臺北醫學大學 泌尿腎臟研究中心 會議記錄

時間：**113 年 7 月 11 日(星期四) 11:00-12:00**

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/hpn-vxie-bvs

(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、陳偉傑、羅詩修、戴定恩、方德昭、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、鄭仲益、陳作孝、蘇裕謀、劉崇德、楊韻紅、李明哲、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、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、吳逸文、高芷華、林冠宏、尹玉聰

【新國民】許永和、鄒居霖

長官指導：

吳麥斯校長、許志成教授、崔克宏副院長、陳瑞明所長、盧星華副院長、許永和院長

議程：

一、 **腎臟泌尿精準健康計畫及生物檢體資料庫建置** （吳逸文醫師報告）

二、 腎移植團隊報告

三、 功能性泌尿團隊報告

Genetic testing and personalized risk stratification are conspicuously absent in the current guideline

陳女士，50 歲，因糖尿性腎病變開始透析治療

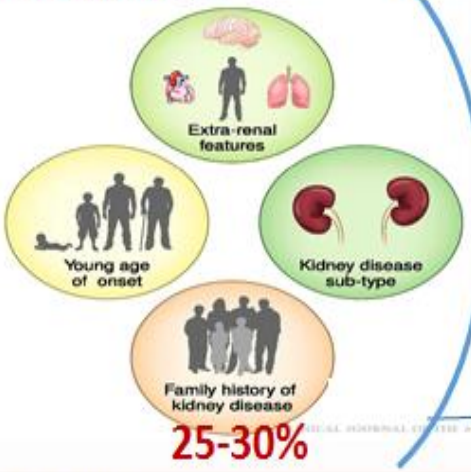
Prediction of CVD
C-statistics: 0.757 to 0.813,

3 位親戚亦曾經接受透析治療

18 歲，血糖，腎臟功能正常

Unmet clinical needs: Genetic testing and actionable genes

- **Prevalence of genetic kidney disease: 8.5-9.8%**
- **Monogenic kidney disease is present in 35-50% of them**

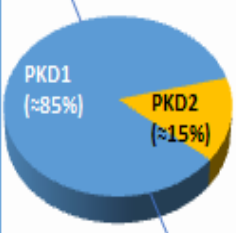


- 50% Complex (polygenic) kidney disease
- Laborious sequencing and analytic methodology
- Lack of core competency in genetics
- lack of evidence-based interventions
- Equity, accessibility and anxiety

KDIGO Conference, Kidney Int, 2022

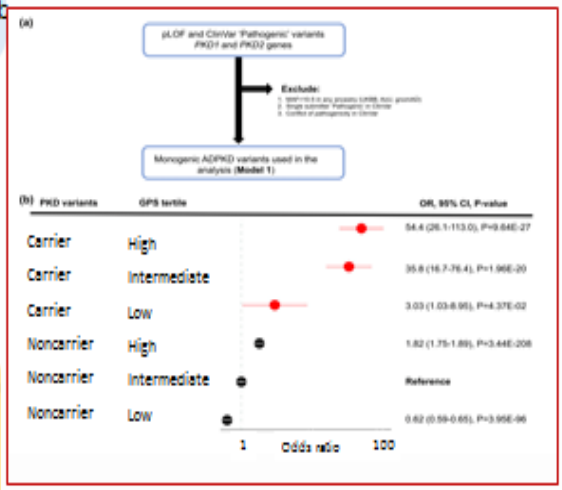
Autosomal dominant polycystic kidney disease: Monogenic kidney disease with genetic approach

Chromosome region 16p13.3
Genomic region spanning 50 kb
Encodes polycystin 1 (PC-1)



