

Patient reported Physical Function (PF) predicts long-term survival in early-stage NSCLC surgical patients. (ID 5183)

C.Pompili¹, S. Omar¹, M.H. Ilyas¹, A. Campisi², G. Velikova¹, Laura Valuckiene³, A. Brunelli³

BACKGROUND

Additional prognostic factors such as Quality of Life (QoL) may benefit further stratification of risk for an individualized treatment allocation. Our study aimed to assess the association between preoperative QoL and long-term survival in patients undergoing surgical resection for pathological stage I non-small cell lung cancer (NSCLC).¹

METHODS

A retrospective analysis conducted on 388 consecutive patients who completed the QoL assessment through the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire C30 and lung cancer specific module (LC13), prior to anatomical lung resection for early-stage NSCLC (2014-2018) (Table 1).

The Physical Functioning Scale (PF) – EORTC QLQ-C30				
Questions/Items	Not at all	A little	Quite a bit	Very Much
Do you have any trouble strenuous activities like carrying a heavy shopping bag or a suitcase?	1	2	3	4
Do you have any trouble taking a <u>long</u> walk?	1	2	3	4
Do you have any trouble taking a <u>short</u> walk outside of the house?	1	2	3	4
Do you need to stay in bed or a chair during the day?	1	2	3	4
Do you need help with eating, dressing, washing yourself or use the toilet?	1	2	3	4

Table 1: The Physical functioning scale extracted from the EORTC QLQ-C30 questionnaire completed by patients at follow-up.

Median follow-up was 1685 days. Survival distribution was estimated by the Kaplan-Meier method. Cox proportional hazard regression and competing risk regression analyses were used to assess the independent association of preoperative patient-reported outcomes with overall and cancer-specific survival.

