The European Society of Regional Anaesthesia & Pain Therapy
ESRA ITALIA

ESRA ITALIAN CHAPTER

30° NATIONAL MEETING

13-15 NOV 2025

NAPOLI
HOTEL RAMADA

Presidents:
Giuseppe Servillo, Fabrizio Fattorini

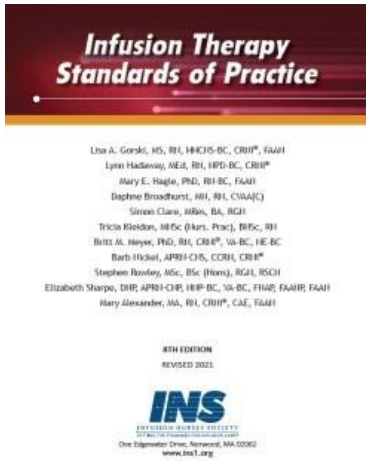
MZ EVENTS

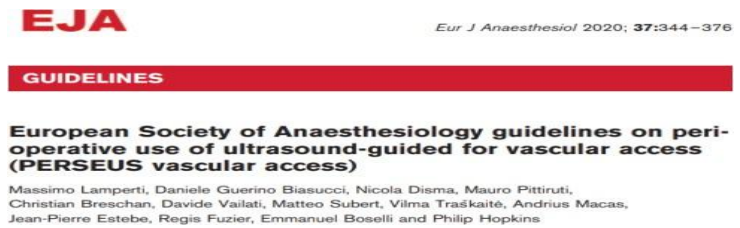
Ultrasound examination of the veins in the cervico-thoracic region (RaCeVA protocol) and the SIC protocol for ultrasound-guided placement of CICC

Andrea Sica
UOC Anestesia e Rianimazione – P.O. Sant'Ottone Frangipane – Ariano Irpino – ASL Avellino

The use of ultrasound offers significant advantages in terms of:

- safety of patients
- quality of procedures





…non solo ultrasuoni…

- Skin antisepsis with 2% chlorhexidine in alcohol
- Maximum barrier precautions
- Correct choice of intracavitary ECG exit site for tip location
- Sutureless fixation systems and cyanoacrylate glue

BUNDLE

A structured and limited set of evidence-based practices that, when applied together in a consistent and systematic manner, significantly improve patient outcomes.

Editorial

JVA The Journal of Vascular Access

The Journal of Vascular Access
1–6

DOI: 10.1177/11297298211036002
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SAGE

The SIC protocol: A seven-step strategy to minimize complications potentially related to the insertion of centrally inserted central catheters

Fabrizio Brescia[1], Mauro Pittiruti[2], Matthew Ostroff[3], Timothy R Spencer[4] and Robert B Dawson[5]

Table 1. The seven steps of the SIC protocol.

Step 1	*Preprocedural evaluation*—choice of the vein by systematic ultrasound examination of the veins of the neck and of the supra/infraclavicular region (RaCeVA protocol) and choice of the ideal exit site (Central ZIM)
Step 2	*Appropriate aseptic technique*—hand hygiene, skin antisepsis with 2% chlorhexidine in 70% alcohol, maximal barrier precautions
Step 3	*Ultrasound-guided insertion*—ultrasound-guided venipuncture, ultrasound verification of the correct direction of the guidewire (tip navigation) and of the absence of pneumothorax (pleural scan)
Step 4	*Intra-procedural assessment of tip location*—verification of the central position of the tip by intracavitary ECG and/or by transthoracic echocardiography, using the "bubble test"
Step 5	*Adequate protection of the exit site*—reduction of the risk of bleeding and risk of contamination by sealing with cyanoacrylate glue
Step 6	*Proper securement of the catheter*—stabilization of the catheter using skin-adhesive sutureless devices, transparent dressing with integrated securement or subcutaneous anchorage
Step 7	*Appropriate coverage of the exit site*—use of semi-permeable transparent dressing, preferably with high breathability

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Review

JVA The Journal of Vascular Access

Rapid Central Vein Assessment (RaCeVA): A systematic, standardized approach for ultrasound assessment before central venous catheterization

The Journal of Vascular Access
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Timothy R Spencer[1] and Mauro Pittiruti[2]

- **Protocollo ecografico sistematico e rapido** utilizzato per valutare le vene della regione cervico - toracica
- Permette di **scegliere il sito di inserzione ideale**
- Guida l'operatore a valutare sistematicamente: **pervietà, comprimibilità, calibro (diametro)**, **profondità, rapporti anatomici**

Rapid Central Vein Assessment:

- It takes only 20–30 s for each side
- It is easy to teach, easy to learn
- It is a useful guide for a rational choice of the central vein to be accessed, in terms of:
  - Patient's safety
  - Cost-effectiveness
  - Improved performance of central venous catheterization

