



Variability in accessing of implantable ports is described relative to research- and manufacturer-recommended needle bevel angle, needle puncture angle, and central puncture position. The extent to which such deviation influences port function deserves focused clinical research” Murray et al (2017).

Abstract:

Aim: Implantable ports are typically inserted by interventional radiologists or surgeons; however, daily maintenance, access, and de-access are often performed by members of nursing staff in accordance with manufacturers’ guidelines and local policy. An audit of port access using retrospective computed tomography (CT) scanning was proposed.

ReTweet if useful... Audit of implantable port needle placement accuracy

[@ivteam #ivteam](https://ctt.ec/uM3Yc+)

Click To Tweet

Methodology: Across a 4-year period, all CT scans performed for any reason while a port was accessed were reviewed.

Results: Fifty-four CT scans of accessed ports were included. Mean depth of tissue between skin and port was 3.74 mm, and between port and pectoralis major was 5.91 mm. Port tilt in side-to-side and up-down axes measured 6.9° and 10.6°, respectively. Mean distance from

needle to center of the septum was 1.96 mm. Mean distance from center of the chamber to the needle tip was 2.73 mm. In 2 cases (3.7%), the needle bevel was malpositioned, with the bevel still within the silicone-rubber septum. Mean angulation of the access needle from perpendicular was 11.5°. Angulation of the needle correlated with port tilt ($r = 0.37$; $P = .006$). Angle of the needle bevel relative to the port exit channel was 140.8°. No significant correlation between needle bevel directionality and needle angle, depth of port, or tilt of port was detected (all P values $> .21$).

Conclusions: Variability in accessing of implantable ports is described relative to research- and manufacturer-recommended needle bevel angle, needle puncture angle, and central puncture position. The extent to which such deviation influences port function deserves focused clinical research.

Reference:

Murray, T.E., O'Neill, D.C. and Lee, M.J. (2017) Accessing Implantable Ports: An Opportunistic Computed Tomography-Based Audit. *The Journal of the Association for Vascular Access*. 22(4), p.193-198.

DOI: <http://dx.doi.org/10.1016/j.java.2017.09.002>

Thank you to our partners for supporting IVTEAM

