Results: Three hundred and seven CAS patients were identified, of which 190 were considered high-risk (62%), 101 were physiologically high-risk (53%), 63 were anatomically high-risk (33%), and 26 were both (14%). Ninety-six patients were symptomatic (31%). Twenty-three patients suffered complications (7.5%), including 9 CVAs (2.9%), 8 TIAs (2.6%), 4 MIs (1.3%), and 4 deaths (1.3%). Independent predictors of CVA/TIA, death, or MI were physiologic high-risk status, symptomatic status, and male gender, while anatomic high-risk status was not (Table 1).

Conclusions: Current CMS physiologic high-risk CEA criteria place patients at increased risk for adverse events for CAS. This warrants the need for improved patient selection criteria for CAS vs. CEA in physiologically high-risk patients.

Table 1. Results of multivariate logistic regression analysis

	OR	*CI*	*p-Value*
HR (Physiologic)	2.54	1.01-6.42	0.047
HR (Anatomic)	1.02	0.39-2.67	0.96
Symptomatic	3.77	1.54-9.26	0.004
Male Gender	3.22	1.04-9.95	0.042

HR, high-risk; OR, odds ratio; CI, confidence interval.

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PS94.

Postoperative Transcranial Doppler Monitoring in the Prediction of Cerebral Hyperperfusion after Carotid Endarterectomy

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Objectives: Cerebral hyperperfusion syndrome (CHS) following carotid endarterectomy (CEA) is defined by a combination of symptoms and at least a doubling of preoperative cerebral blood flow, correlated to a doubling of the mean blood velocity (Vmean) measured in the ipsilateral middle cerebral artery with transcranial Doppler (TCD). Currently, an increase in Vmean of >100% 3 minutes after carotid declamping, compared to pre-clamping Vmean is the gold standard for CHS prediction. However, applying this method, not all patients at risk for CHS are identified, while others may be treated unnecessarily. We hypothesize that the positive predictive value (PPV) of TCD in the prediction of CHS can be increased by an additional post-operative TCD measurement within two hours after CEA.

Methods: In 184 CEA patients the pre-operative (V1), pre-clamping (V2), post-clamping (V3) and post-operative Vmean (V4) was measured by TCD and standard blood pressures were scored. The intra-operative Vmean increase ((V3 - V2) / V2) was compared to the post-operative increase ((V4 - V1)/ V1) in relation to CHS and post-operative hypertension. Outcome was reported as PPV and ROC-curve analysis.

Results: An intra-operative Vmean increase of >100% was noted in 16 patients (9%), and a post-operative Vmean increase in 22 (12%) patients. In 10 patients (5%) CHS was diagnosed; two of those had an intra-operative Vmean increase of >100% and nine a post-operative Vmean increase >100%. This results in a PPV of 13% for the intra-operative and 41% for the postoperative measurement, and a PPV of 29% if both measurements were combined.

ROC curve analysis showed an area under the curve of 0.641 for the intra-operative and 0.904 for the post-operative Vmean measurement method.

Conclusions: A post-operative Vmean increase of >100% as measured by TCD is superior to both the intra-operative and the combined intra- and post-operative TCD measurement for the identification of patients at risk for the development of CHS after CEA.

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PS96.

Hospital Economics of Carotid Endarterectomy and Carotid Stenting

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Objectives: Cost-effectiveness has become an important endpoint in comparing therapies considered to have clinical equipoise. Prior economic analysis of carotid artery treatment has been limited by small sample size.

Methods: A retrospective analysis of hospital cost and 30 day clinical outcomes was performed on patient undergoing carotid endarterectomy (CEA) and carotid stenting with (CAS) between 1/1/08 - 9/30/10 at a single insti-

tution. Cost (not charges) of the index hospitalization included direct and indirect costs and was normalized to 2010 values. Data are mean +/- S.D.

