

BACKGROUND

- Patient-reported outcomes (PROs) and Social Determinants of Health (SDoH) are used to explore patient needs individually, yet rarely in tandem.
- Baseline frailty status is used to identify patients who may need dose adjustments or drug change to decrease treatment toxicity or need additional support during treatment.
- Caregivers are often relied upon to provide the additional support needed when patients experience treatment side effects.
- PRO platforms, especially in oncology, make it possible to bring together PROs and SDoH in real-world care to identify patients potentially needing care escalation over time, with particular focus on the role of frailty and caregiver presence.
- This study aimed to explore quality-of-life (QoL), symptom burden, and tolerability in frail patients without caregivers in the real-world oncology clinical practice.

METHODS

- This retrospective study used pan-tumor data from patients enrolled in the Carevive PROMpt® PRO platform across multiple institutions from 9/2020 to 11/2024, who reported to be frail and had no caregiver.
- All patients reported baseline SDoH, race, and frailty, and completed weekly surveys assessing symptoms, physical function (measured by PROMIS 4A Physical Function), QoL (measured by the Global Health/QoL items of EORTC-QLQ C30) and treatment bother (measured by FACT-GP5) while on therapy. Patients were followed from baseline survey completion until the last completed survey or end of study period, whichever was earliest.
- Patient-reported SDoH assessed were aligned with the CDC's Healthy People 2030 SDoH domains¹ as shown below.

CDC domain	SDoH questionnaire
Economic stability	Insurance type, employment status
Education access and quality	Education level
Healthcare access and quality	Distance to care, insurance type
Neighborhood and built environment	Living situation (alone or with >1 other adults)
Social and community context	Caregiver status, living situation, marital status

- Symptom burden was measured by the number of alerts per patient per week generated by the moderate/severe symptoms report from PRO-CTCAE®-derived questionnaire.
- **Patient-reported tolerability (PRT)** was adopted with modifications from Brose et al. (2024)², defining **high treatment bother (HTB)** as response 3 ("Quite a bit") or 4 ("Very much") to the single item FACT-GP5 ("I am bothered by the side effects of treatment"). PRT and persistent HTB, defined as reporting HTB 76-100% of the time during follow-up, were described and further explored by living situation.

RESULTS

Table 1: Demographic and Clinical Characteristics

- A total of 206 patients were included. Median age was 69 (range: 31-88), 55% female, 84% white, with 12-week median follow-up (**Table 1**). Nearly half (49%) were on Medicare, 62% retired, 59% without college degree, 45% living >20 miles from the center, 60% married, and 80% (n=164) were living with at least one other adults (LAA).

	All Patients (n=206)	Living Alone (n=42)	Living With >1 Other Adult (n=164)
Sex, n (%)			
Female	113 (55)	30 (71)	83 (51)
Male	91 (44)	12 (29)	79 (48)
Unknown	2 (1)	0 (0)	2 (1)
Age at Enrollment			
Mean (SD)	66.9 (12.2)	69.8 (11.2)	66.1 (12.4)
Median (IQR)	69 (17.8)	70.5 (15.8)	68 (18)
Range	31-88	45-88	31-87
Race, n (%)			
White	174 (84)	36 (86)	138 (84)
Black	25 (12)	6 (14)	19 (12)
Other	7 (3)	0 (0)	7 (4)
Ethnicity, n (%)			
Non-Hispanic or Latino	166 (81)	30 (72)	136 (83)
Hispanic or Latino	4 (2)	1 (2)	3 (2)
Unspecified	36 (17)	11 (26)	25 (15)
Tumor Type, n (%)			
Multiple Myeloma	61 (30)	10 (24)	51 (31)
AML	50 (24)	12 (29)	38 (23)
Breast	40 (19)	9 (21)	31 (19)
Lung	33 (16)	4 (10)	29 (18)
Gastrointestinal (GI)	15 (7)	4 (10)	11 (7)
Gynecology	7 (3)	3 (7)	4 (2)
Cancer Stage, n (%)			
Early Stage (I-II)	48 (23)	13 (31)	35 (21)
Advanced Stage (III and Above)	64 (31)	11 (26)	53 (32)
Not Applicable or Unspecified	94 (46)	18 (43)	76 (47)
PRO Follow-Up Duration, Weeks			
Mean (SD)	16.8 (13.7)	15.3 (12.6)	17.2 (14.0)
Median (IQR)	12.1 (7.0)	12.1 (3.0)	12.2 (8.1)

- About 80% of patients (n=164) reported moderate/severe symptoms at least once, with a median of 2 alerts/patient/week and was similar by living situation (**Table 2**). Top symptoms that triggered an alert were fatigue, pain, neuropathy, constipation, and anxiety (**Figure 1**).

