different cohort compared to those requiring unilateral CIA stents. Bilateral CIA stents had significantly (P < .05) higher rates of independent ambulation and claudication as the indication, with fewer prior aortoiliac and infragenual interventions, and less concomitant external iliac artery interventions and femoral endarterectomies. Patients who received unilateral CSs had the highest frequencies of critical limb ischemia (35.2%), acute limb ischemia (7.7%), previous interventions (21.5%), TASC D lesions (19.8%), total vessel occlusion (62.4%), nonelective interventions (17.8%), concomitant external iliac artery interventions (38.1%), and femoral endarterectomies (27.5%). For unilateral CIA stents, primary patency at 18 months was 83.7% for BMSs and 65.5% for CSs (P = .0005). Multivariable analysis demonstrated that loss of primary patency was associated with age (hazard ratio [HR], 0.97; P = .005), renal insufficiency (HR, 2.60; P = .024), nonindependent ambulation (HR, 2.09; P = .005), previous aortoiliac interventions (HR, 1.73; P = .015), CSs (HR, 1.88; P = .006), maximal diameter ≤7 mm (HR, 1.86; P = .005), and lack of dual antiplatelet therapy (HR, 1.65; P = .012).

For bilateral CIA stents, primary patency was 82.1% for BMSs and 80.1% for CSs (P = .56). Loss of primary patency was associated with age (HR, 0.93; P < .001), previous aortoiliac intervention (HR, 2.1; P = .002), and maximal diameter ≤7 mm (HR, 1.88; P = .004).

**Conclusions:** Patients undergoing unilateral CIA stenting represent a subset of patients with more advanced disease and acuity compared to those undergoing bilateral stenting. For bilateral CIA stenting, CSs do not have superior primary patency rates compared BMSs in the midterm. However, in the setting of unilateral CIA treatment, CSs have significantly worse primary patency compared to BMSs, despite controlling for differences in patient selection.

### Table.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Bare metal, N (%)</th>
<th>Covered stent, N (%)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stent Configuration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unilateral</td>
<td>1480 (44.7%)</td>
<td>247 (40.2%)</td>
<td>.039</td>
</tr>
<tr>
<td>Bilateral</td>
<td>1834 (55.3%)</td>
<td>368 (59.8%)</td>
<td></td>
</tr>
<tr>
<td>Indication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claudications</td>
<td>2523 (76.1%)</td>
<td>425 (69.1%)</td>
<td>.002</td>
</tr>
<tr>
<td>Rest pain/Tissue Loss</td>
<td>635 (19.2%)</td>
<td>151 (24.6%)</td>
<td></td>
</tr>
<tr>
<td>Acute Limb ischemia</td>
<td>136 (4.1%)</td>
<td>39 (6.3%)</td>
<td></td>
</tr>
<tr>
<td>Previous Aortoiliac Procedure</td>
<td>468 (14.1%)</td>
<td>114 (18.5%)</td>
<td>.0046</td>
</tr>
<tr>
<td>Urgent or Emergent</td>
<td>313 (9.4%)</td>
<td>78 (12.7%)</td>
<td>.014</td>
</tr>
<tr>
<td>TASC Classification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>1774 (53.5%)</td>
<td>258 (42.0%)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>B</td>
<td>619 (18.7%)</td>
<td>150 (24.4%)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>319 (9.6%)</td>
<td>78 (12.7%)</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>290 (8.8%)</td>
<td>110 (17.9%)</td>
<td></td>
</tr>
<tr>
<td>CIA occlusion</td>
<td>1558 (47.0%)</td>
<td>362 (58.9%)</td>
<td>.001</td>
</tr>
<tr>
<td>Femoral Endarterectomy</td>
<td>353 (10.7%)</td>
<td>123 (20.0%)</td>
<td>&lt;.001</td>
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<tr>
<td>Maximum diameter &lt;7 mm</td>
<td>2281 (68.8%)</td>
<td>471 (76.6%)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>External Iliac Artery Treatment</td>
<td>643 (20.0%)</td>
<td>190 (10.9%)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Dissection or Perforation</td>
<td>134 (4.0%)</td>
<td>46 (7.5%)</td>
<td>.002</td>
</tr>
<tr>
<td>Antiplatelet Therapy at Discharge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>164 (4.9%)</td>
<td>51 (8.3%)</td>
<td>.0039</td>
</tr>
<tr>
<td>Aspirin Alone</td>
<td>913 (27.6%)</td>
<td>180 (29.3%)</td>
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<tr>
<td>Plavix Alone</td>
<td>333 (10.0%)</td>
<td>53 (8.6%)</td>
<td></td>
</tr>
<tr>
<td>Dual Antiplatelet</td>
<td>1902 (57.4%)</td>
<td>332 (54.8%)</td>
<td></td>
</tr>
<tr>
<td>Discharge Home</td>
<td>3169 (95.6%)</td>
<td>557 (90.6%)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

