaphragm muscle, enhancing lung capacity and optimizing oxygen exchange. These techniques enhance mucus clearance, ventilation, and overall respiratory comfort. Effective airway clearance is paramount in bronchiectasis care. This chronic condition leads to mucus accumulation in the bronchial tubes, increasing the risk of infections. Techniques such as high-frequency chest wall oscillation and positive expiratory pressure devices assist in mobilizing and clearing mucus. By promoting lung hygiene, these methods reduce infection frequency and enhance overall respiratory well-being. Incorporating these non-pharmacological interventions into the management of bronchiectasis is vital. Healthcare providers must tailor exercise regimens, teach effective breathing techniques, and utilize airway clearance devices to enhance the quality of life and clinical outcomes for bronchiectasis patients. A patient-centered approach, customized to individual needs, ensures optimal bronchiectasis care, emphasizing the significance of these non-pharmacological strategies within a comprehensive care plan.



12/3(日)

301 演講廳

國內暨國外特別演講

Special lecture

主持人：張上淳

1020 Opening remarks

1025 Bronchiectasis in 2023

1110 Physician well-being in a time of crisis

1155 Closing remarks

張上淳(臺大醫學院)

Prof. John Kolbe

(President, International Society
of Internal Medicine)

Dr. Eileen D. Barrett

(Chair, Board of Regents,
American College of Physicians)

張上淳(臺大醫學院)



12/3(日)

301 演講廳

慢性阻塞性肺病的治療

Treatment in COPD

主持人：王鶴健、鄭世隆

1330	引言 Opening remarks	王鶴健(臺大醫院癌醫中心)
1335	醫療社會責任的實踐：以吸入型藥物的環境影響為例 Social Responsibility in Clinical Medicine: The Environmental Impact of Inhalers	黃俊凱(台大醫院內科部胸腔科)
1355	COPD 早期診斷及分類學的新概念 The new concept of early diagnosis and taxonomy in COPD	陳彥甫(台大醫院雲林分院內科部胸腔科)
1415	COPD 指引最新治療現況 The update of COPD treatment from the latest guideline	陳家弘(中國附醫內科部胸腔暨重症系)
1435	治療肺阻塞，我們有改善死亡率策略？ Can we reduce COPD mortality?	蔡英明(高醫大附設醫院胸腔內科)
1455	結語 Closing remarks	鄭世隆(亞東醫院)

◆ 醫療社會責任的實踐：以吸入型藥物的環境影響為例

台灣作為一個高度工業化和人口密集的地區，能源的使用對環境和健康帶來了深遠的影響，碳排放成為台灣面臨的嚴重問題之一。碳排放也加劇了氣候變遷，促進溫室效應，造成極端氣候增加，進一步危害公共健康。

近年來從歐盟到台灣，正透過各種的機制，讓碳排放需要付出成本，藉以降低碳排放量，台灣在2023年年初，已經將「溫室氣體減量及管理法」修正為「氣候變遷因應法」，將碳排放納入收費，預計會於2024年上路。

全世界溫室氣體排放，由醫療部門產生的約佔5-8%，壓力定量吸入器中的推進劑(HFA)亦是溫室氣體排放的重要來源，本講題會探討目前HFA的二氧化碳當量以及對環境的影響。以及預計未來可能對於降低碳排放所需的努力。

◆ 治療肺阻塞，我們有改善死亡率策略？

Chronic obstructive pulmonary disease (COPD) has been known as a leading cause of death worldwide. The 5-year mortality of COPD patients was 25.4% (29.9% in males and 19.1% in females). As we know, the causes of COPD are smoking, indoor and outdoor air pollutants, etc.

The treatment strategies for COPD rely on smoking cessation to prevent worsening lung conditions, bronchodilators for symptom control, inhaled corticosteroid (ICS) for acute exacerbation prevention, oxygen supplement for hypoxemic symptoms, etc. However, these strategies do not meet the standard of modern era.

To prolong life expectancy is the goal of modern medicine with no exception for COPD. Few studies have provided the evidence of reduction in mortality. To date, two therapeutic interventions are known to increase the life expectancy of patients with COPD as long-term oxygen therapy (LTOT) and smoking cessation.

Other than these two methods, recently, evidence suggest pharmacological therapies to improve patient life expectancy, focusing on ICSs combined with long-acting



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bronchodilators (LABDs) for a specific group in COPD patients. This talk will focus on recent advance in COPD treatment with the possibilities for better survival in COPD patients.



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空氣品質和肺部疾病

Air Quality and Pulmonary Diseases

主持人：王金洲

1520	引言 Opening remarks 台灣空氣品質的目現挑戰與未來展望	王金洲(高雄長庚紀念醫院胸腔內科)
1523	Air Quality in Taiwan:Current Challenges and Future Perspective 空氣品質與肺部感染	彭啟明(天氣風險管理開發公司)
1546	Air quality and Lung Infections 空氣品質與肺癌	吳大緯(高雄市立小港醫院內科部胸腔科)
1609	Air quality and Lung Cancer 空氣品質與慢性呼吸道疾病	曾健華(衛生福利部雙和醫院胸腔內科)
1632	Air quality and Chronic Airway Diseases	陳家弘(中國附醫內科部胸腔暨重症系)
1655	結論與結語 Closing remarks	王金洲(高雄長庚紀念醫院胸腔內科)

◆ 空氣品質與肺部感染

空氣污染是一個全球性的問題和肺部感染密切關聯。主要空氣污染物包括微小顆粒(PM2.5)深入滯留到呼吸道的深處導致炎症和氧化損傷。臭氧(O₃)是低層大氣污染物引發肺炎和氧化損傷。一氧化碳(CO)無色無味來自燃燒過程，如汽車和室內暖氣，降低氧氣攜帶能力。硫化物(SO₂)和氮氧化物(NO_x)來自工業排放和交通污染與水蒸氣反應成硫酸和硝酸。揮發性有機化合物(VOCs)來自汽車排放、化工廠。常見感染性疾病如：肺炎、肺結核、流感、COVID-19、SARS-CoV-2、黴菌性肺病等。總之，保持良好空氣品質避免暴露高污染環境，採取預防措施，接種疫苗提高免疫力、保持個人衛生，可減少感染風險。



解析腎臟之旅：由急性腎損傷蜿蜒而至慢性腎臟疾病的轉變

Unraveling the Renal Journey: Navigating the Transition from Acute Kidney Injury to Chronic Kidney Disease

