



臺北醫學大學 泌尿腎臟研究中心 會議記錄

時間：**112年6月30日(星期五) 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/zmf-qhgu-pwd>

(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、羅詩修、
戴定恩、方德昭、陳錫賢、林彥仲、吳岳霖、高治圻、陳靜怡、葉曙慶、
邵明珠、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、
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、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

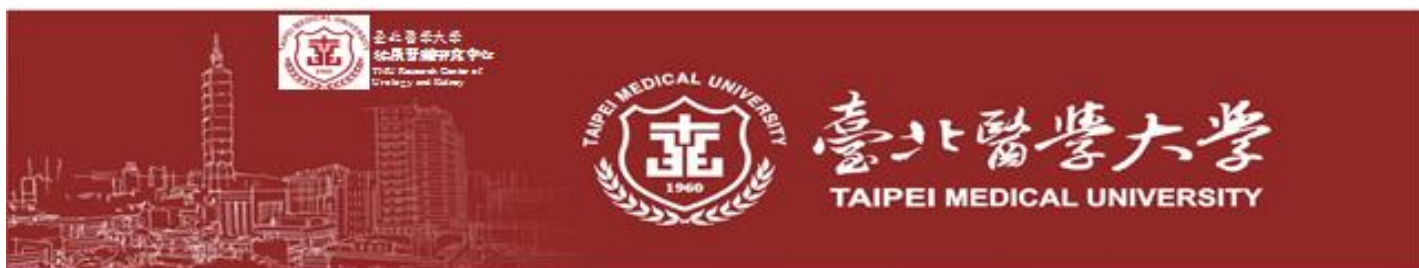
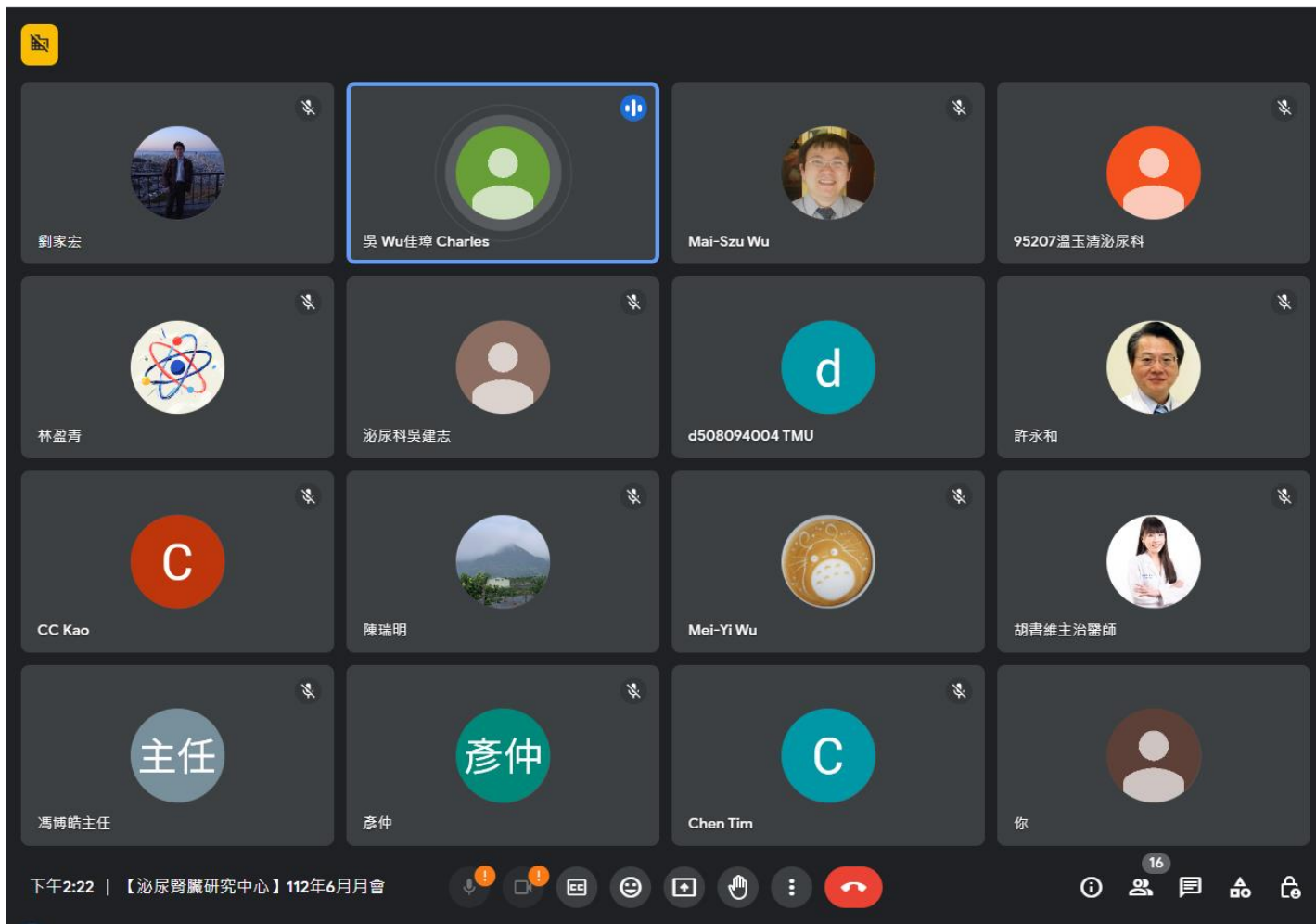
【新國民】許永和、鄒居霖

