臺北醫學大學 泌尿腎臟研究中心 會議記錄

時間：**114 年 3 月 13 日(星期四) 9:00-10:00**

地點：視訊會議- (請以正式全名登入會議室，以利進行會議簽到)

使用 Google Meet (會議前 10 分鐘即開啟會議室)

會議室連結：https://meet.google.com/ihn-wugo-jfv

(敬略稱位)

會議主席：洪冠予

與會人員：

【附醫】劉明哲、葉劭德、吳建志、林孝友、吳政誠、張景欣、林敬哲、吳致寬、方德昭、吳逸文、陳錫賢、林彥仲、高治圻、陳靜怡、葉曙慶、邵月珠、周安琪

【萬芳】溫玉清、李良明、林克勳、林雍偉、蕭志豪、許軒豪、賴宗豪、鍾卓興、許永和、鄭仲益、陳作孝、劉崇德、楊韻紅、吳岳霖

【雙和】吳佳璋、陳冠州、劉家宏、江怡德、鄒凱亦、高偉棠、胡書維、董劭偉、陳至亨、吳美儀、李明哲、洪麗玉、鄭彩梅、廖家德、高芷華、林冠宏、陳正憲、邱惠雯

【新國民】蘇裕謀、鄒居霖

長官指導：

吳麥斯校長、許志成教授、陳瑞明所長、盧星華副院長、許永和副院長

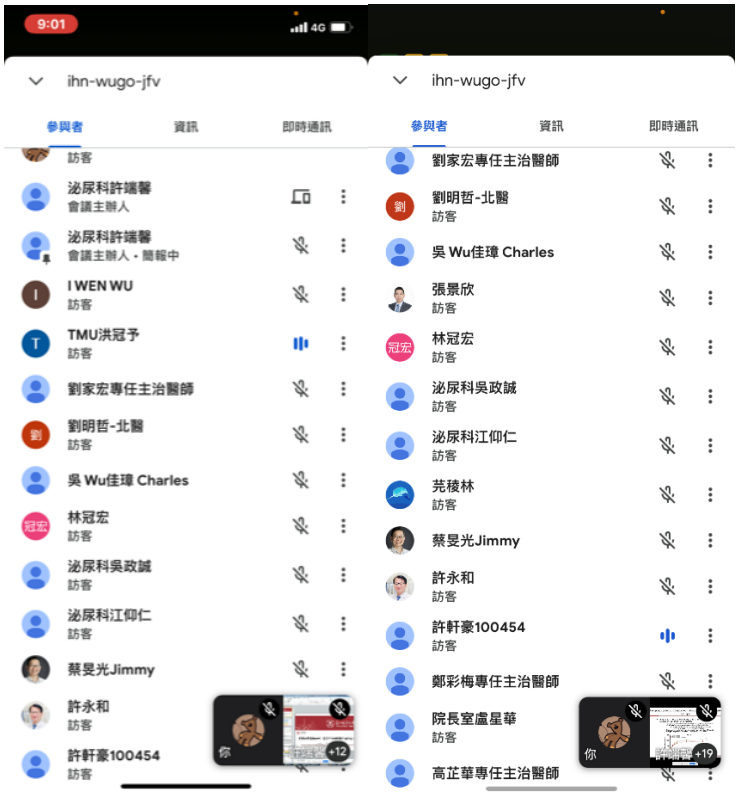
議程：

一、腎臟泌尿精準健康計畫及生物檢體資料庫進度報告(吳逸文主任)

二、 團隊報告

1.功能性泌尿團隊(萬芳許軒豪醫師)

2.急性腎病團隊(雙和林冠宏醫師)