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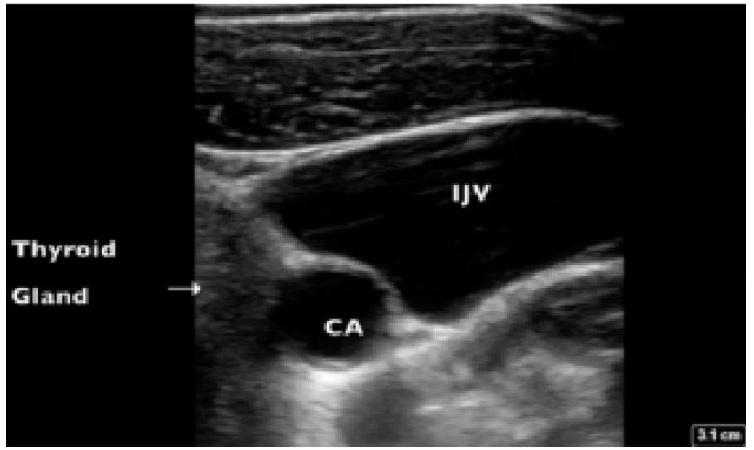

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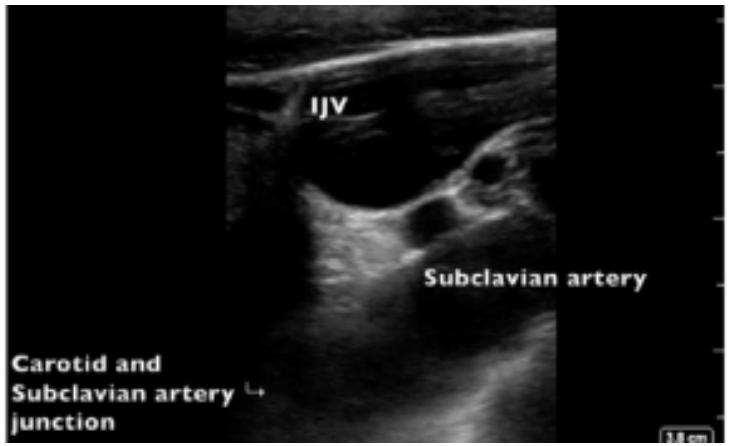

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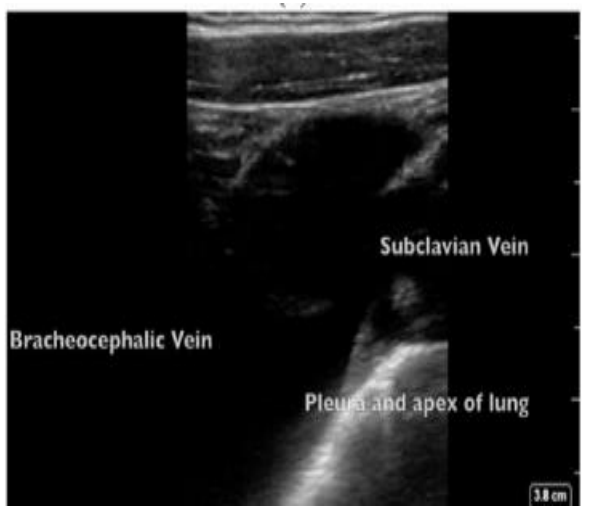

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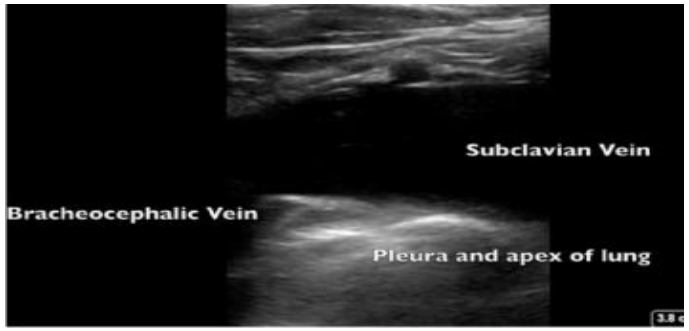

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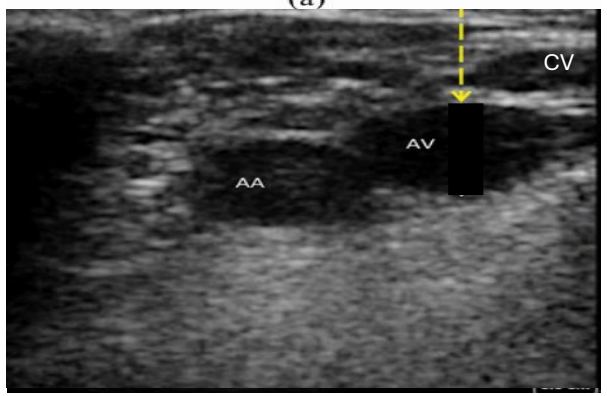
(a)



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Step 7	Sliding lung (longitudinal)	Pleura (anterior chest wall)	Ribs

