Objective: Lawmakers recently called for a reduction of non-traumatic amputations (AMP) to zero. Because diabetics with vascular disease are at higher risk for AMP, we sought to characterize the full potential of revascularization to reduce diabetic amputation rates.

Methods: Patients who underwent a below-the-knee amputation (BKA) or above-the-knee amputation (AKA) from 2007-2016 at our institution were included. Demographics and descriptors of prior limb-salvaging interventions were collected. Patients were stratified by diabetic status. Primary 30-day outcomes included death, higher amputation level, and wound complications. Univariate analysis was performed and Cox proportional hazards models were created to assess risk factors for survival.

Results: 307 procedures were identified in 273 patients. The majority were male (63%), had coronary artery disease (54%), and had diabetes (63%). There were 210 (68%) BKAs and 97 (32%) AKAs. 30-day death and wound complication rates were 5% and 23%, respectively. The median time from last limb-salvaging intervention to AMP was 72 days and 17% of the BKAs underwent conversion to AKAs. Diabetics were more likely to have a BKA (75% vs 56%, p<0.01) and more likely to have had a prior minor ipsilateral amputation (36% vs 19%, p<0.01). Diabetics were less likely to have a prior lower extremity bypass (32% vs 56%, p<0.01). Thirty-eight percent of diabetics had no option for revascularization at the time of indexed procedure and 54% of the diabetic cohort had AMP for ischemia. Thirty-two percent of limbs did not have an ankle-brachial index within 6 months of the indexed procedure. Between the cohorts, there were no differences in 30-day outcomes except for wound complications; non-diabetics had more wound complications following AMP (30% vs 20%, p=0.04). There was a statistically significant increased risk of mortality at 2 years and beyond in the diabetic group (p=0.02). Significant negative predictors of survival were male gender (hazard ratio (HR) 1.74, p <0.01), diabetes (HR 1.55, p <0.01), and chronic kidney disease (HR 1.46, p=0.02).

Conclusions: Approximately 1 in 5 diabetic AMP have revascularizable disease at the time of presentation and up to a third of salvageable diabetic limbs do not undergo complete vascular evaluation prior to AMP. This suggests the full potential of revascularization to reduce diabetic amputation rates is not currently being realized and continued education of non-vascular providers is essential.