Use of Distress Screening To Identify Shorter Life Expectancy in Patients with Advanced Cancer Newly Referred to Palliative Care

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Dear Editor:

Patients with advanced cancer are frequently referred to palliative care (PC) providers for intensive symptom management as well as goals of care conversations. It is critical for PC providers to have an accurate approach to predicting life expectancy when caring for patients with advanced cancer. However, it is well documented that providers frequently over estimate prognosis at the end of life.^{1,2} Emerging evidence

suggests patient-reported outcomes (PROs) may provide more accurate prognostic information than clinical characteristics alone.³

As part of a larger project evaluating patient beliefs about their cancer symptoms and stress response, we collected information about performance status, quality of life (QOL), distress, and survival status. A third of the participants died during data collection and we wondered whether we could

TABLE 1. COMPARISON OF PATIENT CHARACTERISTICS AND PATIENT-REPORTED OUTCOMES BY 12-WEEK SURVIVAL STATUS

	<i>Survival status at 12 weeks from initial palliative care referral</i>			<i>p Value for ANOVA or chi-square</i>
	<i>Alive (n=6)</i>	<i>Declining (n=8)</i>	<i>Deceased (n=6)</i>	
Age mean (SD)	63.0 (±4.3)	62.3 (±2.6)	64.0 (±9.3)	ns
Race, n (%)				
White	5 (83)	8 (100)	6 (100)	ns
Nonwhite	1 (17)	—	—	
Gender, n (%)				
Male	3 (50)	2 (25)	6 (100)	ns ^a
Female	3 (50)	6 (75)	—	
Receiving anticancer				
Yes	4 (66)	5 (63)	3 (50)	
Treatments, n (%)				
No	2 (34)	3 (37)	3 (50)	ns
Cancer sites, n (%)				
All others	5 (83)	6 (75)	4 (66)	ns
Pancreatic	1 (17)	2 (25)	2 (34)	
PPS mean (SD)	47 (±15)	65 (±12)	52 (±17)	<0.05
Distress thermometer mean (SD)	2.5 (±1.7)	3.5 (±3.5)	8.0 (±1.5)	<0.05
Total reported symptoms mean (SD)	16.4 (±5.3)	14.5 (±8.1)	11.2 (±5.2)	ns
SF-36 mean (SD)				
PCS	23.3 (±4.9)	35.7 (±20.7)	34.9 9 (±5.3)	ns
MCS	42.8 (±23.9)	52.9 (±11.9)	51.3 (±13.4)	ns

^aSignificance level was $p < 0.05$ when compared deceased to alive and declining as a single group but not significant when compared alive to declining and deceased as one group.

MCS, Mental component score; ns, not significant; PCS, Physical component score; PPS, Palliative performance score; SD, standard deviation.

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have prospectively identified those patients. The purpose of this secondary analysis was to explore the use of PROs (i.e., total number of symptoms, QOL, and distress) to predict survival in patients with advanced cancer.

Patients ($n=20$) with advanced cancer newly referred to PC were enrolled. Data were collected at initial PC referral and after 6 weeks and 12 weeks. Age, gender, cancer type, palliative performance score (PPS), severity and total number of symptoms (out of 25 possible), QOL using the SF-36, and distress thermometer score were assessed at baseline. Survival status (alive, declining health, or deceased) at 12 weeks from PC referral was used as the grouping variable for analyses. Chi-square and analysis of variance were used to assess between-group differences in baseline predictor variables.

Mean age was 60.8 (± 5.4) years, 57% were men, and 95% were white. Most patients (60%) were receiving ongoing anticancer treatment (e.g., radiation, chemotherapy, and hormonal therapy). At 12 weeks from initial PC referral, six participants were alive, six were deceased, and eight were significantly declining in health and no longer attending appointments at the cancer center. The sample had a mean PPS of 55%, a mean distress score of 4, and 14.2 total symptoms. Patients *alive* at 12 weeks had significantly lower PPS scores at baseline than did patients in the other groups. Patients *deceased* at 12 weeks had significantly higher baseline distress scores than those in the other groups. No differences were found between survival status groups on demographic or clinical characteristics, QOL, or total number of symptoms (see Table 1 for description of the sample).

This study demonstrates that a single item distress screen may be a useful clinical prognostic indicator of life expectancy in patients with advanced cancer. The small sample size and a heterogeneous sample of cancer types are major limitations of this study. However, it is particularly noteworthy that a statistically significant relationship was found between distress

and survival status. In this secondary analysis, distress scores at the time of initial PC referral were significantly associated with survival status at 12 weeks after referral. Conversely, other potential indicators, including clinical and demographic characteristics, performance status, QOL, and symptom burden, were not associated with survival status at 12 weeks. Distress may be a useful clinical screening tool to identify patients at high risk of dying.⁴ Additional research is needed to verify this preliminary research.

References

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