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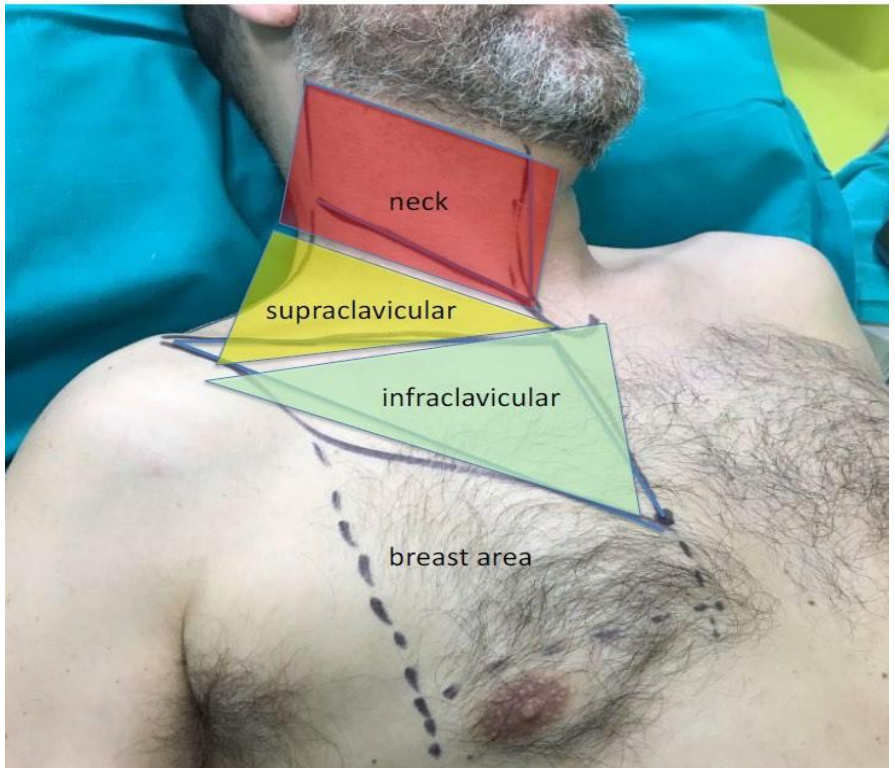

Central ZIM (Zone Insertion Method) Protocol

Sito venipuntura ideale ≠ Exit site ideale

Central ZIM (Zone Insertion Method) Protocol

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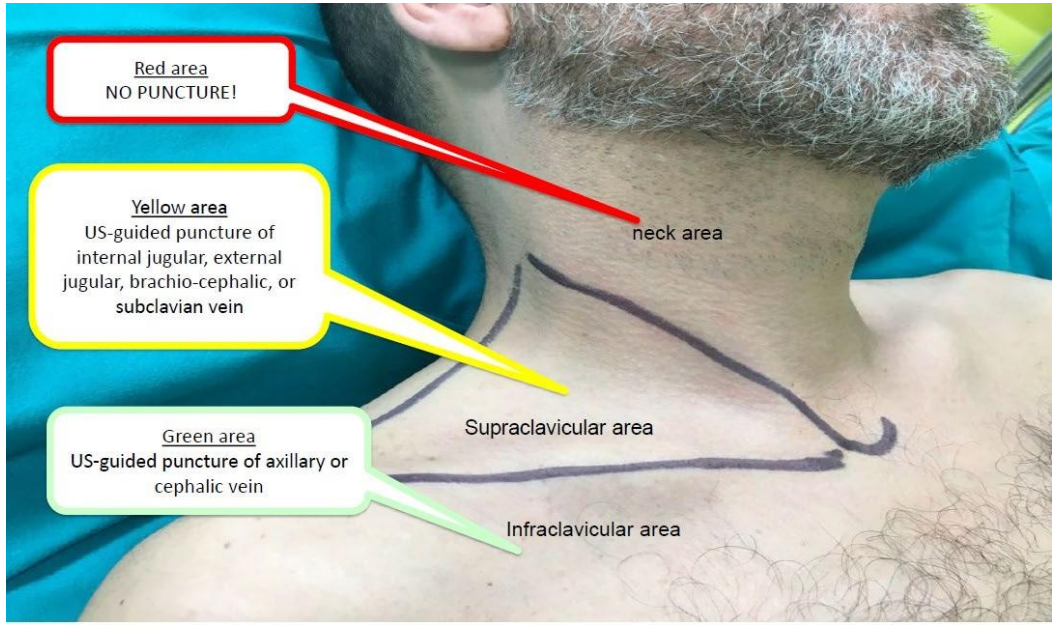