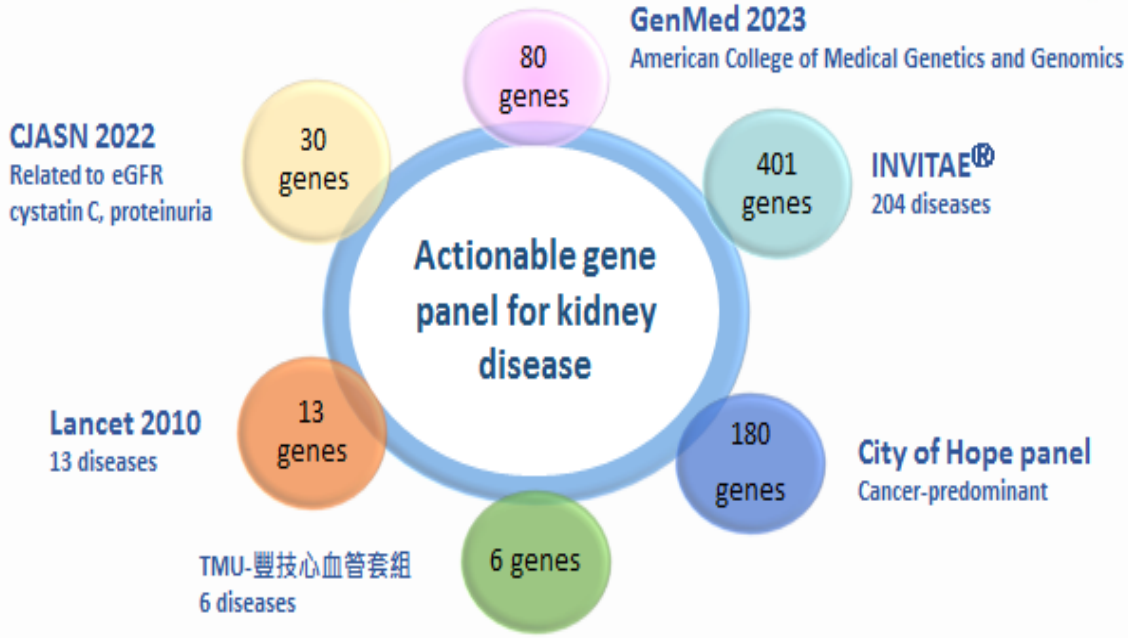
Chromosome region 4q21
Genomic region spanning 68 kb
Encodes polycystin 2 (PC-2)

polygenic risk score for risk stratification



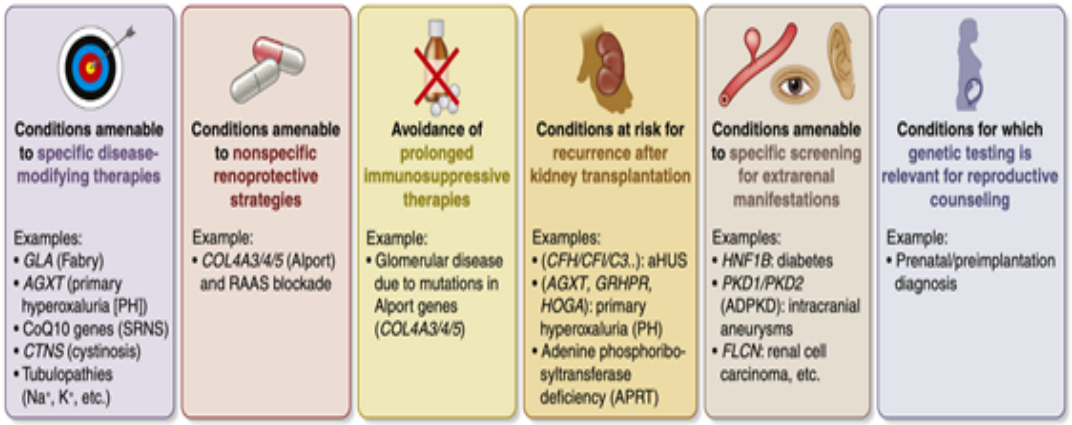
Harris PC, Rossetti S. Nat Rev Nephrol, 2010; Khan, A. et. Al. Nat Commun, 2023

目前無適合臨床應用的腎病相關可行動的基因套組



可行動的基因檢測可增加診斷的精準性亦能提供疾病早期介入

- **Actionable genes:** genes significantly altered, confer a high risk of serious disease that could be prevented or mitigated if the risk were known



腎病精準醫學計畫：改變疾病照護策略，實現數位精準管理

S1 建立精準照護流程

S2 培育基因專業人才

S3 驗證精準照護效益

【基因檢測】建立檢體及定序流程

【基因檢測】結果判讀及報告

【基因資料庫】建立世代研究族群

【公衛環境】建立公衛及環境測值

【基因體學】基因分析人員培育與訓練

【遺傳諮詢】建立諮詢內容及訓練

【精準治療】建立基因建議介入項目

【驗證療效】確認精準檢測與預後關係

【臨床應用】數位精準管理

2024 04

2024 06

2024 12

2025 03

2025 12

One campus: 共同收案，共享資料，共同發表

- **Genomic Cohort Establishment**

高治圻	廖家德/林冠宏	吳岳霖
IgA nephropathy	Polycystic kidney disease Diabetic kidney disease	Other kidney disease

  - Prospective cohort with repeated measurement
  - **Outcome:** rapid renal progression (eGFR decline > 50 % or progression to ESKD) or occurrence of cardiovascular disease
  - Exposome, multi-omic biomarker and social determinant of health
- **Next steps: kidney cancers**