主持人：吳麥斯、洪冠予

0830	引言 Opening remarks	吳麥斯(衛生福利部雙和醫院腎臟內科)
0835	水能載舟亦能覆舟，急性腎損傷轉至慢性腎病的水分控制 AKI to CKD : fluid management	張智翔(林口長庚醫院加護腎臟科)
0900	阻止 AKD 轉成 CKD，我們能作什麼？ Halting the Progression from AKI to CKD: Exploring Strategies for Intervention and Prevention	黃道民(台大醫院腎臟科)
0925	集微行之力，能成大道乎？-- 以組合式照護及生物標記預防急性腎損傷 Can the Power of Little Actions Lead to Great Impact? - Preventing Acute Kidney Injury through Integrated Bundle Care and Biomarker Utilization	潘恆之(基隆長庚紀念醫院腎臟科)
0950	綜合討論 Panel discussion	主持人及全體講師
0955	結語 Closing remarks	洪冠予(台北醫學大學)

◆ 阻止 AKD 轉成 CKD，我們能作什麼？

Acute Kidney Disease (AKD) has the potential to progress into Chronic Kidney Disease (CKD), a condition that poses significant health risks and necessitates prolonged treatment. This talk will provide an review of the experiences and approaches adopted by National Taiwan University Hospital in managing the transition from AKD to CKD, underlined by current empirical evidence and care protocols for AKD.

At our institute, a multi-disciplinary approach is emphasized, involving early detection, rigorous monitoring, and tailored intervention strategies aimed at mitigating the risk factors and addressing the underlying causes of AKD. We employ a combination of active surveillance, pharmaceutical interventions, and lifestyle modifications to slow down or prevent the progression of AKD to CKD. Our efforts are deeply rooted in evidence-based practices, informed by the latest research and clinical trials, ensuring the effectiveness and adaptability of our interventions.

The accumulated experiences from our institute demonstrate that the progression from AKD to CKD can be significantly impacted by timely and appropriate interventions. These interventions are not only medical but also involve patient education and community engagement, emphasizing the importance of lifestyle modifications, patient compliance, and regular follow-ups.

Moving forward, continuous research and innovation are paramount to furthering our understanding of the mechanisms underlying the progression of AKD to CKD and developing more effective preventive and therapeutic strategies. The amalgamation of evolving scientific insights and practical experiences will be instrumental in refining care



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protocols and shaping future perspectives in the management of kidney diseases, aspiring to improve patient outcomes and enhance the quality of life for individuals affected by these conditions.

◆ 集微行之力，能成大道乎？-- 以組合式照護及生物標記預防急性腎損傷

急性腎損傷是住院患者中常見的併發症，尤其在危重病例或進行重大手術的患者中更為普遍。現今有越來越多的證據表明，急性腎損傷會引起嚴重的短期和長期併發症，包括增加透析依賴性慢性腎臟疾病、心血管事件和死亡，其重要性不言而喻。因此，早期識別和及時處理急性腎損傷，以避免腎功能進一步惡化，是臨床上一個很重要的課題。

國際組織 KDIGO 在 2012 年的急性腎損傷處理指南，提出了許多包括預防和管理急性腎損傷的建議，包括優化血流動力學和液體狀態，預防腎毒性刺激，並避免高血糖。這些措施被稱為「急性腎損傷組合式照護」。雖然目前已有許多關於急性腎損傷組合式照護的研究，但其基本組成部分和具體目標尚未標準化。另一方面，現今亦有許多新的生物標記被報導能夠更早地診斷 AKI，例如中性粒細胞明膠酶相關脂蛋白 NGAL 和細胞週期停滯標記 TIMP-2 x IGFBP7。

我們透過系統性回顧，比較了結合生物標記引導分層的急性腎損傷組合式照護與常規護理對於改善急性腎損傷預後的效果。這項研究提供了有力的科學數據，證明了使用生物標記引導的急性腎損傷組合式照護所帶來的積極影響。這項發現不僅為臨床醫師提供了醫療處置上的參考依據，也為患者提供了更大的希望。



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上消化道常見疾病診斷與治療之最新進展

Recent advances in the management of common upper gastrointestinal diseases

主持人：吳明賢、吳俊穎、吳登強

1020	引言 Introduction	吳明賢(台大醫院)
1025	胃食道逆流疾病診斷與治療之最新進展 Gastroesophageal reflux disease	曾屏輝(台大醫院胃腸肝膽科)
1045	消化性潰瘍出血 Peptic ulcer bleeding	鄭修琦(成大醫院胃腸肝膽科)
1105	幽門螺旋桿菌的根除治療 Management of Helicobacter pylori infection	劉志銘(台大醫院胃腸肝膽科)
1120	功能性消化不良 Functional dyspepsia	盧俊良(臺北榮民總醫院胃腸肝膽科)
1145	討論與結語 Panel discussion and conclusion	主持人及全體講師

◆ 胃食道逆流疾病診斷與治療之最新進展

Gastroesophageal reflux disease (GERD) has been associated with a broad spectrum of symptoms, and have a great impact on the quality of life of patients. Currently, proton pump inhibitor (PPI) remains the most potent anti-secretory agent for acid suppression, symptomatic relief and mucosa healing, and is the drug of choice in the treatment of GERD. However, up to 40% of patients have poor responses to PPI. The underlying pathophysiology involved in refractory GERD is complex. Identifying factors that might attribute to the poor treatment response of PPI in GERD is very important to improve the overall treatment responses. Currently, endoscopy is the mainstay of diagnostic tool for patients with reflux symptoms in Taiwan, but a great proportion of patients have no esophageal mucosa changes on examination, so call non-erosive reflux disease (NERD). The 24-h MII-pH catheter combines impedance channels to conventional pH catheters and helps to establish the reflux-symptom association with symptoms index (SI) and symptom association probability (SAP), and therefore is very useful in clarifying the underlying mechanism of refractory GERD. With the aid of 24-h MII-pH monitoring, traditional GERD patients, who are quite heterogeneous from a pathophysiological point of view, could be further categorized into 1. endoscopic positive; 2. true NERD (patients with an excess of acid reflux); 3. hypersensitive esophagus to acid reflux; 4. hypersensitive esophagus to non-acid reflux) and 5. functional heartburn. For patients who could not tolerate catheter-based ambulatory MII-pH monitoring, utilization of prolonged wireless reflux monitoring off PPI therapy also helps to characterize severity of GERD. Absence of pathologic acid exposure on ambulatory reflux monitoring (AET <4.0% on all 4 days of the prolonged wireless pH study) with a normal endoscopy rules out GERD. Erosive esophagitis of Los Angeles Grade B or higher, and/or AET \geq 6.0% on 2 or more days constitutes conclusive GERD evidence. Therapeutic strategies should be directed based on the GERD phenotype and start with the least invasive and safest treatment options. Moreover, personal factors focused on visceral anxiety and hypervigilance need to be addressed because these features can affect symptom severity and health care use. Application of motility studies, including HRM, MII-pH, and wireless pH monitoring helps to clarify the mechanism of refractory reflux symptoms and tailor treatment strategies (personalized/precision medicine).



