



Highly-Frequent Users of Emergency Services in a Canadian Cancer Centre

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Background

Among patients with cancer, highly-frequent users of Emergency Department (ED) services represent a small but care-intensive population. We aimed to describe highly-frequent ED users in a tertiary cancer center in Ontario, Canada.

Methods

We included patients with hematologic malignancies or solid tumors receiving treatment at Princess Margaret Cancer Centre (Toronto, ON). We evaluated ED and Urgent Care (UC) visits across our hospital network, which includes three university hospitals, from 2017 to 2022. We defined highly frequent users as patients with 10 or more visits within any 1-year period and identified them accordingly (Fig 1).

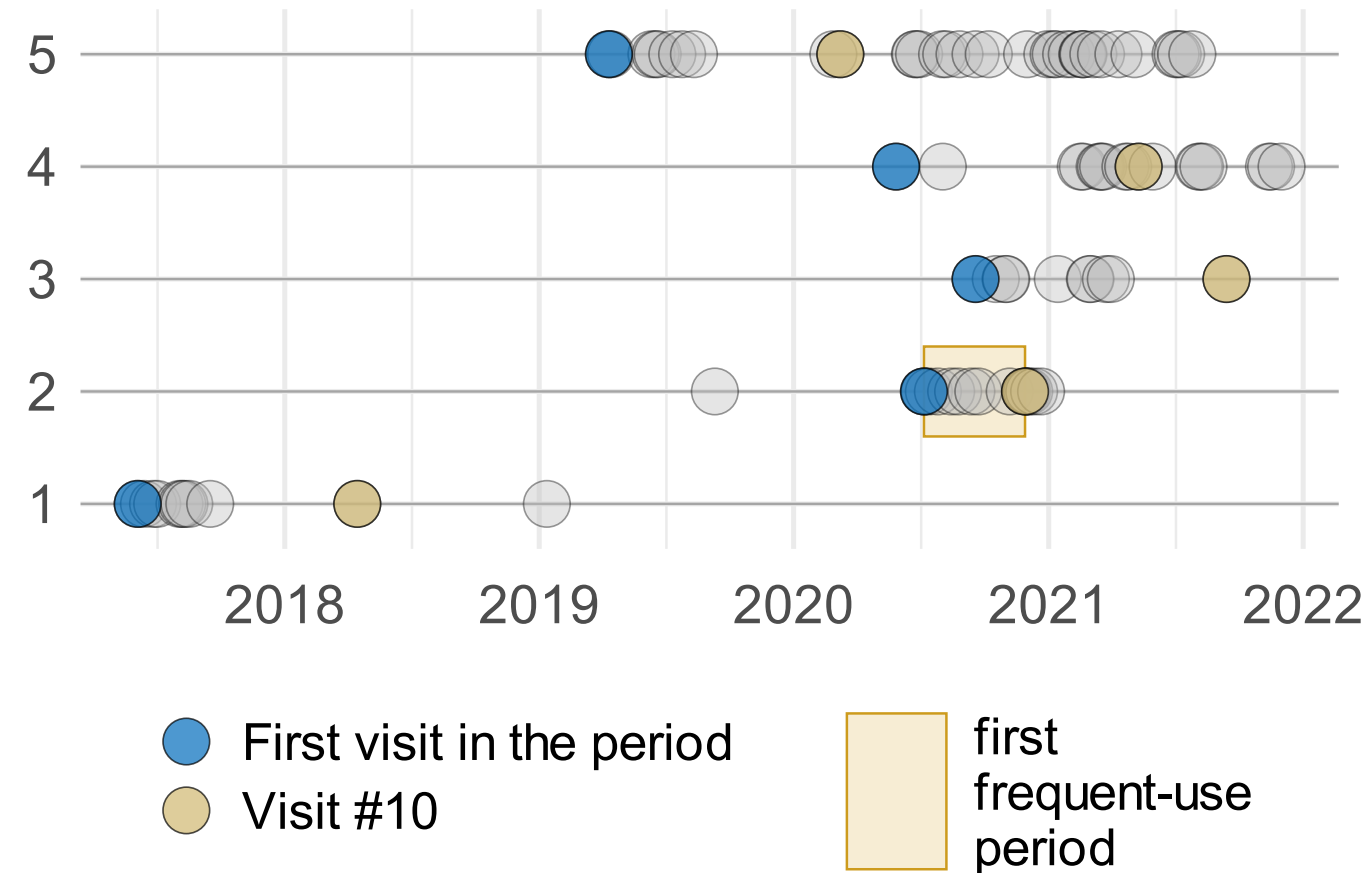


Fig. 1. ED Visits over time, sample of 5 patients. The first period of “high-frequency” utilization is highlighted for patient 2.

We conducted chart reviews to capture cancer diagnosis, treatment regimens, records of anxiety (or behavioural safety events), Palliative Care involvement and survival. Our primary objective was to determine whether highly-frequent users had a recurrent reason for most visits ($\geq 50\%$) during their first 1-year period of frequent ED utilization.

