

Influence of vascular access type in survival outcomes for incident elderly hemodialysis patients

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INTRODUCTION AND AIMS

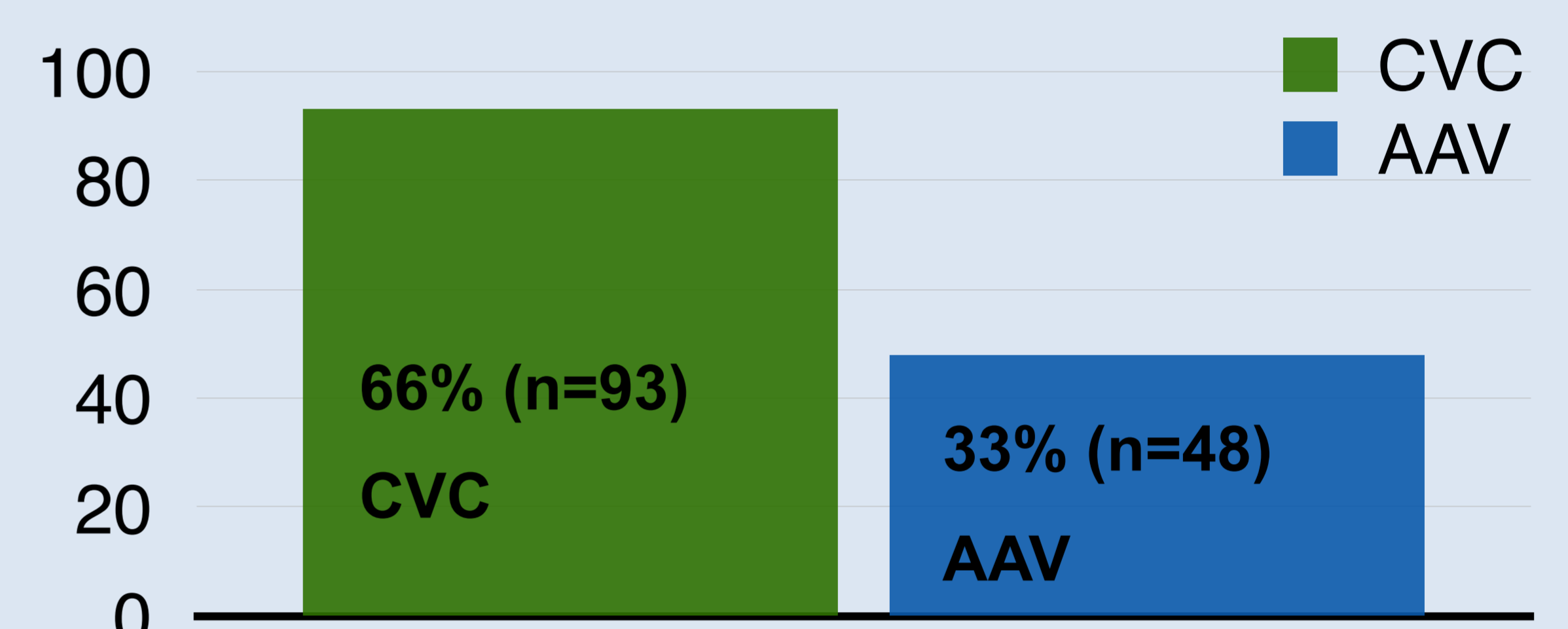
- ✦ Elderly patients are an increasing population entering renal replacement therapy and these patients are more likely to initiate hemodialysis (HD) with a central venous catheter (CVC) than an arteriovenous access (AVA).
- ✦ **AIM:** evaluate the influence of vascular access type in survival outcomes for elderly HD patients.

METHODS AND RESULTS

- ✦ Single-center cohort retrospective study of all incident elderly (≥ 65 years) HD patients between January 1, 2014, and December 31, 2014.
- ✦ Patients who recovered renal function or switched to another renal replacement therapy were excluded
- ✦ Patient comorbidity scored according to the Charlson Comorbidity Index (CCI, low < 8 vs high ≥ 8)
- ✦ Survival outcomes by the end of follow up (December 31, 2016) were analyzed using Kaplan-Meier survival curves and Cox's proportional hazards model