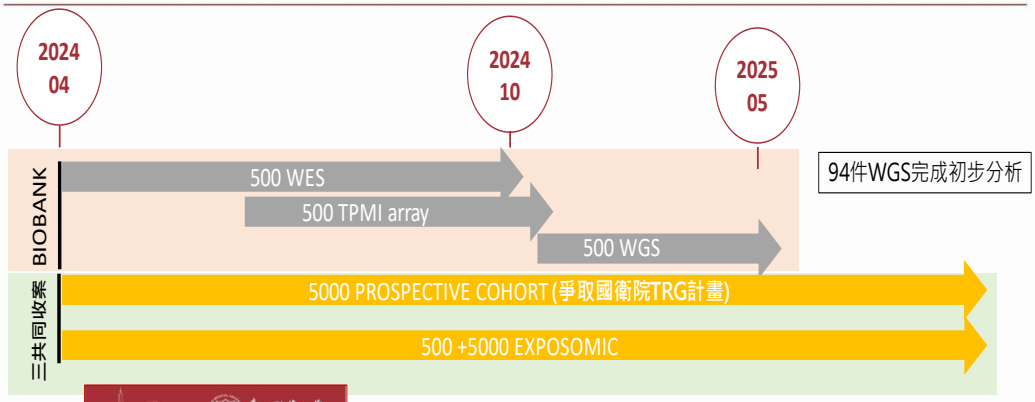
臺北醫學大學
泌尿腎臟研究中心
TMU Research Center of Urology and Kidney

腎臟泌尿精準健康計畫及生物檢體資料庫進度報告

報告人：吳逸文 副教授

114年3月13日

精準腎臟健康計畫進度：



https://docs.google.com/forms/d/e/1FAIpQLSeWgJ5cNSuaBjDkuUtRfqtUY7G5mW43UIG8jxj49klc9c5Sw/viewform?usp=pp_url&entry.1813552769=T20241105-01

Biobank 收案時，公衛學生同時收集問卷

附醫	雙和	萬芳
高治圻	林冠宏	吳岳霖
吳逸文	廖家德	

One campus: 共同收案，共享資料，共同發表

- **Prospective Genomic Cohort Establishment:**

高治圻/吳逸文

IgA nephropathy

廖家德/林冠宏

Polycystic kidney disease

Diabetic kidney disease

吳岳霖

Other kidney disease

年度	月份	腎臟科_雙和_血液	腎臟科_附醫_血液	腎臟科_萬芳_血液	腎臟科_雙和_尿液	腎臟科_附醫_尿液	腎臟科_萬芳_尿液	問卷_雙和	問卷_附醫	問卷_萬芳
2024	7	0	1	0	0	0	0	0	0	0
2024	8	0	2	0	0	0	0	0	0	0
2024	9	0	7	0	0	0	0	0	0	0
2024	10	0	13	0	0	0	0	0	0	0
2024	11	0	11	0	0	0	0	0	0	0
2024	12	0	18	0	0	0	0	0	0	0
2025	1	0	12	0	0	0	0	0	0	0
2025	2	0	10	1	0	0	0	0	10	0

目前成果及未來工作

成果：

- **教育部深耕計畫**：腎病精準醫學計畫（吳逸文, 2024/1-2024/12）
- **國際研討會**：台灣腎臟醫學會-台馬泰國際研討會（吳逸文, 2024/12/14)
- **論文**： Polygenic Score for Kidney Function and Clinical Management through Whole-Exome Sequencing in the Taiwanese Population (已投搞)
- **計畫: 國科會**：2 件（吳逸文，洪冠宇，已投出），**教育部深耕計畫**：1 件（吳逸文，已投出）

未來工作：

國衛院計畫：1 件（吳麥斯，預計2025/03 投出）

泌尿腎臟研究中心
RCUK

組別：功能性泌尿團隊
報告人: 萬芳醫院 許軒豪醫師
20250313

分析因膀胱纖維化導致膀胱功能損害之研究

- 研究背景: 膀胱纖維化導致功能失常，導致間質性膀胱炎/膀胱疼痛症候群
- 研究目的: 藉由分析結抗膀胱纖維化的pathway，找出可以間質性膀胱炎/膀胱疼痛症候群的藥物

