




# Malnutrition in idiopathic pulmonary fibrosis: the great forgotten comorbidity!

*To the Editor:*

The publication by TORRISI *et al.* [1] in the *European Respiratory Journal* evaluated the ability of comorbidities to improve the prediction of survival of idiopathic pulmonary fibrosis (IPF) patients. These variables are in addition to those in the best validated Gender-Age-Physiology (GAP) multivariable prediction model for mortality in IPF. The authors have added to the four parameters (age, sex, forced vital capacity per cent predicted and diffusing capacity of the lung for carbon monoxide per cent predicted) of the GAP model [2] comorbidities such as gastro-oesophageal reflux, pulmonary hypertension, lung cancer, valvular heart disease and atrial arrhythmias, which were found to have a significant impact on survival. They showed that the inclusion of comorbidities in TORVAN models significantly improved the prediction of the risk of death.

However, we were surprised that there was no mention of nutritional status despite growing evidence that IPF patients frequently suffer from malnutrition [3]. We now have evidence that malnutrition is also a prognostic factor (S. Jouneau and co-workers, unpublished results; see also [4, 5]) and is suspected of involvement in several chronic diseases. For example, the body mass index (BMI) [6] or body fat-free mass [7] can be strong, independent predictors in chronic obstructive pulmonary disease (COPD) patients. It is conceivable that the negative effect of malnutrition on survival might be reversed by pulmonary rehabilitation in malnourished patients as demonstrated in COPD [8], in contrast to some of the significant variables (pulmonary hypertension, atrial arrhythmias or lung cancer) identified by TORRISI *et al.* [1].

We, therefore, suggest that BMI or another nutrition variable should be included in the present study, if they are available, and in future work on predictive models for IPF patients.


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Received: Feb 27 2019 | Accepted: March 01 2019

Conflict of interest: S. Jouneau reports current work on malnutrition and IPF funded by Boehringer Ingelheim and Roche/Genentech, during the conduct of the study; grants for research, personal fees and non-financial support for congress attendance, registration, travel and accommodation, personal fees for advisory board work and consultancy from Actelion, AIRB, AstraZeneca, BMS, Boehringer, Chiesi, Gilead, GSK, LVL, Mundipharma, Novartis, Pfizer, Roche and Savara-Serendex, outside the submitted work. M. Lederlin reports current work on malnutrition and IPF funded by Boehringer Ingelheim and Roche/Genentech, during the conduct of the study; personal fees from Boehringer Ingelheim, outside the submitted work. L. Vernhet reports current work on malnutrition and IPF funded by Boehringer Ingelheim and Roche/Genentech, during the conduct of the study. R. Thibault reports current work on malnutrition and IPF funded by Boehringer Ingelheim and Roche/Genentech, during the conduct of the study; and received royalties from Knoë, Le Kremlin Bicêtre, France for designing the Simplified Evaluation of Food Intake (SEFI) tool.

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**BMI/nutritional assessment should be part of the evaluation of IPF patients, since it has an impact on prognosis** <http://ow.ly/BBE930ocgx5>

**Cite this article as:** Jouneau S, Lederlin M, Vernhet L, *et al.* Malnutrition in idiopathic pulmonary fibrosis: the great forgotten comorbidity! *Eur Respir J* 2019; 53: 1900418 [<https://doi.org/10.1183/13993003.00418-2019>].

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## From the authors:

We appreciate the thoughtful comments of S. Jouneau and co-workers in their correspondence addressing the importance of nutritional status in idiopathic pulmonary fibrosis (IPF). We agree with the authors that nutritional status is of great interest in chronic diseases such as IPF [1].

The two most accepted methods to assess nutritional status are body mass index (BMI) and fat-free mass (FFM) [2–5]. Although BMI is the most widely used and simplest method, several factors such as ethnicity, gender and social status may influence it [6]. Moreover, it remains unestablished what cut-off value is the most appropriate to identify malnutrition [7]. Fat-free mass, a more sophisticated assessment technique using bioelectrical impedance, is not routinely performed in IPF patients. Thus, evidence for FFM is very limited in patients with IPF [8].

We agree that the central question of “what are the best indicators to assess malnutrition in IPF?” has to be addressed [1]. It was not possible to assess most indicators of malnutrition in the TORVAN study (*e.g.* FFM, weight loss, low energy intake, mid-arm circumference, triceps skinfold, *etc.*) as they were not routinely collected in the cohort [9]. In addition, only variables previously proven to be associated with survival were considered for our analytical model. While nutritional status is known to influence prognosis in some pulmonary diseases, such as chronic obstructive pulmonary disease and tuberculosis [3, 10], its impact on IPF remains uncertain. Furthermore, it should be considered that malnutrition in IPF is rather a consequence of the disease and not a comorbid condition *per se*. However, given the high prevalence of malnutrition in IPF patients, this “forgotten factor” is of great interest and we agree that its impact on mortality should be further evaluated.

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**The role of malnutrition in IPF remains uncertain and should be considered a consequence of the disease and not a comorbid condition. However, given the high prevalence of malnutrition in IPF its impact on mortality should be further evaluated.** <http://ow.ly/5CKe30okjma>

**Cite this article as:** Torrisi SE, Ley B, Kreuter M, *et al.* Malnutrition in idiopathic pulmonary fibrosis: the great forgotten comorbidity! *Eur Respir J* 2019; 53: 1900615 [https://doi.org/10.1183/13993003.00615-2019].

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Received: March 27 2019 | Accepted: March 27 2019

Conflict of interest: S.E. Torrisi has nothing to disclose. B. Ley has nothing to disclose. M. Kreuter reports grants from Galapagos, grants and personal fees from Boehringer Ingelheim and from Hoffman la Roche, outside the submitted work. M. Wijsenbeek reports grants and other from Hoffman la Roche, grants and other from Boehringer Ingelheim, other from Galapagos, outside the submitted work; all grants and fees were paid to her institution. E. Vittinghoff has nothing to disclose. H.R. Collard reports personal fees from Bayer, Boehringer Ingelheim, Bristol-Myers Squibb, Global Blood Therapeutics, Genoa, ImmuneWorks, Navitor, Parexel, PharmAkea, Prometic, Toray, Unity, Patara, Veracety, Roche/Genentech, aTyr, Advance Medical, Aeolus and MedImmune, grants from the Pulmonary Fibrosis Foundation, and grants and personal fees from Three Lakes Partners, all outside the submitted work. C. Vancheri has nothing to disclose.

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