

THE IMPACT OF FIM SCORE IN THE SHORT TERM MORTALITY OF HEMODIALYSIS PATIENTS

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BACKGROUND

Decreased activity of daily living (ADL) has been associated with mortality in general population.

Hemodialysis (HD) Patients

- Decreased ADL seems to be more common than general population.
- The correlation between ADL and mortality should be noted, however it has not been addressed.

OBJECTIVES

HD Patients

- The level of ADL: "Low in HD patients?"
- ◆ Using functional independence measure (FIM) score as the major surrogate markers of ADL.
- The association between ADL and mortality: "Is ADL related with all-cause mortality in HD patients?"

METHODS

Study design:

- Prospective cohort study for 2 years (no censored cases).
- Mean follow-up period: 285 ± 220 days.

Subjects:

- HD patients (N = 107).
- 68 men and 39 women.
- Mean age: 72 ± 9 years.
- HD vintage: 7.4 ± 7.2 years.
- The underlying diseases
 - 54 diabetic nephropathy (50.4%)
 - 18 chronic glomerulonephritis (16.8%)
 - 10 nephrosclerosis (9.3%)
 - 3 polycystic kidney disease (2.8%)
 - 22 others (20.5%).

Statistics:

- Kaplan-Meier analysis: cumulative survival rate.
- The Cox proportional hazards regression model, adjusted for age, gender, albumin, and C-reactive protein.

RESULTS

Table 1. Baseline characteristics

	No. of patients	N = 107
Hb, g/dL	10.4 ± 1.5	
Alb, g/dL	3.1 ± 0.6	
UN, mg/dL	46.3 ± 2.1	
Ca, mg/dL	8.7 ± 0.8	
P, mg/dL	4.7 ± 1.7	
Whole PTH, pg/mL	114.7 ± 93.1	
β2MG, mg/L	23.5 ± 21.5	
hsCRP, mg/dL	4.1 ± 6.7	
GA, %	21.3 ± 6.5	
hANP, pg/mL	106.9 ± 110.3	
CTR, %	55.4 ± 7.3	

Table 2. Details of FIM score in HD patients

Large item	Middle item	Small item	mean ± SD	
Self-care		Eating	5.0 ± 2.5	
		Grooming	3.1 ± 2.4	
		Bathing	1.2 ± 0.9	
		Dressing, Upper Body	1.4 ± 0.7	
		Dressing, Lower Body	1.4 ± 0.7	
		Toileting	3.0 ± 2.5	
Motor items	Sphincter Control	Bladder Management	4.9 ± 2.6	
		Bowel Management	3.9 ± 2.6	
	Transfer	Transfers: Bed, Chair, Wheelchair	3.4 ± 2.3	
		Transfers: Toilet	3.1 ± 2.3	
		Transfers: Tub or Shower	1.1 ± 0.8	
	Locomotion	Ambulation, Wheelchair	2.0 ± 1.9	
Stairs		1.0 ± 0.4		
Cognitive items	Communication	Comprehension	5.4 ± 2.0	
		Expression	5.3 ± 2.1	
	Social Cognition	Social Interaction	4.8 ± 2.4	
		Problem solving	4.9 ± 2.3	
			Memory	5.1 ± 2.3