Biomedicine & Pharmacotherapy 138 (2021) 111522

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Biomedicine & Pharmacotherapy

journal homepage: www.elsevier.com/locate/biopha

Original article

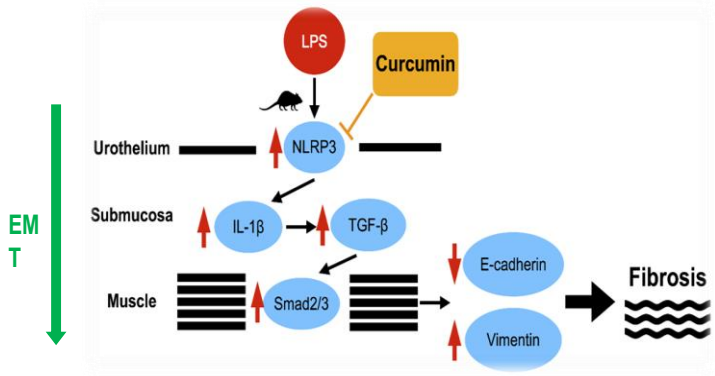
Therapeutic effect of modulating the NLRP3-regulated transforming growth factor-β signaling pathway on interstitial cystitis/bladder pain syndrome

Hung-Jen Shih [a,b,c], Chao-Yuan Chang [d,e,f], Chung-Howe Lai [a,1], Chun-Jen Huang [d,e,f,*,1]

[a] Department of Urology, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan
[b] Department of Urology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan
[c] Department of Urology, Changhua Christian Hospital, Changhua, Taiwan
[d] Integrative Research Centre for Critical Care, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan
[e] Department of Anesthesiology, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan
[f] Graduate Institute of Clinical Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan

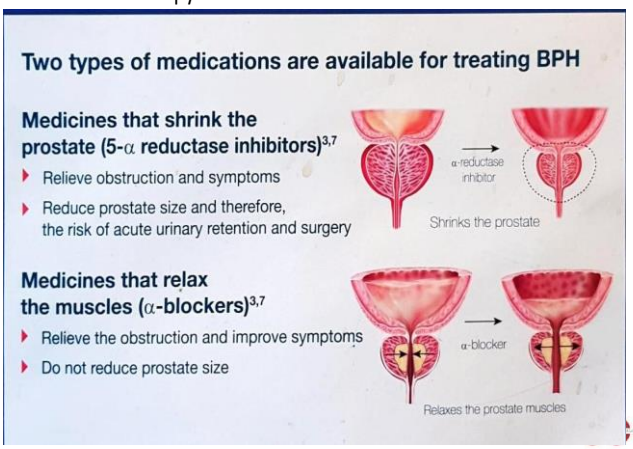
Results & Conclusion

- The pathogenesis of chronic inflammation -induced IC/BPS is associated with the NLRP3 inflammasome /IL-1β-related TGF -β/Smad pathway.
- Downregulation of the expression of this pathway through curcumin mitigates chronic inflammation -induced bladder injury .



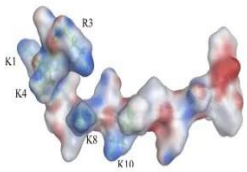
Medication for BPH

- Preventing or reducing bladder tissue remodeling in a timely manner is the treatment goal of BOO because delay treatment may induce irreversible bladder damage
  - A novel therapy that can stop or reverse bladder remodeling is in need for effective therapy of BOO.

