Clinical outcomes of 295 PICC-ports implanted in cancer patients: a retrospective cohort study

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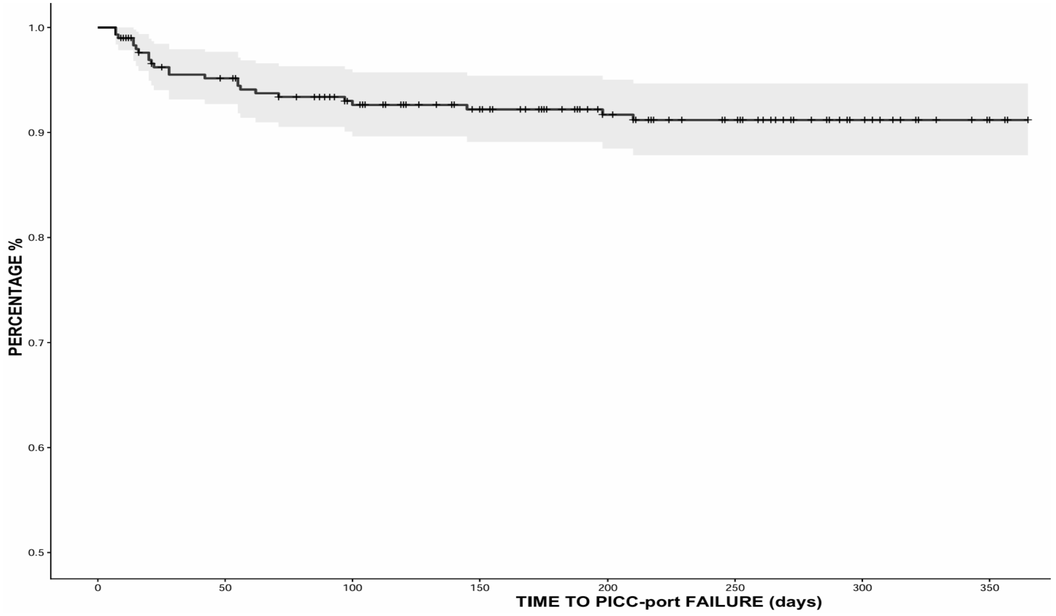
Background: PICC-ports are emerging as an alternative long-term vascular access device in oncology. However, real-world outcome data remain limited. We evaluated device survival and complication rates in a tertiary center using a standardized SIP-Port protocol[1].

Methods: This **r**etrospective observational cohort study **included 295 PICC-ports** implanted in adult cancer patients between November 2023 and October 2025. Devices were inserted **according to the SIP-port protocol**. Demographic characteristics, cancer type, device dwell time, complications, and **device failures** (defined as removals due to device-related complications) were collected. Follow-up was 12 months.

Result: A total of 72,344 catheter-days were recorded. The mean and median device observation times were 245.2 and 280 days, respectively. The cohort consisted of 138 men and 157 women, with a mean age of 64.4 years; 39% had metastatic disease. The most common cancer types were breast (n=83), lung (n=70), and head and neck (n=50). **The incidence density of infection was 0.15 per 1,000 catheter-days, and catheter-related thrombosis (CRT) occurred at a rate of 0.16 per 1,000 catheter-days**. A total of 33 devices (0.33 per 1,000 catheter-days) were removed because of serious adverse events.

Main reported complications included CRT (4.1%), infection (3.7%), reservoir flip (1.7%), catheter occlusion (3.1%), tip malposition (0.7%), and skin complications (1.7%).



Conclusion: PICC-ports inserted by trained vascular access specialists following a standardized protocol demonstrate excellent survival and extremely low complication rates.

[1]Brescia F, et al. A GAVeCeLT bundle for PICC-port insertion: The SIP-Port protocol. J Vasc Access. 2024 Nov;25(6):1713-1720