## **Supplementary Online Content**

Penedo FJ, Natori A, Fleszar-Pavlovic SE, et al. Factors associated with unmet supportive care needs and emergency department visits and hospitalizations in ambulatory oncology. *JAMA Netw Open.* 2023;6(6):e2319352. doi:10.1001/jamanetworkopen.2023.19352

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This supplementary material has been provided by the authors to give readers additional information about their work.

ER visit	Univariate	Univariate		Multivariate		
Predictor	HR (95%CI)	P value	HR (95%CI)	P value		
Age	0.99 (0.98-0.99)	0.004	0.99 (0.98-0.99)	0.002		
Male (vs. Female)	0.97 (0.94-1.12)	0.66	NA N			
Race						
White (ref)	-	-	-	-		
Black	1.43 (1.13-1.82)	0.003	1.60 (1.22-2.09)	<.001		
Other	0.99 (0.67-1.48)	0.98	1.20 (0.79-1.82)	82) 0.40		
Hispanic (vs. Non-Hispanic)	0.45 (1.25-1.68)	<.001	1.39 (1.17-1.66)	<.001		
Charlson Score	1.17 (1.15-1.20)	<.001	1.16 (1.13-1.18)	<.001		
Uninsured (vs. insured)	1.65 (1.02-2.66)	0.04	1.16 (0.64-2.11)			
Active treatment	2.64 (2.15-3.23)	<.001	2.08 (1.67-2.59)	<.001		
Patient-reported outcomes						
Anxiety	2.19 (1.80-2.66)	<.001	1.49 (1.14-1.96)	0.004		
Depression	1.98 (1.63-2.41)	<.001	0.94 (0.71-1.25)	0.67		
Pain	2.78 (2.15-3.60)	<.001	1.39 (0.98-1.98) 0			
Fatigue	2.09 (1.50-2.91)	<.001	0.92 (0.62-1.38) 0.7			
Declined physical function	2.55 (2.11-3.09)	<.001	1.54 (1.20-1.99) <.			
Unmet supportive care needs	1.85 (1.58-2.17)	<.001	1.45 (1.20-1.74)	<.001		
Hospitalization	Univariate		Multivariat	Multivariate		
Predictor	HR (95%CI)	P value	HR (95%CI)	P value		
Age	0.99 (0.98-0.99)	<.001	0.98 (0.97-0.99)	<.001		
Male (vs. Female)	1.20 (1.04-1.39)	0.01	1.53 (1.15-1.80) <.001			
Race						
White (ref)	-	-				
Black	1.35 (1.06-1.72)	0.01	1.63 (1.24-2.13) <.00			
Other	0.98 (0.66-1.46)	0.92	1.39 (0.94-2.07) 0.			
Ethnicity						
Non-Hispanic (ref)	-	-				
Hispanic	1.17 (1.01-1.36)	0.03	1.23 (1.03-1.47)	-1.47) 0.02		
Charlson Score	1.20 (1.18-1.22)	<.001	1.16 (1.14-1.19)			
Uninsured (vs. insured)	1.57 (0.96-2.58)	0.07	1.25 (0.72-2.18)	0.42		
Active treatment	7.25 (5.34-9.83)	<.001	5.88 (4.25-8.11)	<.001		
Patient-reported outcomes						
Anxiety	1.67 (1.35-2.07)	<.001	0.96 (0.71-1.29)	0.78		
Depression	1.80 (1.46-2.01)	<.001	0.99 (0.73-1.33)	,		
Pain	2.35 (1.79-3.08)	<.001	1.14 (0.79-1.65)	· · · ·		
Fatigue	2.10 (1.51-2.92)	<.001	1.03 (0.70-1.54)	0.87		
Declined physical function	2.50 (2.06-3.03)	<.001	1.59 (1.24-2.05)	<.001		
Unmet supportive care needs	1.73 (1.47-2.05)	<.001	1.36 (1.13-1.63)	0.001		

