XIII Picc Day 4 Dicembre 2019

Lo stato dell'arte nell'impianto dei Midline: la verifica ecografica della posizione della punta

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Clinical Practice Guidelines for the Diagnosis and Management of Intravascular Catheter-Related Infection: 2009 Update by the Infectious Diseases Society of America

Leonard A. Mermel,[1] Michael Allon,[2] Emilio Bouza,[9] Donald E. Craven,[3] Patricia Flynn,[4] Naomi P. O'Grady,[5] Issam I. Raad,[6] Bart J. A. Rijnders,[10] Robert J. Sherertz,[7] and David K. Warren[8]

Midline catheter	Peripheral catheter (size, 7.6–20.3 cm) is inserted via the antecubital fossa into the proximal basilic or cephalic veins, but it does not enter central veins; it is associated with lower rates of infection, compared with CVCs

THE MIDLINE CATHETER: A CLINICAL REVIEW

Daniel Z. Adams, MD,* Andrew Little, DO,† Charles Vinsant, MD,* and Sorabh Khandelwal, MD*

The Journal of Emergency Medicine, Vol. 51, No. 3, pp. 252–258, 2016

Midline catheters (MC) are typically 8–20 cm in length and are placed peripherally into the antecubital fossa or upper arm, with the tip located at or below the axillary vein (1,2). As such, they are not considered to dwell in

Variation in use and outcomes related to midline catheters: results from a multicentre pilot study

Vineet Chopra,[1,2,3] Scott Kaatz,[4] Lakshmi Swaminathan,[5] Tanya Boldenow,[6] Ashley Snyder,[1,2,3] Rachel Burris,[1,3] Steve J Bernstein,[2,3,7] Scott Flanders[1,3]

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central veins. By definition, the tip of the midline catheter should be located at or near the level of the axilla, distal to the shoulder.[2] Because they are not central

Comparison of Venous Thrombosis Complications in Midlines Versus Peripherally Inserted Central Catheters: Are Midlines the Safer Option?

Clinical and Applied Thrombosis/Hemostasis
Volume 25: 1-8

DOI: 10.1177/1076029619839150
journals.sagepub.com/home/cat
SAGE

Amit Bahl, MD, MPH, RDMS, FACEP[1], Patrick Karabon, MS[2], and David Chu, BS[2]

to PICCs for peripheral infusions. Midline catheters are inserted into peripheral veins of the upper arm and terminate before the distal axillary vein.[5] These catheters have been uti-

Editorial

JVA The Journal of Vascular Access

Long peripheral catheters: Is it time to address the confusion?

The Journal of Vascular Access
2019, Vol. 20(5) 457–460

DOI: 10.1177/1129729818819730
journals.sagepub.com/home/jva
SAGE

Kirby R Qin[1], Ramesh M Nataraja[1,2] and Maurizio Pacilli[1,2]

Table 1. Comparison of peripheral venous access devices.

	Peripheral intravenous catheter	Long peripheral catheter	Midline catheter
Length	3–6 cm	6–15 cm	15–25 cm
Catheter tip extension	Distal to the axilla	Distal to the axilla	Infra/supraclavicular region
Insertion site	At or distal to the antecubital fossa	Forearm, antecubital fossa or upper arm	Antecubital fossa or upper arm
Material	PTFE, PUR	PUR, PEBA	PUR, silicone
Insertion technique	Catheter-over-needle	Catheter-over-needle Catheter-over-guidewire (direct Seldinger)	Catheter-over-guidewire with tissue dilator (modified Seldinger)
Cost[a]	$6	$44	$160

