外賓演講

K01

A Day of Inspiration
Digital Implant Workflows at a Glance and How to Build a Successful Clinic

Dr. Marcus Dagnelid
DDS, Board Certified Prosthodontist
CEO, Chief of Staff, Dagnelid Clinic & Falkenberg Clinic, SAACD AB
CEO, European Dental Academy

During this day the participants will be updated on the latest treatment possibilities utilizing digital implant workflows. Both the single implant site and multiple implants with immediate loading will be highlighted.

Building a successful office in this day of age with the right tools for practice management and team building will also be discussed. Dr Marcus Dagnelid will share his views on a journey so far building four clinics, maximizing the efficiency utilizing digital tools and creating success with unconventional marketing ideas.

外賓演講

K02

Current update of precision medicine in oral cancer treatment

Mitomu Kioi, DDS, PhD, FIBCSOMS
Department of Oral and Maxillofacial Surgery,
Yokohama City University Graduate School of Medicine

Despite the fact that the surgery is standard therapy for the treatment of oral cancer patients in many cases, advanced oral cancer is deadly and disfiguring disease for which better systemic therapy is enormously sought to improve the mortality and avoiding dysfunction such as dysphagia, dysarthria, and cosmetic disorder. Although recent advances in multimodality therapies using combination of chemotherapy, radiotherapy, and surgery for the treatment of oral squamous cell carcinoma (OSCC) lead to expanding its indication for the treatment, survival rates, functional outcomes, and toxicities of therapy remain poor. In addition, there is no reliable biomarker for either detection in early stage or prediction of the treatment outcome. Thus, the development of precision medicine including personalized therapy for the treatment of oral cancer patients is urgent issue to be solved. Head and neck squamous cell carcinoma (HNSCC) including OSCC is associated with elevation of genomic mutations but lacks specific mutations. Exposure to tobacco and alcohol consumption are the most exogenous etiologic factors for carcinogenesis of OSCC. In the last decade, the treatment of OSCC patients has undergone change using targeted therapy and immunotherapy. The development of targeted therapies potentially decreased toxicities and increased selectivity may represent significant improvement for the efficacy and also as treatment options.

Targeted agents currently approved or under investigation for OSCC include epidermal growth factor receptor (EGFR) monoclonal antibodies, EGFR tyrosine kinase inhibitors, vascular endothelial growth factor receptor (VEGFR) inhibitors and various inhibitors of other targets including immune-checkpoint. Checkpoint inhibitors such as anti-PD-1 antibody including nivolumab and pembrolizumab exhibit the significant improvement for disease free survival and overall survival after failure of platinum-based chemotherapy.

We also developed locally targeted therapy using intra-arterial chemotherapy combined with daily radiation (IACRT) against locally advanced oral cancer. The treatment of IACRT exhibits better local control rate as well as good survival rate.

In this talk, the recent updates in precision medicine for OSCC will be presented, and also our clinical outcome of several targeted therapies using cetuximab and/or IACRT will be introduced.

G01

牙科三維打印的應用與展望

Practice and Perspective of 3D - Printing in Dentistry

李一鳴（Yiming Li）
美國羅馬琳達學牙醫學院

外賓演講

Advances in digital technology have greatly transformed every aspect of our daily lives, including sweeping changes in healthcare practice; dentistry is no exception. Innovative technologies have not only improved the quality of dental care but also increased the efficiency and predictability of procedures. One such technology showing a potential significant impact in dental care is three-dimensional (3D) printing.

The 3D printing technology has initially been used in aerospace and automobile industries, armaments, and art and design. It quickly attracts attention in healthcare fields, especially orthopedic surgery as it is capable of revolutionizing the process of manufacturing prostheses and devices. While digital dentistry, such as intraoral scanning and CAD/CAM (Computer-Aided Design/computer-Aided Manufacturing), have become a part of dental practice, 3D printing is a relatively new technology to dentistry. With its such advantages as highly feasible in custom design and quick manufacturing process, 3D printing has become a technology of great interest to dentistry in the last decade.

With the 3D printing technology, the innovative manufacturing process based on the CAD technology allows for the production of customized devices which were not even thinkable when using classic manufacturing methods. Knowing fundamentals of the design process which brings to the digital model to be printed helps understand mechanical features of the resulting physical device. Moreover, low-cost desktop 3D printers make it possible for dentists to fabricate their own custom devices in the clinic.

However, it is necessary to understand how additive manufacturing works and recognize that different technologies are available, each with its advantages and limitations, which need to be adequately evaluated before acquiring a 3D printer. The best 3D printer is the one that meets the needs for a specific application, such as accuracy, material, design, and production size.

