

M O N D O: MONitoring Dialysis Outcomes

Global Young Adult Hemodialysis Dialysis Experience: The PICCOLO MONDO Cohort

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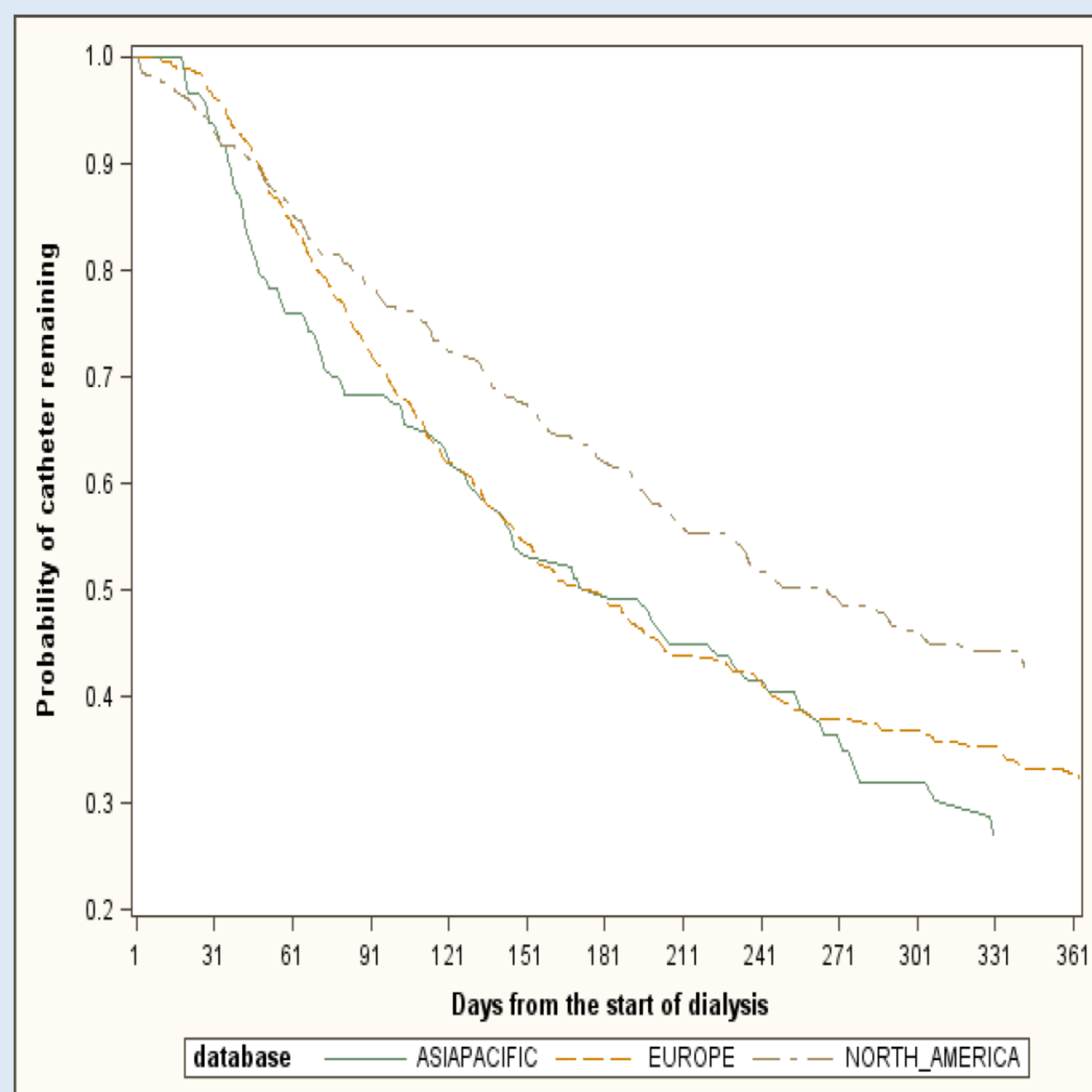
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Background: Young adults on hemodialysis (HD) have unique morbidities. The experience with these patients around the globe needs to be characterized. The global pediatric PICCOLO MONDO (Pediatric Investigation and Collaboration to examine Ongoing Life Outcomes in the MONitoring Dialysis Outcomes) Cohort experience is described.

Methods: The MONDO consortium consists of dialysis facilities from Renal Research Institute in the US; Fresenius Medical Care (FMC) in Europe, Asia Pacific, Latin America; KfH (Germany); Imperial College (London, UK), Hadassah Medical Center (Jerusalem, Israel); and Univ Maastricht (The Netherlands) (Usvyat, *Blood Purif* 2013). Eight dialysis providers agreed to provide de-identified electronic health record data, representing 1,052 units from 26 countries. The PICCOLO MONDO cohort includes patients between 18 to < 30 years of age with treatment information 2000 to 2012.

Conclusions: In this first global cohort of young adult patients, the Asia Pacific units have a greater number of diabetics and the youngest patients at the start of HD. The USA units have the greatest prevalence of catheter use & cardiovascular disease.

Figure 1 Catheter retention in the first year on dialysis (Kaplan-Meier analysis; log rank test, $p < 0.001$)



Results:

We identified 2,876 patients, 371 from the Asia Pacific (62% males, age 25.3 ± 3.4 years); 423 from the USA (52% males, age 25.2 ± 3.4 years); 993 from Latin America (52% males, age 25.2 ± 3.4 years) and 1,039 from Europe (62% males, age 25.2 ± 3.2 years).

For those with known etiology, the most common causes of ESRD were: glomerular diseases, "other", congenital anomalies and diabetes. The Asia-Pacific units had the most patients with diabetes (20%).

Body mass index (kg/m^2) was lowest in the Asia-Pacific (21.3 ± 0.8), followed by South America (22.4 ± 7.7), Europe (22.7 ± 5.7) and the USA (28.1 ± 10.2 ; $p = 0.0001$).

The USA and South America cohorts had the greatest prevalence of hypertension (51% & 30%, respectively) and cardiovascular comorbidities (58%), followed by the European cohort (26 & 18%, respectively). The use of HD catheters was greatest in the Americas (> 75%), followed by Europe (51%) and Asia Pacific (48%).

Retention of catheters as vascular access in the first year on dialysis was highest in the US (**Figure 1**).

