Understanding Physicians' Decision-Making Practices Related to Biomarker Testing: Analysis of the Adelphi Real-World Ovarian Cancer II Disease Specific Programme (DSP™)

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Background

- Ovarian cancer (OC) is one of the most common gynaecologic cancers worldwide, with an estimated 314,000 new cases diagnosed globally in 2020[1]
- Most patients are diagnosed with OC at an advanced stage, resulting in a low 5-year survival rate of ≈30%[2]
  - Although most patients with advanced OC (aOC) have a response to first-line (1L) treatment, as many as 85% of patients experience disease recurrence,[3] and the survival benefit is reduced with each subsequent line of therapy[4]
- Identifying and characterising factors influencing the risk for disease progression is a critical step in treatment selection and aOC care management[5]
- To inform treatment selection, current guidelines suggest that patients with aOC should receive a genetic risk evaluation, including germline and somatic *BRCA* testing and evaluation of homologous recombination deficiency (HRD) status[6–8]
  - For patients with OC, reported rates of biomarker testing range from 35% to 70%,[9–11] depending on the type of test (lower rates for multipanel tests and higher for germline and/or somatic *BRCA* tests). These rates have increased since 2010–2011, when 13%–23% of patients with OC received any biomarker testing[10,11]
  - Real-world data describing the current frequency of and motivation for biomarker testing in aOC are limited

Conclusions

- Physicians treating aOC reported using *BRCA* and HRD testing in Canada, the US, and 5 European countries (France, Germany, Italy, Spain, and the UK [EU5]), most commonly at diagnosis, to support maintenance therapy decisions
- Among physicians sampled in this survey, 87% of physicians reported conducting *BRCA1/2* testing, and 90% of physicians reported conducting HRD testing
  - These real-world results suggest physician-ordered biomarker-testing rates are increasing. However, these are physician-estimated rates of biomarker testing, so they may differ from rates of actual patients tested
- Continued education is needed on the importance of early biomarker testing in the aOC setting, including somatic and germline *BRCA* testing, and the limited role of HRD retesting
  - Together, this may help optimise treatment, improve health resource efficiency, and encourage cascade testing to identify high-risk carriers

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Objective

- To describe real-world biomarker-testing practices for patients with aOC, including biomarker-testing rates, time points of testing, and physician beliefs around testing

Methods

- The 2023 Adelphi Real World OC II DSP™ is an anonymised cross-sectional survey of physicians treating OC who completed a detailed questionnaire on attitudes to the disease and its treatment
  - Physicians were recruited from Canada, the US, and the EU5
  - Recruited physicians comprised medical oncologists, radiation oncologists, and gynaecologic oncologists, all of whom saw a minimum of 4 unique patients with aOC per month, with a geographical spread of respondents across each country
  - Data collection commenced in March 2023, and final physician survey results are reported (data collection cutoff, September 2023)
- Physicians provided details about their role, practice setting, and approach to tumour biomarker and genetic testing
- Current practices in patients with aOC at various stages of the treatment journey were tabulated
- All analyses were descriptive