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：

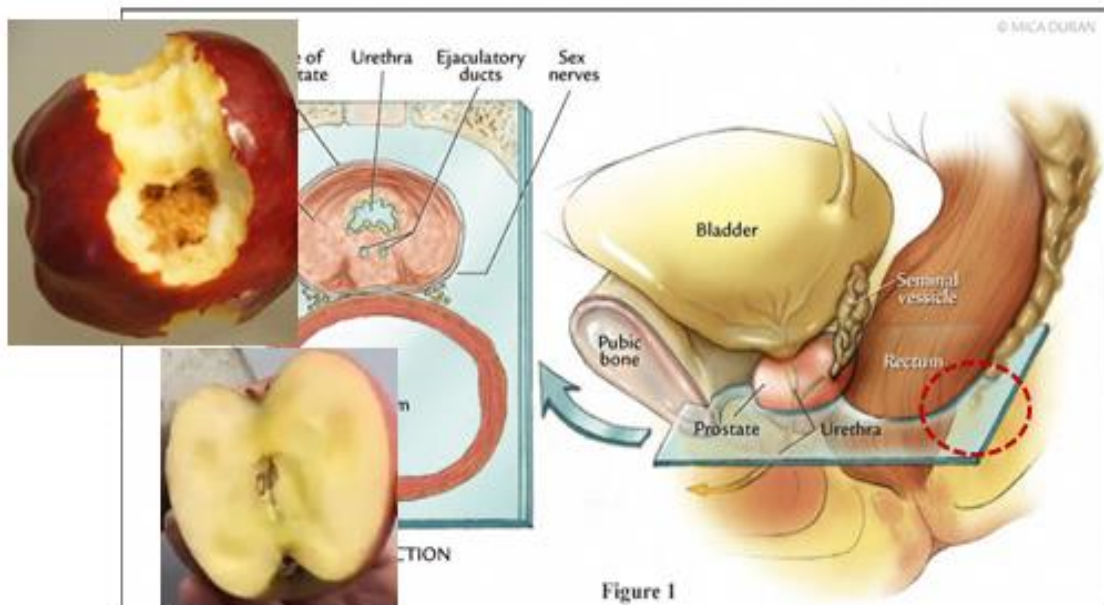
一、泌尿腎臟癌症團隊、腎移植團隊 小組報告



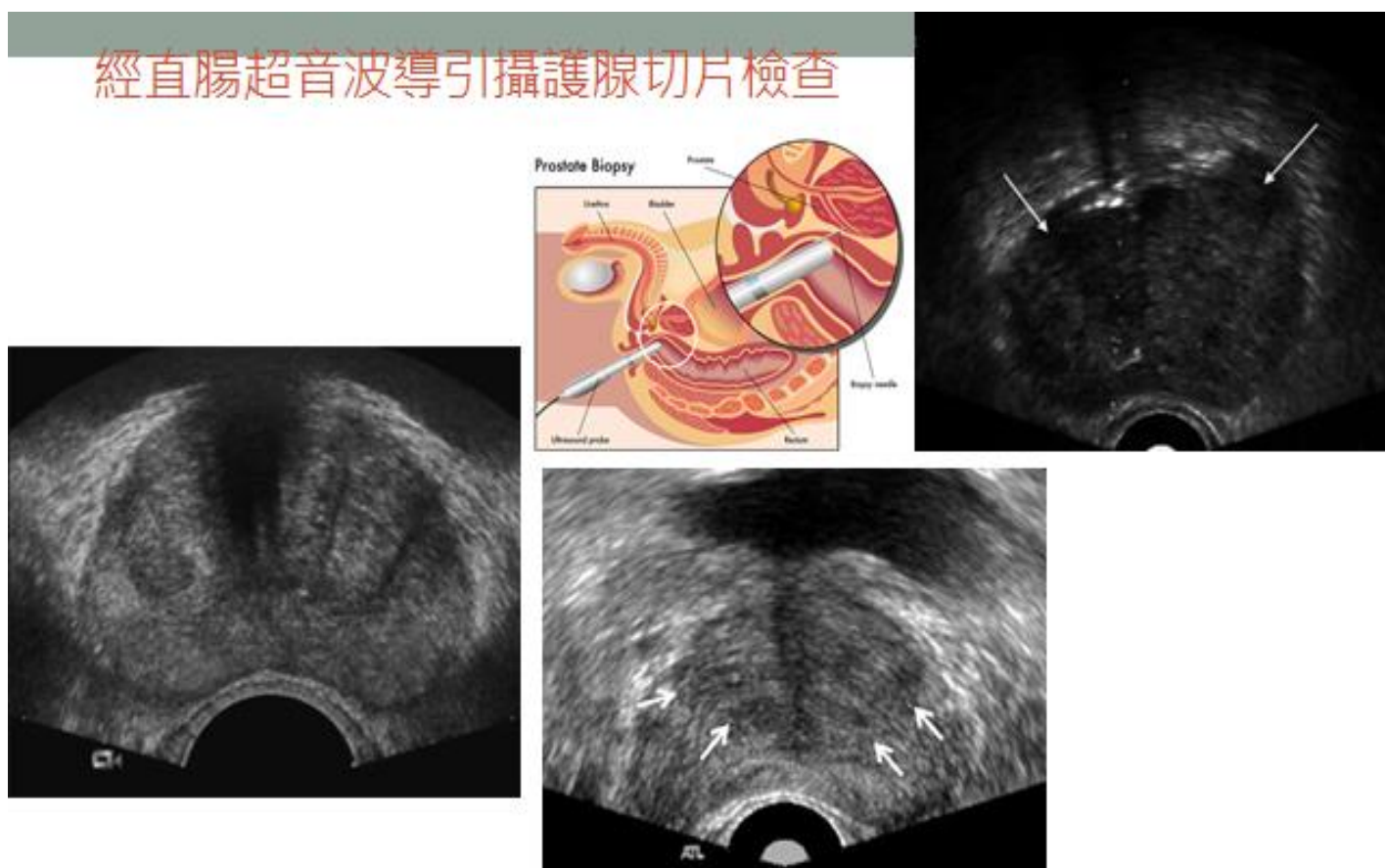
核磁共振與超音波影像融合 攝護腺**精準**切片

雙和醫院 劉家宏醫師

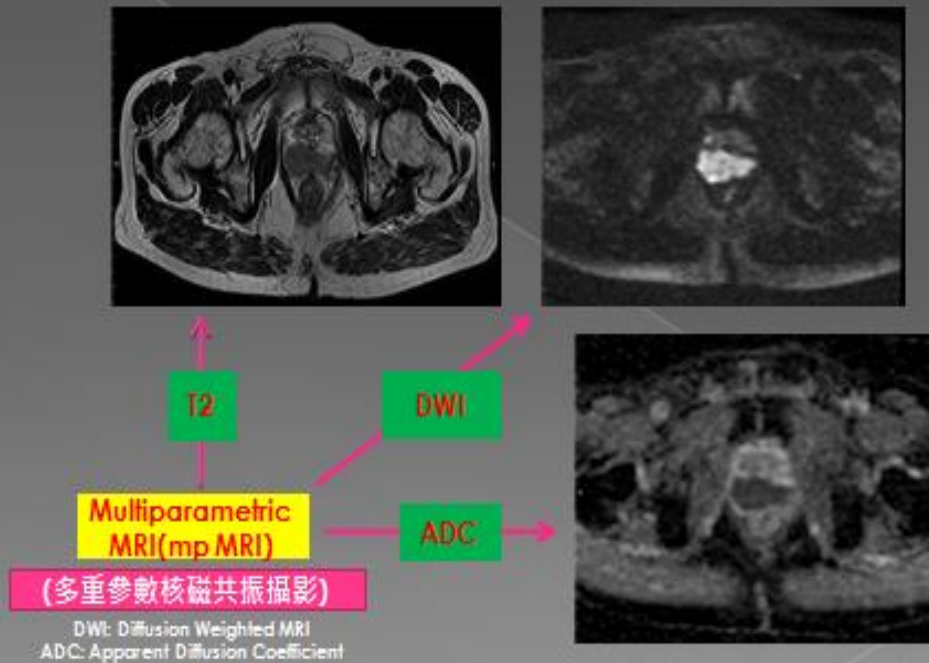
攝護腺的解剖位置



經直腸超音波導引攝護腺切片檢查



MP-MRI is the combination of multiple MRI sequences to give both anatomical and functional information



PI-RADS
(哨累分數)

PI-RADS v2 scoring system. (Prostate Imaging-Reporting and Data System)

Imaging sequence and score	Description
T2 weighted, F2	
1	Uniform hyperintense signal intensity (normal)
2	Linear or wedge-shaped hypointensity or diffuse mild hypointensity, usually indistinct margins
3	Heterogeneous signal intensity or non-circumscribed, rounded, moderate hypointensity Includes others that do not qualify as 2, 4, or 5
4	Circumscribed, homogeneous moderate hypointense focus/mass <u>confined to prostate</u> and <1.5 cm in greatest dimension
5	Same as 4 but ≥ 1.5 cm in greatest dimension or <u>definite extraprostatic extension/invasive behavior</u>
T2 weighted, T2	
1	Homogeneous intermediate signal intensity (normal)
2	Circumscribed hypointense or heterogeneous encapsulated nodules (BPH)
3	Heterogeneous signal intensity with obscured margins Includes others that do not qualify as 2, 4, or 5
4	Lenticular or non-circumscribed, homogeneous, moderately hypointense, and <1.5 cm in greatest dimension
5	Same as 4, but ≥ 1.5 cm in greatest dimension or <u>definite extraprostatic extension/invasive behavior</u>
