Results: For ENDO, 36 chimney stents (1.7/patient), 8—SMA and renal, 7—bilateral renal, 5—single renal, 1—SMA, were successfully placed in 37 branches (97%); 1 renal occluded from loss of guidewire. For OPEN, there were 15 tube and 6 aortoiliac grafts. Perioperative data are shown in Table. Kaplan-Meier patency at 1 and 6 months was 97.3%. There was one type IA endoleak at 30-days. Despite a lower preoperative eGFR in the ENDO group (52 vs 60 mL/min/1.73m2, p = 0.017) the median post-operative change was similar (-0.5 vs 0 mL/min/1.73m2, p = 0.841); 2 OPEN, but no ENDO, patients required dialysis.

Conclusions: Chimney technique may be a viable option for repair of suprarenal aneurysms and an “off-the-shelf” alternative to custom fenestrated/branched endografts. Perioperative benefits of endovascular repair are maintained with preservation of end organ function. Late stent patency and proximal fixation remains to be determined.

<table>
<thead>
<tr>
<th>TABLE</th>
<th>ENDO</th>
<th>OPEN</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proc Time (min)</td>
<td>235</td>
<td>213</td>
<td>0.65</td>
</tr>
<tr>
<td>EBL (ml)</td>
<td>350</td>
<td>1500</td>
<td>0.001</td>
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<tr>
<td>PRBC transfusion (units)</td>
<td>1</td>
<td>3</td>
<td>0.007</td>
</tr>
<tr>
<td>ICU stay (days)</td>
<td>1</td>
<td>4</td>
<td>0.001</td>
</tr>
<tr>
<td>Total LOS (days)</td>
<td>5</td>
<td>10</td>
<td>0.021</td>
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<tr>
<td>Mortality (n)</td>
<td>(4.8%)</td>
<td>(4.8%)</td>
<td>1.0</td>
</tr>
<tr>
<td>Adverse Events (n)</td>
<td>29</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>All (n/patient)</td>
<td>1.4</td>
<td>2.9</td>
<td>0.75</td>
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<tr>
<td>Severe (n/patient)</td>
<td>0.3</td>
<td>0.7</td>
<td>0.60</td>
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</table>

Author Disclosures: A. W. Beck: Nothing to disclose; K. J. Brun: Nothing to disclose; R. J. Feezor: Nothing to disclose; T. S. Huber: Nothing to disclose; W. Lee: Nothing to disclose; P. R. Nelson: Nothing to disclose.

SS30.

Midterm Outcomes of the Zenith Renu Ancillary Graft: Results From a Post-market Registry

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Objectives: The Zenith Renu AAA Ancillary Graft, which gained FDA approval in June 2005, provides active proximal fixation for treatment of pre-existing endografts with failed or failing proximal fixation or seal. The purpose of this study is to evaluate the midterm outcome of treatment with this device.

Methods: From 09/2005 to 11/2006, a prospective, nonrandomized, post-market registry was implemented, collecting experience from 151 cases (89 converters and 62 main body extensions) at 95 institutions. Preoperative indications, procedural and post-implantation outcomes were analyzed. Technical success and clinical success were determined as defined by the SVS reporting standards.

Results: Patients were predominantly male (87%) with mean age of 77 years. The interval between the original endograft implantation to Renu treatment was 43.4 ± 18.7 months. The indications for treatment were endoleak (n = 108), migration (n = 136), or both (n = 94). Technical success was 98% with 2 cases of intraoperative conversion and 1 persistent type IA endoleak. The mean follow-up for the cohort was 18.5 ± 12.7 months (range 0-48). Overall, 23 patients had treatment failures which included at least one of the following: 8 type I/III endoleaks, 1 migration, 7 aneurysm enlargement >5mm, 3 aneurysm ruptures, 8 conversions (with 6 after 30 days), and 5 identified procedure-related deaths. Overall, the clinical success for the entire cohort during the follow-up period was 84.7%.

Conclusions: The post-market registry data confirms that the Zenith Renu AAA Ancillary Graft can be used to treat failed endovascular repairs from proximal attachment failures. However, this is associated with a high rate of midterm failure. While we can salvage failed endovascular repairs, these results emphasize the importance of patient and device selection during initial endovascular aneurysm repair. In this challenging population with endovascular graft failure, surgical conversion should be considered for those that are medically fit for open repair.

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C4: Peripheral Vascular Surgical Society Paper Session I

PVSS2.

Effect of Gender on Long-term Survival After Abdominal Aortic Aneurysm (AAA) Repair: Results From Medicare National Database

Natalia N. Egorova1, Ageliki Vouyouka1, James F. McKinsey2, Peter Faries1, K. Craig Kent3, Alan Moskowitz1, Annette Gelijns1. 1Mount Sinai School of Medicine, New York, NY; 2Columbia University, New York, NY; 3University of Wisconsin School of Medicine and Public Health, Madison, WI

Objectives: Historically, women have higher mortality rates after AAA repair than men. Although endovascular repair (EVAR) has improved these rates, how gender affects long-term survival after AAA repair is unknown. We analyzed survival in matched cohorts after EVAR and open (OAR) repair for elective (eAAA) and ruptured (rAAA) abdominal aortic aneurysm.

