**Table:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>MMR-deficient (n=6)</th>
<th>p53 aberrant (n=34)</th>
<th>p53 wild (n=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-grade</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Graphs:**

- **Graph a:**
  - Low-grade (n=21)
  - High-grade (n=36)
  - $p = 0.020$

- **Graph b:**
  - MMR-deficient (n=6)
  - p53 wild (n=17)
  - p53 aberrant (n=34)
  - $p = 0.447$
Sarcomatous component

Low-grade carcinoma component

Endometrial cell

High-grade carcinoma component

TP53 mutation

Transformatio
<table>
<thead>
<tr>
<th>FIGO Stage</th>
<th>Numbers (%) (n=57)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>21 (36.8)</td>
</tr>
<tr>
<td>IB</td>
<td>11 (19.2)</td>
</tr>
<tr>
<td>II</td>
<td>6 (10.5)</td>
</tr>
<tr>
<td>IIIA</td>
<td>5 (8.8)</td>
</tr>
<tr>
<td>IIIB</td>
<td>1 (1.8)</td>
</tr>
<tr>
<td>IIIC1</td>
<td>1 (1.8)</td>
</tr>
<tr>
<td>IIIC2</td>
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</tr>
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<td>IVB</td>
<td>6 (10.5)</td>
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<table>
<thead>
<tr>
<th>Histology</th>
<th>Numbers (%)</th>
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<tbody>
<tr>
<td>Epithelial component</td>
<td></td>
</tr>
<tr>
<td>Endometrioid G1</td>
<td>16 (28.1)</td>
</tr>
<tr>
<td>Endometrioid G2</td>
<td>5 (8.8)</td>
</tr>
<tr>
<td>Endometrioid G3</td>
<td>14 (24.6)</td>
</tr>
<tr>
<td>Serous</td>
<td>13 (22.8)</td>
</tr>
<tr>
<td>Small cell</td>
<td>1 (1.8)</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>1 (1.8)</td>
</tr>
<tr>
<td>Mixed</td>
<td>7 (12.3%)</td>
</tr>
<tr>
<td>Mesenchymal component</td>
<td></td>
</tr>
<tr>
<td>Homologous</td>
<td>25 (43.9)</td>
</tr>
<tr>
<td>Heterologous</td>
<td>32 (56.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Myometrial invasion</th>
<th>Numbers (n=57)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 1/2</td>
<td>35 (61.4)</td>
</tr>
<tr>
<td>&gt; 1/2</td>
<td>22 (38.6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cervical invasion</th>
<th>Numbers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>48 (84.2)</td>
</tr>
<tr>
<td>Present</td>
<td>9 (15.8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LVSI</th>
<th>Numbers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>33 (57.9)</td>
</tr>
<tr>
<td>Present</td>
<td>24 (42.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Peritoneal cytology</th>
<th>Numbers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>35 (61.4)</td>
</tr>
<tr>
<td>Positive</td>
<td>22 (38.6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ovarian metastasis</th>
<th>Numbers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>52 (91.5)</td>
</tr>
<tr>
<td>Present</td>
<td>5 (8.5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lymph node metastasis</th>
<th>Numbers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>31 (54.3)</td>
</tr>
<tr>
<td>Present</td>
<td>9 (15.8)</td>
</tr>
<tr>
<td>Not evaluated</td>
<td>17 (29.8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recurrent disease</th>
<th>Numbers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>36 (63.2)</td>
</tr>
<tr>
<td>Present</td>
<td>21 (36.8)</td>
</tr>
<tr>
<td>Local</td>
<td>18 (31.6)</td>
</tr>
<tr>
<td>Distant</td>
<td>6 (10.5)</td>
</tr>
</tbody>
</table>

Abbreviation: LVSI, lymphovascular space invasion.
Table 2 Histological type of epithelial component and clinicopathological characters