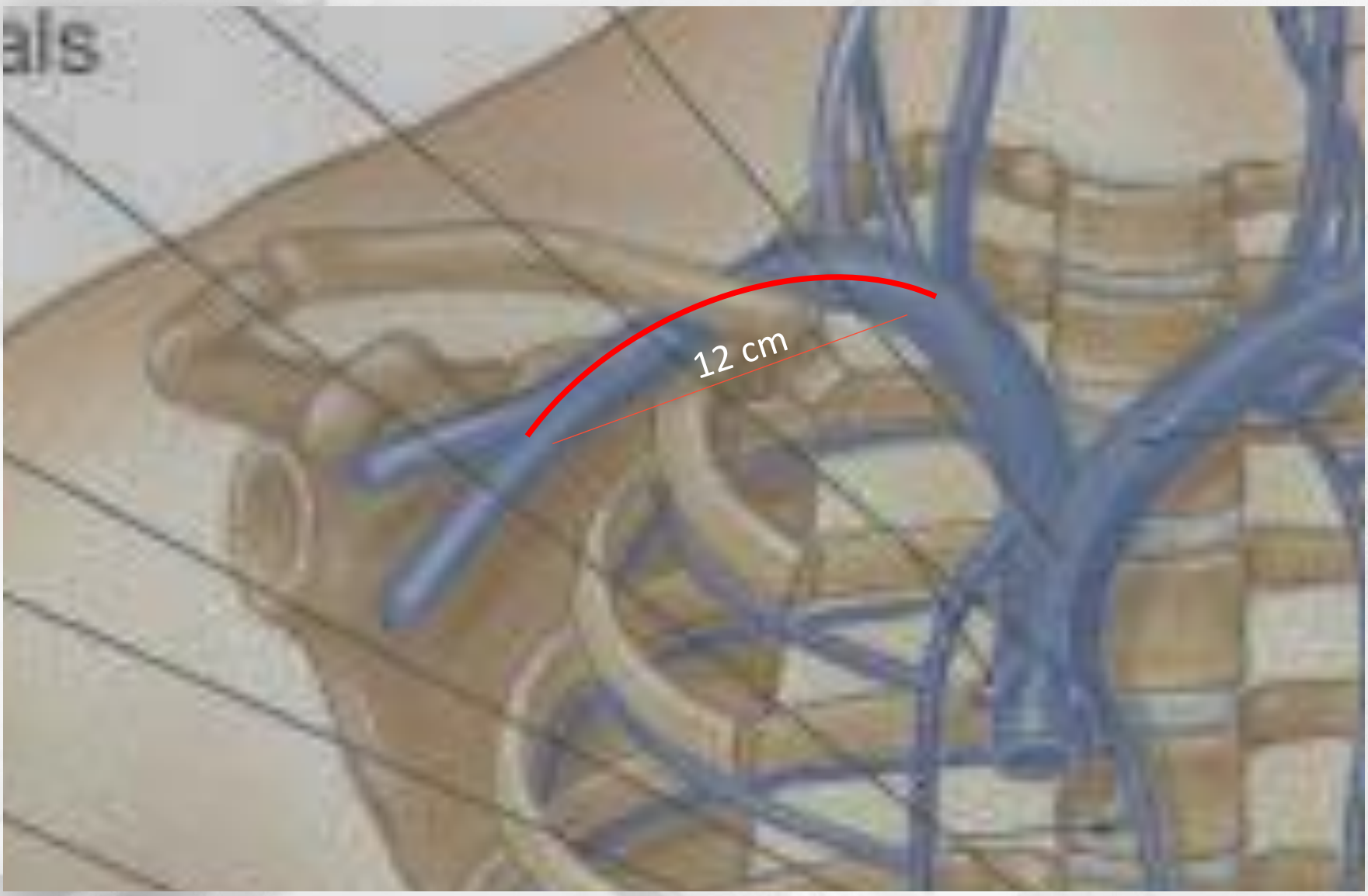
PTFE: polytetrafluoroethylene; PUR: polyurethane; PEBA: poly-ether-bloc-amide.
[a]At our institution (in 2018 Australian Dollars).

