

FNIH criteria, with cut points derived from a large pool of patient-level data.⁵ Nonetheless, the project team had to make difficult decisions around data harmonisation and handling, and by group's own admission the criteria are a 'work in progress' to be evolved and refined.⁶

Professor Scarlata and colleagues suggest the FNIH employ gait speed as an end point rather than a parameter of muscle function. However, low gait speed (<0.8 m/s) was the principal criterion for mobility disability, from which grip strength and then appendicular lean mass cut points were derived. In this respect, we view gait speed as an intrinsic component of the FNIH operationalisation.⁵ With regards to lean mass assessment, the FNIH elected only to accept dual-energy X-ray absorptiometry (DXA) measurements and in doing so excluded over half of their data set (14 603/26 625 cases). While DXA offers a more accurate assessment of lean mass than bioelectrical impedance analysis, it may not be readily available in practice, particularly within settings where sarcopenia is relevant (nursing homes, critical care). In contrast, the EWGSOP criteria are more pragmatic and accept use of bioelectrical impedance analysis, a measure we routinely use in practice.⁷ Finally, when deciding between absolute and normalised cut points, FNIH data were inconsistent across genders; body mass index adjustment did not affect relationships between sarcopenia domains in men, but markedly improved the fit of models in women.⁵ Further, for all combinations of FNIH-defined low strength and mass, there were no significant associations with survival among women.⁶ This contrasts with recent studies in which EWGSOP-defined sarcopenia carried a twofold mortality risk.⁸

We are unable to offer a sarcopenia prevalence by FNIH criteria owing to lack of DXA measures in our cohort.² However, 2119 patients within the FNIH data set had a COPD diagnosis and disease-specific publications may emerge.⁵ We agree that multiple definitions may hinder efforts to treat sarcopenia. However, we are encouraged that a consistent phenotype is emerging in which a lean mass criterion is combined with one or more markers of physical function. This is important and exciting given the effectiveness of exercise, and nutritional and pharmacological interventions on functional end points. We observed a modest whole-group effect on all EWGSOP sarcopenia domains following pulmonary rehabilitation.² To this end, patients falling close to a cut point before

intervention had a reversal of their sarcopenia status. This phenomenon would have occurred irrespective of the cut points or definition used. We look forward to further interventional studies that capitalise on this shared feature of recent definitions, and reveal sarcopenia as a common but treatable problem.

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Sarcopenia definitions: where to draw the line? Response to Scarlata *et al*

We thank Scarlata *et al*¹ for their interest in our study² in which we demonstrated a 15% prevalence in stable COPD by European Working Group on Sarcopenia in Older People (EWGSOP) criteria.³ Professor Scarlata and colleagues acknowledge these are the most commonly adopted sarcopenia criteria. Consequently, prevalence estimates in other populations⁴ allow us to compare our findings beyond respiratory medicine. Towards the end of recruitment, The Foundation for the National Institutes of Health (FNIH) Sarcopenia Project published their findings.⁵ We acknowledge the strength of the