



臺北醫學大學 泌尿腎臟研究中心 會議記錄

時間：**111年4月21日(星期四) 14:00-15:00**

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/epb-ovcv-snx>

(敬略稱位)

會議主席：吳麥斯

與會人員：

【附醫】劉明哲、葉劭德、吳建志、林孝友、吳政誠、張景欣、陳偉傑、顧芳瑜、羅詩修、方德昭、陳錫賢、林彥仲、吳岳霖、高治圻、陳靜怡、葉曙慶、戴定恩

【萬芳】溫玉清、李良明、林克勳、林雍偉、蕭志豪、許軒豪、賴宗豪、鄭仲益、陳作孝、蘇裕謀、劉崇德、楊韻紅、李明哲、鍾卓興

【雙和】吳佳璋、陳冠州、劉家宏、江怡德、林佳達、鄒凱亦、高偉棠、胡書維、魏汶玲、吳美儀、洪麗玉、鄭彩梅、邱怡仁、陳佑瑋、廖家德、游博翰、陳正憲、邱惠雯

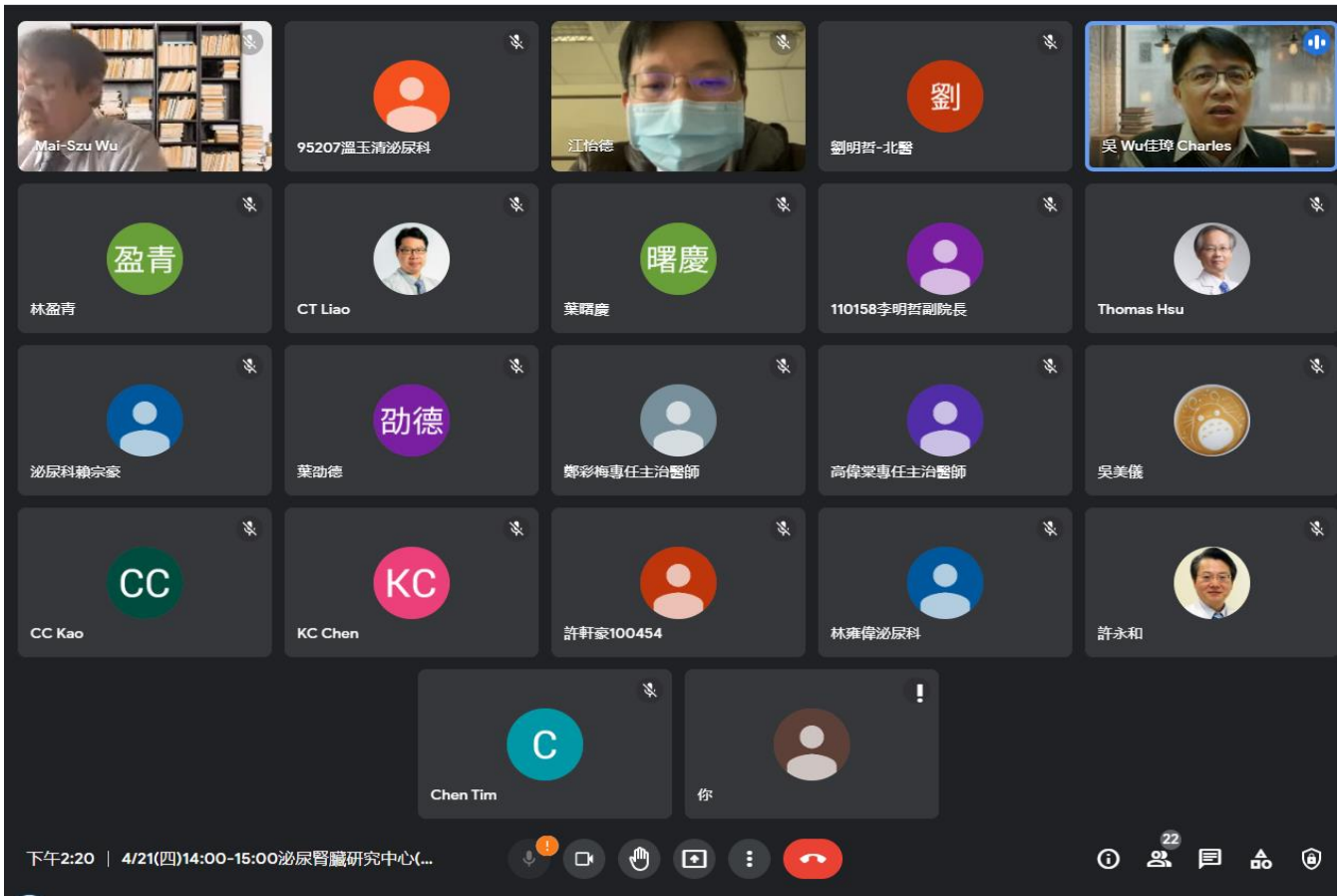
