



# PICC Lines in Patients with Chronic Kidney Disease and Cancer: What Are We Saving the Vein For?

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# Background

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- ❑ Vascular access devices (VADs) are vital in cancer treatment
- ❑ Peripherally inserted central catheter (PICC)
- ❑ not recommended for patients with chronic kidney disease stage 3b or higher or an eGFR that is lower than 45 mL/min

# Objectives

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The study attempts to explore if the competing risk of death or progression to kidney failure among patients with cancer should be considered in evaluating the appropriateness of PICC placement.

# Methods

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- ❑ retrospective study
- ❑ patients with eGFR <60 ml/min 90 to 180 days before and after a PICC placement from 2018 to June
- ❑ Demographics
- ❑ types of cancer
- ❑ outcomes were a proportion of patients who died of cancer vs progressed to renal failure requiring dialysis

# Data results

Characteristic	Number	Percentage
Caucasian	35	63%
Male	40	72%

Stage	Number	Percentage
CKD stage 3	44	80%
CKD stage 4	4	7.3%

Cancer Type	Number	Percentage
Lymphoma	12	
Stem cell transplant	8	
Leukemia	7	
Sarcoma	6	
Genitourinary	5	
Colon	4	

# Data results

Patients were followed 90 to 180 days after PICC insertion

Outcome	Number/Percentage
Died	26 (47.3%)
Cancer surveillance	20 (36.4%)
OSA	3 (5.45%)
Lost to follow-up	6 (10.9)

Four (7.27%) patients in the entire cohort needed acute dialysis for AKI and the PICC lines were not a barrier for non-tunneled dialysis catheter placement. None of the patients progressed to End Stage Renal Disease needed AV fistula placement.

Diagnoses: metastatic lymphoma, colon cancer, and sarcoma.

# Conclusion

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- ❑ PICC line as a VAD might be a feasible option
- ❑ Cancer patients with CKD stage 3 and beyond
- ❑ Risk of end stage renal disease (ESRD) is significantly less than risk of progression of cancer or death

# Implications to Practice

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- Vascular access devices selection
- Guidelines
  - eGFR
  - Other considerations
- Onconeurology
- Action plans
  - decreased eGFR parameter to  $<35$  mL/min
  - Review data two years after process change
  - Review internal data and explore catheter related outcomes for our cancer patients
- Future research



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Thank you

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