Treatment Patterns Among Patients with Advanced/Recurrent Endometrial Cancer in the United States

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Background

- Endometrial cancer (EC) is the sixth most commonly diagnosed cancer in women in the United States, and its incidence and mortality have increased in recent years[1,2]
- In the United States, approximately 10%–15% of women present with advanced disease at diagnosis, which is associated with a worse prognosis, an increased likelihood of recurrence, and limited treatment options[1,2]
- For patients with advanced or recurrent EC, platinum-based chemotherapy regimens are preferred for first-line (1L) treatment[2]
- Regardless of the treatment approach, the median overall survival (OS) for patients with advanced or recurrent EC treated in clinical trials is ≈1 year[2]

Conclusions

- Among patients with advanced/recurrent EC treated with first-line (1L) platinum-based chemotherapy, platinum-based regimens remained prevalent treatment choices in later lines of treatment, and immunotherapy was used infrequently overall
- Median time to next treatment (TTNT) decreased with each subsequent line of treatment
- The limitations of this study include the retrospective observational design and the limitations of the database itself, such as the inability to uniformly capture encounters outside the Optum network, coding inaccuracies or missing data, and the possible underreporting of patient death data
- This study highlights a critical need for novel, more effective therapy options in later lines of treatment to optimize outcomes among patients with advanced/recurrent EC

Abstract 291

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Objective

- To describe patient characteristics, treatment patterns, TTNT, and OS among patients with advanced/recurrent EC treated with a 1L platinum-based regimen in a real-world setting in the United States

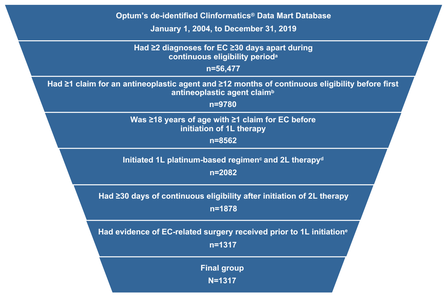
Methods

- This retrospective study used data from Optum's de-identified Clinformatics® Data Mart Database from January 1, 2004, to December 31, 2019
- This analysis included adult patients with advanced/recurrent EC who received a 1L platinum-based regimen (carboplatin, cisplatin, or oxaliplatin), had evidence of EC-related surgery before 1L treatment initiation, and subsequently initiated second-line (2L) antineoplastic therapy
- To ensure that the antineoplastic therapy did not occur in response to indications other than EC, all patients were required to have ≥12 months of continuous enrollment without any use of antineoplastic agents (except hormonal agents) before the start of 1L treatment; >30 days of continuous eligibility after the initiation of the last observed line of treatment was also required
- The index date was defined as the date of initiation of 1L treatment with a platinum-based antineoplastic agent; patients were followed from index date until the end of continuous eligibility, death, loss to follow-up, or end of data availability, whichever occurred first
- The number of lines of treatment that patients received, the sequence of treatments received, and the proportion of patients who received each type of treatment for each line of treatment were assessed
- Kaplan-Meier rates were used to report OS from 2L treatment and TTNT from 2L, third line (3L), and fourth line (4L) separately

Results

- In total, 1317 patients with advanced/recurrent EC who received 1L platinum-based chemotherapy and initiated 2L treatment were included in the analysis (Figure 1)

Figure 1. Patient Attrition



[a]Patients with EC were identified using ICD-9-CM codes 179.x and 182.x and ICD-10-CM codes C54 and C55; [b]Patients must not have any record of treatment with an antineoplastic agent (excepting a hormonal agent) in the 12 months before 1L treatment initiation; [c]Platinum-based regimens included carboplatin, cisplatin, and oxaliplatin; [d]Initiation of 2L treatment with a chemotherapy, immunotherapy, or targeted therapy agent; [e]EC-related surgery included hysterectomy (subtotal, total, radical, or unspecified), salpingo-oophorectomy, or total hysterectomy + bilateral salpingo-oophorectomy + omentectomy.
1L, first-line; 2L, second-line; EC, endometrial cancer; ICD-9-CM/ICD-10-CM, International Classification of Disease, Ninth/Tenth Revision, Clinical Modification.

