

# The ability of the Geriatric Nutritional Risk Index to assess the nutritional status and predict the outcome of home-care resident elderly: a comparison with the Mini Nutritional Assessment.

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## Abstract

The Mini Nutritional Assessment (MNA) is recommended for grading nutritional status in the elderly. A new index for predicting the risk of nutrition-related complications, the Geriatric Nutritional Risk Index (GNRI), was recently proposed but little is known about its possible use in the assessment of nutritional status. Thus, we aimed to investigate its ability to assess the nutritional status and predict the outcome when compared with the MNA. Anthropometry and biochemical parameters were determined in 241 institutionalised elderly (ninety-four males and 147 females; aged 80.1 (SD 8.3) years). Nutritional risk and nutritional state were graded by the GNRI and MNA, respectively. At 6 months outcomes were: death; infections; bedsores. According to the GNRI and MNA, the prevalence of high risk (GNRI < 92)/malnutrition (MNA < 17), moderate risk (GNRI 92-98)/malnutrition at-risk (MNA 17-23.5) and no risk (GNRI > 98)/good status (MNA > 24) were 20.7/12.8%, 36.1/39% and 43.2/48.2%, respectively, with poor agreement in scoring the patient (Cohen's kappa test: kappa = 0.29; 95% CI 0.19, 0.39). GNRI categories showed a stronger association (OR) with overall outcomes than MNA classes, although no difference ( $P > 0.05$ ) was found between malnutrition (v. 'good status', OR 6.4; 95% CI 2.1, 71.9) and high nutritional risk (v. 'no risk', OR 9.7; 95% CI 3.0, 130). Multivariate logistic regression revealed the GNRI as an independent predictor of complications. In overall-outcome prediction, a good sensitivity was found only for GNRI < 98 (0.86 (95% CI 0.67, 0.96)). The combination of a GNRI > 98 with an MNA > 24 seemed to exclude adverse outcomes. The GNRI showed poor agreement with the MNA in nutritional assessment, but appeared to better predict outcome. In home-care resident elderly, outcome prediction should be performed by combining the suggestions from both these tools.

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