【新國民】許永和、鄒居霖

長官指導：

林建煌校長、李岡遠研發長、許志成教授、崔克宏副院長、陳瑞明所長

議程：

一、泌尿腎臟癌症團隊、腎移植團隊小組報告



HIFU in prostate cancer treatment

雙和醫院 江怡德醫師



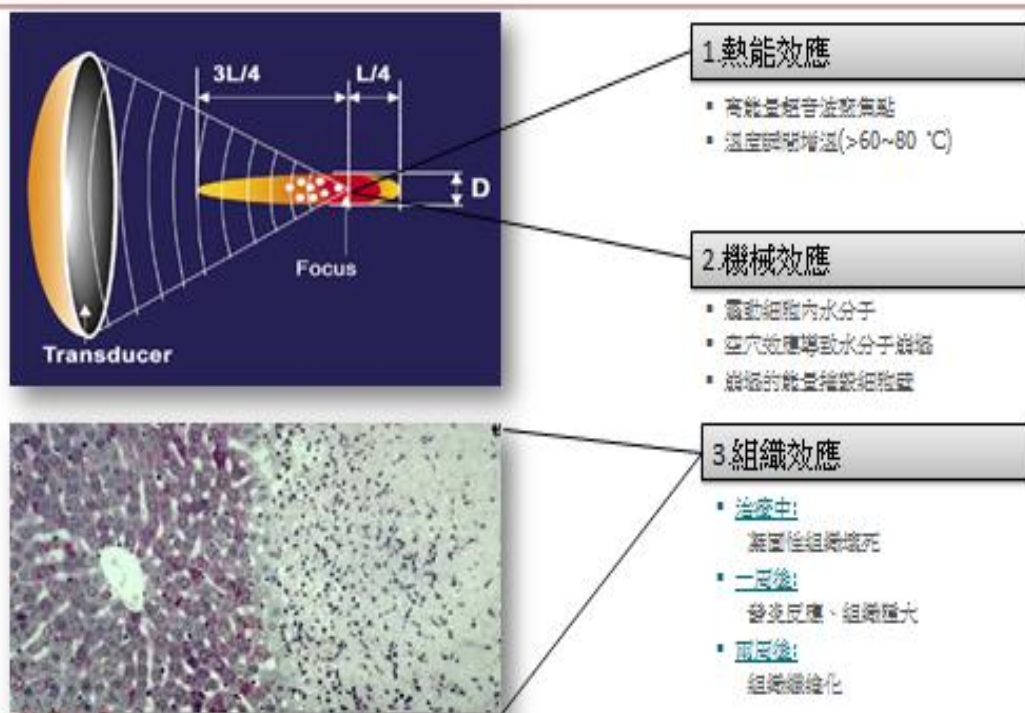
臺北醫學大學
TAIPEI MEDICAL UNIVERSITY

Introduction of HIFU

- HIFU (High-intensity focused ultrasound 高強度聚焦超音波)
- 利用大面積的探頭聚焦，產生高強度的超音波，對組織產生破壞。
- 從1940年代開始使用在醫學研究，到80年代後蓬勃發展。
- 主要用來治療治療良性或惡性腫瘤，如肝癌、胰臟癌、前列腺癌、腎細胞癌、膀胱癌、子宮肌瘤等。



