**Introduction/Background** With the approval of the first poly-
adenosine diphosphate-ribose polymerase inhibitor (PARPi),
olaparib therapy has demonstrated efficacy in first-line (1L) 
maintenance for Breast Cancer gene mutated (BRCa)
advanced ovarian cancer (AOC) patients in 2018 and in combi-
nation with bevacizumab for Homologous Recombination 
Deficient (HRD+) AOC patients in 2020. This study describes 
biomarker testing and treatment patterns in a representative 
AOC patient sample.

**Methodology** A retrospective observational study utilizing 
the electronic health record-derived de-identified US-based Flatiron 
Health database was performed including women ≥18 
years at AOC diagnosis between July 2018 and December 
2021 with ≥2 clinical visits. Patients were followed from diag-
nosis until 31 December 2021, cessation of dataset coverage, or 
death, whichever occurred first. Biomarker testing was 
defined as evidence of a test for BRCA or HRD.

**Results** Of the 1,107 patients included, most (88%, n = 976/ 
1,107) were BRCA tested, and 22.5% (n = 249/1,107) were 
HRD tested. In BRCA-tested patients 25.3% (n = 247/976) 
were additionally HRD tested. Among patients receiving 
either a BRCA or HRD test (n = 978) 56.4% (n = 552/978) 
were tested between AOC diagnosis and initiation of 1L sys-
temic therapy. With respect to 1L maintenance: among 
BRCAm patients (n = 139), 33.1% (n = 46/139) were treated 
with olaparib monotherapy vs. 6.5% (n = 9/139) with other 
PARPi therapy. Among HRD+ patients, including those with 
a pending HRD result who were BRCAm (n = 115), 20.0% 
(n = 23/115) were treated with olaparib monotherapy, 13.9% 
(n = 16/115) were treated with olaparib/bevacizumab combina-
tion therapy vs. 17.4% (n = 20/115) with other PARPi 
therapy.

**Conclusion** Although the majority of patients were tested for 
BRCA, a large majority of patients were not tested for HRD. 
Following testing, few patients received PARPi as 1L main-
tenance therapy despite actionable biomarker results. This study 
demonstrates the need for improved education surrounding 
genetic testing to optimize therapeutic decisions for AOC 
patients.

**Abstract 2022-RA-1519-ESGO Table 1** Patient demographics by 
biomarkers status and overall

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>BRCA****</th>
<th>BRCA-wild-type</th>
<th>HRD**</th>
<th>HRD*****</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at advanced stage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥65 years</td>
<td>613</td>
<td>121(19.9)</td>
<td>53(8.6)</td>
<td>487</td>
<td>25(4.7)</td>
</tr>
<tr>
<td>Race/ethnicity, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td>480</td>
<td>121(25.2)</td>
<td>53(10.9)</td>
<td>333</td>
<td>15(4.5)</td>
</tr>
<tr>
<td>White</td>
<td>227</td>
<td>62(27.5)</td>
<td>44(19.3)</td>
<td>168</td>
<td>9(4.9)</td>
</tr>
<tr>
<td>Missing</td>
<td>174</td>
<td>39(22.4)</td>
<td>10(5.8)</td>
<td>134</td>
<td>7(5.2)</td>
</tr>
<tr>
<td>Histologic diagnosis, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Serous</td>
<td>627</td>
<td>140(22.5)</td>
<td>60(9.6)</td>
<td>529</td>
<td>21(4.0)</td>
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<tr>
<td>Other</td>
<td>589</td>
<td>140(23.3)</td>
<td>42(7.0)</td>
<td>464</td>
<td>22(4.3)</td>
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<tr>
<td>Unknown/Not documented</td>
<td>16(1.4)</td>
<td>3(1.9)</td>
<td>12(7.5)</td>
<td>6(3.8)</td>
<td>1(0.6)</td>
</tr>
<tr>
<td>EOCO at initiation of IL maintenance, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1,169</td>
<td>290(24.7)</td>
<td>108(37.3)</td>
<td>961</td>
<td>34(3.5)</td>
</tr>
<tr>
<td>2</td>
<td>577</td>
<td>140(24.5)</td>
<td>63(35.3)</td>
<td>417</td>
<td>14(3.4)</td>
</tr>
<tr>
<td>3</td>
<td>305</td>
<td>82(26.9)</td>
<td>18(59.4)</td>
<td>210</td>
<td>16(5.3)</td>
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<tr>
<td>Missing</td>
<td>65</td>
<td>22(34.0)</td>
<td>10(15.4)</td>
<td>45</td>
<td>5(11.1)</td>
</tr>
<tr>
<td>IL maintenance therapy, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Chemotherapy</td>
<td>2,883</td>
<td>490(17.1)</td>
<td>101(20.5)</td>
<td>2,202</td>
<td>47(2.1)</td>
</tr>
<tr>
<td>Bevacizumab monotherapy</td>
<td>128</td>
<td>15(11.8)</td>
<td>28(88.2)</td>
<td>108</td>
<td>4(3.7)</td>
</tr>
<tr>
<td>Olaparib monotherapy</td>
<td>95</td>
<td>15(15.8)</td>
<td>38(40.0)</td>
<td>52</td>
<td>5(9.6)</td>
</tr>
<tr>
<td>Other PARPi combination therapy</td>
<td>117</td>
<td>11(9.4)</td>
<td>9(78.3)</td>
<td>51</td>
<td>4(3.4)</td>
</tr>
<tr>
<td>Olaparib and bevacizumab combination therapy</td>
<td>42</td>
<td>8(19.0)</td>
<td>34(80.9)</td>
<td>22</td>
<td>4(18.2)</td>
</tr>
<tr>
<td>Other maintenance therapy</td>
<td>30</td>
<td>5(16.7)</td>
<td>2(66.7)</td>
<td>18</td>
<td>3(15.0)</td>
</tr>
<tr>
<td>No maintenance therapy</td>
<td>702</td>
<td>64(9.1)</td>
<td>40(58.8)</td>
<td>560</td>
<td>18(3.2)</td>
</tr>
</tbody>
</table>

**Discussion**

**Results** Of the 229 patients who met the inclusion criteria, 
169 (73.8%) were in the endophytic group and 60 (26.2%) 
in the exophytic group. Patients in the endophytic group were 
older (50 vs. 41 years, p=0.001), less frequently nulliparous 
women (38.5% vs. 58.3%, p=0.008), more often with BMI >100 
mm (73.8%) were in the endophytic group and 60 (26.2%) 
were in the exophytic group. Concerns have 
 arisen about the clinical significance of BOT with exophytic 
growth pattern. This study aims to analyse and compare patients’ 
characteristics, sonographic features, and prognosis 
related to both patterns.

**Methodology** A retrospective multicentre study was conducted. 
Patients who underwent surgical treatment for BOT were 
recruited and they were divided in two groups according to 
microscopic aspect.

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