Results

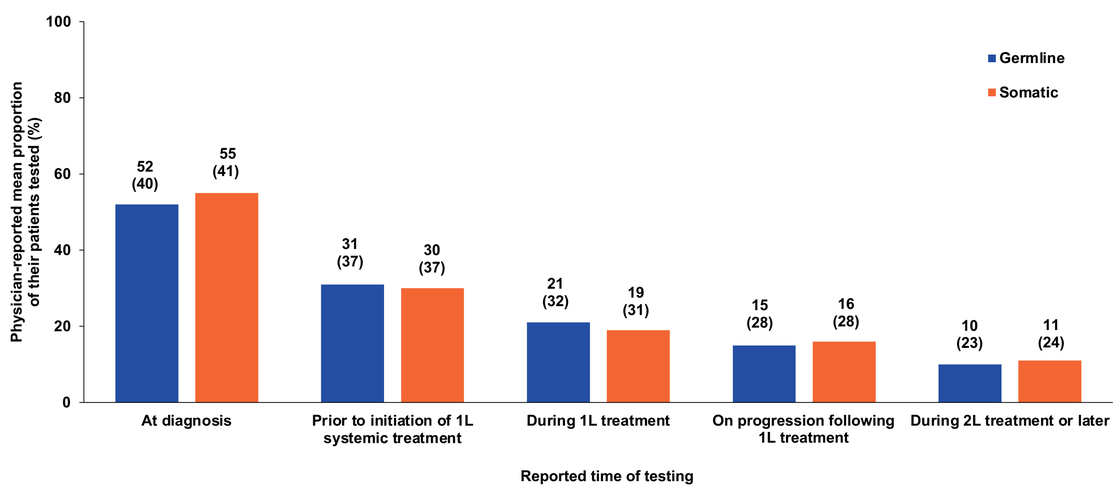
Physicians

- Data were collected from 306 physicians who treat patients with aOC: 15 from Canada, 64 from the US, and 227 from the EU5 (France, 50; Germany, 50; Italy, 45; Spain, 46; UK, 36)
  - Slightly more than half of all physicians primarily practiced at an academic site (168/306; 55%), and the remainder primarily practiced in a nonacademic setting (138/306; 45%)
- Overall, the mean (SD) number of patients with aOC seen by each physician during the 12 months prior to the survey was 51 (46)

BRCA Testing

- Overall, 87% of physicians reported conducting *BRCA1/2* testing
- The physician-reported mean (SD) percentage of their patients tested for germline or somatic *BRCA1/2* at diagnosis and at each stage of the treatment journey are shown in **Figure 1**
  - At diagnosis, the physician-reported median (IQR) percentages of their patients tested were 50% (10%–100%) and 60% (10%–100%) for germline and somatic *BRCA1/2*, respectively. Prior to initiation of 1L systemic treatment for aOC, the physician-reported median (IQR) percentages of their patients tested were 15% (0%–50%) and 13% (0%–50%) for germline and somatic *BRCA1/2*, respectively. The physician-reported median percentage of their patients tested for germline or somatic *BRCA1/2* was 0% during 1L treatment (IQR, 0%–25% for germline and 0%–20% for somatic), on progression following 1L treatment (IQR, 0%–20% for both germline and somatic), and during 2L treatment or later (IQR, 0%–10% for both germline and somatic), indicating a slightly skewed data distribution (mean values shown in **Figure 1**)
- A majority (63%) of *BRCA1/2* tests were conducted as part of HRD testing

Figure 1. Physician-Reported Mean (SD) Percentage of Their Patients Tested for *BRCA1/2* at Each Stage of the Treatment Journey[a]



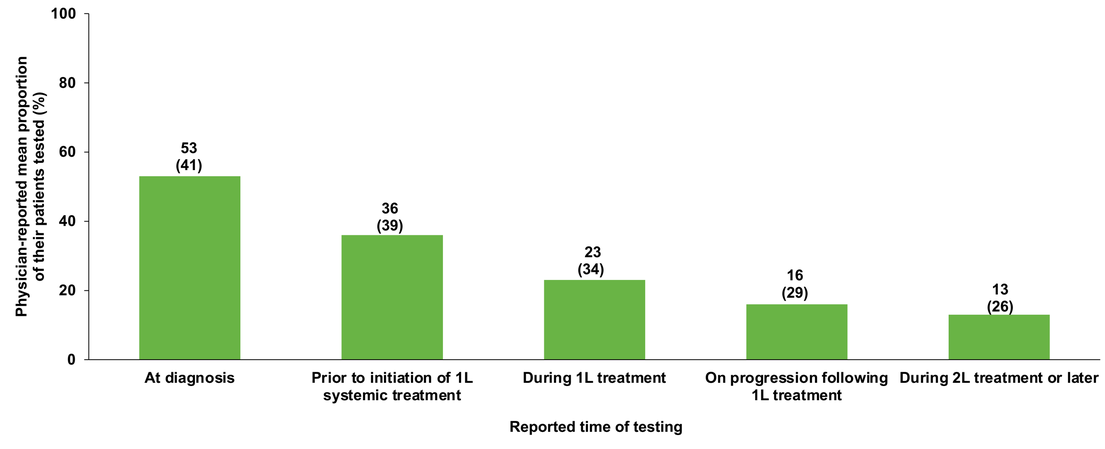
Total percentage exceeds 100% because physicians reported a percentage at each time point. Standard deviation is shown in parentheses. 1L, first-line; 2L, second-line.