This presentation will provide an overview of the basic principle of 3D printing, the digital workflow that brings to the manufactured object, current and potential applications of 3D printing in dentistry, and comparison of different technologies for choosing the most appropriate one for dental applications.

專題演講

S01

乳牙預成樹脂冠的製作與操作

How to make the preformed primary tooth resin crowns

紀乃智（Chi, Nai-Chih）
ABC 牙醫聯盟

牙齒美學不止在成年人會被重視，近年來也有越來越多的家長甚至是小孩本身也很重視。以往大面積的乳牙缺損或是做過根管治療的牙齒會建議使用不鏽鋼乳牙預成冠來修復，但是美觀常常是家長與小孩介意的，所以近年來開始使用乳牙的預成鋯冠來解決美觀問題，可是這種削足適履的做法不僅增加操作時間，也增加牙齒被修磨的量，而且會有修復體外懸的問題，因此使用樹脂乳牙預成冠不但改善了美觀，且符合過往牙醫師的操作流程，就可以解決操作時間、牙齒修磨量與修復體外懸的問題。

S02

人工智慧與精準醫學在特殊照護牙醫學之運用

AI and Precision Medicine Concepts Applied in Special Care Dentistry

陳信銘（Hsin-Ming Chen）
台大醫院牙科部特殊需求者牙科醫療服務示範中心

Precision medicine is a new concept to treat people as an individualization of evidence-based medicine. As the goal of special care, people with special needs (SN) are treated according to their needs. It is similar to the concept of precision medicine. On the other hand, using big data to create an identical rule to diagnose the disease is commonly used as one of artificial intelligent (AI) techniques. Under the assistance of AI, the diagnosis could be done quickly and exactly. For the specificity of SN, it is not suitable to treat them with the same strategy. Every SN requires a specialized design for their treatment. However, personalized treatment is a laborious and expensive work. It means that we have to collect lots of data from each SN, then, Using the big data to create a rule after analyzing the similarity and the difference. Finally, a neural like network is created and is able to help the dentist to find the most proper treatment strategy for the individual SN. Before we enter the new era, the education in dental school should be changed to train the dental students to build the concepts of precision medicine and AI. Dental caries, periodontal diseases and oral cancer are the common diseases in dentistry. The basic research is also necessary to reach the requirement of developing AI and precision medicine. Therefore, the dentist can treat SN individualized in the future. In this talk, we will identify the idea image of AI and precision medicine in special care dentistry and discuss the possible trend in using these new techniques to treat SN.

S03

牙髓疾病的非典型症狀

Atypical Symptoms of Endodontic Disease

楊正嬓（Chengmei Yang）
高雄榮民總醫院口腔醫學部

確認臨床症狀與疾病之間的關係是建立正確診斷及執行適當處置重要的一環。牙髓疾病的主要特徵在於根管系統遭受細菌感染後，常會引發根尖周圍組織的發炎，造成根尖牙周炎。雖然有文獻顯示與根尖牙周炎相關的細菌和發炎因子可能隨血流影響全身系統性疾病的發展，大部分牙髓疾病的典型臨床症狀為疼痛、牙齦腫脹或患齒根尖周圍膿腫。然而，牙髓壞死後的產物、細菌與其毒素仍有可能造成鄰近解剖組織發炎而引發一些易被忽略的非典型臨床症狀，如上顎竇炎、神經感覺異常和皮膚漏管等。本次報告藉由對這些因牙髓病灶引起之非典型臨床症狀的介紹，希望能對牙髓疾病的鑑別診斷有更清楚的瞭解。

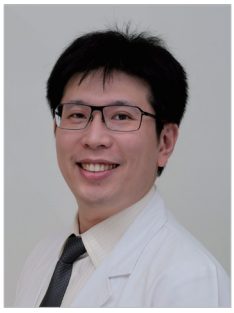
Identifying the relationship between etiology and clinical pathologies of a disease is essential to establish the correct diagnosis and management of the patient. Endodontic disease is characterized by bacterial infection of the root canal system and subsequent inflammatory response in the adjacent periapical tissues to form apical periodontitis (AP). Though microbiological and inflammatory elements released in conjunction with AP may be distributed via the blood stream and modify the risks for developing systemic disorders, most endodontic lesions usually manifest typical symptoms such as pain, tenderness to biting pressure, percussion or palpation as well as gingival swelling or a dental fistula around the root apex. However, bacteria, their toxins, and products of pulpal necrosis may spread to adjacent anatomic structures, such as the maxillary sinus, mental and inferior alveolar nerves, or skin, and lead to inflammation. Some of these lesions may easily be misdiagnosed, owing to their uncommon occurrence and absence of dental symptoms. This report aimed to introduce these endodontic lesion-derived atypical symptoms, making a clearer understanding of pain for better differential diagnosis.

