Treatment Patterns and Time to Next Treatment Among Patients with OC in a Real-Life Setting in Finland: the OCRWE-Finland Study

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Background

- Ovarian cancer (OC) has a high mortality rate and has resulted in the death of more than 207,000 patients worldwide in 2020 alone[1]
- In Finland, there were approximately 560 new cases of OC and 360 deaths from OC in 2020[2]
- Most patients with OC have advanced disease at diagnosis, which is associated with a much worse prognosis than early-stage disease[3,4]
- Although the treatment landscape for OC has expanded in recent years to include antiangiogenic agents and maintenance treatment with poly(ADP-ribose) polymerase (PARP) inhibitors, the combination of surgery and chemotherapy remains a mainstay of first-line (1L) treatment[4,5]
- Real-world data investigating treatment patterns and outcomes in patients with OC in Finland are lacking

Objectives

- The retrospective OCRWE-Finland study was designed to evaluate the real-world burden of disease, treatment patterns, healthcare resource utilisation, and outcomes in patients with OC
- In this analysis, real-world treatment patterns and time to next treatment (TTNT) are reported for Finnish patients

Conclusions

- This study documents real-life treatment patterns across lines of treatment among patients with OC and high-grade serous OC (HGSOC) treated in Finland during the first years of disease
- These results can provide useful baseline information about the rapidly evolving treatment landscape in OC in recent years
- In patients with HGSOC with stage III or IV disease at diagnosis, surgery plus adjuvant chemotherapy was the most common 1L treatment
- Median TTNT was significantly shorter in patients with HGSOC with stage III or IV disease at diagnosis than in patients with stage I or II disease at diagnosis
- Median TTNT was significantly shorter in patients with HGSOC with stage III disease at diagnosis who had visible residual disease than in patients with no visible residual disease after surgery

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Methods

- OCRWE-Finland is a multicentre, retrospective, noninterventional study collecting hospital medical records from university hospitals in Helsinki, Turku, and Tampere
- Patients with ovarian, fallopian tube, or primary peritoneal cancer who were newly diagnosed as part of routine clinical care and who had received all OC treatments in these hospitals from 2014 to 2019 were included, constituting ≈50% of the Finnish OC population in that period
- Registry data were collected and combined by Findata (data holder), operating under the performance guidance of the Finnish Ministry of Social Affairs and Health
- For treatment pattern assessment, patients were grouped into categories for each line of treatment; maintenance therapies and antiangiogenic treatments were excluded from treatment line classifications
  - 1L: surgery only, surgery + adjuvant chemotherapy, neoadjuvant chemotherapy + surgery + adjuvant chemotherapy, chemotherapy only, and other
  - Second-line (2L) and third-line (3L): platinum-based chemotherapy and other chemotherapy
- For 1L treatment, chemotherapy included both platinum- and nonplatinum–containing regimens, and all drugs received within 49 days of one another were grouped together as 1L treatment
- Kaplan-Meier survival analysis was used to estimate the probability of TTNT
  - TTNT was defined as the time between the end of 1L treatment, not including maintenance therapies, and the beginning of 2L treatment, date of death, or loss to follow-up through the end of the study period (31 December 2019); patients who were lost to follow-up were censored
  - Patients who did not receive 1L treatment were excluded from the TTNT analysis
- All analyses were performed with RStudio, R version 4.1.0 (R Core Team 2021, R Foundation for Statistical Computing)

Results

- The analysis included a total of 1711 patients with OC diagnosed between 2014 and 2019
- Patient demographic and clinical characteristics are detailed in the Table
- In the overall population:
  - The mean age at diagnosis was 65.9 years
  - 50.9% of patients were overweight or obese, and 36.1% of patients were normal weight
  - The ovaries were the primary tumour site at diagnosis in 74.9% of patients
  - The most common histological type was serous
  - 50.6% of patients had advanced disease at diagnosis (stage III or IV)
  - 31.0% of patients who underwent debulking surgery had visible residual disease after surgery
- 867 (50.7%) patients in the overall population had HGSOC (Table)
- In patients with HGSOC:
  - The mean age at diagnosis was 68.6 years
  - 52.4% of patients were overweight or obese, and 37.7% of patients were normal weight
  - 74.4% of patients had advanced disease at diagnosis (stage III or IV)
  - 37.5% of patients who underwent debulking surgery had visible residual disease after surgery
- The *BRCA* mutation testing rate was low in both the overall and HGSOC populations

