

operational definition has not been reached yet. In a homogenous cohort of 68-year old community-dwellers, we applied different criteria and cutpoints to evaluate disease prevalence and classification agreement according to various operational diagnostic criteria, as proposed by the European Working Group on Sarcopenia in Older People (EWGSOP), the International Working Group on Sarcopenia (IWG), and the Foundation for the National Institutes of Health Sarcopenia Project (FNIH).

**Methods:** Seven hundred sixty-seven subjects (608 women; age  $67.9 \pm 1.5$  years), enrolled in the Geneva Retirees Cohort (GERICO), were studied. Appendicular lean mass (ALM), ALM/height<sup>2</sup> and ALM/BMI ratios were determined by DXA. Gait speed was measured over 4 meters and grip strength using a handheld dynamometer. Sarcopenia prevalence was estimated using EWGSOP, IWG and FNIH proposed criteria, and degree of agreement assessed using kappa statistics.

**Results:** Low lean mass prevalence ranged from 3.8% (FNIH) to 16.0% (EWGSOP). Weakness prevalence ranged from 0.7% (FNIH) to 3.9% (EWGSOP). Prevalence of low lean mass combined with either weakness or slowness fulfilling various proposed sarcopenia definitions was the lowest for FNIH (0.3%) compared with IWG (1.2%) and EWGSOP (1.6%) criteria, with higher prevalence in women across all definitions. There was poor agreement between the groups identified according to the different definitions (kappa values below 0.3).

**Conclusions:** Our results obtained in a large cohort of 68-year old subjects indicate that the prevalence of sarcopenia is low at that age independently of the definition. They also suggest that muscle weakness, slowness and low lean mass prevalence widely vary depending on the criteria and cutpoints applied. Similarly, sarcopenia prevalence considerably varies according to the definitions, with poor agreement between classifications. Further studies should compare the predictive ability of candidate sarcopenia criteria for hard outcomes.

## 1-49

### Financial impact of sarcopenia on hospitalization costs

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**Background and aims:** Data on the association of sarcopenia with costs among hospitalized patients are limited to surgical patients. This study aims to increase knowledge regarding the association of sarcopenia with these costs among a wide-ranging sample of surgical and non-surgical patients.

**Methods:** A prospective study was conducted among hospitalized adult patients. Sarcopenia was identified according to the European Working Group on Sarcopenia in Older People, as low muscle mass,

assessed by bioelectrical impedance analysis and low muscle function evaluated by handgrip strength. Hospitalization cost was calculated for each patient based on discharge diagnosis related group codes. Costs were defined as the percentage of deviation from the cost of a patient with a relative weight equal to one. Multivariable linear regression models were performed to identify if sarcopenia and if sarcopenic overweight were independently associated with hospitalization costs.

**Results:** Study sample is composed of 656 hospitalized patients aged  $\geq 18$  years, 24.2% were sarcopenic. Sarcopenia increased hospitalization costs by €1240 (95% CI: €596-1887) for patients aged  $< 65$  years and by €721 (95% CI: €13-1429) for those aged  $\geq 65$  years. Sarcopenic overweight was related to an increase in hospitalization costs of €884 (95% CI: €295-1476).

**Conclusions:** Sarcopenia independently increases hospitalization costs by 58.5% for patients aged  $< 65$  years and 34% for patients aged  $\geq 65$  years. The present results show the financial burden of this condition in adult and older adult hospitalized patients.

## 1-50

### Sarcopenia predicts fracture risk in 65-year old healthy community-dwellers

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**Background and aims:** Sarcopenia is associated with an increased risk of adverse outcomes. However, the contribution of low skeletal muscle mass to fracture risk remains unknown. In this study, we investigated the prevalence of low lean mass and its association with 3-year fracture incidence in a homogeneous cohort of healthy 65-year old community-dwellers.

**Methods:** Nine hundred thirteen subjects (729 women;  $65.0 \pm 1.4$  years), enrolled in the GERICO study, were prospectively followed-up. Total (TLM) and appendicular (ALM) lean masses were assessed using DXA. The thresholds proposed by Baumgartner, the European Working Group on Sarcopenia in Older People (EWGSOP 1 and 2), the International Working Group on Sarcopenia (IWG), and the Foundation for the National Institutes of Health (FNIH) were applied. Low trauma clinical fracture incidence over a 3-year period was recorded. The associations were assessed using univariate and multivariate logistic regression models.

**Results:** During an average follow-up of  $3.4 \pm 0.9$  years, 40 (4.4%) subjects sustained at least one incident low trauma fracture. Baseline low lean mass prevalence ranged from 3.5% (FNIH) to 17.1% (EWGSOP 2 or IWG). ALM and TLM were lower in subjects with incident fractures compared to those without fractures ( $p < 0.02$  and  $p < 0.04$ , respectively). After adjusting for sex, age, length of follow-up and FRAX probability with BMD, low lean mass was associated with a 2.3 (CI95%: 1.0-5.1;  $p < 0.05$ ) (Baumgartner or EWGSOP 1) and 1.3 (CI95%: 0.6-2.7; ns) (EWGSOP 2 or IWG)-fold increase in