DWI	
1	No abnormality (i.e. normal) on ADC and high b-value DWI
2	Indistinct hypointense on ADC
3	Focal mildly/moderately hypointense on ADC and <u>consistent mildly hyperintense on high b-value DWI</u>
4	Focal markedly hypointense on ADC and markedly hyperintense on high b-value DWI, <1.5 cm in greatest dimension
5	Same as 4 but ≥ 1.5 cm in greatest dimension or <u>definite extraprostatic extension/invasive behavior</u>
DCE	
Negative	no early enhancement, diffuse enhancement not corresponding to a focal finding on T2 and/or DWI, or focal enhancement corresponding to a lesion demonstrating features of BPH on T2WI
Positive	focal, and earlier than or contemporaneously with enhancement of adjacent normal prostatic tissues, <u>and consistent w/ suspicious finding on T2W and/or DWI</u>

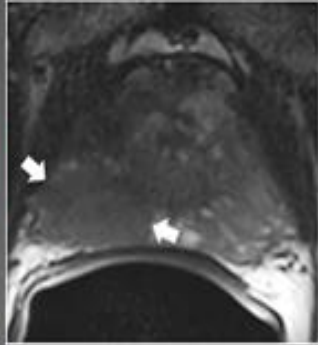
Table 3 MRI lesion-based detection rate of target biopsies

PI-RADS V2 score	Significant cancer n (%)	Insignificant cancer n (%)
5	16/70 (53.3)	3+3 1 1/30 (3.3)
		3+4 9
		4+3 5
4	22/55 (40%)	8-10 2
		3+3 5 5/55 (9.1)
		3+4 14
3	0/22 (0)	4+3 4
		8-10 4
		3+3 2 2/22 (9.1)
Unclassified	2/9 (22.2)	3+4 0
		4+3 0
		8-10 0
Unclassified	2/9 (22.2)	3+3 0 0/9 (0)
		3+4 1
		4+3 1
Unclassified	2/9 (22.2)	8-10 0

Significant cancer = Gleason score >6

Assigning a PI-RADS 5 score for a lesion in the peripheral zone
(a) Axial T2W Image (b) Axial b1400 DWI image (c) Corresponding ADC map
(d) Axial DCE image

