



臺北醫學大學 泌尿腎臟研究中心 會議記錄

時間：**113年3月22日(星期五) 13:30-14:30**

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/eca-dfaq-vri>

(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、 整合透析介入照護團隊、重症腎病團隊小組報告



進度報告

整合透析團隊
腎臟內科 邱怡仁 醫師
2024/03/22

Current Projects

- Database of percutaneous PD cases
- PD intervention workshop

2024 北萬雙膜腹透折工作坊
日期：2024年3月30日（六）

教學對象：北醫醫系內科師培醫師 (RLS2)及對內科有興趣的PGY, 共40位 (學分申請中)
報名連結：請掃描QR CODE報名，額滿即截止報名

立即報名



MEET OUR SPEAKERS

許永超 醫師
臺北醫學大學 泌尿科醫師

林俊廷 醫師
臺北醫學大學 泌尿科醫師

廖家源 醫師
臺北醫學大學 泌尿科醫師

謝宗益 醫師
臺北醫學大學 泌尿科醫師

林俊宇 醫師
臺北醫學大學 泌尿科醫師

謝宗益 醫師
臺北醫學大學 泌尿科醫師

講堂教學

地點：雙樓透折訓練中心(台北市大安區敦化南路二段99號28樓)

時間	主題	講師
13:00-13:30	開場	—
13:30-13:40	歡迎致詞	許永超 醫師
13:40-14:20	PD overview	廖家源 醫師
14:20-15:00	Remote Patient Monitoring(RPM)	謝宗益 醫師
15:00-15:40	Pre-Empty Peritoneal Dialysis	林俊廷 醫師
15:40-15:50	Break	—

技能教學

時間	PD 插管練習	CAPO-APD練習
15:50-17:30	蔡怡仁 / 林聖宇 醫師	謝宗益 / 林俊廷 醫師 謝宗益的護理師

ISPD GUIDELINES/RECOMMENDATIONS



CREATING AND MAINTAINING OPTIMAL PERITONEAL DIALYSIS ACCESS IN THE ADULT PATIENT: 2019 UPDATE

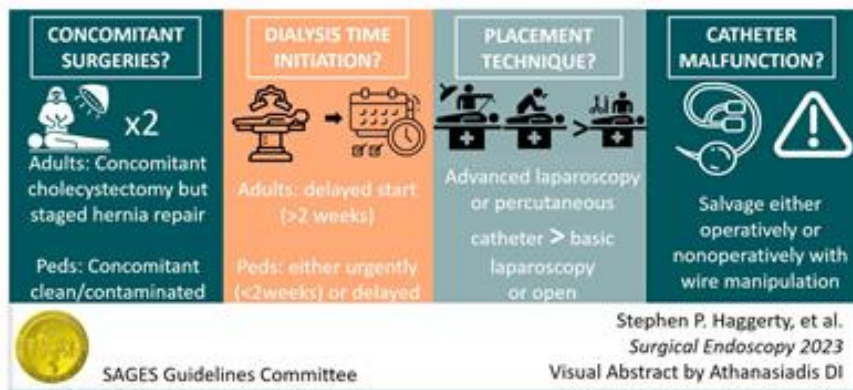
	Previous major surgery or peritonitis (Order of suggested technique)	No previous major surgery or peritonitis (Order of suggested technique)
Patient suitable for general anesthesia	<ul style="list-style-type: none"> • Advanced laparoscopic • Open surgical dissection 	<ul style="list-style-type: none"> • Advanced laparoscopic • Image-guided percutaneous • Open surgical dissection or • Peritoneoscopic • Percutaneous without image-guidance
Patient only suitable for local anesthesia/sedation	<ul style="list-style-type: none"> • Open surgical dissection 	<ul style="list-style-type: none"> • Image-guided percutaneous • Open surgical dissection or • Peritoneoscopic • Percutaneous without image-guidance

Choice of PD catheter implantation approach should be based upon
patient factors, facility resources, and operator expertise

KQ6. Should advanced laparoscopic insertion techniques or image guided percutaneous techniques be used for adults needing renal replacement therapy?

For adult patients, the panel suggests either advanced laparoscopic or image-guided percutaneous insertion (conditional recommendation, very low certainty evidence).