<table>
<thead>
<tr>
<th></th>
<th>Low-grade (n=21)</th>
<th>High-grade (n=36)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (median)</td>
<td>58</td>
<td>67</td>
<td>0.002*</td>
</tr>
<tr>
<td>BMI (median)</td>
<td>22.8</td>
<td>23.4</td>
<td>0.912</td>
</tr>
<tr>
<td>p53 expression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aberrant (E)</td>
<td>9 (42.9)</td>
<td>27 (75)</td>
<td>0.023*</td>
</tr>
<tr>
<td>aberrant (M)</td>
<td>10 (47.6)</td>
<td>30 (83.3)</td>
<td>0.007*</td>
</tr>
<tr>
<td>MMR-deficient</td>
<td>5 (23.8)</td>
<td>1 (2.8)</td>
<td>0.022*</td>
</tr>
<tr>
<td>Mesenchymal component</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homologous</td>
<td>9 (42.9)</td>
<td>16 (44.4)</td>
<td>0.565</td>
</tr>
<tr>
<td>Heterologous</td>
<td>12 (57.1)</td>
<td>20 (55.6)</td>
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</tr>
<tr>
<td>Stage (III/IV)</td>
<td>9 (42.9)</td>
<td>10 (27.8)</td>
<td>0.261</td>
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<tr>
<td>Myometrial invasion (&gt; 1/2)</td>
<td>7 (33.3)</td>
<td>15 (41.7)</td>
<td>0.584</td>
</tr>
<tr>
<td>Cervical invasion (present)</td>
<td>4 (19.0)</td>
<td>5 (13.9)</td>
<td>0.712</td>
</tr>
<tr>
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<td>17 (47.2)</td>
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<tr>
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<td>11 (52.4)</td>
<td>11 (30.6)</td>
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<tr>
<td>Ovarian metastasis</td>
<td>3 (14.3)</td>
<td>3 (8.3)</td>
<td>0.659</td>
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<tr>
<td>Lymph node metastasis</td>
<td>3 (14.3)</td>
<td>6 (16.7)</td>
<td>0.564</td>
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<tr>
<td>Recurrence</td>
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<td></td>
</tr>
<tr>
<td>Local</td>
<td>4 (19.0)</td>
<td>14 (38.9)</td>
<td>0.149</td>
</tr>
<tr>
<td>Distant</td>
<td>1 (4.8)</td>
<td>5 (13.9)</td>
<td>0.397</td>
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</tbody>
</table>

Abbreviations: BMI, body mass index; LVSI, lymphovascular space invasion; MMR, mismatch repair.
<table>
<thead>
<tr>
<th></th>
<th>p53 wild type (%)</th>
<th>p53 aberrant (%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=21)</td>
<td>(n=36)</td>
<td></td>
</tr>
<tr>
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<td>67</td>
<td>0.079</td>
</tr>
<tr>
<td>BMI (median)</td>
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<td>23.4</td>
<td>0.908</td>
</tr>
<tr>
<td>Epithelial type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-grade</td>
<td>12 (57.1)</td>
<td>9 (25.0)</td>
<td>0.023*</td>
</tr>
<tr>
<td>High-grade</td>
<td>9 (42.9)</td>
<td>27 (75.0)</td>
<td></td>
</tr>
<tr>
<td>Mesenchymal component</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homologous</td>
<td>10 (47.6)</td>
<td>15 (41.7)</td>
<td>0.784</td>
</tr>
<tr>
<td>Heterologous</td>
<td>11 (52.4)</td>
<td>21 (58.3)</td>
<td></td>
</tr>
<tr>
<td>MMR-deficient</td>
<td>4 (19.0)</td>
<td>2 (5.6)</td>
<td>0.179</td>
</tr>
<tr>
<td>Stage (III/IV)</td>
<td>4 (19.0)</td>
<td>15 (41.7)</td>
<td>0.144</td>
</tr>
<tr>
<td>Myometrial invasion (&gt; 1/2)</td>
<td>7 (33.3)</td>
<td>15 (41.7)</td>
<td>0.584</td>
</tr>
<tr>
<td>Cervical invasion (present)</td>
<td>5 (23.8)</td>
<td>4 (11.1)</td>
<td>0.266</td>
</tr>
<tr>
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<td>8 (38.1)</td>
<td>16 (44.4)</td>
<td>0.782</td>
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<tr>
<td>Peritoneal cytology (positive)</td>
<td>7 (33.3)</td>
<td>15 (41.7)</td>
<td>0.584</td>
</tr>
<tr>
<td>Ovarian metastasis</td>
<td>1 (4.8)</td>
<td>5 (13.9)</td>
<td>0.397</td>
</tr>
<tr>
<td>Lymph node metastasis</td>
<td>2 (9.5)</td>
<td>7 (19.4)</td>
<td>0.461</td>
</tr>
<tr>
<td>Recurrence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td>6 (28.6)</td>
<td>12 (33.3)</td>
<td>0.775</td>
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<tr>
<td>Distant</td>
<td>2 (9.5)</td>
<td>4 (11.1)</td>
<td>0.851</td>
</tr>
</tbody>
</table>

Abbreviations: BMI, body mass index; IHC, immunohistochemistry; LVSI, lymphovascular space invasion; MMR, micmatch repair.
Table 4 MMR IHC and clinicopathological characters

