

Patient Characteristics and Treatment Patterns in Patients With Advanced or Recurrent Endometrial Cancer in Europe: A Real-World Study

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Background

- Endometrial cancer (EC) is the fourth most common cancer among women in developed countries, with over 120,000 new cases being registered across the European Union (EU) and the United Kingdom (UK) per annum^{1,2}
- Patients with EC are at risk of recurrence;³ patients with advanced or recurrent EC have a poor prognosis, with a 5-year survival rate as low as 17%⁴
- Platinum-based treatments are recommended as first-line therapy for advanced or recurrent EC, but no standard of care for second-line (2L) therapy exists for these patients¹
- Currently there is a scarcity of real-world data for patients with advanced or recurrent EC, particularly those who progressed on or after platinum-based chemotherapy (PBCT), and there is a need for clear understanding of existing patient characteristics, treatment patterns, and responses to current treatments for this population

Objective

The objective of this study was to describe real-world patient demographics, clinical characteristics, treatment patterns, and outcomes in European patients with EC who progressed on or after ≤2 prior lines of systemic chemotherapy for advanced or recurrent disease with at least one of them being PBCT

Methods

Study design

- This retrospective study collected data from chart reviews of European patients (France, Germany, Italy, Spain, UK) with EC identified from the IQVIA Oncology Advantage (OA) Database, and a de novo case report form capturing relevant variables was generated

Patient eligibility

- Eligible patients were ≥18 years of age with recurrent or advanced (stages III or IV) EC, ≥2 documented clinical encounters on or after January 1, 2013, and Eastern Cooperative Oncology Group (ECOG) performance status at index date (defined below) of ≤1; who had progressed on or after ≤2 prior lines of chemotherapy (CT) for treating advanced or recurrent disease (hormone monotherapy not counting towards a line), with at least one of them being a PBCT regimen
- Patients were included if their index date was between January 1, 2013 and December 31, 2016, and followed to the last visit, record of death, or date of data extraction in Sept–Nov 2020 (whichever came first)
 - For patients receiving active treatment (vs hormone monotherapy or best supportive care) after CT, the index date was the date of initiation of the post-platinum treatment
 - If patients had platinum therapies in both 1L and 2L, the index date was the date of initiating the treatment after either 1st or 2nd platinum therapy, based on a randomization algorithm
 - For patients not receiving active post-platinum treatment, the index date was the discontinuation date of the last therapy or the date of progression

Measurements of interest

- Patient demographics, clinical characteristics, treatments by lines of therapy (LOT) and at index
- For patients receiving active post-platinum therapy, the following outcomes were calculated: Treatment response, defined as complete response (CR) or partial response (PR), stable disease (SD), and progressive disease (PD) per RECIST v1.1 or provider assessment. If a response could not be determined, the patient was classified as not evaluable (NE)

Statistical analysis

- Continuous variables were summarized by the number of patients, mean, standard deviation, median, minimum, and maximum. Frequencies and percentages were presented for categorical data
- Response rates were analyzed descriptively with percentage of responders (including 95% confidence intervals)

Results

- A total of 339 patients were included, treated by 227 providers (≥33 providers in each country), with 55.5% (126/227) of providers located in a teaching/university hospital setting and 35.2% (80/227) in a cancer specialist hospital
 - Most providers were medical oncologists (63.9% [145/227]) and 58.6% (133/227) of providers had ≥15 years' experience
- Patient demographics are summarized in **Table 1**
- Mismatch repair (MMR)/microsatellite instability (MSI) status was tested in 108/339 patients (31.9%); broken down by country this included France: 29/79 (36.7%), Germany: 16/66 (24.2%), Italy: 6/72 (8.3%), Spain: 39/62 (62.9%) and UK: 18/60 (30.0%) patients
 - Of the 108 patients tested, 15.7% (17/108) were dMMR/MSI-H
- During the follow-up period, 214 patients (63.1%) died, of which 207 (96.7%) deaths were due to EC

