

# Assessing pharmacoequity in PARPi therapy utilization and HCRU outcomes in ovarian cancer patients

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## Objectives

This study seeks to uncover potential racial inequities in the utilization of poly(ADP-ribose) polymerase inhibitors (PARPi) for patients diagnosed with ovarian cancer (OC) in the US. By examining the potential disparities, this research will enable healthcare providers to improvise strategies that ensure equitable access and optimize treatment outcomes across diverse patient populations.

## Methods

- Optum® de-identified Market Clarity database was used for this retrospective study, which deterministically links medical and pharmacy claims with EHR data from providers across the continuum of care.
- The study period was from Jan 2013 to Jun 2023, the OC patients were identified in the US using ICD-9-CM and ICD-10-CM codes from Jan 2014 to Dec 2021.
- A 12 months pre-index period and a minimum of 18 months post index period were considered. The end of follow-up period was based on enrollment end date/the last month with clinical activity, end of study period, or death.
- Total 60,629 adult female members were selected by applying the continuous enrollment / clinical activity criteria. Total 52,517 incident subjects were identified with no claims or clinical activity related to OC in the baseline period.
- Demographic analysis was conducted for the overall incident patients and PARPi treated patients.
- Kaplan-Meier (KM) curves were plotted to visualize racial disparities during the period from OC diagnosis to initiation of PARPi therapy, accounting for differential follow-up time and censoring.
- The post-hoc Kruskal-Wallis test was performed to evaluate racial differences in the utilization of various place of services (POS) for OC care.

## Results

Table 1: Demographic characteristics of patients with OC and patients with PARPi therapy

Demographics	Pts w/ OC (n=52,517)	Pts w/ PARPi therapy (2,939)
Mean Age (SD), yrs.	58.22 (14.58)	61.08 (11.08)
Insurance type (%)		
Commercial	62.28%	66.84%
Medicaid	11.40%	7.90%
Medicare	26.33%	25.26%
Race/Ethnicity		
Asian	2.31%	2.99%
African American	10.43%	7.45%
Caucasian	82.04%	84.17%
Hispanic	5.22%	5.39%

Figure 1: PARPi treatment utilization: African Americans vs Caucasians

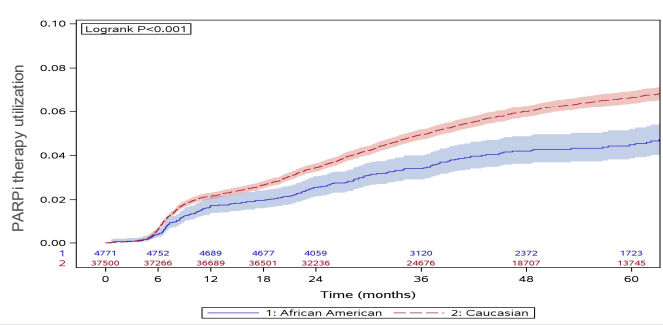
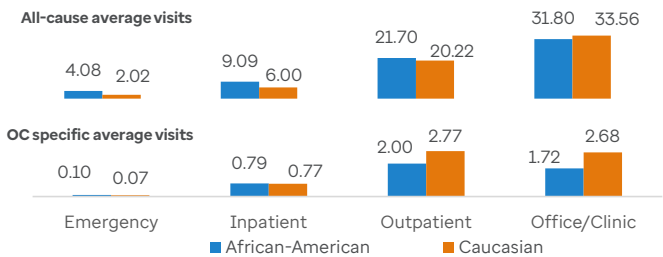


Figure 2: Mean patient visits in different PoS for African Americans and Caucasians



- Demographic characteristics suggest a mean age of 58.2 years for patients diagnosed with OC, while 68.1 years is the mean age of OC patients undergoing PARPi therapy (Table 1).
- Kaplan-Meier estimations over five years show a prominently higher proportion of Caucasians receiving PARPi therapy compared to African Americans, with steeper curves indicating faster treatment initiation for Caucasians (Fig. 1).
- The proportion of Caucasians having PARPi therapy is 6.7%, while the proportion of African Americans is 4.5% at 5 years.
- Physician's office/clinic and outpatient visits rank the highest among different POS for African Americans and Caucasians, in case of both all-cause and OC specific visits.
- Caucasians had a higher number of OC specific outpatient and office/clinic visits as compared to African Americans (Fig. 2).
- Kruskal-Wallis test with post-hoc analysis for OC-specific outpatient visits (Fig. 2) shows that Caucasians (mean: 2.77) significantly outnumber African Americans (mean: 2.00) ( $p < 0.05$ ). Similarly, for OC specific office/clinic visits, a significantly higher ( $p < 0.05$ ) Caucasian visits (mean: 2.68) are evidenced as compared to the African Americans (mean: 1.72).
- However, OC specific emergency visits were significantly higher ( $p < 0.05$ ) in case of African-Americans (mean: 0.10) relative to Caucasians (mean: 0.07). OC specific inpatient visits for African Americans are also marginally higher (mean: 0.79) compared to Caucasians (mean: 0.77).

## Conclusions

- A steeper KM curve for the Caucasians reflects a faster treatment initiation for the Caucasians in comparison with African Americans.
- A significantly higher number of outpatient and physician's office/ clinic visits was observed for Caucasians as compared to African Americans for OC specific visits. However, contrary findings were seen for emergency department visits.
- Additionally, follow-up visits indicated a higher rate of PARPi therapy for Caucasians compared to African Americans over 5 years.
- Examining the association between county-level percentage of population from racial minority groups and the corresponding PARPi treatment pattern would paint more colors on the high-cost drug therapy utilization.