Clinical Impact of Pharmacist-Led Oral Anticancer Agent Outpatient Monitoring

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Introduction & Intention

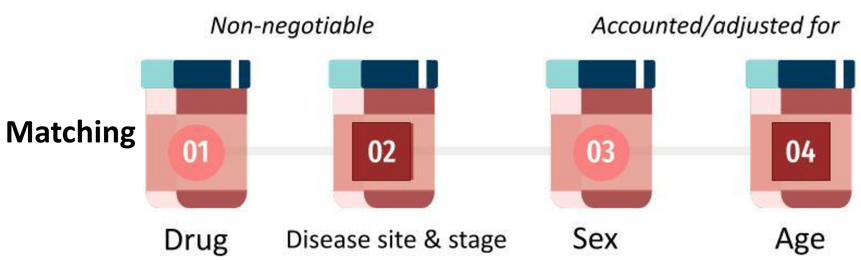
Oral anticancer agents encompass a major patient-centric advancement in therapy convenience, however, are associated with challenges such as novel toxicity profiles, frequent lab parameter monitoring, and the need for strict adherence for optimal effects [1]. As medication experts, oncology pharmacists are uniquely placed for monitoring patients receiving oral anticancer therapies [2]. Patients treated with oral anticancer agents in Atlantic Canada receive varying degrees of follow-up by oncology pharmacists - ranging from routine comprehensive proactive monitoring and intervention (St. John's, NL), to reactive programs that focus on bloodwork monitoring (Saint John, NB).

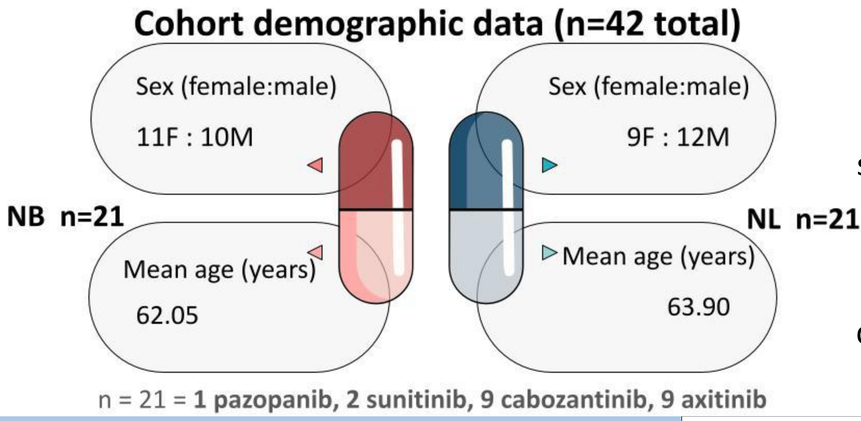
Objectives

- Compare tolerability of oral anticancer treatments in outpatients receiving proactive comprehensive pharmacist follow-up, to those with limited reactive pharmacist monitoring.
- Demonstrate the clinical impact of pharmacist-led oral anticancer outpatient monitoring programs to health authorities.
- Identify subpopulations that may experience greater benefit from routine pharmacist follow-up, as to stratify resources appropriately.
- Evaluate and extend understanding of patient-meaningful outcomes of pharmacist follow-up and intervention in an oral anticancer outpatient setting.

Hypothesis: tolerability of oral anticancer agents is improved with proactive comprehensive pharmacist-led monitoring, compared to limited reactive monitoring

Methods

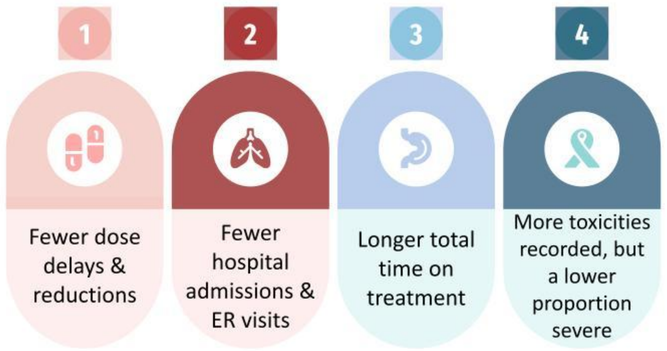




Cancer care is changing, the role of the pharmacist must too

A multi-centre retrospective matched cohort chart review was conducted between June 2015 and June 2023, based out of Dr. H. Bliss Murphy Cancer Centre (St. John's) and the Saint John Regional Hospital Oncology Program (Saint John). Patients included were treated with cabozantinib, pazopanib, sunitinib, or axitinib for renal cell carcinoma on an outpatient basis. Study cohorts were selected using cross-site pairwise matches to facilitate equal baselines.

Results & Discussion



The rigorous pharmacist-led monitoring program enabled increased documentation of toxicities within the NL cohort. Early detection and intervention by pharmacists significantly reduced the percentage of toxicities that were severe. Findings endorse maintenance/expansion of pharmacist-led programs within the study sites, as well as implementation/expansion within other jurisdictions. The data reveals value to all: the patient population, the health authorities, and pharmacy practice.

Table 1	NL (n=21)	NB (n=21)	
Mean total time on tx (days)	449	252	Duration ratio: 1.78 [95% CI 1.19-2.85] p = 0.0006
# ER visits	6	17	Incidence ratio: 0.35 [95% CI 0.11-0.94] p = 0.023
# hospital admissions	7	9	Incidence ratio: 0.78 [95% CI 0.25-2.35] p = 0.63
# toxicities	120	24	Incidence ratio: 5.0 [95% CI 3.21-8.11] p < 0.0001
# toxicities identified by pHc (% severe)	88 (12.5%)	9 (58%)	Incidence ratio: 9.78 [95% CI 4.92-21.1] p <0.0001
# phc interventions	79	39	Incidence ratio: 2.03 [95% CI 1.36-3.05] p = 0.0002
# phc encounters	137	201	Incidence ratio: 0.68 [95% CI 0.54-0.85] p = 0.0005
# dose delays (+ mean duration in days)	20 (17.3)	61 (10.2)	Incidence ratio: 0.33 [95% CI 0.19-0.55] p < 0.0001
# dose reductions (+ mean % received)	12 (56.08%)	14 (68%)	Incidence ratio: 0.86 [95% CI 0.36-2.0] p = 0.70

Future Directions

- Nova scotia data
- Intraprovincial comparisons
- Cost-based analysis

1. Thanki et al. 2013 J Control Release. 170(1):15-40
2. Huff et al. 2022. Clin J Oncol Nurse. 15;26(5):487-494.