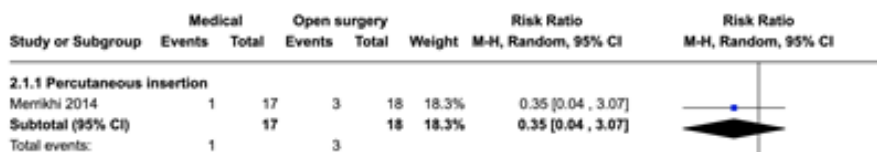
Peritoneal Dialysis Access Guideline Update 2023



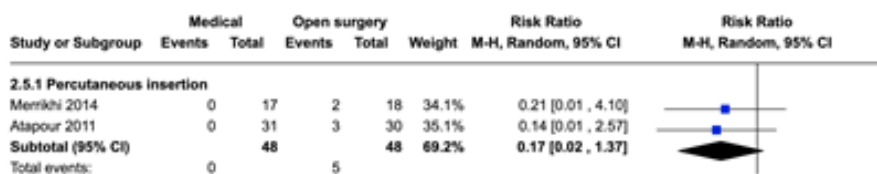
Catheter insertion techniques for improving catheter function and clinical outcomes in peritoneal dialysis patients

Victoria R Briggs, Richard M Jacques, James Fotheringham, Ravi Maheswaran, Michael Campbell, Martin E Wilkie
 Authors' declarations of interest

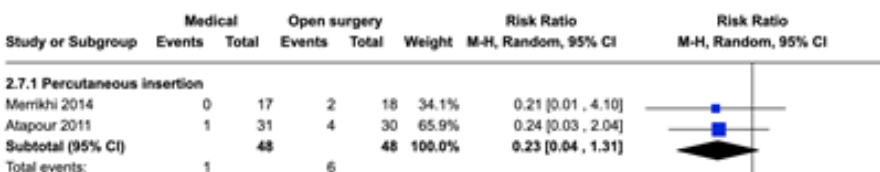
Version published: 22 February 2023 [Version history](#)



Early PD catheter function



Exit site infection



Hemorrhage




Peritoneal Dialysis Catheter Complications after Insertion by Surgeons, Radiologists, or Nephrologists

JASN

JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY

METHODS

Population: 46,973 PD-naïve patients with PD catheter inserted between 2010-2019 

Exposure:

 Specialty of the operator


Outcome: Odds of needing a follow-up procedure after initial PD catheter insertion

OUTCOME

15.5% of patients required a follow-up procedure within 90 days of the initial catheter insertion

Odds of requiring a follow-up procedure within 90 days (compared with general surgeons):

 OR 1.86 (95% CI 1.56-2.22) interventional nephrologists

 OR 1.36 (95% CI 1.17-1.58) interventional radiologists

 OR 1.06 (95% CI 0.97-1.14) vascular surgeons

Conclusion

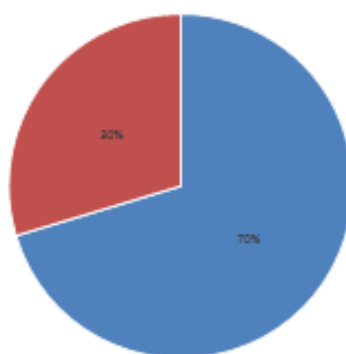
The probability of needing a follow-up procedure after initial PD catheter placement varied by operator specialty and was higher for interventionalists and lowest for general surgeons.

1. Various technique
2. Previous surgical history
3. BMI
4. Hemodialysis

Cases of percutaneous PD catheter implantation



植管人數比例



■ 外科 102 ■ 內科 45

	外科	內科
平均年齡 (year)	60.58	65.92

	外科	內科
>75 year (%)	13.1	17.7



序號	姓名	性別	生日	年齡	病歷摘要	診斷	治療	手術	術後	追蹤	備註
1	張國華	男	1955/05/15	68	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
2	陳建宏	男	1965/08/20	57	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
3	林文雄	男	1970/03/10	53	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
4	王明達	男	1975/12/05	48	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
5	吳志強	男	1980/07/25	43	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
6	李國輝	男	1985/04/18	38	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
7	張國華	男	1990/01/08	33	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
8	陳建宏	男	1995/09/22	28	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
9	林文雄	男	2000/06/15	23	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
10	王明達	男	2005/03/01	18	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
11	吳志強	男	2010/11/10	13	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
12	李國輝	男	2015/08/05	8	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤
13	張國華	男	2020/05/20	3	慢性腎臟病	慢性腎臟病	藥物治療	無	無	無	定期追蹤

