## 22945 | Risk of undernutrition assessed by the GNRI index and undernutrition identified by parameters suggestive of undernutrition

Catarina Mendes Matos[1]; Sara Cascarejo[1]; Diva Melim[2]; Bruno MP Oliveira[1]; Sílvia Pinhão[1,2]; Jorge Almeida[3]

Faculty of Nutrition and Food Sciences, University of Porto, Porto, Portugal[1]; Nutrition Service of the São João Local Health Unit, Porto, Portugal[2]; Internal Medicine Department of the São João Local Health Unit, Porto, Portugal[3]

---

**Background & Aim:** Undernutrition, which can be identified using the GLIM criteria, is associated with more complications and higher mortality, so assessing nutritional risk is essential. The GNRI (Geriatric Nutritional Risk Index) is a useful tool, however, there are anthropometric, body composition and biochemical parameters that can also suggest the presence of undernutrition. The aim was to study the relationship between undernutrition assessed by GLIM criteria, anthropometric, body composition and biochemical data and nutritional risk identified by the GNRI in elderly people admitted to an Internal Medicine department. **Methods:** Weight, height, Body Mass Index (BMI), waist circumference (WC), brachial circumference (BC) and fat mass (FM) were measured using skin folds (Lipowise®) and information was collected on weight loss and biochemical data. **Results:** 46 women and 43 men were included, with an average age of 78.7 and 76.9 years, BMI 28.3 and 25.4 kg/m2, WC of 27.8 and 26.7 cm, BC of 43.8 and 46.2 cm and FM of 31.5 and 25.0%, respectively. Using GLIM criteria, 57.3% were undernutrished, 17.6% were severely undernutrished. The GNRI identified 12.4% at high nutritional risk, 40.4% moderate and 30.3% low. There was significant agreement between undernutrition by the GLIM criteria and weight loss (k=0.619, p<0,001), WC (k=0.374,p<0.001) and BC (k=0.120,p=0.017) and being undernutrished was negatively related to the degree of BMI the patient was in (p=0.002). Significant agreement was found between undernutrition assessed by the GLIM criteria and total cholesterol (k=0.273,p=0.035). Nutritional risk assessed by GNRI was in significant agreement with undernutrition identified by albumin (k=0.413, p<0.001) and hemoglobin (k=0.186,p=0.044). **Conclusions:** A high prevalence of patients at nutritional risk and/or undernutrished was found. The expected agreement between GNRI and criteria suggestive of undernutrition was not found, however, it is assumed that this could happen with a larger sample size.

**Keywords:** Undernutrition, GNRI, GLIM, Albumin.