

# Daily hemodialysis in France: an alternative for various patients.

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## INTRODUCTION

Daily hemodialysis has been associated with improved surrogate outcomes like reduction of left-ventricular mass and health-related quality of life (1,2) but whether these benefits translate into improved patient survival remains uncertain. The French REIN registry participated to the International Quotidian Dialysis Registry (IQDR). However, international studies often mixed various patients related to different practices across countries. Global results may be difficult to interpret. **The aim of this study was to describe the clinical characteristics of the French patients who were treated once by daily hemodialysis (DHD) according to the location of their care.**

## METHODS

In the French ESRD registry REIN, we identified **436 adult** patients, who received daily hemodialysis  $\geq 5$  times per week in 21 regions. We excluded young patients under 18 years, patients in intensive care receiving more than 10 hours 7 time /week and patients with a follow-up or death in less than 3 months after DHD start. Patients were compared according to the location of their care: in-centre (clinic or hospital setting with permanent medical support), self-care unit (non permanent medical support) and home for clinical characteristics. Mortality rates between groups were compared using Cox proportional hazards regression.

## RESULTS

Overall, 239 (55%) patients received in-centre care, 147 (34%) were treated in self-care units and 50 at home (11%). The median time of each session was 2.5 hours. In-centre patients were older, had more often comorbidities (Table 1). They were less likely on the waiting list for renal transplantation (16% vs. over 40% for the 2 others groups) and less often treated with a native fistula (52% vs. over 96%).

At three years, survival after DHD initiation was 65.2% (CI 57.5-71.2) for in-centre patients, 89.0% (CI 81.7-93.5) for self-care unit patients and 97.8% (CI 85.3-99.7) for home patients (Log-rank  $p < 0.05$ ) (Figure 1). Compared to self-care unit patients, after adjustment on age and congestive heart failure, no more differences persist across groups (HR for in-patients : 1.3, CI : 0.7-23, home patients : 0.5, CI : 0.2-1.4 vs. self-care).