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◆ 消化性潰瘍出血

Peptic ulcer bleeding is a common disease and rebleeding is an independent risk factor leading to mortality. Endoscopic hemostasis plus 3-day intravenous proton pump inhibitor (PPI) infusion and subsequent 4- to 8-week oral PPI are the protocol to treat peptic ulcer bleeding; however, some patients are still at risk of rebleeding. Diagnostic testing is employed to predict the risk of early (the first 72 hours), short-term (28 days), and long-term (>1 year) rebleeding and identify the indication for the optimal duration and dose of PPI to reduce the risk.

Within the first 72 hours, Forrest class Ia/Ib lesions and hypoalbuminemia < 3.5 g/dL at index endoscopy are factors to predict persistent major stigmata of recent hemorrhage (SRH) after receiving 2- or 3-day PPI infusion. An additional tranexamic acid powder application on ulcers alongside endoscopic hemostasis reduces the risk of rebleeding and the persistence of major SRH. At the short-term follow-up, comorbidities and Rockall scores ≥ 6 are indicators to use a prolonged intravenous standard-dose PPI infusion, 7-day course or a double dose of oral PPI, 14-day course after first 3-day intravenous PPI infusion.

The issue on peptic ulcer disease could not get closed although *H. pylori* infection is eradicated. Multiple drug intake due to old age and comorbidities induces peptic ulcer disease. At the long-term follow-up, Rockall scores ≥ 6 at index endoscopy is a risk factor to have rebleeding over subsequent years. A prolonged oral PPI therapy, 52-week course reduces such risk.

In conclusion, Forrest class Ia/Ib lesions and hypoalbuminemia are the predictors of early rebleeding. Endoscopic hemostasis plus topical tranexamic acid powder application reduce the risk of early rebleeding. The Rockall score is useful to predict the risk of short-term and long-term rebleeding and select patients to receive the optimal duration and dose of PPI.

◆ 幽門螺旋桿菌的根除治療

H. pylori infection is the major etiological factor of gastric cancer and peptic ulcer disease. The antibiotic resistance rate of *H. pylori* infection has increased in Taiwan. Therefore, optimization of eradication therapy through the use of adequate treatment length, dosage of PPI and antibiotics, and bismuth or non-bismuth quadruple therapy can increase the efficacy of first-line therapy. Quadruple therapy, including the bismuth quadruple therapy for 10-14 days or the non-bismuth quadruple therapy for 14 days, is recommended as the first-line therapy. Triple therapy for 14 days is acceptable as an alternative in regions with the lower clarithromycin resistance. Bismuth quadruple therapy for 10-14 days is suggested as the first-line therapy for patients who report penicillin allergy. Antibiotic susceptibility testing guided therapy can be an alternative choice. Confirmation of treatment response is suggested after eradication therapy for *H. pylori* infection. The bismuth quadruple therapy, levofloxacin based triple therapy, or levofloxacin based quadruple therapy can be used as the second-line treatment for *H. pylori* infection. The susceptibility testing guided therapy or the empirical levofloxacin-based therapy is suggested for patients with penicillin allergy after failure from bismuth quadruple therapy in the first-line treatment. Susceptibility testing guided therapy is



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recommended after two or more treatment failures. Bismuth or non-bismuth quadruple therapies containing the high dose of proton pump inhibitors for 14 days are recommended. For those who fail after three or more eradication therapies, rifabutin based triple or quadruple therapy is recommended as the fourth-line rescue regimen.

◆ 功能性消化不良

Dyspepsia is the most common encountered symptom complex in both general or gastrointestinal practitioners' clinic. The dyspeptic symptoms include epigastric pain or burning, postprandial fullness, or early satiety, which symptoms are usually referable to the gastroduodenal region. No matter in Western or Eastern countries, it is estimated that around 80-90% of individuals with dyspepsia have no structural explanation for their symptoms, thus be called as functional dyspepsia (FD).

FD affects around 10-20 % of otherwise healthy individuals in the general population. The reported risk factors for FD comprise of psychological comorbidities, acute bacterial/viral gastroenteritis, female gender, smoking, medications (such as non-steroidal anti-inflammatory drugs), and *Helicobacter pylori* (*H. pylori*) infection. The pathophysiology in FD remains unclear, but has been attributed to disordered brain-gut interaction, motility disturbances, visceral hypersensitivity, gastrointestinal dysbiosis, as well as mucosal and immune dysfunction. Typically, FD patients would display normal endoscopy. Nevertheless, we should be aware that to arrange endoscopy in all dyspeptic patients is unnecessary and American Gastroenterology Association (AGA) suggest its use be restricted to people aged 55 years and older, or to those with alarm symptoms (such as weight loss or vomiting).

Because of its unclear pathophysiology, the treatment for FD remains unsatisfactory. The difficulty in facing FD patients because the condition is always chronic with fluctuating symptoms. AGA guideline suggest eradication therapy should be offered to FD patients with positive test for *H. pylori*. Other potential therapies would include proton pump inhibitors, histamine-2 receptor antagonists, prokinetics, central neuromodulators, and psychological therapies.



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興腎炎論 – 腎病照護的原則與實踐

台灣費森尤斯卡比股份有限公司贊助

主持人：田亞中

1215 Opening

1220 興腎炎論-腎病照護的原則與實踐

1300 Q&A session

田亞中(林口長庚紀念醫院內科部)

陳冠興(林口長庚紀念醫院腎臟科)

全體講師暨主持人

◆ 興腎炎論-腎病照護的原則與實踐

台灣慢性腎臟病 (CKD) 盛行率與發生率居高不下，早期腎臟病治療著重糖尿病、高血壓與共病症治療，後期則逐漸把重心放在保護腎臟的治療。本課程將以醫學中心腎臟科醫師的角度，介紹台灣的 CKD 照護系統、early CKD 與 preESRD 照護目標與重點、現行的治療準則、低蛋白飲食對腎臟病患的益處與注意事項，並介紹酮酸胺基酸療法的證據、指引、健保給付規範，最後再以案例分享如何成功地照護腎病患者。