Table 1. Patient demographics and clinical characteristics

Patient characteristics	Total (N=339)	France (N=79)	Germany (N=66)	Italy (N=72)	Spain (N=62)	UK (N=60)
Age at advanced or recurrent diagnosis of EC, n (%)						
Mean (SD)	60.33 (9.07)	60.82 (9.07)	60.43 (8.89)	58.2 (10.65)	61.08 (8.27)	61.37 (7.79)
Median (range)	61.6 (43.6)	62.1 (43.0)	61.4 (39.3)	58.3 (38.8)	62.3 (40.5)	62.3 (39.1)
MMR/MSI status, n (%)	n=108	n=29	n=16	n=6	n=39	n=18
dMMR/MSI-H	17 (5.0%)	4 (5.1%)	3 (4.5%)	2 (2.8%)	7 (11.3%)	1 (1.7%)
Not dMMR/MSI-H	89 (26.3%)	25 (31.6%)	11 (16.7%)	4 (5.6%)	32 (51.6%)	17 (28.3%)
Tumor histology, n (%)						
Endometrioid	116 (34.2%)	28 (35.4%)	24 (36.4%)	22 (30.6%)	24 (38.7%)	18 (30.0%)
Non-endometrioid	217 (64.0%)	50 (63.3%)	40 (60.6%)	49 (68.1%)	36 (58.1%)	42 (70.0%)
Unknown	6 (1.8%)	1 (1.3%)	2 (3%)	1 (1.4%)	2 (3.2%)	0
History of prior anticancer treatment for adjuvant/neoadjuvant disease, n (%)						
Yes	52 (15.3%)	15 (19%)	5 (7.6%)	3 (4.2%)	19 (30.6%)	10 (16.7%)
No	273 (80.5%)	60 (75.9%)	58 (87.9%)	67 (93.1%)	40 (64.5%)	48 (80.0%)
Unknown	14 (4.1%)	4 (5.1%)	3 (4.5%)	2 (2.8%)	3 (4.8%)	2 (3.3%)
Total number of prior lines of treatment (LOT, including hormone)*						
Mean (SD)	1.23 (0.42)	1.24 (0.43)	1.18 (0.39)	1.28 (0.45)	1.21 (0.41)	1.25 (0.44)
Median (range)	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)
Number of prior total number of LOTs (excluding hormonal agents)*, n (%)						
1	260 (76.7%)	60 (75.9%)	54 (81.8%)	52 (72.2%)	49 (79.0%)	45 (75.0%)
2	79 (23.3%)	19 (24.1%)	12 (18.2%)	20 (27.8%)	13 (21.0%)	15 (25.0%)
Number of prior platinum-based LOTs†, n (%)						
1	311 (91.7%)	73 (92.4%)	65 (98.5%)	63 (87.5%)	57 (91.9%)	53 (88.3%)
2	28 (8.3%)	6 (7.6%)	1 (1.5%)	9 (12.5%)	5 (8.1%)	7 (11.7%)
Platinum-free interval‡, n (%)						
<6 months	229 (67.6%)	64 (81.0%)	31 (47.0%)	48 (66.7%)	50 (80.6%)	36 (60.0%)
6+ months	110 (32.4%)	15 (19.0%)	35 (53.0%)	24 (33.3%)	12 (19.4%)	24 (40.0%)

dMMR, mismatch repair deficient; EC, endometrial cancer; MMR, mismatch repair; MSI-H, microsatellite instability-high; SD, standard deviation; UK, United Kingdom.
*Including hormone therapy prior to index since advanced/recurrent diagnosis; †post-advanced or recurrent diagnosis but before index date; ‡from end date of last platinum-based LOT to index date – categorical.