Introduction of HIFU



Introduction of HIFU

- Extracorporeal and intracavitary (transrectal mainly)
- Guided with ultrasound or MRI
- 目前HIFU治療
 - 海扶刀 → 乳癌、子宮肌瘤
 - 海芙刀 → 子宮肌瘤
 - 海芙音波拉提 → 醫美
 - 海福刀 → 攝護腺癌



HIFU in GU

Table 1. Intracavitary devices being used for the treatment of prostate cancer.

| Company | Device | Treatment Frequency Range | Reach | Guidance Method | Power Settings | |
|------------------|--------------------------------|------------------------------|--|---|--|----------------|
| Edap Technomed | Focal One (formerly Ablatherm) | 3 MHz | 32–67 mm ¹ | US 7.5 MHz ² US/MR fusion | Set levels, automatically calculated depending on focal length & area to be treated. | Trans-rectal |
| Sonacare Medical | Sonablate | 4 MHz | 3 cm & 4 cm focal lengths ³ | US 6.5 MHz ⁴ US/MR fusion | Adjustable ⁵ | Trans-rectal |
| Profound Medical | TULSA-PRO | 4.1–4.5 MHz 13.0–14.4 MHz | 3 cm ⁶ | MRI (1.5 T or 3 T) | Automatically set and continuously adjusted ⁷ | Trans-urethral |
| Insightec | Exablate Prostate | 2.3 ± 0.25 KHz | 15–60 mm ⁸ | MR (1.5 T or 3 T) | Automatically set and adjustable ⁹ | Trans-rectal |

Cancers (Basel). 2021 Nov 14;13(22):5696.



Medium-term 1st-line Treatment

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journal homepage: www.europeanurology.com



Prostate Cancer

Medium-term Outcomes after Whole-gland High-intensity Focused Ultrasound for the Treatment of Nonmetastatic Prostate Cancer from a Multicentre Registry Cohort

Louise Dickinson^{a,b}, Manit Arya^{a,b,c}, Naveed Afzal^d, Paul Cathcart^b, Susan C. Charman^{e,f}, Andrew Cornaby^g, Richard G. Hindley^h, Henry Lewis^b, Neil McCartan^{a,b}, Caroline M. Moore^{a,b}, Senthil Nathan^a, Chris Ogden^g, Raj Persadⁱ, Jan van der Meulen^g, Shradha Weir^b, Mark Emberton^{a,h}, Hashim U. Ahmed^{a,h,i,*}

^aDivision of Surgery and Interventional Sciences, University College London, London, UK; ^bDepartment of Urology, UCLH NHS Foundation Trust, London, UK; ^cDepartment of Urology, Princess Alexandra Hospital NHS Trust, Harlow, UK; ^dDepartment of Urology, Dorset County Hospital, Dorchester, UK; ^eDepartment of Health Services Research and Policy, London School of Hygiene and Tropical Medicine, London, UK; ^fClinical Effectiveness Unit, The Royal College of Surgeons in England, London, UK; ^gDepartment of Urology, Radcliffe Hospital, Hampshire Hospitals NHS Foundation Trust, Hampshire, UK; ^hDepartment of Urology, Brunel Hospital, Mid Essex NHS Trust, Chelmsford, UK; ⁱDepartment of Academic Urology, The Royal Marsden Hospital NHS Foundation Trust, London, UK; ^{*}Department of Urology, North Bristol NHS Trust, Bristol, UK

Sonoblate 500 HIFU:

- 5 year survival: **87%** in low-risk group patients
- ED about **61%** after HIFU
- UTI rate **7.7%**
- Rectao-urethral fistula **0.13%**



HIFU Hemiablation to RALP



COMPARISON OF HIGH-INTENSITY FOCAL ULTRASOUND HEMIABLATION TO ROBOTIC RADICAL PROSTATECTOMY IN THE MANAGEMENT OF UNILATERAL PROSTATE CANCER: A MATCHED-PAIR ANALYSIS

Comparing High-Intensity Focal Ultrasound Hemiablation to Robotic Radical Prostatectomy in the Management of Unilateral Prostate Cancer: A Matched-Pair Analysis

Shreyas Menon, MD, Prasad Anand, MD, Steven Bekelman, MD, Stephen Bhaia, MD, Marwan Lotfi, MD, Eric Helgeson, MD, Alexander Patten, MD, and Prasad K. Chittipeddi, MD, PhD

Abstract

Introduction: Although self-reported, focal enucleation is being increasingly implemented in the management of prostate cancer (PC). Aim of the current study was to compare functional and oncologic outcomes of high-intensity focal ultrasound (HIFU) hemiablation of the prostate to robot-assisted laparoscopic prostatectomy (RALP) in the management of unilateral PC.