HRD Testing

- Overall, 90% of physicians reported conducting HRD testing
- When asked to rank the importance of conducting HRD testing for patients with aOC on a scale of 1 (not at all important) to 5 (extremely important), most physicians reported HRD testing was a score of 5 (extremely important, 167/306; 55%) or a score of 4 (95/306; 31%)
- Physicians who reported HRD testing for their patients most frequently reported using Myriad myChoice® CDx (128/275; 47%) or FoundationOne CDx (80/275; 29%)
- The physician-reported mean (SD) percentages of their patients tested for HRD prior to initiation of 1L systemic treatment, during 1L, on progression following 1L treatment, and during 2L treatment or later are shown in **Figure 2**
  - At diagnosis, the physician-reported median (IQR) percentage of their patients tested was 50% (10%–100%). Prior to initiation of 1L systemic treatment for aOC, the physician-reported median (IQR) percentage of their patients tested was 20% (0%–80%). The physician-reported median percentage of their patients tested for HRD status was 0% during 1L (IQR, 0%–30%), on progression following 1L treatment (IQR, 0%–20%), and during 2L treatment or later (IQR, 0%–10%), indicating a slightly skewed data distribution (mean values shown in **Figure 2**)

Results *(cont'd)*

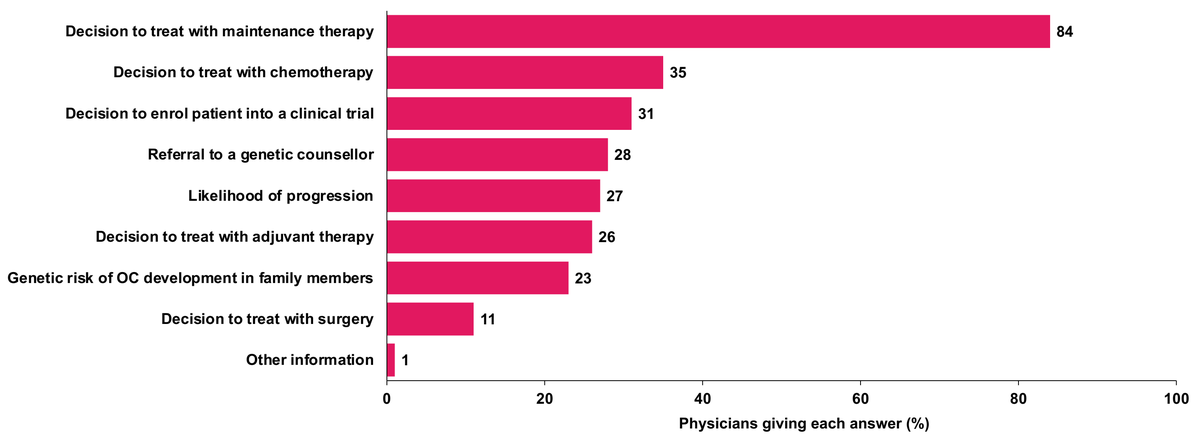
Figure 2. Physician-Reported Mean (SD) Percentage of Their Patients Tested for HRD at Each Stage of the Treatment Journey[a]



Total percentage exceeds 100% because physicians reported a percentage at each time point. Standard deviation is shown in parentheses.
1L, first-line; 2L, second-line; HRD, homologous recombination deficiency.