BMI
Hemodialysis

90 days follow-up
procedures

Leakage
Infection
Trauma



重症腎病團隊

報告人：高治圻
113.3.22



組織架構

醫院	姓名	個人經歷	專長
北醫	高治圻	腎臟內科主治醫師 急重症透析	Clinical nephrology, Critical care
	陳靜怡	腎臟內科主治醫師 一般醫學、醫學教育	Clinical nephrology, Critical care, Medical education
	邵月珠	整合醫學科主治醫師 高齡醫學	Clinical nephrology, Geriatric medicine
	林哲宇	整合醫學科主治醫師 介入腎臟學	Clinical nephrology, Intervention nephrologist
萬芳	劉崇德	腎臟內科主治醫師	Clinical nephrology, Vascular access
	楊韻紅	腎臟內科主治醫師 急重症透析	Critical-care nephrology
雙和	洪麗玉	腎臟內科主治醫師 急重症透析	Clinical nephrology, Critical care
	邱怡仁	腎臟內科主治醫師 介入腎臟學	Critical-care dialysis, PD catheter implantation

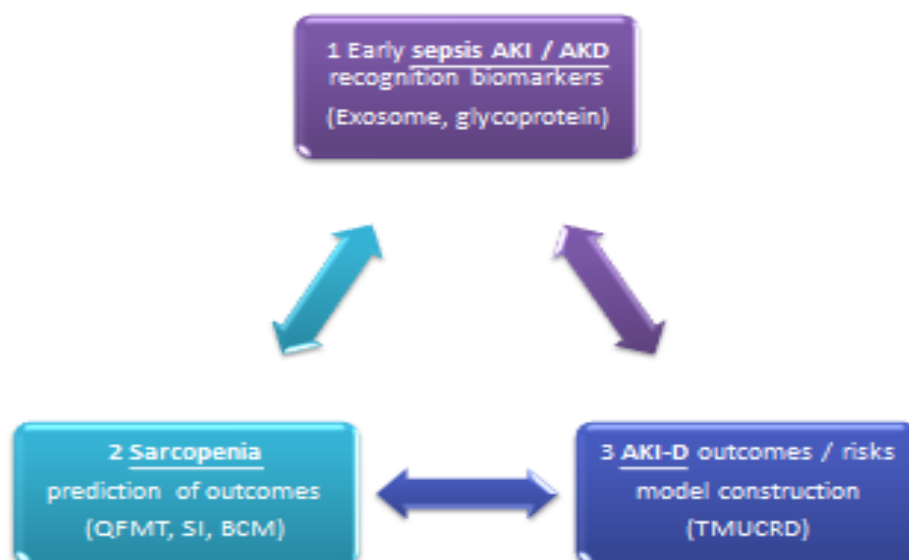


3/8 重症小組會議

3/8 小組會議：肌少症收案，BCM使用，分享彼此研究，討論可能研究主題



Critical-ill patients



* TMUCRD: TMU-Clinical Research Database

3

Project 1

Early AKI / AKD recognition biomarker



申請 113 年度國科會計畫

Patient enrollment

IRB 110/8/20 已通過 → 到 113/3/20 為止、已收案 90 個病人

We enroll critical-ill patients aged 20-80 years with the diagnosis of sepsis, without a history of malignancy, ESRD and organ transplantation. Sepsis is defined by 1. microbiological proof (cultures) or 2. suspicion of sepsis + >2 SOFA score. Patients will be divided into 2 groups, 1: septic AKI (n=100), 2: septic non-AKI (n=100)



Plasma and Urine samples are collected on Day 1, Day 4, and Day 8.