RESULTS

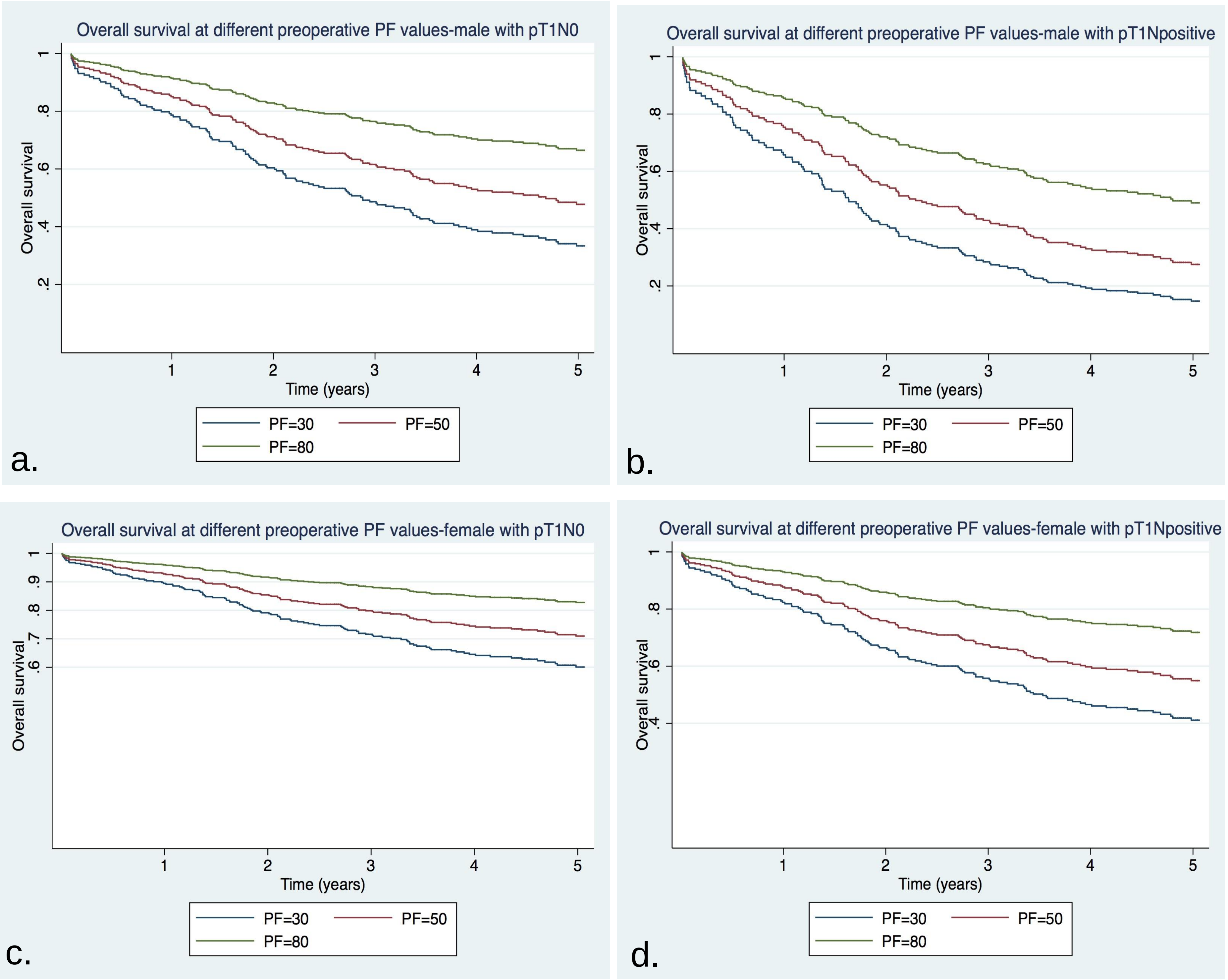


Figure 1: Overall survival function by different values of PF (higher values of PF represent better functional status) in different representative patients (numeric variables in the model kept at their mean values – age 70, BMI 27 kg/m², DLCO 73%). **a)** male with pT1N0 stage **b)** male with pT1Npositive stage **c)** female with pT1N0 stage **d)** female with pT1Npositive stage.

Higher score in patient-reported PF was significantly associated with longer overall survival (Figure 1). Other factors significantly associated with poorer overall survival remained older age (p=0.005), low BMI (p=0.007), male sex (p<0.001) and nodal involvement (p=0.007).

A 70-year-old male patient with a BMI of 27 and a pT1N0 stage would have an estimated 5-year overall survival of 65%, 50% and 35% corresponding to a baseline Physical Functioning of 80, 50 and 30, respectively. Interestingly, the same theoretical patient with positive nodal status would have 50% 5-year survival with a good baseline functional status PF=80.

Competing regression analysis found that worse baseline lung cancer-specific dyspnoea was significantly associated with a poorer cancer-specific survival (p=0.03) along with low Body Mass Index (p=0.01), high Performance Status (p=0.03) and lymph node involvement (p=0.01).

CONCLUSION

A better patient-reported Physical Function score was associated with longer overall survival after curative resection for cancer. Our study highlights the significance of routinely collecting QoL data in clinical practice to aid preoperative decision making in early-stage NSCLC patients.²

REFERENCES

1. Valsangkar N, Wei JW, Binongo JN et al. Association Between Patient Physical Function and Length of Stay After Thoracoscopic Lung Cancer Surgery. Semin Thorac Cardiovasc Surg 2021;33:559-66.
2. Rees JR, Whale K, Fish D et al. Patient-reported outcomes in randomised controlled trials of colorectal cancer: an analysis determining the availability of robust data to inform clinical decision-making. J Cancer Res Clin Oncol 2015;141:2181-92.

AUTHOR AFFILIATIONS & CONFLICT OF INTEREST

1. Leeds Institute of Medical Research at St James's, University of Leeds, United Kingdom.
2. Thoracic Surgery, University Hospital Trust Verona, Verona, Italy.
3. St James's University Hospital, Leeds, United Kingdom.

The authors of this poster presentation have no conflict of interest to declare.