T2



(a)

DWI



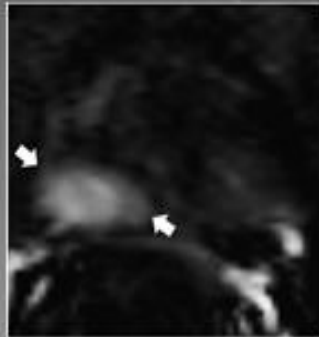
(b)

ADC



(c)

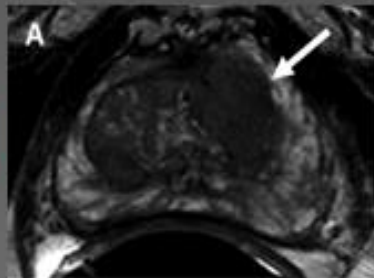
(d)



Hassanzadeh et al. *Abdom Radiol*, 2017

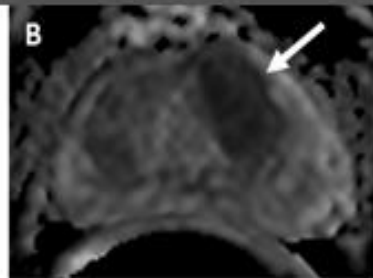
An MP MRI scan shows a PI-RADS 5 lesion in the left mid-anterior transition zone (arrow)

T2



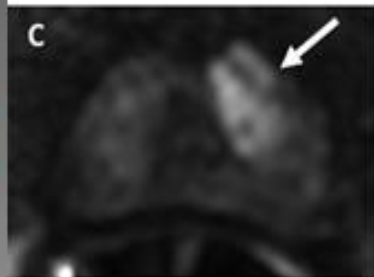
A

ADC

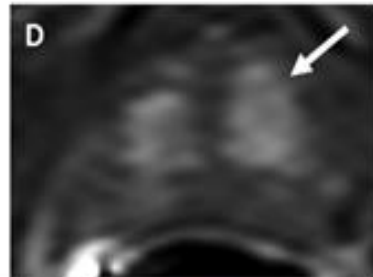


B

DWI



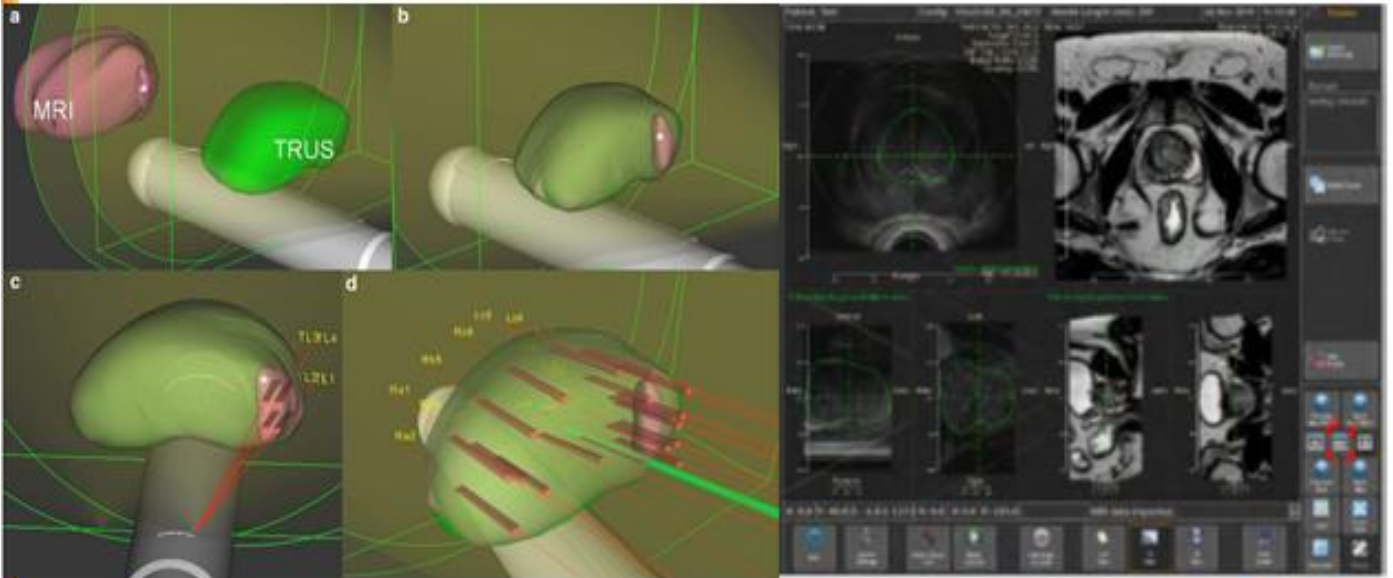
C



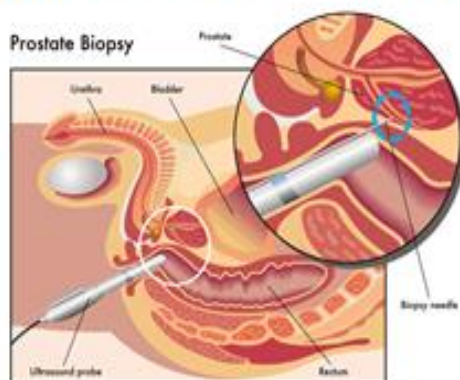
D

Tosolan et al. *Am Soc Clin Oncol Educ Book*, 2016

MRI-ultrasound fusion capability

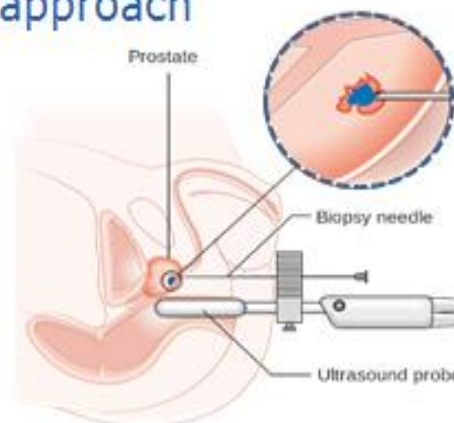


Transrectal and Transperineal approach



Transrectal (經直腸)

- Most commonly, the transrectal ultrasound-guided (TRUS) prostate biopsy is used.
- The biopsy needle is inserted into the prostate through the rectum wall.