Inserzione ecoguidata:

"Tratto toracico della vena ascellare"

"Vena Succlavia"

Pittiruti M, Scopettuolo G. Mauale GAVeCeLT dei Picc e dei Midline. EDRA 2016


12 cm

JOURNAL OF SURGICAL RESEARCH 191 (2014) 1–5

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journal homepage: www.JournalofSurgicalResearch.com

ELSEVIER

Association for Academic Surgery

Ultrasound-guided placement of midline catheters in the surgical intensive care unit: a cost-effective proposal for timely central line removal

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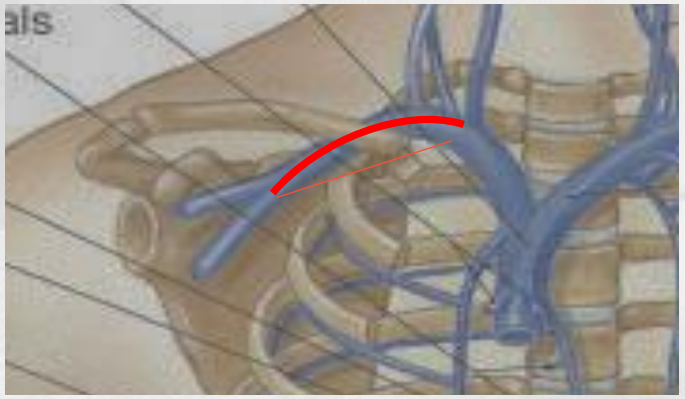
Department of General Surgery, North Shore-Long Island Jewish Health System, New Hyde Park, New York

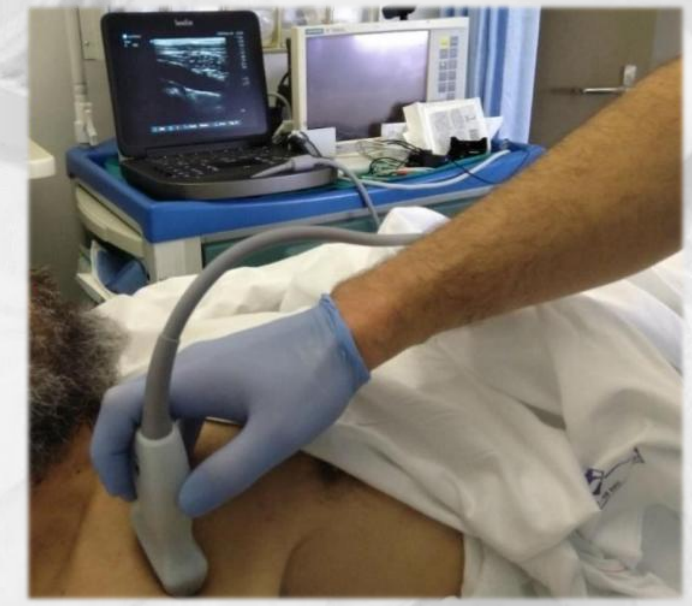


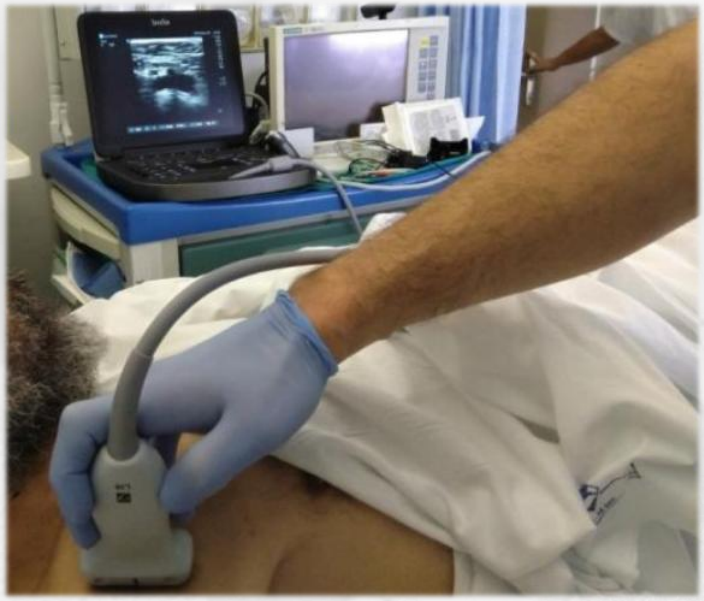
current position. The catheter was then sutured in place with 3-0 silk suture and the location confirmed by aspirating blood and flushing with normal saline without resistance. Finally,