<table>
<thead>
<tr>
<th></th>
<th>MMR-intact (%) (n=51)</th>
<th>MMR-deficient (%) (n=6)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (median)</td>
<td>64</td>
<td>57</td>
<td>0.204</td>
</tr>
<tr>
<td>BMI (median)</td>
<td>23</td>
<td>22.1</td>
<td>0.603</td>
</tr>
<tr>
<td>Epithelial type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-grade</td>
<td>16 (31.4)</td>
<td>5 (83.3)</td>
<td>0.022*</td>
</tr>
<tr>
<td>High-grade</td>
<td>35 (68.6)</td>
<td>1 (16.7)</td>
<td></td>
</tr>
<tr>
<td>Mesenchymal component</td>
<td></td>
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<td>0.388</td>
</tr>
<tr>
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<td>21 (41.2)</td>
<td>4 (66.7)</td>
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</tr>
<tr>
<td>Heterologous</td>
<td>30 (58.8)</td>
<td>2 (33.3)</td>
<td></td>
</tr>
<tr>
<td>p53 expression</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>aberrant (E)</td>
<td>38 (74.5)</td>
<td>2 (33.3)</td>
<td>0.058</td>
</tr>
<tr>
<td>aberrant (M)</td>
<td>34 (66.7)</td>
<td>2 (33.3)</td>
<td>0.179</td>
</tr>
<tr>
<td>Stage (III/IV)</td>
<td>16 (31.4)</td>
<td>3 (50.0)</td>
<td>0.389</td>
</tr>
<tr>
<td>Myometrial invasion (&gt; 1/2)</td>
<td>18 (35.3)</td>
<td>4 (66.7)</td>
<td>0.192</td>
</tr>
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<td>Cervical invasion (present)</td>
<td>8 (15.7)</td>
<td>1 (16.7)</td>
<td>0.662</td>
</tr>
<tr>
<td>LVSI (present)</td>
<td>21 (41.2)</td>
<td>3 (50.0)</td>
<td>0.689</td>
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<tr>
<td>Peritoneal cytology (positive)</td>
<td>20 (39.2)</td>
<td>2 (33.3)</td>
<td>0.575</td>
</tr>
<tr>
<td>Ovarian metastasis</td>
<td>5 (9.8)</td>
<td>1 (16.7)</td>
<td>0.504</td>
</tr>
<tr>
<td>Lymph node metastasis</td>
<td>7 (13.7)</td>
<td>2 (33.3)</td>
<td>0.237</td>
</tr>
<tr>
<td>Recurrence</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Local</td>
<td>18 (35.3)</td>
<td>0 (0)</td>
<td>0.162</td>
</tr>
<tr>
<td>Distant</td>
<td>5 (9.8)</td>
<td>1 (16.7)</td>
<td>0.504</td>
</tr>
</tbody>
</table>

Abbreviations: BMI, body mass index; IHC, immunohistochemistry; LVSI, lymphovascular space invasion; MMR, mismatch repair.
Table 5. Prognostic factors for progression-free survival with endometrial carcinosarcoma selected by Cox's univariate analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>Hazard ratio</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (≧75 year)</td>
<td>1.794</td>
<td>0.695-4.628</td>
<td>0.227</td>
</tr>
<tr>
<td>Epithelial component (High-grade)</td>
<td>3.352</td>
<td>1.124-9.991</td>
<td>0.030*</td>
</tr>
<tr>
<td>Mesenchymal component (Homologous type)</td>
<td>1.559</td>
<td>0.661-3.677</td>
<td>0.31</td>
</tr>
<tr>
<td>Stage (Stage III-IV)</td>
<td>1.821</td>
<td>0.773-4.289</td>
<td>0.17</td>
</tr>
<tr>
<td>Myometrial invasion (&gt; 1/2)</td>
<td>1.135</td>
<td>0.476-2.704</td>
<td>0.776</td>
</tr>
<tr>
<td>Cervical invasion (Present)</td>
<td>0.827</td>
<td>0.244-2.811</td>
<td>0.762</td>
</tr>
<tr>
<td>LVSI (Present)</td>
<td>1.813</td>
<td>0.764-4.305</td>
<td>0.177</td>
</tr>
<tr>
<td>Peritoneal cytology (Present)</td>
<td>1.222</td>
<td>0.514-2.904</td>
<td>0.65</td>
</tr>
<tr>
<td>Ovarian metastasis (Present)</td>
<td>0.891</td>
<td>0.207-3.833</td>
<td>0.877</td>
</tr>
<tr>
<td>Lymph node metastasis (Present)</td>
<td>1.65</td>
<td>0.603-4.512</td>
<td>0.33</td>
</tr>
<tr>
<td>Epithelial component with aberrant expression of p53</td>
<td>1.017</td>
<td>0.410-2.522</td>
<td>0.97</td>
</tr>
<tr>
<td>Mesenchymal component with aberrant expression of p53</td>
<td>1.187</td>
<td>0.570-2.472</td>
<td>0.648</td>
</tr>
<tr>
<td>MMR - intact</td>
<td>3.368</td>
<td>0.450-25.195</td>
<td>0.237</td>
</tr>
</tbody>
</table>

Abbreviations: LVSI, lymphovascular space invasion; MMR, mismatch repair.

* p < 0.05