Individualized Care Plans' Effect on Therapy Adherence for Patients Prescribed Olaparib

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Background

Importance of Symptom Management in Cancer Care

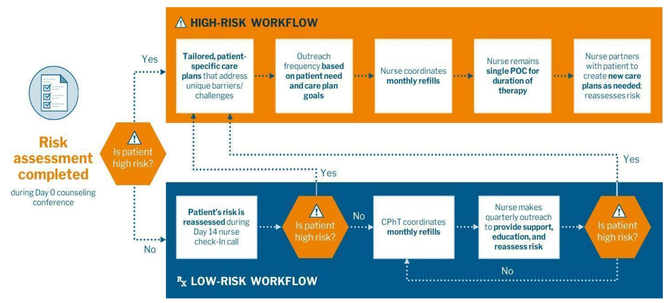
- Among patients with cancer, symptom management is an important part of maintaining quality of life and managing levels of physical and psychological distress.[1]
- Patients with cancer can receive uncoordinated and fragmented care across several health professionals and settings, which can leave symptoms under-detected and under-treated.[2]
- Studies have shown that approximately 50% of patients with cancer experience symptoms of fatigue, pain, or distress but largely do not communicate this to their providers.[3]
- When symptoms go undetected and unmanaged, the result can be medication nonadherence, early discontinuation, and poor health outcomes.[4]

Role of Specialty Pharmacy in Cancer Care

- Hospital-based, nurse-led case management has been shown to improve health-related quality of life and reduce healthcare utilization and costs among patients with cancer.[2,5,6]
- Little is known about the effects of nurse-led case management provided by specialty pharmacies, in the delivery and coordination of complex care in oncology.
- More patients are receiving cancer treatment at home due to rapid adoption of oral oncology medications, such as poly (adenosine diphosphate ribose) polymerase (PARP) inhibitors.
- Thus, it is important to understand whether and to what extent nurse-led case management provided by specialty pharmacies improves treatment continuation.

Risk-Based Care Program

Biologics by McKesson, a specialty pharmacy, implemented a Risk-Based Care (RBC) program in January 2020. Risk-Based Care is a personalized healthcare approach that leverages a nurse-patient relationship, to create tailored Care Plans that focus on every patient's unique challenges and barriers. In the Risk-Based Care model, clinicians conduct risk assessments to identify barriers to medication adherence and to better understand a patient's symptoms or concerns.



Per the risk assessment, patients who are at high-risk for medication nonadherence are automatically enrolled into the RBC program and are given increased support and intervention by a dedicated nurse who serves as their point of contact throughout their course of treatment. High-risk patients in the RBC program are eligible to receive personalized, symptom-focused Care Plans from a nurse. The nurse communicates with the patient as of the as they need (e.g., weekly, monthly).

Objectives

1. To evaluate the effects of a nurse-led personalized Care Plan on Time on Therapy (TOT) for patients on olaparib who are at high-risk of medication nonadherence (high-risk Care Plan patients)
2. Among high-risk Care Plan patients, to explore differences in TOT in the following subgroups:
    - Patients who received a dose reduction vs. patients who did not
    - Patients who were identified as having a Care Plan symptom resolution vs. no resolution

Methods

Intervention

All high-risk patients (n=560) taking olaparib in the RBC program were eligible to receive personalized, symptom-focused Care Plans from a nurse. Of these, n=163 received at least one Care Plan (high-risk Care Plan group) and n=397 did not receive any Care Plans (control group).

Data

Data from January 2020 to June 2022 were obtained from an independent specialty pharmacy (Biologics by McKesson), including demographic characteristics, olaparib prescriptions dispensed, indication for olaparib, risk level, Care Plan status*, Care Plan details (e.g., symptoms, resolution)*, treatment discontinuation*, and adverse events*.

Study Design

- A retrospective cohort study design was used to compare the duration of olaparib therapy for patients in the high-risk Care Plan group and the control group.
- The date of the first dispense of olaparib was defined as the index date. Patients were followed up from the index date until treatment discontinuation or the end of the study period, whichever occurred first.
- TOT was compared between Care Plan and control groups using Mann-Whitney U test. Within the Care Plan group, TOT was compared among subgroups who had at least one dose reduction or symptom resolution.

