Are newer devices better than the previous ones: do they provide better results or are they just easier to use?

Marc RHM van Sambeek, Rutger Stokmans, Pieter Broos, Joep AW Teijink, Philippe Cuypers
Department of Vascular Surgery
Catharina Hospital Eindhoven

Disclosure
Marc RHM van Sambeek
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Medtronic
Unrestricted research grants
Medtronic
Abbott Vascular
WL Gore & Associates
Philips Medical Systems

Results over time

J Vasc Surg 2006;43:896-902

Brewster DC, et al.
Ann Surg 2006; 244:426-38

EUROSTAR Collaborators.
J Endovasc Ther 2005;12:417-429

Over time, the number of re-interventions is decreasing and endograft seems to perform better

Franks SC, et al.
EJVES 2007; 33:154-171

Results over time

DREAM Trial

EVAR Trial
Lancet. 2005;365:2179-86

ACE Trial
J. Vasc. 2011;53:1167-73

OVER Trial

ENGAGE Registry
C3 GREAT Registry
ENVAS FORWARD Global Registry
### ENGAGE vs Landmark trials
**Results at 2 years**

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Primary Device</th>
<th>Secondary Intervention</th>
<th>Conversion</th>
<th>Aneurysm-related Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>DREAM 2000-2003</td>
<td>Zenith Talent Excluder</td>
<td>12%</td>
<td>1.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>OVER * 2002-2008</td>
<td>Zenith Excluder AneurX</td>
<td>13.7%</td>
<td>&lt;1.5%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Endurant U.S. IDE 2005-2007</td>
<td>Endurant</td>
<td>6.1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>ENGAGE 2009-2011</td>
<td>Endurant</td>
<td>7.7%</td>
<td>0.8%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

### GREAT vs Landmark trials
**Results at 2 years**

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Primary Device</th>
<th>Secondary Intervention</th>
<th>Conversion</th>
<th>Aneurysm-related Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>DREAM 2000-2003</td>
<td>Zenith Talent Excluder</td>
<td>12%</td>
<td>1.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>OVER * 2002-2008</td>
<td>Zenith Excluder AneurX</td>
<td>13.7%</td>
<td>&lt;1.5%</td>
<td>2.1%</td>
</tr>
<tr>
<td>GREAT 2010-2012</td>
<td>Excluder</td>
<td>8.5%</td>
<td>0%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

### EVAS vs Landmark trials
**Results at 1 year**

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Primary Device</th>
<th>Secondary Intervention</th>
<th>Conversion</th>
<th>Overall Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>DREAM 2009-2010</td>
<td>Zenith Excluder</td>
<td>11%</td>
<td>?</td>
<td>4.5%</td>
</tr>
<tr>
<td>ACE/OVER 2002-2003</td>
<td>Zenith Excluder AneurX</td>
<td>9.6%</td>
<td>&lt;1.5%</td>
<td>4.8%</td>
</tr>
<tr>
<td>EVAS Forward 2012-2014</td>
<td>Nitra</td>
<td>10.0%</td>
<td>0%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

### Conclusion

**EVAR is getting better**

It is reasonable to assume that more physician experience, better knowledge of the pathophysiology and better devices play a role in the improvement of outcomes.