L'ACCESSO FEMORALE ECOGUIDATO OGGI: UNA RIVOLUZIONE NELLE INDICAZIONI E NELLE TECNICHE DI IMPIANTO E DI TIP LOCATION

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Editorial

Femoral venous access: State of the art and future perspectives

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Table 1. Non-dialysis femoral venous access today.

Patients	Device	Indication	Access	Exit site	Tip location method	Preferred securement
Neonates	ECC	Short term	Superficial veins of the lower limb	Peripheral sites	Neo-ECHOTIP	Sutureless
	Non-tunneled FICC	Emergency	CFV	Groin	Not required	Sutureless
	Tunneled FICC	Short/long term	CFV	Mid-thigh	Neo-ECHOTIP	Subcutaneous anchorage
Children	Non-tunneled FICC	Emergency	CFV	Groin	ECHOTIP-Ped	Sutureless
	Tunneled FICC	Short/long term	CFV	Mid-thigh	ECHOTIP-Ped	Subcutaneous anchorage
Adults	Peripheral catheter	Short term	Deep veins of the lower limb	Various sites	Not required	Sutureless
	Non-tunneled FICC	Emergency	CFV	Groin	Not required	Sutureless
	Non-tunneled FICC	Short/long term	SFV	Mid-thigh	ECHOTIP/IC-ECG	Subcutaneous anchorage
	Tunneled FICC	Short/long term	CFV or SFV	Mid-thigh	ECHOTIP/IC-ECG	Subcutaneous anchorage
	FICC-port	Long term	CFV or SFV	—	ECHOTIP	—

ECC: epicutaneo-cava catheter; FICC: femorally inserted central catheter; CFV: common femoral vein; SFV: superficial femoral vein.
Neo-ECHOTIP, ECHOTIP-Ped, ECHOTIP, IC-ECG: see explanation in the text.
Short term: <3–4 weeks; long term: >3–4 weeks.

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THE 'NEW' THING….

Techniques in vascular access

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Ultrasound-guided cannulation of the superficial femoral vein for central venous access

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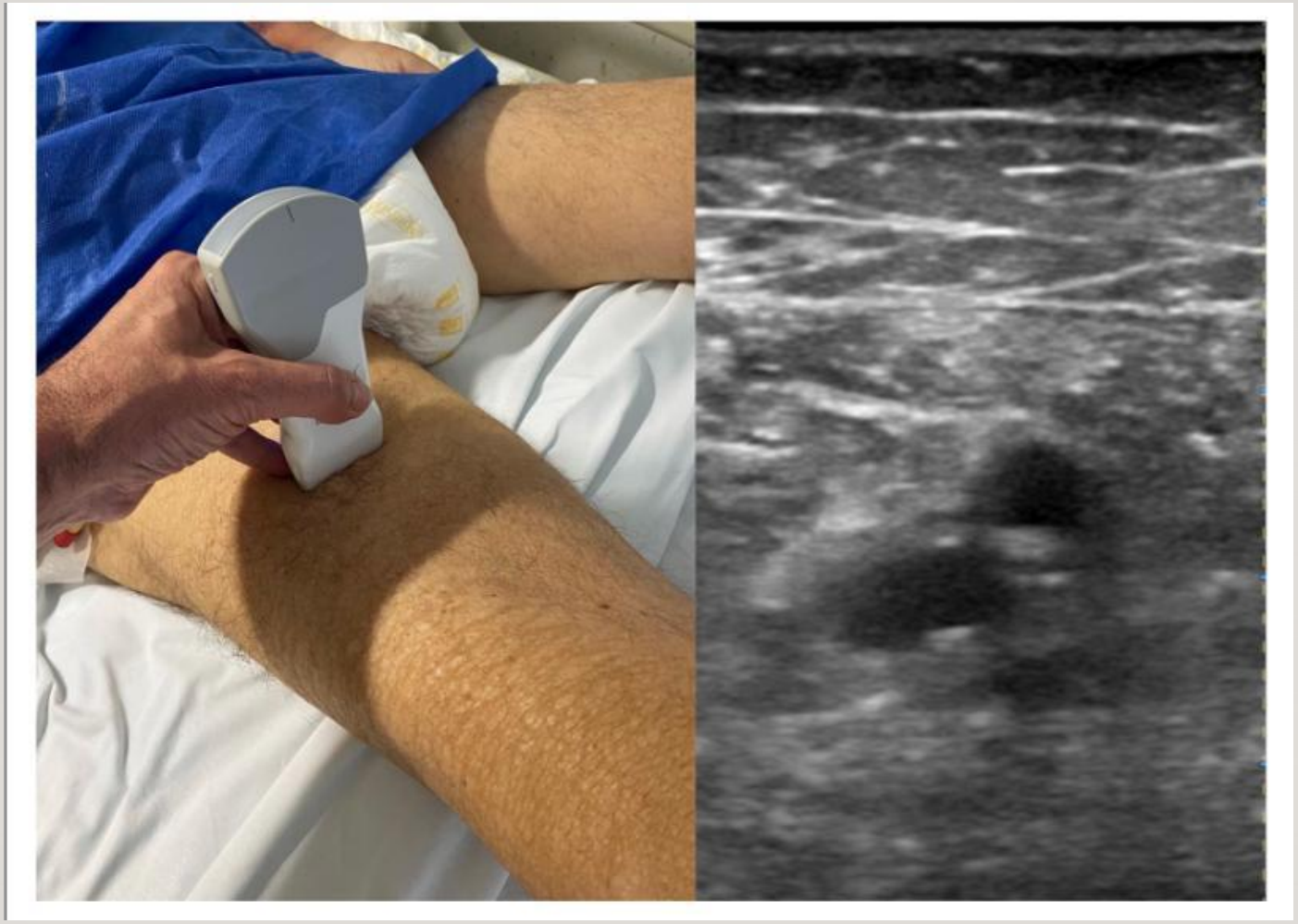
Maria Giuseppina Annetta, Bruno Marche, Laura Dolcetti, Cristina Taraschi, Antonio La Greca, Andrea Musarò, Alessandro Emoli, Giancarlo Scoppettuolo and Mauro Pittiruti



