



# Prevalence of Sarcopenia in a Danish geriatric out-patient population

Christensen MG<sup>1</sup>, Piper KS<sup>2</sup>, Dreier R<sup>1,3</sup>, Suetta C<sup>3</sup>, Andersen HE<sup>1</sup>

<sup>1</sup>Department of Internal Medicine, Geriatric section, Glostrup, University Hospital Amager/Hvidovre

<sup>2</sup> Department of Occupational Therapy and Physiotherapy, Rigshospitalet-Glostrup

<sup>3</sup>Department of Clinical Physiology, Nuclear Medicine & PET, University of Copenhagen, Denmark

Correspondance: mglud@hotmail.com

## BACKGROUND AND AIM

Using the European Working Group on Sarcopenia (EWGSOP) criterias on a geriatric outpatient-population the aim was to assess the prevalence of sarcopenia and to describe the association between sarcopenia and age, gender, body-mass index (BMI)



Measuring muscle function with 10 meter walk (GS), muscle mass with Dual Energy X-ray Absorptiometry (DXA) and muscle strength with Handgrip (HG)

## METHODS

According to the EWGSOP's recommendations, patients referred to a geriatric outpatient-clinic were assessed for sarcopenia by measuring

- Muscle mass (Appendicular skeletal muscle mass (ASM)): Dual Energy X-ray Absorptiometry (DXA)
- Muscle strength: Hand-grip strength (HGS)
- Muscle function: 10 meter walk (GS)

Skeletal Muscle Mass Index (SMI) was calculated by  $ASM/height^2$  (kg/m<sup>2</sup>). Patients were classified:

- No sarcopenia (normal SMI)
- Pre-sarcopenia (reduced SMI, normal HGS and GS)
- Sarcopenia (reduced SMI and reduced HGS or GS)
- Severe sarcopenia (reduced SMI, HGS and GS)

## RESULTS

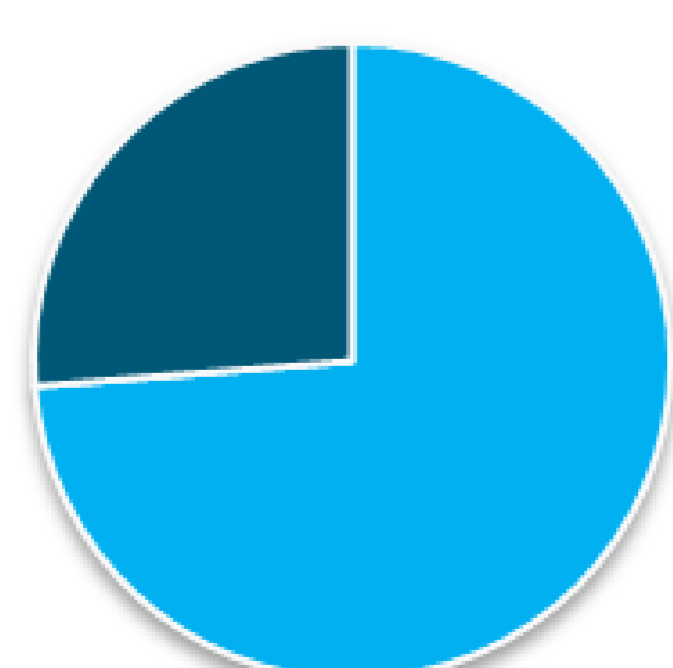
189 patients were screened for inclusion; 80 were included.

- 12 (15%) had severe sarcopenia
- 9 (11%) sarcopenia
- 8 (10%) pre-sarcopenia
- 51 (64%) no sarcopenia

Mean age was significantly higher in the SARC-GROUP (sarcopenia and severe sarcopenia) than in the NOSARC-GROUP (pre-sarcopenia and no sarcopenia) (p: 0.009) and BMI was significantly lower in the SARC-GROUP (p <0.0001).

No difference was found in gender distribution (p=0.729)

### Prevalence of sarcopenia n=80



- NO SARC (no sarcopenia + presarcopenia) (64%)
- SARC (sarcopenia + severe sarcopenia) (26%)

Variable	NOSARC-GROUP n=59	SARC-GROUP n=21	P-value
Age, yrs, mean±SD*	78.1±6.4	82.5±6.3	0.009
<b>Gender</b>			
- Male, n (%)	20/59 (33.9 %)	8/21 (38.1 %)	0.729
- Female, n (%)	39/59 (66.1 %)	13/21 (61.9 %)	
Low BMI (BMI ≤20.5 kg/m <sup>2</sup> ), n (%)	2/59 (3.4 %)	9/21 (42.9 %)	<0.0001

\*SD = standard deviation

## CONCLUSION

Prevalence of sarcopenia was 26% in our study highlighting that this condition is common in a geriatric outpatient population. Assessment using the EWGSOP diagnostic method was feasible and is suggested to be part of the standard clinical comprehensive geriatric assessment