



Symptom burden and short-term survival in patients with advanced cancer visiting the emergency department

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Background

Patients with advanced cancer suffer from multiple severe physical and psychosocial symptoms, which can negatively impact their quality of life,^{1,2} with cluster of multiple symptoms occurring in the same patient. These cancer patients with advanced disease often visit the ED with secondary symptoms, including pain and distress, which may not be adequately assessed.^{3,4} The purpose of this study is to investigate the relationship between symptom severity and short-term survival outcomes in advanced cancer patients presenting to the emergency department (ED).

Methods

A secondary analysis of our previous prospective randomized study,⁵ was conducted exploring the association between the MD Anderson Symptom Inventory (MDASI) scores and short-term mortality. Descriptive statistics were used to summarize the main characteristics, The Kolmogorov-Smirnov test was used to examine the difference in the distribution of MDASI item scores by 90-day mortality. The association between different MDASI items and short-term mortality was examined using logistic regression models.

Results

MDASI median symptom scores for pain, fatigue, and interference with work were the highest. A significant difference in MDASI item score distribution with 90-day mortality (Figure 1) was observed for fatigue ($P=0.018$), shortness of breath ($P<0.001$), difficulty remembering ($P=0.038$), lack of appetite ($P=0.035$), drowsiness ($P<0.001$), feeling sad ($P=0.031$), and interference with walking ($P<0.001$). In multivariable analysis, shortness of breath (adjusted OR 1.15, 95% CI 1.04-1.26, $P=0.005$) and drowsiness (adjusted OR 1.17, 95% CI 1.05-1.33, $P=0.008$) were significantly associated with 90-day mortality, adjusting for age, race, performance status, and cancer type (Table 1).

Table 1. Multivariable analysis of the association between MDASI items and 90-day mortality. *Adjusted for age, race, performance status, and cancer type

| Variable | 90-day mortality | |
|------------------------------------|------------------|--------------|
| | AOR* (95% CI) | P |
| Fatigue | 1.16 (1.02-1.34) | 0.031 |
| Shortness of breath | 1.15 (1.04-1.26) | 0.005 |
| Difficulty remembering | 1.11 (0.98-1.27) | 0.098 |
| Lack of appetite | 1.07 (0.97-1.17) | 0.196 |
| Drowsiness | 1.17 (1.05-1.33) | 0.008 |
| Feeling sad | 1.08 (0.97-1.21) | 0.146 |
| Interference with general activity | 1.05 (0.92-1.21) | 0.490 |
| Interference with mood | 1.08 (0.97-1.22) | 0.150 |
| Interference with walking | 1.09 (0.97-1.23) | 0.140 |

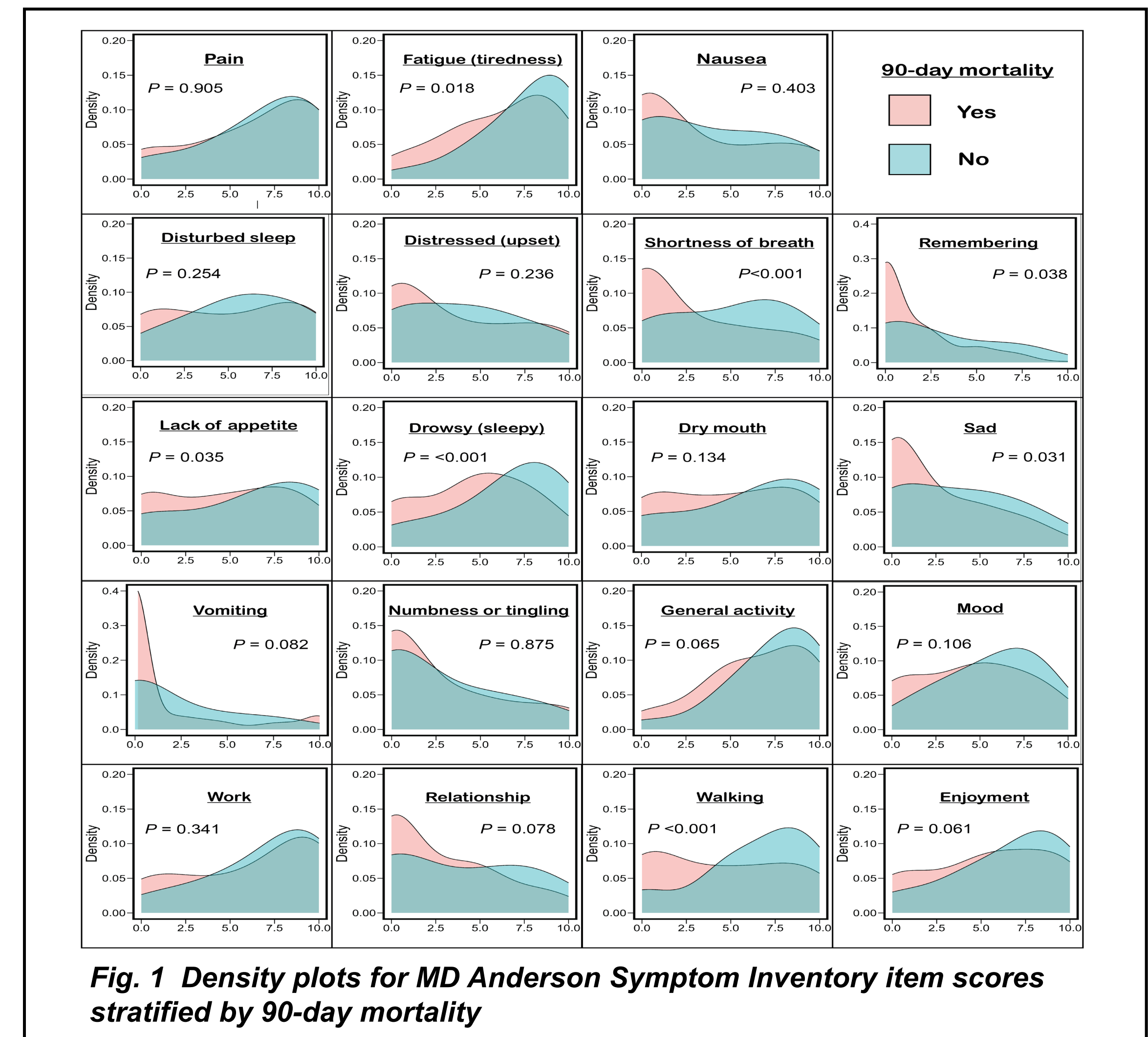


Fig. 1 Density plots for MD Anderson Symptom Inventory item scores stratified by 90-day mortality

Conclusions

Severe symptoms and symptoms that significantly interfere with daily living in patients with advanced cancer presenting to the emergency department (ED) are closely linked to poor short-term survival outcomes. These symptoms often signal the progression of the disease and are key indicators of the patient's overall prognosis. Recognizing these symptoms, even if they are not the primary reason for the visit, is crucial for providing comprehensive care. Additionally, taking these symptoms into account when making care decisions—whether it's about treatment options, palliative care, or end-of-life planning—can lead to improved patient outcomes, including potential survival benefits, better quality of life, and more informed decision-making.

References

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