

Comparing GLIM, GLIM-MS and MNA-FF for malnutrition identification in older adults: Secondary analysis of the POWER Randomised Controlled Trial

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Background

- GLIM requires *one* phenotypic and *one* etiologic criterion to diagnose malnutrition.
- Body composition in older adults can be influenced by inflammation or oedema.
- Low muscle strength has been proposed as a proxy for low muscle mass (GLIM-MS). The Mini Nutritional Assessment-Full Form (MNA-FF) is widely used to assess malnutrition (risk) in older adults.
- Comparing these tools shows how different assessments influence malnutrition identification.

Aim: To report malnutrition rates among older adults using GLIM, GLIM-MS and the MNA-FF using data from the POWER trial (NCT05688956)

Research design

- Participants (n=46)
- Older adults ≥ 70 years
 - At risk of sarcopenia (SARC-F ≥ 1)
 - Recruited to the POWER trial
- Measures
- Body composition using Tanita BIA, calf circumference or MUAC
 - MNA-FF
 - 24-hour dietary recall
 - Handgrip strength test using Jamar dynamometer
 - Five times Sit-to-Stand (5xSTS)
- Classification
- GLIM
 - GLIM-MS (GLIM with muscle strength as proxy for muscle mass)
 - MNA-FF < 17.5

Results

Table 1. Frequency of GLIM and GLIM-MS phenotypic and etiologic criteria in the sample (n = 46)

Criterion	Definition	n (%)
Weight loss	MNA-FF QB ≥ 3 kg	1 (2.2%)
Low BMI	$< 22 \text{ kg/m}^2$ (≥ 70 years)	6 (14.6%) out of 41
Low muscle mass	BIA-derived low ASM/SMI	7 (15.2%)
Low handgrip strength	$< 27 \text{ kg}$ (men), $< 16 \text{ kg}$ (women)	28 (63.6%) out of 44
Slow 5xSTS	> 15 seconds	22 (51.2%) out of 43
Reduced intake	MNA-FF QA moderate-severe decrease	18 (39.1%)
Inflammation/disease burden	Acute or chronic disease	46 (100%)

The number of participants classified as malnourished was 10 (21.7%) using GLIM, 38 (82.6%) using GLIM-MS, and 1 (2.2%) using the MNA-FF.

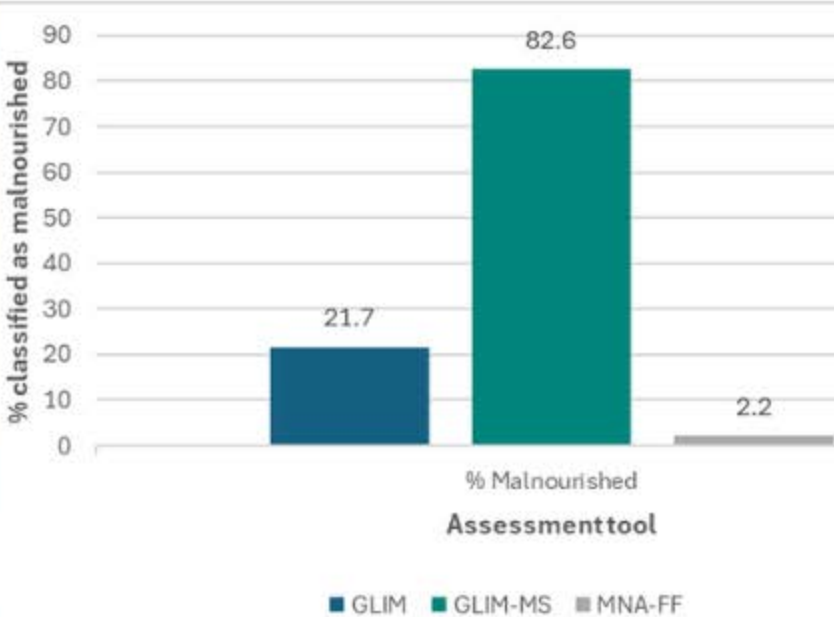


Figure 1. Malnutrition identification by assessment tool

Conclusion

Comparing GLIM, GLIM-MS and the MNA-FF highlights how assessment choice influences malnutrition rates. The tools use different combinations of phenotypic, aetiologic and functional indicators, leading to differences in malnutrition case identification

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Read out protocol paper

