

We are what we eat

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In this issue of the *Journal*, Okamura and colleagues report on a retrospective evaluation on the predictive value of sarcopenia in risk assessment of long-term outcomes after valvular surgery.¹ The age of the population included in the study was older than 70 years. The evaluation of sarcopenia is based on the area of psoas muscle calculated at the level of the top of the iliac crest on a computed tomography scan of the abdomen and therefore easily reproducible. This index appears to be very attractive, as it is able to give an objective and quantifiable idea of frailty, which otherwise is not always well defined. It is furthermore important for the increasing number of older patients who are proposed to undergo minimal invasive treatment strategies.

Sarcopenia is one of the consequences of malnutrition, a condition quite common among elderly patients, related to a complex deterioration of functional and mental capacity with loss of resistance to internal and external stressors. The treatment choice in this vulnerable condition, which prevails in 5% to 10% of the population older than 65 years, should be carefully weighted among surgical, interventional, or medical options.² At the same time, the assessment of the degree of frailty of the patient is based on elements of motor assessment or mental status that make its evaluation complex and not easily reproducible.

The recent guidelines for the management of valve disease recommend for aortic valve stenosis a patient selection based on the use of risk calculators (Society of Thoracic Surgeons and European System for Cardiac Operative Risk Evaluation II) typically used to select surgical candidates.^{3,4} In contrast, a risk calculator for transcatheter aortic valve replacement procedures has not been routinely recommended until now. Concerning this issue, in a recent study the impact of cachexia (defined as body mass index $<20 \text{ kg/m}^2$ body surface area) on the short- and long-term outcome of patients undergoing transcatheter aortic valve replacement is of considerable importance, demonstrated by an increase of overall mortality, mainly in the most severe forms of cachexia (body mass index



Vincent Willem van Gogh (1853-1890). *The Potato Eaters*. Van Gogh Museum, Amsterdam (Vincent van Gogh Foundation).

Central Message

The sarcopenia index in elderly patients plays an important role in defining frailty with the aim of a right choice of treatment option.

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$<18 \text{ kg/m}^2$ body surface area).⁵ If sarcopenia could be considered as the tip of the iceberg of frailty, the index proposed by Okamura and colleagues,¹ beyond the desirable inclusion in any risk calculator, may per se represent the boundary between an invasive treatment and medical therapy.

Concerning the social aspects of the problem, a careful selection of candidates for expensive treatments is necessary while remembering that in at least one-third of aged populations worldwide, malnutrition and consequent frailty are the effects of poor-quality food intake worsened by the reduction of absorption common in elderly patients and low economic resources; the prevalence of carbohydrates with a lack of proteins reduces lean body mass.^{6,7}

In 1862 Ludwig Feuerbach, a German philosopher, wrote in his book *The Mystery of Sacrifice or Man Is What He Eats*, “What about a food in which proteins and useful fats are present in an exactly inverse proportion compared to that of the protein and lipid components of the blood? ... A weak blood of potato [Kartoffelblut] should transfer to the muscles the strength to work and transmit to brain the life-giving momentum of hope?”⁸ In the *Odyssey*, the famous Greek poet Omeros used to describe foreign countries by their eating habits. Therefore, he described poor people as wild herbs eaters, Egyptians as bread eaters, and people from Libya as lotus eaters. It would be interesting to know what the incidence of sarcopenia was in these populations!

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