**Author Disclosures:** D. T. Baril: Nothing to disclose; E. A. Genovese: Nothing to disclose; D. Landsittel: Nothing to disclose; M. S. Makaroun: Nothing to disclose; A. S. Topp: Nothing to disclose.

**VES15.**

**Multi-Institutional Experience in the Management of Adventitial Cystic Disease**

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1Indiana University, Indianapolis, Ind; 2University of Arkansas for Medical Sciences, Little Rock, Ark; 3Lake Erie College of Osteopathic Medicine, Bradenton, Fla; 4University of California Los Angeles School of Medicine, Los Angeles, Calif; 5Keio University School of Medicine, Shinjuku-ku, Tokyo, Japan; 6Mayo Clinic, Rochester, Minn; 7University of Messina, Messina, Italy

**Objectives:** Adventitial cystic disease (ACD) is an unusual arteriopathy; case reports and small series constitute the available literature regarding treatment. We sought to examine the presentation, contemporary management, and long-term outcomes using a multi-institutional database.

**Methods:** Using a standardized database, 12 institutions retrospectively collected demographics, comorbidities, presentation/symptoms, imaging, treatment, and follow-up data on consecutive patients treated for ACD over a 10-year period, using Society for Vascular Surgery reporting standards for limb ischemia. Univariate and multivariate analyses were performed comparing treatment methods and factors associated with recurrent intervention. Life-table analysis was performed to estimate the freedom from re-intervention when comparing the various treatment modalities.

**Results:** Forty-five patients (31 men, 14 women; mean age, 52) were identified with ACD involving the popliteal artery (n = 39), radial artery (n = 3), superficial/common femoral artery (n = 2), and common femoral vein (n = 1). Lower extremity (LE) claudication was seen 93% of the leg arteries, while patients with upper extremity (UE) ACD had hand or arm pain. Preoperative diagnosis was made in 86% of patients, primarily using cross-sectional imaging of the LE; mean LE ankle-brachial index (ABI) was 0.71 in the affected limb. Forty-one patients with LE ACD underwent operative repair (resection with interposition graft = 18; cyst drainage without resection or reconstruction = 8; bypass graft = 8; cyst excision = 5; excision with patch = 2). Two patients with UE ACD underwent cyst drainage without resection or arterial reconstruction. Complications, including graft infection, thrombosis, hematoma, and wound dehiscence, occurred in 11% of patients. LE patients undergoing cyst resection only or cyst excision and patch took longer before returning to normal activity (55 days; P = .013). Mean LE ABI at 3 months postoperatively improved to 1.07 (P < .001), with an overall mean follow-up of 6 years (range, 0.33-9 years). Eight patients (18%) with LE arterial ACD required reintervention; redo cyst resection = 1; thrombectomy = 3; redo bypass = 1; balloon angioplasty = 3) after a mean of 70 days (Fig), with symptom relief in 88%. LE patients who underwent cyst resection and
interposition or bypass graft were less likely to require re-in-
tervention ($P = .046$). One patient with LE ACD required
an above-knee amputation.

Conclusions: This multi-institutional, contemporary ex-
perience of ACD, the largest to date, examines the treat-
ment and outcomes of ACD. The majority of patients can
be identified preoperatively; surgical repair, consisting of
cyx excision with arterial reconstruction or bypass alone,
provides the best long-term symptomatic relief.

Author Disclosures: G. De Caridi: Nothing to disclose;
R. R. DeMartino: Nothing to disclose; N. Fujimura:
Nothing to disclose; M. P. Harlander-Locke: Nothing to
disclose; P. F. Lawrence: Nothing to disclose;
Vascular Low Frequency Disease Consortium:
Nothing to disclose; R. L. Motaganahalli: Nothing to
disclose; M. R. Smeds: Nothing to disclose.

VESS16.