Results *(cont'd)*

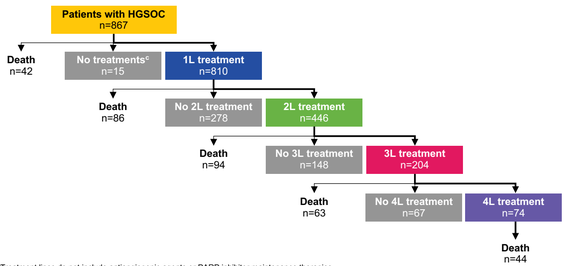
Table. Patient Characteristics

	All patients (N=1711)	Patients with HGSOC[a] (n=867)
Demographic characteristics		
Mean age at first diagnosis (StDev), years	65.9±13.4	68.6±10.8
Age at diagnosis, n (%)		
<40 years	67 (3.9)	179 (20.6)
40–59 years	428 (25.0)	
60–79 years	970 (56.7)	556 (64.1)
≥80 years	246 (14.4)	132 (15.2)
BMI, n (%)[b]		
Underweight: <18.5	38 (2.2)	18 (2.1)
Normal weight: 18.5–24.9	617 (36.1)	327 (37.7)
Overweight: 25–29.9	510 (29.8)	285 (32.9)
Obese: >30.0	361 (21.1)	169 (19.5)
Unknown	185 (10.8)	68 (7.8)
Year of initial OC diagnosis, n (%)		
2014	290 (16.9)	127 (14.6)
2015	260 (15.2)	117 (13.5)
2016	284 (16.6)	151 (17.4)
2017	287 (16.8)	161 (18.6)
2018	299 (17.5)	157 (18.1)
2019	291 (17.0)	154 (17.8)
Geographic region, n (%)		
Helsinki	1042 (60.9)	522 (60.2)
Tampere	363 (21.2)	220 (25.4)
Turku	306 (17.9)	125 (14.4)
Clinical characteristics		
Location at initial diagnosis, n (%)		
Ovaries	1281 (74.9)	586 (67.6)
Primary peritoneal	239 (14.0)	119 (13.7)
Fallopian tube	107 (6.3)	95 (11.0)
Other	84 (4.9)	67 (7.7)
Histological grading, n (%)		
Serous, high-grade	867 (50.7)	867 (100)
Serous	209 (12.2)	—
Serous, low-grade	60 (3.5)	—
Mucinous	107 (6.3)	—
Endometroid	102 (6.0)	—
Clear cell	78 (4.6)	—
Mesenchyme	65 (3.8)	—
Other	223 (13.0)	—
FIGO stage at initial diagnosis, n (%)		
I	382 (22.3)	92 (10.6)
II	89 (5.2)	45 (5.2)
III	574 (33.5)	442 (51.0)
IV	291 (17.0)	203 (23.4)
Unknown	375 (21.9)	85 (9.8)
BRCA mutation status, n (%)		
*BRCA*m	30 (1.8)	28 (3.2)
*BRCA*wt	282 (16.5)	212 (24.5)
Unknown	1399 (81.8)	627 (72.3)
Residual tumour, n (%)[c,d]		
No visible residual disease	409 (34.3)	271 (40.6)
Visible residual disease	369 (31.0)	250 (37.5)
Unknown	413 (34.7)	146 (21.9)

[a]Results for categories with <5 patients masked per privacy regulations.
[b]BMI was calculated based on structured data on weight and height. The first measure (max 3 years prior to diagnosis) for each patient was included in the analysis.
[c]Size of residual tumour of patients with OC who were diagnosed and received surgical treatment in 2014–2019.
[d]Percentages calculated out of the number of patients who underwent debulking surgery. In the overall population, 520 (29.2%) patients did not undergo debulking surgery. In the HGSOC population, 200 (23.1%) patients did not undergo debulking surgery.
BMI, body mass index; *BRCA*m, *BRCA* mutated; *BRCA*wt, *BRCA* wild-type; FIGO, Federation of Gynecology and Obstetrics; HGSOC, high-grade serous ovarian cancer; OC, ovarian cancer.

- In patients with HGSOC, characteristics were also assessed by residual disease status
  - Body mass index was similar in patients with and without visible residual disease
  - Visible residual disease was seen more frequently in older patients (see supplemental results)
  - 95.2% of patients with visible residual disease had stage III or IV disease at diagnosis
- Treatment patterns were assessed in patients with HGSOC
- Patients were analysed from 1L treatment to death or loss to follow-up (Figure 1)

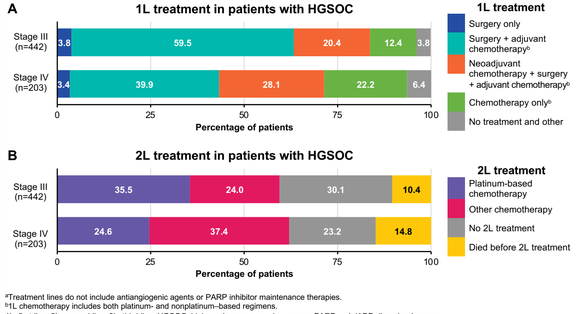
Figure 1. Treatment Line Progression in Patients with HGSOC[a,b]