Methods: HIFU was done with the endorectal, virtual navis HIFU system (HIFU hemiablation) of the affected prostate lobe between HIFU and RALP. All patients were treated to have unilateral disease on the basis of the concordance between multiparametric magnetic resonance imaging (MRI) and PSA-guided biopsy. These patients were matched 1:1 with patients who underwent RALP for a similar PSA to disease concordance on the basis of their pathologic analysis. Matching criteria were Gleason score, prostate specific antigen (PSA), and cT stage. Treatment failure was defined as the need for salvage treatment from radiotherapy or systemic androgen deprivation therapy (ADT) due to disease progression. Kaplan-Meier curves and log-rank test were conducted to assess differences in salvage treatment-free survival across surgical techniques.

Results: Matching was effective with no significant differences within the two groups, although data related with HIFU were better (p<0.05). Median follow-up time for patients hemiablated with HIFU was 48 months vs 36 months for RALP. Median PSA before surgery was 10.0 ng/ml (range 4.0-20.0) and 10.0 ng/ml (range 4.0-20.0) for HIFU and RALP, respectively. Postoperative PSA was 0.1 ng/ml (range 0.0-0.5) and 0.1 ng/ml (range 0.0-0.5) for HIFU and RALP, respectively. The need for salvage treatment was significantly lower after HIFU. The significant differences were found in the need for salvage treatment from radiotherapy or systemic androgen deprivation therapy (ADT) due to disease progression. RALP-Meier curves and log-rank test were conducted to assess differences in salvage treatment-free survival across surgical techniques.

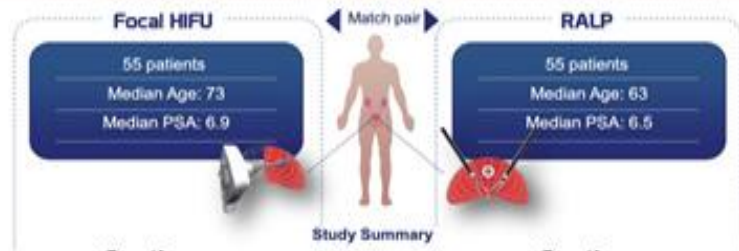
Conclusion: In this matched pair analysis, HIFU hemiablation was comparable to RALP in controlling localized unilateral PC with no significant differences in the need for salvage therapies. HIFU was also associated with significantly better functional outcomes. Accurate patient selection remains vital, and larger prospective trials are needed to confirm our findings.

Keywords: HIFU, prostate cancer, robotic, unilateral

Introduction

Prostate cancer (PC) is a major health problem, with 1.3 million new cases and 360,000 deaths worldwide in 2012. Robotic-assisted laparoscopic prostatectomy (RALP) is the most common surgical approach for PC.

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Continenence
82%(1mo) 94.5%(12mo)

Potent
80%(1mo) 80%(12mo)

Salvage Therapy
7/55

Continenence
40%(1mo) 87%(12mo)

Potent
15%(1mo) 38%(12mo)

Salvage Therapy
6/55

✓ **No significant differences** in the need for salvage therapies between HIFU and RALP.

✓ HIFU was associated to significantly **better** functional outcomes.

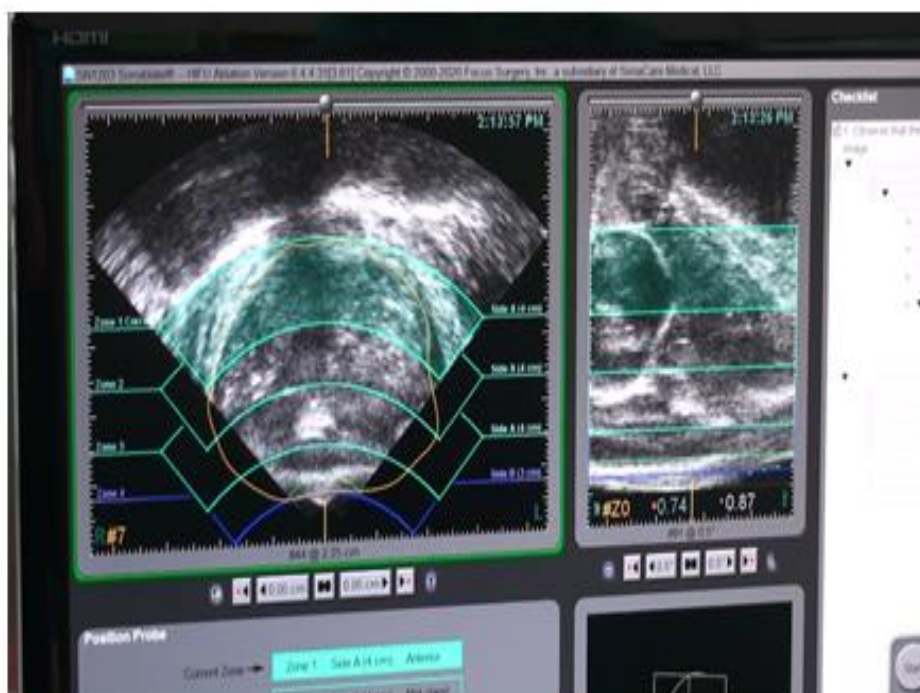


Summary

- For 1st Tx (low-risk patients or not-suitable for surgery)
- Salvage Tx after RT
- Oncological outcome compatible
- Better function preservation



Layer separation





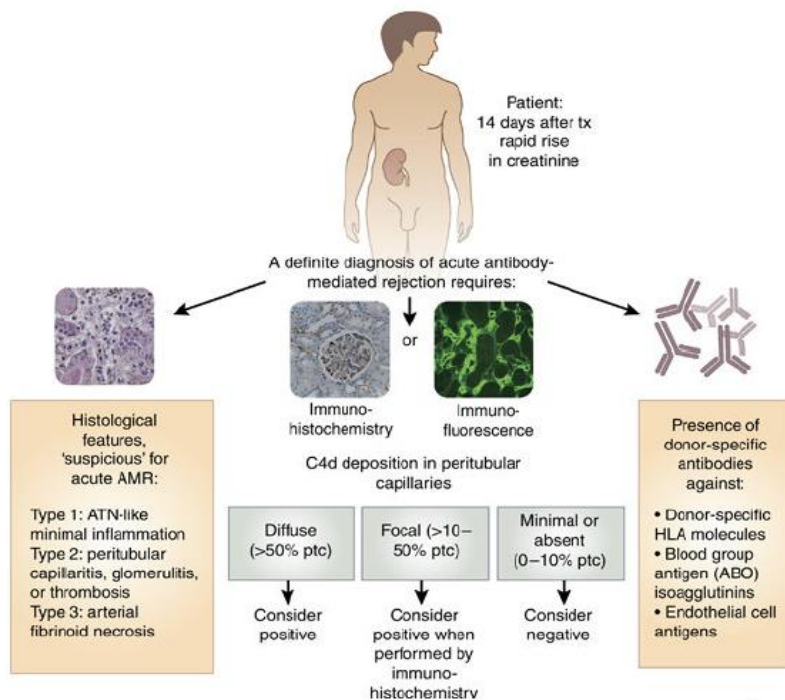
腎移植團隊

報告人：
衛生福利部雙和醫院
吳美儀 主任

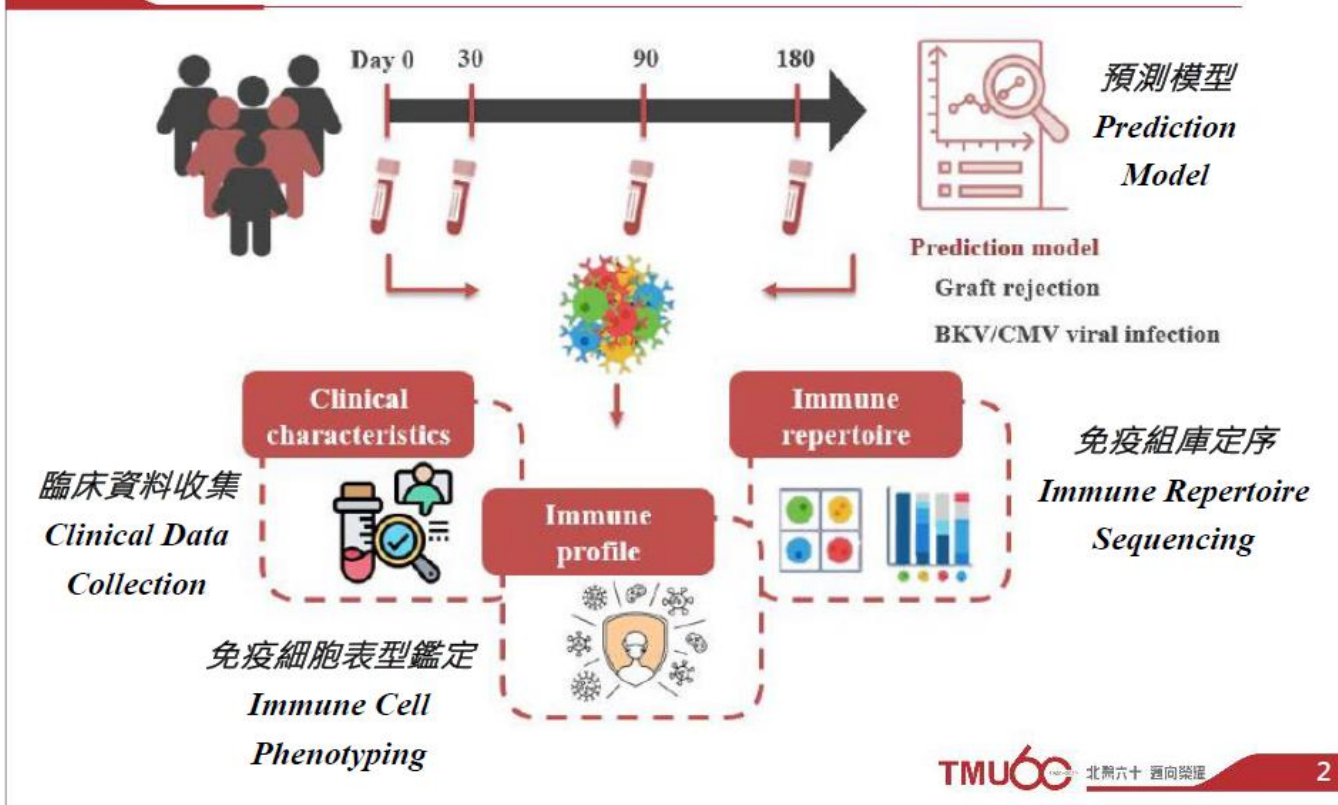


1960-2020 北醫六十 邁向榮耀

腎移植後抗體排斥



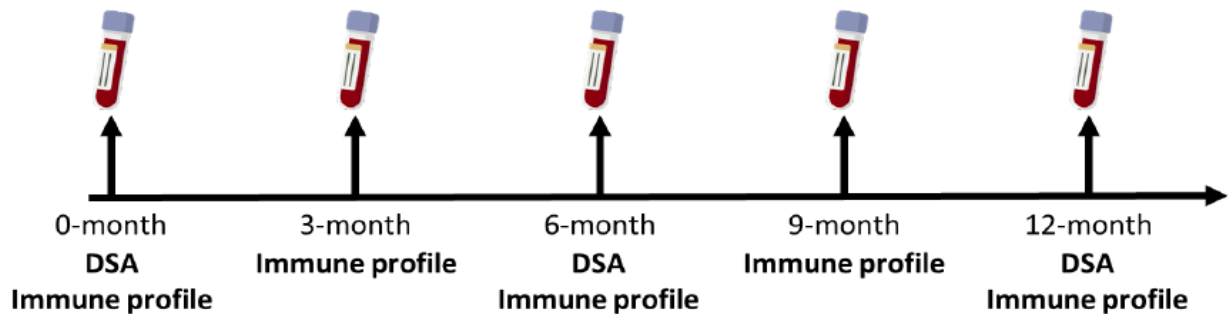
探討腎移植後抗體排斥之危險因子與免疫機轉




研究目標

- 本研究包含下列目標：
 - 收納北醫三院腎移植患者以建立一完整臨床資料庫。
 - 長期追蹤移植腎功能變化及排斥反應。
 - 找尋與腎臟移植後抗體排斥相關之免疫組庫特徵。
 - 找尋與腎臟移植後抗體排斥相關之免疫細胞標誌。
 - 使用腎功能軌跡及免疫特徵建立「腎臟移植後發生抗體媒介排斥反應之預測模型」。
- 自2021年08月開始執行，至2022年04月共收案 **30** 例

檢體採集、生化指標收集及免疫圖譜檢測

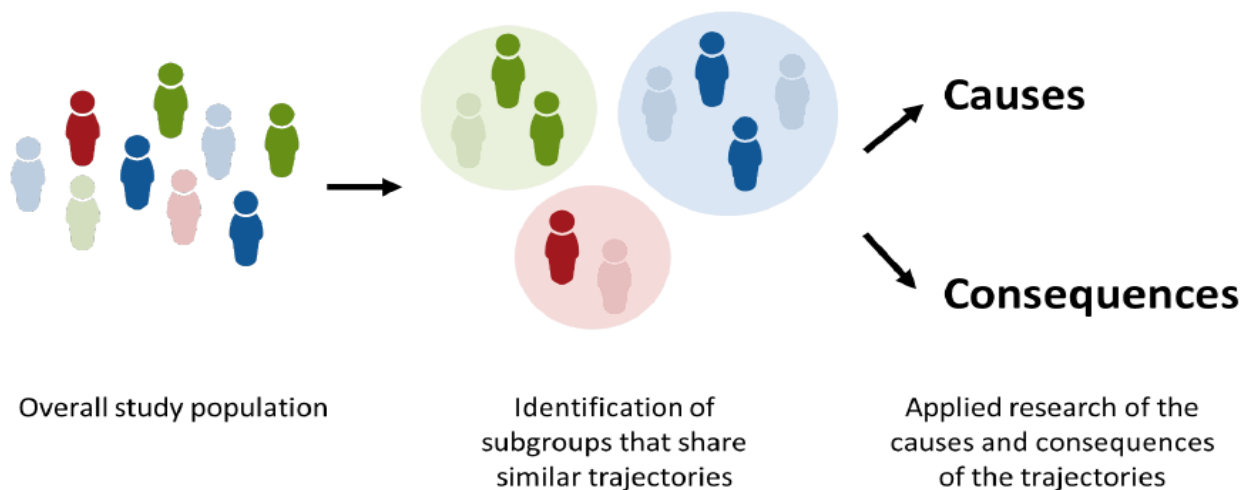


 **Laboratory data:** eGFR, HCT, HGB, WBC, Platelet, Ca, Lymphocyte, TG, Glucose AC, Cholesterol, K, Na, Creatinine, BUN, Uric acid, eGFR, FK-506, sirolimus, everolimus...

 **If AMR/BKV/CMV happened**

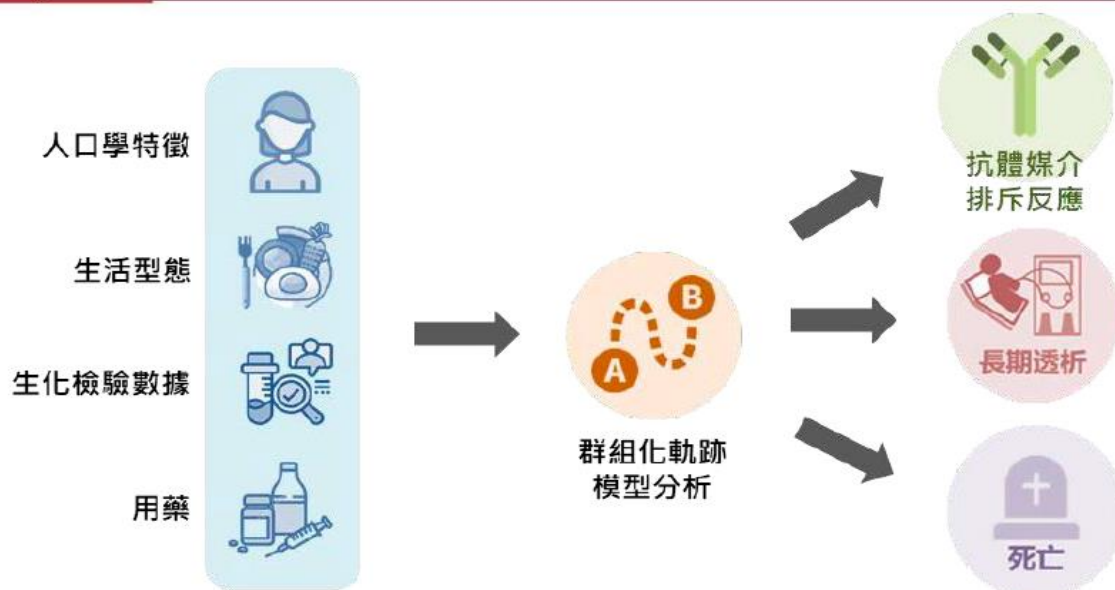
- 定期採集腎移植病人之血液檢體，用於生化指標之取得及免疫圖譜之分析。

腎移植之群組化軌跡模式分析模型



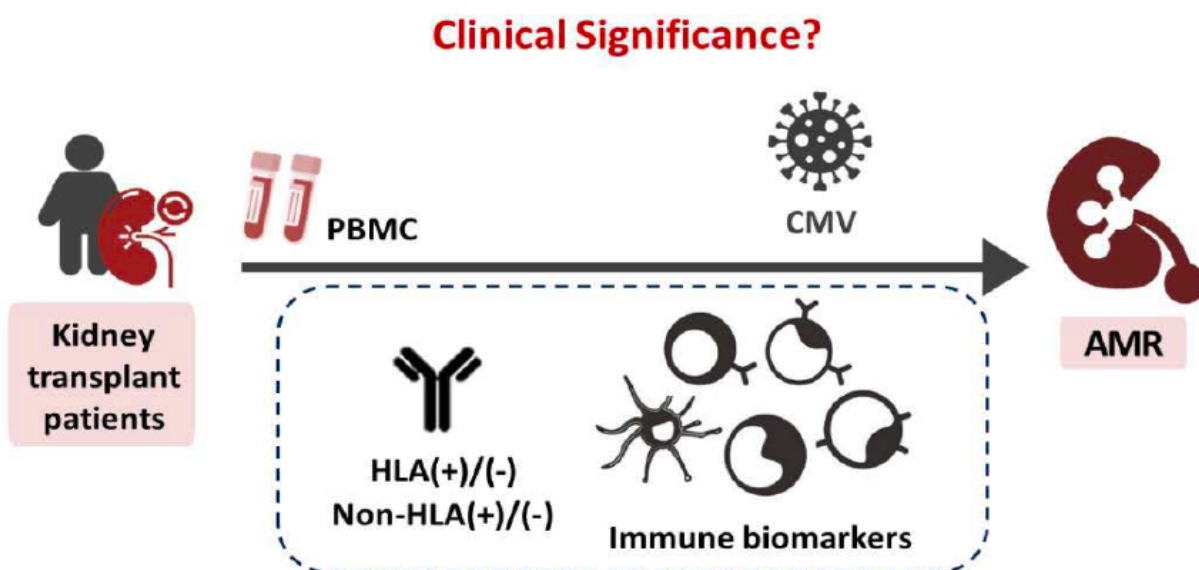
- 利用群組化軌跡模式辨識腎移植患者其腎功能長期發展之軌跡。

腎移植後抗體排斥與移植失敗預測模型



- 結合生化和免疫特徵、環境風險因子、人口學特徵及腎功能軌跡發展等因子，建立預測移植後抗體排斥及失敗之模型。

腎移植後抗體排斥之免疫細胞特徵



- 找尋與腎移植後抗體排斥相關之免疫細胞次分群、特定免疫標記、抗體、補體及臨床特徵。

由危險因子和免疫特徵探討腎移植後抗體排斥