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沉默的疫情-抗藥性病原

Silent epidemic - drug resistant pathogens

主持人：王復德、張峰義

1330	引言 Opening remarks	王復德(臺北醫學大學附設醫院感染科)
1335	抗藥性葛蘭氏陽性菌 Resistant gram-positive bacteria	黃盈綺(國家衛生研究院)
1405	抗藥性葛蘭氏陰性菌 Resistant gram-negative bacteria	郭書辰(國家衛生研究院)
1435	新冠肺炎藥物發展 Development of Drugs for COVID-19	王振泰(台大醫院感染科)
1455	結語 Closing remarks	張峰義(三軍總醫院感染科)

◆ 抗藥性葛蘭氏陽性菌

自 1998 年起，國家衛生研究院開始執行台灣微生物抗藥性監測計畫 (Taiwan Surveillance of Antimicrobial Resistance, TSAR) 至今，此計畫監測台灣重要臨床致病菌的抗藥性以及分子流行病學。革蘭氏陽性菌包括金黃色葡萄球菌、腸球菌、鏈球菌為 TSAR 主要監測的重要致病菌。本演講將著重於台灣近年來革蘭氏陽性菌的抗藥性變化。

另外，為因應 COVID-19 後常用口服抗生素的短缺，TSAR 研究團隊整理了門診常見致病菌的抗藥性變化，包括肺炎鏈球菌、大腸桿菌以及克雷伯氏桿菌等等。藉由這些資料，提供臨床醫師更多治療門診常見感染的口服抗生素選擇。

◆ 抗藥性葛蘭氏陰性菌

國衛院執行之全國微生物抗藥性監測計畫 Taiwan Surveillance of Antimicrobial Resistance (TSAR) 已有 20 多年歷史，二十多家醫院每兩年提供臨床菌株，使國衛院得以進行細菌學與分生實驗，其結果對於監測台灣抗藥性趨勢、抗藥病原體/機制的偵測、新藥研發、政策建言等各方面皆有貢獻，本節演講將介紹 2022 年重要 Gram negative 細菌 (Escherichia coli, Klebsiella pneumoniae, Acinetobacter baumannii, and Pseudomonas aeruginosa) 之抗生素敏感性或相關抗藥基因。這些資料也會與過去年度/不同國家/肉品上細菌做比較。近年有許多抗生素上市，我們也將介紹 TSAR 亦以搜集的抗藥菌株測試新藥的結果。TSAR 抗生素敏感性資料 (不含醫院個資) 皆公開於 TNAK website (<https://infection.nhri.edu.tw/>)，供各界參考。

第二部分將介紹新興病原體，伊莉莎白國王菌(Elizabethkingia spp.)。近年台灣各重症病房偵測到 Elizabethkingia spp.，因其多重抗藥的特性，治療是一大難題，而目前也無強證據支持的治療建議，本次演講將概述 Elizabethkingia spp.之抗藥機制與不同抗生素在動物之治療效果，希望能提供臨床在使用抗生素時的參考，然其臨床效果仍須更多臨床研究驗證。



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疫苗發展：從預防到健康促進

Vaccine development - From prevention to health promotion

主持人：陳宜君、黃建賢

1520	引言 Opening remarks	陳宜君(台大醫院感染科)
1525	疫苗發展：由科學研究到臨床試驗 Vaccine development: from bench to clinical trials	謝思民(台大醫院感染科)
1555	疫苗接種與公共衛生 Vaccination for infectious disease prevention	李欣蓉(高雄榮民總醫院感染科)
1625	疫苗接種與健康促進 Vaccination for health promotion	劉伯瑜(臺中榮民總醫院感染科)
1655	結語 Closing remarks	黃建賢(新光醫院感染科)

◆ 疫苗發展：由科學研究到臨床試驗

As infectious diseases continue to emerge and spread across Southeastern region and/or the whole world, vaccine has become a vital tool in controlling their widespread transmission of diseases. However, we could not be sure whether international pharmaceutical companies can supply these necessary vaccines to Taiwan timely or not. Thus, Taiwan should have biotechnology capabilities, top-quality clinical trials, and capacity of mass manufacturing to produce our own domestic vaccines. This will help to secure the nation's health system, especially when the shortage of international vaccine supply. Therefore, the development of the domestic vaccines is an essential component of national security, particularly in the event of life-threatening infectious diseases outbreaks. In this lecture, I will apply the development of domestic COVID-19 vaccine as an example.

In response to the pandemics of human infections due to SARS-CoV-2, many vaccine candidates from several platforms have been developed rapidly under the process of rolling review and the global policy of emergency use authorization (EUA). Due to the possibility of shortage of international vaccine supply, Taiwan has implemented several programs to develop and manufacture the domestic protein-based COVID-19 vaccine to face the threat of pandemics alongside purchasing adenovirus-vectored vaccines and mRNA vaccines. In this presentation, I will discuss the development of our domestic protein-based vaccine, including the choice of antigen and adjuvants, the data of animal studies, the rationale behind phase I trial design, the challenges faced during phase II clinical trial design and execution, the data interpretation using correlate of protection (COP) modeling by applying the WHO internal standard reference of convalescent serum to estimate the vaccine efficacy, the phase III immunobridging trial, and phase III Solidarity Trial sponsored and conducted by WHO.

◆ 疫苗接種與公共衛生

疫苗接種是預防傳染病最具有效益的措施，對個人可以避免傳染性疾病的發生，對整體社會則可以經由群體免疫達到遏止傳染病在社區中的傳播。過去台灣經由有效的疫苗接種政策推行，甚至可達到根除疾病，包括小兒麻痺、天花、白喉已經完全消失。台灣推動 B 型肝炎全面預防注射 30 年後，成功效阻斷母嬰垂直感染使得台灣 6 歲幼童帶原率由 10.5% 已降至 0.8% 以下，達到世界衛生組織小於 1% 目標。也證實了 B 型肝炎疫苗可以預防肝炎的發生，是一個成功的疫苗接種對



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公共衛生影響的案例。

在成人的疫苗種類中，和公共衛生相關的包括季節性流感疫苗和肺炎鏈球菌疫苗、在老年人和高風險族群優先施打，有效減少每年流感重症和需要住院的肺炎個案數。近年來，新冠肺炎疫苗和猴痘疫苗對全世界的疫情控制的效果，大家也是有目共睹。對於高風險組群喝止群突發，疫苗也有其效果，例如 A 型肝炎疫苗、和猴痘。近年較新的疫苗包括人類乳突病毒(HPV)疫苗，也有預防肛門癌和口腔癌的效果，雖然長期效益還需要更多證據。