Figure 1. Crude survival according to the location of care after DHD initiation

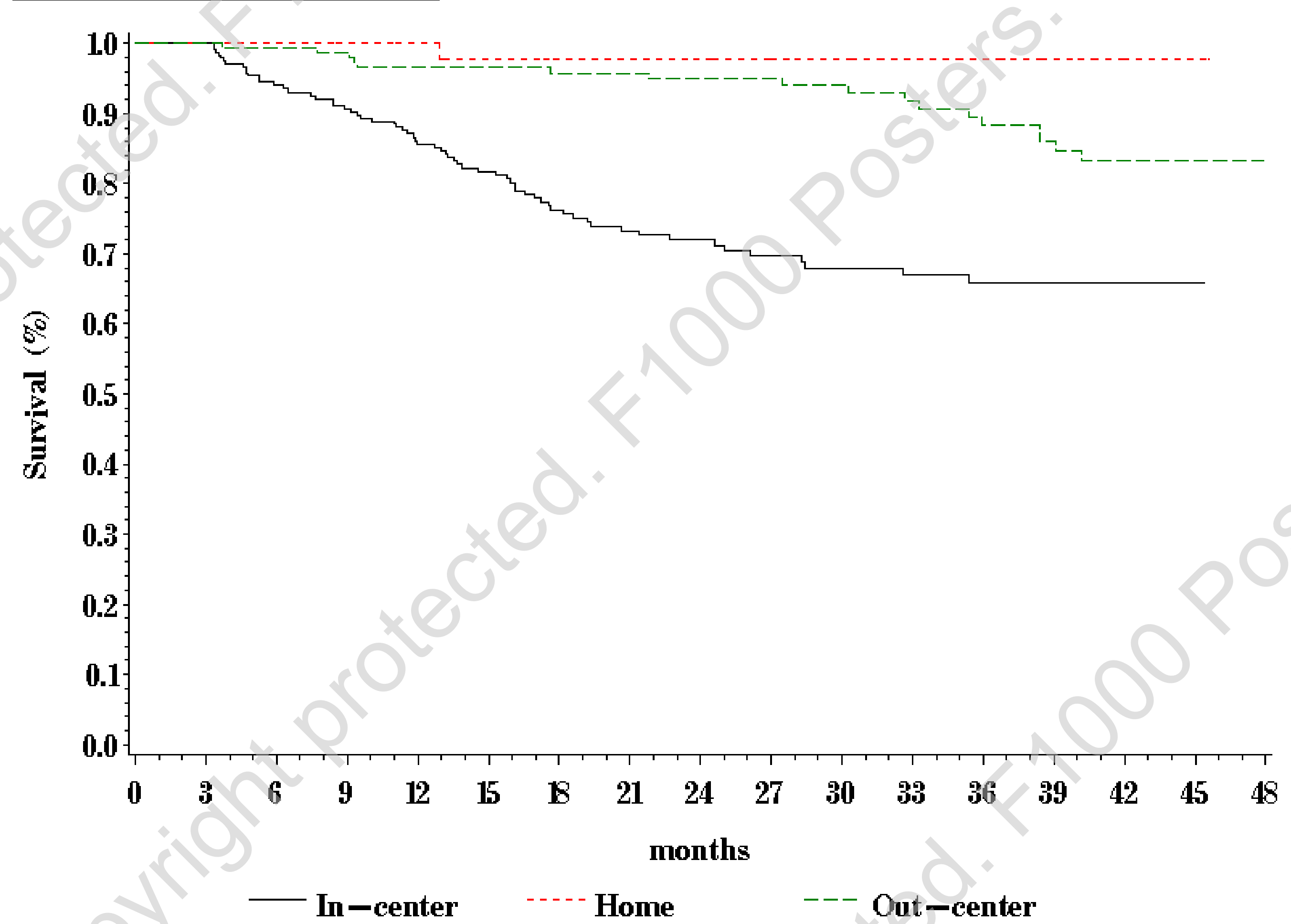
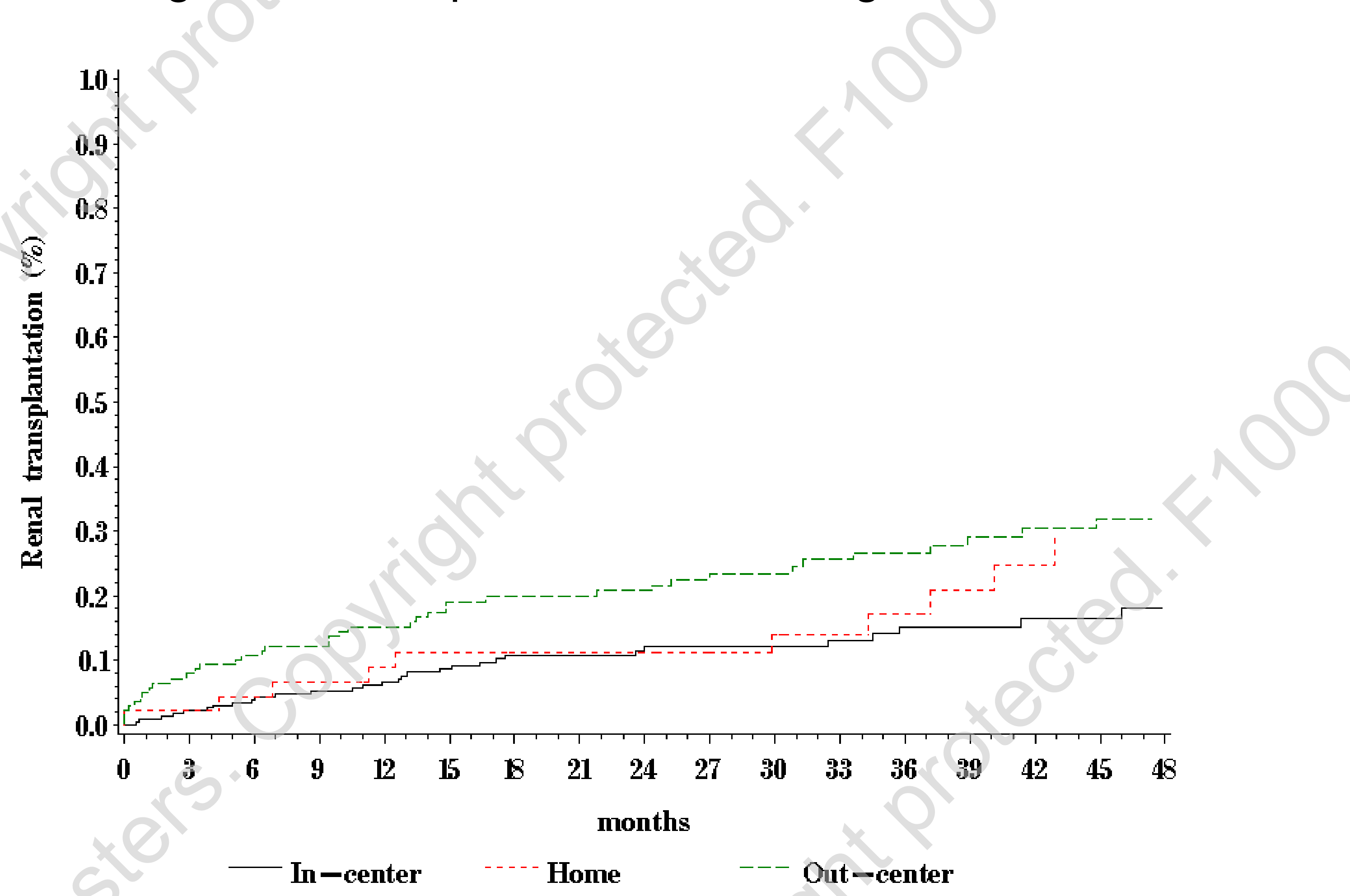