Results: 306 patients underwent either CEA (n=174) or CAS (n=132). Patients undergoing CEA trended towards a higher prevalence of being symptomatic (44.8 %)compared to CAS(34.0%,P= 0.09). Age was not significantly different between patients undergoing CEA and CAS (70.2 vs 72.0,respectively, P=0.36). CAD was more common in patients undergoing CAS (60.3% vs 39%,P=0.003). The prevalence of COPD, ESRD, Hypertension and diabetes were not significantly significant. Mean hospital cost for CAS was $9426+/−5776 while CEA cost was $6734+/−3935 (P < 0.0001). This cost differential was driven by the higher direct supply costs for CAS ($5634) vs CEA ($1967),(P = <.0001). These higher costs for CAS were seen consistently in symptomatic, asymptomatic, elective and urgent subgroups (Table). 30 day stroke/death/MI rate was 2.3%(4/174)in the CEA group and 3.8%(5/132) in the CAS group,P=0.5. Overall LOS was 2.1 days in both groups (P=0.9).

	N		*Length of Stay (days)*		*Cost ($)*		P
	CAS	*CEA*	*CAS*	*CEA*	*CAS*	*CEA*	
Entire Cohort	132	174	2.1	2.06	9426	6734	<0.0001
Symptomatic	45	78	3.5	2.85	12128	7750	<0.0001
Asymptomatic	87	96	1.3	1.43	7983	5835	0.0068
Elective	118	152	1.4	1.34	8538	5841	<0.0001
Urgent	14	22	7.5	7.05	16095	12540	0.0542

Conclusions: Treatment of carotid artery disease with CAS was 40% more costly than CEA and did not provide better clinical outcomes or a reduction in LOS. The cost differential was driven entirely by the increased supply costs in the CAS cohort. At present, carotid stenting cannot be considered a cost-effective treatment for carotid artery disease.

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C3e: Poster Session - Peripheral Arterial Disease (1)

PS98.

Gender-Related Outcomes in the Endovascular Treatment of Femoro-Popliteal Obstructive Disease

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Objectives: To analyze early and long term results of endovascular infrainguinal peripheral revascularizations in female patients in a single centre experience.

Methods: From January 2000 to March 2010, 223 consecutive endovascular interventions for femoro-popliteal disease in 214 patients were performed. Interventions were performed in females in 71 cases (group 1) and in males in 152 cases (group 2).

Early and follow-up results were analyzed and compared with appropriate statistical tests.

Results: There were no differences between the two groups in terms of risk factors for atherosclerosis, comorbidities, clinical status, TASC II classification of arterial lesions and technical characteristics of the procedures.

Technical failure rate was 3.9% in group 2, while no failure occurred in group 1 (p=0.09).

Cumulative 30-day mortality was 0.9%, with no difference between females (no deaths) and males (2 deaths, 1.3%; p=0.3). Overall amputation rate at 30 days was 1.3%, again with no differences between the two groups (2.8% and 0.7%, respectively; p=0.2); also the rate of perioperative thrombosis (overall 2.7%) was similar between the two groups (2.8% and 2.6%, respectively; p=0.4).

Follow-up was available in 95 % of patients with a mean duration of 17 months (range 1-85).

Estimated 36-month survival rates were 95% in group 1 and 81.8% in group 2 (p=0.3; log-rank 0.9). Primary, assisted primary and secondary patency rates at 36 months were 39.8%, 49.1% and 62% in group 1 and 41.3%, 55.5% and 75% in group 2, without significant differences between the two groups. Also the rates of freedom from any (open or endovascular) reintervention and from conversion to surgical bypass at 3 years were similar. In patients with critical limb ischemia, limb salvage rates at 36 months were 80.5% and 90.3, respectively (p=0.7, log-rank 0.2).

Conclusions: Endovascular treatment of femoro-popliteal occlusive disease provides similar results between males and females at an intermediate follow-up.

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PS100.

The Prognostic Value of Objective Markers of Atherosclerotic Disease in Vascular Surgery Patientsl: Optimizing Preoperative Cardiac Risk Evaluation

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Objectives: Cardiac risk factors encompassed in the Revised Cardiac Risk (RCR) index help identify patients at the highest cardiac risk in the surgical population. Recently, high-sensitivity C-reactive protein (hs-CRP), the common