Objective(s): To identify candidates having elective EVAR of asymptomatic infra-renal AAA who are eligible for early (< 6 hour) hospital discharge or to have EVAR performed in free standing (FS) ambulatory surgery centers (ASC).

Methods: Medical records of all elective EVAR performed at a University Medical Center over five years were reviewed for demographics, co-morbidities, operative findings, postoperative care, morbidity and mortality.

Results: There were 272 elective EVAR; mean age 74(52-94), 75% male gender; 93% ≥ ASA class 3. General anesthetic was used in 84%; median operative time 152(70 -609 minutes). There were 25 operative major adverse events (MAE) in 21 patients (7.7%): bleeding (5.9%), thrombosis (1.8%), arterial injury (1.8%). Percutaneous EVAR (PEVAR) attempted in 260(96%) was successful in 238(88%). Failed PEVAR (FPEVAR) was associated with operative MAE; (P< 0.001). Post-operative MAE (8.8%) occurring <1 hour-7 days included: MI 1.1%, thrombosis/re-operation 1.1%, CHF 1.5%, bleeding 0.07%, COPD exacerbation 0.036%,
cholecystitis 0.36%, ischemic bowel 0.36%, ICU admission for respiratory treatment 1.5%, arrhythmia 1.1%, pre-operative comorbidity monitoring 0.7%. Combined operative /postoperative MAE was 43(15.8%); 17(6%) required ICU admission: 88% directly from OR /post anesthesia care unit (PACU). Other AEs included: nausea 17%, blood pressure alteration 15% and urinary retention 13%. Routine services included: IV hydration, urinary catheterization, supplemental oxygen. Other AE/need for non-routine services occurred in 131(48%): 79(29%) developed/required treatment ≥ 6 hours postoperatively, 22(8%) treated /resolved ≤ 6 hours, 30(11%) monitored only. Thirty-six percent had no complications and required routine care only. FPEVAR (3.4: 1.6-7.3; P=0.002) and aortic cuff (0.23: 0.07-0.75; P=0.015) were independent predictors of MAE or AE occurring /requiring treatment ≥ 6 hours postoperatively, but had poor sensitivity 47% and PPV 65%. However, 91% could have been detected ≤ 6 hours. Two (0.07%) MAE (CHF @24 hours, thrombosis/re-op @ 15 hours) would have occurred after discharged; 9(3%) AE/ treatment (nausea, sliding scale insulin) would have gone undetected.

Conclusions: Greater than one half of all EVAR are ready for discharge ≤6 hours postoperatively. Ambulatory admission provides easy inpatient transition for those requiring continued care. FPEVAR and aortic cuffs are independent predictors of MAE or AE occurring/requiring treatment ≥ 6 hours. While sensitivity is insufficient to advocate EVAR in FS-ASUs at this time, PEVAR and aortic IFUs may be key parameters to enable future FS-ASU use.

Author Disclosure Block: