The impact of different diagnostic criteria on the prevalence of sarcopenia in healthy elderly participants and geriatric outpatients

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Rationale

Sarcopenia, low muscle mass, is frequently identified in elderly and associated with physical disability and mortality. Consensus on diagnostic criteria for sarcopenia has not been reached yet.

Aim

To compare prevalence rates of sarcopenia using nine sets of diagnostic criteria in geriatric outpatients and healthy elderly participants (MyoAge).

Results

Prevalence rates of sarcopenia varied between 2% and 34% in geriatric outpatients and between 0% and 15% in healthy elderly participants. Only 1 of the outpatients and none of the healthy elderly participants was classified as sarcopenic according to all applied sets of diagnostic criteria (figure 1).

Methods

Each set of criteria used different diagnostic measures and cut-offs.

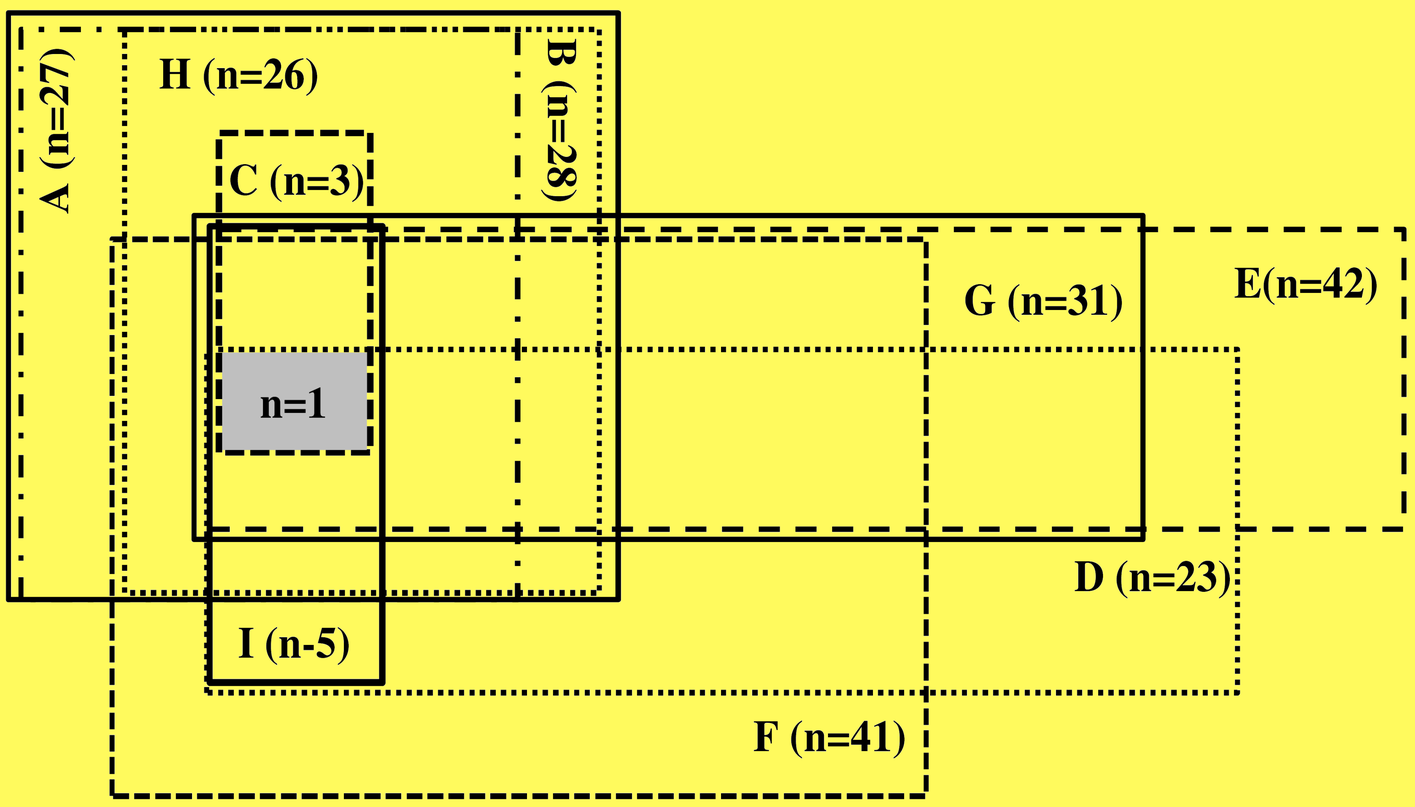
A:	ALM/height^2	Baumgartner 1998
B:	ALM/height^2	Delmonico 2007
C:	ALM/height^2	Kelly 2009
D:	SM relative	Janssen 2002
E:	SMI	Janssen 2004
F:	Handgrip strength	Lauretani 2003
G:	Gait speed, handgrip strength, SMI	EWGSOP 2010
H:	Gait speed, ALM/height^2	IWGS 2011
I:	Gait speed, handgrip strength, ALM/BMI	FNIH 2014

Conclusion

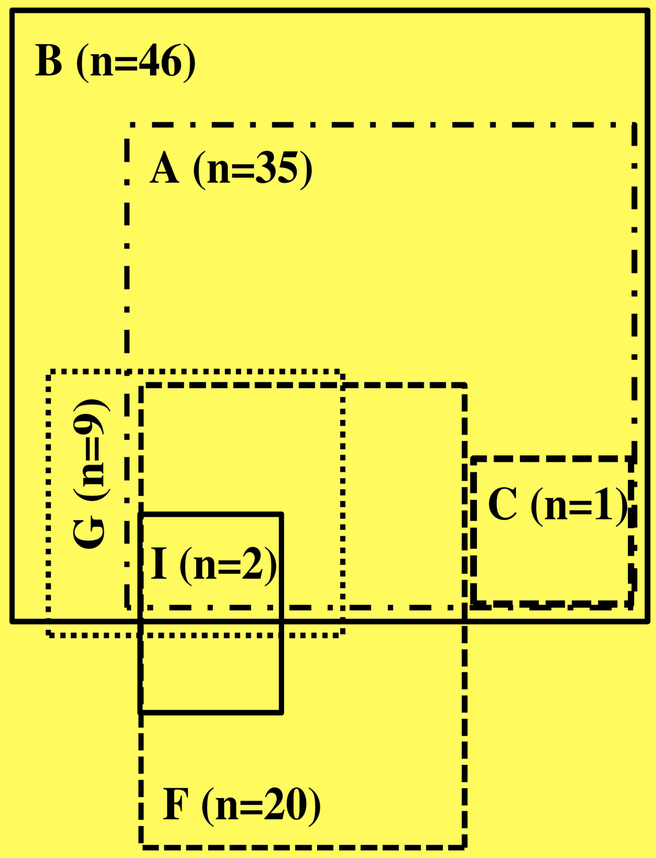
- **Prevalence rates of sarcopenia vary within the same elderly population, depending on the applied set of diagnostic criteria.**
- **Agreement between the applied sets was minimal.**
- **These findings indicate the importance of defining sarcopenia and the need to reach consensus on the diagnostic criteria.**

Figure 1. Number of participants identified as having sarcopenia according to the applied sets of diagnostic criteria

Geriatric outpatients n=123



Healthy elderly participants n=308



ALM; appendicular lean mass, SM; skeletal muscle mass, SMI; skeletal muscle mass index, BMI; body mass index, EWGSOP; European Working Group on Sarcopenia in Older Persons, IWGS; International Working Group on Sarcopenia, FNIH; Foundation for the National Institutes of Health

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