

PREVALENCE OF LOW MUSCLE MASS AND MALNUTRITION IN HOSPITAL PATIENTS WITH OVERWEIGHT AND OBESITY: A MATTER OF METHODS

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BACKGROUND

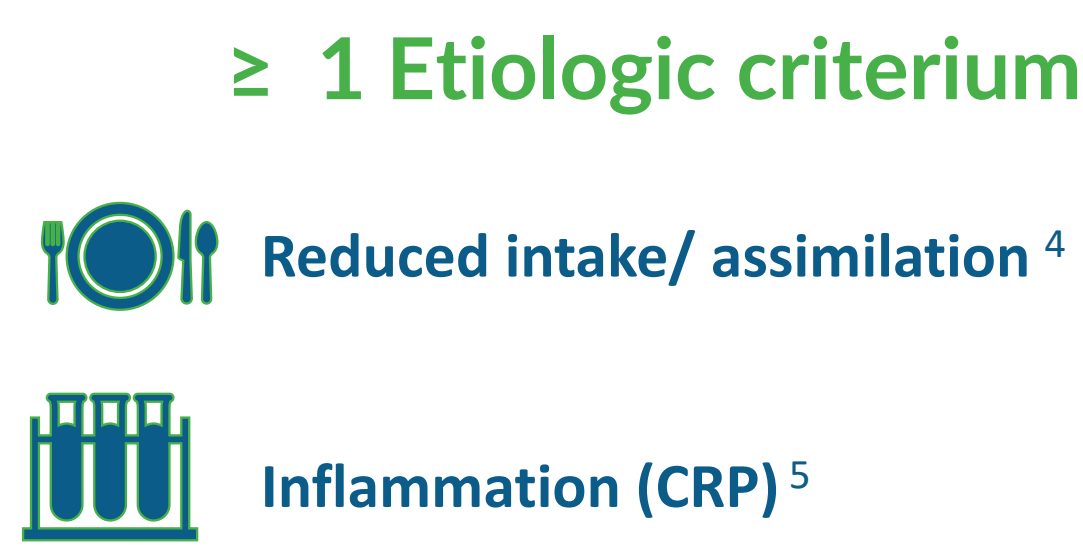
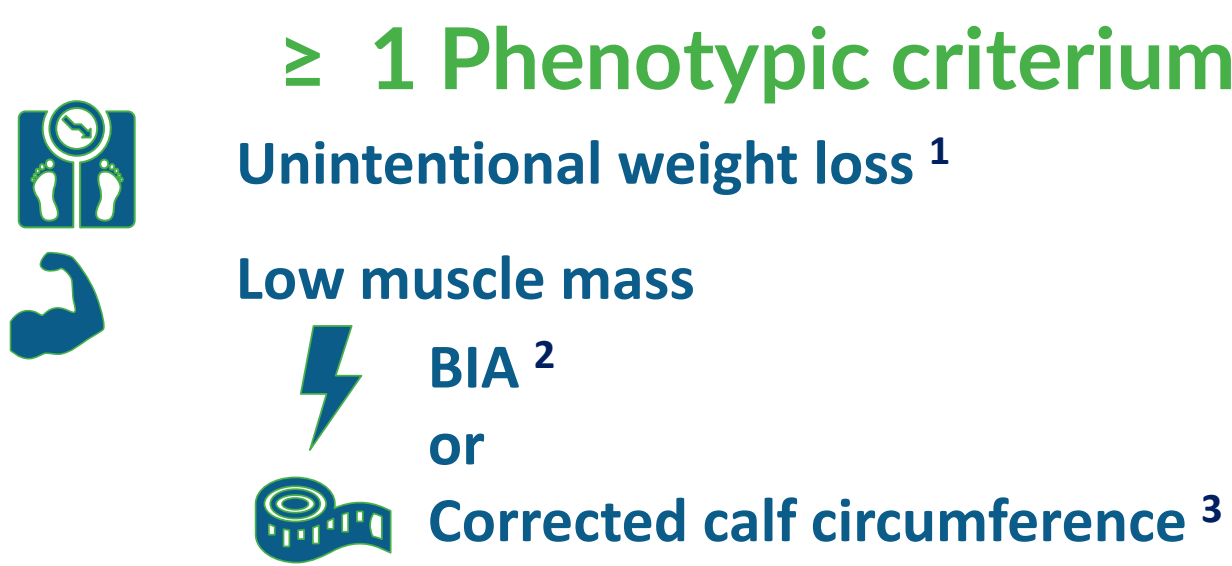
- Malnutrition worsens outcomes, also in overweight/obese patients.
- GLIM-criteria require assessment of low muscle mass.
- Methods to define low muscle mass: BIA vs corrected calf circumference (CC) → both may be inaccurate in overweight/obese populations.

OBJECTIVES

- To compare prevalence of malnutrition in overweight/obese hospital patients using GLIM with either BIA (GLIM-BIA) or CC (GLIM-CC) for low muscle mass assessment.

