

# Palliative Care Symptoms Assessment Tool (PCSA) and Palliative Care Referral Criteria Index (PCRCI) Major Criteria were equally effective at increasing Palliative Care Referrals

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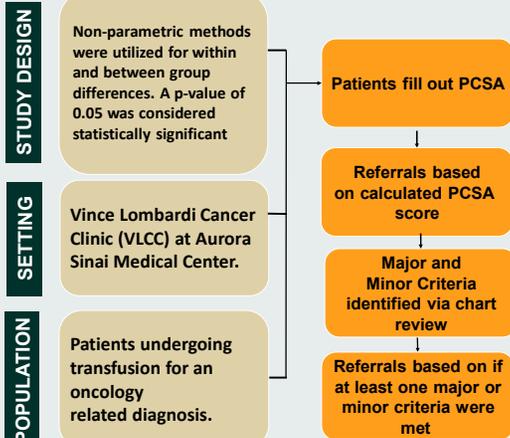
## BACKGROUND

- Early access to palliative care specialists can have a positive impact on quality of life through symptom management, reducing hospital admission and length of stay, improving overall patient care by addressing goals of care and health care directives, and even prolonging survival of patients with cancer.
- However, a main barrier to providing this care early and on-time is the difficulty in identifying patients who could benefit from it.

## OBJECTIVE

- To compare the effectiveness of the **Palliative Care Clinic Symptoms Assessment Tool (PCSA)** and the **Palliative Care Referral Criteria Index (PCRCI)** in appropriately identifying and creating an effective method for referrals to palliative care services, within the Vince Lombardi Cancer Clinic (VLCC) at Aurora Sinai Medical Center.

## METHODS



## RESULTS

**Table 1. Demographic characteristics of all patients (N=27)**

Gender	
Male, N (%)	17 (60.9%)
Female, N (%)	9 (38.0%)
Other, N (%)	1 (3.7%)
Ethnicity	
Non-Hispanic, N (%)	24 (88.9%)
Unknown, N (%)	3 (11.1%)
Age, $\bar{x} \pm \sigma$	59 $\pm$ 12

- A Z test for equality of proportions showed that the PCSA and the PCRCI Major Criteria referred a similar percentage of patients (88.9% vs 85.2%),  $p=0.69$ . By contrast, the PCRCI Minor Criteria referred significantly less patients than the PCSA (48.2% vs. 88.9%),  $p=0.001$ . (**Table 1**).
- A Fisher's Exact Test showed a statistically significant association between PCSA and PCRCI Major Criteria screening tools ( $p=0.05$ ), while the PCSA and PCRCI Minor Criteria show no association ( $p=0.22$ ). (**Table 2**).
- A Mann-Whitney U Test showed that the total PCSA scores were significantly different between those referred vs those not referred within the PCSA (Mdn=50.0, IQR=[24.0-79.0] vs. 6.0, [0.0-8.0]) and PCRCI Minor Criteria (61.0, [42.0, 84.0] vs. 20.5, [9.0, 57.0]) screening tools ( $p=0.01$  and  $p=0.02$ , respectively). The difference (referred vs not referred) in total scores were not statistically significant within the PCRCI Major criteria (42.0, [17.0, 83.0] vs. 39.0, [3.0, 73.5]),  $p=0.38$ . (**Figure 1**).

**Table 2. Patients Referred to Palliative Care by Screening Tool (N=27)**

Screening Tool	Referred N (%)		Difference (%)		
	Yes	No	%	95% CI	p-value <sup>a</sup>
PCSA	24 (88.9%)	3 (11.1%)	Ref.	Ref.	Ref.
Major Criteria	23 (85.2%)	4 (14.8%)	-3.7%	[+14.1%, -21.7%]	0.69
Minor Criteria	13 (48.2%)	14 (51.8%)	-40.7%	[-11.3%, -63.0%]	0.001

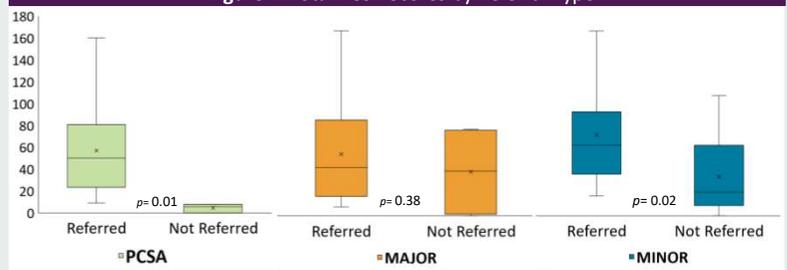
<sup>a</sup> p-value determined by Z test for equality of proportions, significance at  $p < 0.05$

**Table 3. Association between a successful Palliative Care Clinic Symptoms Assessment Tool (PCSA) referral and successful Palliative Care Referral Criteria Index (PCRCI) referral—both Major and Minor Criteria (N=27)**

Screening Tool	Screening Tool					
	PCRCI -Major Criteria N (%)			PCRCI -Minor Criteria N (%)		
	Yes	No	p-value <sup>a</sup>	Yes	No	p-value <sup>a</sup>
PCSA						
Yes	22 (81.5%)	2 (7.4%)	0.05	13 (48.2%)	11 (40.7%)	0.22
No	1 (3.7%)	2 (7.4%)		0 (0.0%)	3 (11.1%)	

<sup>a</sup> p-value determined by Fisher's Exact Test, significance at  $p < 0.05$

**Figure 1. Total PCSA Scores by Referral Type**



## CONCLUSION

- The PCSA and the major criteria were **equally effective at referring patients** while the Minor Criteria performed poorly. Future research should focus on whether the Major Criteria would still be as effective with the exclusion of the severe symptoms criteria, as severe symptoms are determined by the PCSA.

## References

- Walsh RJ, Mitchell G, Francis L, et al. What diagnostic tools exist for the early identification of palliative care patients in general practice? A systematic review. *J Palliat Care* 2015; 31(2): 118–123. [PubMed]
- Molin Y, Gallay C, Gautier J, et al. PALLIA-10, a screening tool to identify patients needing palliative care referral in comprehensive cancer centers: A prospective multicentric study (PREPA-10). *Cancer Med*. 2019;8(6):2950-2961.
- McDonald J, Swami N, Hannon B, et al. Impact of early palliative care on caregivers of patients with advanced cancer: cluster randomized trial. *Ann Oncol*. 2017;28(1):163-168