預防勝於治療，能有好的疫苗，好的接種推動政策和計畫，進而達到有效疾病的預防甚至根治，疫苗實為促進公共衛生的重要策略之一。

◆ 疫苗接種與健康促進

Vaccines have historically focused on preventing infectious diseases through stimulating adaptive immune responses that block pathogen transmission and infection. However, recent advances are expanding their application towards more proactive promotion of health and wellbeing. Novel vaccine technologies are enabling precise activation of innate and adaptive arms of the immune system to optimize responses against both infections and chronic conditions such as cancer, autoimmune disorders, and Alzheimer's disease. Adjuvant systems can elicit targeted immunogenic reactions, while advanced delivery mechanisms are allowing vaccines to stimulate mucosal, cellular, and humoral immunity. Personalized vaccines catered to individuals' genomic profiles, lifestyles, and exposures are promoting resilience. Alongside these innovations, vaccination policies, campaigns, and recommendations are transitioning from a narrow preventive model to integrated lifelong health management.

Community-based promotion, participatory design, and personalized platforms are driving accessibility, relevance, and uptake. Funding and research priorities have expanded beyond infectious diseases to therapeutic and health-promoting vaccines. As they continue to evolve, vaccines are poised to not just provide baseline protection against pathogens, but directly enhance health and quality of life at all stages through smart immune modulation. This paradigm shift promises to accelerate development of vaccines that promote wellness and longevity in a manner personalized for diverse populations.



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沉默的 노인 殺手

The Silent Elderly Assassin

主持人：詹鼎正、陳永銘

0830	引言 Introduction	詹鼎正(台大醫院老年醫學部)
0833	衰弱成人的臨床評估與介入處置 Clinical Assessment and Intervention Approaches for Frail Older Adults	林坤霖(台大醫院老年醫學部)
0901	肌少症與肌少性肥胖 Sarcopenia and Sarcopenic Obesity	林文元(中國附醫健康醫學中心)
0929	2023 台灣成人骨質疏鬆症防治之共識指引 Consensus Guidelines for the Prevention and Treatment of Osteoporosis in Taiwanese Adults 2023	黃兆山(林口長庚紀念醫院新陳代謝科)
0957	結語 Closing remarks	陳永銘台大醫院北護分院

◆ 衰弱成人的臨床評估與介入處置

衰弱是一種身體虛弱和功能下降的狀態，通常伴隨著高齡、疾病或長期處於慢性壓力下的成人。評估衰弱成人的臨床評估是一個多面向的過程，需要綜合考慮生理、心理和社會因素。這包括評估患者的肌力、體重變化、活動能力、認知功能、情緒狀態和社交支持。醫療專業人員還應該收集病史信息，包括患者的現有疾病和用藥情況。

而衰弱的介入處置包括制定個別化的治療計劃，以改善患者的身體狀態和生活品質。這可能包括運動和體力活動的建議，營養諮詢，藥物管理，心理支持和社交參與的促進。此外，有時需要處理潛在的基礎疾病，以處理衰弱的根本原因。總之，衰弱成人的臨床評估和介入處置是一個綜合性的過程，旨在提高患者的整體健康狀態。這需要醫療團隊的合作，以確保患者獲得最適切的治療和支持，並提供他們應有的關心和照護。

◆ 2023 台灣成人骨質疏鬆症防治之共識指引

骨質疏鬆症主要是骨骼質量減少、密度降低，結構遭破壞引起疏鬆而易骨折，常見於髖部、脊椎和前臂遠端。根據流行病學資料，台灣髖部骨折發生率名列亞太地區第一，所以臺灣被歸屬為高風險的國家。中華民國骨質疏鬆症學會，於2023年，更新骨鬆防治指引，提供臨床醫護人員有關骨質疏鬆症之預防、診斷及治療的參考。

骨質疏鬆症預防與治療之目的是減少骨折，因此篩檢骨質疏鬆，有系統地辨識高風險案例，可防治骨質疏鬆，減少骨折發生。

骨質疏鬆的預防應補充足夠之鈣與維生素D，適度日曬，運動促進肌肉力量、提升身體的柔軟度及協調性，生活習慣上應避免過量使用酒、咖啡，並維持適當體重等。治療上先評估的骨折風險，再進一步討論治療的必需性，以及適合的治療方式。



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自體免疫風濕疾病特殊器官侵犯之新進展

Updates on Specific Organ Involvement Associated with Autoimmune Rheumatic Diseases

主持人：林世昌、陳明翰

1020	引言 Opening remarks	林世昌(國泰醫療財團法人內湖國泰診所)
1025	結締組織疾病相關之間質性肺病與自體免疫特徵之間質性肺炎 Connective Tissue Disease Associated Interstitial Lung Disease and Interstitial Pneumonia with Autoimmune Features	陳信華(臺中榮民總醫院過敏免疫風濕科)
1045	自體免疫風濕疾病之腎臟侵犯 Renal Involvement in Autoimmune Rheumatic Diseases	吳建陞(亞東醫院過敏免疫風濕科)
1105	自體免疫風濕疾病對心血管之影響 Cardiovascular Consequences of Autoimmune Rheumatic Diseases	曹彥博(臺北榮民總醫院全人整合醫學科)
1125	自體免疫風濕疾病之癌症風險 Cancer Risks in Autoimmune Rheumatic Diseases	謝祖怡(臺中榮民總醫院過敏免疫風濕科)
1145	綜合討論 Panel discussion	陳明翰(臺北榮民總醫院內科部過敏免疫風濕科)
1155	結語 Closing remarks	陳明翰(臺北榮民總醫院內科部過敏免疫風濕科)

◆ 結締組織疾病相關之間質性肺病與自體免疫特徵之間質性肺炎

Connective tissue diseases (CTDs) exhibiting characteristics of interstitial lung involvement encompass a spectrum of conditions, including systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), systemic sclerosis (SSc), dermatomyositis (DM), polymyositis (PM), ankylosing spondylitis (AS), Sjogren syndrome (SS), and mixed connective tissue disease (MCTD). When assessing the histopathology of lung biopsies in CTD-related ILDs (CTD-ILDs), the presence of multi-compartmental involvement serves as a pivotal diagnostic clue, prompting the inclusion of CTD among the primary etiological differential considerations. A wide array of histological patterns can be observed in patients with CTD-ILDs, including nonspecific interstitial pneumonia (NSIP), usual interstitial pneumonia (UIP), organizing pneumonia, apical fibrosis, diffuse alveolar damage, and lymphoid interstitial pneumonia. Notably, the NSIP pattern prevails as a predominant feature, particularly in the context of SSc, DM, PM, and MCTD, followed by the UIP pattern. Individuals with symptomatic or progressive fibrosing CTD-ILDs can benefit from the administration of immunosuppressive or antifibrotic agents as part of their treatment regimen.