	Intra-hospital use	Extra-hospital use
Number of patients	52	46
Sex		
- Male > 18 years old	25	20
- Male < 18 years old	2	–
- Female	25	26
Catheter size/lumens		
- 5 Fr double lumen	44	6
- 4 Fr single lumen	8	40
Tip position		
- Right atrium	4	–
- Mid-portion of IVC	48	46
Exit site location		
- Thigh, middle third	32	20
- Thigh, distal third	20	26

ANCHE IN PAZIENTI SCOAGULATI!

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Review

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Management of antithrombotic treatment and bleeding disorders in patients requiring venous access devices: A systematic review and a GAVeCeLT consensus statement

Maria Giuseppina Annetta[1], Sergio Bertoglio[2], Roberto Biffi[3], Fabrizio Brescia[4], Igor Giarretta[5], Antonio La Greca[1], Nicola Panocchia[6], Giovanna Passaro[7], Francesco Perna[8], Fulvio Pinelli[9], Mauro Pittiruti[1], Domenico Prisco[10], Tommaso Sanna[8] and Giancarlo Scoppettuolo[1]

ANCHE IN PAZIENTI SCOAGULATI!

	Type of venous access procedure		
	Minimally invasive (*all peripheral VADs, nontunneled PICCs, nontunneled FICCs at mid-thigh*)	**Moderately invasive** (*nontunneled CICCs, nontunneled FICCs at the groin, tunneled PICCs, nontunneled dialysis catheters*)	**Highly invasive** (*tunneled CICCs, tunneled FICCs, tunneled-cuffed dialysis catheters, ports and PICC-ports*)
Bleeding disorder			
PT/INR > 1.5 and/or aPTT ratio > 1.3	No contraindication	Relative contraindication (see text)	Absolute contraindication
Platelet $< 50 \times 10^9$/L	No contraindication	Relative contraindication	Absolute contraindication (see text)

