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DIAGNOSTIC RESEARCH FOR OLDER PERSONS IN RESOURCE-LIMITED SETTINGS

Dear Editor,

We appreciate the interest in our work (1). We would like to discuss some points that we believe are important to clarify regarding diagnostic research, particularly in resource-limited settings.

We agree with Daungsupawong and Wiwanitkit that the MNA is not a perfect tool for detecting sarcopenia, and although AUC values are not very high in the literature (2-4), the MNA is the most widely used tool for nutritional assessments in older adults. As we acknowledge in our study, the sample size may have been insufficient to estimate the test performance with preciseness, as reflected by the wide confidence intervals in the MNA short (MNA-SF) and long (MNA-LF) forms: 0.68 (95 % CI: 0.58-0.78) and 0.60 (95 % CI: 0.49-0.71), respectively. These results suggest that MNA may not be directly transferrable to older adults in resource-limited nursing homes, warranting further examination of the reasons for poor performance, and investigating alternatives to detect sarcopenia. While digital technologies and biomarkers are interesting alternatives (5), such suggestion by Daungsupawong and Wiwanitkit may not be easily implemented in institutionalized older adult units in Mexico due to the lack of trained personnel and specialized equipment (6).

We would like to emphasize that diagnostic research is typically cross-sectional, as it seeks to detect the presence of an outcome at the specific moment in time when the test is performed (7). Therefore, it is unclear what additional benefit would be gained from conducting clinical trials as suggested by Daungsupawong and Wiwanitkit, and how this approach would address their criticisms of the diagnostic evaluation of the MNA in older adults. While diagnostic randomized controlled trials can be used to compare the implementation of two or more diagnostic tests and their effects on clinical outcomes (e.g., mortality, quality of life, etc.) (8), it would be difficult to justify the conduction of such trials before first understanding the performance of a test within observational frameworks.

It is also important to distinguish between diagnostic test research and diagnostic research. The former evaluates a single test or tool and its usefulness in detecting a disease. The latter aims to infer the probability of having a disease by combining results from various predictors or tests using diagnostic models (e.g., generalized linear models) (7). In our study, we evaluated the performance of MNA as used in clinical practice, treating it as a single diagnostic test despite the fact that it was originally developed as a predictive diagnostic model. An alternative approach would have been to conduct an external validation (9) with possible updating (10) of the MNA, the latter resulting in an importantly modified prediction model. Noteworthy, it would be questionable to propose updating such a widely used model without first evaluating its diagnostic performance in its original form.

Our study concludes that the MNA-SF performs poorly in institutionalized older adults, while there is uncertainty for MNA-LF. Therefore, future research perspectives include more thorough validation of the MNA with the possibility of updating the model or investigating new diagnostic modalities that can be used by untrained personnel.

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Ashuin Kammar-García[1], Esmeralda Garza-Santiago[2], Javier Mancilla-Galindo[3], Orietta Segura-Badilla[4], Martín Lazcano-Hernández[5], Obdulia Vera-López[5], Addi Rhode Navarro-Cruz[5]

[1]Research Direction. Instituto Nacional de Geriatría. Ciudad de México, Mexico. [2]Faculty of Health Sciences. Universidad Anáhuac. Ciudad de México, Mexico. [3]Institute for Risk Assessment Sciences (IRAS). Utrecht University. Utrecht, The Netherlands. [4]Faculty of Health and Food Sciences. Universidad del Bío-Bío. Chillán, Chile. [5]Faculty of Chemical Sciences. Benemérita Universidad Autónoma de Puebla. Puebla de Zaragoza, Puebla. Mexico

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