Table 1. Clinical characteristics at DHD initiation

	In centre n=239	Self care unit n=147	Home n=50	p value (between 3 groups)
Age (median)	62,6	46,4	49,6	<.0001
Male (%)	60,7	66,0	82,0	0.0152
Native fistula (%)	52,3	96,0	100	<.0001
Diabetes (%)	33,7	15,5	11,6	0.0002
Congestive heart failure (%)	36,9	18,1	0	<.0001
Ischemic heart disease (%)	32	14,1	16,2	0.0014
Cerebrovascular disease (%)	8,6	6,9	2,3	NS
Chronic respiratory disease (%)	15,5	5,2	9,3	0.0199
Peripheral vascular disease (%)	26,3	17,2	20,9	NS
Reduced mobility (%)	23,8	6,5	0	0.0006
Malignancy (%)	7,5	6,9	7,0	NS

At three years, 15% (CI 10-21) of the in-centre patients, 27% (CI 20-36) of self-care unit patients and 17% (CI 8-33) of home patients were transplanted (Log-rank  $p < 0.05$ ) (Figure 2). This differences didn't persist after adjustment on age. Interestingly, about 1/4 of the patients had a renal graft before DHD initiation.

Figure 2. Transplantation according to the location of care



## Conclusion

Initially, DHD was imagined as a home treatment for “young” patients who didn't tolerate or were inadequately controlled by conventional HD. Then, in-centre DHD was used as an alternative for more serious patients. But DHD may also be used as an alternative for old patients to allow them to have a less aggressive treatment, at their home or in a nursing home. Our study shows that in France, the case-mix of the patients differs accordingly to their location of care, but adjustment on age and comorbidity, the survival is similar.

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2.Suri RS, Nesrallah GE, Mainra R, Garg AX, Lindsay RM, Greene T et al. Daily hemodialysis: A systematic review. Clinical Journal of the American Society of Nephrology 2006; 1:33-42.