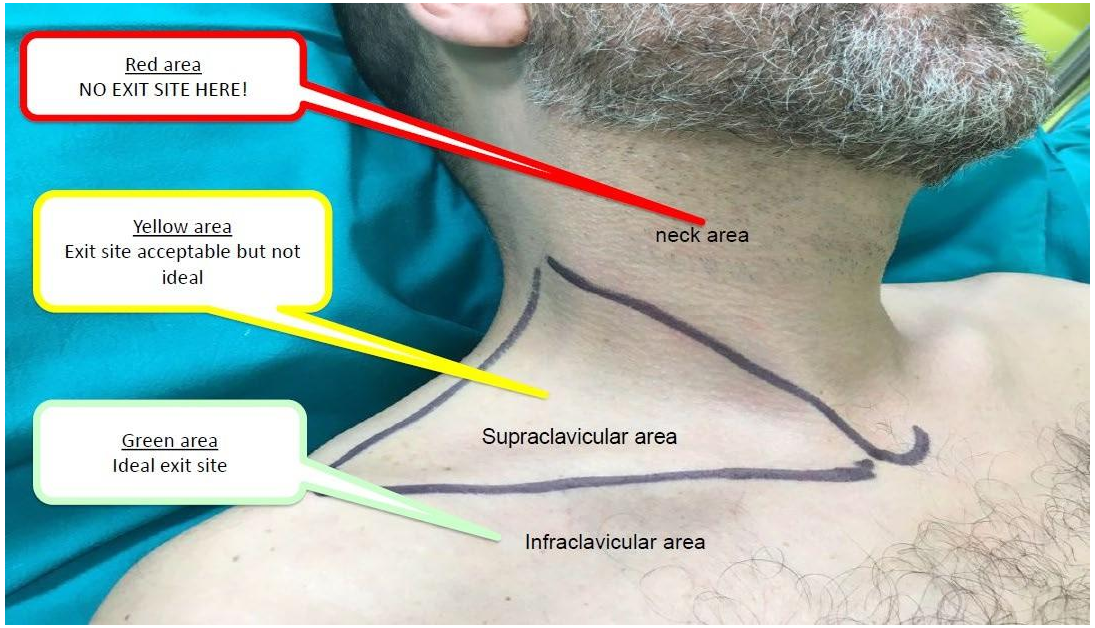

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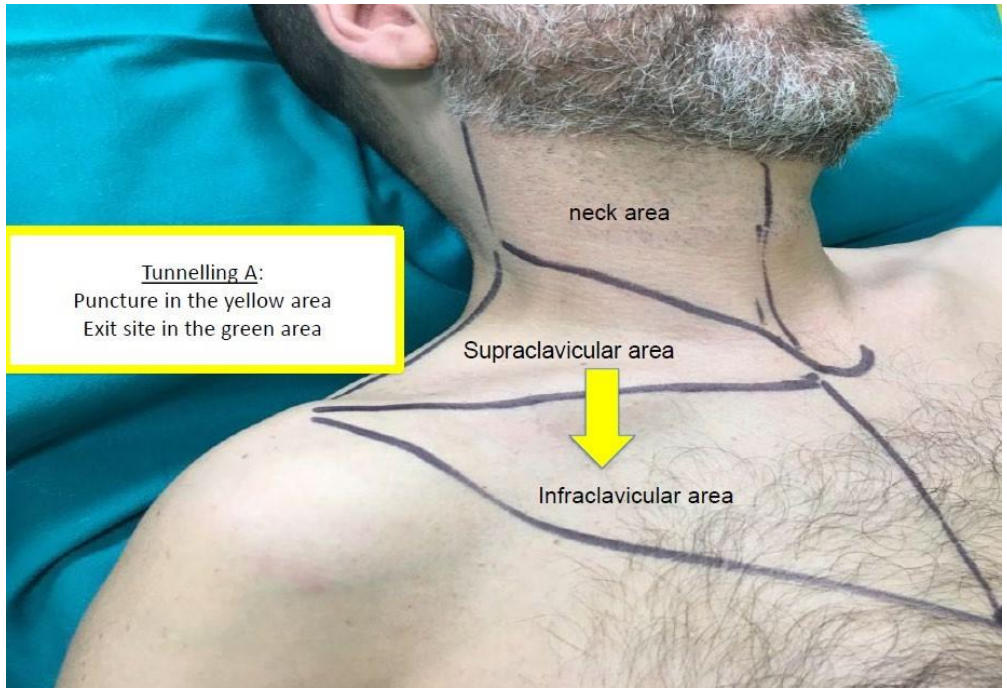
Central ZIM (Zone Insertion Method) Protocol

Tunnellizzazione

↓ *rischio infettivo*
↓ *rischio trombotico*
↓ *rischio dislocazione*



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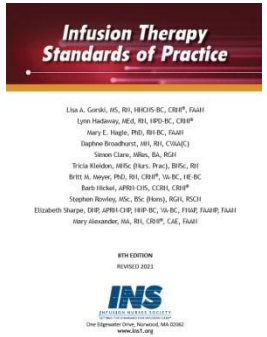
Step 2	*Appropriate aseptic technique*—hand hygiene, skin antisepsis with 2% chlorhexidine in 70% alcohol, maximal barrier precautions



16. HAND HYGIENE

Standard

16.1 Hand hygiene is performed routinely during patient care activities.

33. VASCULAR ACCESS SITE PREPARATION AND SKIN ANTISEPSIS

Standard

33.1 Skin antisepsis is performed prior to VAD placement.
33.2 The intended VAD insertion site is visibly clean prior to application of an antiseptic solution; if visibly soiled, cleanse the intended site with soap and water prior to application of antiseptic solution(s).