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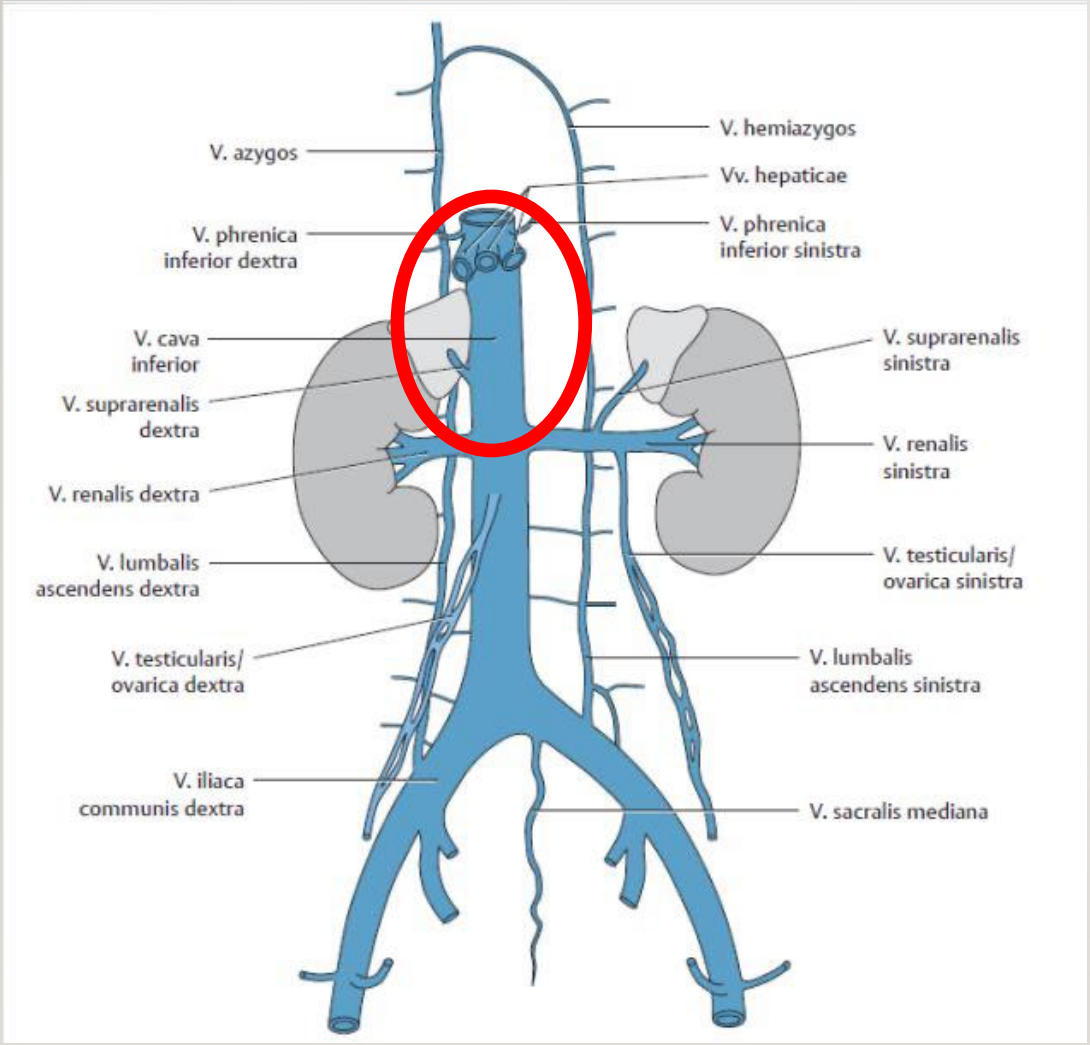
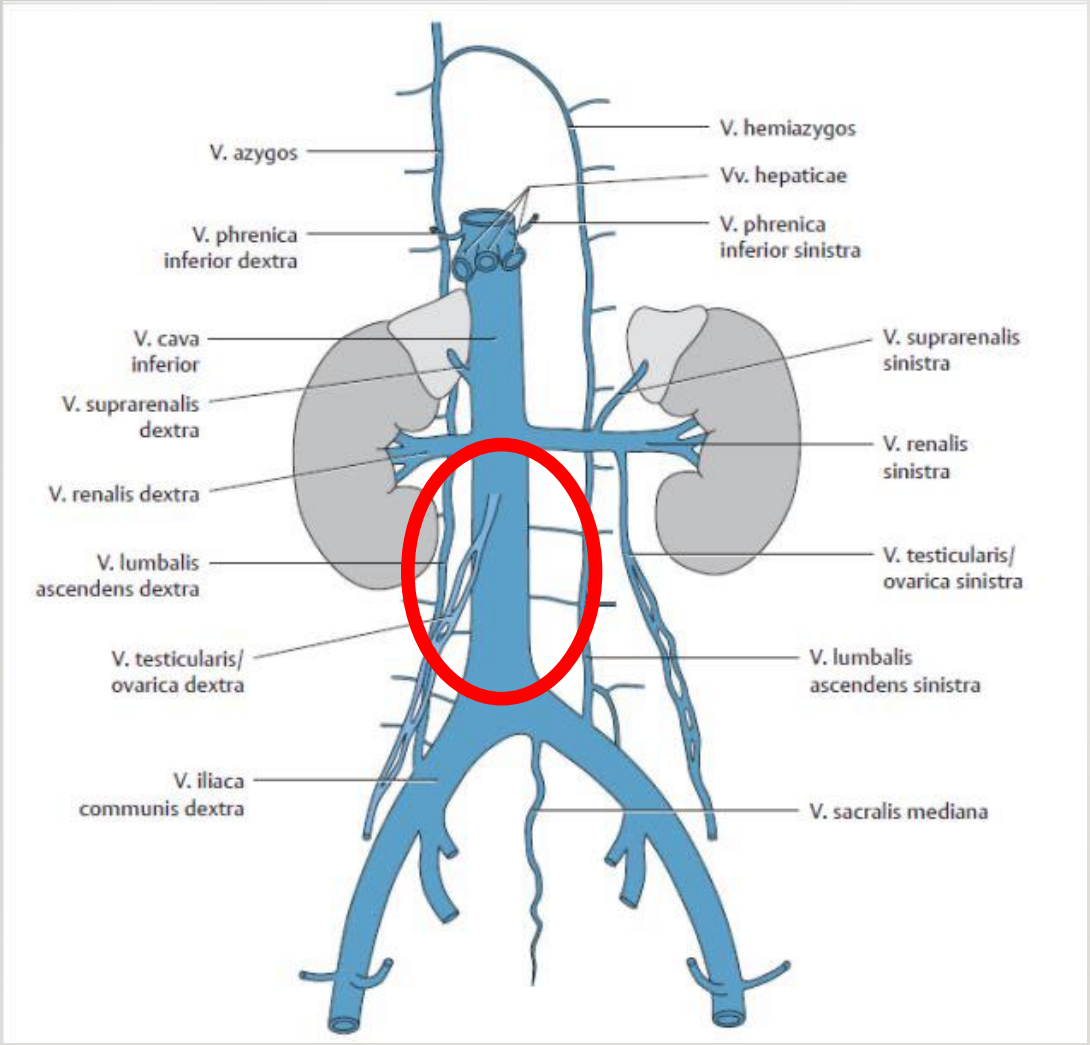
UNA GRANDE NOVITA':
LA TIP LOCATION ECOGUIDATA PER I FICC