Interstitial pneumonia with autoimmune features (IPAF) is a research classification introduced by the European Respiratory Society and the American Thoracic Society Task Force on Undifferentiated Forms of Connective Tissue Disease-associated Interstitial Lung Disease. This classification serves as an initial effort to create a consistent



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framework for defining, identifying, and researching patients with ILD who exhibit autoimmune characteristics but do not meet the criteria for a well-defined connective tissue disease. Since its publication in July 2015, IPAF has garnered considerable attention. Institutions worldwide have reported their retrospective findings of patient cohorts meeting IPAF criteria, and suggestions for refining these criteria have emerged.

◆ 自體免疫風濕疾病之腎臟侵犯

Autoimmune diseases can affect various organs in the body, including the kidneys. Glomerulonephritis is characterized by inflammation of the glomeruli in the kidneys, which may present with nephritic or nephrotic syndrome. The presence of edema, hypertension, proteinuria, or hematuria should alert the clinical suspicion of glomerulonephritis, which is usually immune-mediated. It can occur alone or as part of another systemic disease, such as systemic lupus erythematosus or anti-neutrophil cytoplasmic autoantibody (ANCA)-associated vasculitis (AAV). Severe or prolonged inflammation associated with glomerulonephritis can damage the kidneys, and immunosuppressants are usually required for disease activity control. However, the treatment response is sometimes unsatisfactory, and the immune reaction in the kidney is not fully understood. Lupus nephritis is a prototype of an autoimmune disease that may affect the kidneys. Deposition of the immune complex and complement in the pathology of kidney biopsy is seen in Class III and IV of lupus nephritis. In contrast, global or segmental subepithelial immune deposits are noted in Class V of lupus nephritis. Mycophenolate or cyclophosphamide is the current mainstay of therapy. ANCA-associated glomerulonephritis is pauci-immune, i.e. no immune complex deposition in pathology. The tissue damage can be attributed to activated neutrophils. Rituximab, which depletes B cells and decreases ANCA levels, has become a standard treatment. These diseases exemplify various immune mechanisms involved in autoimmune kidney disease. It is still a mystery why and how autoimmune diseases involve specific organs. Not all autoimmune kidney diseases have specific markers or treatments. A complete understanding of organ pathophysiology and immune response in specific microenvironments is necessary for decoding the puzzle of autoimmune disease.



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Early initiate with DPP4i: How does Simplicity Matter T2D Patients' Journey

台灣百靈佳殷格翰股份有限公司贊助

主持人：蔡世澤

1215 Opening

蔡世澤(振興醫院)

1225 Early initiate with DPP4i: How does Simplicity Matter T2D Patients' Journey

廖國盟(臺北市立聯合醫院忠孝院區新陳代謝科)

1305 Discussion and Closing

All Experts/蔡世澤醫師

◆ Early initiate with DPP4i : How does Simplicity Matter T2D Patients' Journey

糖尿病是非常重要的腦心血管風險因子，良好的血糖控制乃是為了減少微血管病變與大血管病變等糖尿病之長期併發症的重要根本。

2002 年發表於 Diabetes Care 期刊的研究即證實，DPP4i 可在 4 週治療後快速降低 T2D 病人的血糖濃度；而在長期研究中則發現，DPP4i 不僅能降低血糖濃度，在治療期間還能穩定將血糖控制於低濃度。DPP4i 降低血糖的效果與其它藥物（如：metformin、TZD、SGLT2i、GLP-1 RA）並無明顯不同，但 DPP4i 不需注射、不會有低血糖及體重增加的問題，因此用藥順從性較佳，病人也較願意長期使用。

即使使用藥物，仍常見病人控糖不佳，有超過五成的病人控制未達標。且血糖控制過程中的穩定度，須深入探討之細節。醫師在處方時除考慮藥品特性以外，以病人為處方思考的核心，提供結合指引與臨床，為病人提供最大的臨床助益。

醫師應留意台灣糖尿病病人的特性，提倡個人化醫療選擇。化簡為繁，治療第二型糖尿病是大部分病人的需求。尤其根據統計，糖尿病病患平均用藥數量與種類逐年增加，也必須思考長期治療策略，盡早達標並選用具有改善 beta cell 潛在好處的用藥，延緩糖尿病程進展，以達到最大化的臨床效益。



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癌症治療的新里程碑：抗體藥物載體 (Antibody Drug Conjugates)

Antibody Drug Conjugates: The Next Frontier in Cancer Therapy

主持人：陳明晃、陳偉武

1330	引言 Opening remarks	陳明晃(臺北榮民總醫院腫瘤內科)
1335	從單株抗體到抗體藥物載體 (ADC) 的演進：邁向 征服癌症的道路 The Evolution of Monoclonal Antibodies to Antibody Drug Conjugates (ADCs): The Road to Conquer Cancer	謝耀宇(衛生福利部雙和醫院血液 腫瘤科)
1405	抗體藥物載體 (ADC) 的臨床應用(1)：聚焦在 HER2 生物標記 Antibody Drug Conjugates (ADCs): Targets and Applications: Focusing on HER2	鍾為邦(成大醫院血液腫瘤科)
1435	抗體藥物載體 (ADC) 的臨床應用(2)：其他的生 物標記 Antibody Drug Conjugates (ADCs) Targets and Applications: Other Targets	蘇祐立(高雄長庚紀念醫院血液腫 瘤科)
1455	結語 Closing remarks	陳偉武(台大醫院腫瘤部)

◆ 從單株抗體到抗體藥物載體 (ADC) 的演進：邁向征服癌症的道路

抗體藥物複合物 (ADCs) 展現了癌症治療的一個簡單而優雅的願景 - 將強效細胞毒劑傳遞給腫瘤細胞，對正常細胞造成最小損害，所謂的“智慧化療”。有如特洛伊木馬一般，ADC 第一次在西元 2000 年首次獲得食品和藥物管理局 (FDA) 批准，但隨後的技術進步使 ADCs 的藥物快速發展，並獲得了針對各種腫瘤類型的核准上市。對實體腫瘤最成功的應用是在乳腺癌中，ADCs 已經成為傳統人表皮生長因子受體 2 (HER2) +、激素受體+ (HR+) 和三陰性疾病亞型的標準治療。此外，隨著 ADCs 的開發，改進了其特性並提高了效力，使低/異質性表達目標抗原的腫瘤患者也能夠接受治療，如 Trastuzumab-deruxtecan，或者是 Sacituzumab Govitecan，在特定疾病上看起來都與目標蛋白的表現高低無關。儘管這些新型藥物具有抗體導向的歸巢能力，但在治療期間仍然伴隨著一些副作用，需要適當選擇患者並進行監測。隨著越來越多的 ADCs 被納入治療武器庫，需要研究和了解抵抗機制以進行最佳順序治療。通過修改藥物載荷以使用免疫活化劑或與免疫療法和其他有效的標靶療法結合治療，可以進一步擴大這些藥物在實體腫瘤治療中的應用。

