

Are patients with normal weight or overweight and concomitant weight loss missed in the new ESPEN definition for malnutrition?

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Rationale

Concerns have been raised whether the new ESPEN definition for malnutrition correctly classifies malnutrition in patients with normal weight or overweight and concomitant weight loss, as they do not necessarily meet the criteria for low FFMI. The aim of this study is to assess the association between critical weight loss and one-year mortality in hospitalized patients, stratified by BMI and FFMI subgroups.

Methods

Included were 769 patients admitted to the VU University Medical Center. Critical weight loss (CWL) was defined as >5% weight loss in the previous month or >10% weight loss in the previous six months.

The association between CWL and one-year mortality was analyzed with a priori stratification by the ESPEN definition cut-off values:

- **BMI** ≥ 20.0 kg/m² (<70y) / ≥ 22.0 kg/m² ($\geq 70y$)
- **FFMI** ≥ 15 kg/m² (females) / ≥ 17 kg/m² (males)

Mortality risks were calculated (HR, 95% CI).

Results

In total 769 patients were included, 270 (35%) had experienced CWL, 51% were inpatients, 49% outpatients, mean age 60 ± 16 years, 55% male. Overall, CWL was associated with an increased one-year mortality rate compared to no-CWL. In BMI and FFMI subcategories, CWL was predictive for mortality only in patients with low FFMI. For example: in patients with BMI $\geq 20/22$, FFMI was crucial in the observed association with mortality (CWL + normal BMI + low FFMI, HR 2.69 (1.29-5.65); CWL + normal BMI + normal FFMI, HR 1.38 (0.84-2.27)) (figure).

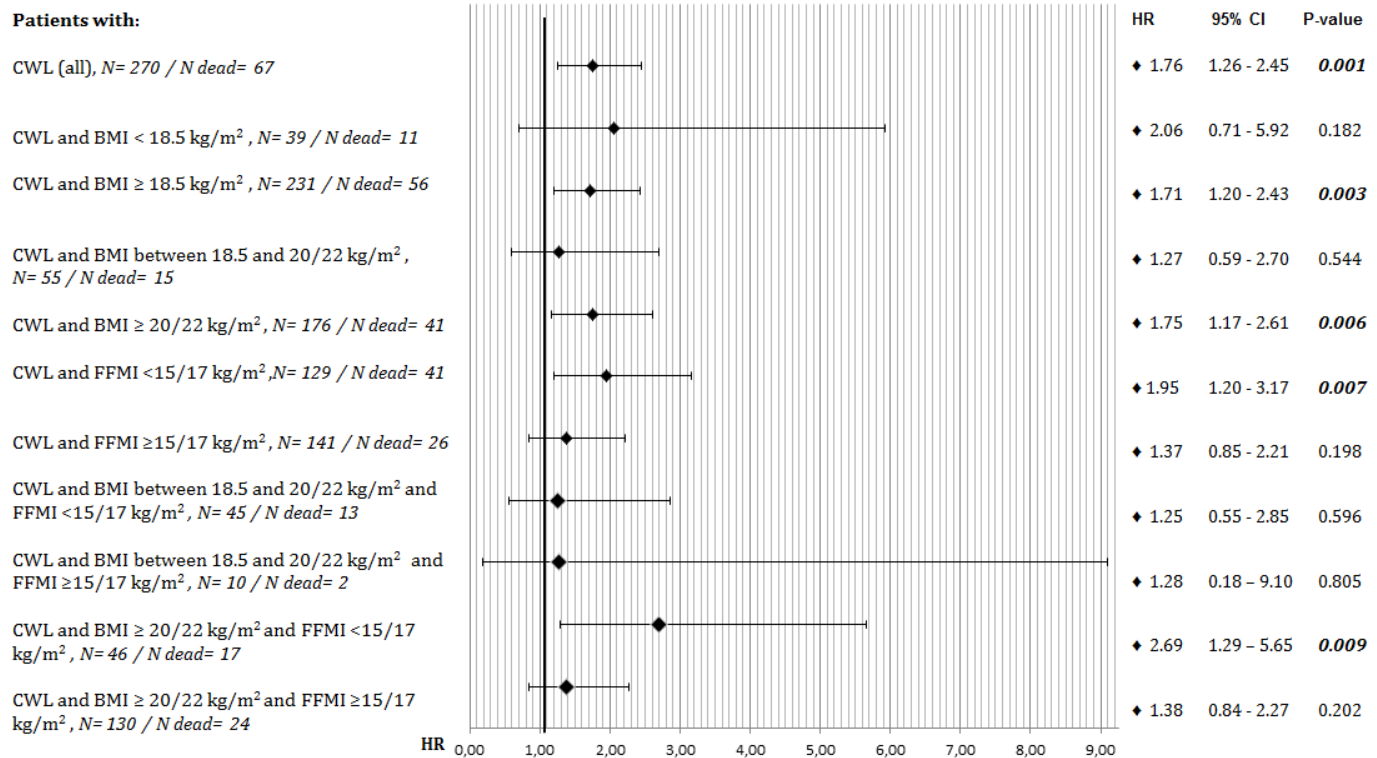


Figure. Cox regression analysis on the association between patients with critical weight loss compared to patients with no critical weight loss and one-year mortality in total cohort, and stratified by BMI and FFMI subgroups.

Conclusion

Patients with critical weight loss have a higher one-year mortality risk compared to patients with no critical weight loss. FFMI seems to play a crucial role in this association, as only patients with a FFMI below cut-off points had increased mortality rates, compared to their counterparts with normal FFMI.