Disproportionate Use of Atherectomy for SFA Interventions Between Office-Based and Hospital-Based Laboratories May Be Self-Serving

Dipankar Mukherjee, MD, Homayun Hashemi, MD.
Inova Fairfax Hospital, Falls Church, Va

Objectives: This study evaluated “real-world” data
with regards to the current management of peripheral
vascular disease using Medicare patients and specifically
examined the type and frequency of endovascular interven-
tions for occlusive disease of the femoral artery and the
place of service of these interventions.

Methods: Analysis of Medicare Part B procedure and
claims data summary from 2011 to 2014 was used for
this analysis. Frequency of use of angioplasty vs angioplasty
with stent vs angioplasty with atherectomy vs atherectomy
with stent were analyzed for all endovascular leg interven-
tions, as well as a more detailed analysis of the codes for
endovascular femoropopliteal procedures. The place of ser-
vice was recorded. Trends over time were then recorded.

Results: There has been a progressive increase in endo-
vascular interventions for claudication from 2011 through
2014. Place of service trends reveal marked increase in pro-
cedures in office-based laboratories at the expense of hospital-
based laboratories. Procedure trends demonstrate increase
in all procedure types (ie, angioplasty, angioplasty with athe-
rectomy and stent with atherectomy) with slight decline in
stent with angioplasty. Femoral artery interventions at of-
fice-based labs increased by 3487 procedures from 2013 to
2014. From 2012 to 2014, the use of atherectomy in the of-
fice-based laboratory setting doubled. By contrast, atherec-
tomy in the hospital setting (inpatient and outpatient) for
the same time period saw no significant change. According
to Centers for Medicare and Medicaid Services, atherectomy
pays $12,000 to $18,000 per case in the outpatient setting.

Conclusions: Percutaneous treatment for occlusive dis-
case of the femoral artery in patients presenting with claudi-
cation symptoms is increasingly being done in office-based
laboratories. Explosive and disproportionate use of atherec-
tomy in office-based vs hospital-based laboratories suggests
that factors other than efficacy of treatment are likely respon-
sible for this difference. Economic incentives inherent to the
office based laboratory could be the difference.

Author Disclosures: H. Hashemi: Nothing to disclose;
D. Mukherjee: Nothing to disclose.

VESS17.

Amputation After Peripheral Vascular Intervention and Bypass for Claudication in the Vascular Quality Initiative (VQI)

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Christian Ochoa, MD1, Thomas Huber, MD, PhD1,
Adam W. Beck, MD2. 1University of Florida, Gainesville,
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3University of Southern California, Los Angeles, Calif

Objectives: Intermittent claudication (IC) is described
to have benign clinical course, with 1 and 5-year major
amputation rates of <1% and 1% to 3%, respectively. Inter-
vention is typically undertaken to alleviate symptoms rather
than prevent amputation. The efficacy of therapy is
measured in the ability to provide sustained symptom relief
and maintain patency. Any amputation precipitated by inter-
ventions for IC is abject failure of therapy. Given
increasing frequency of IC procedures, it is crucial to deter-
mine how they alter the natural history of disease. Goal of
this project is to define incidence and risk factors for ampu-
tation after IC treatment in Society for Vascular Surgery-
Vascular Quality Initiative (SVS-VQI).

Methods: All IC VQI patients treated with
peripheral vascular intervention (PVI) or surgical bypass
were included. Patients with critical limb ischemia, or ur-
gent/emergent procedures were excluded. Primary end
point was minor (toe or transmetatarsal) and major ampu-
tation (below knee and above knee) within 1 year after pe-
ripheral vascular intervention (PVI)/bypass. Secondary end
points included other adverse limb events within 1 year
(wound / graft infection, and reintervention) as well as
30-day and 1-year all-cause mortality. For each procedure,
univariate associations between predictors and amputation
rates of IC VQI patients treated with
peripheral vascular intervention (PVI) or surgical bypass
were included. Patients with critical limb ischemia, or ur-
gent/emergent procedures were excluded. Primary end
point was minor (toe or transmetatarsal) and major ampu-
tation (below knee and above knee) within 1 year after pe-
ripheral vascular intervention (PVI)/bypass. Secondary end
points included other adverse limb events within 1 year
(wound / graft infection, and reintervention) as well as
30-day and 1-year all-cause mortality. For each procedure,
univariate associations between predictors and amputation
were investigated, and stepwise variable-reduction algo-

Results: A total of 16,428 patients were analyzed
(67% PVI; 33% bypass). One-year any (minor + major)
amputation rate for PVI and bypass was 1.3% and 2.1%