◆ 抗體藥物載體 (ADC) 的臨床應用(1)：聚焦在 HER2 生物標記

HER2-directed antibody-drug conjugates (ADCs) are a promising therapeutic method in the treatment of breast cancer. HER2 is a protein that is overexpressed in around 20–25% of breast tumors, making it an appealing therapeutic target. ADCs are a unique medication class that combines the specificity of monoclonal antibodies with the cytotoxicity of chemotherapy drugs. ADCs typically include three components: a monoclonal antibody that binds specifically to the targeted protein, a linker, and a powerful cytotoxic payload. The antibody enables precise delivery to HER2-positive cancer cells while causing minimal damage to healthy tissue. When the ADC attaches to HER2, the cancer cell internalizes it. The linker is then broken, releasing the cytotoxic drug payload, resulting in cell death. Trastuzumab emtansine (T-DM1) was one of the first HER2-directed ADCs to be licensed for HER2-positive breast cancer. In patients with



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HER2-positive breast cancer, it significantly increased progression-free survival and overall survival. Trastuzumab deruxtecan (T-DXd) is the second HER2-directed ADC with a different linker and payload. In the DESTINY-Breast03 phase III clinical trial, T-DXd outperformed T-DM1 in terms of progression-free survival and overall survival. Despite their promise, there are certain drawbacks, including resistance and adverse effects. Finally, HER2-directed ADCs represent a targeted and effective treatment option for HER2-positive breast cancer. When compared to standard treatment, they have the potential for better outcomes. In this session, I will provide a quick overview of what we have accomplished with HER2-directed ADCs in the field of breast cancer, as well as what to expect soon.



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醫學倫理：法規、品質、兩性

主持人：吳俊穎

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|--------------------------|----------------------|
| 1520 醫療事故預防及爭議處理法：立法及執行 | 劉越萍(衛生福利部醫事司) |
| 1545 醫療事故預防及爭議處理法：爭點及解析 | 吳俊穎(臺北榮民總醫院內科部胃腸肝膽科) |
| 1610 建立性別親善的醫療環境-從社會學的角度 | 成令方(高雄醫學大學性別研究所) |

◆ 建立性別親善的醫療環境-從社會學的角度

醫療場域又稱為「白色巨塔」，有其封閉性與階級化。演講內容將包括：(1) MeToo 運動的社會意義 (2) 白色巨塔內的權力階層不平等與性別關係 (3) 案例：醫師之間，醫護之間，醫病之間，醫師與藥廠業務 propa 之間的關係。(4) 性別平等工作法修法後的新要求。



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Women's Weight Management Journey over Generations and the Role of Liraglutide 3.0mg

台灣諾和諾德藥品股份有限公司贊助

主持人：翁國昌

1215	Opening Remarks	翁國昌(中山附醫 心臟內科)
1220	Women's Weight Management Journey over Generations and the Role of Liraglutide 3.0mg	林柏霖(新竹馬偕 心臟內科)
1300	Panel Discussion	All

肥胖會對人體帶來諸多不良影響，像是心血管健康、患病罹癌風險、骨骼關節負擔等等；但女性肥胖造成的不良影響會是男性兩倍。肥胖者發生糖尿病、代謝症候群及血脂異常的風險超過 3 倍，發生高血壓、心血管疾病、膝關節炎及痛風也有 2 倍風險。研究證實，當肥胖者減少 5% 以上體重(如成人 90 公斤，減少 5 公斤)，就可以為健康帶來許多益處，高血壓、糖尿病等與肥胖相關疾病將可改善。

Liraglutide 是一種與人體腸道荷爾蒙 GLP-1 結構類似的注射藥物。GLP-1 可以經由作用於身體的重要器官，包含屬於中樞神經系統的下視丘，增加飽足感，對於胃部則有延緩胃部排空的效果，使食物停留在胃部的時間拉長，較不會感覺到飢餓，因此使用 liraglutide 有效減少食物總量的攝取、減輕體重，而我們也可以由臨床使用 liraglutide 3.0 mg 的 SCALE 一系列研究得知其效果與安全性。而 Liraglutide 3.0 在台灣是唯一具有體重控制適應症的 GLP-1 注射藥物，如何正確使用 on label 的藥物於體重管理以保護醫療照護者與病患為一重大課題。



糖尿病治療 – 腸泌素與胰島素

台灣諾和諾德藥品股份有限公司贊助

主持人：王治元、林慶齡、蔡世澤

- | | | |
|------|----------------------------|--------------------|
| 0830 | 糖尿病創新治療發展暨臨床實務分享 | 李建興(松山班廷建興診所新陳代謝科) |
| 0920 | 從血糖控制到心血管保護：GLP-1 RA 的多重功效 | 江晨恩(台北榮總心臟科) |
| 1010 | 開啟胰島素治療的會談技巧-從基礎開始 | 江珠影(亞東醫院新陳代謝科) |
| 1100 | 對病人友善的胰島素強化治療策略及經驗分享 | 陳佩綺(新光醫院新陳代謝科) |

◆ 糖尿病創新治療發展暨臨床實務分享

糖尿病藥物近年來蓬勃發展，除了不斷創新的胰島素之外，GLP-1 RA 藥物更是有許多突破性的發展，其中，Oral semaglutide 為近百年的糖尿病藥物史上，第一且唯一用於第二型糖尿病患者的蛋白質口服降血糖藥物，利用胺基酸修飾延長 GLP-1 的半衰期，並透過 SNAC 專利技術克服胃蛋白酶的破壞，提升藥物於體內吸收率，突破了以往蛋白質藥物不易被口服吸收的難題。

