ANNUAL MEETING ON WOMENS' CANCER®

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Evolution of the Ovarian Cancer Treatment Paradigm, Including Maintenance Treatment, in the US and Europe: A Real-World Chart Review Analysis (2017–2020)

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Financial Disclosures

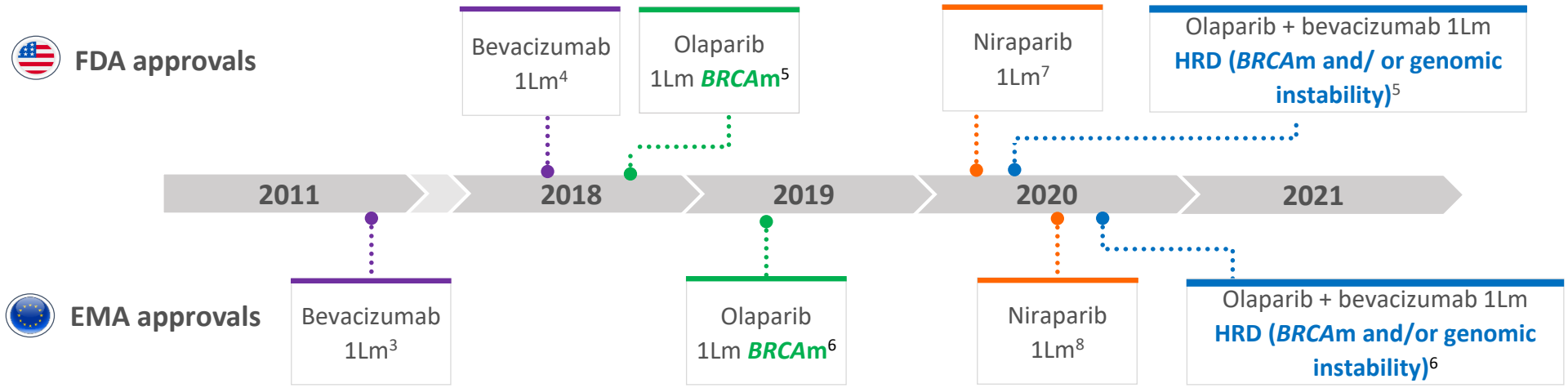
- I have the following financial relationships with ACCME defined ineligible companies to report over the past 24 months:
  - Personal fees, grants and other from Astra Zeneca, Genentech/Roche, Immunogen, Clovis, GSK/Tesaro, Pfizer, Aravive, VBL Therapeutics, Onco Med, Lilly, Eisai, Vavotar, Abbvie, personal Tarveda, Myriad, Rubius and Elevar

Unlabeled/Investigational Uses

- I will not be discussing any unlabeled or investigational uses of any pharmaceutical products or medical devices

Introduction

- Historically, treatment options for patients with newly diagnosed advanced OC have been limited, leading to disease recurrence in ~70% of patients[1]
- The OC treatment landscape for 1Lm has evolved since the approval of bevacizumab, with PARP inhibitors being approved as monotherapies or in combination with anti-angiogenic agents by the FDA and EMA[2]



- There is an interest in evaluating the impact of these approvals on the OC treatment paradigm using real-world data
- **This analysis describes patient characteristics, biomarker testing rates, and treatment patterns for patients diagnosed with advanced OC in Europe and the US, with a focus on 1Lm**

1Lm, first-line maintenance; BRCA, breast cancer gene; EMA, European Medicines Agency; FDA, Food and Drug Administration; HRD; homologous recombination deficiency; OC, ovarian cancer; PARP, poly (ADP-ribose) polymerase;.
1. Bartoletti, M et al. Bevacizumab or PARP-Inhibitors Maintenance Therapy for Platinum-Sensitive Recurrent Ovarian Cancer: A Network Meta-Analysis. Int. J. Mol. Sci. 2020, 21, 3805 2. Banerjee, S et al. First-line PARP inhibitors in ovarian cancer: summary of an ESMO Open Cancer Horizons round-table discussion. ESMO 2020; 1–10; 3. Bevacizumab EMA CHMP 2011. https://www.ema.europa.eu/en/documents/variation-report/avastin-h-c-582-ii-0041-epar-assessment-report-variation_en.pdf [Accessed Jan 2022]; 4. Bevacizumab US Prescribing information. https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/125085s323lbl.pdf [Accessed Jan 22]; 5. Olaparib US Prescribing information. https://www.accessdata.fda.gov/drugsatfda_docs/label/2020/208558s014lbl.pdf Accessed Jan 22]; 6. Olaparib Summary of Product Characteristics. https://www.ema.europa.eu/en/documents/product-information/lynparza-epar-product-information_en.pdf [Accessed Jan 2022]; 7. Niraparib US Prescribing information. https://www.accessdata.fda.gov/drugsatfda_docs/label/2020/208447s015s017lbledt.pdf [Accessed Jan 22]; 8. Niraparib Summary of Product Characteristics. https://www.ema.europa.eu/en/documents/product-information/zejula-epar-product-information_en.pdf [Accessed Jan 22].