Tip location: lo decide il caso

USGTL

Ultra Sound guided tip location

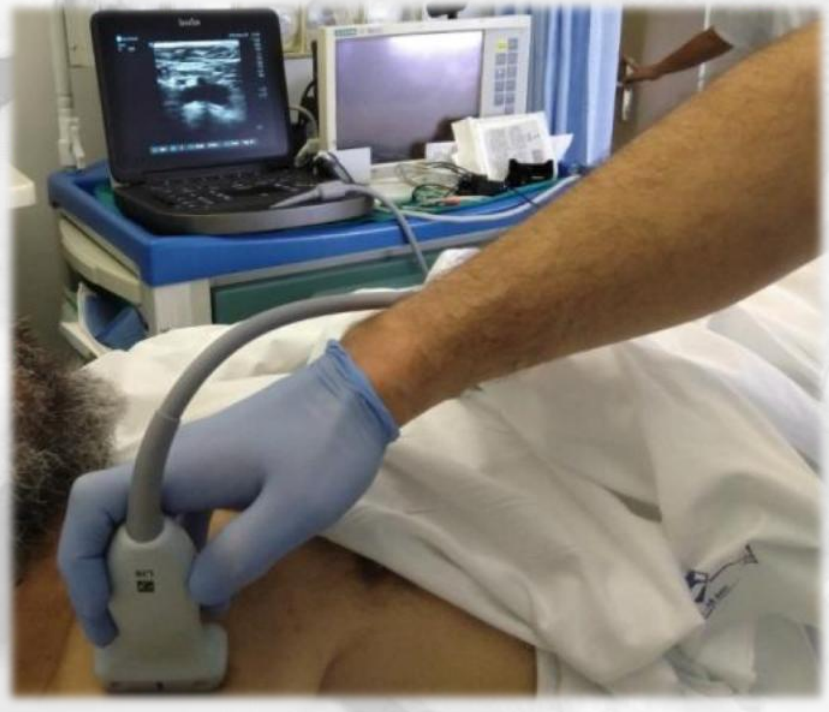




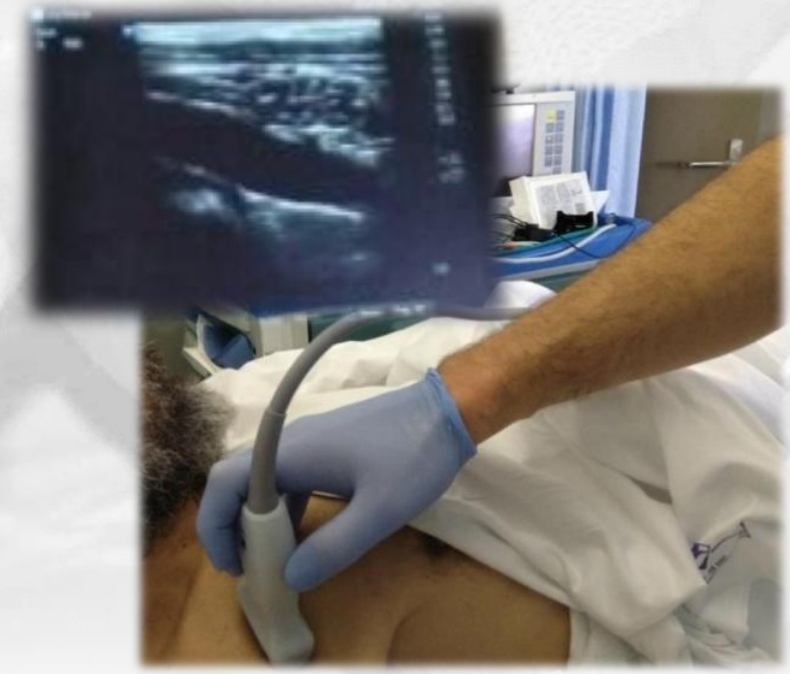
Punta del Midline
in vena ascellare sottoclaveare
(circa 3 cm dalla clavicola)
o in vena succlavia