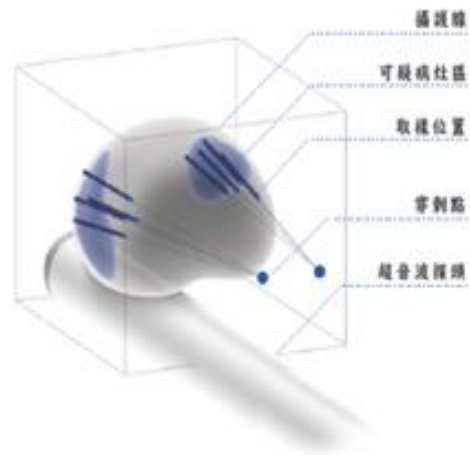
Transperineal (經會陰)

- The biopsy needle is inserted into the prostate through a guidance grid placed against the perineum (skin area between the scrotum and anus)
- **Minimal risk of sepsis or hematuria**

攝護腺採檢的比較



	傳統經直腸穿刺	機器手臂自動導軌會陰穿刺
穿刺位置	直腸壁	會陰部 (陰囊和肛門中間區域)
操作方式	手動，無法精準定位	電腦導軌，精準至1mm
影像	僅使用超音波圖像	MRI+超音波融合
取樣	侷限性高，無法確認實際採檢點。	全攝護腺採檢，可指定採檢點。
傷口數量	多點 (取量數量決定)	少至2個點
診斷	僅能做區域判讀，檢出率低。	每個採檢點皆能判讀，提高檢出率
併發症	敗血症：高 血尿：高 尿路感染：低 血便：高	敗血症：低 血尿：低 尿路感染：極低 血便：無



Introducing the robotic prostate biopsy system - iSR'obot™ Mona Lisa

Targeted biopsy with precision and ease, through:

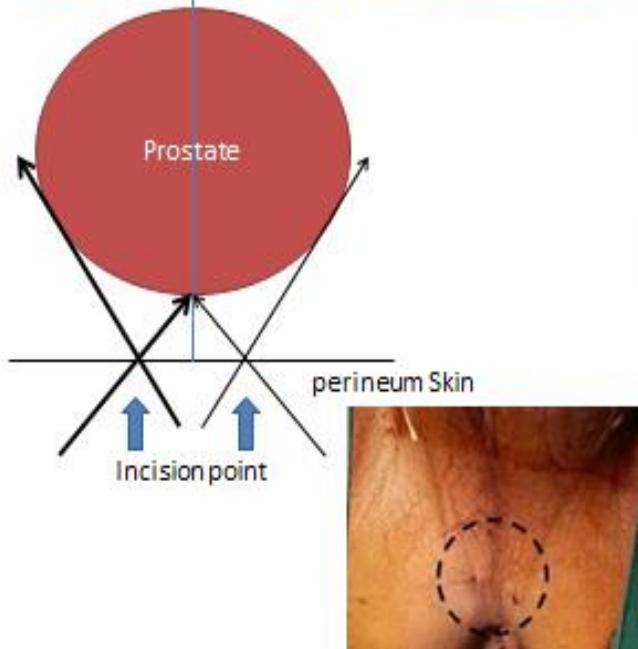
- Innovative dual cone transperineal prostate biopsy
- Auto modeling 3D image
- Robotic biopsy needle positioning and depth control, Prostate stability using unique probe sheath
- MRI-ultrasound fusion capability



Da Vinci

Innovative dual cone transperineal prostate biopsy

- Easy and precise targeting with mechanical accuracy of 1.5mm



Precision :
+/- 1.5 mm

biobot

Table 1 Detailed biopsy results

Biopsy results (systematic and targeted biopsy)	n (%)
Overall detection rate (systematic and targeted biopsy)	34 (61.8)
Overall significant PC (Gleason score ≥ 7)	29 (85.3)
PC only in systematic biopsy	5 (14.7)
Significant PC only in systematic biopsy	1 (2.9)
Proportion of systematic biopsies with significant PC	4.8%
PC only in targeted biopsy	15 (44.1)
Significant PC in targeted biopsy	15 (44.1)
Proportion of targeted biopsies with significant PC	40.9%
Patients with anterior lesions	9 (26.5)

- 簡單
- 精準
- 安全
- 無疤無痛
- 可重複
- 降低過度治療的風險

Table 2 Detection rate of cancer

	Significant cancer
Overall	44/86 (51.2%)
Target biopsy	35/86 (40.7%)
Exclusively present in random biopsy	9/86 (10.5%)

