

Table 4. Performance Characteristics of Preliminary Definitions of Improvement for Adult and Juvenile Myositis Developed from Logistic Regression (LR) Analysis*.

Definition of Improvement	Data Set Derived From	Sensitivity [†] %	Specificity [†] %	Positive Predictive Value, %	Negative Predictive Value, %	Sensitivity × Specificity
LR1 = $-7.57 + 0.36 \times (\% \text{ change in muscle strength by MMT}) + 0.07 \times (\% \text{ change in Physician Global Activity})$	Adult % change in Core Set Measures	86%	95%	91%	93%	0.82
LR2 = $-4.92 + 0.20 \times (\% \text{ change in muscle strength by MMT}) + 0.10 \times (\% \text{ change in Physician Global Activity})$	Pediatric % change in Core Set Measures	90%	96%	96%	91%	0.86
LR3 = $-5.62 + 0.26 \times (\% \text{ change in muscle strength by MMT}) + 0.07 \times (\% \text{ change in Physician Global Activity})$	Combined Adult/Pediatric % change in Core Set Measures	86%	93%	90%	90%	0.80
LR4 = $-5.96 + 1.05 \times (\text{raw change in Physician Global Activity}) + 0.37 \times (\text{raw change in muscle strength by MMT})$.	Adult Raw Change in Core Set Measures	86%	95%	91%	93%	0.82
LR5 = $-2.91 + 1.68 \times (\text{raw change in Physician Global activity}) + 0.11 \times (\text{raw change in muscle strength by MMT})$.	Pediatric Raw Change in Core Set Measures	81%	91%	89%	84%	0.74
LR6 = $-3.99 + 3.40 \times (\text{raw change in Functional ability by CHAQ/HAQ}) + 1.180 \times (\text{raw change in Physician Global Activity}) + 0.16 \times (\text{raw change in muscle strength by MMT})$.	Combined Adult/Pediatric Raw Change in Core Set Measures	86%	93%	90%	90%	0.80

* Note: These definitions have not been rank ordered by the Adult and Pediatric Working Groups. For each of the logistic regression definitions, improvement is defined as LR greater than 0. Each LR definition is calculated using the formula provided based on the

percentage or raw changes in the core set measure as listed. **Abbreviations:** MMT, manual muscle testing. [†]False Positive = 1 – specificity; [‡]False Negative = 1 – sensitivity.