Malnutrition in haemodialysis patients assessed by Body Composition Monitor

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OBJECTIVES

Malnutrition is a known predictor of mortality in the haemodialysis population. Body Composition Monitoring (BCM) is used mainly for assessing overhydratation in haemodialysis patients, but it also offers the possibility of evaluating nutrition status. This study explored whether malnutrition diagnosed by BCM predicts mortality in prevalent haemodialysis patients. In addition, the effects of enteral nutrition supplementation were evaluated as well.

METHODS

- 960 chronic haemodialysis participants
- baseline BCM measurement in years 2008-2013
- observation period was up to 54 months
- data were retrieved from medical records
- nutrition status estimated by BCM
- malnutrition: Lean Tissue Index (LTI) <10% of the normal value
- Cox regression to analyse predictors of mortality

RESULTS

Survival in patients without nutrition supplementation (p=0.029)
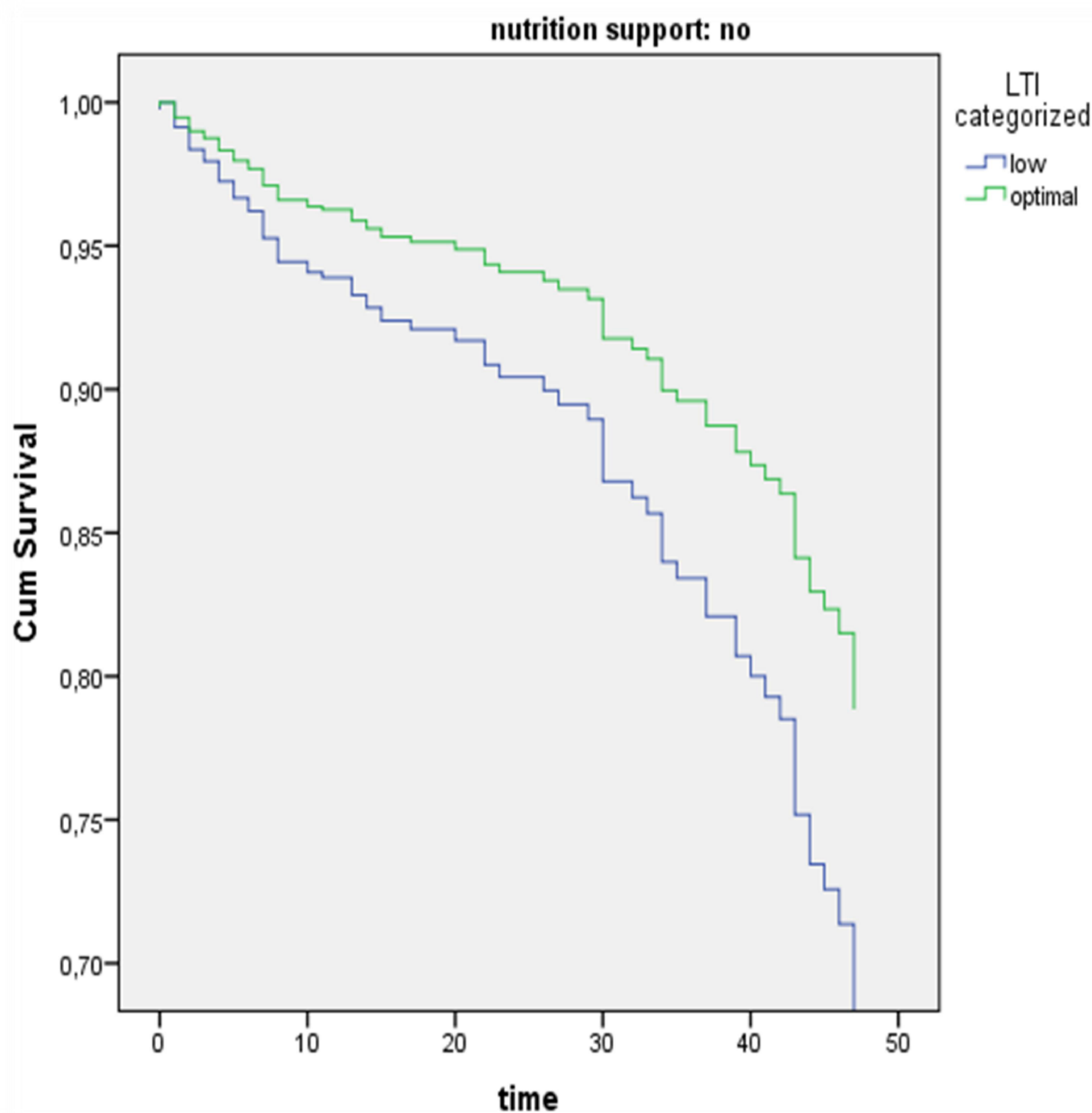
BCM-diagnosed malnutrition (HR 1.66; 95% CI 1.1; 2.44) was independent predictor of mortality. Other significant predictors:
- higher age (HR 1.05; 95% CI 1.03; 1.07)
- longer dialysis vintage (HR 1.00; 95% CI 1.00; 1.00)
- central venous catheter use (HR 1.96; 95%CI 1.28; 2.99)
- low serum albumin (HR 0.91; 95% CI 0.87; 0.95)
  Rosenberger et al. J Renal Nutr 2014

16.2% of patients received enteral supplementation.
The use of supplements was related neither to BMC-diagnosed malnutrition nor mortality; however in stratified sample the BCM-diagnosed malnutrition remained significant predictor of mortality only in patients not using enteral supplementation (HR 1.65; 95% CI 1.05; 2.59; p=0.029).

CONCLUSIONS

BCM-diagnosed malnutrition in chronic haemodialysis patients is an independent predictor of mortality and is associated with a 1.66-fold higher risk of dying compared with normal nutrition status (Rosenberger et al. J Renal Nutr 2014). Nutritional supplementation is not associated with decrease in mortality; however it was applied equally to malnourished and normally nourished patients. In addition, when patients were stratified according the nutritional supplementation, only those with malnutrition and without treatment had increased mortality. Prospective study with proper design is necessary to evaluate possible beneficial effects of enteral supplementation.

REFERENCES

Body Composition Monitor assessing malnutrition in the haemodialysis population independently predicts mortality. Rosenberger J et al. Journal of Renal Nutrition 2014; 24 (3): 172-176.

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M) Dialysis. M9) Protein-energy wasting, inflammation and oxidative stress in CKD 5D.
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