- At index date, median patient age was 68 years, and the median time between first EC diagnosis and initiation of 1L treatment was 2.4 months (Table 1)

Results *(cont'd)*

Table 1. Demographic and Clinical Characteristics

	Overall population (N=1317)
Demographic characteristics at index date[a]	
Median age, years	68.0
Year of index date, n (%)	
2005–2007	127 (9.6)
2008–2010	238 (18.1)
2011–2013	312 (23.7)
2014–2016	352 (26.7)
2017–2019	288 (21.9)
Insurance plan type, n (%)	
Medicare Advantage	698 (53.0)
Commercial insurance	619 (47.0)
Clinical characteristics prior to the index date[b]	
Time between first EC diagnosis and initiation of 1L, months	
Mean (StDev)	7.0 (12.7)
Median	2.4
Radiotherapy received, n (%)	190 (14.4)
Hormonal agents received, n (%)	106 (8.0)

[a]Demographic characteristics were evaluated on the index date; [b]Clinical characteristics were evaluated from the start of the eligibility period to the index date (ie, 1L initiation). 1L, first-line; EC, endometrial cancer; StDev, standard deviation.

- The median total follow-up time was 25.2 months following the index date
- During the overall follow-up time, 39.5% and 17.8% of patients received 3 or 4+ lines of treatment, respectively (Table 2)

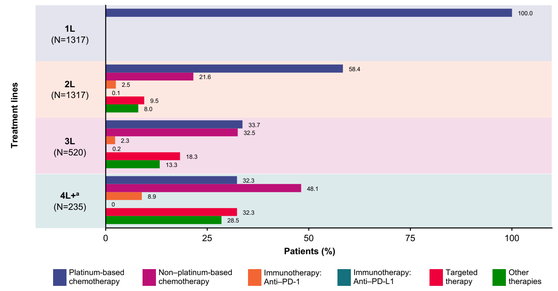
Table 2. Duration of Treatment and Treatment-Free Interval by Treatment Line

	1L (N=1317)	2L (N=1317)	3L (N=520)	4L+[a] (N=235)
Duration of treatment,[b] months				
Mean (StDev)	4.4 (2.9)	3.9 (3.5)	4.5 (4.4)	3.7 (2.8)
Median	4.4	3.1	3.3	3.1
Duration of treatment-free interval,[c] months				
Mean (StDev)	9.1 (14.2)	10.7 (19.8)	4.5 (11.8)	2.5 (5.6)
Median	4.5	2.8	0.5	0.5

[a]Patients with >1 line included in the 4L+ section will have each line counted once (eg, a patient with a carboplatin-based regimen in 4L and a pembrolizumab-based regimen in 5L would count as 2 lines in the calculation); [b]Duration of treatment was defined as the time from the date of initiation of the line of treatment until the last day of supply of the medications used as part of the treatment regimen; [c]Duration of treatment-free interval was defined as the time from the last day of supply of the medications used as part of the treatment regimen to the date of initiation of the next line of treatment.
1L, first-line; 2L, second-line; 3L, third-line; 4L, fourth-line; 5L, fifth-line; StDev, standard deviation.

- Platinum-based chemotherapy was the most common 2L treatment, and chemotherapy use overall (platinum- or non–platinum-based regimens) remained common across all treatment lines examined (Figure 2)
- The percentage of patients who received targeted therapies increased with each line of treatment, increasing from 9.5% of patients in 2L to 32.3% of patients for 4L+; immunotherapy use remained low overall (Figure 2)

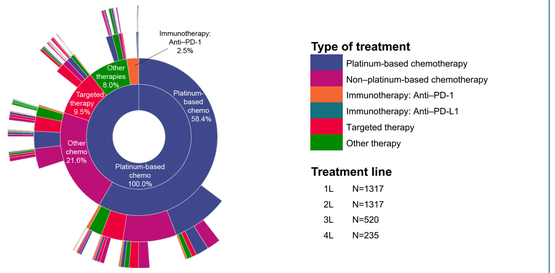
Figure 2. Percentage of Patients Who Received Each Treatment Type by Treatment Line



[a]Patients with >1 line included in the 4L+ section will have each line counted once (eg, a patient with a carboplatin-based regimen in 4L and a pembrolizumab-based regimen in 5L would count as 2 lines in the calculation).
1L, first-line; 2L, second-line; 3L, third-line; 4L, fourth-line; 5L, fifth-line; PD-1, programmed death 1; PD-L1, programmed death ligand 1.

