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

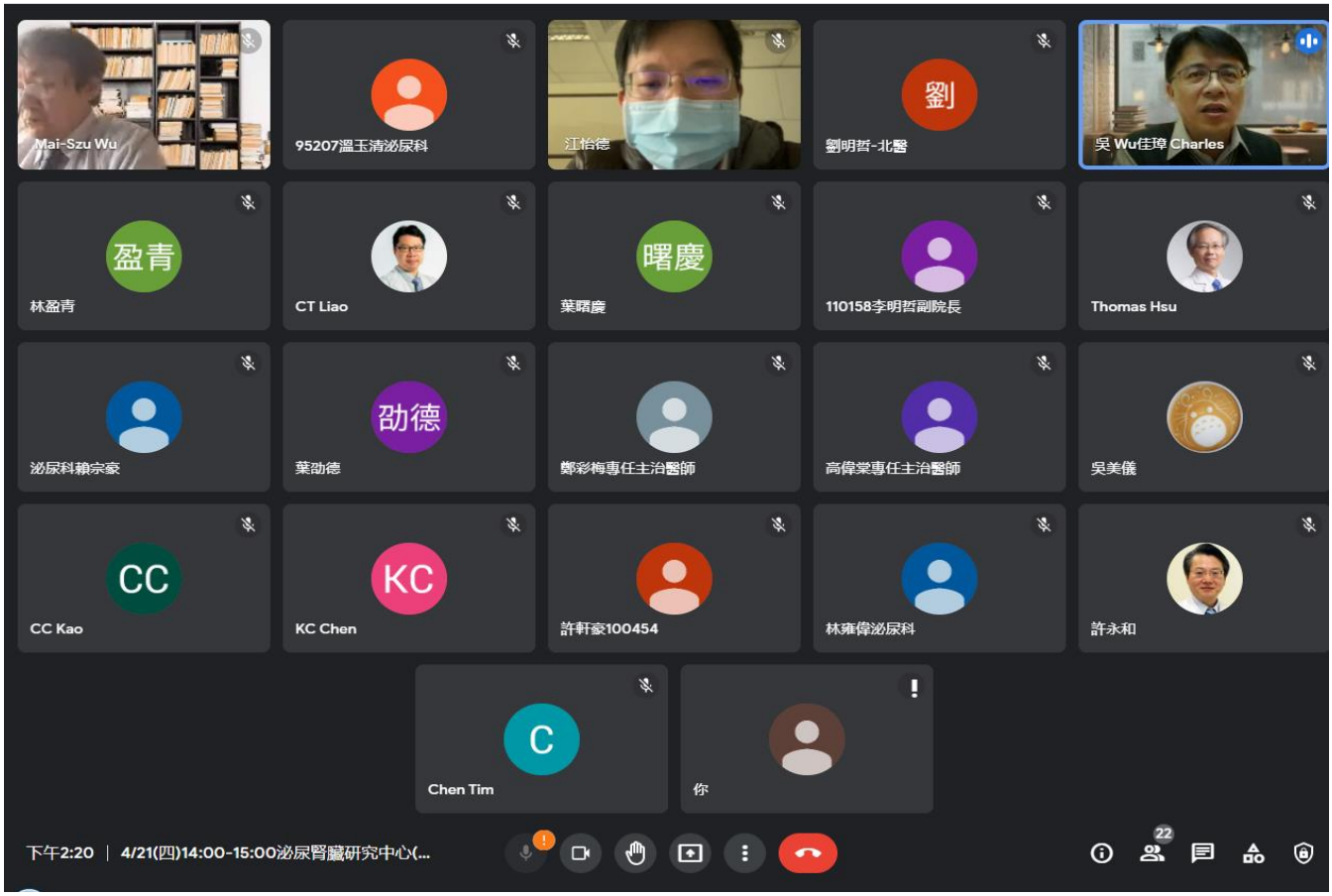
【新國民】許永和、鄒居霖

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

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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。

