

“Vein protection must begin long before dialysis treatment is needed, and therefore, clinicians caring for patients with CKD should consider **when the potential long-term consequences of PICC outweigh their short-term convenience.**”¹

McGill, R.L., et al.

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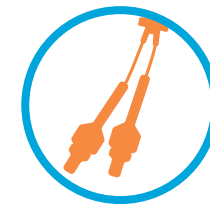
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THE IMPORTANCE OF VEIN PRESERVATION IN PATIENTS WITH CHRONIC KIDNEY DISEASE (CKD)



CKD is Common:

- Approximately 15% of US adults (30 million people) have Chronic Kidney Disease (CKD)²
- However, 48% of people who have severely decreased kidney function do not know that they have CKD²
- There was a 4.6% increase (from \$33.8 billion to \$35.4 billion) in Medicare Fee-for-Service spending on End Stage Renal Disease (ESRD) from 2015 to 2016, which accounts for 7.2% of all Medicare paid claims³



PICCs & Adverse Events in CKD:

- PICC placement can cause vessel injury, stenosis, and thrombosis which can result in loss of future Arteriovenous Fistulas^{1, 4}
- A recent study showed that CKD patients receiving one or more PICC(s) either before or after starting HD had a 15% higher likelihood of death within two years¹
- Patients with CKD who did not receive nephrology care prior to dialysis were more likely to have a PICC placed¹



The Importance of AVFs:

- Arteriovenous Fistulas (AVFs) are the preferred option for vascular access over central venous catheters (CVCs) and grafts¹
- AVFs have a lower risk for adverse events, including infection, major cardiovascular events, and mortality¹
- Failing to transition to an AVF for HD is a predictor for poor outcomes and increased cost of care¹



Groups Recommending Against PICC Placement in CKD:

- National Kidney Foundation⁴
- ESRD National Coordinating Center⁵
- Fistula First⁸
- Choosing Wisely⁷
- American Society of Diagnostic and Interventional Nephrology⁸

Vascular Access Options:

- **Consult with a nephrologist when considering vascular access options** for patients with all levels of CKD to determine what is best for each individual patient and their care goals⁶
- **Small bore central catheters (SBCCs) in the internal jugular vessels are recommended over PICC lines** if central access is needed for patients with CKD who may progress to dialysis because they can be more easily replaced, last longer, and have a lower complication rate⁸
- **Consider placing a peripheral IV** in the dorsum of the hand if venous access is needed for 5 days or less⁵
- **Consult with Nephrology** to see if central medication administration can occur in conjunction with dialysis if the patient is receiving renal replacement therapy⁶



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