S04

根管與補綴的對話

The Conversation between Endodontics and Restorative Dentistry

何偉宏（Wei Hung He）
高雄長庚紀念醫院牙科



傳統上，Endo, OD, Pros 這三個專科的理論是相關的，但卻也各自發展出不同的理論架構及觀點，那臨床醫師在治療患者時，該如何去遵循呢？

隨著時代的演進，組織學的觀察、材料的發展、治療工具的進化、臨床研究的統計，似乎方向及原則現今已變的更加明確，那該怎麼活用？

本次分享的內容觀念找出 Endo, OD, Pros 三個專科觀念上殊途同歸的理念，可略分為四點（1）治療可以分階段進行（2）治療也是診斷的一部分（3）風險和回報需整體性思考（4）病程具連續性而診斷及治療的 guideline 該怎麼 follow ？試圖貫串看似對立實則相輔相成的觀念，從「Interdisciplinary Dentistry」多元整合的角度考量臨床醫療計畫的擬定與執行。

專題演講

S05

高齡口腔醫學專題 1：銀髮新世紀的社區整合口腔醫療照護

Integrated Community Oral Health - Care Systems for The New Era of Silver Tides

季麟揚（Lin-Yang Chi）
國立陽明大學牙醫系

台灣 65 歲以上的老年人已於 2018 年 4 月超過 14%，正式進入「老年社會（aged society）」，預估到 2025 年，老年人口將超過 20%，成為「超高齡社會（super - aged society）」。一般人以為老年人普遍有掉牙的問題，所以人口老化之後，口腔醫療的需要會隨之下降。事實上，隨著未來的老年人教育程度提高、經濟能力改善、以及對生活品質的重視，口腔醫療的需要可能會明顯增加。然而老年人多半也是糖尿病、高血壓等慢性病的患者，甚至可能有腦中風、洗腎、失智等病史，使的她們的口腔醫療需要也更為複雜。面對社區中愈來愈多的失能長者，牙醫師需要瞭解政府長照政策的規劃方向，包括：社區整合照護、居家醫療、出院準備、居家服務、乃至於安寧照護。本次報告將介紹國內外老年口腔流行病學的調查結果，以及國內西醫相關照護模式的發展現況。

S06

高齡口腔醫學專題 2：體弱高齡者的臨床口腔醫療：2020 年口腔照護觀點

Geriatric Perspectives in Clinical Care for The Frail Elders: for The Decade of 2020's

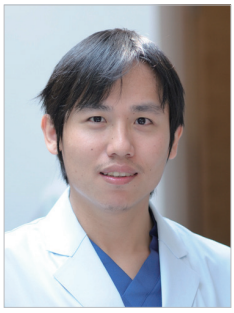
鄧延通 教授／主治醫師（Prof. Andy Yen-Tung Teng, DDS., MS., PhD.）
高雄醫學大學：教授／主治醫師
口腔醫學院牙醫學系 & 骨免疫暨生技研究中心；
附設醫院 － 牙科部（家庭牙醫學科及牙周病科）

Background: With the globally increasing elderly populations, a deeper and better understanding of the underlying physiologic vs. pathologic mechanisms on the ageing and disease processes has placed our elder patients on the edges of embracing dangerous concerns from dental and medical treatments, along with their long-term care for the general & oral health. In particular, the ever-changing clinical protocols employed in geriatrics (> 65yrs) that are complicated by the ongoing pathophysiology of acute diseases (i.e., strokes w/wt-CVA, ACS/cardiac arrests, unstable DM & hypertension, aspiration pneumonias or infarctions, etc.) vs. chronicity of particular comorbidities (i.e., arthritis, osteoporosis, medication-related bone manifests & MRONJ or glucocorticoids, neuromuscular dysfunctions, cancer-related disorders, local & systemic risks from peri-implantitis, etc.) over the poly-pharmacy have become a clip-hanger dilemma for the frail elder seeking the comprehensive and safe treatments on the daily basis. Meanwhile, new approaches and therapies are re-shaping the clinical outcomes, thereby embracing new challenges or threats to the frail elders and clinicians for the critical health-care concerns. The method: This presentation will deal with the resulting analyses from employing the mixes of 42 collectives via the evidence-based medicine/dentistry (e.g., databases & key-words), the concerned issues (i.e., CVA/heart, diabetes, strokes, hypertension & dementia, cancer/oncologic, drugs/poly-pharmacy, etc.) and specific target-cases to have addressed and summed up the current risks & impacts when dealing with the oral-systemic medical links in the frail geriatrics, leading to the ongoing silent epidemic crisis over the physical comorbidities in our population. For example, such analyses also showed that surgical treatments of periodontal disease in the diabetic subjects may lead to reduction of the medical expenditures on the insurance claims for their correspondence therapies, suggesting the underlying medical links may help to resolve epidemic dilemma described above. For this, few clinical cases will be shared for the discussion. Summary: Oral health-care and the modern medical therapies involve more than the concerning matters of the ageing; importantly, we must carefully incorporate the risk assessments specific for the frailer elders with the step-wise evidence to ensuring the subject's capacity/ability upon engaging the stress produced from dental/medical procedures; esp. how to prevent and manage the prior critical situations, so that the long-term prognosis vs. outcomes, particularly on the life-saving longevity, functional independence and the quality of life, will be more favorable to the brittle or frail elders in the dental/medical facilities.