Significant cancer = Gleason score > 6

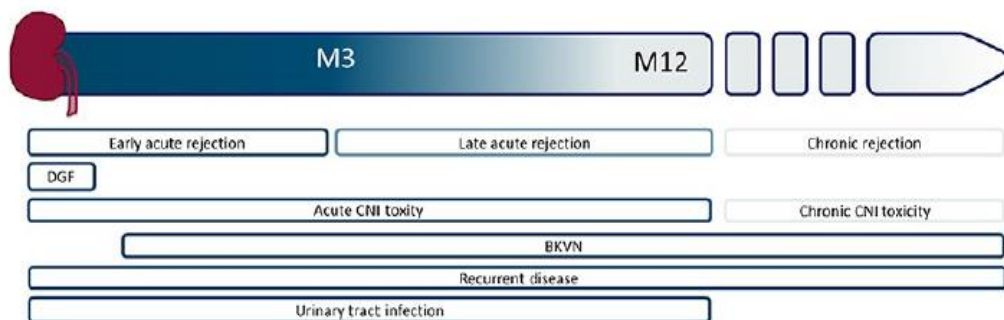


Immune Profile of Kidney Transplant Patients

馮博皓/吳美儀
雙和醫院 內科部 胸腔內科
雙和醫院 內科部 腎臟內科

2023/06/30

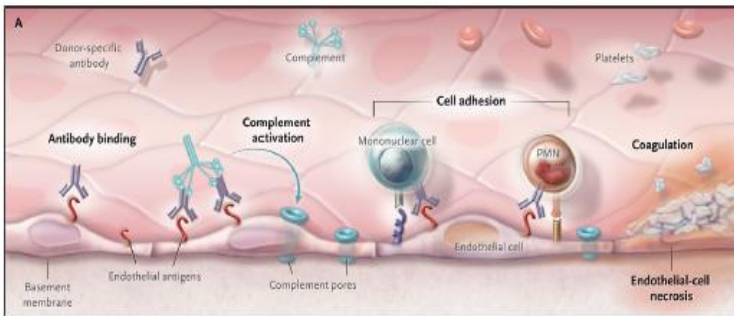
Background



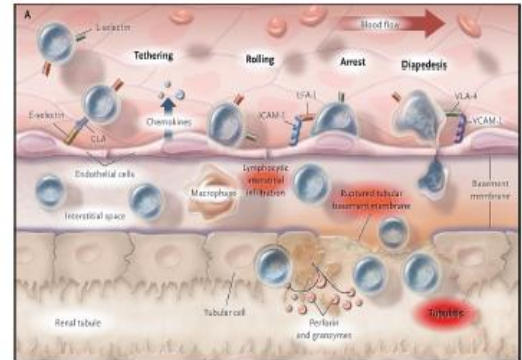
- About **10%** rejection rate in the **first year** after a kidney transplant
- After **5 years** of kidney transplant, **about 80%** patient remain un-dialysis in Taiwan.