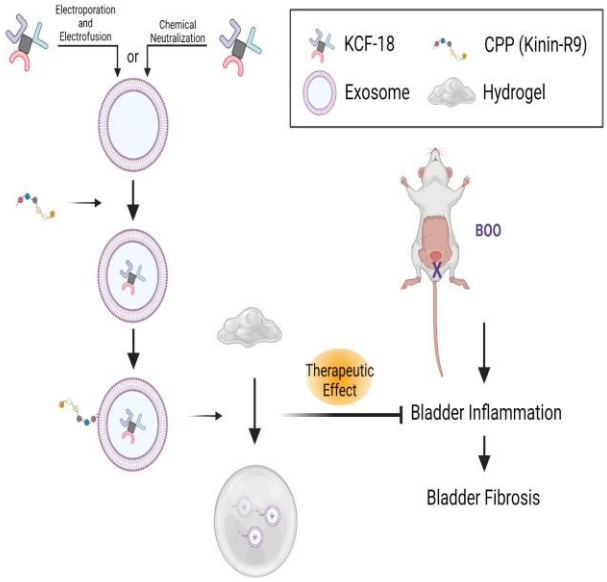


A novel cytokine inhibiting therapy : KCF-18

- KCF18 is a designed peptide which composed of 18 amino acids derived from the receptors of the TNF-α, IL-1β and IL-6.
  - The composition of KCF18 is N-terminal amino acids from TNF receptor-1, middle amino acids from IL-1 receptor and C-terminal amino acids from IL-6 receptor.
  - The anti-inflammatory effects of KCF18 have been confirmed in in vitro and in vivo studies.
- This novel peptide may serve as an effective anti-inflammatory treatment for BOO-induced bladder remodeling



Enhance biodistribution in bladder



臺北醫學大學
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TMU Research Center of Urology and Kidney

急性腎病團隊
AKI-AKD bundle and oXiris

報告人：林冠宏 醫師

114.03.13

Outline

- AKI-AKD bundle
- oXiris

OXFORD ERA ndt

Nephrol Dial Transplant, 2025, **40**, 524–536
https://doi.org/10.1093/ndt/gfae168
Advance access publication date: 17 July 2024

A novel real-time model for predicting acute kidney injury in critically ill patients within 12 hours

Tao Sun[1,*], Xiaofang Yue[1,*], Xiao Chen[1,*], Tiancha Huang[1,*], Shaojun Gu[1], Yibing Chen[1], Yang Yu[1], Fang Qian[1], Chunmao Han[1], Xuanliang Pan[1], Xiao Lu[1], Libin Li[1], Yun Ji[1], Kangsong Wu[1], Hongfu Li[1], Gong Zhang[1], Xiang Li[1], Jia Luo[2], Man Huang[1,2], Wei Cui[1], Mao Zhang[1] and Zhihua Tao[1]

[1]The Second Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, China
[2]Chongqing Zhongyuan Huiji Biotechnology Co. Ltd, Chongqing, China
[3]Key Laboratory of Multiple Organ Failure (Zhejiang University), Ministry of Education, Hangzhou, China
Correspondence to: Zhihua Tao. E-mail: zrtzh@zju.edu.cn
*These authors contributed equally to this work

Artificial intelligence-enabled decision support in nephrology

Tyler J. Loftus, Benjamin Shickel, Tezcan Ozrazgat-Baslanti, Yuanfang Ren, Benjamin S. Glicksberg, Jie Cao, Karandeep Singh, Lili Chan, Girish N. Nadkarni & Azra Bihorac

Nature Reviews Nephrology **18**, 452–465 (2022) | Cite this article

Box 1 | **AI algorithms and applications frequently used in healthcare**

Types of health data

Structured data

- Demographics
- Laboratory tests
- Medications
- Diagnoses
- Procedures

Unstructured data

- Clinical notes
- Waveform data
- Images
- Videos

Types of AI

Unsupervised learning
Supervised learning
Reinforcement learning

Algorithms

Generalized linear models
Discriminant analysis
Naive Bayes
Support vector machine
Decision trees
Random forest
Gradient boosting machines
Neural networks