Methods: From the Medicare Beneficiary Database, we compiled a cohort of patients who underwent OAR or EVAR repair for either eAAA (n = 214, 802) or rAAA (n =
Men and women were matched by baseline demographics, comorbidities, institution and operator’s experience using propensity method. Long-term survival of the matched groups was compared by Kaplan Meier analysis.

**Results:** For eAAAs, perioperative mortality was significantly lower among EVAR recipients compared to OAR recipients for both men and women (1.56% vs 3.86% for men and 2.84% vs 5.36% for women, p < 0.0001). One difference, however, is that the EVAR survival benefit was sustained in women but disappeared in men after 1.5 years. Relatedly, the survival benefit of men over women after elective EVAR disappeared after 1.5 years. For rAAAs, 30-day mortality was significantly lower among male EVAR recipients compared to OAR recipients (37.70% vs 47.62%, p = 0.0053), but this treatment modality difference was not seen among women. Moreover, survival was substantially higher for men after emergent EVAR (p = 0.0036).

**Conclusions:** Gender disparity is evident from long-term outcomes after AAA repair. This is especially the case for rAAA, where the long-term outcome for women was significantly worse than for men and where the less invasive treatment modality of EVAR did not appear to benefit women as it did for men. These associations require further study to isolate specific risk factors that would be potential targets for improving AAA management.

**Author Disclosures:** N. N. Egorova: Nothing to disclose; P. Faries: Nothing to disclose; A. Gelijns: Nothing to disclose; K. Kent: Nothing to disclose; J. F. McKinsey: Nothing to disclose; A. Moskowitz: Nothing to disclose; A. Vouyouka: Nothing to disclose.

**PVSS3.**

**PVSS3.**

**Percutaneous Verus Femoral Cutdown Access for EVAR in ACS NSQIP**

Premal S. Trivedi, Teviah Sachs, Frank B. Pomposelli, Allen D. Hamdan, Mark C. Wyers, Marc L. Schermerhorn. Beth Israel Deaconess Medical Center, Boston, MA

**Objectives:** To analyze outcomes of bilateral percutaneous (PC) vs femoral cutdown (FC) access for endovascular repair (EVAR) of AAA.

**Methods:** We used NSQIP 2005-07. We selected patients, using ICD-9 & CPT codes, with intact (iAAA) aneurysm, undergoing bifurcated EVAR. Cohorts were defined by presence/absence of CPT for FC. We excluded femoral-femoral bypass & brachial access patients.

**Results:** We isolated 5086 repairs. PC use increased over time (36 - 46%). Females underwent FC more often (61 vs 39%; p < 0.05). Comorbidities were similar between groups, except for ASA class, which was higher with PC (3.14 vs 3.07; p < 0.01). PC patients received general anesthesia more often (82 vs 78%; p < 0.01). Mean duration of anesthesia (3.5 vs 3.7 hrs) and operative time (2.3 vs 2.5 hrs) were lower with PC (all p < 0.01). 30 d mortality (1.2% PC vs 0.9% FC) aggregate morbidity (9.5% PC vs 8.6% FC) and intraoperative blood transfusions (11% PC vs 10% FC; p = 0.23) were similar between groups. Although uncommon, MI (0.3 vs 0.1%; p < 0.05), pneumonia (1.6 vs 1.0%; p < 0.05) and DVT (1.1 vs 0.3%; p < 0.01) were higher with PC without a significant decrease in infections (1.6 vs 2.4%; p = 0.16) or length of stay (mean: 2.6 vs 3.0; p = 0.47). Female sex, was independently predictive of worse morbidity (OR: 1.7[1.3, 2.1]) and mortality (OR: 1.9[1.0, 3.6]).

**Conclusions:** Percutaneous access is being performed increasingly with no benefit in rates of wound infection or 30-day mortality. Contrary to previous reports, PC is associated with higher rates of MI, pneumonia, DVT as well as greater use of general anesthesia, indicating that the potential benefit of decreased sedation is not being exploited. Better selection criteria are needed to maximize the benefits of percutaneous access.

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**PVSS4.**

**Surgical Revascularization for Aorto-Iliac Occlusive Disease (AIOD): Current Indications and Outcomes**

Rabib Chaer1, Jason Wagner2, Rogerio Vasconcelos1, Ulka Sachdev1, Jae Cho1, Robert Rhee1, Michel Makaroun1. 1Surgery, UPMC, Pittsburgh, PA; 2Eastern Virginia Medical School, Norfolk, VA

**Objectives:** Endovascular interventions have largely replaced surgical replacement of aortoiliac occlusive disease. This review reports on current indications and outcomes of surgical bypass of AIOD.

**Methods:** Retrospective review of all patients treated for AIOD. Kaplan-Meier and logistic regression analyses of all variables were applied.

**Results:** 2200 patients underwent interventions for AIOD between 2000-08: only 205 (9.3%) had a surgical bypass: 142 aortofemoral and 63 axillofemoral. Mean age was 64.4 ± 10.8 (54% males) (Table 1). Mean FU was 25.3mths.

Indications were claudication (25%) or critical limb ischemia (75%, 15% acute ischemia). All but nine patients had bilateral iliac occlusions (61) aortic occlusion to the renals (57) or both (56). Prior endovascular interventions were present in 36%: failed iliac angioplasty/stent in 29% and a failed recanalization in 7%. The mean ABI increased from 0.32 ± 0.20 to 0.85 ± 0.22 post op. Patients with an ax-fem bypass had more comorbidities and a higher mortality (HR = 7.9, p < 0.001). At