Results

We screened 79,496 ED visits from 2017 to 2022. Among 18,847 distinct patients, 210 (1.1%) met the definition of highly frequent ED users, accounting for 5.5% of all visits. Most had solid tumors (76%); Acute leukemia was the most common hematologic malignancy (11%; Table)

Table. Cancer Diagnoses Among Highly-Frequent ED Users.

	Malignancy	n (%)
Hematologic Malignancy (n=45)	Acute Leukemia	21 (10.6%)
	Lymphoma – MM	14 (7.1%)
	– Other Lymphoid	
	MPN-MDS	8 (4.0%)
	Chronic Leukemia	2 (1.0%)
Solid Tumor (n=151)	Ovarian	23 (11.6%)
	Renal and Urothelial	22 (11.1%)
	Hepatobiliary-Pancreas	17 (8.6%)
	GI	16 (8.1%)
	Prostate	16 (8.1%)
	Lung	15 (7.6%)
	Cervico-Uterine	14 (7.1%)
	Other Solid	28 (14.1%)
Multiple Cancers (n=2)	2 (1.0%)	

Most patients (75%) had a recurrent reason for their visits (Fig. 2). These included symptom management (27%; namely pain, dyspnea and malignant bowel obstruction), suspected infection (17%) and medical device or catheter malfunction (15%). Notably, 24% of all frequent users had a medical device, mostly nephrostomy tubes (Fig. 2).

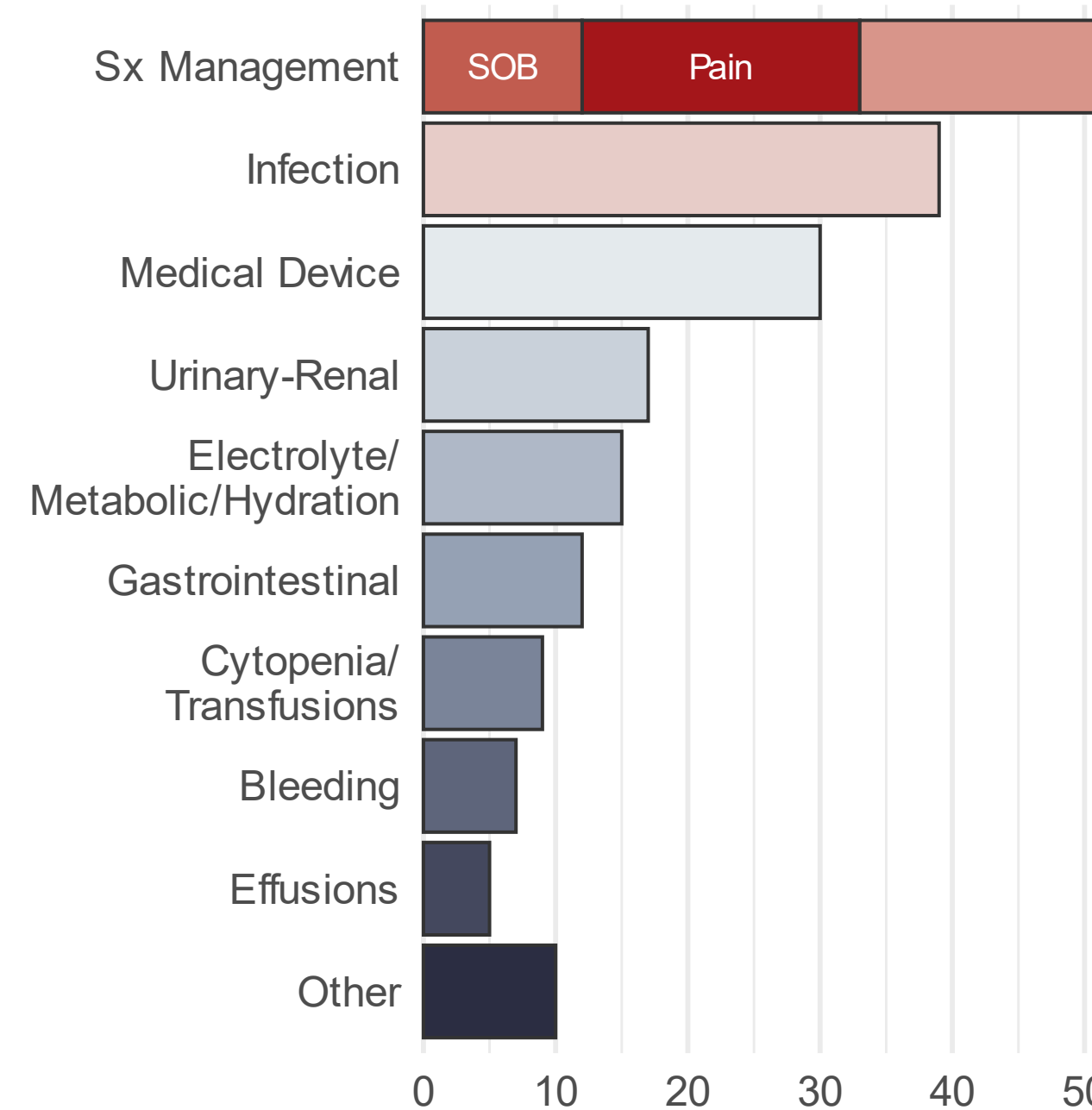


Fig. 2. Reasons for recurrent ED Visits by highly-frequent users.

