SHIELDS HEALTH SOLUTIONS

Pharmacist-Driven Outcomes for Patients on Oral Oncology Medications: Clinical Impact of an Integrated Specialty Pharmacy Model

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SCAN ME

BACKGROUND

Oral oncology medications have been increasingly utilized; however, these therapies often involve complex regimens, intricate dosing schedules, and challenging side effect profiles, all of which contribute to patient nonadherence, therapy disruptions, and increased healthcare costs. To address these challenges, many health systems have implemented integrated specialty pharmacy (HSSP) models (**Figure 1**), which optimize coordination of care and offer comprehensive patient support. The objective of this evaluation was to highlight the impact of this type of care model on prescription adherence and outcomes within a patient population filling oral oncology medications through a HSSP.

Figure 1: HSSP Oncology Patient Journey

METHODS

Study Design: This was a retrospective, observational evaluation of patients filling oral oncology medications between January 4, 2021 and June 9, 2025 at oncology clinics associated with a large, academic medical center HSSP.

Inclusion Criteria: Patients enrolled in the integrated HSSP services with at least 2 fills of an oral oncology medication during the study period.

Primary Outcome: Pharmacist-led intervention types and the associated outcomes

Secondary Outcome: Medication adherence calculated by the proportion of days covered (PDC), average time on therapy for each medication, and patient-reported ER/hospitalization events related to their cancer diagnosis

Patient Identification and Data Analysis: Patients were identified from prescription fill records, and data extracted included demographics, prescription fill dates, medications dispensed, top medications needing intervention, and top reasons for interventions. Descriptive statistics were used to analyze the data.

RESULTS

Table 1 presents the characteristics and outcomes associated with patients who filled an oral oncology medication though the HSSP model. The top five medications dispensed were capecitabine (11.6%), venetoclax (8.3%), zanubrutinib (8.0%), temozolomide (6.4%), and abiraterone acetate (6.3%). A total of 379 unique pharmacist-led interventions were conducted, with the most common reasons displayed in **Figure 2**. Medications associated with a pharmacist-led intervention and the associated outcome are reported in **Figure 3**, organized in order of decreasing prevalence by medication and intervention outcome type.

Table 1: Patient Characteristics and Outcomes

Characteristic	N=6668
Age at initial fill (years)*	65
Sex (n, %) M F	 3466 (52) 3202 (48)
Outcomes	
PDC (%)	92
ER Visits (n, %) Hospital Utilization (n, %)	97 (1.5) 411 (6.2)
Time on therapy (days)*	306.2
Interventions (n)	379

*Average

Figure 2: Intervention Reasons (n=379)

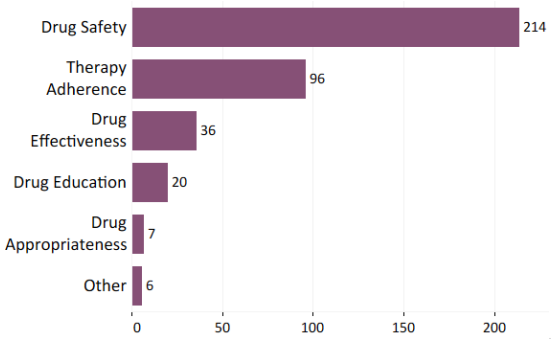

Figure 3: Intervention Outcomes (n=582)**

Medication	Improve Therapy Adherence	Prevent Therapy Complication	Resolve Side Effect	Eliminate Inappropriate Therapy	Eliminate Drug Interaction	Other	Total
TEMOZOLOMIDE	31	29	8	15	2	15	100
ABEMACICLIB	17	7	11		8	10	53
OSIMERTINIB	11	17	7			4	39
ACALABRUTINIB	8	5	5	2	6	6	32
CAPECITABINE	5	6	5	6		9	31
ABIRATERONE ACETATE	11	5	3	6		2	27
IMATINIB	4	4	7	2	1	4	22
LENVATINIB	9	6	2	2		3	22
VENETOCLAX	6	3	6		3	3	21
ZANUBRUTINIB	7	3	4		6	1	21
RUXOLITINIB	2	5		1	2	6	16
Other	46	49	31	17	20	35	198
Total	157	139	89	51	48	98	582

**Totals exceed number of interventions due to multiple outcomes for a single intervention

CONCLUSIONS

Pharmacist-led care within an integrated specialty pharmacy model demonstrates meaningful clinical value in the management of oral oncology therapies. Interventions contributed to improved adherence, mitigation of treatment-related complications, and reduced healthcare utilization. High-risk medications such as temozolomide, abemaciclib, and osimertinib required more frequent pharmacist engagement, highlighting the need for targeted monitoring in this population. These efforts not only improve clinical outcomes but may also contribute to cost avoidance for the health system.