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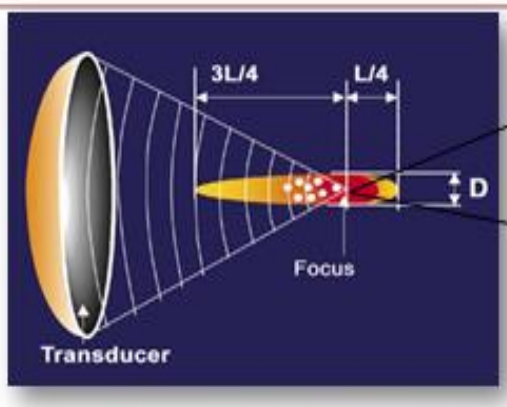
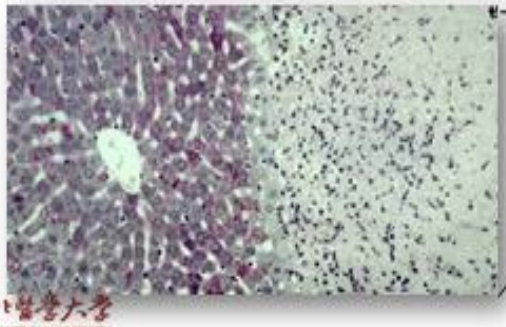
Introduction of HIFU





1.熱能效應
- 高能量超音波聚焦點
- 溫度瞬間增溫(>60~80 °C)

2.機械效應
- 震動細胞內水分子
- 空穴效應導致水分子崩塌
- 崩塌的能量摧毀細胞膜

3.組織效應
- 治療中:
  凝固性組織壞死
- 一周後:
  發炎反應、組織腫大
- 兩周後:
  組織纖維化

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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

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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.

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Medium-term 1st-line Treatment

EURURO-6697; No. of Pages 7

ARTICLE IN PRESS

EUROPEAN UROLOGY XXX (2016) XXX–XXX

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journal homepage: www.europeanurology.com

European Association of Urology

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 [d], Richard G. Hindley [g], Henry Lewi [h], Neil McCartan [a,b], Caroline M. Moore [a,b], Senthil Nathan [b], Chris Ogden [i], Raj Persad [j], Jan van der Meulen [e], Shraddha Weir [b], Mark Emberton [a,b,1], Hashim U. Ahmed [a,b,1,]*

[a] Division of Surgery and Interventional Sciences, University College London, London, UK; [b] Department of Urology, UCLH NHS Foundation Trust, London, UK; [c] Department of Urology, Princess Alexandra Hospital NHS Trust, Harlow, UK; [d] Department of Urology, Dorset County Hospital, Dorchester, UK; [e] Department of Health Services Research and Policy, London School of Hygiene and Tropical Medicine, London, UK; [f] Clinical Effectiveness Unit, The Royal College of Surgeons of England, London, UK; [g] Department of Urology, Basingstoke Hospital, Hampshire Hospitals NHS Foundation Trust, Hampshire, UK; [h] Department of Urology, Broomfield Hospital, Mid Essex NHS Trust, Chelmsford, UK; [i] Department of Academic Urology, The Royal Marsden Hospital NHS Foundation Trust, London, UK; [j] 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%

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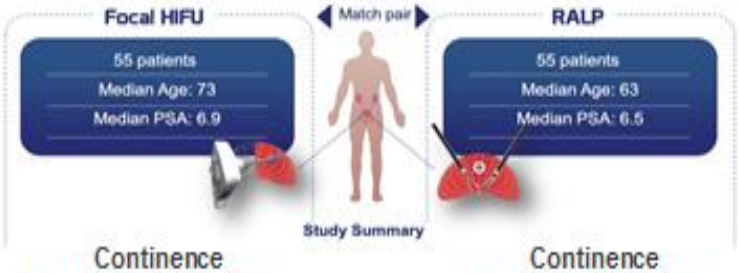
HIFU Hemiablation to RALP

ENDOUROLOGICAL SOCIETY

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



	Focal HIFU	RALP
Continence	82%(1mo) 94.5%(12mo)	40%(1mo) 87%(12mo)
Potent	80%(1mo) 80%(12mo)	15%(1mo) 38%(12mo)
Salvage Therapy	7/55	6/55

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

✓ HIFU was associated to significantly better functional outcomes.