Tip location: lo decidiamo noi

Visualizzo la vena ascellare in asse corto (utilizzando la clavicola come repere)

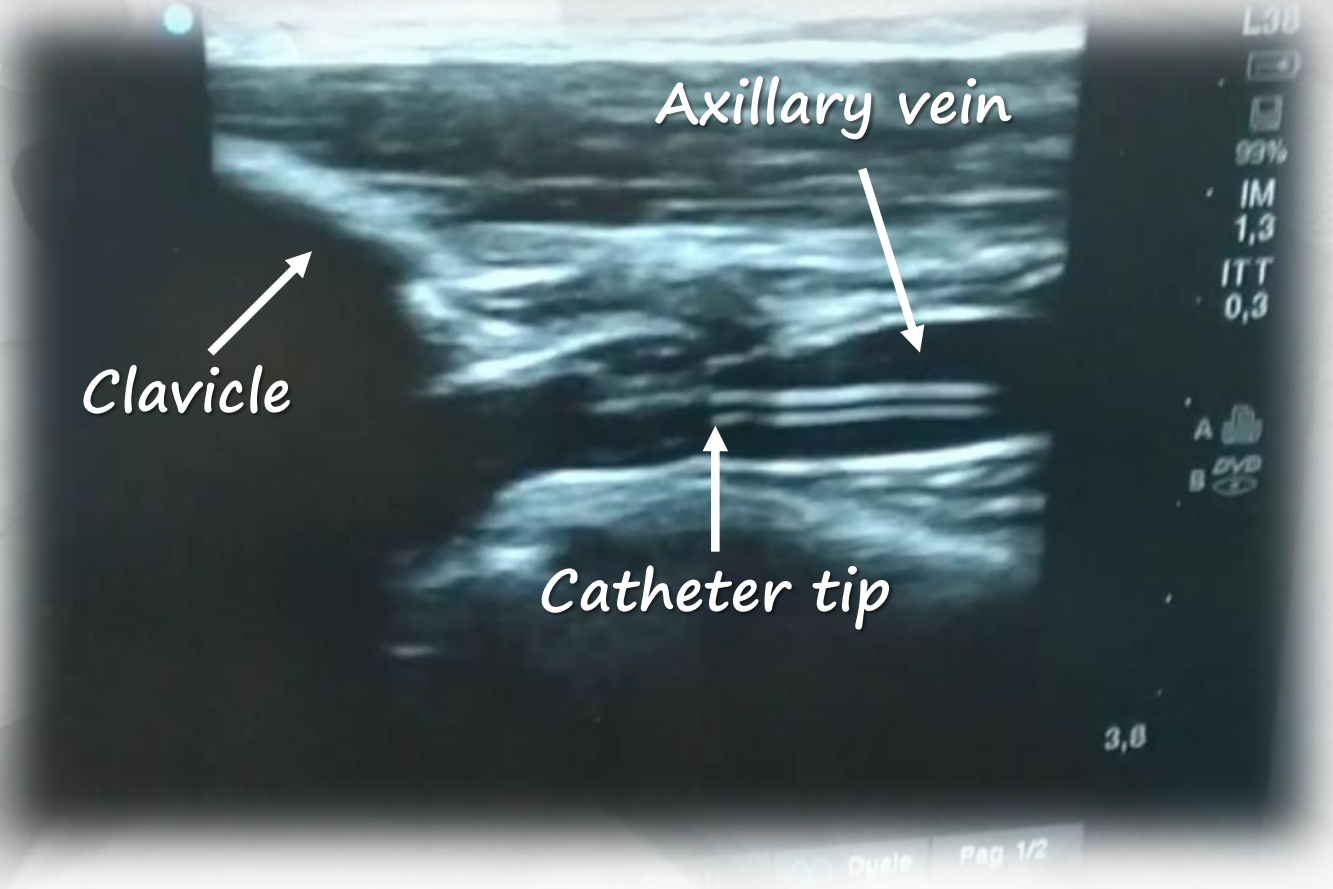


Passo alla visione in asse lungo (mantenendo sull'estremo dello schermo l'ombra della clavicola)



