studies, and clinical implantation of the graft. Banked human aortic smooth muscle cells were cultured in bioreactors in vitro to produce vascular tissue grafts, and a decellularization process was subsequently used to remove immunogenic cellular antigens. Arteriovenous grafts were implanted into nonhuman primates for up to 6 months and were evaluated for patency, durability, cannulation, rejection, and cellular repopulation. In addition, these grafts were evaluated for long-term arterial reconstruction in a canine model, using canine-derived grafts. In animal studies, histologic analysis demonstrated evidence of host vascular cell migration into grafts and endothelialization. Little intimal hyperplasia was observed in animal studies. These preclinical studies supported initiation of clinical trials.

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Clinical Outcomes and Cost Effectiveness of Initial Treatment Strategies for Non-Embolic Acute Limb Ischemia in Real-Life Clinical Settings

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Objectives: Optimal initial treatment for patients with acute limb ischemia (ALI) remains undefined. Although clinical outcome data are inconsistent, catheter-directed thrombolysis (CDT) with tissue plasminogen activator is increasingly used. Patient-level analysis combining clinical and economic data in a real-life setting is lacking. This study compares clinical outcomes and cost effectiveness of initial treatment strategies for non-embolic ALI using real-life patient-level data.

Methods: Medical records and hospital cost data were analyzed for non-embolic ALI patients treated in four hospitals over 3 years. A cost-effectiveness analysis was performed using a decision tree analytical model. All costs were valued based on cost-to-charge ratios.

Results: In 205 patients, initial treatments were CDT alone (68) or with angioplasty (16), open surgery (60), endovascular (33), and hybrid (28). Clinical and economic outcomes are summarized in the Table. Although clinical outcomes did not differ significantly between groups, reintervention rates during hospital stay, readmission rates, and costs were highest in the CDT group. More than one reintervention was needed in 16% of patients in the CDT group.

Conclusions: In this real-life study, initial treatment of non-embolic limb ALI with currently available CDT options was associated with greater healthcare resource consumption and cost compared to other initial treatment options.

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SS24

Lessons Learned in the Surgical Treatment of Neurogenic Thoracic Outlet Syndrome over 10 years

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Objectives: To evaluate our extensive experience in the treatment of patients with neurogenic thoracic outlet syndrome (NTOS) who underwent first rib resection and scalenectomy (FRRS) over a decade.

Methods: Patients treated with FRRS for NTOS from 2003 to 2013 were retrospectively reviewed using a prospectively maintained database.

Results: Over the 10 years, 286 patients underwent 308 FRRS. During the first 5-year period, 127 FRRS were performed (96 female, 31 male), with an average age of 36.9 years. During the second 5-year period, 181 FRRS were performed (143 female, 38 male), with an average age of 33 years. Twenty-four children (age ≤18 years) underwent FRRS; nine during the first 5 years and

Table. Clinical and economic outcomes

Variable	*CDT (n = 68)*	*CDT + A (n = 16)*	*Open Surg (n = 60)*	*Endovasc (n = 33)*	*Hybrid (n = 28)*	P
AFS (%/N)	94/64	87/14	95/57	100/33	100/28	NS
Readmissions (%/N)	16/11	31/5	7/4	6/2	3/1	<.05
Mortality (%/N)	0	6/1	1/1	0	0	NS
Major bleed (%/N)	3/2	0	1/1	0	0	NS
Reinterventions (%/N)	62/42	33/5	7/4	12/4	18/5	<.00001
Initial hosp costs, $						.01
Mean	31,804	27,779	16,636	20,751	21,134	
SE	2436	5035	2595	3494	3850	
Readmission cost ($)						.05
Mean	20,441	26,844	7434	24,409	4156	
SE	4684	7306	9847	11,235	18,117	
Total cost						.0001
Mean	34,840	37,002	17,758	21,916	21,220	
SE	2725	5628	2921	3911	4309	