Practice Recommendations

A. Remove excess hair at the insertion site if needed to facilitate application of VAD dressings; use single-patient-use scissors or disposable-head surgical clippers; do not shave as this may increase the risk for infection.[1,2] (I)
B. Evaluate patient history of any allergy or sensitivity to skin antiseptics (see Standard 55, *Catheter-Associated Skin Injury*).[3,4] (V)
C. Perform skin antisepsis using the preferred skin antiseptic agent of alcohol-based chlorhexidine solution.[5-10] (I)
   1. If there is a contraindication to chlorhexidine solution, an iodophor (eg, povidone-iodine) or 70% alcohol may also be used.[5,6,10] (IV)
   2. Aqueous chlorhexidine may be considered if there is a contraindication to alcohol-based chlorhexidine.[3] (IV)

SHEA/IDSA/APIC Practice Recommendation

Strategies to prevent central line-associated bloodstream infections in acute-care hospitals: 2022 Update

Journal of Hospital Infection 86S1 (2014) S1-S70

Available online at www.sciencedirect.com

Journal of Hospital Infection

journal homepage: www.elsevierhealth.com/journals/jhin

ELSEVIER

epic3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England

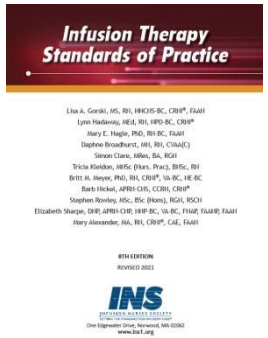
H.P. Loveday[a]*, J.A. Wilson[a], R.J. Pratt[a], M. Golsorkhi[a], A. Tingle[a], A. Bak[a], J. Browne[a], J. Prieto[b], M. Wilcox[c]

Table 1. The seven steps of the SIC protocol.

Step 3	*Ultrasound-guided insertion*—ultrasound-guided venipuncture, ultrasound verification of the correct direction of the guidewire (tip navigation) and of the absence of pneumothorax (pleural scan)

- **Venipuntura ecoguidata**

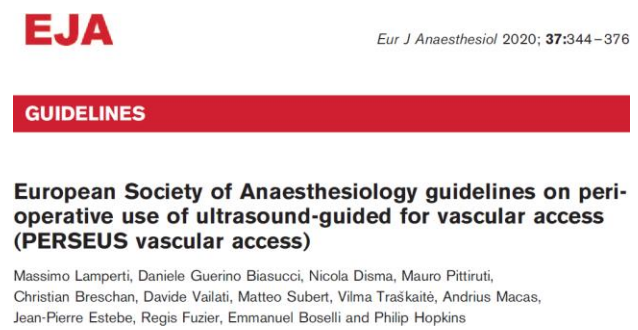
- Successo 1° tentativo
- Sicurezza paziente
- ↓ complicanze



NICE National Institute for Health and Care Excellence

Guidance on the use of ultrasound locating devices for placing central venous catheters

Technology appraisal guidance | TA49 | Published: 04 October 2002



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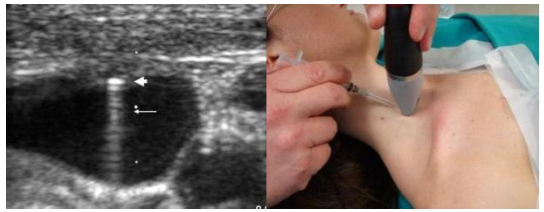
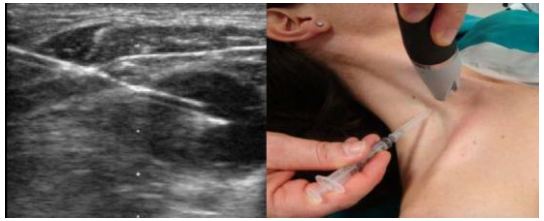
SOVRACLAVEARE