S07

複合樹脂於 Class II 窩洞的處理訣竅

The Essential Factors of Class II Composite Restoration



郭益嘉（Yi-Chia Kuo）
崇翔牙醫診所

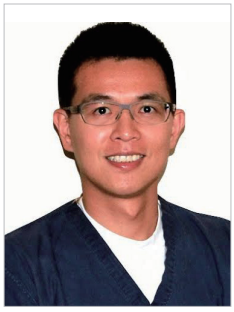
Resin composites are widely considered the first-choice material for posterior direct restorations. Patient demands for tooth-colored restorations and a need to seek alternatives to amalgam are two reasons for the increasing use of composite resin materials for posterior tooth restorations. Despite significant improvements in resin composite materials and adhesives since their introduction, posterior composite restorations still require a careful placement technique in order to avoid less than ideal anatomy, microleakage and postoperative sensitivity. And Class II composite restorations seem to present challenges for the clinician to create predictable and long-lasting results. There are 4 main challenges in Class II composite restorations : (1)structural loss for fracture resistance (2)marginal leakages could cause secondary caries, especially on cervical margin (3)predictability to get a smooth and tight contact area (4) reasonable time and effort to achieve a hight quality result. Difficulty in obtaining intimate cavity adaptation and marginal complete sealing in posterior resin composite restorations may result in postoperative problems, such as sensitivity and adversely affecting the clinical performance of these restorations.

In this presentation' we would like to discuss and review class II composite restoration. And from the clinical point of view, I would like to explain my strategy and procedural steps in class II composite restorations which include: rubber dam isolation, caries management, cavity design, removal of biofilm, bonding process, selection of proper matrix system, incremental strategy, finishing and polishing of composite resin. For the build-up of proximal wall of class II composite restoration, it is a "morphology driven" procedure and there will be a new diagnosis method to introduce in this lecture. Case series of different type of decay will be discussed. As a dental microscope user, I will address the advantages of microscope in restorative dentistry. Magnification makes minimal invasive dentistry. Maximum preservation of tooth vitality and structure is a key for longevity of our restorations.

S08

全顎的數位植牙重建

Digital Technique in Full Arch Implant Rehabilitation



陳政佑（Chen, Cheng-Yu）
城東牙醫診所

人工植體支持的　復假牙運用於全口重建已有 60 年之久，固定式和活動式皆有各自的優點與缺點。此次演講中，將跟大家分享植牙數位流程、手術導板製作和活動假牙設計，利用數位的優勢達到可預期並且令人滿意的臨床結果。

S09

隱形矯正技術在前牙開咬的治療策略

The Strategy and Mechanics of Clear Aligner Technique in Openbite Malocclusion Treatment

張箭球（Stephen Chang Jiann Chyou）
信義瑞比牙醫診所
新樹牙醫診所

Anterior Openbite 的形成往往包含了許多不同原因，包括骨骼、肌肉的生長發育，或是呼吸生理問題。 成人開咬的治療方式跟發育期兒童也會有不同的治療策略。治療前牙開咬及預防開咬復發首先要確認致病因子做出正確診斷之後再擬定適當的治療計劃。本次演講主要針對成人開咬提出用隱形矯正技術的治療理念。

臨床上成人開咬的牙齒矯正治療方式包括前牙 extrusion, 或是後牙 intrusion。運用隱形矯正技術 (Clear Aligner Technique) 透過數位模擬技術預先規劃未來牙齒的移動方式，再運用 3D 列印技術製造出不同時期的牙齒移動模型然後製作透明牙套。

這種看似簡單的工具，很多醫師在使用的時候卻常會出現不一樣的治療結果。本次演講內容主要針對開咬患者的隱形矯正治療策略提出數個病例報告。並且針對過程中可能出現的 side effect 提出解決方案。

S10

架設人工智慧於臨床醫療之經驗分享

A Computer - Aided System Using Artificial Intelligence for Clinical Assessments

黃宗祺（Tzung-Chi Huang）
長佳智能股份有限公司／中國醫藥大學

本次與大家分享的內容為人工智慧於臨床醫療的經驗談，一個醫療 AI 專案的建立，需要針對臨床需求並與醫師詳談後，判定專案可行性及其他細節，之後才開始進行資料蒐集、資料清理，並標記，以完成一個結構化的大型資料庫，此為前端資料整理與取得的過程。

