DIFFERENCES IN AAA SIZE AT RUPTURE BETWEEN PATIENTS TREATED BY EVAR AND THOSE NOT SO TREATED

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RESULTS

AAA rupture occurred in 5.4% of patients after endovascular repair versus 1.4% of patients after open repair through 8 years of follow-up (p<0.001)

Shermerhorn M I et al
39,966 matched pairs in the Medicare Population

LATE RUPTURE AFTER EVAR

• We have previously reported survival following late AAA rupture on 3 separate occasions in a single patient

• What was most striking about this patient was the size of the aneurysm at rupture on each occasion and its durability now out to 7 years from the first rupture

FIRST RUPTURE OF AAA

2008

• Male 77 Years
• Diameter at rupture 10cm x 14cm
• 17/Nov Bifurcated Endograft with suprarenal hook fixation

Disclosures

• None
**SECOND RUPTURE OF AAA**

2010

12cm x 14cm diameter

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**THIRD RUPTURE**

2012

PRE OP ANGIO  
POST CONTRAST CT

17cm diameter

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**CONCURRENT COMPARISON**

Royal Prince Alfred Hospital  
2003 – 2014

Elective repair of intact AAA - 878  
Endovascular repair - 679  
Rupture - 22  
Group I  
Urgent repair of ruptured AAA - 47  
Group II

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**SIZE OF AAA AT RUPTURE**

<table>
<thead>
<tr>
<th></th>
<th>GROUP I</th>
<th>GROUP II</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATIENTS</td>
<td>22</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>PATIENTS + CT</td>
<td>21</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>AAA SIZE ON CT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean diameter</td>
<td>8.1cm</td>
<td>6.9cm</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>range</td>
<td>5.4 – 17cm</td>
<td>6.0-10cm</td>
<td></td>
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</tbody>
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**CONCLUSIONS**

- We have demonstrated a significant difference in the size at which AAAs rupture
- Those which rupture after EVAR are larger than those who have received no prior treatment for their AAA
- Further research is required to explain the pathophysiological basis of this difference