VGI _ SA - OOP



VGI _ SA - IP

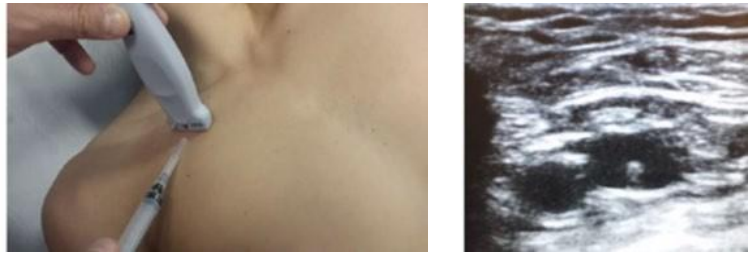


VAn _ LA - IP

VS _ LA - IP

INFRACLAVEARE

VA _ SA - OOP



VA _ LA - IP

VA _ SA - IP

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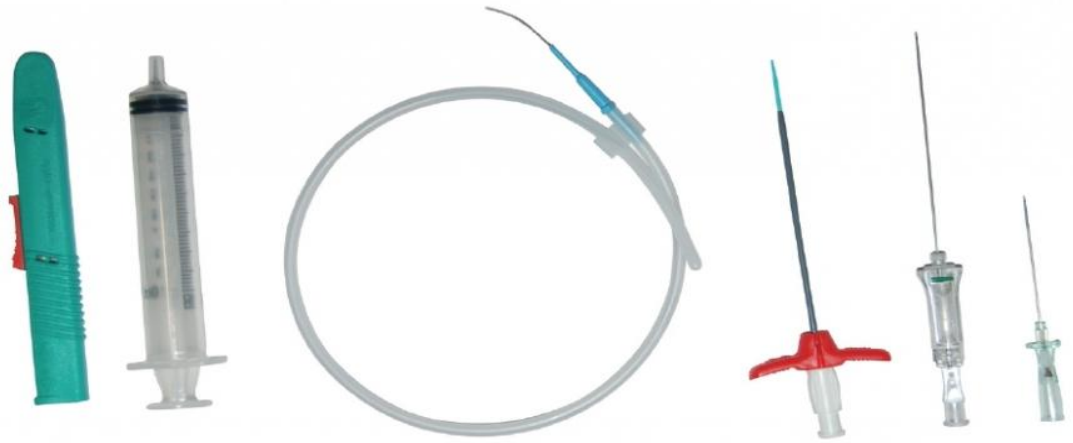
Step 3	*Ultrasound-guided insertion*—ultrasound-guided venipuncture, ultrasound verification of the correct direction of the guidewire (tip navigation) and of the absence of pneumothorax (pleural scan)

Kit da microintroduzione

- Ago venipuntura piccolo (tipicamente da 21 Gauge)
- Guida metallica da 0.018” flessibile con punta morbida
- Microintroduttore minor traumatismo venoso



- ✓ ↓ traumatismo venoso
- ✓ Ago ecoriflettente
- ✓ ↓ complicanze legate all’impianto

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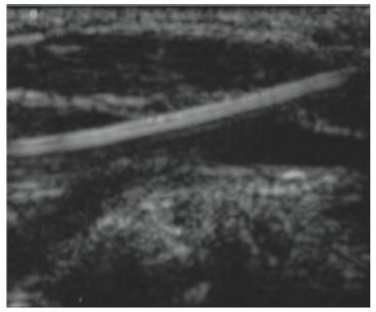
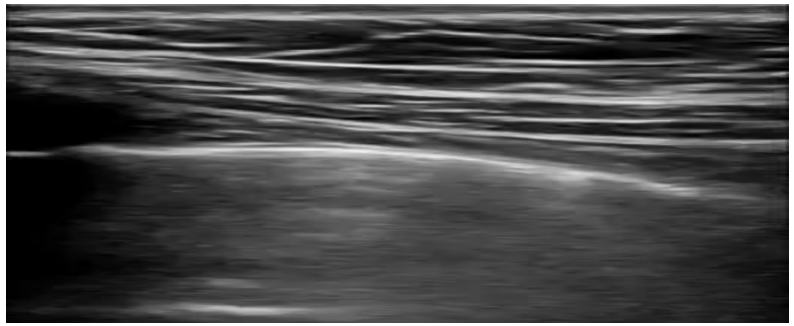
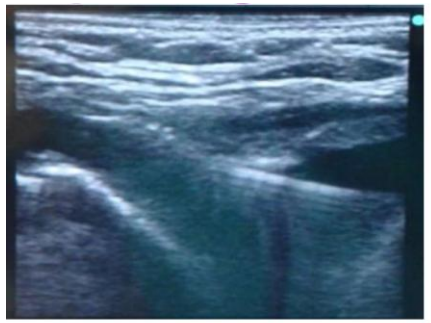
✓ **Tip Navigation…** dove sta andando la punta?

Controllo in tempo reale della direzione che il catetere (o il filo guida) prende mentre viene fatto avanzare nel vaso.

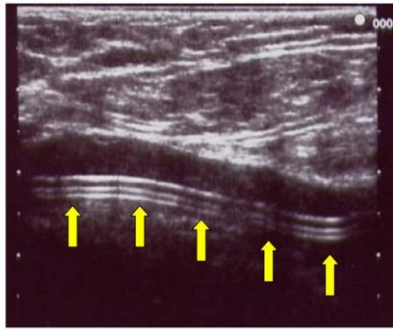


✓ **Pleural scan**





Guidewire



Catheter

Table I. The seven steps of the SIC protocol.

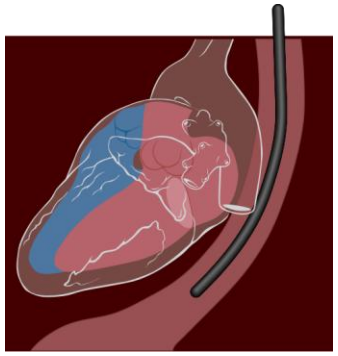
Step 4	*Intra-procedural assessment of tip location*—verification of the central position of the tip by intracavitary ECG and/or by transthoracic echocardiography, using the "bubble test"