Mechanisms of Cellular mediated kidney rejection

Acute antibody mediated rejection



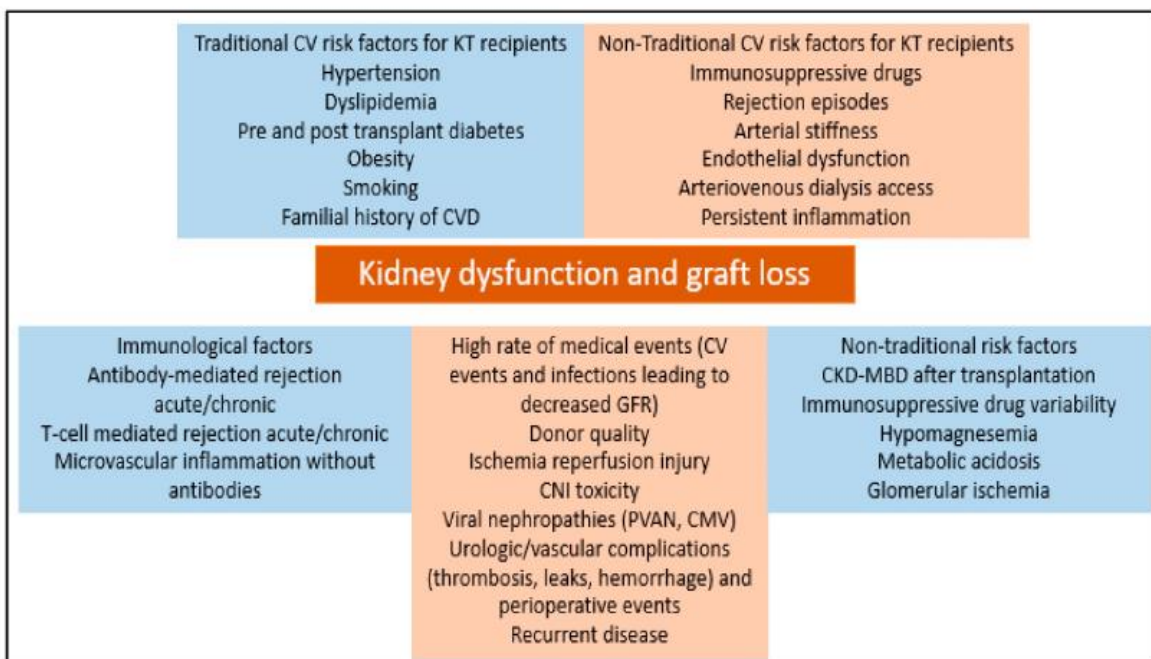
Acute T cell mediated rejection



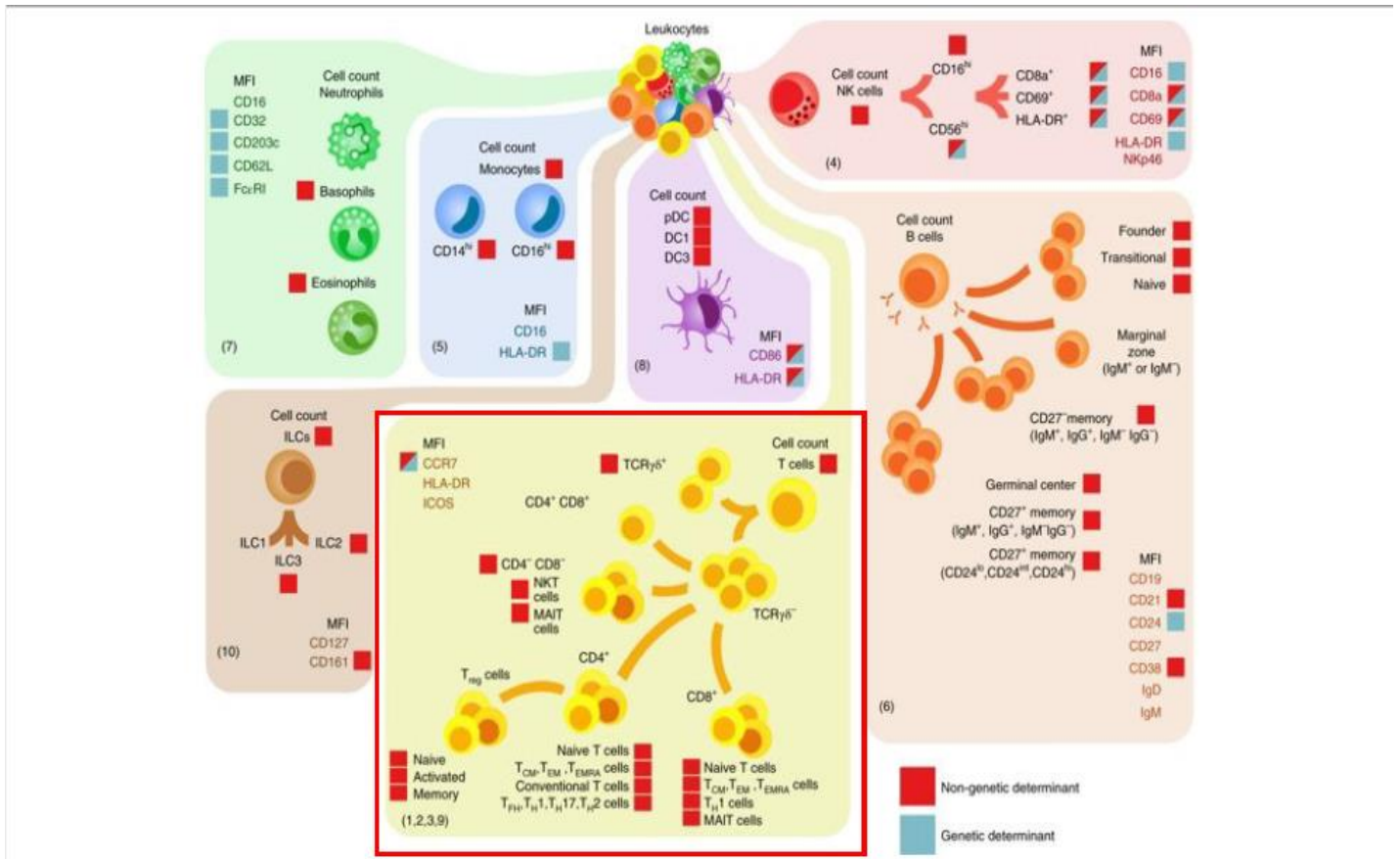
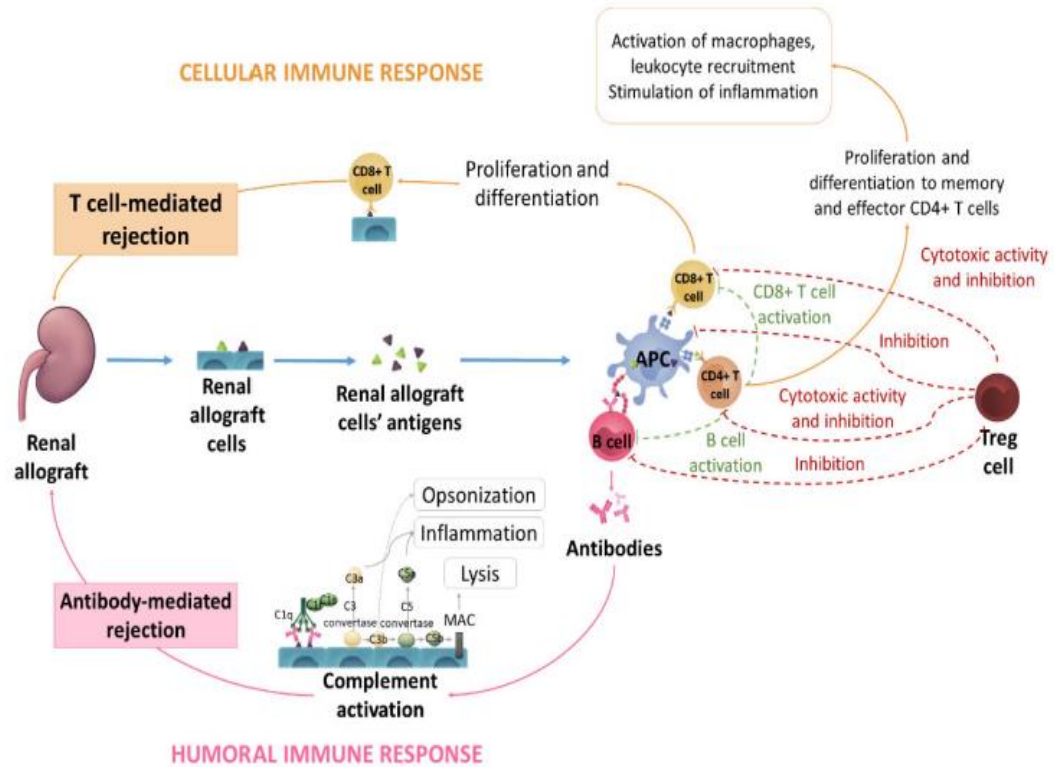
Whether the immune profile is different between graft rejection and non-rejection?

