

THE ARTERIOVENOUS GRAFT BETWEEN THE BRACHIAL ARTERY AND VENA COMITANS: A RELIABLE VASCULAR ACCESS IN PATIENTS WITH INADEQUATE SUPERFICIAL VEINS

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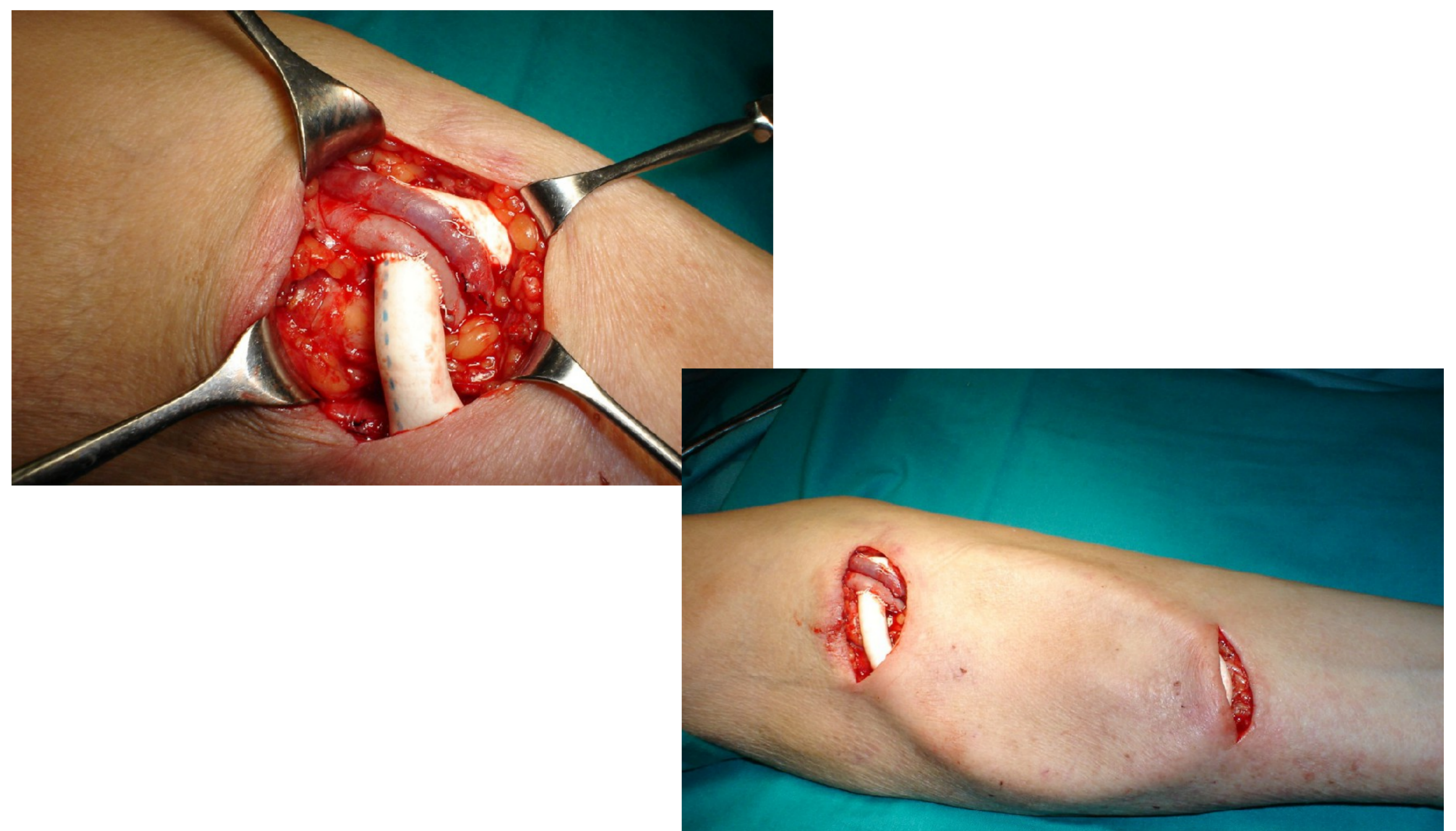


Introduction and aims:

The arteriovenous fistula is regarded as the preferred vascular access, because of longer patency and lower access morbidity. Hemodialysis population is getting older and creating autologous accesses in such comorbid patients may result in poor outcomes and increased use of central venous catheters. In patients with suboptimal superficial veins, a forearm loop arteriovenous graft may be positioned between the brachial artery and vena comitans. This retrospective study aims at analyzing outcomes of PTFE brachial-comitans grafts placed in adult dialysis patients, by nephrologists, at our hospital.