4

Early AKI / AKD recognition biomarker



- Collect clinical profiles
- 2nd blood / urine samples analysis for validation

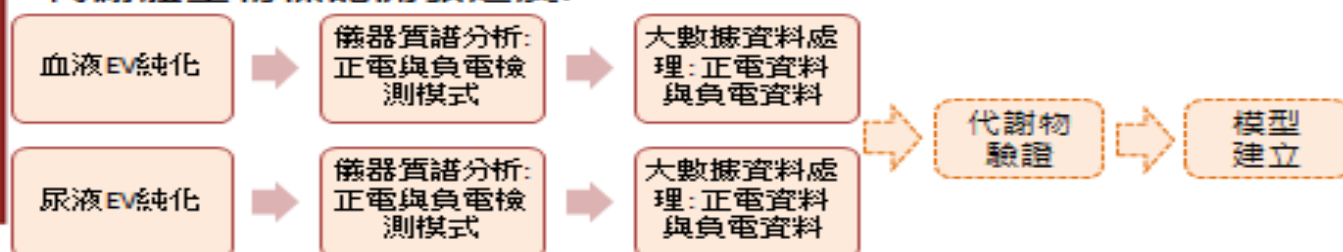
Current Progress



收案進度: 截至 2024/3/20	收案人次	血液樣品數	尿液樣品數
	90 人	198	186

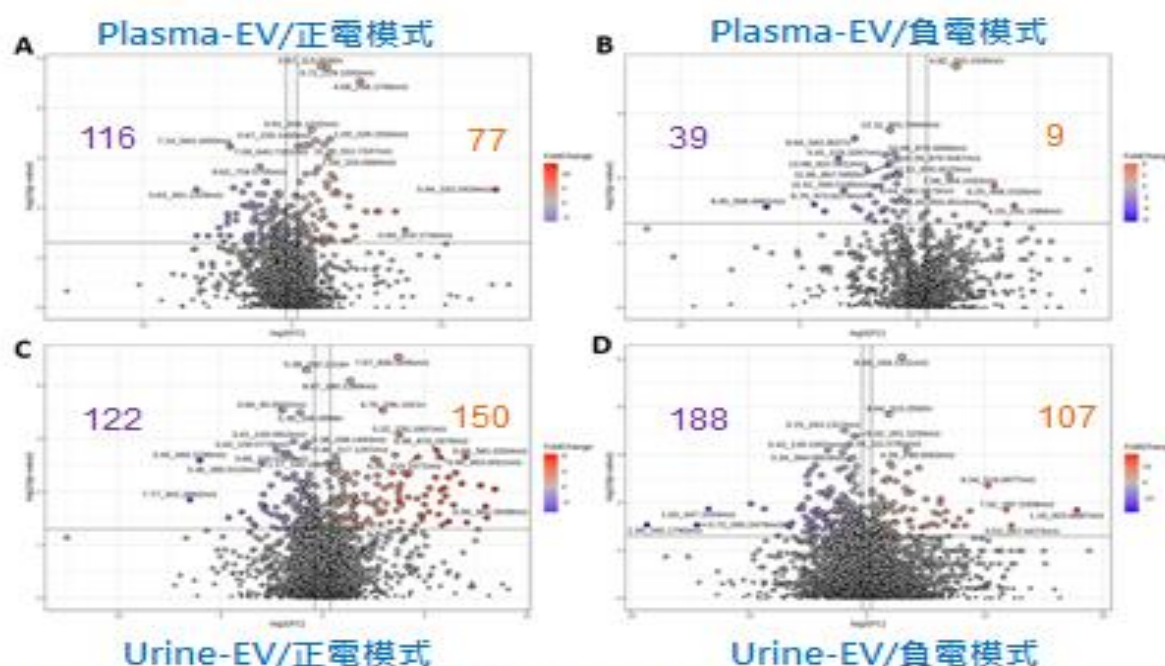
研究進度:	已分析人次	已分析血液樣品數
	30 人	45
	已分析人次	已分析尿液樣品數
	85 人	186

代謝體生物標記開發進度:





Preliminary results

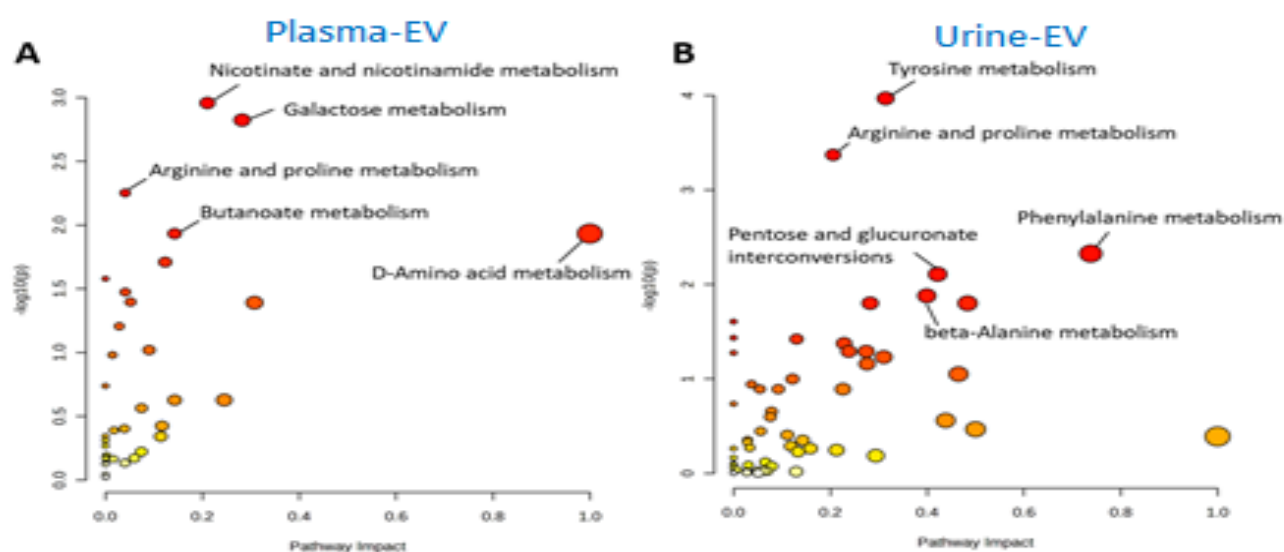


Volcano plot: Fold change 1.3, p -value < 0.05



Preliminary results

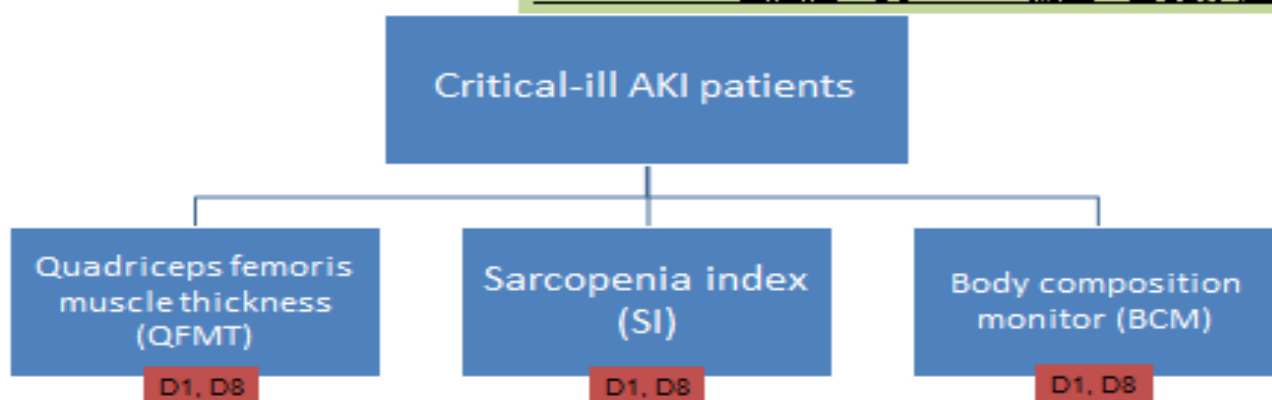
代謝路徑分析



Sarcopenia change in Critical-ill AKI patients



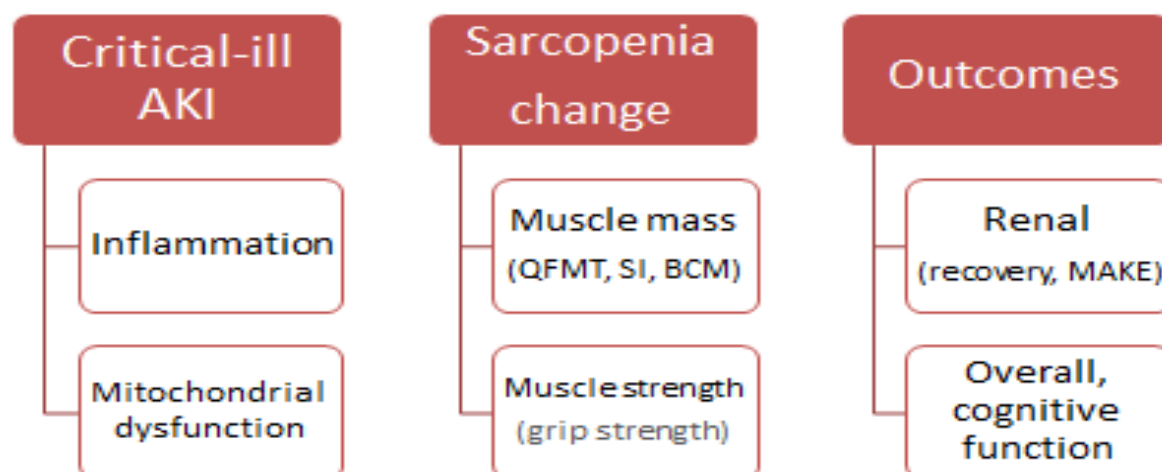
IRB 112/12/13已通過→到113/3/20為止、已收案4個病人



* Gold standard for muscle mass: paraspinal muscle surface area at L4 (CTMSA)

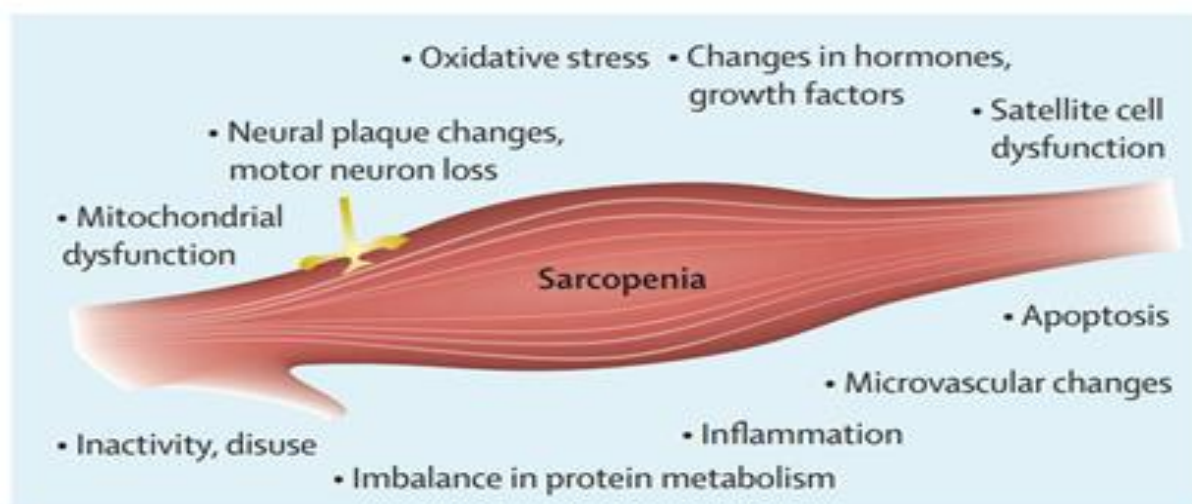
