SS10
Why Discordance of the Treatment Received Compared with the Treatment Recommended Results in Worse Outcomes for Peripheral Arterial Disease
Thomas E. Brothers. Surgery, Ralph H. Johnson Department of Veterans Affairs Medical Center, Charleston, SC

Objectives: Strategies available to facilitate decision-making for patients with peripheral arterial disease (PAD) include a Markov-based decision analysis (DA) model and the Lower Extremity Grading System (LEGS) score, both of which have suggested that outcomes may be inferior when the actual treatment received does not follow that recommended. The purpose of the current study was to examine this discordance and why patients fared worse with discordance.

Methods: Patients referred for symptomatic lower extremity PAD over a 3-year period were evaluated using the DA model and LEGS score. Calculated quality of life (cQOL) values were assigned preoperatively and at follow-up according to symptoms and treatment Results 0.00 (death) - 1.00 (perfect health). Outcomes were compared according to whether the treatment provided matched that initially proposed by the surgeon or predicted by the models.

Results: Among 375 consecutively enrolled patients (median follow-up, 16 months), the cQOL at last follow-up improved from baseline with endovascular (0.23 ± 0.16) or open (0.21 ± 0.17) revascularization more than with amputation (0.10 ± 0.07) or medical therapy (0.04 ± 0.09). The magnitude in cQOL improvement was greatest when the treatment received was concordant with the initial plan of the surgeon (k = 0.84, 0.18 vs 0.08; P < .01), the DA model (k = 0.53, 0.19 vs 0.13; P < .01), or the LEGS score (k = 0.32, 0.23 vs 0.10; P < .01). Patient refusal to follow the surgeon’s recommendations and on-going tobacco use were associated with minimal improvement in cQOL (ranges, 0.05-0.07 and 0.00-0.02, respectively), whereas the decision to pursue a less morbid therapy was associated with substantial improvement in cQOL (range, 0.28-0.38).

Conclusions: Mean cQOL improved most when the treatment received matched that proposed by the surgeon or predicted by the models. Patient refusal to follow the therapy recommended as well as the strategy not to revascularize claudicant patients who persist in smoking were associated with significantly less patient benefit.

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SS11
Geometric Remodeling of Vein Bypass Grafts and the Impact on Graft Failure
Yong He¹, Kenneth Desart¹, Khayree Butler¹, Anne Irwin¹, Peter R. Nelson¹, Scott A. Berceli². ¹University of Florida, Gainesville, Fla; ²Malcom Randall VAMC, Gainesville, Fla

Objectives: The risk factors for vein graft (VG) failure are well established, but the underlying mechanisms are poorly understood. This study used high-resolution, sequential mapping to identify factors controlling VG remodeling.

Methods: VG patients (n = 56) were prospectively recruited and underwent computed tomography imaging at 1 week, and at 1, 6, and 12 months postoperatively. VGs were digitally reconstructed, and lumen areas were calculated at 1-mm intervals, followed by segmental analysis.

Results: VG remodeling was highly dynamic with substantial spatial and patient-to-patient heterogeneity (Fig). Distinct temporal phases in the remodeling response were observed (change in lumen cross-sectional area: −5.5% (early) vs +1.3% (late); P = .03). Small diameter VGs (area <15 mm²) demonstrated enhanced outward remodeling (P = .002), consistent with a shear-driven adaptation response. Of 56 VGs, 12 (21%) failed ≤12 months, and maladaptive early (1 week-1 month) remodeling in regions of stenosis were predictive of VG failure (P = .03). Impaired remodeling was observed in the anastomotic regions of composite VGs (P < .001); no remodeling differences were noted in arm vs leg VGs or outflow location. Cilostazol use was associated with marked outward remodeling in all phases of VG adaptation (P = .005); warfarin and Plavix had no effect on this response. Race (black vs

Fig. Dynamics of vein graft cross-sectional area changes after implantation. Graphs of individual and cumulative patients demonstrate the significant temporal and spatial heterogeneity in these remodeling events.
nonblack) was a significant factor in both impaired outward remodeling \( (P = .03) \) and VG survival \( (P = .02) \).

**Conclusions:** VGs demonstrate distinct temporal patterns in remodeling. Anatomic, pharmacologic, and racial factors control adaptation and impact VG survival.

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**Table.** One-year outcomes (predicted and observed) of revascularized foot wounds by estimated Wound characteristic/Ischemia/foot Infection (WIfI) classification

<table>
<thead>
<tr>
<th>Estimated WIfI classification</th>
<th>Predicted outcomes, %</th>
<th>Observed outcome, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Limb loss</td>
</tr>
<tr>
<td>Class 0-very low risk</td>
<td>40</td>
<td>3 ± 3</td>
</tr>
<tr>
<td>Class 1-low risk</td>
<td>63</td>
<td>8 ± 8</td>
</tr>
<tr>
<td>Class 2-moderate risk</td>
<td>46</td>
<td>23 ± 6</td>
</tr>
<tr>
<td>Class 3-high risk</td>
<td>6</td>
<td>40 ± 22</td>
</tr>
</tbody>
</table>

**SS14**

**Endovascular Treatment of Common Femoral Artery Occlusive Disease in 167 Consecutive Patients: Midterm Analysis**

Manish Mehta\(^1\), Max Kahn, Philip S. K. Paty\(^2\), Jeffery Hnath\(^2\), Paul B. Kreienberg\(^2\), Melissa Shan, John Byrne, Paul J. Feustel\(^1\). \(^1\)Albany Medical College, Albany, NY; \(^2\)The Vascular Group at Albany Medical Center, Albany, NY

**Background:** Stenting of the common femoral artery (CFA) represents an attractive approach to treat noncritical limb ischemia, and it is the treatment of choice for chronic total occlusion (CTO). However, there are concerns about long-term patency and complication rates. We report our mid-term results of stenting CFA in a large consecutive patient cohort.

**Methods:** A single-center, retrospective, observational study of 167 consecutive patients undergoing CFA stenting between 2011 and 2014. Stenting was performed using balloon-expandable stents only. There were 106 males and 61 females, with a mean age of 62.3 ± 13.5 years. The CFA was occluded in 144 patients (86.7%), and nonocclusive disease in 23 patients (13.3%).

**Results:** The primary and secondary patency rates at 1 year were 82.2% and 90.2%, respectively. Primary patency rates were similar across the CFA diameter strata. The CFA was occluded in 144 patients (86.7%) and nonocclusive disease in 23 patients (13.3%).

**Conclusions:** The mid-term outcome of CFA stenting in this large consecutive patient cohort is favorable. The CFA occlusion rate is high, and there is no evidence for increase in CFA diameter strata. The complication rate is low, and further studies are needed to define the indications for CFA stenting.