

Nutritional Competence in Chronic Dialysis Patients Prior to Death

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Introduction

- Nutritional status is a strong predictor of outcomes in hemodialysis (HD) patients and warrants monitoring in this vulnerable population as per Thijssen et al. [CJASN 2015]. We have recently reported an aggregate nutritional score comprising 5 readily available nutritional parameters, and have described its relationship to intercurrent events (HD initiation and hospitalization). The aim of this study was to explore the trajectories of this score prior to death in HD patients from different geographical regions.

Methods

- We conducted a retrospective cohort study on a subset of data from the international MONItoring Dialysis Outcomes (MONDO) initiative.
- HD patients treated in Europe, Asia, and North America who died between 01/01/2006 and 12/31/2010 were included.
- The nutritional score was calculated monthly for 12 months preceding death (subject to data availability), using the monthly averages of serum albumin, creatinine, phosphate, enPCR, and IDWG as per Thijssen et al. [CJASN 2015], and expressed as a percentile value.
- Trajectories of the nutritional score before death were examined by construction of a penalized B-spline function.

Results

- We included data from 2,210 HD patients (Asia Pacific 122, Europe 511, and North America 1,577). The nutritional score showed a marked decline over the 12 months before death [Fig. 1A]. Analysis by continent revealed materially identical trends in all three regions [Fig. 1B].

Figure 1A Mean nutritional score percentile over 12 months before death in patients from all regions.

