INTRODUCTION
Proximal junctional kyphosis (PJK) and proximal junctional failure (PJF) rates after adult spinal deformity (ASD) surgery have been reported as high as 61% and 6% respectively. Previous studies focused on the timing of and the factors predicting its occurrence. ASD procedures are known to be highly morbid. Data on complications related to surgical correction of PJF specifically is currently lacking. Our study is the first to examine the complication rate of corrective procedures in addition to identifying risk factors that might predict complications.

METHODS
A retrospective case series was performed after institutional review board approval, including patients who underwent surgical correction for PJF and had at least two years of follow up. A univariate logistic regression was performed to predict complication where variables with p < 0.2 were entered into a multivariate model.

RESULTS
A total of 78 patients (Mean age 64.7 ± 10.1yrs; 69.2% female) were included. The average number of significant medical comorbidities was 3 ± 2, and follow-up was 4.7 ± 3.1yrs. A total complication rate of 69% was detected with 65% occurring acutely (up to 1 month postoperatively) or early (between 1 and 6 months). A lumbar or distal thoracic upper instrumented vertebra (UIV), lower number of previously levels fused, higher degree of kyphotic deformity, and thoracic final UIV location after correction were found to be significant predictors in a univariate analysis (p < 0.05). Multivariate analysis yielded degree of kyphosis to be the only significant predictor of complication. Deformities between 21-40° and >40° had odds ratios (95% confidence intervals) of 5.98 (1.06 to 33.63) and 7.88 (1.13 to 54.98), respectively.

CONCLUSION
Surgical correction of PJF is a highly morbid undertaking. All patients undergoing such procedures should be thoroughly counseled as to the significant risks. Higher degrees of kyphotic deformity have a higher likelihood of complication. Given these increased risks, extra measures should be implemented to reduce the more common complications.