

## Use of dual layered stents in endovascular treatment of extracranial stenosis of the internal carotid artery: one year results of a patient-based meta-analysis of 4 clinical studies

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**Background:** Small sized clinical studies evaluating one year outcomes of CAS performed with two available DLS, Roadsaver<sup>®</sup> (RS) and CGuard<sup>®</sup> (CG), have been published.

**Purpose:** To evaluate one year safety and efficacy of dual layered mesh covered carotid stent systems (DLS) for carotid artery stenting (CAS).

**Methods:** We performed an individual patient-level meta-analysis including studies enrolling more than 100 CAS with DLS. Primary endpoint was the death and stroke rate; secondary endpoints were restenosis and in-stent thrombosis rates at one year.

**Results:** Patients were divided in two groups according to DLS (RS N=250; CG N=306). At one year, 11 patients died (1.97%), 7 patients in the group RS (2.8%) and 4 patients in the CG one (1.31%), 10 strokes occurred, 4

in the group RS (1.6%) and 6 in the CG one (1.96%). Overall death and stroke rate was 3.77% (N=21), 11 events in the group RS (4.4%) and 10 in the CG group (3.27%). Symptomatic status was the only predictor of death and or stroke.

At one year restenosis occurred in 12 patients (2.1%), 10 in the group RS (4%) and 2 in the CG one (0.65%) (p=0.007). In stent thrombosis occurred in 1 patient (0.18%) of the group CG (0.32%). RS use was the only independent restenosis predictor.

**Conclusions:** This study suggests that DLS use for CAS is associated to a low one year death and stroke rate and specific DLS stent use could affect restenosis rate.