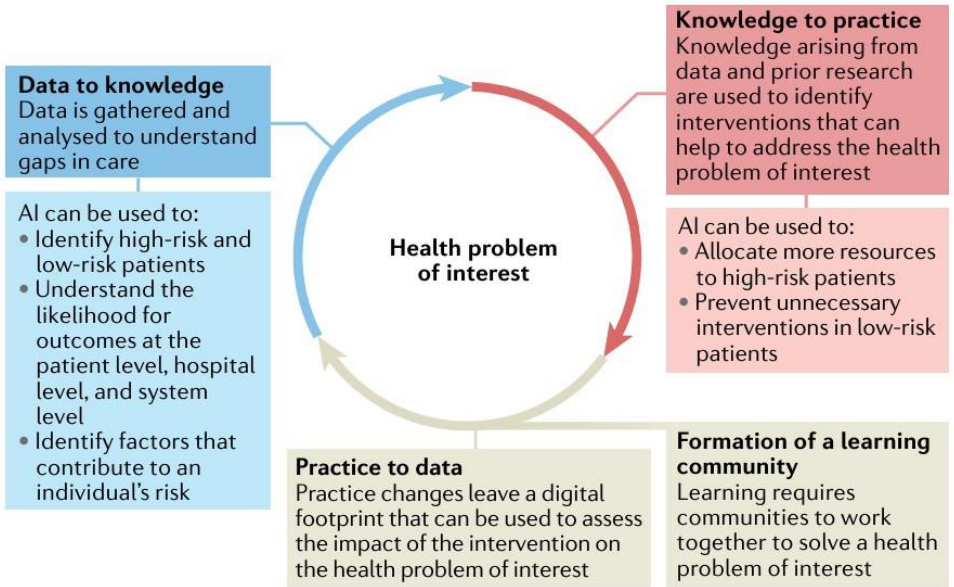
- Convolutional neural networks
- Recurrent neural networks

Applications

Biomarker discovery
Drug discovery
Disease diagnosis

- CheXNet
- Diabetic retinopathy
- Skin cancer
- Breast cancer nodal metastasis

Patient risk stratification
Treatment recommendation systems



ICU team sepsis bundle care

ORIGINAL ARTICLE

Early Goal-Directed Therapy in the Treatment of Severe Sepsis and Septic Shock

Authors: Emanuel Rivers, M.D., M.P.H., Bryant Nguyen, M.D., Suzanne Havstad, M.A., Julie Ressler, B.S., Alexandria Muzzin, B.S., Bernhard Knoblich, M.D., Edward Peterson, Ph.D., and Michael Tomlanovich, M.D., for the Early Goal-Directed Therapy Collaborative Group* Author Info & Affiliations

Published November 8, 2001 | N Engl J Med 2001;345:1368-1377 | DOI: 10.1056/NEJMoa010307
VOL. 345 NO. 19 | Copyright © 2001

Protocolised Management In Sepsis (ProMISe): a multicentre randomised controlled trial of the clinical effectiveness and cost-effectiveness of early, goal-directed, protocolised resuscitation for emerging septic shock

Health Technology Assessment, No. 19.97

Paul R Mouncey, Tiffany M Osborn, G Sarah Power, David A Harrison, M Zia Sadique, Richard D Grieve, Rahi Jahan, Jermaine CK Tan, Sheila E Harvey, Derek Bell, Julian F Bion, Timothy J Coats, Mervyn Singer, J Duncan Young, and Kathryn M Rowan.

Author Information and Affiliations

Southampton (UK): NIHR Journals Library; 2015 Nov.

ORIGINAL ARTICLE

A Randomized Trial of Protocol-Based Care for Early Septic Shock

Author: The ProCESS Investigators* Author Info & Affiliations

Published May 1, 2014 | N Engl J Med 2014;370:1683-1693 | DOI: 10.1056/NEJMoa1401602 | VOL. 370 NO. 18

ORIGINAL ARTICLE

Goal-Directed Resuscitation for Patients with Early Septic Shock

Author: The ARISE Investigators and the ANZICS Clinical Trials Group* Author Info & Affiliations