- For 2L treatment, 58.4% of patients were re-treated with platinum-based chemotherapy, and re-treatment with chemotherapy remained common in later treatment lines (Figure 3)

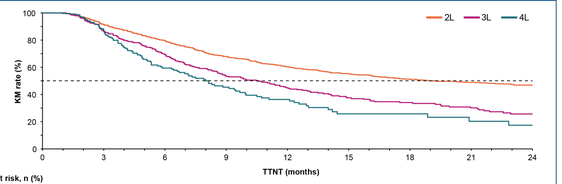
Figure 3. Treatment Sequence



Each ring represents 1 line of therapy, starting with 1L treatment in the innermost ring. The 4L ring shows treatments initiated in 4L only.
1L, first-line; 2L, second-line; 3L, third-line; 4L, fourth-line; chemo, chemotherapy; PD-1, programmed death 1; PD-L1, programmed death ligand 1.

- Median TTNT was 19.3 months from 2L to 3L, 10.5 months from 3L to 4L, and 8.1 months from 4L to 5L (Figure 4)

Figure 4. TTNT by Treatment Line

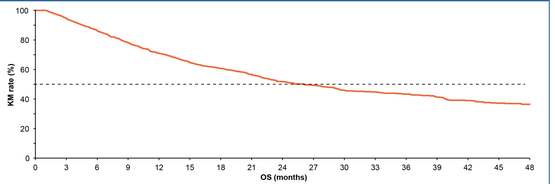


Patients at risk, n (%)							
2L	1082 (82.2)	789 (59.9)	568 (43.1)	427 (32.4)	346 (26.3)	291 (22.1)	218 (16.6)
3L	378 (72.7)	219 (42.1)	144 (27.7)	94 (18.1)	70 (13.5)	55 (10.6)	29 (5.6)
4L	164 (69.8)	76 (32.3)	47 (20.0)	32 (13.6)	14 (6.0)	10 (4.3)	6 (2.6)
KM rates (%)							
2L	91.3	79.4	68.0	60.4	55.3	51.1	46.9
3L	86.5	69.3	53.3	45.0	37.5	34.1	25.7
4L	86.3	59.4	45.4	36.4	25.8	25.8	17.4

TTNT was measured as the time from the initiation of a line of therapy to the date of initiation of the next line of therapy. Patients who did not initiate a next line of therapy were censored at the end of continuous eligibility, death, loss to follow-up, or end of data availability, whichever occurred first.
2L, second-line; 3L, third-line; 4L, fourth-line; KM, Kaplan-Meier; TTNT, time to next treatment.

- Following initiation of 2L treatment, the percentage of patients alive at 1, 2, 3, and 4 years were 70.9%, 51.7%, 43.3%, and 36.5%, respectively
- Median OS was 26.0 months (Figure 5)

Figure 5. OS Following Initiation of 2L Treatment



Patients at risk, n (%)	1197 (90.9)	1007 (76.5)	841 (63.9)	701 (53.2)	360 (27.3)	224 (17.0)	146 (11.1)
KM rates (%)	94.6	86.1	78.0	70.9	51.7	43.3	36.5

OS was defined as the time between the initiation of 2L treatment and the date of death. Patients alive at the end of their continuous eligibility period or at the end of data availability were censored.
2L, second-line; KM, Kaplan-Meier; OS, overall survival.

References

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2. Brooks RA, et al. *CA Cancer J Clin* 2019;69(4):258–279.

Acknowledgments

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Conflicts of Interest

Drs. Liu and Hurteau are current employees of GlaxoSmithKline. **Mr. Emond, Ms. Lafeuille, Mr. Lefebvre, and Ms. Ghelerter** are employees of Analysis Group, Inc., a consulting company that has provided paid consulting services to GlaxoSmithKline, which funded the development and conduct of this study and poster. **Dr. Maiese** was an employee of GlaxoSmithKline at the time analysis was conducted. **Mr. Emond** reports consulting fees from Janssen Scientific Affairs, Novartis, Pfizer, and Pharmacyclics. **Ms. Lafeuille** reports consulting fees from Janssen Scientific Affairs, Pfizer, and Pharmacyclics. **Mr. Lefebvre** reports consulting fees from Actelion, Janssen Scientific Affairs, Pfizer, Pharmacyclics, and Regeneron. **Ms. Ghelerter** reports consulting fees from Janssen Scientific Affairs, Novartis, and Regeneron. **Ms. Wu** was an employee of Analysis Group Inc. when the study was conducted and reports consulting fees from Janssen Scientific Affairs. **Dr. Thaker** reports institutional grants from GlaxoSmithKline and Merck; and personal fees from AstraZeneca, Celsion, GlaxoSmithKline, Iovance, Novocure, and Seagen.