METHODS

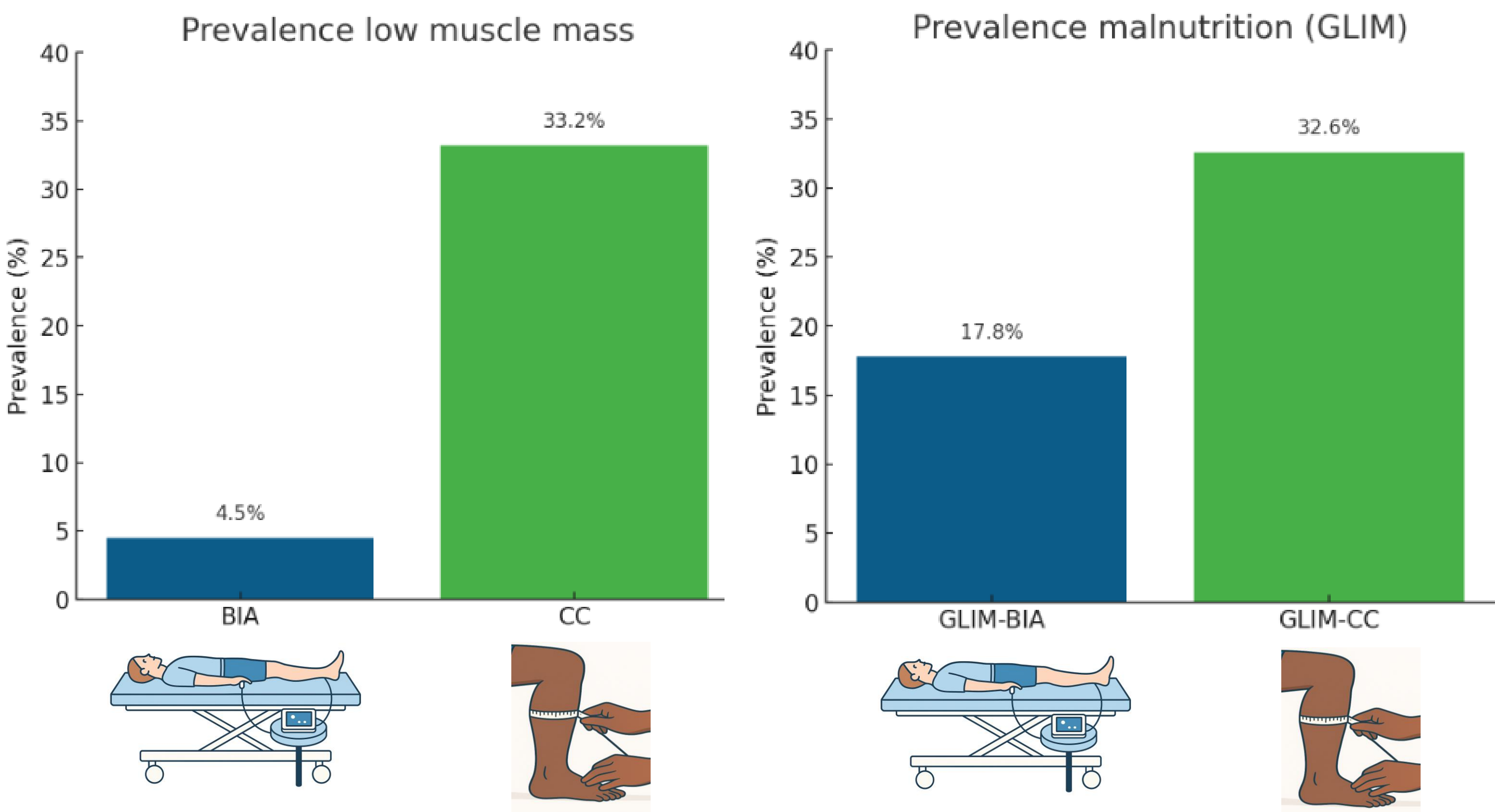
- Design: Multicenter cross-sectional study
- Population: Adults (≥ 18 y) with overweight/obesity ($\text{BMI} \geq 25 \text{ kg/m}^2$)
- Malnutrition diagnosis: GLIM.



- Analysis: Descriptive statistics

RESULTS

803 patients were included (64.1 ± 15.6 years, 45.7% female, $\text{BMI}: 30.8 \pm 5.2 \text{ kg/m}^2$). Malnutrition prevalence was 17.8% (138/777) using GLIM-BIA and 32.6% (254/779) using GLIM-CC.



Phenotypic criteria	N	N (%)
Unintentional weight loss ¹	771	153 (19.1%)
Low muscle mass		
• BIA ²	596	27 (4.5%)
• CC ³	692	230 (33.2%)



Etiologic criteria	N	N (%)
Reduced food intake or assimilation ⁴	793	396 (49.9%)
Inflammation ⁵	490	369 (75.3%)

¹ >5% weight loss within the past 6 months or >10% over the past year; ² BIA: Bioelectrical Impedance Analysis - Fat free mass index: males <17 kg/m², females <15 kg/m²; ³ CC: Calf Circumference - males: <33 cm, females: <32 cm - CC minus 3 cm for BMI 25–30 kg/m² and minus 7 cm for BMI $\geq 30 \text{ kg/m}^2$; ⁴ Intake <50% of energy needs for >1 week, or any reduction for >2 weeks, or chronic GI condition affecting assimilation; ⁵ CRP $\geq 10 \text{ mg/L}$ (≤ 3 days for inpatients, ≤ 10 days for outpatients)

CONCLUSIONS

- Prevalence of malnutrition strongly depends on chosen method.
- Applicability of both BIA and CC in overweight/obese patients is questionable.
- A gold standard for assessing muscle mass in this population is urgently needed.