Figure 1. FIM score in HD patients and healthy subjects

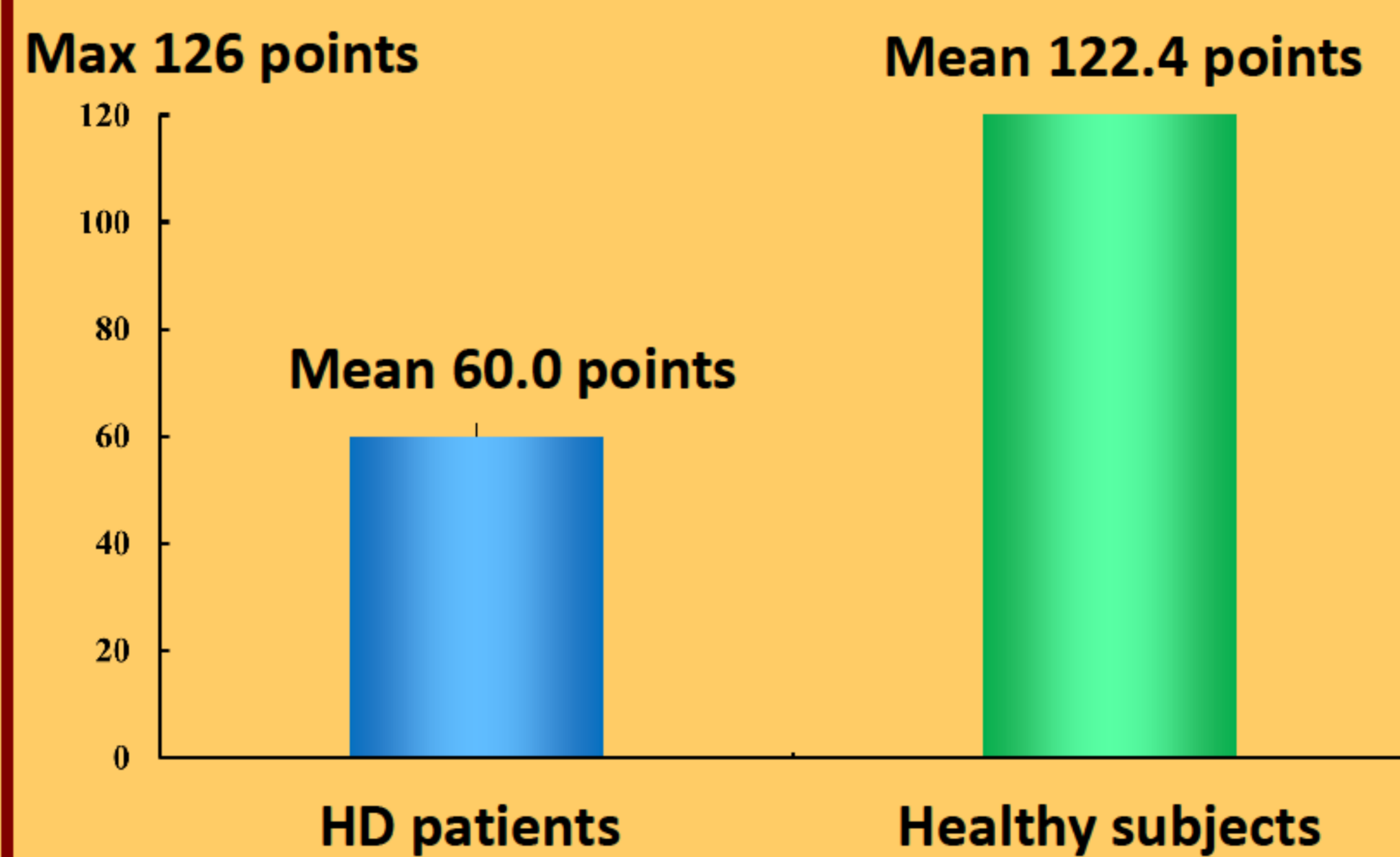


Figure 2. Motor and cognitive items of FIM score

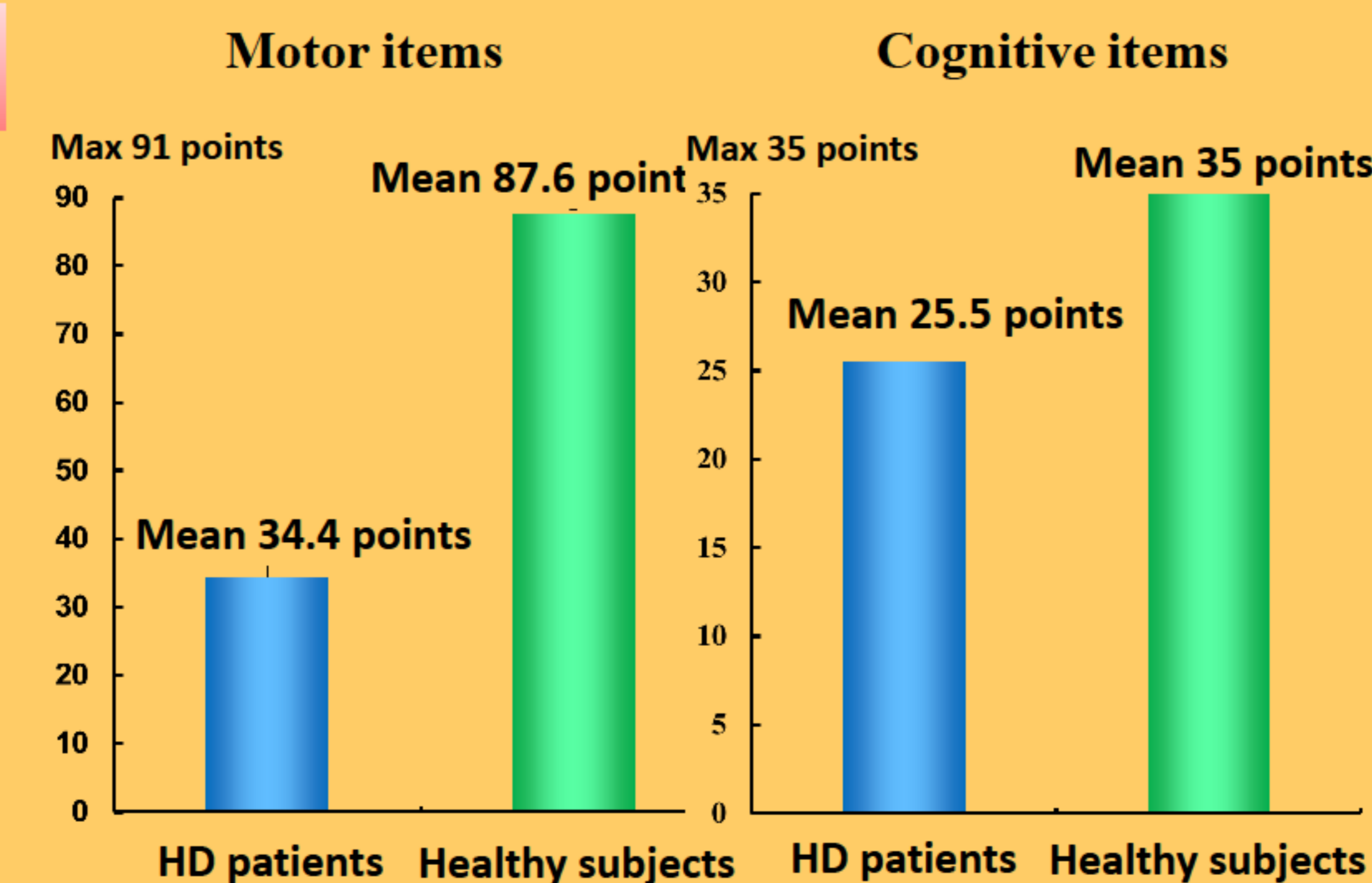
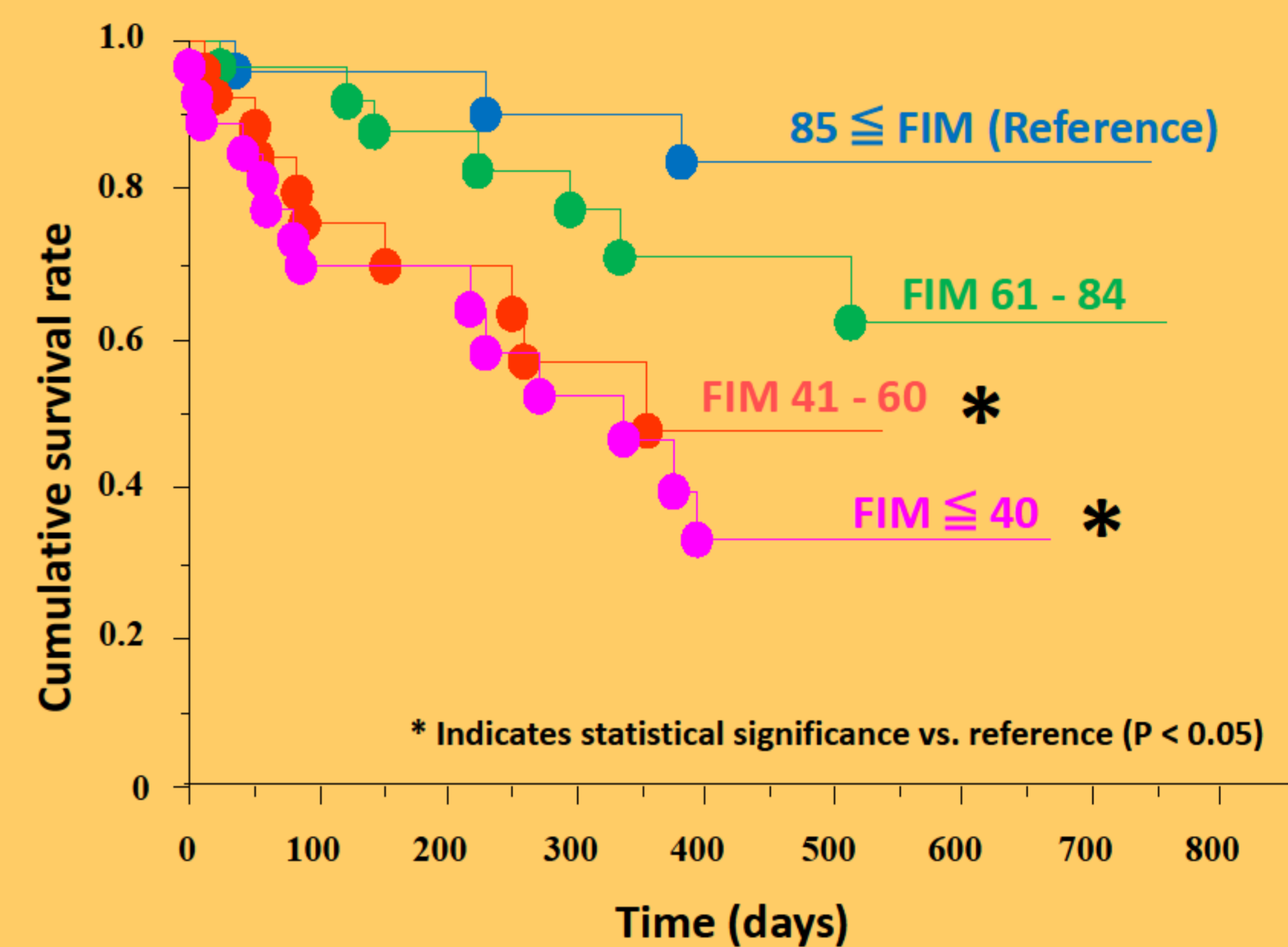