USGTL

Identifico la punta del catetere e la posiziono a circa 3 cm dalla clavicola



Sto impiantando un Midline da 20 cm?

Lo mantengo in questa posizione e lo assicuro con sutureless e colla

USGTL

Sto impiantando un Midline da 25 cm?

Ho almeno 5 cm di catetere ancora da introdurre?

↓

Lo introduco completamente e lo assicuro con sutureless e colla

Ho meno di 5 cm di catetere ancora da introdurre?

↓

Lo mantengo in questa posizione e lo assicuro con sutureless e colla

Elli S. Pittiruti M. et al. Ultrasound guided tip location of midline catheters. J. Vasc. Acc. **under revew**

Study group	Luglio 2018 / Aprile 2019	**Midline 20 cm con USGTL**
Control group 1	Gennaio 2017 / Dicembre 2017	**Midline 25 cm senza USGTL**
Control group 2	Marzo 2018 / Giugno 2018	**Midline 20 cm senza USGTL**

Elli S. Pittiruti M. et al. Ultrasound guided tip location of midline catheters. J. Vasc. Acc. **under revew**

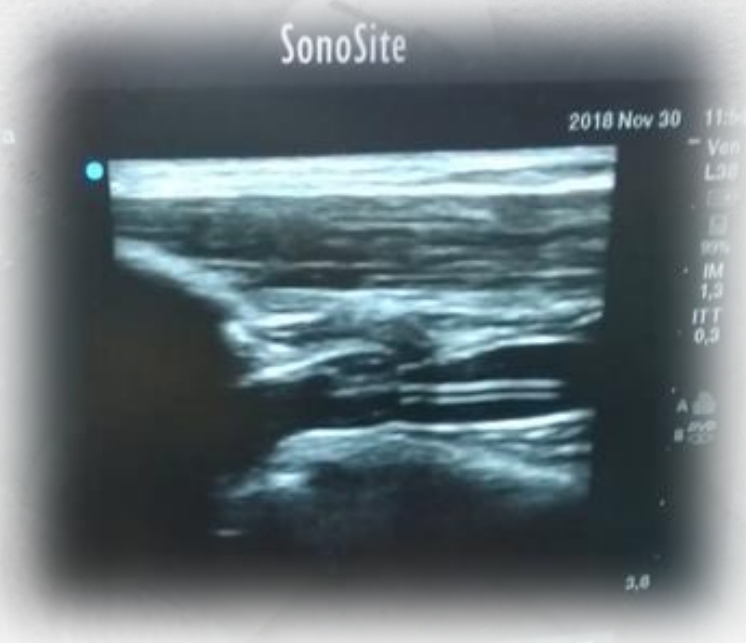
	Control Group 1	Control Group 2	Study Group	p value
MCs (n.)	412	111	458	
Age (mean ± SD)	67,2 ± 17,6	67,8 ± 16,9	67,6 ± 17,5	ns
Sex = M (%)	54,12	45,9	51,64	ns
Medical / Surgical desease (%)	86,4 / 13,6	88,2 / 11,8	85,5 / 14,5	ns
DTV (n.)	10	10	12	
DTV (%)	2,42	9	2,62	
DTV: group 1 vs. study group	10		12	0,852
DTV: group 2 vs. study group		10	12	0,002

Midline da 20 o 25 cm: cosa è meglio?