Treatments

- All patients had PBCT at 1L; the majority (62.8% [213/339]) received carboplatin/paclitaxel
- Non-PBCT (including combination with hormonal agents) was received by 69.9% (237/339) of patients at 2L (26.9% [91/339] doxorubicin), 82.9% (29/35) of patients at 3L (22.9% [8/35] doxorubicin; 22.9% [8/35] paclitaxel) and 100% (7/7) at 4L (42.9% [3/7] doxorubicin; 57.1% [4/7] paclitaxel)
- For treatments prior to index, 76.7% (260/339) had received a PBCT at 1L without a subsequent LOT, 15% (51/339) had received a PBCT at 1L followed by a non-platinum 2L therapy; 8.3% (28/339) had received a PBCT in both 1L and 2L
- At the index line the most common regimens (i.e., post-platinum therapy) were doxorubicin monotherapy (21.3% [72/339]), paclitaxel monotherapy (10.6% [36/339]), and carboplatin/paclitaxel (6.5% [22/339]); 20% (68/339) did not receive active treatment after the index date (**Figure 1**)
 - Across all countries doxorubicin and paclitaxel were the most common index therapies except for France and the UK (7.6% [6/79] in France received gemcitabine and 16.7% [10/60] in the UK received carboplatin); Italy had the largest percentage of patients (26.4% [19/72]) receiving no active treatment
- In the 271/339 patients receiving active treatment, the most common reasons for stopping index treatment included treatment completion (35% [95/271]), distant progression/relapse (22% [59/271]), patients' choice (16% [44/271]), SD (9% [25/271]) or death (6% [17/271])
- For all patients (n=339), only 8% received further active treatment after index treatment/care, the top three treatment pathways included non-platinum-based therapy such as paclitaxel (2.4%), topotecan (1.8%), and doxorubicin (1.2%)

Figure 1. Most common treatments at index line (total population; N=339)