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Summary

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

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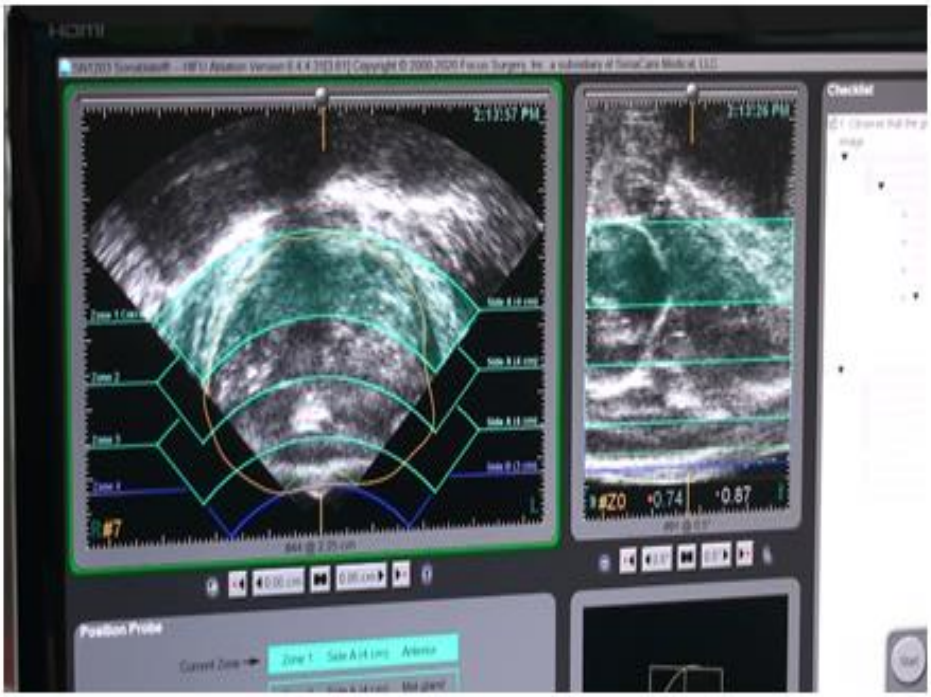
Layer seperation



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泌尿腎臟研究中心
TMU Research Center of Urology and Kidney

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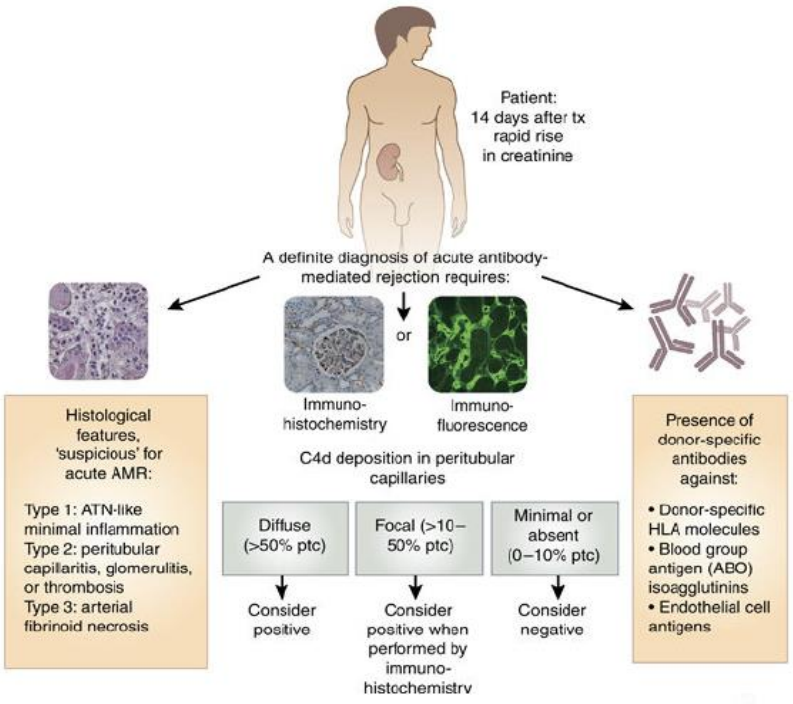
腎移植團隊

報告人：
衛生福利部雙和醫院
吳美儀 主任

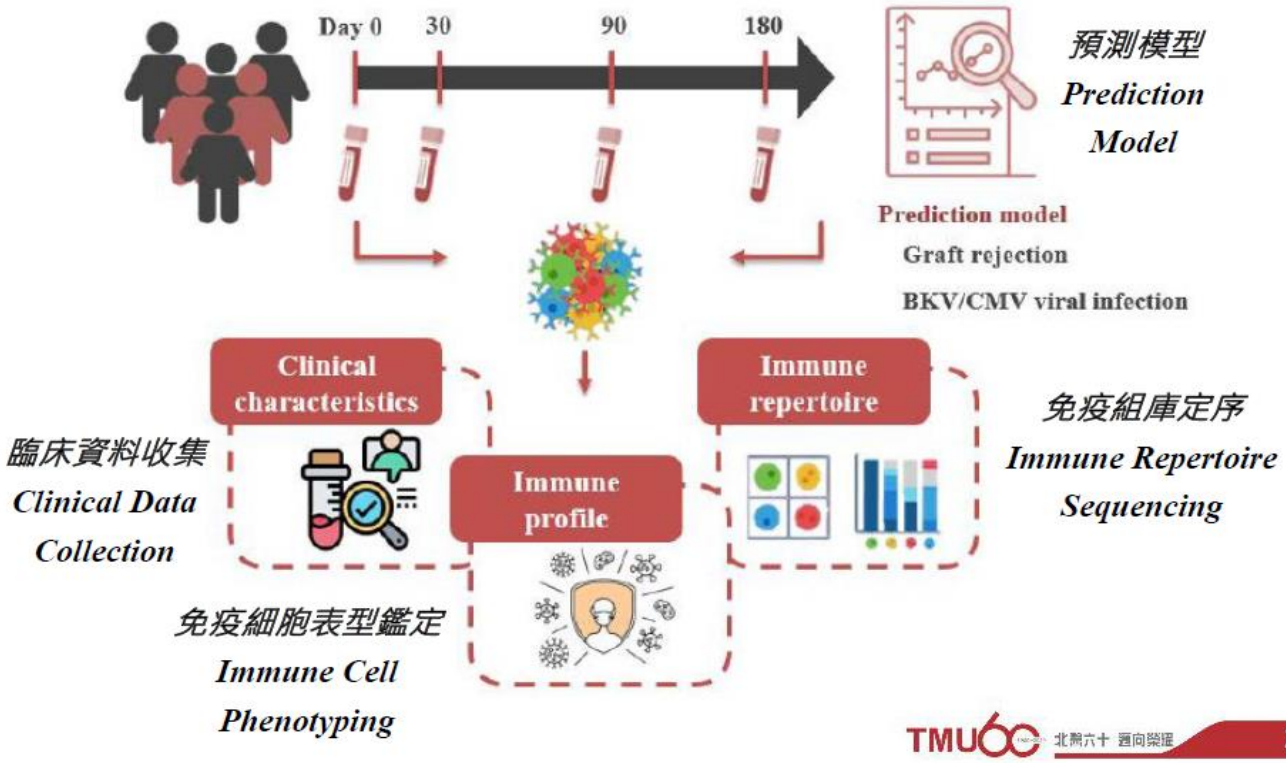
TMU60 1960~2020 北醫六十 邁向榮耀

腎移植後抗體排斥



Kidney Int. 2012; 81(7):628-39

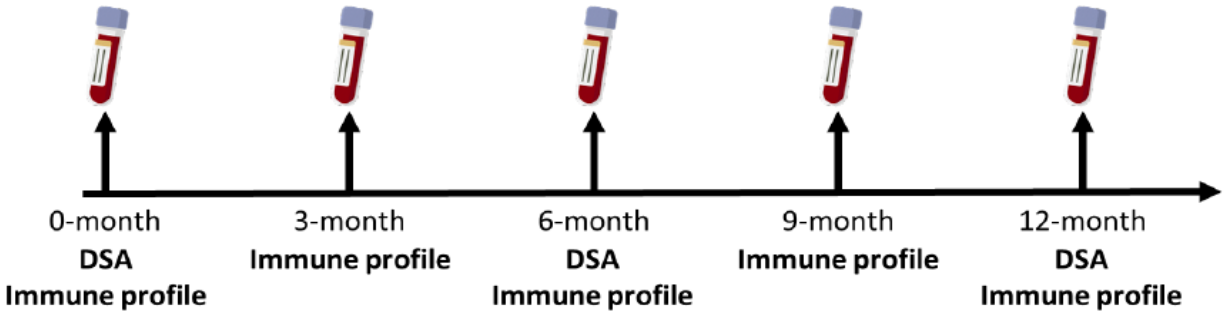
探討腎移植後抗體排斥之危險因子與免疫機轉



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

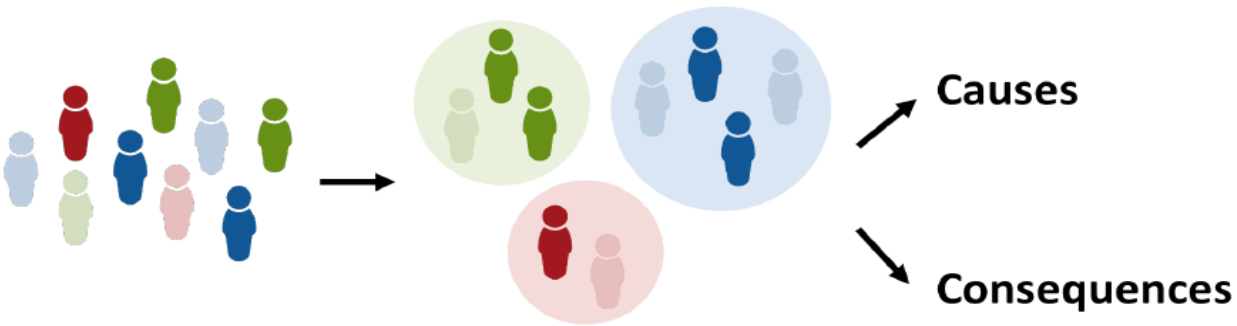


Laboratory data: eGFR, HCT, HGB, WBC, Platelet, Ca, Lymphocyte, TG, Glucose AC, Cholesterol, K, Na, Creatinine, BUN, Uric acid, eGFR, FK-506, sirolimus, everolimus...