第二階段進入到資料的訓練，通過前端取得的大型數據庫，其資料集訓練後衍生之深度學習神經網路模型為此醫療專案最重要的一環。醫院的臨床資訊單位提供應用程式介面 (Application Programming Interface, API) 及院內資料庫的搜尋條件，並在取得資料後，交由神經網路模型分析，最後藉由網頁形式呈現模型分析結果與結構化臨床研究報告。

人工智慧於臨床醫療委實提供巨大貢獻，其未來的發展性也是不可預期的，除了增進判讀的精確率及縮短時間外，更減低了臨床人員的潛在負擔，未來除了網頁研究報告的呈現之外，也會漸漸向個人化行動裝置發展，如通訊軟體的 chatbot 形式，使得 AI 能夠更加多元化發展，以快速的醫療報告此等優勢，發展更即時的醫療照護服務。

S11

雷射在牙周再生術式與組織工程的應用

The applications of LiteTouch Er: YAG Laser in Periodontal Regenerative Treatments and Tissue EngineeringLiteTouch Er: YAG

陳開盛（Kai Seng Tan）
麗世牙醫診所

Nowadays, new knowledge, methodologies and instrument are continuing to develop methods of treating periodontal disease in conjunction with conventional armamentarium.

Dental lasers are user both adjunctive and stand-alone in the protocol. According to scientific and clinical case studies, the characteristics of photoacoustic and photoablative effects of Er-YAG lasers have been a useful addition to the effectiveness and outcome of disease treatments.

The use of tissue engineering techniques such as A-PRF + and Emdogain in the surgical approach to periodontal disease has greatly improved the success of GBR.

Optimal bone growth that helps to establish and maintain an ideal physiological gingival structure is critical to the long-term stability of periodontal tissue.

S12

Lasers Daily Practice in Dental GP Working Life.

楊振樺（Cheng-Hua Yang）
彼得牙醫診所

Water lasers 在 LITE TOUCHES 改進下顛覆我一般治療的計畫。說是創新，又找不到合理的論文跟課本。在一般網路下，尋找我要的答案。世界真是大，從宏觀到微觀，在口腔裡的世界找答案。WELCOME TO MY WOLRDs. 我在臨床治療可以做得的，大家都可以做到。不要怕，有勇氣的人是不缺舞台的。DO THE RIGHT THINGS, DO THE THINGS RIGHT. 從心開始，治療沒有絕對的對錯。我是楊振樺，彼德牙醫的院長。

感恩，感謝無限光榮的大地。

專題演講

S13

精準口腔雷射醫療的生物性與數位化於牙科的應用

Clinical Application of Precision Laser Dentistry in Biological and Digital Way

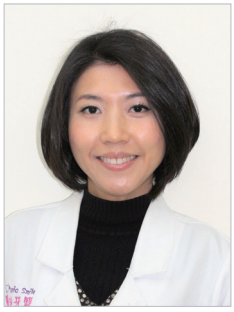
黃萬騰（Wan-Teng Huang）
美麗華牙醫診所

精準醫療是新醫學世代的黃金標準，牙科的精準醫療更是如同工業 4.0 的牙科的進化模式。雷射醫學更是以精準切割與生物再生刺激的特性為臨床上廣泛地使用。精準的雷射醫學結合數位人工智慧化的醫學，更能為我們臨床上的治療提供更好的服務。

本次演講將著重於將雷射牙科精準醫療中的兩大特點：生物性與數位性如何運用於牙科臨床中介紹，並期待透過此模式能增進臨床醫療的精確性與舒適度。

S14

GIVE THE PATIENT A PLEASANT SMILE Flapless / Esthetic crown lenghening with Er: YAG laser (follow up case)



潘韞珊（Yun-Shan Pan）
魔法牙醫診所

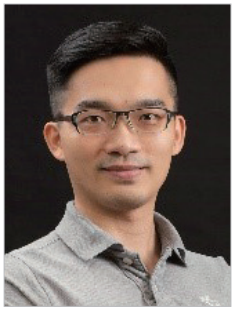
When we analyze the smile of the patient, we would classify their smiles to high smile (gummy smile), low smile or average smile (pleasant smile). According to textbooks, designing a pleasant smile must meet several criteria. A pleasant smile should exhibit a harmonious, pleasant, and nicely scalloped gingival form, and Er: YAG laser makes it possible to change gummy smile to a pleasant gingival form accurately in a very short time, just like using a paintbrush. If the dentist or the patient is not satisfied with the treatment result, "Esthetic Crown Lengthening Surgery" (in short "ECLS") could also be repeated because of short wound healing time. The treatment results are always impressive just one month after Er: YAG laser-assisted ECLS, while the traditional crown lengthening procedure would take about 6 months for the wound to heal.