Methods:

After excluding 9 patients (non dialysis initiation or missing information), 102 grafts created in 102 patients, between January 2010 and December 2015, were included in this study. Primary failure, primary patency, secondary patency, complications and interventions were analyzed. Kaplan-Meier method was used in survival analysis. Complications and interventions were expressed as number of events per patient-year (py). Patients were followed-up until 31 October 2016.

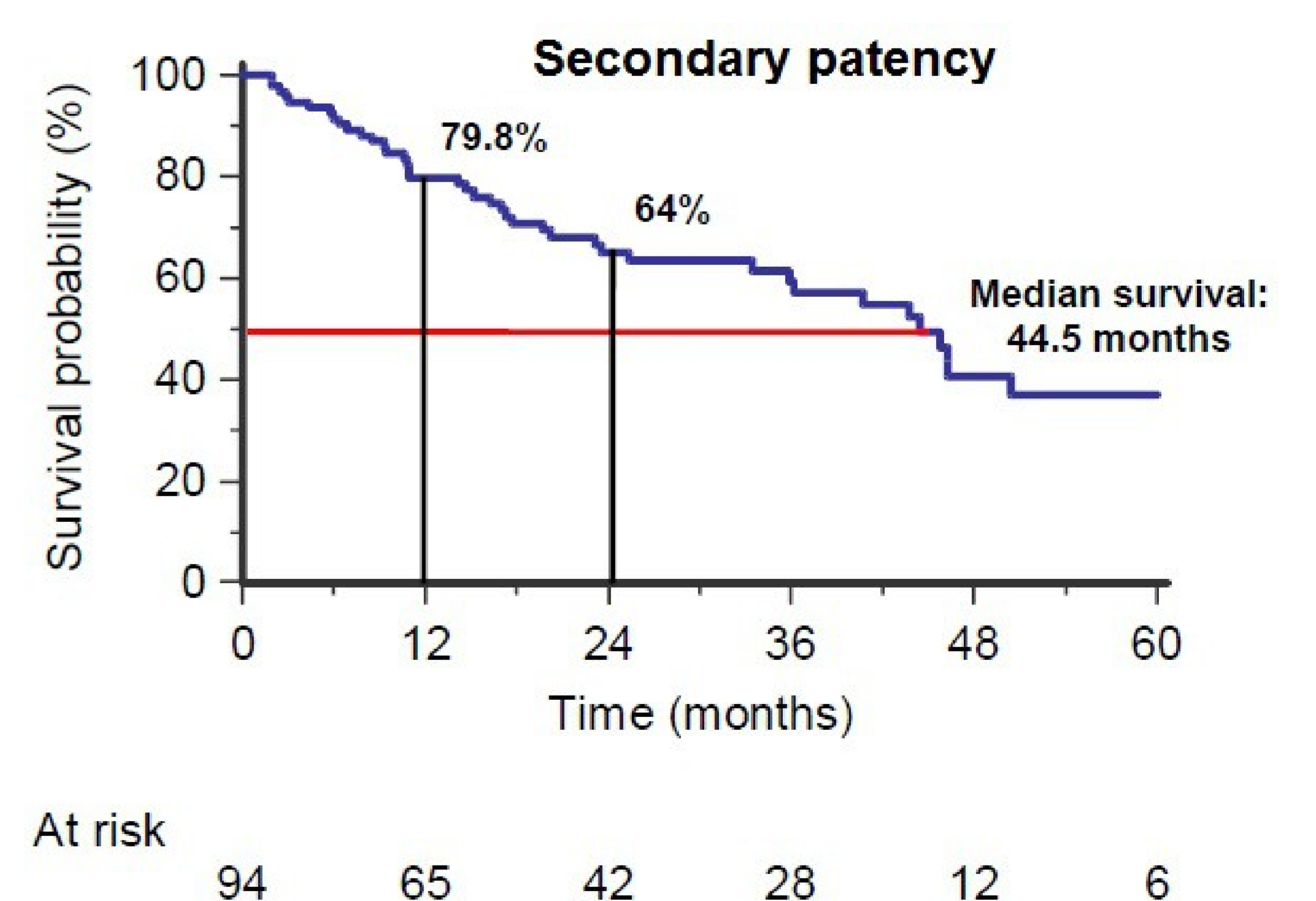
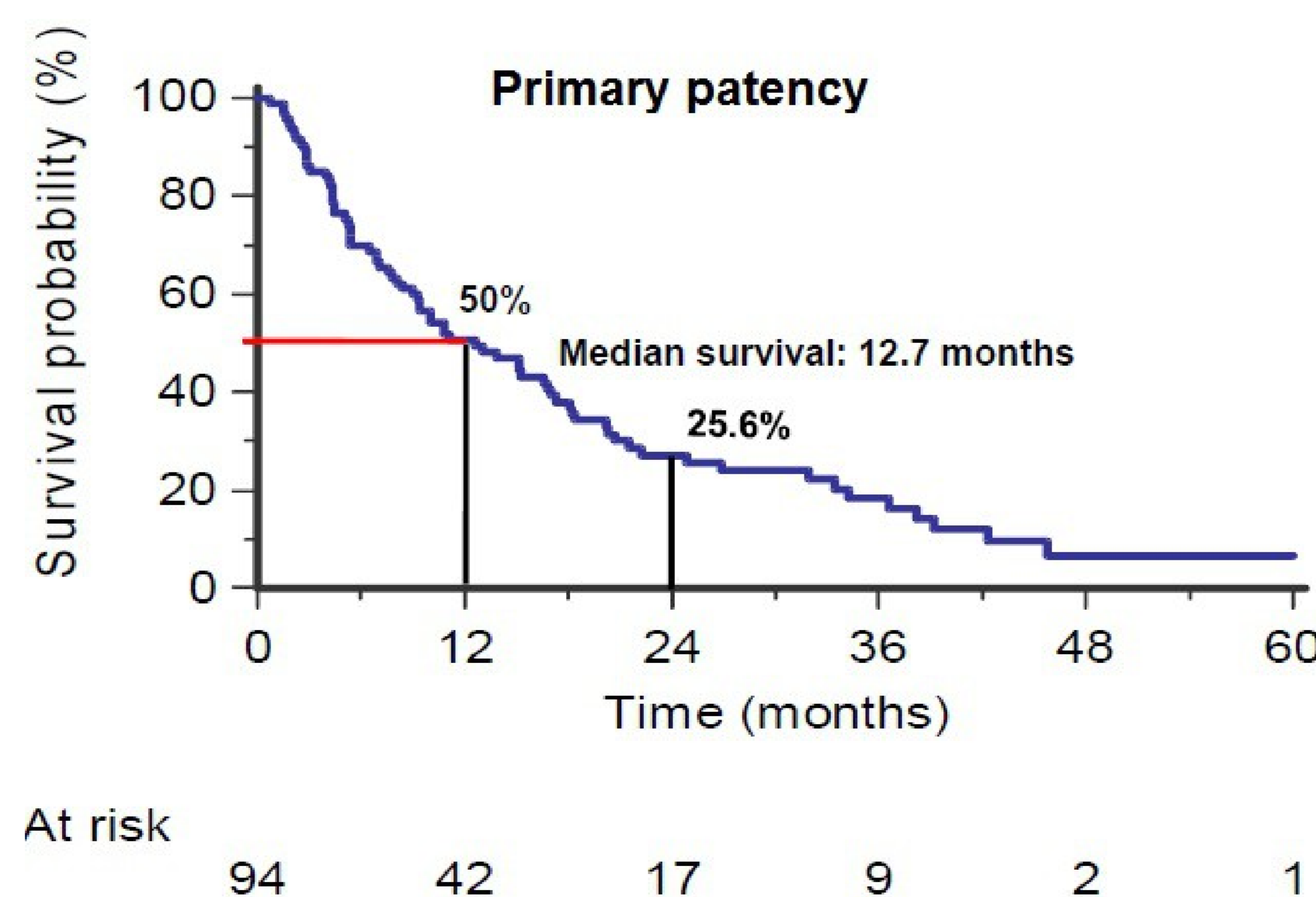