Significant anxiety or distress was noted in 47% of frequent users. Palliative care assessment rose from 25% to 66% by the end of the period of interest. Patients with stage IV malignancies or acute leukemia (75% of our sample) had a median survival of 5.6 months after their 10th visit to the ED (95%CI: 4.5 to 9.7 months).

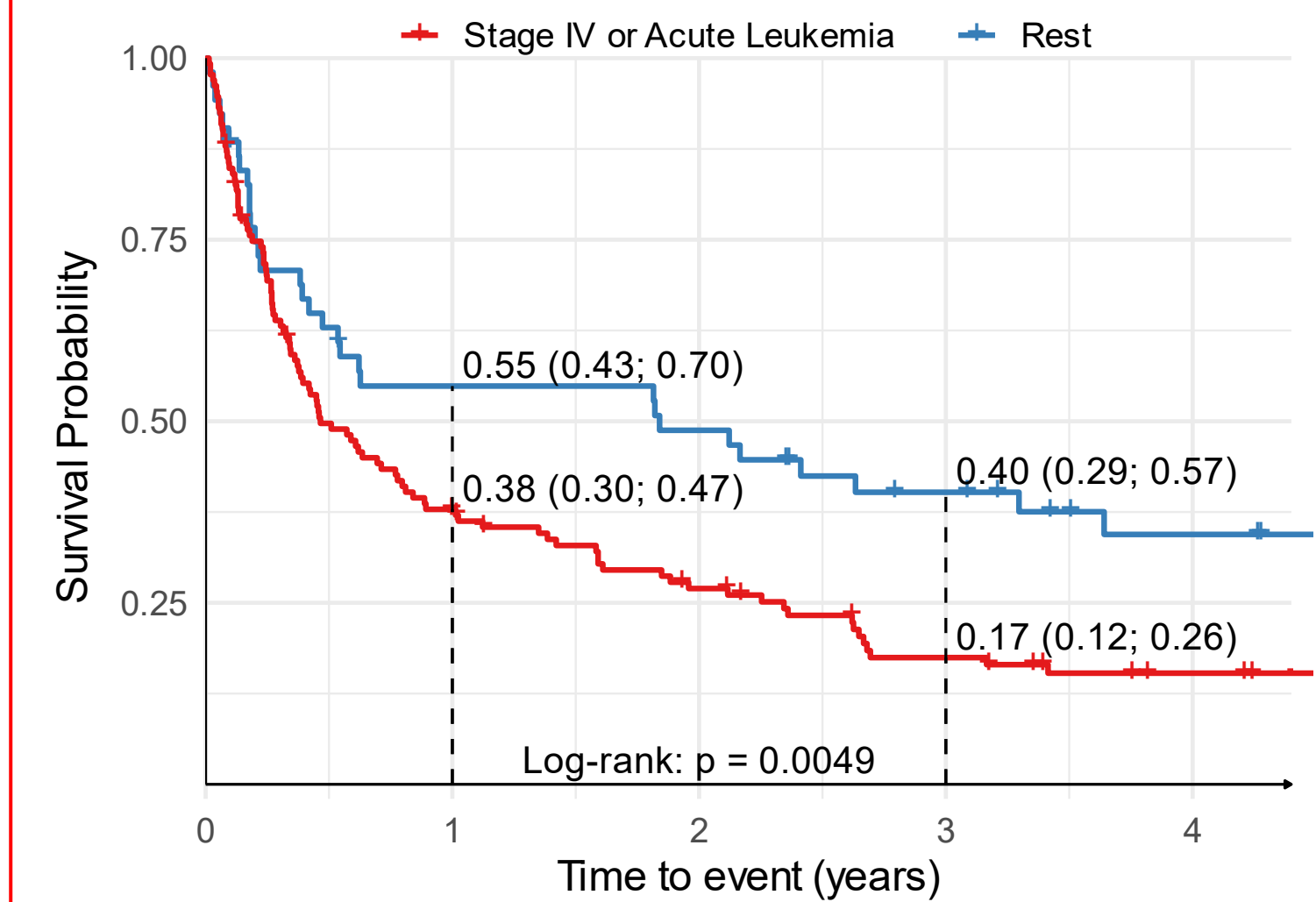


Fig. 3. Survival of highly-frequent ED users Survival after the 10th ED visit in a 1-year period.

Conclusions

Highly frequent ED users with cancer face unmet needs and insufficiently-controlled symptoms. A distinct reason for recurrent visits could be identified in 75% of cases. Our cohort showed a higher prevalence of medical device-related issues compared with general reports on ED utilization by adults with cancer. Targeted interventions focused on managing medical devices, expediting palliative access and enhancing social support systems may reduce ED use while improving patient care and experience.

References

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