Outcomes

- TOT of olaparib therapy, defined as the number of days between the first fill and the last fill, plus the days' supply of the last fill
- Differences in the TOT between groups

Inclusion Criteria

- Age ≥18 years
- High-risk for medication nonadherence, as assessed using a survey administered during the pharmacy intake process
- Filled ≥1 olaparib prescription

**Data documented by a clinician*

Results

Demographic and Clinical Characteristics

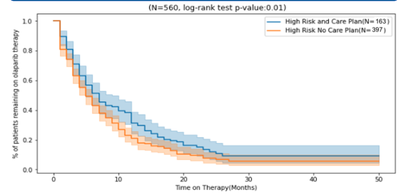
	All (n=560)	Care Plan (n=163)	No Care Plan (n=397)	p-value
Age, mean (SD), years	61.7 (12.8)	62.2 (12.9)	61.5 (12.8)	0.574
Median Age [IQR], years	62.0 [54.0-71.0]	61.0 [53.0-70.0]	63.0 [55.5-71.0]	0.252
Sex, n (%)				
Female	473 (84.8%)	146 (89.6%)	327 (82.8%)	0.058
Male	85 (15.2%)	17 (10.4%)	68 (17.2%)	
Caregiver, n (%)				
Yes	474 (84.6%)	133 (81.6%)	341 (85.9%)	0.249
No	86 (15.4%)	30 (18.4%)	56 (14.1%)	
Cancer Type, n (%)				
Breast	69 (12.3%)	15 (9.2%)	54 (13.6%)	0.156
Female reproductive organ (non-ovarian)	37 (6.6%)	10 (6.1%)	27 (6.8%)	
Gastrointestinal	17 (3.0%)	6 (3.7%)	11 (2.8%)	
Ovarian	271 (48.4%)	93 (57.1%)	178 (44.8%)	
Pancreatic	16 (2.9%)	3 (1.8%)	13 (3.3%)	
Prostate	51 (9.1%)	10 (6.1%)	41 (10.3%)	
Other cancer or not specified	99 (17.6%)	26 (16.0%)	73 (18.5%)	
Average Daily Olaparib Dose, n (%)				
<600 mg	194 (34.6%)	98 (39.9%)	129 (32.5%)	0.116
600 mg	366 (65.4%)	65 (60.1%)	268 (67.5%)	

Differences in TOT between high-risk patients with vs. without a Care Plan (n=560)

	Care Plan (n=163)	No Care Plan (n=397)	Differences in restricted mean survival time (95% CI)[b]	P-value[a]
Duration of therapy, median [IQR], months	6.7 [2.5-14.3]	4.9 [1.9-10.4]	2.9 [2.3-3.4]	<0.001

[a]Mann-Whitney test was used to compare duration of olaparib therapy between patients with vs. without a resolved symptom or dose modification.
[b]Restricted mean difference was compared duration of olaparib therapy between patients with vs. without a symptom resolution or dose decrease.
Abbreviation: IQR, interquartile range.

*Care Plan vs. No Care Plan**



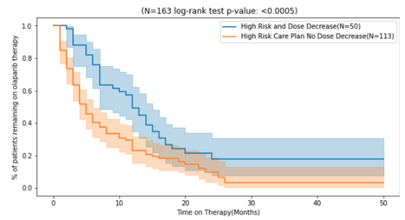
**Kaplan-Meier Survival Curves describing percentage of patients remaining on olaparib therapy among patients with cancer at high risk of medication nonadherence with vs. without a care plan (n=560)*

Subgroup analysis: TOT by symptom resolution or dose (n=163)

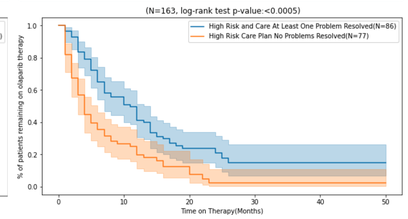
High-Risk Care Plan subgroup	Duration of therapy, median [IQR], months	Differences in restricted mean survival time (95% CI)[b]	P-value[a]
At least one symptom resolved (n=86)	10.3 [4.8-19.0]	8.1 [7.1-9.3]	<0.001
No symptom resolved (n=77)	3.9 [1.9-11.4]		
Dose decrease (n=50)	11.9 [6.7-17.8]	8.3 [7.2-9.4]	<0.001
No dose decrease (n=113)	4.7 [1.9-11.8]		

[a]Mann-Whitney test was used to compare duration of olaparib therapy between patients with vs. without a resolved symptom or dose modification.
[b]Restricted mean difference was compared duration of olaparib therapy between patients with vs. without a symptom resolution or dose decrease.
Abbreviation: IQR, interquartile range.

Dose decrease vs. No dose decrease[a]



Resolution vs. No resolution[b]



[a]Kaplan- Meier Survival Curves describing percentage of patients remaining on olaparib therapy by dose decrease or symptom resolution and [b] by symptom resolution among high-risk Care Plan patients (n=163)

Conclusion

- The Care Plan group had statistically significantly longer TOT (6.7 vs. 4.9 months, p<0.001) and lower risk of discontinuing treatment (aHR 0.77, 95% CI 0.64-0.94) compared with the control group.
- The effect on TOT was more apparent among patients in the Care Plan group who experienced symptom resolution or dose modification.
- These findings suggest the effectiveness of a nurse-led, personalized care approach for increasing TOT among patients receiving olaparib for treatment of cancer.

References

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