2005 年第一個 GLP-1 受體促效劑(GLP-1 RA)問世，顛覆了過往對於糖尿病注射藥物的認知，有別於胰島素，除了有效控制血糖外，同時不易造成低血糖發生並具有體重下降的好處。近年來新型的 GLP-1 RA 經證實心血管安全性證據，國內外各國指引皆建議將 GLP-1 RA 類藥品作為具有心血管疾病病史或高風險指標之第二型糖尿病病人的首選藥物之一。但針劑藥品的病患接受度遠不及口服藥品，在台灣的注射率更是遠遠低於國際平均。

糖尿病位居十大死因中第 5 位，加上其他常見因糖尿病所之併發症，對國人的健康及健保醫療負擔甚鉅。儘管治療指引明確，且現有市場上有許多新型口服降血糖藥物，但在歷經一系列的強化治療後，根據 2018 國際糖尿病聯盟大會發表的「台灣糖尿病登錄計畫」報告中指出，仍有約 65% 的病人未達血糖控制目標。

在 PIONEER 系列研究中，Rybelsus®相較於現行的口服糖尿病藥物，能提供卓越的血糖體及體重的控制效果。有助於提升國人糖尿病照護品質並減少併發症造成的醫療負擔，開拓蛋白質藥物口服給予及糖尿病治療標準的新紀元。

◆ 從血糖控制到心血管保護：GLP-1 RA 的多重功效

糖尿病是一種慢性疾病，對身體有廣泛的影響，包括心血管系統。糖尿病患者比非糖尿病患者更容易患上心血管疾病，如心臟病和中風。這是由於糖尿病對血管造成的損害，使得血管更容易受到損傷和阻塞。

GLP-1RA 是一種腸道分泌的激素，可刺激胰島素的分泌，降低血糖，並且還有其他的保護心血管系統的作用。這些作用包括減少體重，改善血脂，降低血壓和減少心臟病發作的風險。

多項臨床研究顯示，GLP-1RA 可以顯著降低糖尿病患者的血管風險。其中最具代表性的是 LEADER 和 SUSTAIN-6 研究，這些研究表明，使用 GLP-1RA 治療糖尿病的患者可以降低心臟病、中風及所有原因的死亡風險。這些結果非常顯著，並且對於糖尿病患者的治療和管理具有重要意義。

◆ 開啟胰島素治療的會談技巧-從基礎開始

胰島素的應用迄今已屆滿一百周年，糖尿病患者也因為胰島素的出現，生命得以重新燃起希望。胰島素的創新不只提供更好的血糖控制、更可以降低低血糖風險，並且能夠給予病患更多的方便性，在控制糖尿病同時，能兼顧生活品質。然而，根據 2019 年第二型糖尿病的台灣糖尿病年鑑，截至 2014 年健保資料的統計，胰島素的使用率仍僅約 12%，患者及醫療人員拒絕或延遲胰島素治療的原因相對複雜。例如，二者均擔心低血糖、體重增加及治療依賴性等問題。延遲啟動胰



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島素治療在患者方面還包括心理抗拒因素，包括注射恐懼和/或血糖自我監測的恐懼，以及生活品質上的誤解也會加重啟用胰島素的擔憂。

隨著胰島素的持續創新，新一代超長效基礎胰島素 Insulin Degludec (IDeg) 能提供 42 小時長效的空腹血糖控制，除了能夠平穩控糖之外，減少低血糖風險，可在一天中的任一時間注射，並且適用於一歲以上的全齡糖尿病患，皆為 Insulin Degludec 的特色。

通過最新文獻的探討與臨床使用經驗，從簡單的基礎胰島素開始，降低患者心理障礙，積極起始有效的控糖治療。

◆ 對病人友善的胰島素強化治療策略及經驗分享

糖尿病治療需要同時兼顧空腹及餐後血糖，若餐後血糖沒有控制好，會增加血糖波動幅度，導致心血管風險及低血糖風險的增加。此外，糖尿病腎病變也是目前全世界導致慢性腎臟病 (CKD) 和末期腎衰竭 (ESRD) 的重要原因，因此理想的血糖控制對於糖尿病患者顯得相當重要。台灣第二型糖尿病患者接受胰島素治療時，多以基礎胰島素作為起始。然而國內研究顯示，僅約一成患者在接受基礎胰島素 24 周後達到 HbA1c 的目標(J Diabetes Investing 2016; 7:881-888)。而亞洲地區因人種以及飲食習慣以米食為主的關係，餐後血糖對高血糖的貢獻度較西方人高，顯示餐後血糖的控制於亞洲族群更顯重要。因此，預混胰島素為目前常用來控制餐後血糖的選項之一，預混型胰島素在一支筆針同時包含速效及中長效胰島素，可同時有效控制及餐後血糖，並提供簡單方便的治療方式，減少病人須學習多種注射藥物的障礙。同時，目前也將有新形態的可溶性雙胰島素問世，IDegAsp 為第一個能夠將兩種不同胰島素類似物混合於同一筆針的可溶性雙胰島素，成分包含超長效胰島素 Insulin Degludec 及速效胰島素 Insulin Aspart，藥水呈透明澄清，病患使用前不須重新搖振均勻。此外，IDegAsp 可做為胰島素起始以及強化的選擇，能減少低血糖發生風險，同時有效控制空腹及餐後血糖，並使用改良式注射器幫助病患方便有效的控制血糖。



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落髮治療新契機 ~ 端看複合式生髮實證數據脈絡

蓓麗嘉國際股份有限公司贊助

1215 從營養看毛髮生長,後疫情時代養髮生髮營養補充建議 陳信宏(長榮大學保健營養學系)

1235 乳癌化療副作用後的落髮治療臨床經驗分享 喬浩禹(三軍總醫院整形外科)

◆ 從營養看毛髮生長,後疫情時代養髮生髮營養補充建議

在現今後疫情時代下,讓我們從營養學出發窺看毛髮生長的脈動,還有養髮、生髮的營養補充建議。

◆ 乳癌化療副作用後的落髮治療臨床經驗分享

癌症已連續 40 年位居臺灣十大死因之首,近期衛生福利部公佈最新 2021 年國人十大死因報告中,女性癌症就佔其中兩項,分別是第四名乳癌及第十名的卵巢癌。

許多癌友在漫長治療與疾病奮鬥心路歷程中,身心已承載非常沈重的壓力外,還必須承擔化療衍生的落髮副作用,癌友在接受化療過程約有 65%的機率會帶來落髮副作用,甚至因此而降低治療的意願。

為此整形外科主治醫師喬浩禹,在其臨床專業學理經驗智慧上的積累,特以「低能量雷射用於男女性落髮、乳癌落髮治療之臨床經驗分享」,為讓癌友在化療療程結束後的 3-6 個月後,能縮短毛髮新生的階段進程。