Late Results of ICSS Trial Show CAS and CEA to be Equivalent in Patients with Symptomatic Stenosis

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On behalf of ICSS Trialists

International Carotid Stenting Study (ICSS)

- **Design**: A multicentre open randomised trial with independent neurological assessment of outcome events blinded to allocated treatment
- **Aims**: To determine the risks and long term benefits of carotid artery stenting (CAS) in comparison to carotid endarterectomy (CEA) in patients with symptomatic > 50% carotid stenosis

Interim results: Lancet 2010;375:985–97

**Recruitment**

- Recruitment started May 2002
- Completed on target October 2008
- 50 centres, 15 countries; total patients 1713
- Follow up continued until 2012

<table>
<thead>
<tr>
<th>Country</th>
<th>Patients</th>
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<tr>
<td>UK</td>
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</table>

**Duration of Follow-up**

Median follow up: CAS 4.2 years, CEA 4.2 years
Total follow up: 7350 patient years

**Duration of Follow-up**

**Short Term (120 day) Follow-up**

Stoke or death more frequent after stenting CNI and bleeding more frequent after surgery

HR 1.69 (95% CI 1.16-2.45) p=0.006

ICSS Investigators, Lancet 2010;375:985–97
Long-term Follow-up

Procedural stroke, procedural death or ipsilateral stroke during follow-up

ICSS

Long-term results

Bonati et al. Lancet 2015;385:529-538

Long-term Follow-up

Ipsilateral stroke >30d after treatment

ICSS

Long-term results

Bonati et al. Lancet 2015;385:529-538

Long-term Follow-up

Primary outcome: fatal or disabling stroke

ICSS

Long-term results

Bonati et al. Lancet 2015;385:529-538

Long-term Per-protocol Analysis

Restenosis after treatment

ICSS

Long-term results

Bonati et al. Lancet 2015;385:529-538

Summary

- CAS has higher 30-day risk of stroke, but in ICSS this risk was only 1 extra stroke (typically non-disabling) for every 156 patient-years of follow-up
- CEA has higher risk of CNI and bleeding
- Patient preference and local expertise must be taken into account
- No difference in long-term functional outcome, quality of life, cost-effectiveness or restenosis
- Patients choosing CAS can be reassured about the long-term benefit

ICSS

Long-term results

Bonati et al. Lancet 2015;385:529-538