Figure 1: Overall Prevalence of Symptoms that Triggered an Alert (n=206)

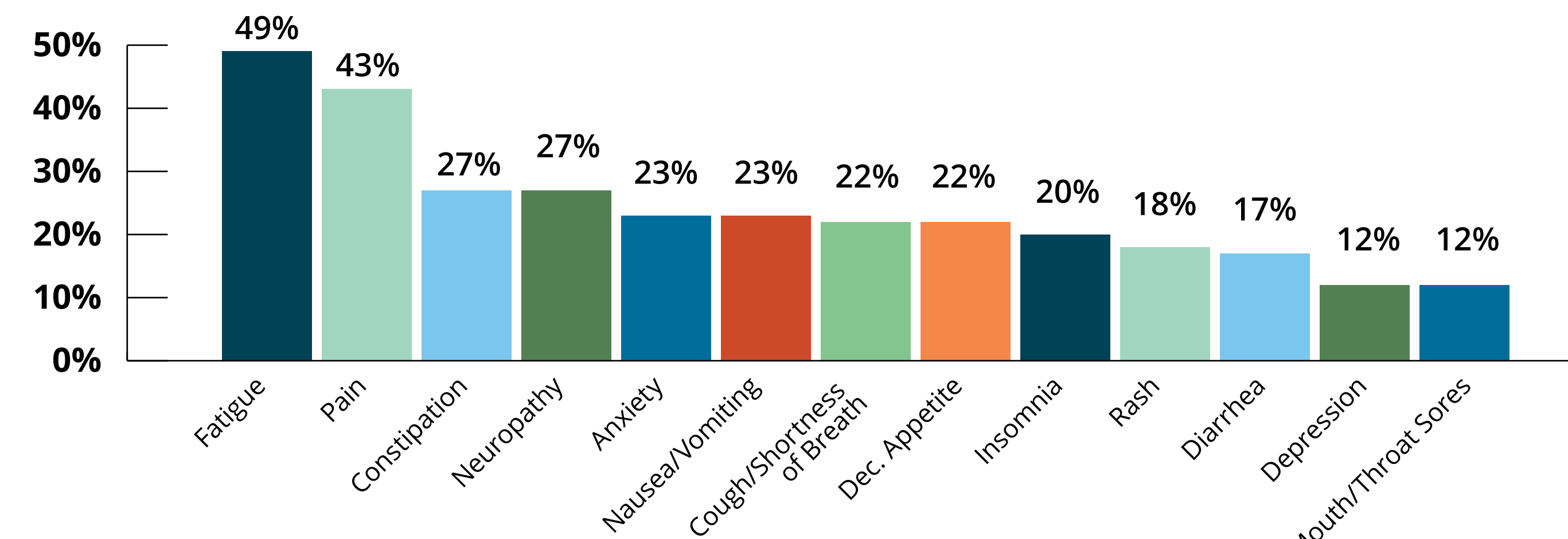


Table 2: Symptom Burden by Living Situation

No. of Alerts Per Patient Per Week	All Patients (n=206)	Living Alone (n=42)	Living With >1 Other Adults (n=164)
Mean (SD)	2.3 (1.8)	2.4 (2.0)	2.3 (1.7)
Median (IQR)	2.0 (2.0)	2.0 (2.0)	2.0 (2.0)
Min-Max	1-13	1-11	1-13

Figure 2: Overall PRT by Living Situation

- About 38% of patients (n=79) reported HTB at least once. Overall PRT showed those LAA had more persistent HTB than those living alone (7.7% vs 4.9%, respectively, **Figure 2**).