Precision health care of Future Nephrology in TMU

RISK PREDICTION

Risk stratification

Inform prognosis

Family counseling

TREATMENT GUIDANCE

Renal transplant donor selection

Target treatments

- Use of ACEI/ARB
- Use of SGLT2i/ GLP1-RA
- Selection of immunosuppression
- Clinical trials according to genotype
- Avoidance of unnecessary treatment

腎移植團隊

計畫主持人：吳美儀 副院長

報告人：羅偉成 老師　　113.06.19

1

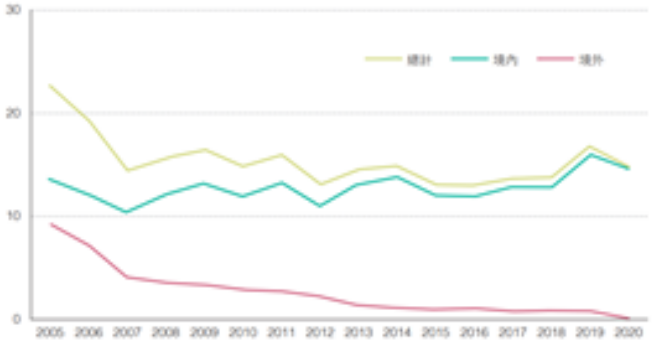
【精準健康】
台灣器官移植受贈者的預期壽命和終身醫療支出
Life expectancy and lifetime healthcare expenditure of adult solid organ recipients in Taiwan

2

Background

財團法人器官捐贈移植登錄中心

台灣腎臟移植率(2005-2020)

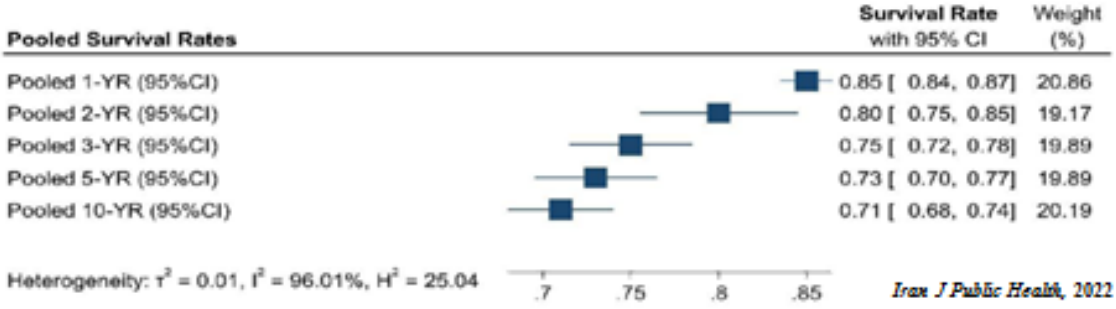


資料來源：台灣器官捐贈移植登錄中心

註：(整體/境內/境外)移植率=(整體/境內/境外)當年移植數/當年人口數*10⁶

2022醫療年報, 2023

Background Survival & Mortality Risk of Liver Transplant



Iran J Public Health, 2022

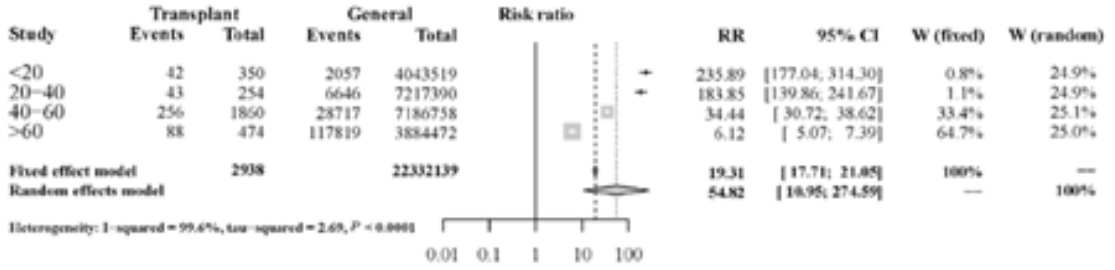


Fig 1. Mortality risk ratios of liver transplant recipients versus the general population.

Plos one, 2015

Methods Study population & Data source

- 研究族群與資料來源
- 台灣全民健保資料庫(2000-2016)，年滿20歲的移植接受者，追蹤至2022年。

	Codes
ICD-9-CM	heart (V42.1), lung (V42.6), kidney (V42.0), and liver (V42.7)
ICD-10-CM	heart (Z94.1), lung (Z94.2), kidney (Z94.0), and liver (Z94.4)

Summary

Contents lists available at ScienceDirect

Science of the Total Environment

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

Lifetime exposure to $PM_{2.5}$ air pollution and disability-adjusted life years due to cardiopulmonary disease: A modeling study based on nationwide longitudinal data

Wei-Cheng Lo [a], Tsuey-Hwa Hu [b], Jing-Shiang Hwang [b,c]

JMIR PUBLIC HEALTH AND SURVEILLANCE

Original Paper

Impact of Healthy Lifestyle Factors on Life Expectancy and Lifetime Health Care Expenditure: Nationwide Cohort Study

Wei-Cheng Lo[1,2], PhD; Tsuey-Hwa Hu[3], MSc; Cheng-Yu Shih[4], MSc; Hsien-Ho Lin[4], MD, SCD; Jing-Shiang Hwang[3], PhD

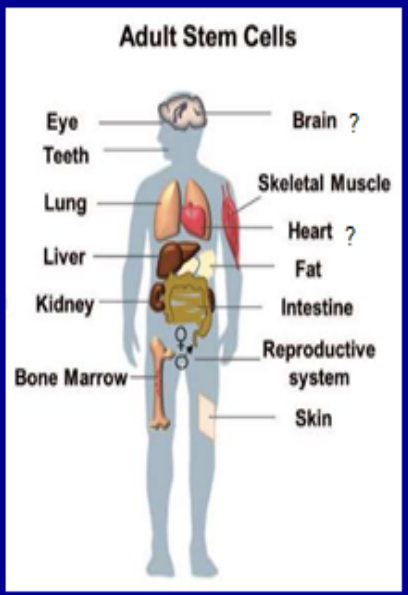
[1]Master Program in Applied Epidemiology, College of Public Health, Taipei Medical University, New Taipei, Taiwan
[2]School of Public Health, College of Public Health, Taipei Medical University, Taipei, Taiwan
[3]Institute of Statistical Science, Academia Sinica, Taipei, Taiwan
[4]Institute of Epidemiology and Preventive Medicine, College of Public Health, National Taiwan University, Taipei, Taiwan

臺北醫學大學
TAIPEI MEDICAL UNIVERSITY

功能性泌尿團隊

蕭志豪醫師

What are the Tissue-Resident Stem Cells (TRSCs)?



Most adult organs contain stem and progenitor cells. They are referred to as tissue-resident stem cells (TRSCs).

A Non-invasive Stem Cell Therapy

Activation of
Tissue Resident Stem Cells
(TRSCs)

- Low intensity pulsed ultrasound (LIPUS)
- Unfocused low intensity shock wave (MAP)

Microenergy Acoustic Pulse (MAP) therapy

FDA Approved Treatments for SUI

Pelvic Floor Conditioning
30% - 50% Effective – Low Risk

Electrical stimulation

Magnetic stimulation

Biofeedback

Urethral Injection
- 50% Effective
- Moderate Risk

Sling Surgery
- 80% Effective
- High Risk

Clinical Trial Results

	PWT Success %	PST Success %
Control Group at 10 treatments (n=74)	39.2%	10.8%
Active Group at 10 treatments (n=112)	51.8%	21.2%
Active Group at 16 treatments (n=97)	79.4%	39.2%
Active Group after 3 maintenance treatments (n=65)	73.8%	49.2%

AWCT (Acoustic Wave Cell Therapy) SUI-100™ for Stress Urinary Incontinence

- **Study Title:** Pivotal Study of the SUI-100™ for the Treatment of **Stress Urinary Incontinence (SUI): A Nonsignificant Risk (NSR) Device Study**

- 試驗時程:

- 國際學者：呂福泰醫師/教授江蒞臨「台北醫學會」解說初期試驗結果
- 本試驗的的特點與競爭性:
  1. 低風險: 本醫療器材(SUI-100)已取得FDA Nonsignificant Risk (NSR)認同，屬非侵入式低風險之器材
  2. 副作用低: 過去試驗無顯著AE發生
  3. 治療效果顯著: Phase 2 試驗已證實，治療16次後病人的有效反應率可達79.4%
     (目前SUI非侵入治療方法最有效者為雷射，有效率約58%)
  4. 操作簡便: 護理師即可執行治療
  5. 國際性: 多國多中心三期臨床試驗，完成後可申請FDA & TFDA NDA，與美國保險給付
  6. 連結國際KOL: 本技術的開發者為國際泌尿科權威 UCSF 呂福泰醫師/教授
  7. 產品穩定性: 本醫療器材由台灣具多年微波醫療器材製造經驗之廠商生產