



# The True Learning Curve in Hip Arthroscopy According to Patient-Reported Outcomes

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## Introduction

The utilization of hip arthroscopy for femoroacetabular impingement (FAI) has increased significantly in recent years. Many surgeons are currently becoming proficient at hip arthroscopy. Much has been published about the hip arthroscopy learning curve given its high difficulty level. Some authors have studied surgical times as surrogate for proficiency, while others have reported complication rates. In the end, the goal of the procedure is to provide reliable, long-term pain relief and to decrease the risk of developing early hip arthritis. As such, an emphasis should be placed on patient-reported outcomes following hip arthroscopy.

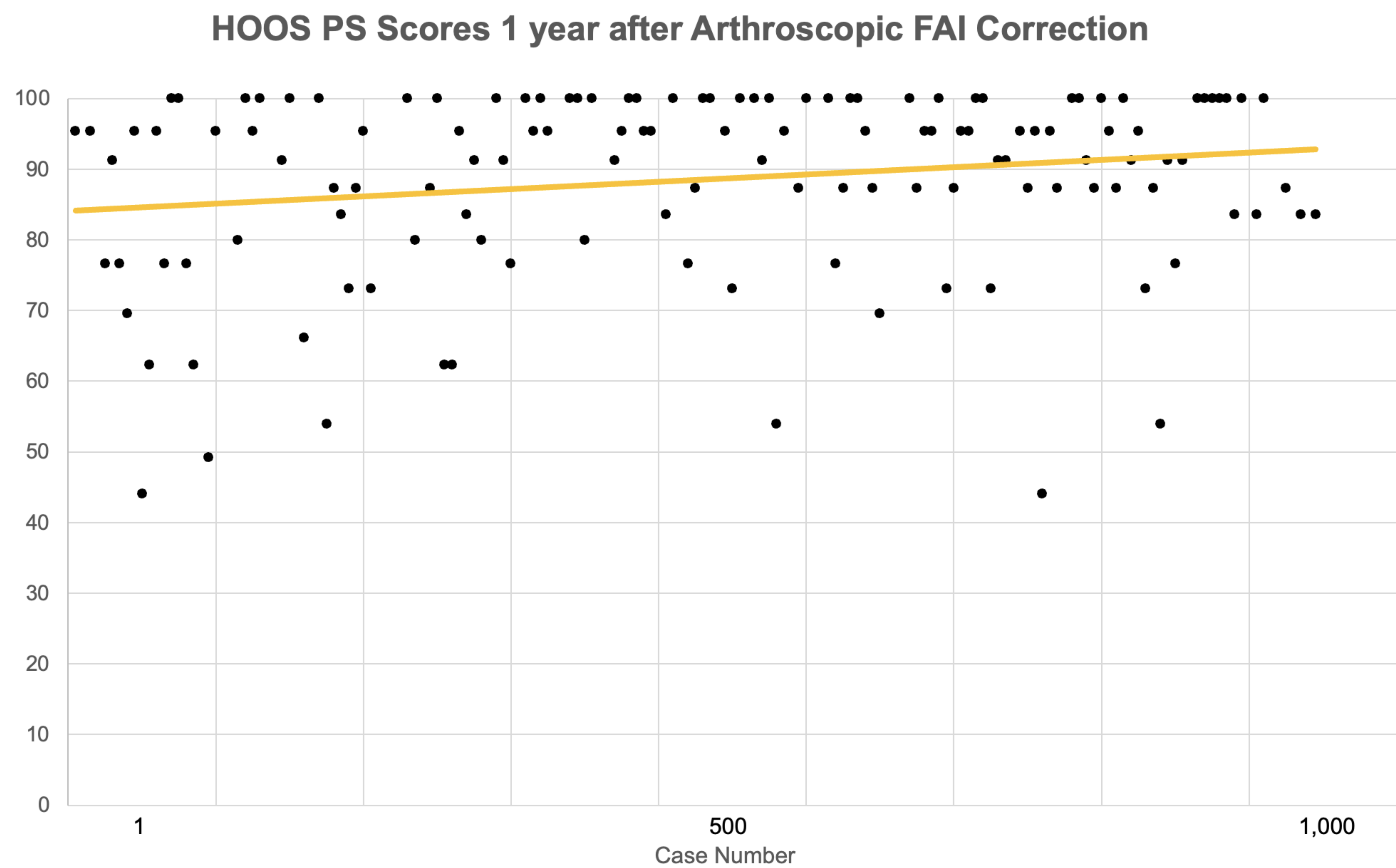
## Objectives

Evaluate for differences in 1-year postoperative patient-reported outcomes (PROs) from a single surgeon as they progress through their learning curve

## Methods

- A retrospective review was performed of a single surgeon's first 1,000 hip arthroscopy cases
- Cases with periacetabular or femoral osteotomy were excluded
- Convenience samples (n=50) were taken from each year
- Preoperative and postoperative Hip Disability and Osteoarthritis Outcome Score (HOOS)-pain and HOOS-physical function scores were recorded
- Minimal clinically important difference (MCID) for HOOS was evaluated

## Results



- The mean 1-year postoperative HOOS pain scores were as follows:
  - Year 1: 82.8
  - Year 2: 90.6
  - Year 3: 89.3
  - Year 4: 93.5 (P<0.05)
- During the first 250 cases, a sample of patients was obtained (n=50), and 11/50 (22%) did not meet MCID for HOOS pain at 1-year follow-up
- A convenience sample from cases 251-1,000 (n=100) 11/100 (11%) did not meet MCID (p<0.05)
- Delta HOOS pain or physical function did not change over time, p>0.05
- For both HOOS pain and physical function subscales, 1-year postoperative scores continued to improve over the 4-year 1,000-case study period

## Discussion & Conclusions

- According to the HOOS validated patient-reported outcome instrument, the learning curve for significant benefits in hip arthroscopy is between 130-250 cases.
- About 80% of patients saw significant clinical benefit early in the learning curve; however, the quality of outcome was significantly improved after 130 cases.
- The chance patients do not reach MCID is decreased by 50% after 250 cases.
- Average 1-year postoperative PROs appear to continually improve even after 750 cases.