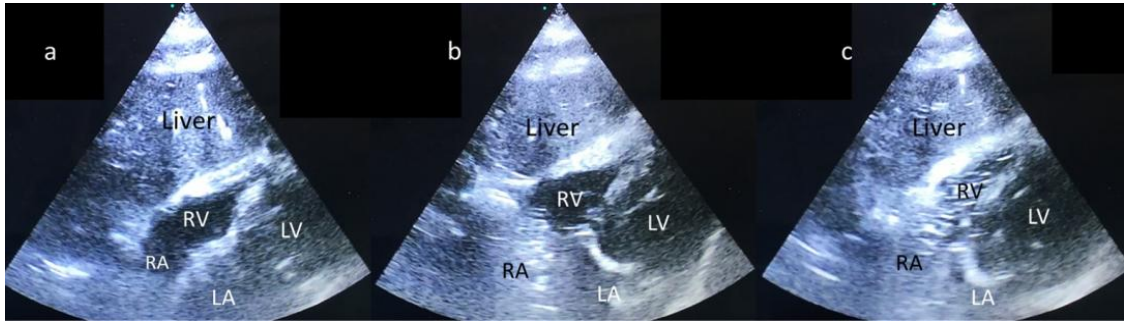
J Vasc Access 2012; 13 (3): 357-365
DOI: 10.5301/JVA.2012.9020

ORIGINAL ARTICLE

The intracavitary ECG method for positioning the tip of central venous catheters: results of an Italian multicenter study

Mauro Pittiruti[1], Daniele Bertollo[2], Ermanno Briglia[3], Massimo Buononato[4], Giuseppe Capozzoli[5], Luigi De Simone[6], Antonio La Greca[1], Cecilia Pelagatti[7], Pier Sandro Sette[8]





Original research article

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SAGE

A modified intracavitary electrocardiographic method for detecting the location of the tip of central venous catheters in atrial fibrillation patients

Maria Calabrese[1], Luca Montini[2], Gabriella Arlotta[1], Antonio La Greca[3], Daniele G Biasucci[2], Francesca Bevilacqua[1], Enrica Antoniucci[1], Andrea Scapigliati[1], Franco Cavaliere[1] and Mauro Pittiruti[3]

Table 1. The seven steps of the SIC protocol.

Step 5	*Adequate protection of the exit site*—reduction of the risk of bleeding and risk of contamination by sealing with cyanoacrylate glue
Step 6	*Proper securement of the catheter*—stabilization of the catheter using skin-adhesive sutureless devices, transparent dressing with integrated securement or subcutaneous anchorage
Step 7	*Appropriate coverage of the exit site*—use of semi-permeable transparent dressing, preferably with high breathability

Protezione

Colla in cianoacrilato: monomeri liquidi che al contatto con i liquidi della pelle polimerizzano mediante reazione esotermica generando una forte adesione

Caratteristica	**NBCA (N-Butil-2-cianoacrilato)**	**OCA (2-Octil cianoacrilato)**
Velocità	Pronta asciugatura	Generalmente rapida
Proprietà Meccaniche	Elevata forza tensile (molto rigido)	Resistenza alla trazione (**molto elastico**)
Resistenza all'Acqua	Evitare contatto per 24 ore	**Contatto possibile immediatamente**
Reazione Biologica	Più citotossico	Meno citotossico, **più adatto alla pelle**
Reazione Termica	Maggiore reazione esotermica (più calore)	Ridotta reazione esotermica (meno calore)

Table 1. The seven steps of the SIC protocol.

Step 5	*Adequate protection of the exit site*—reduction of the risk of bleeding and risk of contamination by sealing with cyanoacrylate glue
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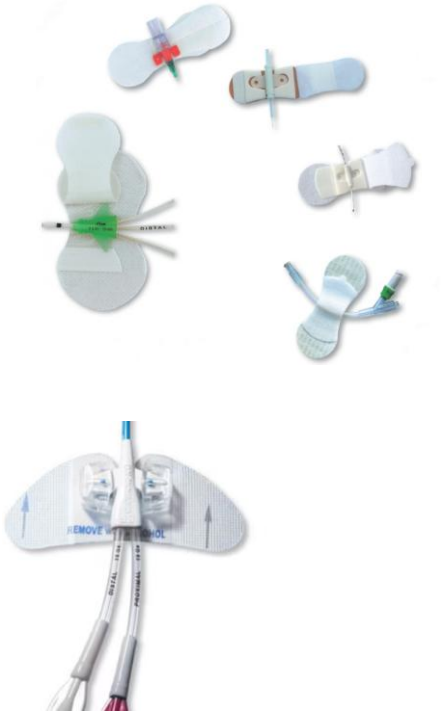
Step 7	*Appropriate coverage of the exit site*—use of semi-permeable transparent dressing, preferably with high breathability