With soft and hard tissue laser (Er:YAG laser), we can also easily do sinus lift and flapless implantation. When the alveolar bone thickness is 5mm or less, we can retain the part of the bone, which makes it possible to do implantation while saving more autogenous bone. In general, with Er: YAG laser, lateral window technique sinus lift would be successful.

Apical cysts debridement can also be done with Er: YAG laser, and repeated debridement is possible if residual lesion still exists. With Er: YAG laser, I have done more than 10 success cases of periapical cyst debridement without recurrence in my clinic.

S15

Advancing Pathology Through AI - Powered Digital Workflow

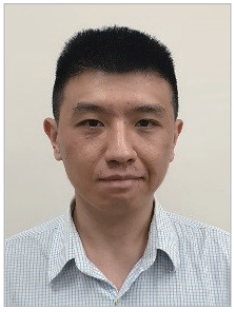


葉肇元（Joe Yeh）
雲象科技

The core process of histopathology slide reading has largely remained the same in the past one hundred years. Pathologists examine thin sections of tissue specimen through the binoculars of a microscope. Despite readily available software and hardware solutions, the adoption of digital pathology workflow has been very slow. One the main reasons is that return of investment is difficult to assess. The advent of AI-powered image analysis has dramatically changed this perception and created unprecedented interest in digital pathology. Deep neural networks have been shown to outperform human experts in several pathology reading tasks, such as detection of metastatic cancer cells in lymph nodes. In this talk, I will use aetherAI's own use cases to illustrate how AI can help improve efficiency, prevent mistakes, introduce objective standards, and facilitate quantification of the pathology reading process. I will further discuss the potential impact of AI on pathology and implications for future research.

病理醫師的機器學習第一課

Machine Learning 101 for Pathologists



張凱博（Kai-Po Chang）
中國醫藥大學附設醫院

在人工神經網路辨識日常生活物件的技術成熟後，病理切片判讀便成為了一個非常熱門的題目。在一些診斷上非常明確的圖像上，工程師與病理醫師互相合作，很快就發展到了顯著的高度，在某些人眼看得比較吃力的題目，例如乳癌前哨淋巴結上，其判讀力甚至超過人類，在診斷稍微困難的領域，例如說原發乳癌篩檢，雖然成果依然不是很令人滿意，然而已經有改善的趨勢。這樣的成就使得「人工智慧將迅速取代病理醫師」的迷思在國內迅速散播，並造成一定程度的恐慌。然而，神經網路不但無法在短期內完全取代病理醫師，其實此一技術即使要成為重要的診斷輔助工具，也還需要至少五年以上的磨合，原因有以下幾個：

其一，現代的機械判讀必須在數位化的環境中進行，而要高速進行病理切片的數位化作業，不但需要昂貴的高速玻片掃描機器，更需要動輒以 PB 計算的海量伺服器空間，可以想見的是，短期內能夠負擔自動化判讀服務的院所必定非常有限。其二，病理診斷的項目非常繁雜，且常出現診斷爭議，若需要全面性的病理影像資料庫供神經網路學習，光是在病理醫師標示的這一步就會遇到人力上以及診斷標準上的困難。最後一點就是，即使開發成功也必須通過中央主管機關的審核，這更是一個曠日費時的工作。

所以雖然神經網路在病理診斷上的實用性會不斷進步，然而在這十年內，對於此一科技的恐慌是不必要的，我們不但不應該排斥它，反而應該擁抱它，因為這個科技可能會型塑未來的病理世界，病理醫師必須要早一點學會與它相處。

S17

尋根救底—牙根齲齒的診斷與臨床處置

Root Caries: Diagnosis and Clinical Management

劉冠亨（Guan-Heng Liu）
臺大醫院 牙科部

In modern society, root caries has become a prevalent dental disease in the elderly and patients with periodontitis and gingival recession, which hampered the maintenance of a healthy oral condition.

Keeping the natural teeth and minimal invasive dentistry are important issues. Before making any treatment, we should know the essence of a disease, and make correct diagnosis. There are various situations, forms, and locations of dental root caries. Therefore, different factors should be taken into consideration as well, including how to choose and know the properties of restorative materials. Clinical techniques about how to deal with the lesions, such as preparation, approach, filling techniques, and the effects to periodontal tissues will be discussed as well.

Although the operative dentistry treatment may be just a basic and daily work to a dentist, proper management are still important and should be regarded as the protector of a healthy dentition.