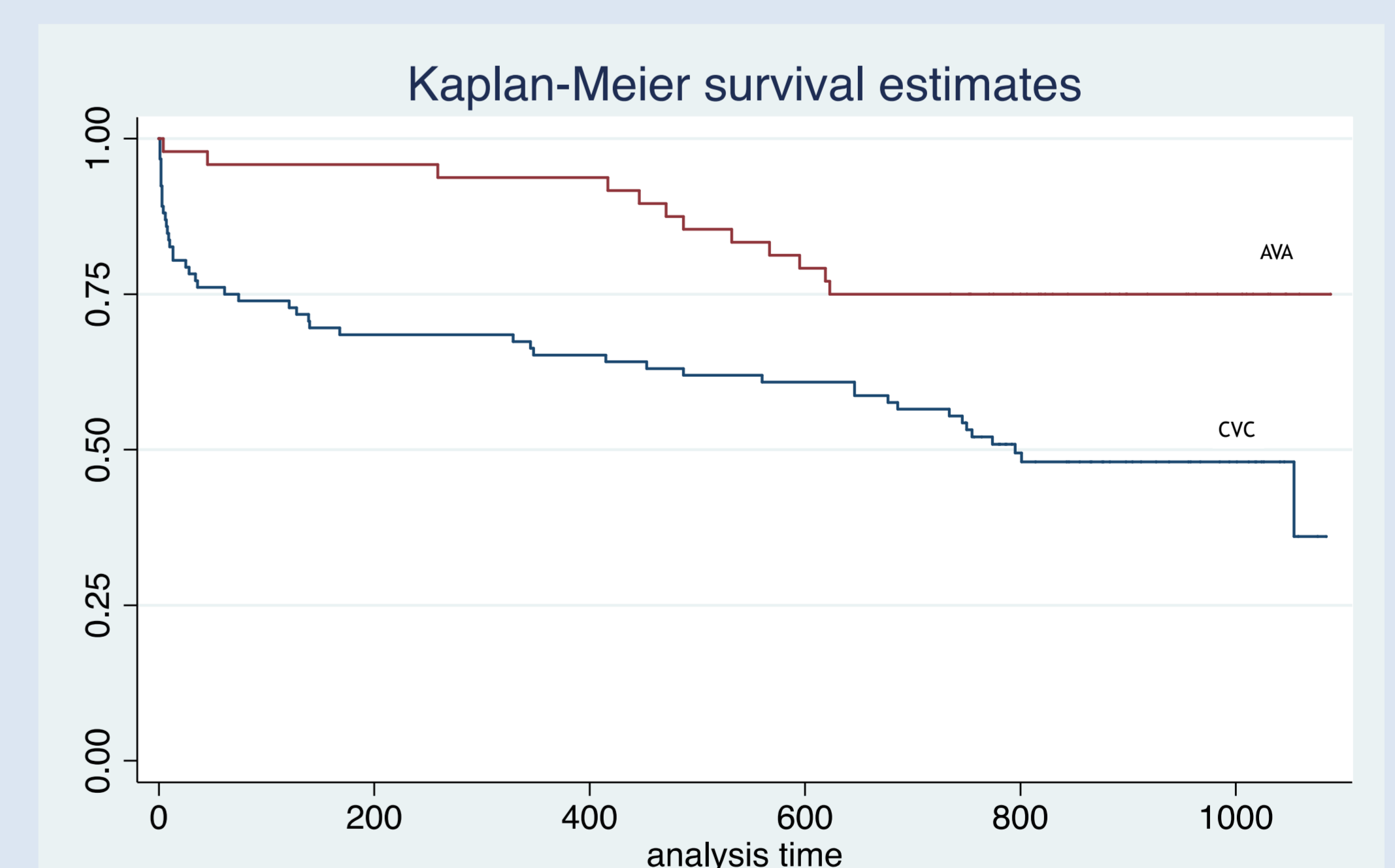
141 PATIENTS

| | |
|-------------------------------|----------------|
| mean age (years) | 77.9 \pm 6.8 |
| male gender (%) | 66,7% |
| caucasian (%) | 97 |
| > 85 years-old (%) | 25 |
| mean score CCI | 7.7 \pm 1.9 |
| CCI score ≥ 8 (%) | 56 |
| started HD as outpatients (%) | 32.6 |



No statistical differences were found in age or CCI between patients who started HD by CVC or AVA

- ✦ Overall mortality was 43% (n=61) and mortality within three months after HD initiation 44% (n=27)
- Score CCI was similar in patients who died comparing to those who survived ($p > 0.05$)
- A **higher mortality** was found in **patients who started HD with CVC** as compared to AVA (80% vs 20%, $p < 0.002$), and mortality risk ratio for AVA was 0.47 (95% IC: 0.3-0.8, $p < 0.0017$)
- A significantly **higher mortality** was also found in **patients who initiate HD as in-patients** ($p < 0.001$)
- ✦ While Kaplan-Meier survival curves show lower mortality for patients who initiate HD with an AVA as compared to CVC (HR 0.4, 95%IC 0.2 – 0.7), our multivariate analyses points to a **overall mortality protection of patients who initiate elective dialysis as outpatients, regardless the vascular access** (HR 0.31; IC 95%: 0.1-0.7, $p = 0.006$).



CONCLUSION

- ✦ While what qualifies as an optimal vascular access in elderly patients remains a controversial discussion topic, we recognize that decision making and planned care of elderly patients is critically important on many levels.
- ✦ **We conclude that patients who start HD as in-patients present higher mortality when compared to outpatients, especially those with CVC.**
- ✦ If confirmed by additional prospective studies, these differences should be considered when planning a vascular access in incident geriatric patients.