Construct sarcopenia model to predict patients' outcomes

Sarcopenia change in Critical-ill AKI patients



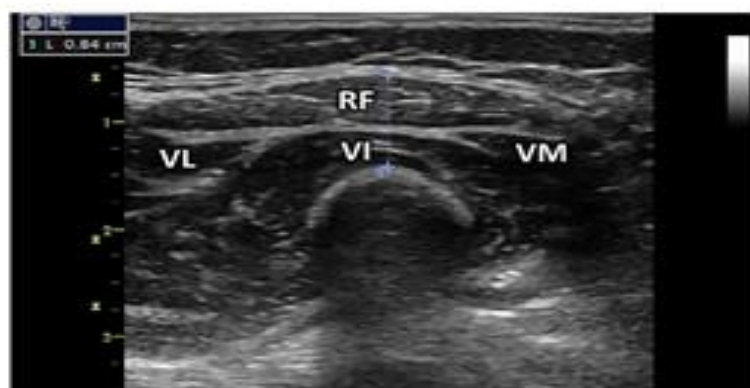
- MAKE (major adverse kidney events)
- QFMT (quadriceps femoris muscle thickness)
- SI (sarcopenia index)
- BCM (body composition monitor)

Multifactorial causes of sarcopenia



Lancet 2019; 393: 2636-46

Ultrasound for quadriceps femoris muscle thickness (QFMT, 股四頭肌厚度)