S18

牙科 3D 列印的發展趨勢與臨床應用

Development and Applications of Dental 3D Printing

林元敏（Dr. Yuan-Min Lin）
國立陽明大學牙醫學系

3D 列印這幾年在牙科界真的是越來越來流行了，需多診所，醫院甚至學校單位，紛紛購入樹脂 3D 列印機開始使用。但是 3D 列印，尤其是大家比較會接觸的樹脂 3D 列印，因為本質上是化學反應，所以在操作上，需要有一些背景知識，在設計列印的模型上，也有些注意事項。不然常常會遇到一些小問題，使大家對 3D 列印這個技術失去信心。這一次的演講，會將 3D 列印的發展趨勢，在牙科上的原理，材料與應用，將所有的細節，徹底說明解釋，帶領大家進入到 3D 列印的世界。

S19

乳牙牙套的選擇與應用

Selection and Application of Full Coverage Techniques for Deciduous Teeth

謝旻桓（Min Huan, Hsieh）
台北馬偕紀念醫院 牙科部

汗水一滴一滴地流下、時間又一分一秒的過去了，看著牆上的時鐘、眼前漸漸失去耐心的小孩、角落發愁的父母，想想自己早在半小時前就補完該補的蛀牙，抽完該抽的神經，卻總是卡在牙套的選擇以及配戴上面。

多年來的經驗分享、從傳統的前牙 Strip Crown、前後牙的 SSC，一直到 Pre-veneer SSC、最新最夯的 Zirconia Crown。從單獨一顆到相鄰多顆同時復型。從傳統上的根管治療後復型到 Hall technique。提供一些小小的訣竅讓醫師們面對小朋友不再抗拒。

專題演講

S20

創造三贏的兒童牙科醫病關係

黃曉楓
臺北市立萬芳醫院兒童牙科

近年來台灣面臨少子化的影響，育兒觀念及教養方式都與過去有很大的改變。此外，網路資訊豐富，病人意識抬頭，醫病關係已不如過去將醫囑視為圭臬。對於兒童牙科醫師而言，如何有效地掌控黃金三角關係（家長一小孩一醫師）達到愉悅平衡的氛圍是一門高深的藝術。本次演講會從牙醫師、家長、孩童三個面向去探討如何創造三贏的兒童牙科醫病關係。

S21

受訓醫師口腔衛生教育的養成
(以家庭牙醫專科醫師訓練機構為例)

陳冠偉（Kuan-Wei Chen）
秀傳紀念醫院牙科部主任暨主治醫師

秀傳紀念醫院目前是區域醫院，牙科自成立以來一直是以 total patient care 為主要看診型態和以訓練家庭牙醫師 主軸。演講內容會跟各位先進探討這些年來訓練的甘苦談，還有整個的訓練制度，以及所面臨的困局，還有未來所面臨的挑戰。

S22

善用口腔衛生人員完成臨床口腔衛生教育

黃皇
景新牙醫診所所長
中華民國家庭牙醫學會理事

杜絕疾病的首要任務是什麼？沒有“撇步”，除了預防之外別無他法。“預防重於治療”是眾所皆知的至理名言，而預後的衛教更是防範疾病復發的不二法則。

在台灣，35 歲以上的國人 90% 以上都患有不同程度的牙周病，88% 的成年國人患有齲齒，甚至還居亞洲之冠。如何才能喚回國人的口腔健康是當務之課題及刻不容緩的工作。除了由牙醫師肩任已罹患疾病的治療工作外，那麼預防工作的角色就交給訓練專業的口腔衛生人員了。

至於預防工作又是什麼呢？其實就是把傳授臨床口腔衛生教育的工作做好！

傳播臨床口腔衛生教育的口腔衛生人員可以是醫療院所的牙醫師、牙醫助理、學校健康中心護理人員、學校特教中心老師、幼兒園老師、安養中心、療養機構的照服員，甚或公眾人物的媒體宣導等等。

如果我們能善用口腔衛生人員做好臨床口腔衛生教育的工作，效果到底會有多大呢？舉個實證的例子：日本養護機構的臥床老人，如果有口腔衛生人員的照護，其功效能使老人的上呼吸道感染和吸入性肺炎罹患率降低 50%，死亡率也能降低 50%，台灣也有例子可舉証。

所以善用優良的口腔衛生人員作專精的臨床口腔衛生教育，再將各個領域和年齡層加以統合接軌，未來再加入 AI 人工智慧的精進，成就完整的臨床口腔衛生教育領域，則不啻為國人口腔健康之無盡福祉。