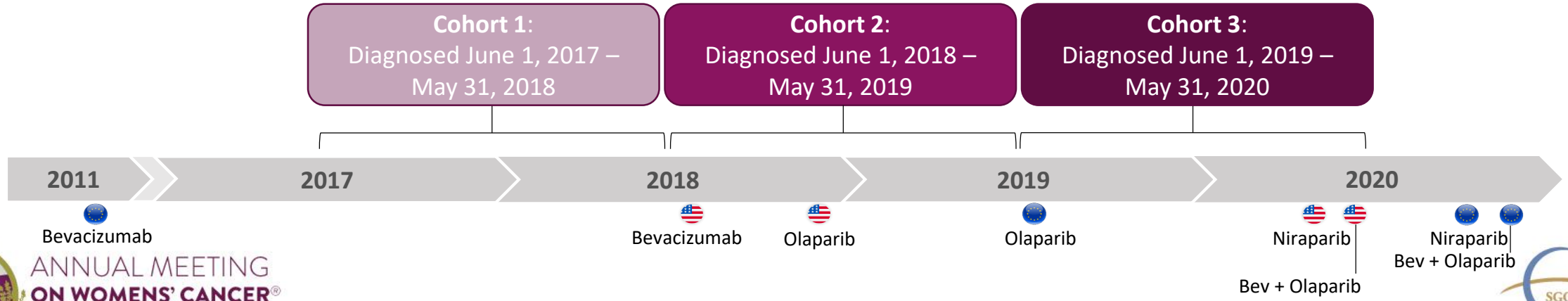
Methods

- The current chart review study assessed electronic medical records (EMR) of patients diagnosed with OC between June 1, 2017 and May 31, 2020 across Italy, France, Germany, Spain, the UK, and the US
  - The study was conducted in line with Healthcare Market Research guidelines
- Data were extracted by certified oncologists (minimum 3 years of experience) treating a minimum of 10 patients with OC, from EMRs to patient record forms (PRFs) and descriptively summarized

Sample, n	UK	Italy	Spain	US	France	Germany
Participating oncologists	52	69	63	89	71	72
Number of patients	1065	1200	1200	1200	1200	1207

*Target sample size was predetermined in order to reach CI of 4.4–5

- Patients were stratified by country and date of diagnosis to provide information on treatment patterns at different time points

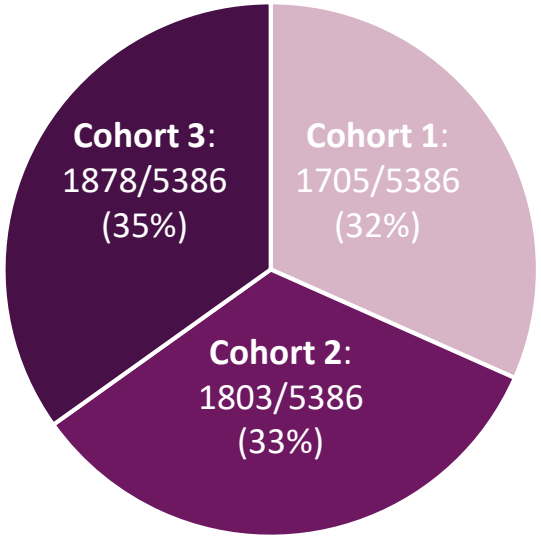


Bev, bevacizumab; CI, confidence interval; OC, ovarian cancer; UK, United Kingdom; US, United States.

