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PROMIS MCID and SCB Achievement in Rotator Cuff Repair

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PROMIS MCID/SCB Achievement in Rotator Cuff Repair

The purpose of this study was to establish threshold score changes to determine minimal clinically important difference (MCID) and substantial clinical benefit (SCB) in PROMIS computer adaptive test (CAT) scores following rotator cuff repair (RCR). Patients undergoing arthroscopic RCR were identified over a 24-month period. PROMIS CAT forms for upper extremity physical function (PROMIS-UE), pain interference (PROMIS-PI), and depression (PROMIS-D) were utilized. Analysis of variance testing with post hoc least significant difference pairwise comparisons and Tukey's B subset analysis were used in determining if anchor question responses showed statistically significant differences between answers. These findings were used to establish two clinically significant outcome (CSO) groups, MCID and substantial clinical benefit (SCB). Patients were then dichotomized into two separate analyses, no MCID achievement compared with MCID achievement and no SCB achievement compared with SCB achievement. Of the 198 eligible patients, 168 patients (84.8%) were included in analysis. Receiver operating curve analysis determined delta PROMIS-UE values of 5.8 and 9.7 (area under the curve (AUC) = 0.906 and 0.949, respectively) and delta PROMIS-PI values of -11.4 and -12.9 (AUC = 0.875 and 0.938, respectively) to be excellent threshold predictors of MCID and SCB achievement. On average, 81.1%, 65.0%, and 54.5% of patients achieved MCID for PROMIS-UE, PROMIS-PI, and PROMIS-D while 70.7%, 60.7%, and 37.7% of patients in the cohort respectively achieved SCB.