Results:

The mean patients' age was 66.4 ± 12.9 , most of them were elderly and suffering from comorbidities (Table 1). A total of 74 patients (72.5%) had had a previous access: 37 fistulas, 20 catheters and 17 grafts. Rates of primary failure and surgical revisions, before cannulation, was 7.8% and 5.9%. After maturation, the incidence of complications and interventions was 1.050 and 0.639 per py, respectively. The majority of complications and interventions were related to occurrence of either stenosis (0.380 per py) or thrombosis (0.530 per py) and related surgical or radiological interventions (0.348 and 0.146 per py). A minority of patients experienced graft infection (0.040 per py), with only two patients undergoing surgical graft removal. Median access survival, after excluding primary failures, was 12.7 and 44.5 months, for primary and secondary patency, respectively (Figure 1 and 2).

Table 1
Demographics and comorbidities

Age	66.4±12.9
Male	64.7%
Elderly	58.8%
Hypertension	66.7%
Peripheral vascular disease	43.6%
Coronary artery disease	36.5%
Diabetes	32.3%



Conclusions:

This study shows that brachial-comitans grafts have a low incidence of complications, acceptable rate of revisions and considerable survival. In elderly and comorbid patients with suboptimal vessels the use of venae comitantes may be an additional option to delay placement of tunnelled catheters, minimize access-related morbidity and preserve the basilic veins for subsequent accesses.