Demographics

- Overall, 7072 patients were included by 416 oncologists. Of those, 5386/7072 (76%) patients had stage III/IV disease and were the focus of these analyses
  - 1686/7072 (24%) stage I/II patients were excluded
  - Mean age of stage III/IV patients was 63 years and the majority had ECOG PS 0–1 (84% [4511/5386])

- Patients with stage III/IV disease were evaluated according to three pre-defined Cohorts:



Dates of diagnosis

Cohort 1: June 1, 2017–May 31, 2018

Cohort 2: June 1, 2018–May 31, 2019

Cohort 3: June 1, 2019–May 31, 2020

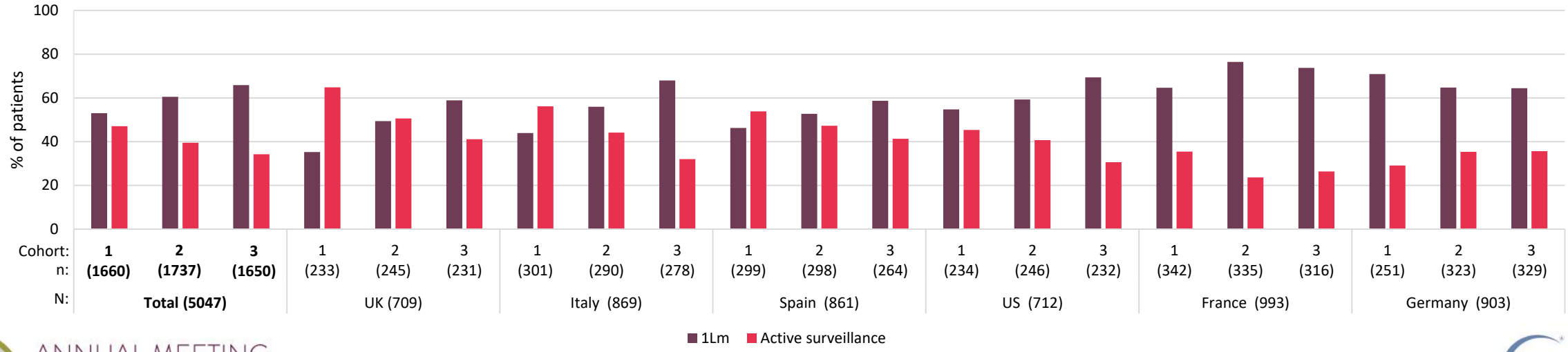
Parameter	All stage III/IV patients (N=5386)
Histology, n (%)	
High grade serous carcinoma	3249 (60.3)
Endometriod carcinoma	519 (9.6)
Other*	1618 (30.0)
***BRCA*, n (%)**	
***BRCA*m**	1427 (26.5)
***BRCA*wt**	3000 (55.7)
Not tested	959 (17.8)
HRD, n (%)	
HRD positive	217 (4.0)
HRD negative	926 (17.2)
Not tested	4243 (78.8)
HRR, n (%)	
HRRm	146 (2.7)
HRRwt	1479 (27.5)
Not tested	3761 (69.8)
Optimal tumor cytoreduction, n/N (%)	1236/1891[a] (65.4)
CR or PR to initial treatment in patients receiving 1Lm, n/N (%)	1803/2004[b] (90.0)

*Other histologies include: clear cell carcinoma; low grade serous carcinoma; mucinous carcinoma; seromucinous carcinoma; malignant Brenner tumor; [a]Patients who had tumor cytoreductive surgery as part of primary treatment, all with a reported outcome of debulking surgery; [b]Patients with recorded response to initial treatment who received 1Lm.

1Lm, first-line maintenance; *BRCA*; breast cancer gene; CR, complete response; ECOG PS, Eastern Cooperative Oncology Group Performance Status; HRD, homologous recombination deficiency; HRR; homologous recombination repair; m, mutation; PR, partial response; PRF; patient record forms; SD, standard deviation; wt, wild-type.