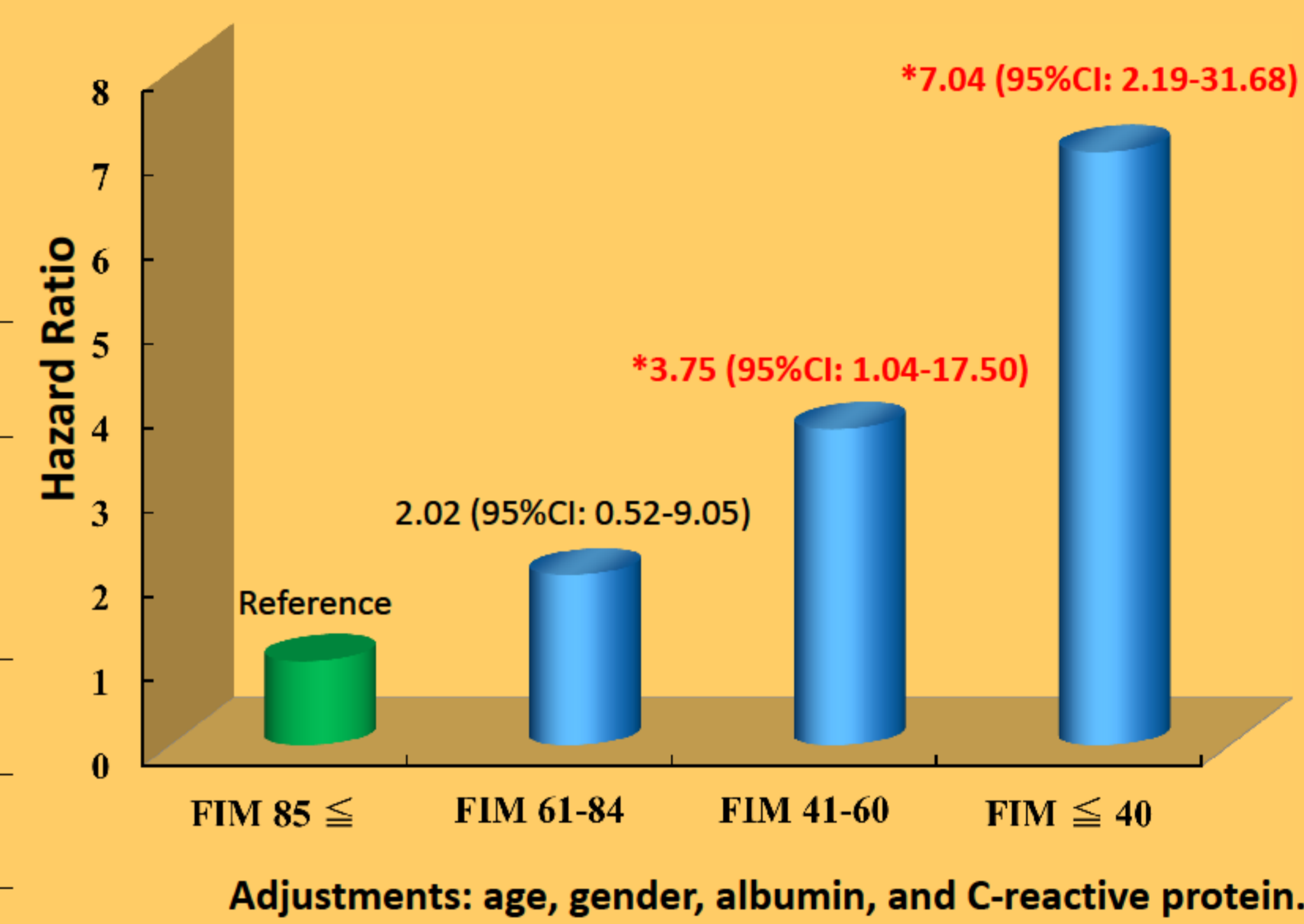


Figure 3. 2-year survival curves stratified into 4 groups using the interquartile range value of FIM score



Cumulative mortality rate was significantly higher in FIM score 60 > groups compared to the reference ones.

Figure 4. Cox proportional hazards regression model



SUMMARIES

- The FIM score was decreased by half in HD patients, especially in motor items.
- FIM score was a novel predictive marker for 2-year mortality in HD patients.

CONCLUSION

Comprehensive strategies which could increase ADL in HD patients are required.

Details of FIM score

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