

# ARE VINTAGE AND PATIENT MOBILITY BETWEEN CENTERS PREDICTORS OF SURVIVAL IN HEMODIALYSIS PATIENTS? A REPORT FROM THE ROMANIAN RENAL REGISTRY



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Grant information: the present study was financed by European Union using Sectorial Operational Program Human Resources Development (POS DRU) program - POS DRU/159/1.5/S/133377

## BACKGROUND

In the context of the growing number of end stage renal disease (ESRD) patients and private hemodialysis (HD) facilities in our country, center to center transfer is an increasing phenomenon. Also, the population with long HD vintage is growing, which might affect the survival trends of ESRD patients. Therefore, we aimed to investigate the effect on survival of HD vintage and patient mobility between centers.

## METHODS

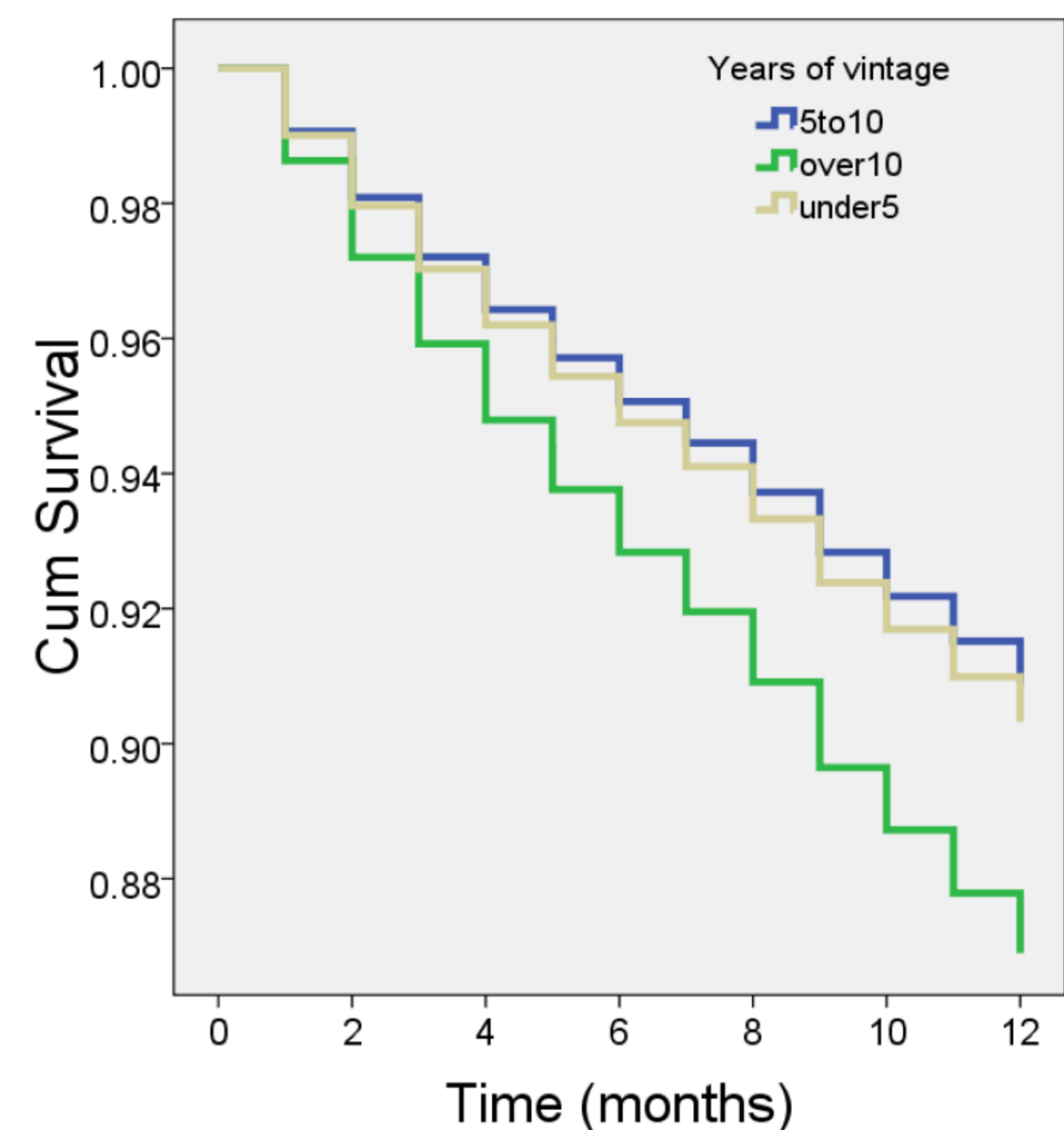
We retrospectively examined the outcome during one year of 8161 prevalent HD patients (56.9 [56.6-57.2] years, 57% male) registered in the Romanian Renal Registry at 31 December 2011. We excluded patients younger than 18 years, those who had recovery of renal function or were lost to follow up during the first 90 days. Patients were segregated by vintage into three categories: <5 years – 5559 patients, 5 to 10 years – 1794 patients, and >10 years – 808 patients. Also, we classified the studied population in two groups by transfer number: ≥2 (1011 patients) and <2 (7150 patients).

## RESULTS

Glomerulonephritis (GN) was the main PRD (25%), followed by diabetic (DN) (10%) and vascular (VN) (7%) nephropathies; 58% were other or unknown (NA). The median dialysis vintage was 3.16 [3.08-3.25] years. Patients of longer vintage (>10 years) were significantly younger (55 [54-56] years vs. 5 to 10 – 57 [56-58] years vs. <5 – 59 [59-60] years;  $p < 0.001$ ), more often of female gender (47% vs. 5 to 10 – 45% vs. <5 – 44%;  $p = 0.003$ ), had GN more frequently (27% vs. 5 to 10 – 20% vs. <5 – 22%;  $p < 0.001$ ) and DN less frequently (7.5% vs. 5 to 10 – 14% vs. <5 – 13%;  $p < 0.001$ ).

There were no differences between the transfer groups regarding the age ( $p = 0.1$ ), gender ( $p = 0.1$ ) and PRD ( $p = 0.06$ ).

In the multivariate CPH model, increased vintage years, DN as PRD were associated with a poorer survival.



HD vintage (years)	Mean survival time
under 5	11.44 [11.39-11.49]
5 to 10	11.45 [11.35-11.54]
over 10	11.14 [10.96-11.31]

### CPH model

	HR (95%CI)	p
Age	1.002 [0.997-1.007]	0.5
Male vs. Female gender	1.068 [0.927-1.229]	0.3
Number of intercenter transfers	0.960 [0.874-1.055]	0.3
HD vintage	1.021 [1.005-1.038]	0.01
PRD vs. Diabetic Nephropathy		
Glomerulonephritis	0.597 [0.468-0.761]	<0.001
NA	0.667 [0.527-0.842]	<0.01
Other	0.682 [0.544-0.856]	<0.01
Vascular nephropathy	0.995 [0.743-1.333]	0.9

## CONCLUSIONS

Dialysis vintage is directly related to survival, since each year on hemodialysis therapy is associated with a 2% increase in relative risk of death. Patient mobility between centers does not seem to influence the outcome, which suggests uniformity in health care between dialysis providers.