咬合與顱顎障礙症之相關
Dental Occlusion and TMD

蕭裕源（Yuh-Yuan Shiau）
國立台灣大學牙醫學院名譽教授
中國醫藥大學講座教授

回顧文獻，二十世紀以前，牙醫界探討人類上下顎牙齒如何接觸的問題，最初只注重如何可使假牙戴在嘴裡後不會掉下來，之後才轉而思考自然牙應該有那種對咬牙的接觸關係。諸多觀念及學說陸續出現，約於 1960 前後開始，牙醫界視牙齒咬合的干擾為口顏部位及顳顎關節的疼痛或功能障礙（現在泛稱 TMD）的肇因，如何提供理想的咬合關係，就是治療 TMD 或避免其發生的方法。但在擴大對 TMD 病因之研討後，咬合問題不再被認為是 TMD 的主因，甚至有認為咬合與 TMD 毫不相關的看法。基於這些討論與瞭解，目前認為研究咬合學的目的應該不再限於 TMD 的診治，而應著重如何提供合理的咬合模式，以改善受破壞的牙齒或齒列的咀嚼功能，或因嚴重磨耗而致影響咬合高度者之個人形象及美觀問題。

下顎吸附性義齒的臨床體認

Recognition of mandible suction denture

馬隆祥
台北大華牙醫診所

下顎吸附性義齒 Suction denture 是近十多年來由日本的阿布二郎醫師所提出的全口義齒製作法，他當年提出時我真的沒甩它，我認為那只是臨床開業醫師誇張自己的一種自我宣傳，直到有一天我真正見識到它的方法製成下顎義齒後的吸附效果一真的緊到很費力拔都摘不下來，配戴者又沒感覺它緊，（常需藉漱好幾下口才好摘）… 我才去看他的著作，開始用它的“精神”溶入我的義齒製作。說實話：

它是一種步驟簡易又有臨床效果的做法，建議您可在 完我 悟的心得後，回去試一試，相信您也會愛上它！

探討任何的技術 Technique 前，我喜歡先了解它的想法 Philosophy，先想一下如果是我，我會如何去實現它的想法，再看它的技巧 Technique 是如何去實現出它的想法 Philosophy，這可讓我更能體會掌握它技巧的“精髓”，歡迎您來享受一下我的“體驗”。

這次大會我願將我觀察及製作上的領悟，做一次“純個人心得”的報告，相信一定能讓您製出的下顎全口義齒如虎添翼；當然更期待您也能帶著您的心得來給我滋潤，期盼能在會場見到您，我們會場見！

S25

齒槽脊保存術應用在嚴重牙周缺損患者的考量

Ridge Preservation in Periodontally Compromised Patient

陳俊榮
奇美醫學中心牙周病科

具有足夠的軟、硬組織，是植牙長期成功的必備條件之一，但是隨著牙齒拔除後齒槽脊的萎縮，常常會影響到後續手術的複雜性與成功率，因此拔牙後接受齒槽脊保存術也在臨床上被廣泛的應用，然而牙齒周圍若已有嚴重的骨缺損或是感染，則會大大的影響其成功率。臨床上在嚴重牙周缺損的患者，要如何選擇合適的治療方式，才會對患者帶來最理想的臨床結果？希望利用這此次機會，與大家一起分享奇美醫院的臨床經驗。

S26

牙周疾病的宿主調控治療

Host Modulation Therapy in Periodontal Diseases: A Journey From Kitchen to Bench

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國防醫學院牙醫學系
三軍總醫院牙周病科

The knowledge that periodontitis is a chronic inflammatory disease provides us with options to consider using anti-inflammatory agents as therapeutic strategies additional to conventional periodontal treatment (i.e. root surface debridement) and risk-reduction strategies. This concept has been referred to as host response modulation or host modulation therapy, denoting that the treatment aims to modify the host response by reducing those damaging aspects of the inflammatory response that lead to tissue destruction. A number of different classes of anti-inflammatory drugs are available, and some of these have been considered for use as adjunctive treatments for periodontitis. Host modulation therapy with anti-inflammatories is not a new concept, and a large number of drugs have been evaluated for a potential role in the management of periodontitis. The immune-modulatory properties of a number of drug classes and molecules are currently under investigation to assess which may be applicable for treatment of periodontitis. The challenge remains to harness the knowledge created from basic science and animal studies to develop and evaluate these molecules as new drugs and to evaluate the risks and benefits associated with their clinical use

S27

YAG Laser 在牙周病及植體周圍炎的基礎科學與臨床應用

林泰誠
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近年，雷射在牙科領域的應用越來越普遍，其中尤其 Er: YAG Laser (2940 nm) 因為可以同時使用在軟硬組織的切割備受注目，此外，其殺菌效果以及無毒效應，以及伴隨在週邊組織帶來的生物刺激作用，目前在牙周病以及植體周圍炎的處理上可以獲得相當好的臨床結果。本次演講將介紹 Er: YAG Laser 的基礎醫學實證，臨床應用，以及最新的發展成果以及未來的潛力。