



Five-year, Retrospective single-center study



All patients undergoing a primary access placement

## Aim

To analyze transitions in frailty-state among patients undergoing primary dialysis access placement.



## Methods

Between 2018 and 2022, all patients undergoing a primary access placement were analyzed. Frailty was assessed by VQI-derived Risk Analysis Index (VQI-RAI). Frailty was defined as a VQI-RAI score > 35. Transition in frailty state between preoperative and follow-up measurement at one month, and one year were analyzed.

## Outcomes

472 patients (56% female, mean age of 66±13yrs; mean±SD) underwent placement of arteriovenous fistula (AVF, 86%), peritoneal dialysis catheter (PD, 6%), arteriovenous graft (AVG, 4%) and long-term hemodialysis catheter (HC, 3%). 53% were considered frail on initial evaluation.

### Transitions

|                                   | AVF | PD  | AVG | HC  |
|-----------------------------------|-----|-----|-----|-----|
| <b>Preoperative Frailty</b>       | 46% | 45% | 58% | 69% |
| <b>Early Transition (30 days)</b> |     |     |     |     |
| Non Frail to Frail                | 2%  | 6%  | 3%  | 4%  |
| Frail to Non Frail                | 5%  | 2%  | 3%  | 3%  |
| <b>Late Transition (1 year)</b>   |     |     |     |     |
| Non Frail to Frail                | 3%  | 3%  | 7%  | 11% |
| Frail to Non Frail                | 11% | 11% | 3%  | 2%  |
| <b>Frailty at 1 yr</b>            | 41% | 43% | 57% | 69% |

Dialysis patients have a high incidence of frailty prior to initiation of dialysis. Achieving non-catheter-based dialysis access stabilizes and improves frailty at one year compared to catheter-based dialysis. Shifting to a frail state is associated with poorer outcomes and should be considered when evaluating a patient for dialysis access.