

# PROGNOSTIC FACTORS IN ADVANCED DISEASE HOW TO SUPPORT DECISION-MAKING

Filipa Ferreira, José Pereira, Leonor Fernandes, Ana João Pissarra, Joana Graça, Leonor Matos, José Nunes Marques, Ana Martins  
Medical Oncology Department of Hospital São Francisco Xavier – Centro Hospitalar de Lisboa Ocidental  
Lisbon, Portugal

## INTRODUCTION

In Oncology, it is essential to recognize the end-of-life period as its identification changes the decisions towards the treatment and overall management of the patient. However, there is lack of validated prognostic scales to help with this identification. Clinical prediction of survival (CPS), performance status (PS), several signs/symptoms (such as weight loss, anorexia, dysphagia, xerostomia, dyspnea and delirium) and analytic factors (leukocytosis, lymphocytopenia and C-reactive protein) showed prognostic value in several studies. Two validated scores also showed prognostic value: Palliative Prognostic Score (PPS) and Palliative Prognostic Index (PPI).

## OBJECTIVES

Identification of prognostic factors in end-stage disease for prediction of survival and to support the decision to initiate specific oncologic treatment.

## METHODS

Retrospective observational study including the patients admitted in a Portuguese Oncology department for one year (during 2016), evaluation of patient/disease characteristics and aferition of possible prognostic factors. PPS and PPI were also calculated. The data were collected from the patients' clinical processes in January 2018. The statistic analysis was preformed using correlation coefficient calculation in Excel and SPSS programs.

## RESULTS



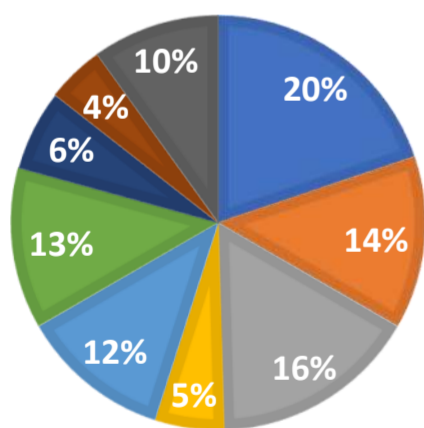
565 patients admitted in 2016



37.5% (N=211)

with metastatic (79.3%) or locally advanced/irresectable (20.7%) disease

### Primary tumors:



■ Colorectal  
■ Prostate  
■ Gastroesophageal  
■ Gynecologic  
■ Other  
■ Biliopancreatic  
■ Breast  
■ Urotelial and renal  
■ Occult primary

**Overall survival: 11.44 months**  
(if metastatic disease – 10.75 months)

The prognostic value of various factors mentioned in literature was evaluated in this population:

Evaluated factors	Mean	Correlation coefficient with survival	
Age (years)	71.41	-0.25 (p=0.008)	
Performance status (ECOG)	0.86	-0.52 (p<0.001)	
Number of comorbidities	2.57	-0.22 (p=0.020)	
Previous medication (number of drugs)	4.15	-0.17 (p=0.074)	
Number of metastatic sites	1.32	-0.09 (p=0.350)	
Symptomatic burden (number of symptoms: weight loss, anorexia, dysphagia, nausea/vomiting, dyspnea, anxiety, pain and delirium)	1.23	-0.24 (p=0.011)	Statistically significant <i>per se</i> : anorexia (R 0.23)
Analytic alterations (number of alterations: anemia, leukocytosis, lymphocytopenia, decreased creatinine clearance, hypoalbuminemia, hyperbilirubinemia, high Lactate dehydrogenase and high C-reactive protein)	2.21	-0.26 (p=0.006)	Statistically significant <i>per se</i> : decreased creatinine clearance (R -0.22), hypoalbuminemia (R -0.36), LDH (R -0.20) and high C-reactive protein (R -0.26)
Clinical prediction of survival (<12 weeks vs. ≥12 weeks)	-	0.28 (p=0.033)	

**Factors with prognostic value: age, PS, number of comorbidities, symptomatic burden, analytic alterations and CPS**

Evaluated scores	Correlation coefficient with survival
Palliative Prognostic Score (Dyspnea, Anorexia, Karnofsky performance status, Clinical prediction of survival, Total WBC count, Lymphocyte percentage)	-0.37 (p<0.001)
Palliative Prognostic Index (PPS, Oral intake, edema, dyspnea at rest, delirium)	-0.44 (p<0.001)

### MORE NUMBERS:

- 38% of the patients died in the 6 months after the first appointment: only 9 of them being submitted to chemotherapy in this period
- 38% didn't initiate specific oncologic treatment for clinicians' decision: 38% of these died in the first 3 months, 71% in the first 6 months and >90% in the first year
- 84% of the patients with PS≥2 died in the first year and only 6 of them initiated chemotherapy

## CONCLUSION

With the limitations of a retrospective study, in this analysis the authors confirm the importance of several validated factors and scores in predicting the survival in this population. PS and CPS showed to be the most relevant prognostic factors, as they also were in several published studies. The correlation coefficients are indeed quite low (mostly inferior to ±0.5), but similar to those in other studies (e.g. CPS between 0.2 and 0.65).

It seems essential to highlight the importance of clinicians prediction as one of the most determinant factors in end-of-life decisions. The search for ways of help decision making in this period is essential, as the failure to do it can have important clinical, psychologic, economic and moral implications.