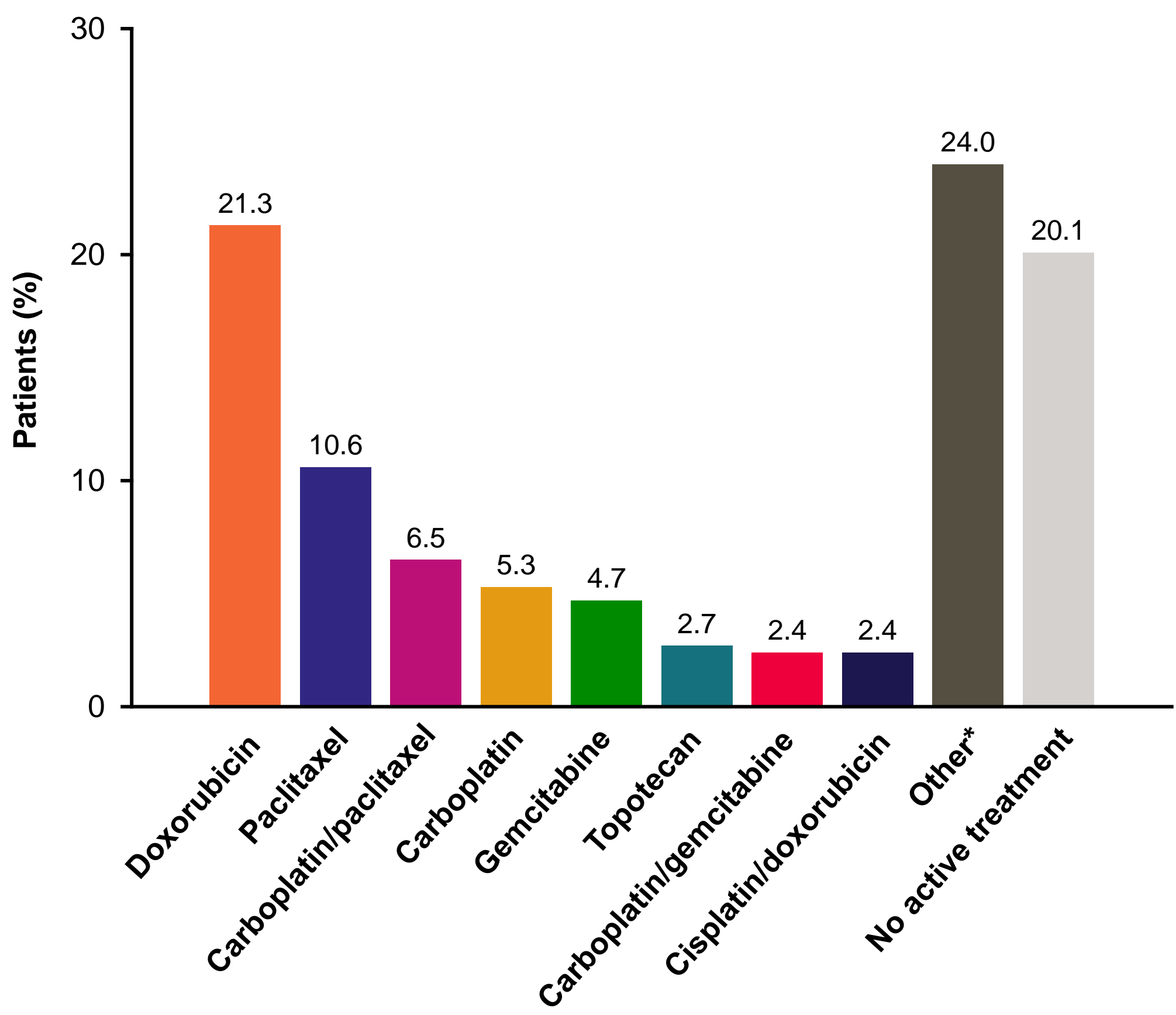
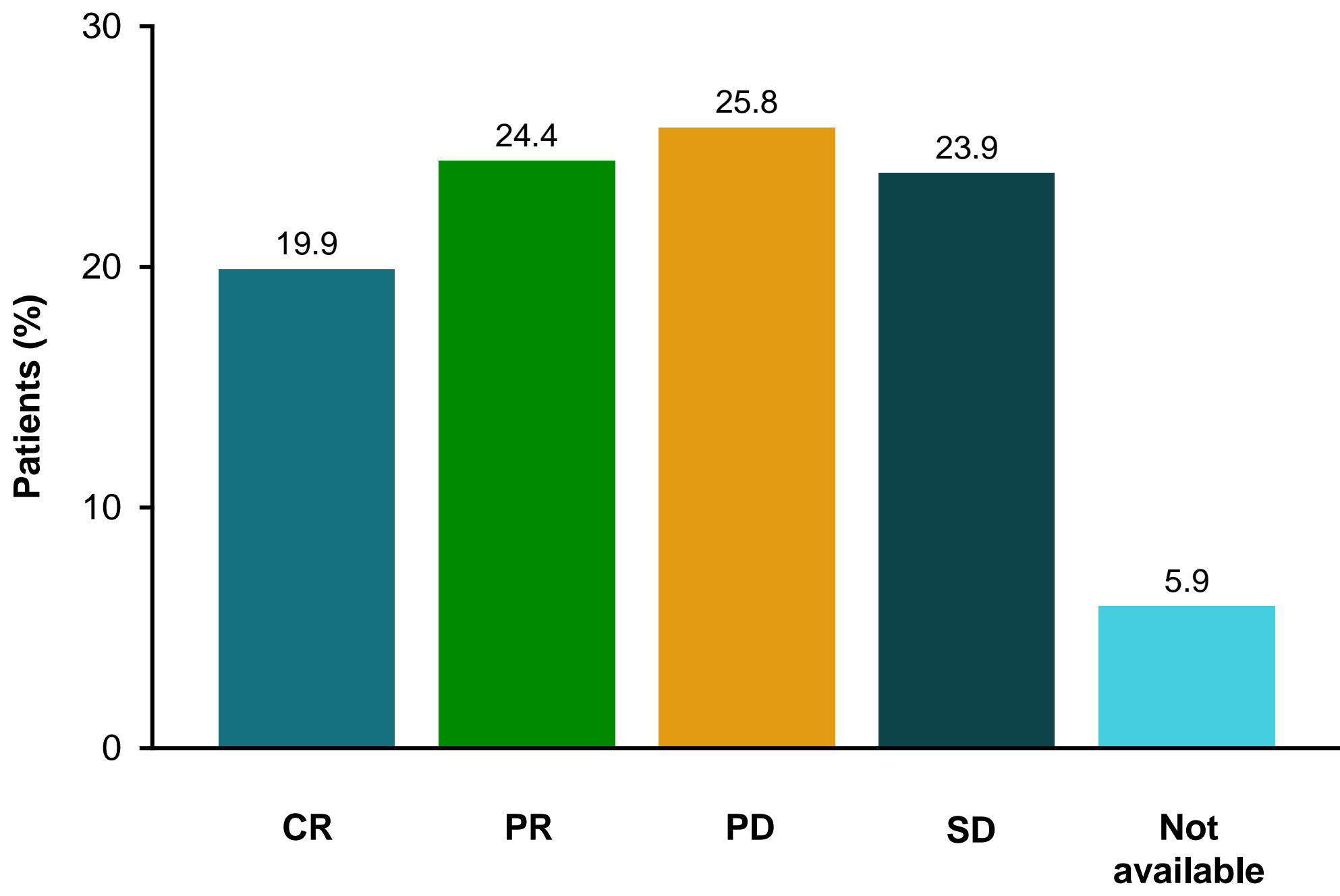


