Debate: **Chimney techniques are the best way to treat persistent type IA endoleaks after EVAR**

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Type IA endoleak after EVAR

- Diameter > 6 cm
- Neck angulation

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Type IA endoleak after EVAR

- Previous treatment attempt (Palmaz stent)

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Type IA endoleak after EVAR

- Stent-struts at the origin of the renals

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**FACTS**

- Rupture-threatening pathologies
- Diameter >> 6 cm
- Symptoms
- Severe neck angulation
- Stent-struts at the origin of the renals

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**Effective treatment**

- 24h available
- Flexible Devices
- Overcoming the barrier of the stent-struts

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**CHIMNEY TECHNIQUE**
Sizing

Devices selection

24h available
Off-the-shelf Devices

Contained rupture

Flexible Devices
for severe neck angulation

Radial force. In vivo and in vitro studies showed harmonic interaction of the Endurant device with balloon-expandable covered stents as chimneys. In the particular case presented a烟囱-EVAR was necessary for contained rupture. Using a烟囱-EVAR ensured the best results in contained rupture.
Flexible Devices for severe neck angulation

Suprarenal stent-struts at the origin of the renals

FEVAR

Technical failures

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<th>Technical issue</th>
<th>Technical failure</th>
<th>Outcome</th>
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<tr>
<td>chimney</td>
<td>Loss of device to engage device due to severe neck angulation</td>
<td>Left renal artery occlusion</td>
<td>24h available due to the use of off-the-shelf devices</td>
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<tr>
<td>chimney</td>
<td>Loss of device due to severe neck angulation</td>
<td>Right renal artery occlusion</td>
<td>Creates new neck also in angulated anatomy</td>
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<tr>
<td>chimney</td>
<td>Difficulty cannulating graft within patient due to previously placed access stent(s)</td>
<td>Loss of left renal artery</td>
<td>Easier sizing and cannulation of the target vessels from the upper extremity</td>
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<tr>
<td>chimney</td>
<td>Right renal artery stenosis</td>
<td>Loss of right renal artery</td>
<td>Cannulation from above</td>
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<tr>
<td>chimney</td>
<td>Right renal artery stenosis due to embolization of scaffold</td>
<td>Loss of right renal artery</td>
<td>Positioning of the sheaths in the renals</td>
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In summary

- Chimney technique
- 24h available due to the use of off-the-shelf devices
- optimal treatment for type IA endoleaks and failed EVAR