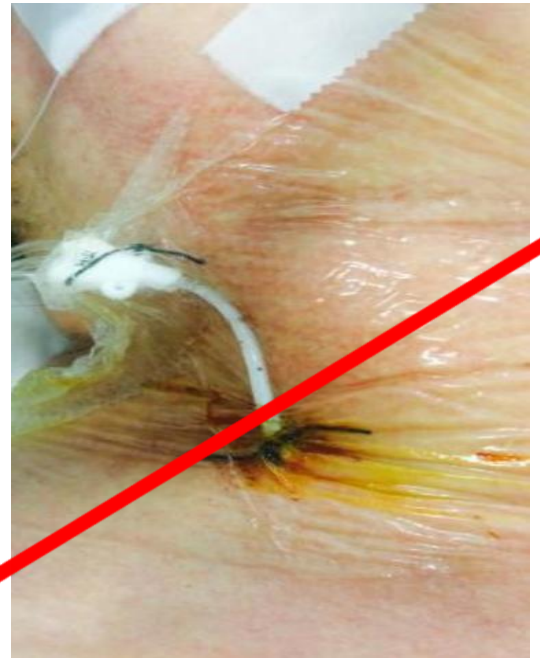
Stabilizzazione

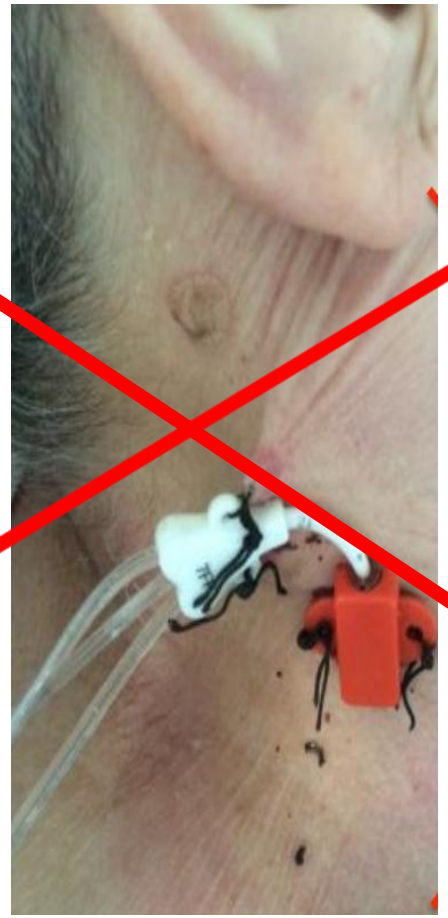
- sistemi ad adesività cutanea
- ancoraggio sottocutaneo



Copertura

- Membrane trasparenti ad alta traspirabilità (elevato MVTR - Tasso di trasmissione del vapore acqueo)





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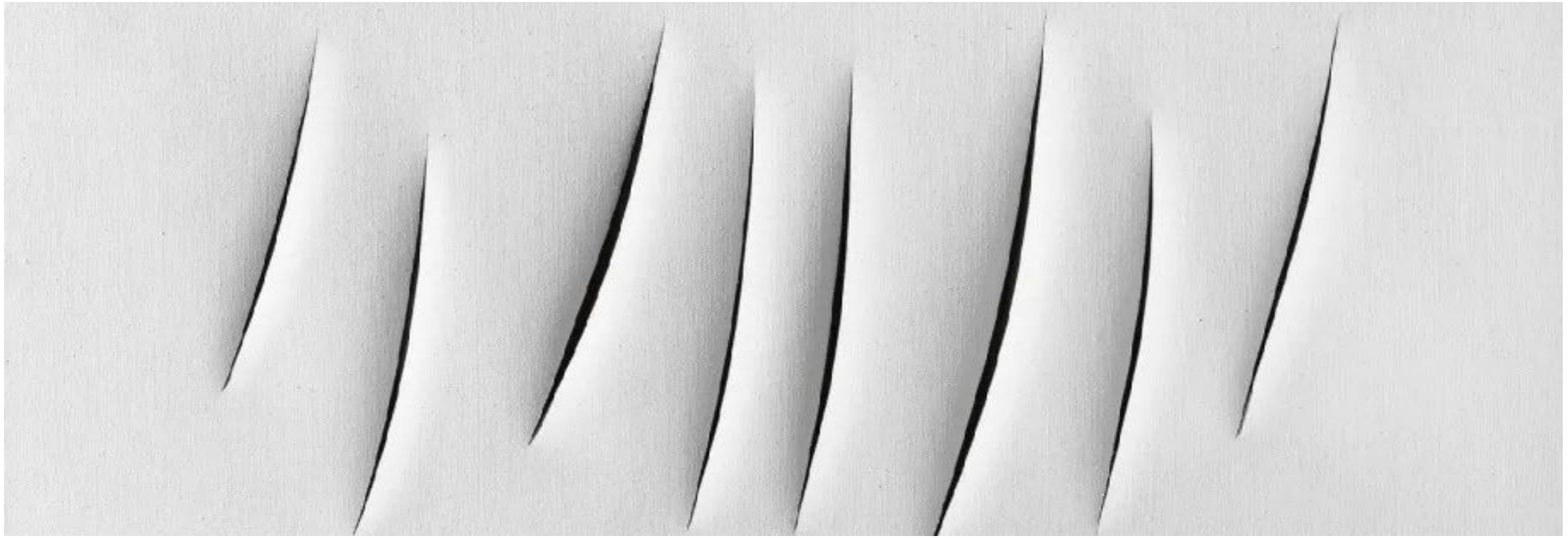

…grazie per l'attenzione!

Andrea Sica
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