Clinically Relevant Thresholds in Patient Reported Outcomes: Do Patient's Expectations Evolve Over Long Term Follow-up?

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Disclosures

I (and/or my co-authors) have something to disclose.

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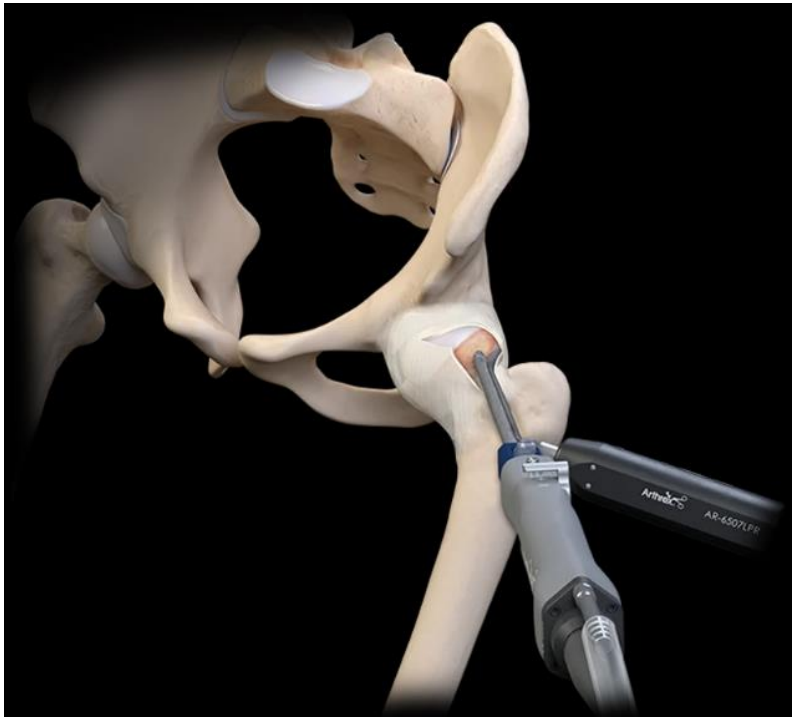
Background

In hip arthroscopy, clinically relevant outcome thresholds have been utilized to provide insight into post-operative functional status and patient satisfaction.

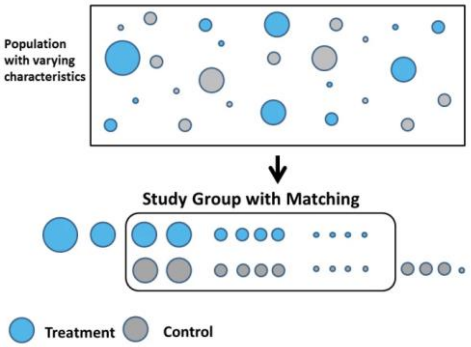


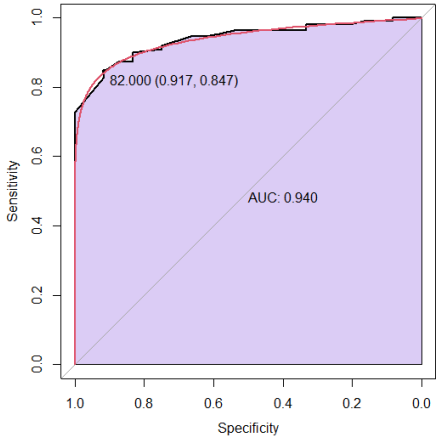
Purpose

To define and evaluate minimal clinically important difference (MCID), patient acceptable symptomatic state (PASS), and substantial clinical benefit (SCB) thresholds over the 2-, 5-, and 10-year timepoints for modified Harris Hip Score (mHHS), Hip Outcome Score Sports-Specific Subscale (HOS-SSS), and the International Hip Outcome Tool (iHOT12).

Methods

- Data was retrospectively reviewed for patients with complete patient reported outcome (PRO) scores with anchor questions at either the 2-, 5-, or 10-year timepoint who underwent primary hip arthroscopy between 2008-2021.
- Groups were propensity-score matched 1:1:1 based on age, body mass index, sex, lateral center edge angle, and surgical procedure.
- Receiver operating characteristic (ROC) curves were generated to define the PASS, SCB, and MCID thresholds using the anchor-based method for mHHS, HOS-SSS, and iHOT12 at the follow-up timepoints.
- Area under the curve (AUC) was then used to evaluate the discrimination of these defined thresholds.