1L maintenance treatment or active surveillance

- Of the stage III/IV patients (N=5386) included in this analysis, 94% (n=5047) completed primary treatment, followed by 1Lm (n=3016) or active surveillance (n=2031)
- The proportion of patients receiving 1Lm increased between Cohort 1 (53%; 879/1660), Cohort 2 (60%; 1051/1737) and Cohort 3 (66%; 1086/1650), while those monitored by active surveillance decreased (Cohort 1: 47% [781/1660], Cohort 2: 40% [686/1737]; Cohort 3: 34% [564/1650])
  - This trend was evident across all countries except Germany, where use of 1Lm decreased between Cohort 1 (71%; 178/251), Cohort 2 (65%; 209/903) and Cohort 3 (64%; 212/329); this was not statistically significant
- Use of 1Lm was highest in France (71.5%; 710/993) and lowest in the UK (48%; 339/709)
  - Italy had the largest increase in 1Lm use (Cohort 1: 44% [132/301], Cohort 2: 56% [162/290] and Cohort 3: 68% [189/278]) followed by the UK (Cohort 1: 35% [82/233], Cohort 2: 49% [121/245] and Cohort 3: 68% [136/231])



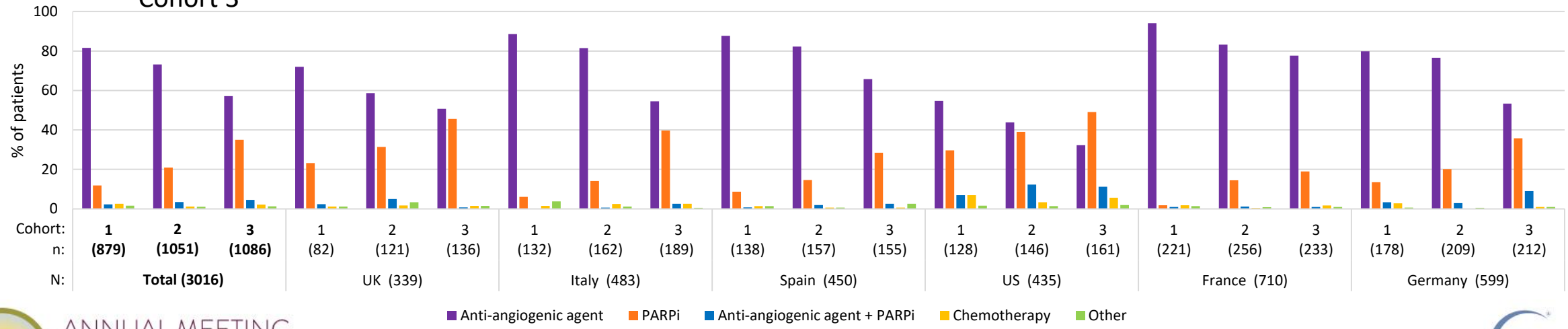
1Lm includes but is not extensive to: anti-angiogenic monotherapy, PARP inhibitor monotherapy, anti-angiogenic agent + PARP inhibitor combination therapy, chemotherapy

1Lm, first-line maintenance; UK, United Kingdom; US, United States.

Cohort 1: June 1, 2017–May 31, 2018 **Cohort 2**: June 1, 2018–May 31, 2019; **Cohort 3**: June 1, 2019–May 31, 2020

1L maintenance type

- Out of the patients who received 1Lm (N=3016), 70% (n=2106) of patients received anti-angiogenic agent monotherapy, 23% (n=705) received PARP inhibitor monotherapy, 4% (n=106) received PARP inhibitor + anti-angiogenic agents, 2% (n=59) received chemotherapy and 1% (n=40) received other agents
  - Use of 1Lm PARP inhibitor monotherapy was numerically highest in the US (40%; 174/435) and lowest in France (12%; 85/710)
  - Conversely, France had the highest use of anti-angiogenic monotherapy (85%; 602/710) and the US had the lowest (43%; 186/435)
- Across all countries, the number of patients receiving PARP inhibitors increased between Cohort 1 and Cohort 3, whilst use of anti-angiogenic agents decreased
  - Only the US had more patients receiving monotherapy of PARP inhibitor than anti-angiogenic agent monotherapy in Cohort 3

