Multivariate analysis indicated that tissue loss (Rutherford class 5 and 6) at presentation in the HR group was associated with decreased limb-salvage ($p = 0.027$).

**Conclusions:** AIFOD can be treated using HR with similar short and long-term efficacy as OR. HR should be considered for all patients with AIFOD, particularly those with high surgical risk. Tissue loss at presentation is associated with an increased risk of amputation in patients undergoing HR.

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RR26.

Longitudinal Outcomes After Tibioperoneal Angioplasty in the US Medicare Population: In-hospital and 30-Day Outcomes

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**Objectives:** Catheter-based revascularization has emerged as an alternative to surgical bypass for the tibioperoneal vessels. Most studies are from single centers and are not population based.

**Methods:** We identified patients undergoing tibioperoneal angioplasty using The Centers for Medicare & Medicaid Services inpatient claims for 2007. We assessed in-hospital complications, mortality, 30-day secondary procedures, and 30-day readmissions after discharge.

**Results:** We identified 9,560 subjects undergoing tibioperoneal angioplasty (53.5% male; 77.2% White, 16.0% Black) and 32.3% had a stent, 48.8% had femoral-popliteal angioplasty, and 20.5% had atherectomy during their initial procedure. Initial hospital complications included: acute renal failure (7.3%), acute respiratory failure (5.1%), and acute cardiac arrest or infarction (3.1%). Mortality in-hospital was 2.2% and at 30-days was 5.2%. 30-day readmission rate was 29.4%. 30-day reinterventions included: repeat angiogram (9.1%), repeat angioplasty (7.5%), open bypass (1.4%), and lower extremity amputations (15.8%). Infection/gangrene was the most frequent diagnosis at readmission (16.4%). Predictors of 30-day readmission included: Black race (OR = 1.2; 95% CI: 1.1-1.3), congestive heart failure (OR = 1.5; 95% CI: 1.3-1.6), and chronic renal failure (OR = 1.8; 95% CI: 1.6-2.0).

**Conclusions:** Tibioperoneal angioplasty is associated with frequent life threatening in-hospital complications and a 30-day readmission rate of almost 30%. Infection and gangrene lead to amputation in more than 15% of patients after their initial angioplasty procedure within 30 days. Further detailed analysis of tibioperoneal intervention is essential as early amputation may be justified in certain cohorts to decrease the high complication and readmission rates.

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RR27.

Effect of Physician and Hospital Experience on Patient Outcomes for Endovascular Treatment of Aortoiliac Occlusive Disease

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**Objectives:** To evaluate the effect of physician volume/specialty and hospital volume on population-level outcomes from endovascular repair for aortoiliac occlusive disease (AIOD).

**Methods:** This is a retrospective cross-sectional analysis of all patients who underwent endovascular repair for AIOD in the HCUP-NIS, 2003-7. Physicians were low (<17 procedures/yr, or <50th percentile) or high-volume (≥17 procedures/yr). Physicians were defined as surgeons if they had performed ≥1 carotid/aortic/iliac endarterectomy, open aortic repair, above/below knee amputation, or aortoiliac-femoral bypass. Hospital volume was low (<116 procedures/yr, or <50th percentile) or high (≥116 procedures/yr). These provider variables, along with other patient demographic and clinical characteristics, were associated with in-hospital complications and mortality, LOS, and cost using bivariate and multivariate analyses.

**Results:** 818 patients with AIOD were identified. 59% of high-volume physicians were surgeons, of which 65% practiced at high-volume hospitals. Unadjusted complication rates were significantly higher for low- compared to high-volume physicians (19 vs 13%, respectively, $p < 0.05$); they were not different by physician specialty or hospital volume. Mortality tended to be lower for high-volume physicians and hospitals. Shorter LOS was associated with physician volume and specialty, as well as hospital volume, while decreased cost was associated with physician specialty (all $p < 0.05$). On multivariate analysis, high physician volume was associated with significantly lower complication rates, high hospital volume with shorter LOS, and non-surgeons with higher costs (all $p < 0.05$).

**Conclusions:** Overall, volume at both the physician and hospital level appears to be a robust predictor of patient outcomes following endovascular interventions for AIOD. Physician volume, not specialty, is a significant predictor of complications, even after case-mix adjustment.

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