

Time to Achievement of Clinically Significant Outcomes Following Revision Rotator Cuff Repair

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INTRODUCTION: The purpose of this study was to define the time required to achieve outcomes (CSOs) following revision rotator cuff repair (RCR). The main outcome was to identify an evidence-based timepoint for functional recovery, including the time needed to attain minimally clinically important difference (MCID) and patient acceptable symptomatic state (PASS) for revision RCR.

METHODS: Patients who underwent rotator cuff repair between 2016 and 2022 were collected. Those with completed preoperative and at least 1 post-operative (3-month, 6-month, 1 year, and 2 years) Patient-Reported Outcome Measures (PROMs), including American Shoulder and Elbow Surgeons (ASES), or Single Assessment Numeric Evaluation (SANE) were included. Exclusion criteria included patients with significant concomitant procedures, or primary rotator cuff repairs. MCID and PASS for each PROM were identified from prior literature and utilized as a threshold needed to attain functional recovery.¹ The time needed to achieve CSO was then calculated and plotted using Kaplan-Meier survival analysis.

RESULTS: The average patient was 58.8 years old, male (66%), and white (72%). Of the 99 included patients, 48 patients had completed SANE forms, and 52 had completed ASES forms. Patients attained SANE achievement rates of 68.8% for MCID and 35.5% for PASS, and ASES achievement rates of 75% for MCID and 38.5% for PASS. Median achievement time across both surveys ranged between 4.3 – 5.01 months for MCID, and between 5.01 – 5.72 months for PASS. Averages for achievement time for MCID ranged from 5.2 – 5.6 months, and for PASS from 6.3-9.2 months, respectively. (Figure 1)

DISCUSSION AND CONCLUSION: When comparing the mean time to CSO of revision RCR to primary RCR in previously published literature, the results are not only similar, but illustrate a slightly earlier time to CSO in revision cases.² However, the overall percentage of MCID and PASS attainment are significantly reduced. This can potentially inform clinicians, that while a lower percentage of the revision cases will attain clinically significant outcomes compared to primary patients, those who do attain CSO will have a similar post-operative course. The timeline for achieving improvement that was established by this study may aid in setting patient expectations and designing future outcome studies involving revision RCR.

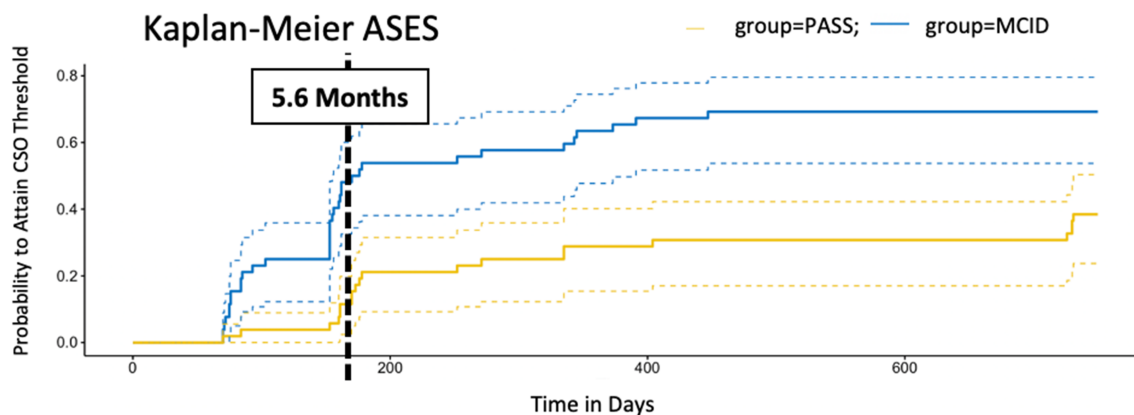


Figure 1: Cumulative probability of achieving MCID and PASS on the ASES. (ASES, American Shoulder and Elbow Surgeons Score)