## eTable 1. Factors Associated With Emergency Room Visits and Hospital Admissions

CI; confidence interval, HR; hazard ratio, ref: reference

Predictor	ER visit		Hospitalization	
	aHR (95%CI)	P value	aHR (95%CI)	P value
Age	0.99 (0.98-0.10)	0.001	0.98 (0.97-0.99)	<.001
Male (vs. Female)	1.13 (0.95 -1.33)	0.16	1.52 (1.28-1.80)	<.001
Race				
White (ref)	-	-		
Black	1.60 (1.22-2.10)	<.001	1.61 (1.23-2.12) <.00	
Other	1.21 (0.79-1.83)	0.38	1.41 (0.95-2.09) 0.09	
Ethnicity				
Non-Hispanic (ref)	-	-		
Hispanic	1.41 (1.19-1.69)	<.001	1.22 (1.02-1.46) 0.03	
Charlson Score	1.15 (1.13-1.18)	<.001	1.17 (1.14-1.19) <.00	
Uninsured (vs. insured)	1.21 (0.66-2.20)	0.54	1.31 (0.75-2.28) 0.34	
Active treatment	2.12 (1.70-2.64)	<.001	5.93 (4.28-8.23) <.001	
Patient-reported outcomes				
Anxiety	1.50 (1.14-1.97)	0.004	0.97 (0.72-1.31) 0.86	
Depression	0.96 (0.72-1.29)	0.79	0.99 (0.73-1.35) 0.96	
Pain	1.36 (0.95-1.95)	0.09	1.13 (0.78-1.6) 0.52	
Fatigue	0.93 (0.63-1.39)	0.93	1.04 (0.69-1.55) 0.85	
Declined physical function	1.56 (1.21-2.02)	<.001	1.62 (1.25-2.09)	<.001
Unmet SCN BPA status				
Completed BPA (ref)	-	-	-	-
Incomplete BPA	1.84 (0.97-3.50)	0.06	1.87 (0.98-3.56)	0.06
No SCN endorsed	0.71 (0.59-0.86)	<.001	0.78 (0.64-0.95)	0.02

**eTable 2.** Clinical Outcomes Associations With Incomplete BPAs, Completed BPAs, and No Unmet Needs Endorsed

aHR: adjusted hazard ratio, ref: reference, SCN: supportive care needs

Classe J. Details			
Domain	Item Bank	Number of items	Number of items to
		in the item bank	be administered*
Anxiety	PROMIS Bank v1.0	29	4-12
Depression	PROMIS Bank v1.0	28	4-12
Pain Interference	PROMIS Bank v1.1	95	4-12
Fatigue	PROMIS Bank v1.0	40	4-12
Physical Function	PROMIS Bank v2.0 (English)	165	4-12
	PROMIS Bank v1.2 (Spanish)		

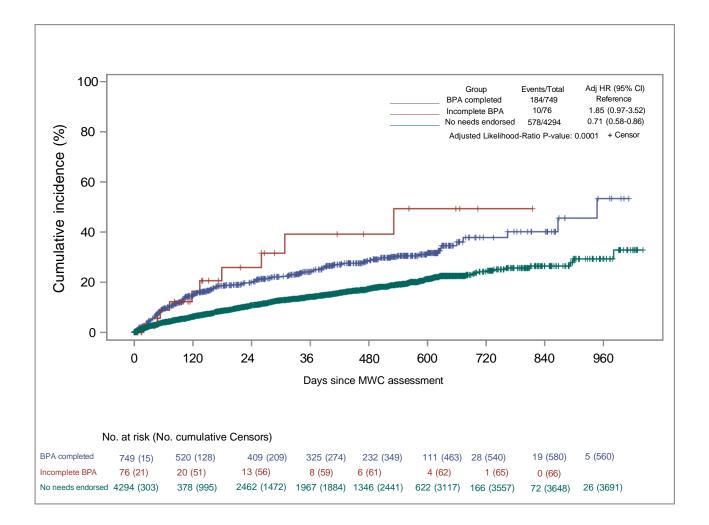
## eTable 3. Details of PROMIS-CATs

\*PROMIS measures are administered by a computerized adaptive test (CAT). CAT is a type of measure in which questions a person answers are tailored to that person by item response theory. CATs begin from an item bank which is a collection of items (questions) all measuring the same function/symptom and these items are ordered by level of difficulty/severity from low to high. CATs administer the first item which is one in the middle of the range of function/symptom severity. After the first response, the CAT algorithm using IRT selects the best item in the item bank based on an estimated score obtained by the prior response. The items are assigned until a standard error of 2 or less has been reached or 12 items were answered.

## eTable 4. List of Options in the Supportive Care Needs Assessment

Prompt "I would like for a treatment team member to contact me for help with (check all that apply):"
No needs at this time
Support to help me cope with my illness and/or manage stress
Financial/insurance concerns about my health care
Transportation resources
General education and information
Advance directives: medical actions to be taken if my health prevents me from making decisions (living will, power
of attorney, health care surrogate)
Family problems/family health concerns
Sexual health concerns
Housing needs/concerns
Oncofertility (ability to have children)
Work/school concerns
Spiritual/religious concerns
Childcare

**eFigure 1.** Cumulative Incidence of ER Visits Among Patients With Incomplete BPAs, Patients With Completed BPAs, and Patients With No Unmet Needs Endorsed



**eFigure 2.** Cumulative Incidence of Hospital Admissions Among Patients With Incomplete BPAs, Patients With Completed BPAs, and Patients With No Unmet Needs Endorsed