Vena cava inferiore sottodiaframmatica tra vene renali e vene sovraepatiche

Tratto ben visualizzabile – in tutti i pazienti – mediante finestra trans-epatica



Vena cava inferiore sottodiaframmatica tra vene iliache e vene renali

Tratto mal visualizzabile per via ecoscopica – tranne che nei neonati e nei lattanti

Techniques in vascular access

JVA | The Journal of Vascular Access

Applicability and feasibility of intraprocedural tip location of femorally inserted central catheters by transhepatic ultrasound visualization of the inferior vena cava in adult patients

The Journal of Vascular Access
1–7

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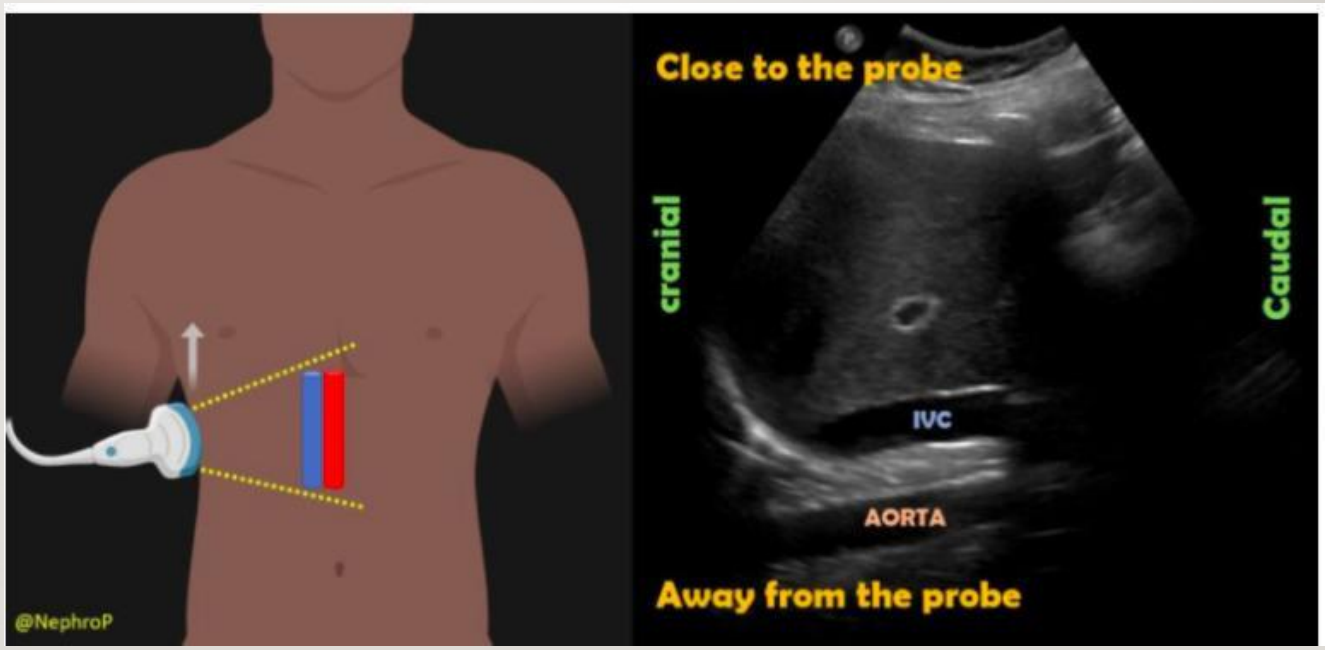
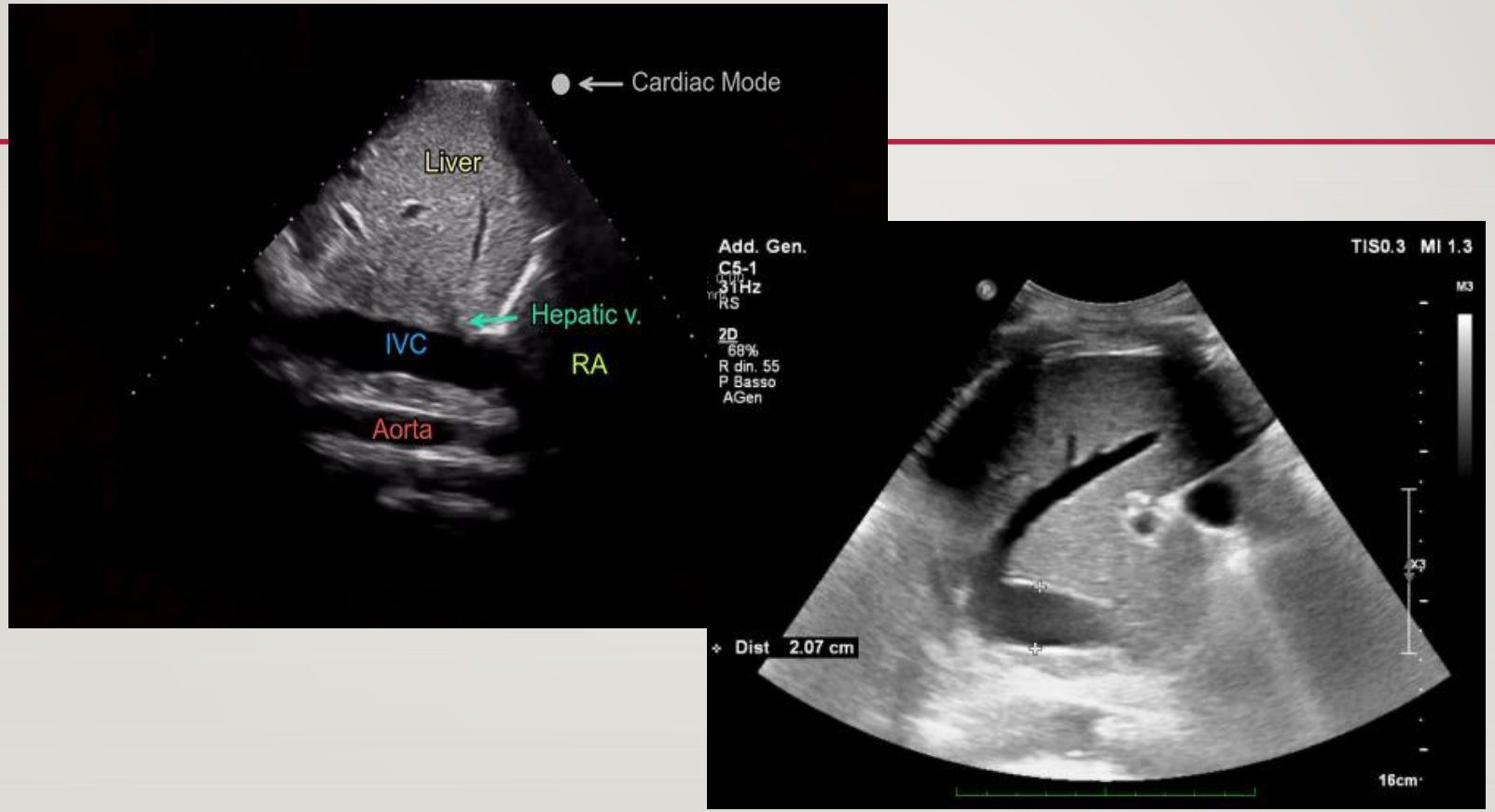
FINESTRA TRANS-EPATICA (CAVA INFERIORE SOTTODIAFRAMMATICA)

Sonda
- Convex
- Settoriale

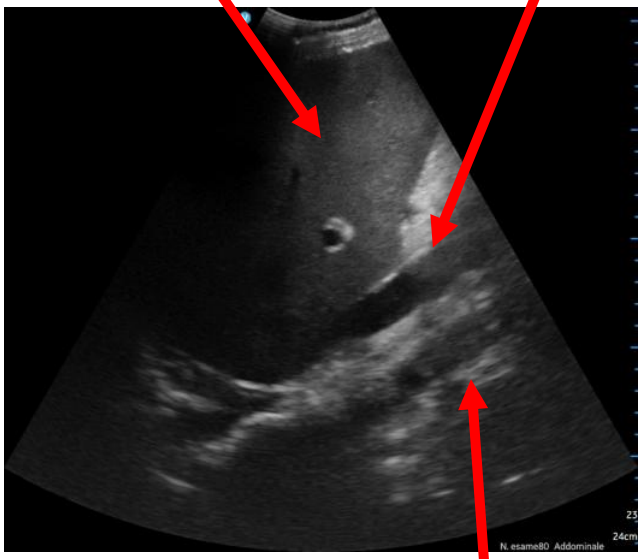
Posizione assiale
(linea ascellare anteriore)




Cardiac Mode
Liver
Hepatic v.
IVC
RA
Aorta
Add. Gen.
C5-1
31Hz
RS
2D
68%
R din. 55
P Basso
AGen
TIS0.3 MI 1.3
M3
Dist 2.07 cm
16cm

