Nationwide Implementation of Robotic Minimally Invasive Surgery for Endometrial Cancer Increases Survival and Reduces Complications

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To determine if a nationwide implementation of robotic minimally invasive surgery influenced the risk of severe complications and survival among women with early-stage endometrial cancer.
### Severe complications

Nationwide implementation of RMIS transitioned the surgical approach

From 97% open to 95% MIS over a decade

MIS reduces severe complications

<table>
<thead>
<tr>
<th></th>
<th>Severe complications</th>
<th>Multivariate logistic regression</th>
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</thead>
<tbody>
<tr>
<td><strong>Group 1, overall</strong></td>
<td>7.3%</td>
<td>OR, 1.39 (95% CI 1.1-1.74)</td>
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<tr>
<td><strong>Group 2, overall</strong></td>
<td>6.2%</td>
<td>Reference</td>
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<tr>
<td><strong>Group 2, TAH</strong></td>
<td>11.4%</td>
<td>OR, 2.91 (95% CI 2.01-4.23)</td>
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<tr>
<td><strong>Group 2, LMIS</strong></td>
<td>5.1%</td>
<td>OR, 1.39 (95% CI 0.87-2.23)</td>
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<tr>
<td><strong>Group 2, RMIS</strong></td>
<td>3.9%</td>
<td>Reference</td>
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</tbody>
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TAH, Total Abdominal Hysterectomy  
LMIS, Laparoscopic Minimally Invasive Surgery  
RMIS, Robotic Minimally Invasive Surgery  
Group 1, Before RMIS implementation  
Group 2, After RMIS implementation
The 5-year survival was significantly lower before RMIS was implemented.

The 5-year survival was significantly lower following TAH.

No difference was found between LMIS and RMIS.

TAH, Total Abdominal Hysterectomy
LMIS, Laparoscopic Minimally Invasive Surgery
RMIS, Robotic Minimally Invasive Surgery
Group 1, Before RMIS implementation
Group 2, After RMIS implementation
The Danish nationwide implementation of robotic surgical availability enabled a paradigm shift towards minimally invasive surgery. This translated into reduced risk of severe complications and increased survival.