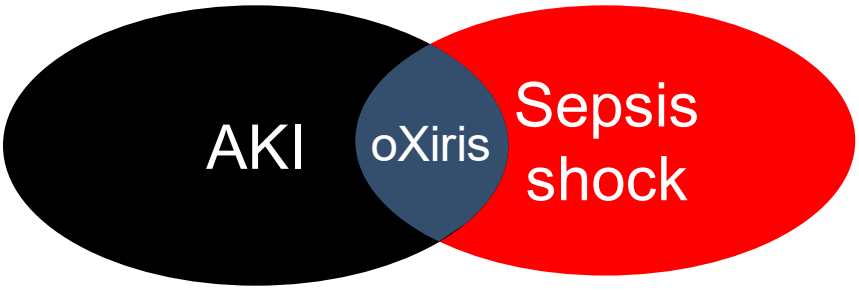
Published October 16, 2014 | N Engl J Med 2014;371:1496-1506 | DOI: 10.1056/NEJMoa1404380
VOL. 371 NO. 16 | Copyright © 2014

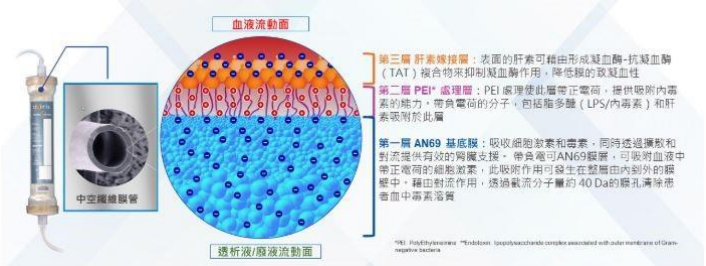
Review > Kidney Int. 2019 Jul;96(1):52-57. doi: 10.1016/j.kint.2018.11.047. Epub 2019 Mar 4.

Fluid management in the critically ill

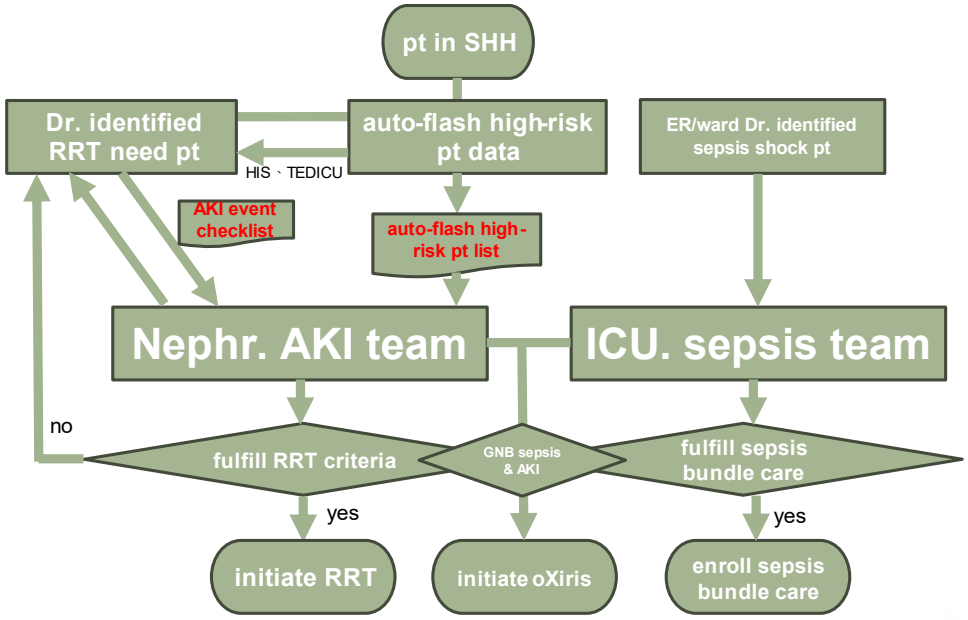
Jean-Louis Vincent [1]

Initiation of oXiris





Initiation of oXiris **flow chart**



Conclusion

- AI輔助警示需兼顧sensitivity and specificity，才能最大化發現迫在眉睫的AKI病人與最小化醫療單位警示疲乏。
- 利用腎內AKI-AKD bundle警示系統和重症加護單位sepsis bundle系統，早期找出適合oXiris治療的病人。