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



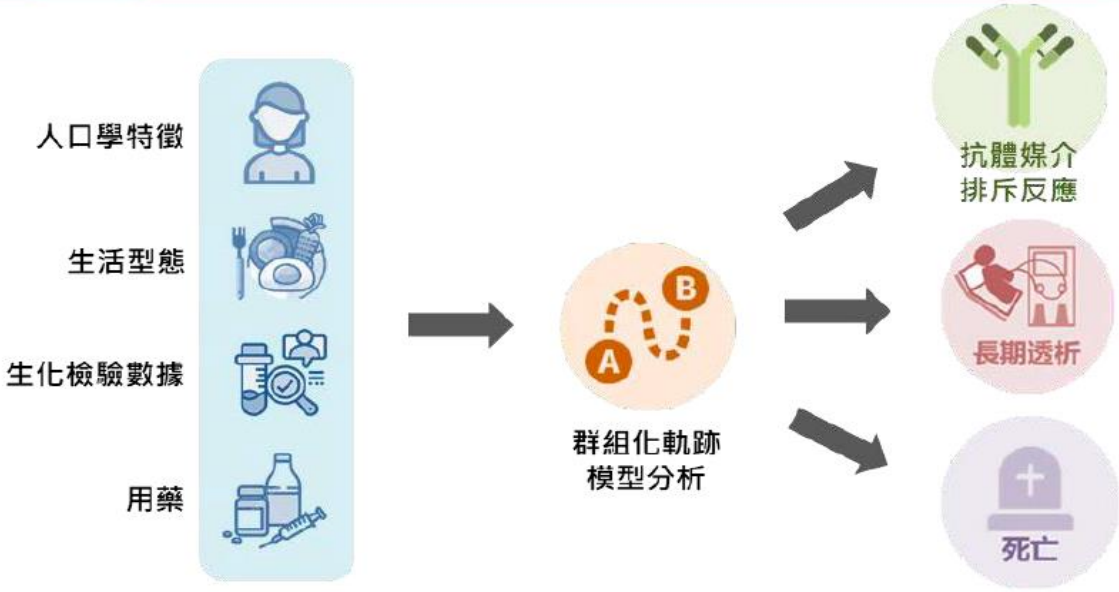
Overall study population

Identification of subgroups that share similar trajectories

Applied research of the causes and consequences of the trajectories

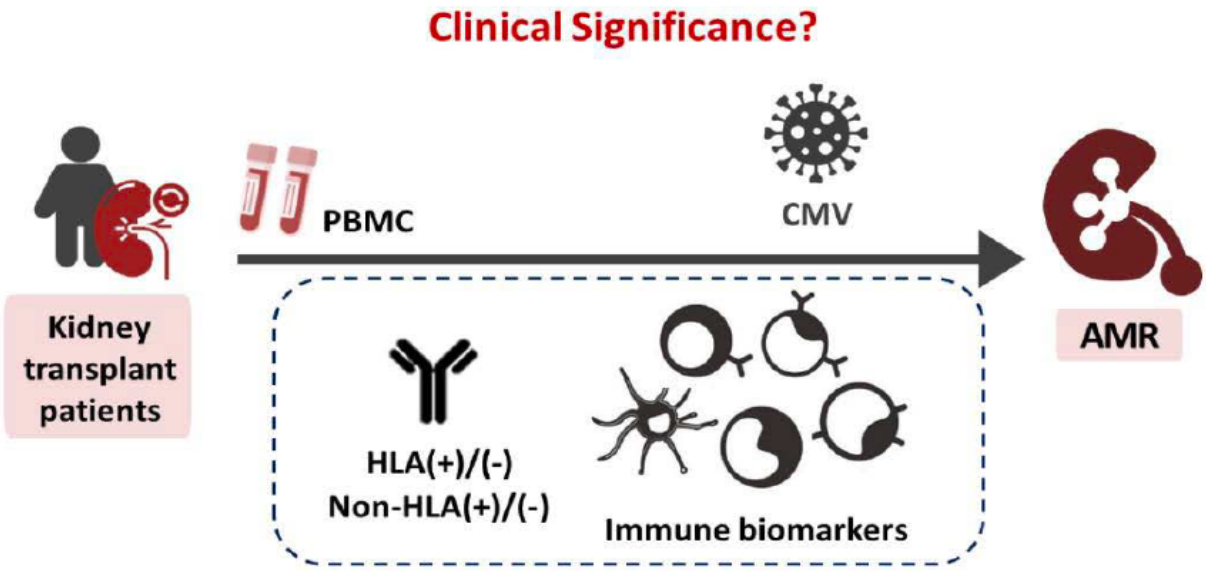
- 利用群組化軌跡模式辨識腎移植患者其腎功能長期發展之軌跡。

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