Nankivell, NEJM 2010

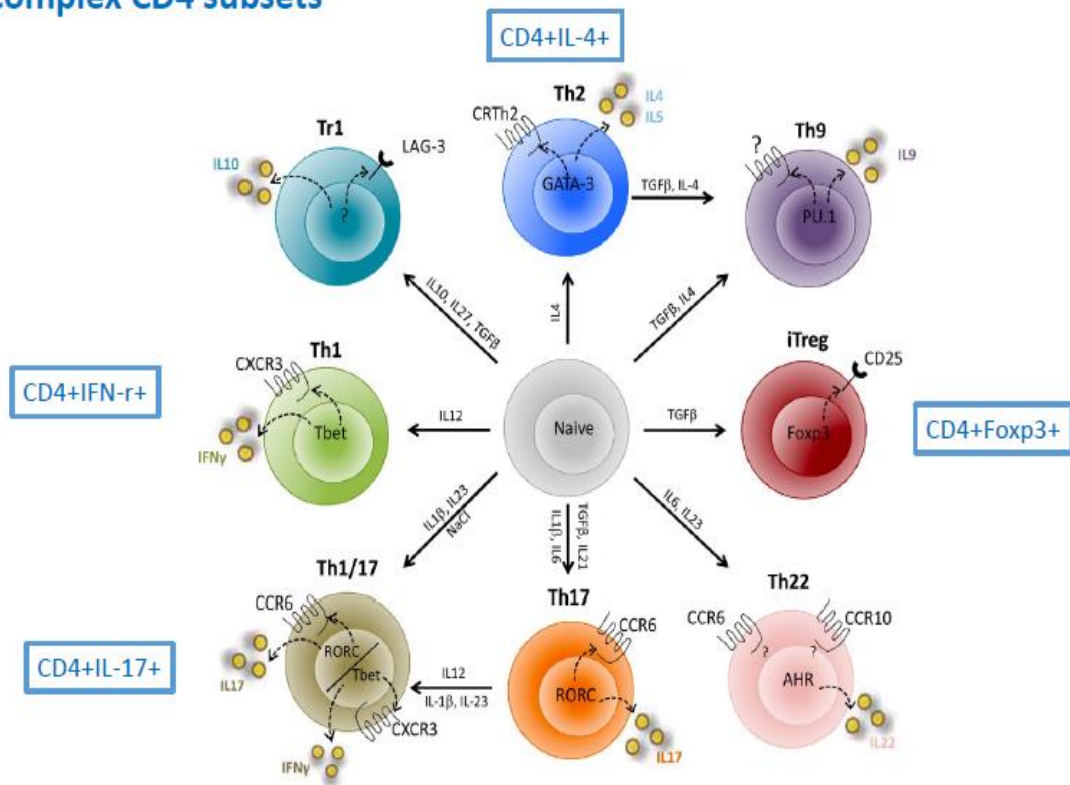
Complex mechanisms of kidney graft loss



Complex immune systems involved in kidney transplant rejection



Complex CD4 subsets



Geginat, J. Seminars in Immunology 2013

Hypothesis

- Immune cells are associated with renal outcome in kidney transplant recipients

Aim 1

Investigate the immune phenotypes in KT recipients

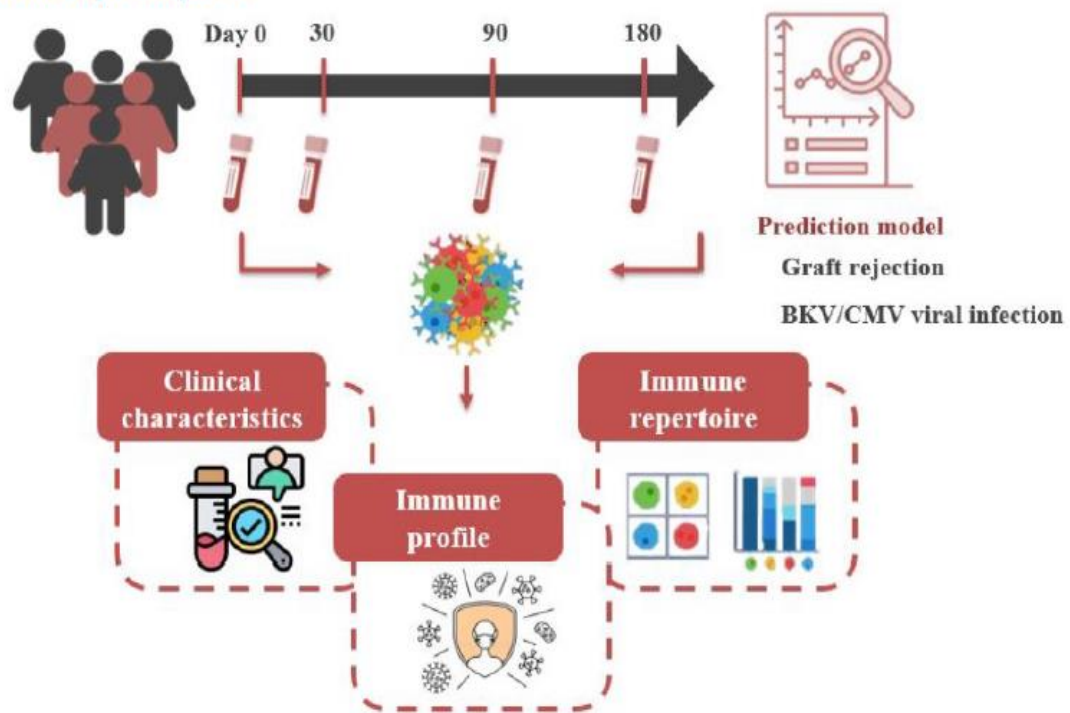


Aim 2

Develop a panel of immune biomarkers for therapeutic monitoring



Post Kidney Transplant



Summary

- No significant difference in CD4 or CD8 activation between CKD+ with or without deterioration of renal function (CKD+GFR+ vs CKD+GFR-)
- Increased peripheral Tfh in CKD+GFR+ comparing to CKD+GFR-