

Introduction

- Nutritional status is a key factor for patient survival and malnutrition is a major risk factor for mortality and inflammation in hemodialysis (HD) patients.

Methods

- We conducted an observational prospective study in 149 prevalent Portuguese HD patients.
- Follow-up time was 12 months.
- We obtained baseline demographic data, blood biochemistry, comorbidities, and prevalence of malnutrition by mini-nutritional assessment (MNA) and patient-generated subjective global assessment (PG-SGA).
- Risk of mortality was investigated and adjusted for comorbidities, age, and time on HD using log-rank test and Cox proportional modeling.

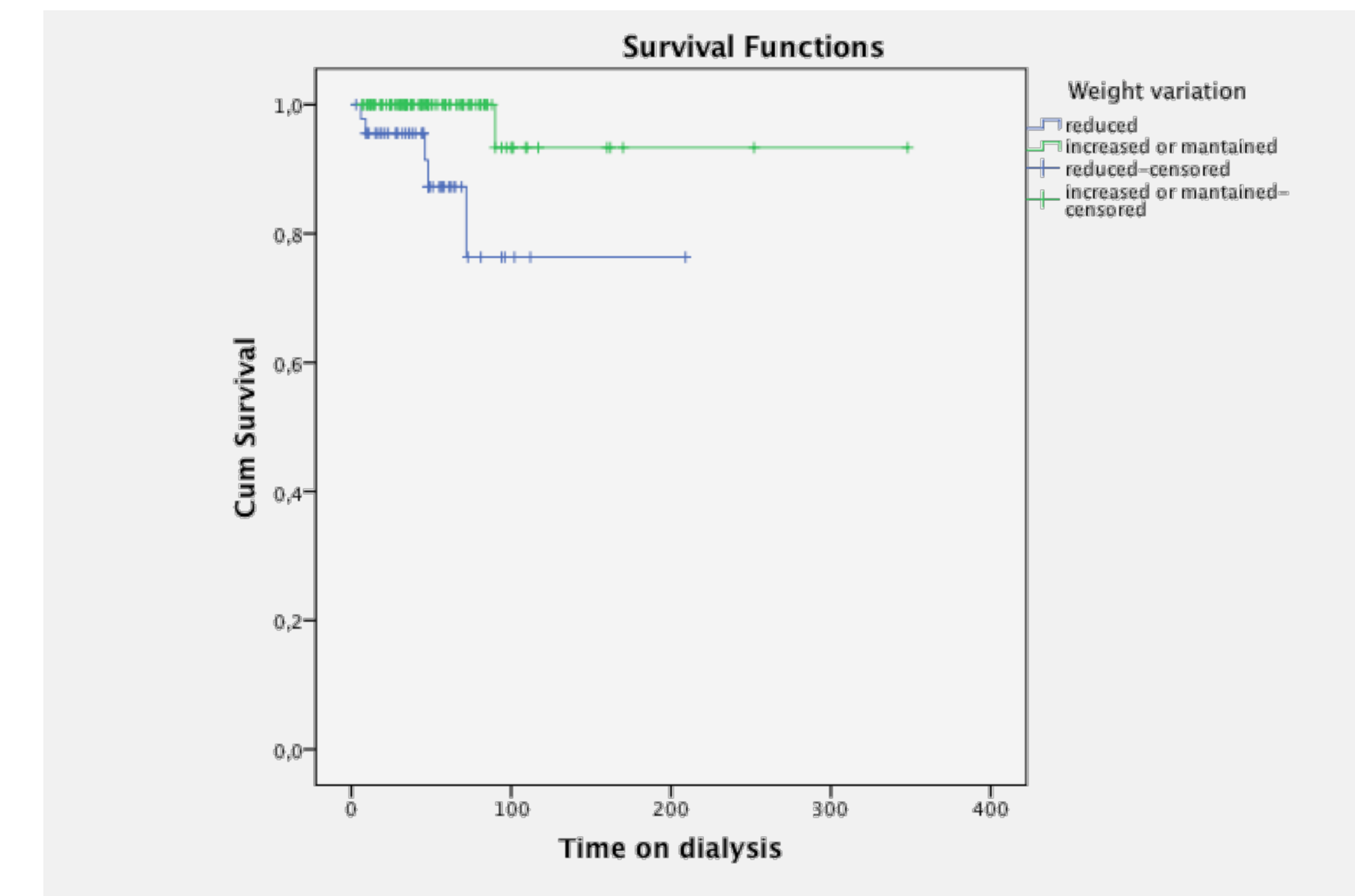
Results

Table 1. Patient Demographic Information

Variable	
Gender	
Male, n = 93	61,6%
Female, n = 58	38,4%
Age (years, mean ± standard deviation)	67,07 ± 13,48
Diabetes mellitus, n = 59	39,1%
Comorbidity Charlson Score (mean ± standard deviation)	4.4 ± 2.3
Body mass index (kg/m ²)	27 ± 4.5
Average time on HD (months, mean ± standard deviation)	54,5 ± 44,9

- During the follow-up period, 6 patients died of cardiovascular events (4 of these patients had diabetes mellitus).
- According to MNA and PG-SGA: 59% and 71% of our patients were well nourished; 31% of the patients lost at least 5% of their weight.
- PG-SGA in patients with unintentional weight loss was 3.8 ± 4 VS patients who maintained or increased weight 2.4 ± 2.1 (p=0.05).
- In a Kaplan Meier test, patients with weight loss had a lower survival: 172 vs 331 months; log rank 8.9; p=0.003 (Figure 1)

Figure 1. Kaplan Meier Survival Analysis



Abbreviations: Cum, cumulative

Table 2. Association Between Albumin and Comorbidity Charlson Score

	Exp (B)	IC (95%)	p
Albumin	-2,13	-3,24-(-1,03)	<0,001
Diabetes mellitus	2,88	2,15-3,53	<0,001

Abbreviations: IC, interval confidence

- Hypoalbuminaemia was associated with higher mortality (binary regression: Exp[B] 0.025; p=0.001; IC 95% 0.003 to 0.2), adjusted for time on HD.
- In a linear regression, lower serum albumin and diabetes mellitus were associated with Comorbidity Charlson score, adjusted for time on HD, age, and diabetes mellitus.

Table 3. Association Between Unintentional Weight Loss and Mortality

	HR	IC (95%)	p
Unintentional weight loss	10,4	1,19-91,31	0,034

Abbreviations: HR, hazard ratio; IC, interval confidence

- In a Cox hazards model, unintentional weight loss was an independent predictor of mortality, adjusted for age and diabetes mellitus.
- Basal MNA and PG-SGA were not predictive of death, but PG-SGA was an independent predictor of unintentional weight loss (Exp[B]0.86; p=0.023; IC 95% 0.8-0.98).

Conclusions

- Unintentional weight loss in patients on HD was an independent predictor of mortality.
- Basal nutrition screening and close monitoring of weight evolution can be a tool for classification of risk and for prioritizing patient care.

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