Figure shows the most common therapies received by >2% of the total population.
*Other index therapies included 47 types of monotherapies or combination therapies, for example, bevacizumab, liposomal doxorubicin, fluorouracil/medroxyprogesterone, trastuzumab, fluorouracil, docetaxel, amongst others.

Response outcomes

- Overall, the objective response rate (CR + PR) for patients receiving treatment at the index line was 44.3% (120/271), which is higher than what has been previously reported in clinical trial data;⁶ **Figure 2** summarizes the best overall response at the index line
 - For those who received active treatment, responses were determined using RECIST v1.1 (56.1% [152/271]) or via physician-reported outcomes (38.0% [103/271]); 5.9% (16/271) were unknown
- Overall, 19.9% (54/271) had a CR, 24.4% (66/271) had a PR, 23.9% (65/271) had SD, and 25.8% (70/271) had PD; unknown for 5.9% (16/271)
 - Spain and Germany had more patients with SD (29.0% [18/62] and 28.8% [19/66], respectively) than other EU countries; the UK had the most patients with PR (33.3% [20/60]); and France had the most patients with PD (29.1% [23/79])

Figure 2. Best overall response at index line (population receiving treatment; N=271)



CR, complete response; PD, progressive disease; PR, partial response; SD, stable disease.

Conclusions

- These results showed that patients with advanced or recurrent EC received variable active treatment following PBCT
 - Overall, a large percentage of patients received no active therapy at index and, for those who did, the most common was doxorubicin monotherapy; this trend was similar across all countries
- More than half (56% [151/271]) of patients did not respond to post-platinum treatment and, for those who progressed, treatment options were limited, suggesting that effective treatments are still needed
 - Patient response rates to CT reported here are higher than clinical trial rates.⁶ This may be due to the majority of patients being ECOG 0/1 and/or physician selection bias of selecting responders
- This study found that MSI or MMR testing is not common in clinical practice in the EU and varies between countries, highlighting the need to increase biomarker testing
- As this was a chart abstraction, some limitations exist, including that data were originally collected for clinical practice and not research purposes, differences in data collection and reporting may exist between participating physicians and countries, and there may be patient selection bias by the physicians

Disclosures

QS is an employee of GSK and holds stocks. **MH** is an employee of ICON plc, which received funding from GSK in connection with this study. **AP** and **RS** are employees of ICON plc. ICON was funded by GSK for this study. **SB** is an employee of GSK.

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