Introduction
A stable and adequate venous access device is an integral part of the management of any oncological patient at any stage. In an advanced stage, the venous access device is frequently indicated not only for chemotherapy but also for hydration and supportive therapies (including parenteral nutrition in some cases and repeated blood sampling).

Case report
A 43-year-old woman affected by cancer of the left breast with multiple secondary metastasis (lymph nodes, skin of the thoracic area and of the left infra-clavicular region, bones, pleura, and lung) underwent neoadjuvant chemotherapy + left mastectomy in 2015 and then radiotherapy on the left chest wall + adjuvant chemotherapy in 2016. In 2017, left axillary lymphaeductomy was added, with subsequent lymphedema of left upper limb. Chemotherapy had been performed in 2015 and in 2016 using a totally implantable venous port on the right side (catheter placed via the right internal jugular vein and reservoir placed in the right infra-clavicular area). Eventually, the port was removed in 2019 because of catheter-related blood stream infection.

During this phase of care, the patient required a new reliable central venous access device for additional chemotherapy and for pain management (continuous infusion of high doses of intravenous opioids). The left side was not appropriate, neither for a peripherally inserted central catheter (PICC) (because of the previous axillary lymphadenectomy) nor for a centrally inserted central catheter (CICC) (because of extensive metastases in the skin of the left thorax) (Figure 1).

It was decided to perform an assessment of all veins of the right upper limb, neck, and right thoracic region, to evaluate the possible placement of a PICC or a CICC, using two protocols of systematic ultrasound evaluation:

Preprocedural ultrasound vascular assessment is essential to decision-making

Fabrizio Brescia¹, Fabio Fabiani¹, Eugenio Borsatti², Laura Parisella¹, Laura Roveredo¹ and Mauro Pittiruti³

Abstract
Reliable venous access should be part of the clinical-therapeutic path of all cancer patients. A correct preliminary ultrasound evaluation of the patient’s veins and the choice of the suitable vein are the fundamental requirements to guarantee a stable and long-lasting venous access.

Keywords
Oncology access, techniques and procedures, ultrasound vascular assessment, vascular device, high-quality care

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¹Unit of Anesthesia and Intensive Care Medicine, Vascular Access Team, Centro di Riferimento Oncologico di Aviano (CRO), IRCCS, Aviano, Italy
²Nuclear Medicine Unit, Centro di Riferimento Oncologico di Aviano (CRO), IRCCS, Aviano, Italy
³Department of Surgery, Fondazione Policlinico Universitario “A. Gemelli” IRCCS, Rome, Italy

Corresponding author:
Fabrizio Brescia, Unit of Anesthesia and Intensive Care Medicine and Vascular Access Team, Centro di Riferimento Oncologico di Aviano (CRO), IRCCS, Via Gallini 2, 33081 Aviano, Italy.
Email: fabriziobrescia@gmail.com
RaPeVA (rapid peripheral vein assessment)\(^1\) and RaCeVA (rapid central vein assessment).\(^2\)

An ectasia of the right axillary vein in the axillary region was found: blood flow was very slow but there was no evidence of thrombosis, since the vein was completely compressible under probe pressure (Figure 2). An ectasia of the terminal tract of the right cephalic vein was also detected at its entry into the axillary vein. At the ultrasound evaluation of the neck, it was found that an enlarged lymph node was compressing the internal jugular vein, reducing the caliber of the vein at the level of its union with the subclavian vein.

The patient reported that ectasia of the right axillary vein was congenital and had already been described in the past.

Because of these two anatomical alterations present at the preliminary ultrasound evaluation (ectasia of the axillary vein and compression of the final tract of the internal jugular vein), the placement of either a PICC or a CICC on the right side was considered inappropriate.

Therefore, it was decided to carry out a bilateral systematic ultrasound evaluation of the common femoral vein and the superficial femoral vein at different levels of the lower limb, from the groin to the middle of the thigh, to consider the placement of a femorally inserted central catheter (FICC). The right common femoral and superficial femoral veins were of appropriate caliber and easy to puncture. By ultrasound guidance, we placed 5 Fr polyurethane catheter Lifecath PICC Easy\(^\text{®}\) (Vygon SA, France) into the common femoral vein, using “off label” a catheter marketed as PICC, appropriately trimmed of the desired length. The exit site
was placed in the right abdomen, soon above the iliac crest, after proper tunneling. The catheter was secured with a subcutaneously anchored stabilization device, SecurAcath® (Interrad Medical, Inc., Minnesota, USA) (Figure 3).

The catheter was used for continuous infusion of opioids for chemotherapy; it remained dwelling in place for 128 days, without any complication (no malfunction, no dislodgement, no infection, and no venous thrombosis).

**Discussion and conclusion**

Ensuring adequate care and offering patients the opportunity to receive high-quality care is a crucial moment in clinical oncology. Vascular access cannot be a source of problems but an effective support tool. In this regard, preliminary ultrasound venous evaluation of all possible options is of paramount importance and should be preferably performed using systematic protocols such as RaCeVA, RaPeVA, and a bilateral systematic ultrasound evaluation of the common femoral vein and the superficial femoral vein at different levels of the lower limb, from the groin to the middle of the thigh.

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**ORCID iDs**

Fabrizio Brescia [i] https://orcid.org/0000-0002-6892-474X
Mauro Pittiruti [i] https://orcid.org/0000-0002-2225-7654

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