- Non esistono evidenze che dimostrino la superiorità di una delle due misure rispetto all'altra.
- Richiedono due approcci differenti nella tip location

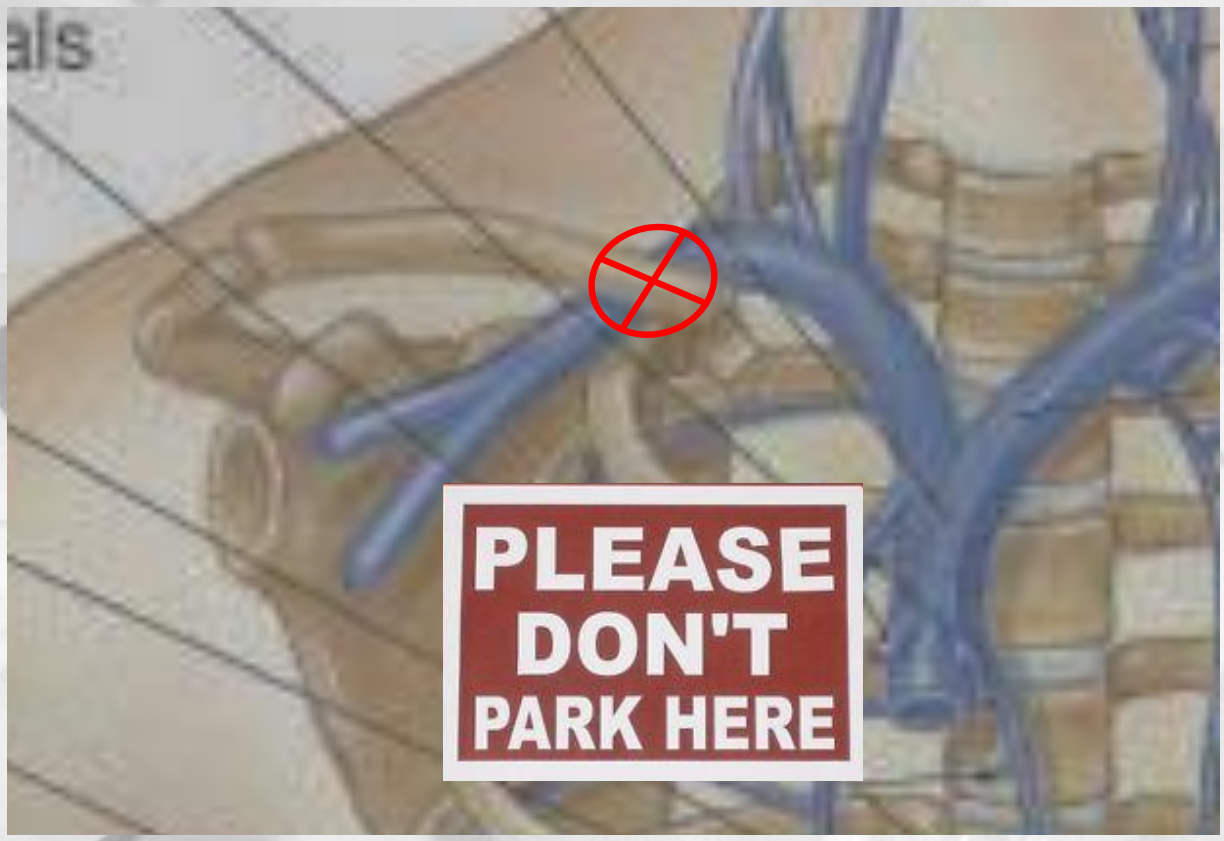
Midline 20 cm.

Visione diretta della punta in vena ascellare



Midline 25 cm.

- Visione diretta del passaggio del catetere in vena ascellare
- Valutazione indiretta del posizionamento della punta oltre la transizione ascellare/succlavia


PLEASE
DON'T
PARK HERE

…un'ultima cosa…

- Due operatori: nessun problema
- Un operatore: allarghiamo il campo sterile fino all'area sottoclaveare e lavoriamo ccc

Take home message

ECHOTIP: anche per i Midline

XIII Picc Day 4 Dicembre 2019

GAVeCeLT

Grazie

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