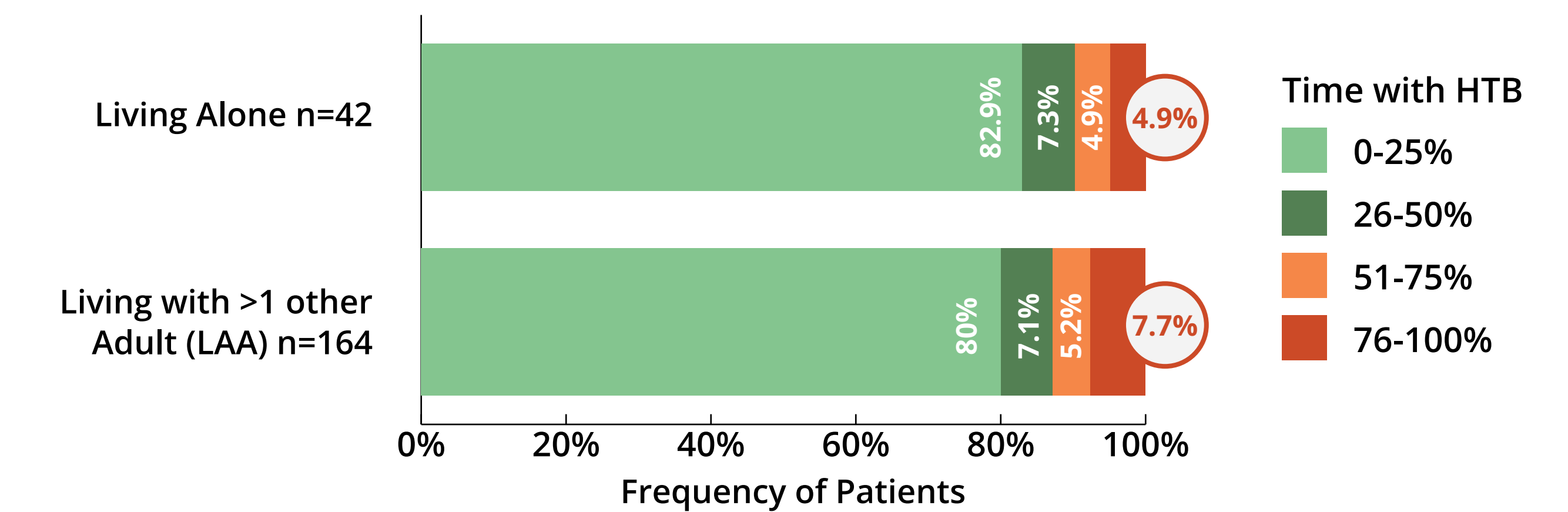


Figure 3: PRT Over Time by Living Situation

- For patients LAA, persistent HTB decreased from 9.2% in weeks 1-4 to 6.1% in weeks 5+ (**Figure 3a**). In contrast, patients living alone (LA) reported increased persistent HTB over time (4.9% vs. 7.1%, respectively, **Figure 3b**).

Figure 3a: PRT Over Time of Patients Livings with Other Adults (LAA)