Fegato

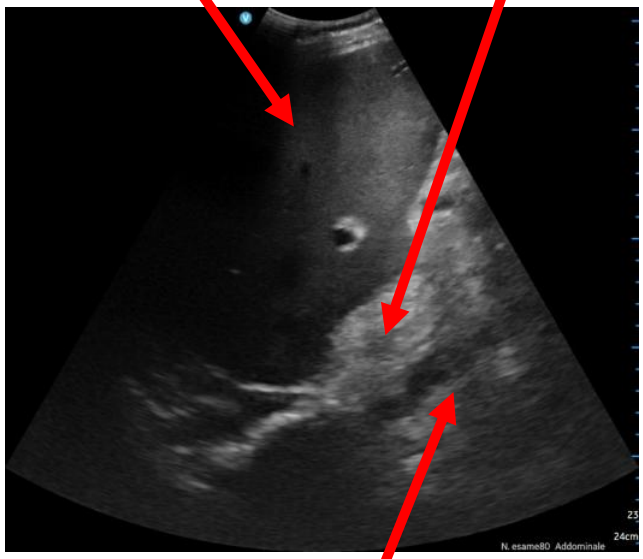
Cava inferiore



Aorta

Fegato

Cava inferiore
con microbolle

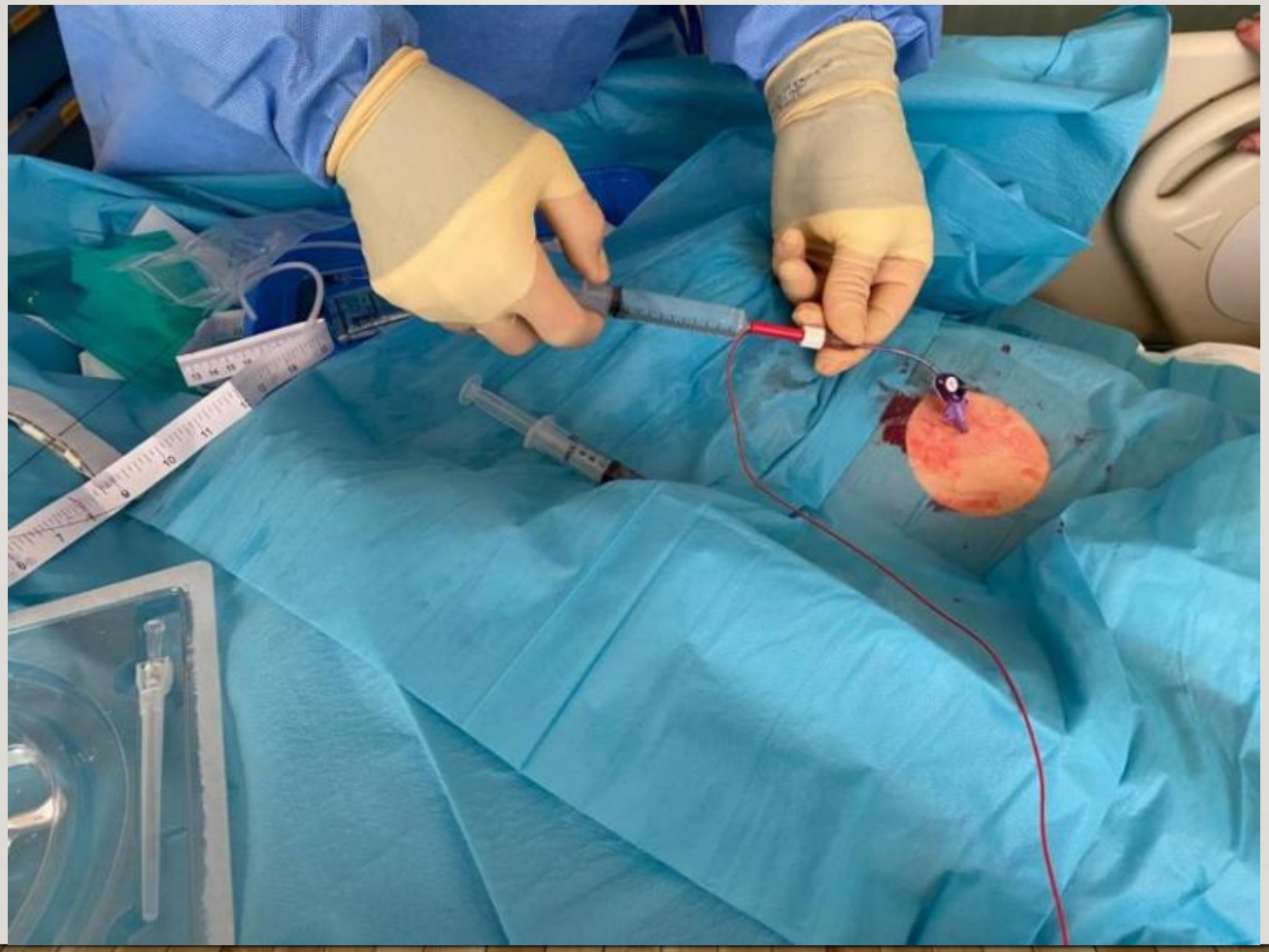


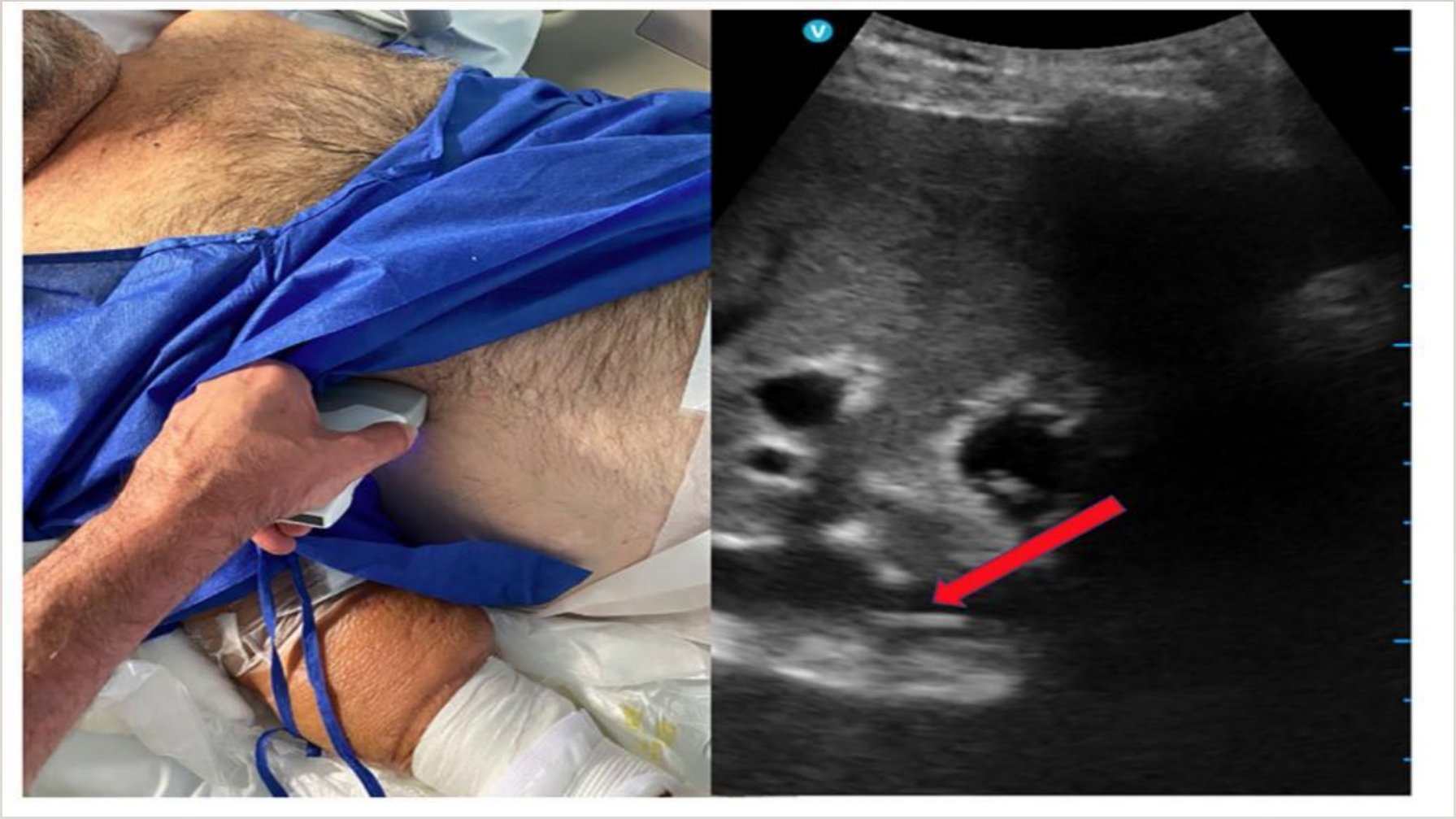
Aorta

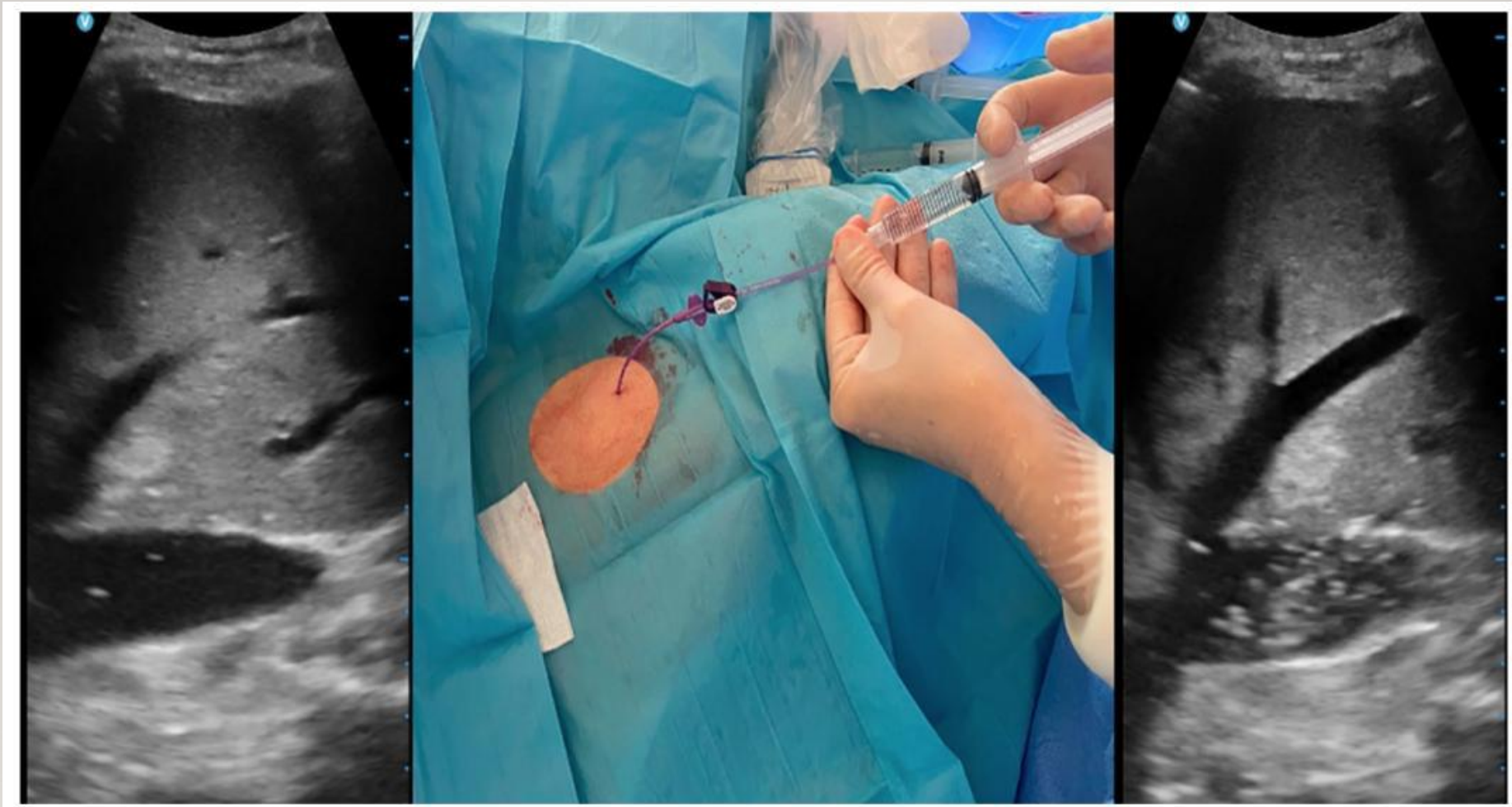
BUBBLE TEST E FINESTRA TRANSEPATICA

- La **comparsa delle microbolle nel tratto visualizzato** in ecoscopia permette di identificare con esattezza la posizione della punta del FICC
- La **comparsa delle microbolle con latenza**, provenienti dal basso, indica un FICC troppo corto, ma posizionato nell'asse iliaco-cavale
- La **mancata comparsa di microbolle** può indicare un FICC troppo lungo o una malposizione fuori dell'asse iliaco-cavale (ad esempio nelle vene lombari)


Exam#48_Vascular







FINESTRA TRANS-EPATICA (CAVA INFERIORE SOTTODIAFRAMMATICA)

- Il progresso più interessante degli ultimi tempi nel campo della *tip location* dei FICC
- Di sicuro successo nel prossimo futuro, grazie alla alta applicabilità e fattibilità, nonché alla facilità di esecuzione (particolarmente utilizzando sonde wireless con trasduttori multipli)
- Da integrare all'interno del protocollo ECHOTIP (scritto tre anni fa), che ancora non prevedeva questa finestra!

TAKE HOME MESSAGE

1. Utilizzare i FICC con approccio alla vena femorale superficiale nei pazienti con controindicazione ai PICC, anche per l'uso extraospedaliero
2. Abbandonare la *tip location* radiologica, sia quella intraprocedurale (fluoroscopia) che post-procedurale (lastra dell'addome)
3. Adottare il metodo di *tip location* intra-procedurale mediante ecografia

GAVeCeLT

Gli Accessi Venosi Centrali a Lungo Termine

Grazie dell'attenzione

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