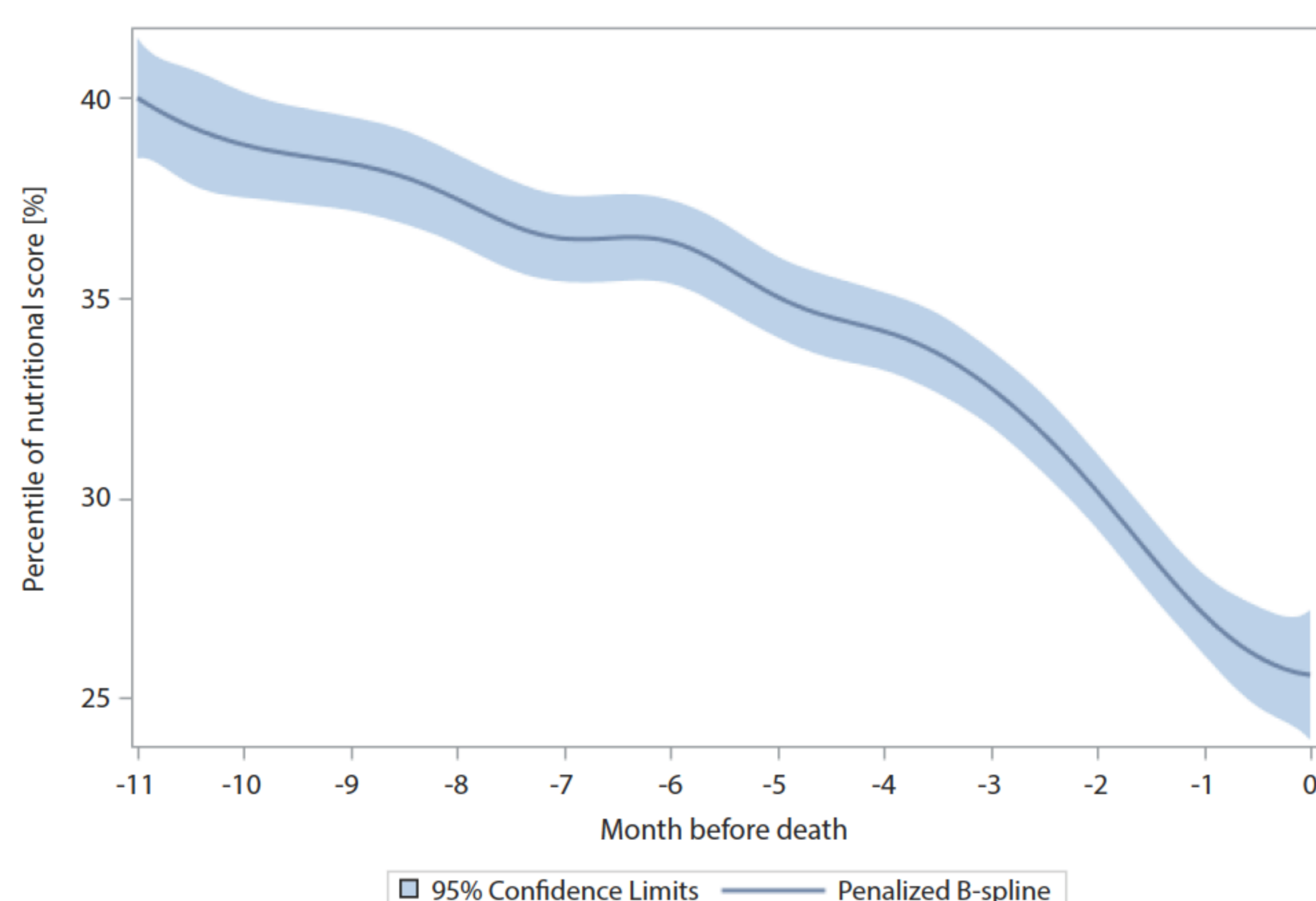
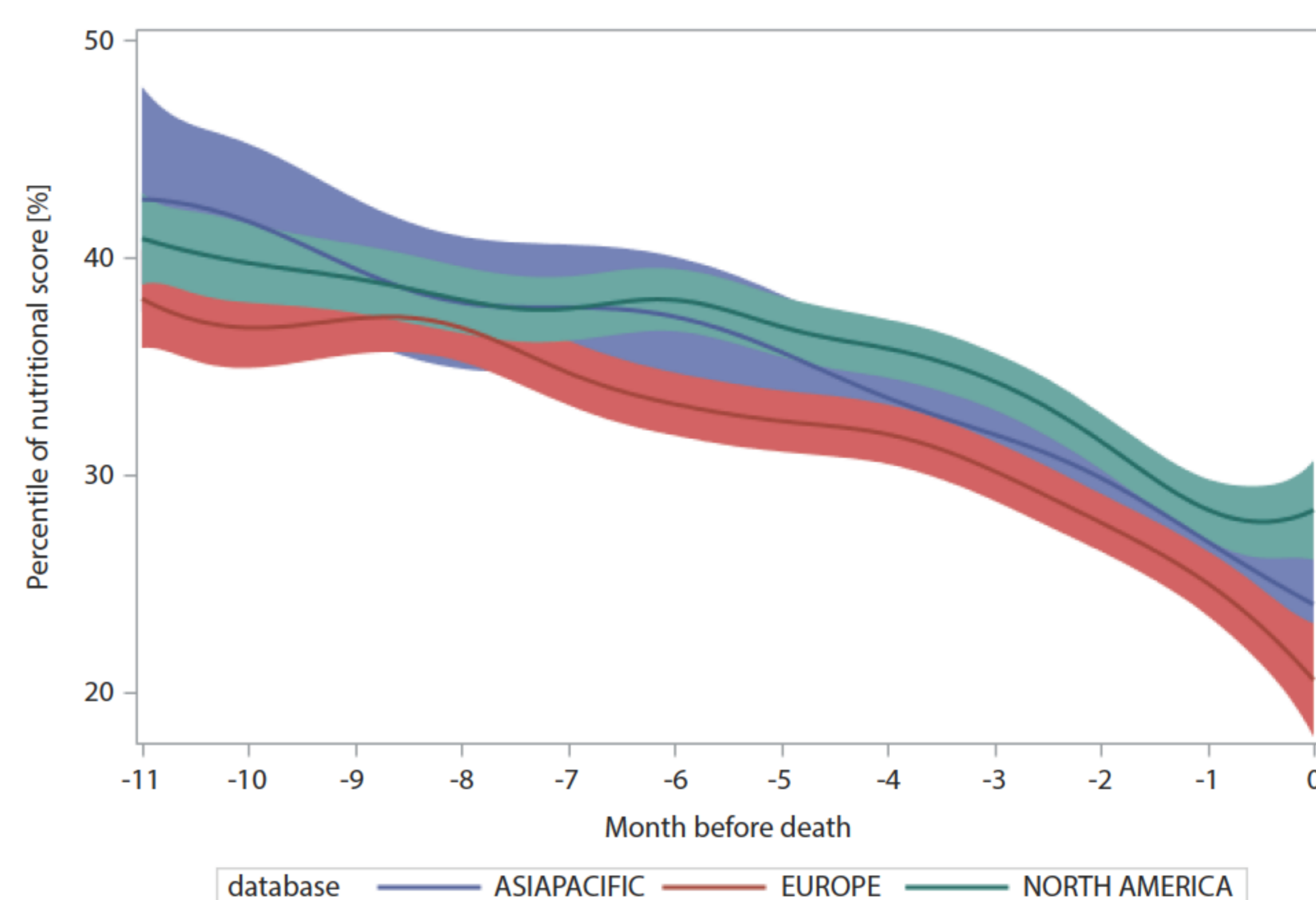


Figure 1B Mean nutritional score percentile over 12 months before death, broken down by geographical region.



Conclusions

- The observed decline in nutritional status before death (as captured by the 5 domains in this nutritional score) is in line with previous findings that several key clinical and laboratory parameters change characteristically over several weeks to months before death in HD patients.
- Similar trajectories across regions suggest that fundamental biological processes rather than demographics or practice patterns are driving these changes.
- These insights may be useful for identifying patients at increased risk of death and, in the case of the nutritional domain, possibly for allocation of nutritional interventions. Utility for these applications has to be demonstrated in subsequent trials.



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