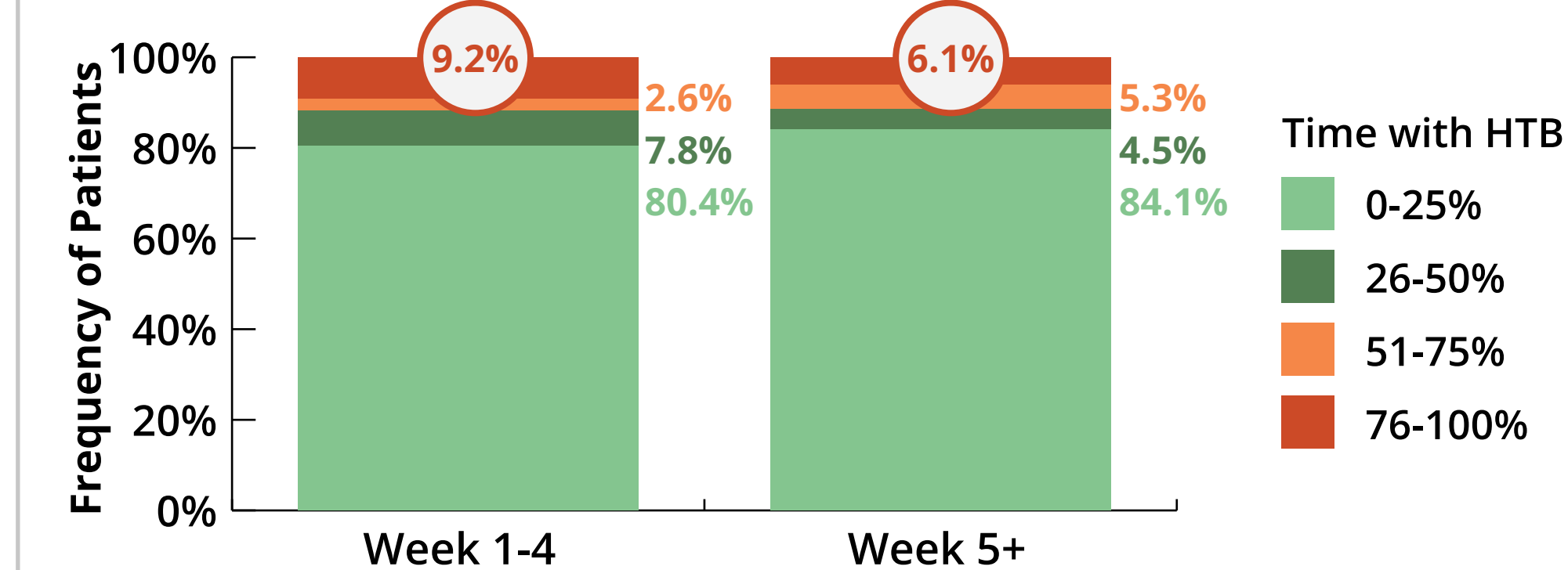


Figure 3b: PRT Over Time of Patients Living Alone

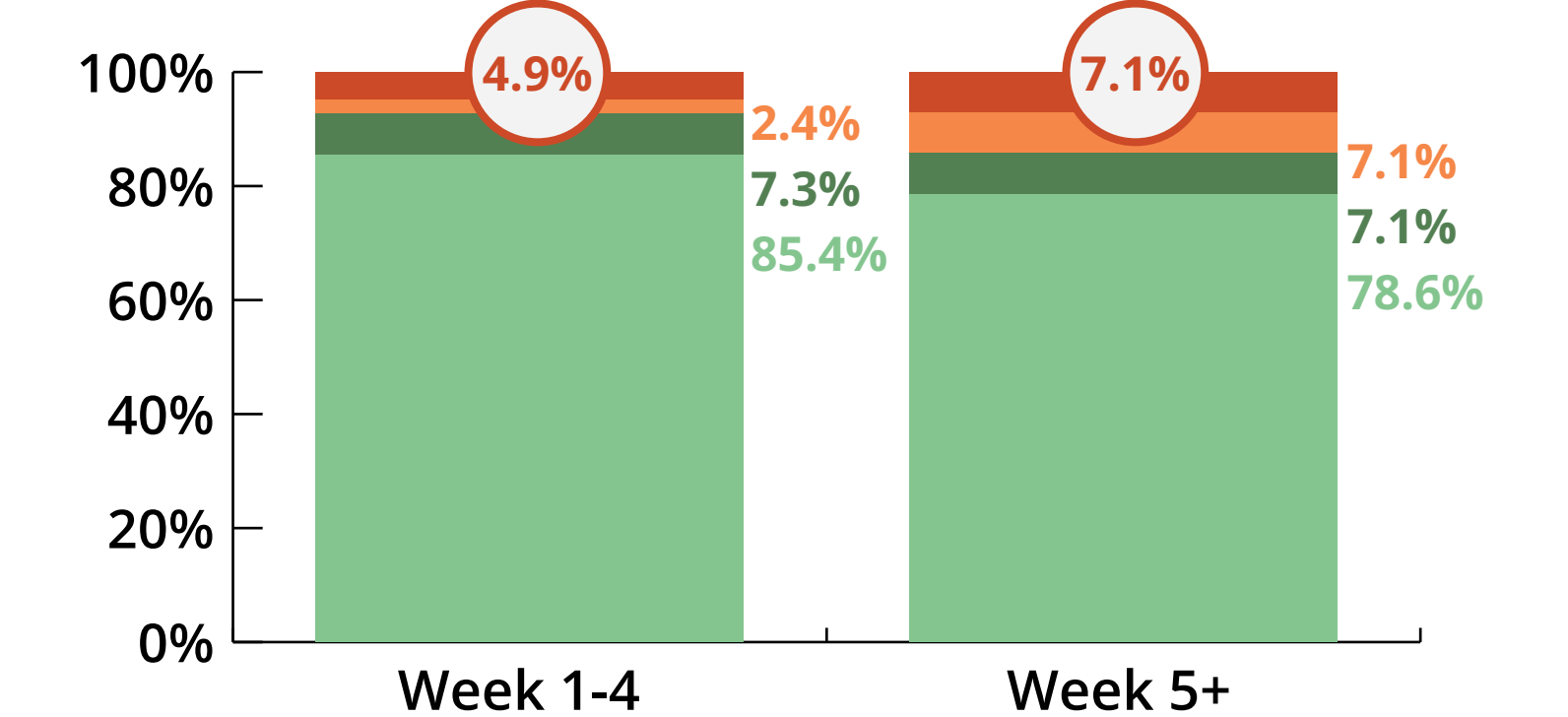
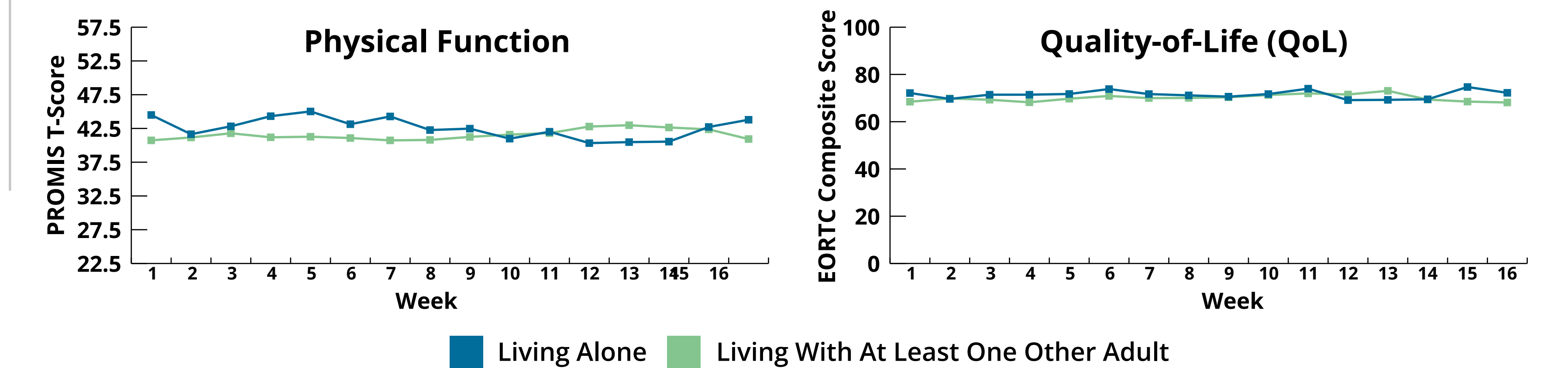


Figure 4: Function and QoL by Living Situation

- QoL and physical function were comparable between LA and LAA, with directional function decline was seen at 11 weeks in those LA (**Figure 4**).



CONCLUSIONS

- More than a third of patients experienced HTB at least once and overall persistent HTB was greater in patients LAA than those LA.
- However, findings suggested frail patients with caregiver absence who LAA reported decreased PHTB over time and those LA had increased PHTB.
- Frail patients LA may experience HTB and severe symptoms (including anxiety) over time, potentially warranting intervention.
- This demonstrates how PROs, coupled with SDoH data, in oncology practices can actionably bolster patient-centered care beyond clinic visits.

REFERENCES

1. Social Determinants of Health (Healthy People 2023). <https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health>. Date accessed March 20, 2025.
2. Brose M.S., et al. (2024). Comparative patient-reported tolerability (PRT): A multiplicity-controlled analysis of LIBRETTO-531, a randomized controlled trial (RCT) in medullary thyroid cancer (MTC). JCO, 42, 11111-11111. doi:10.1200/JCO.2024.42.16_suppl.11111