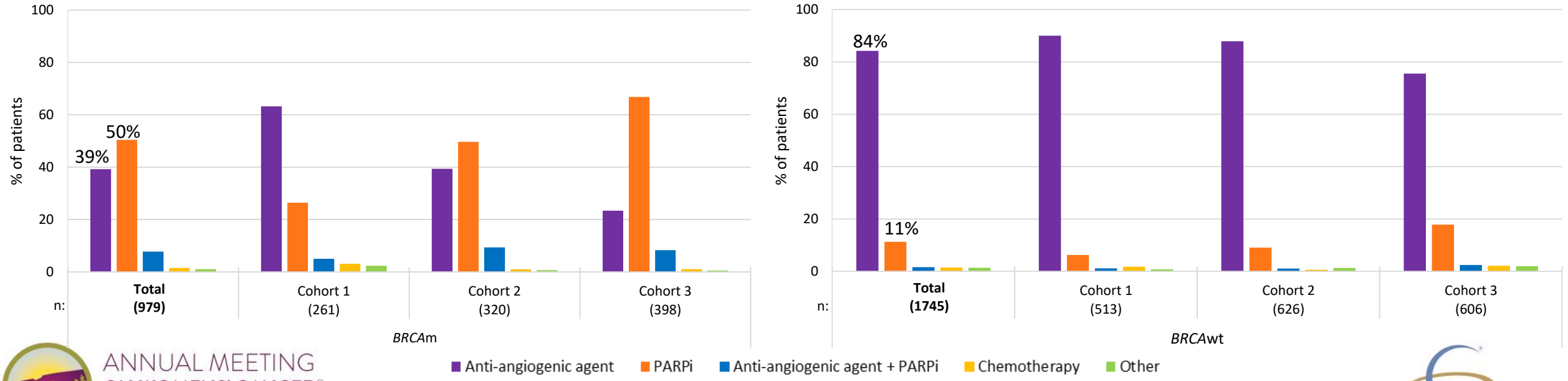


1Lm, first-line maintenance; PARPi, Poly (ADP-ribose) polymerase; UK, United Kingdom; US, United States.

Cohort 1: June 1, 2017–May 31, 2018; **Cohort 2**: June 1, 2018–May 31, 2019; **Cohort 3**: June 1, 2019–May 31, 2020

1L maintenance type by *BRCA* status

- Out of all stage III/IV patients (N=5386), 26% (n=1427) were *BRCA*m, 56% (n=3000) were *BRCA*wt and 18% (n=959) were not tested for *BRCA*
- Of patients that were tested for *BRCA* and received 1Lm, a lower percentage of *BRCA*m patients (39% [384/979])) received anti-angiogenic monotherapy compared with *BRCA*wt patients (84% [1470/1745])
  - Use of anti-angiogenic monotherapy decreased between Cohort 1 and Cohort 3 in both *BRCA*m and *BRCA*wt patients
- Conversely, more *BRCA*m patients (50% [494/979]) received PARP inhibitor monotherapy compared with *BRCA*wt patients (11% [197/1745])
  - PARP inhibitor monotherapy increased between Cohort 1 and Cohort 3 in both *BRCA*m and *BRCA*wt patients



BRCA, breast cancer gene; PARPi, poly (ADP-ribose) polymerase; m, mutation; wt, wild-type.

Cohort 1: June 1, 2017–May 31, 2018; **Cohort 2**: June 1, 2018–May 31, 2019; **Cohort 3**: June 1, 2019–May 31, 2020

Conclusions

- This real-world study showed that only ~55% of patients with advanced OC received 1Lm treatment during the time period evaluated in this study, and that treatment patterns varied by country; ~45% of patients did not receive 1Lm therapies, highlighting an unmet need to improve treatment planning for increased uptake of approved therapies for best possible outcomes for patient

- Across all countries, there was increased use of PARP inhibitor monotherapy over time, with a decrease in use of anti-angiogenic monotherapy as 1Lm

    - For patients in Cohort 3 (June 1, 2019–May 31, 2020) PARP inhibitors for 1Lm had gained FDA and EMA approvals; however, only the US had more patients receiving PARP inhibitor monotherapy than anti-angiogenic agent monotherapy in this cohort

    - Over time, PARP inhibitor monotherapy use also increased in *BRCA*m patients in parallel with the PARP inhibitor monotherapy approvals; the majority of *BRCA*wt patients received anti-angiogenic agents, although there was a reduction over time

- While biomarker status can be used to guide treatment decisions, approximately 17% of stage III/IV patients did not undergo genetic testing for *BRCA*, HRD, or HRR mutations; highlighting an unmet need to increase testing

1Lm, first-line maintenance; *BRCA*, breast cancer gene; EMA, European medicines agency; FDA, food & drug administration; m, mutation; OC, ovarian cancer; PARPi, poly (ADP-ribose) polymerase; US, United States; wt, wild-type

Cohort 1: June 1, 2017–May 31, 2018; **Cohort 2**: June 1, 2018–May 31, 2019; **Cohort 3**: June 1, 2019–May 31, 2020

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