[a]Treatment lines do not include antiangiogenic agents or PARP inhibitor maintenance therapies.
[b]Duration of available follow-up varied, with patients diagnosed early in the study period having a longer duration of follow-up than patients diagnosed late in the study period. Therefore, the number of patients who did not receive 2L, 3L, or 4L treatment includes both patients without disease progression and patients with shorter follow-up times.
[c]Includes patients with irregular 1L treatment.
1L, first-line; 2L, second-line; 3L, third-line; 4L, fourth-line; HGSOC, high-grade serous ovarian cancer; PARP, poly(ADP-ribose) polymerase.

- Overall, approximately 50% of patients with HGSOC received surgery + adjuvant chemotherapy as 1L treatment
- 1L treatment in patients with HGSOC (Figure 2A)
  - For patients with stage III or IV disease at diagnosis, surgery + adjuvant chemotherapy and neoadjuvant chemotherapy + surgery + adjuvant chemotherapy were the most common treatments
- 2L treatment in patients with HGSOC (Figure 2B)
  - For patients with stage III disease at diagnosis, platinum-based chemotherapy was the most common treatment
  - For patients with stage IV disease at diagnosis, other chemotherapy was the most common treatment
- In patients with HGSOC, 3L treatment was received more often in patients with stage III or IV disease at diagnosis than in patients with stage I or II disease at diagnosis; in patients with HGSOC who received 3L treatment, other chemotherapy was the most common treatment

Figure 2. Treatment Patterns in Patients with HGSOC[a]

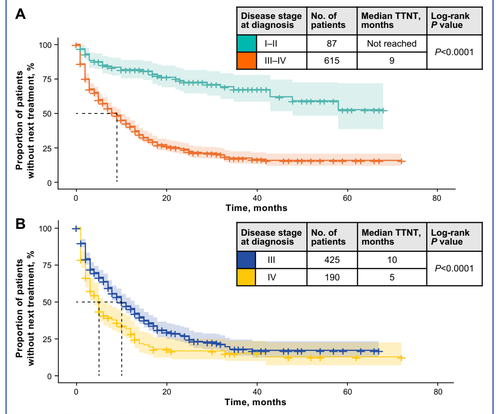


[a]Treatment lines do not include antiangiogenic agents or PARP inhibitor maintenance therapies.
[b]1L chemotherapy includes both platinum- and nonplatinum–based regimens.
1L, first-line; 2L, second-line; 3L, third-line; HGSOC, high-grade serous ovarian cancer; PARP, poly(ADP-ribose) polymerase.

- A total of 323 (37.3%) patients with HGSOC had a record of bevacizumab use, and 16 (1.8%) patients had a record of PARP inhibitor use in any treatment line

- Median TTNT was significantly shorter in patients with HGSOC and stage III or IV disease at diagnosis than in patients with stage I or II disease at diagnosis (Figure 3A)
- Patients with HGSOC and stage IV disease at diagnosis had shorter TTNT than patients with stage III disease at diagnosis (Figure 3B)

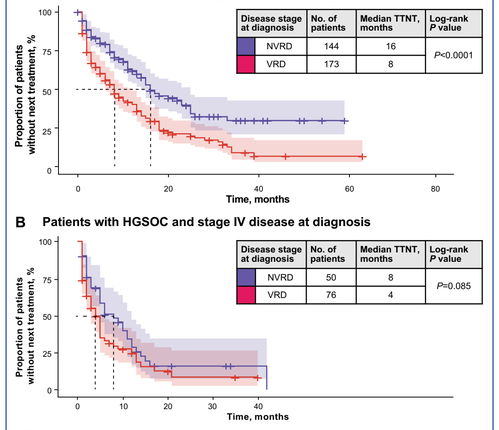
Figure 3. TTNT in Patients with HGSOC by Disease Stage at Diagnosis



HGSOC, high-grade serous ovarian cancer; TTNT, time to next treatment.

- In patients with HGSOC and stage III disease at diagnosis, median TTNT was significantly shorter in patients with visible residual disease than in patients with no visible residual disease after surgery (Figure 4A)
- Similar results were observed in patients with HGSOC and stage IV disease at diagnosis; however, the difference between patients with and without visible residual disease after surgery was not statistically significant (Figure 4B)

Figure 4. TTNT in Patients with HGSOC and Stage III or IV Disease at Diagnosis by Residual Disease Status



HGSOC, high-grade serous ovarian cancer; NVRD, no visible residual disease; TTNT, time to next treatment; VRD, visible residual disease.

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