Results

Table 1. Receiver Operating Characteristic Analysis for modified Harris Hip Score

	Threshold Value	Sensitivity, %	Specificity, %	AUC (95% CI)	Patients Achieving Threshold, No. (%)	Anchor Responder, No. (%)
PASS						
2-year	77.5	0.903	0.760	0.879	108 (78.3%)	113 (81.9%)
5-year	85.5	0.803	1.000	0.951	98 (71.0%)	122 (88.4%)
10-year	78.5	0.933	0.778	0.838	116 (84.1%)	120 (87.0%)
SCB						
2-year	95.0	0.857	0.652	0.799	73 (52.9%)	49 (35.5%)
5-year	99.0	0.740	0.739	0.769	60 (43.5%)	50 (36.2%)
10-year	88.0	0.909	0.542	0.777	88 (63.8%)	55 (39.9%)

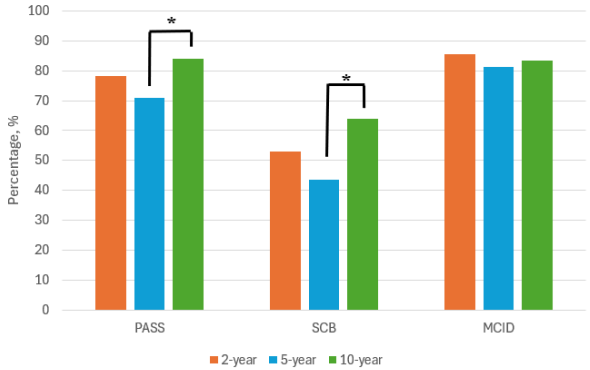


Table 2. Receiver Operating Characteristic Analysis for Hip Outcome Score – Sport Specific Subscale

	Threshold Value	Sensitivity, %	Specificity, %	AUC (95% CI)	Patients Achieving Threshold, No. (%)	Anchor Responder, No. (%)
PASS						
2-year	82.7	0.761	0.840	0.856	90 (65.2%)	113 (81.9%)
5-year	76.4	0.820	1.000	0.932	100 (72.5%)	122 (88.4%)
10-year	67.7	0.858	0.778	0.821	107 (77.5%)	120 (87.0%)
SCB						
2-year	97.0	0.755	0.798	0.800	55 (39.9%)	49 (35.5%)
5-year	80.9	0.920	0.477	0.728	92 (66.7%)	50 (36.2%)
10-year	90.5	0.709	0.687	0.731	65 (47.1%)	55 (39.9%)

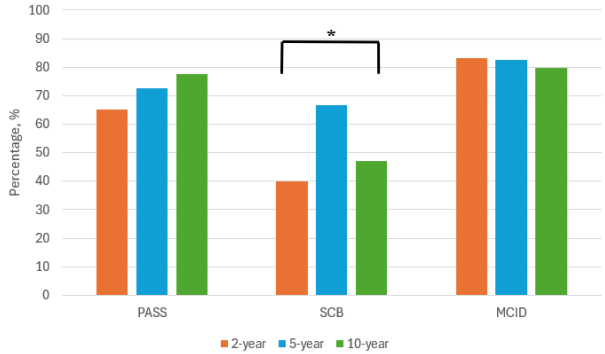
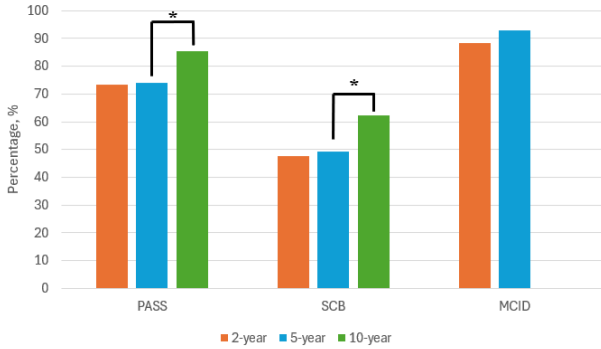


Table 3. Receiver Operating Characteristic Analysis for International Hip Outcome Tool

	Threshold Value	Sensitivity, %	Specificity, %	AUC (95% CI)	Patients Achieving Threshold, No. (%)	Anchor Responder, No. (%)
PASS						
2-year	67.4	0.867	0.880	0.914	101 (73.2%)	113 (81.9%)
5-year	76.9	0.836	1.000	0.948	102 (73.9%)	122 (88.4%)
10-year	62.9	0.950	0.778	0.840	118 (85.5%)	120 (87.0%)
SCB						
2-year	89.4	0.837	0.708	0.831	66 (47.8%)	49 (35.5%)
5-year	94.1	0.800	0.682	0.777	68 (49.3%)	50 (36.2%)
10-year	82.5	0.909	0.566	0.742	86 (62.3%)	55 (39.9%)



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Conclusion

Thresholds for PASS and SCB peaked at the 5-year timepoint and significantly decreased between 5- and 10-year for all PROs. However, patients continue to meet MCID, PASS, and SCB at high rates over a 10-year period. Our findings suggest patients' expectations change over time leading to continued, and at times increasing, patient satisfaction.

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