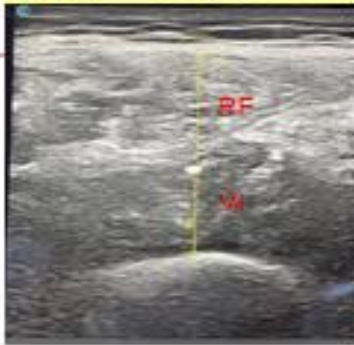


QFMT defined as the sum of the anterior thickness of the **rectus femoris (RF, 股直肌)** and the **vastus intermedius (VI, 股中間肌)** muscles

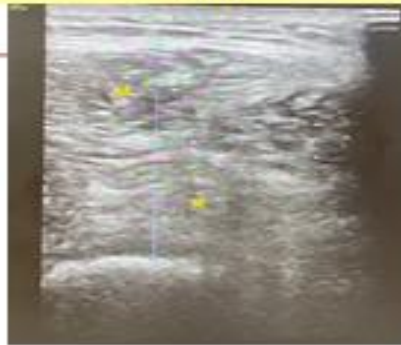
Fig. 1. Ultrasound assessment of the quadriceps femoris muscle thickness (QFMT): transverse ultrasound section made by linear probe. QFMT measurements were obtained from the upper margin of the femur bone to the upper margin of the deep fascia of the quadriceps femoris muscle perpendicularly to the thigh surface. RF: rectus femoris; VL: vastus lateralis; VM: vastus medialis; VI: vastus intermedius.

Project 2

No.1 D1



D8



No.2 D1



D8



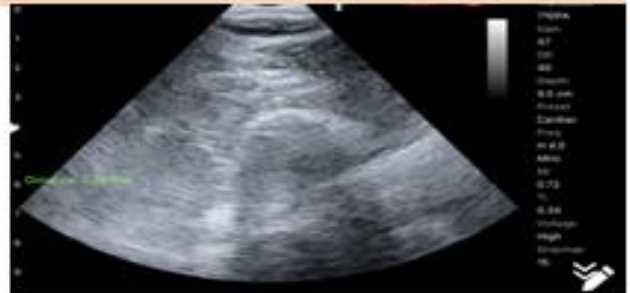
Project 2



No.3 D1



D8



No.4 D1



D8





Discussion-1

- **Echo intensity (EI)** in skeletal muscle has been used to evaluate muscle quality
- EI reflects the adipose and fibrous tissue within skeletal muscle
- EI of the quadriceps femoris is known to be **negatively correlated with quadriceps strength**

Ann Med. 2023; 55(1): 190-197



Discussion-2

- Muscle mass (quantity), muscle function (quality), and general performance
- Poor consciousness of these patients, next step ? extend enrollment criteria to general ward ?

a. Challenges of muscle ultrasound



- Cut-off values for diagnosing low muscle mass or sarcopenia by ultrasound have not been determined
- Examiners require a certain level of experience
- In the acute phase, muscle quantity and quality values could be changeable. Muscle thickness is considered to temporarily increase with systemic inflammation and elevated vascular permeability
- EI can lead to the inaccurate values because EI attenuates with depth

Ann Med. 2023; 55(1): 190-197

b. Sarcopenia and Cognitive function



- Sarcopenia is strongly related to the degree of cognitive impairment
- Sarcopenia accelerates cognitive impairment, and this cognitive change may be related to poor **muscle-brain axis**
- Sarcopenia reduces the level of myokines (肌肉激素) released from skeletal muscle fibers and promotes increase in the levels of proinflammatory cytokines and glucose and lipid metabolism impairment

Biomed Pharmacother. 2022; 147: 112636

Bedside PD catheter implantation



- Q1. Bedside PD catheter implant in ICU critical-ill patients (urgent-start PD)
- Q2. Fluid monitoring method for ICU patients, when modality shifting (modality shift)
- Q3. Nutritional intervention in critical-ill AKI patients (Nutrition in AKI)

Bedside PD catheter implantation



Covariate	N = 27
Age (years)	71 ± 14
Sex	M: 52%, F: 48%
Days between implant and PD start	10 ± 8 days
Diabetes mellitus	46.2%
Hypertension	69.2%
Cr_before dialysis	7.0 ± 2.7
BUN_before dialysis	89 ± 38
Alb_before dialysis	3.6 ± 0.7
Peritonitis	1/23 (4.3%)
Leak or hernia	0/23 (0%)

* Urgent-start PD: within 2 weeks of catheter placement