- When asked what the HRD status of a patient with aOC helps inform, most physicians (230/275; 84%) reported that HRD status helps inform their decision-making for maintenance therapy use (**Figure 3**)
  - Additionally, 96/275 (35%) and 84/275 (31%) physicians reported that HRD testing informs their decision for chemotherapy use and decision to enrol a patient into a clinical trial, respectively

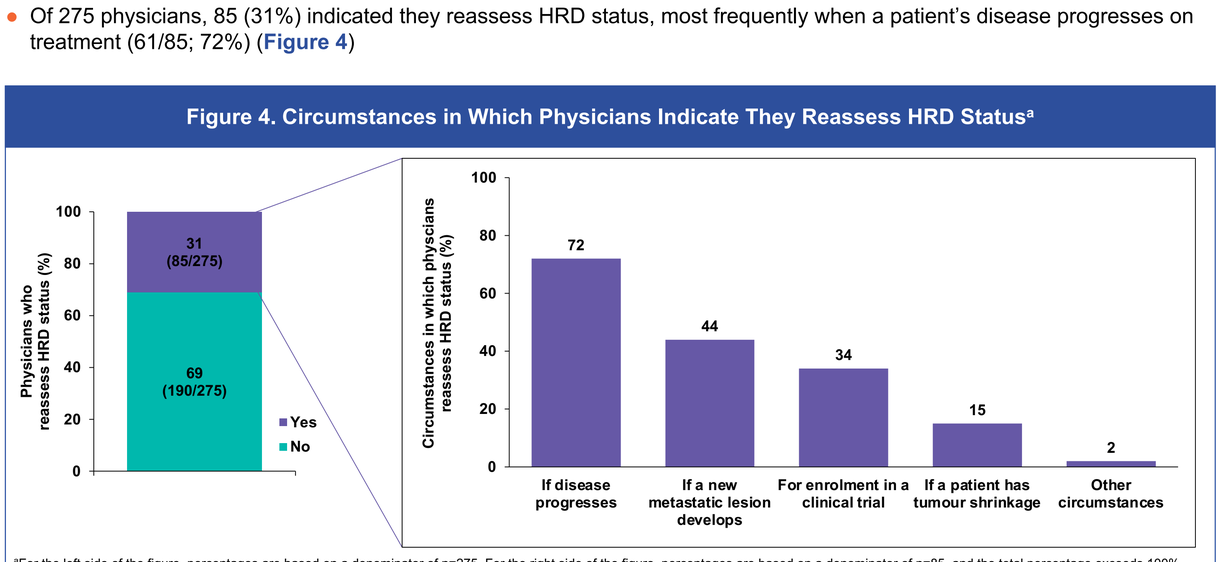
Figure 3. Physician-Reported Drivers of HRD Testing in aOC[a]



[a]Percentages calculated based on a denominator of n=275. Total percentage exceeds 100% because physicians were permitted to select multiple answers.
aOC, advanced ovarian cancer; HRD, homologous recombination deficiency; OC, ovarian cancer.

- Among those who reported conducting HRD testing at aOC diagnosis (n=220), physicians estimated the mean (SD) percentages of patients who were HRD positive (HR deficient) and negative (HR proficient) at diagnosis were 33% (18%) and 52% (22%), respectively, and 15% (24%) remained HRD unknown at diagnosis
- Of 275 physicians, 85 (31%) indicated they reassess HRD status, most frequently when a patient's disease progresses on treatment (61/85; 72%) (**Figure 4**)

Figure 4. Circumstances in Which Physicians Indicate They Reassess HRD Status[a]



[a]For the left side of the figure, percentages are based on a denominator of n=275. For the right side of the figure, percentages are based on a denominator of n=85, and the total percentage exceeds 100% because physicians were permitted to select multiple answers.
HRD, homologous recombination deficiency.

- Physicians were asked how they anticipated the use of HRD testing for patients with aOC would change in the next 2–3 years
  - More than half (191/306; 62%) anticipated that HRD testing rates would increase, and 113/306 (37%) believed that testing rates would remain the same
  - Physicians from Canada (12/15; 80%) and the EU5 (154/227; 68%) countries anticipated testing rates would increase, whereas US physicians believed that testing rates would remain the same (39/64; 61%)

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Conflicts of Interest

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