

Outcome Measures Following Anterior Cruciate Ligament Reconstruction: A Systematic Review of the Literature

Jessi Groves, SPT; Laura Martens, SPT; Julia Murhammer, SPT; Adam Goode, PT, DPT, PhD; Michael Reiman, PT, DPT, OCS, SCS, ATC, FAAOMPT, CSCS; Robert Butler, PT, DPT, PhD

Background

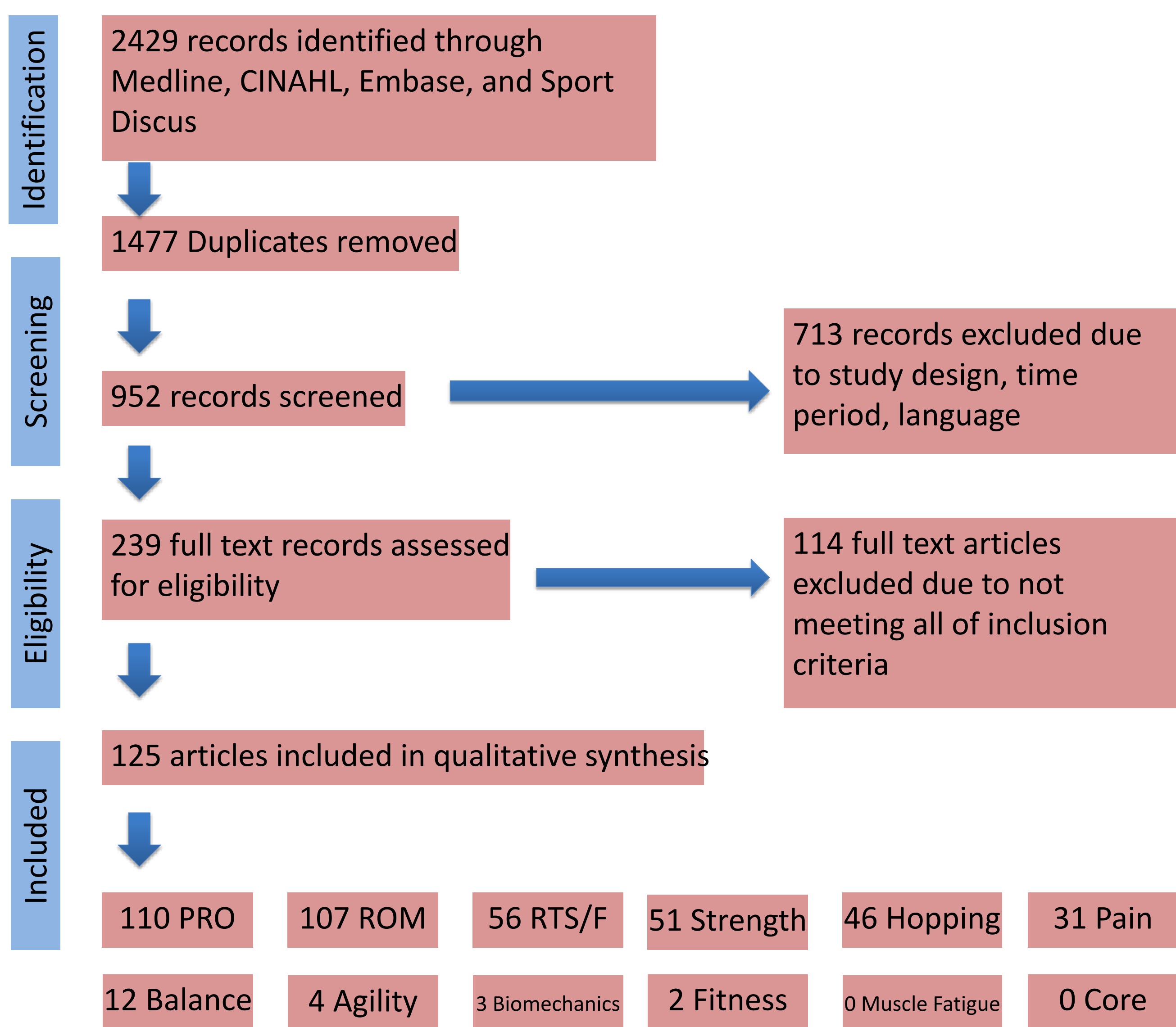
A variety of measures are used to determine functional outcome following surgical and rehabilitation interventions used with patients undergoing anterior cruciate ligament reconstruction (ACLR).

Purpose

- 1) Identify the outcomes currently used to evaluate patients post-ACLR.
- 2) Compare the use of these outcomes between surgical and rehabilitation intervention studies as well as across time.

Methods

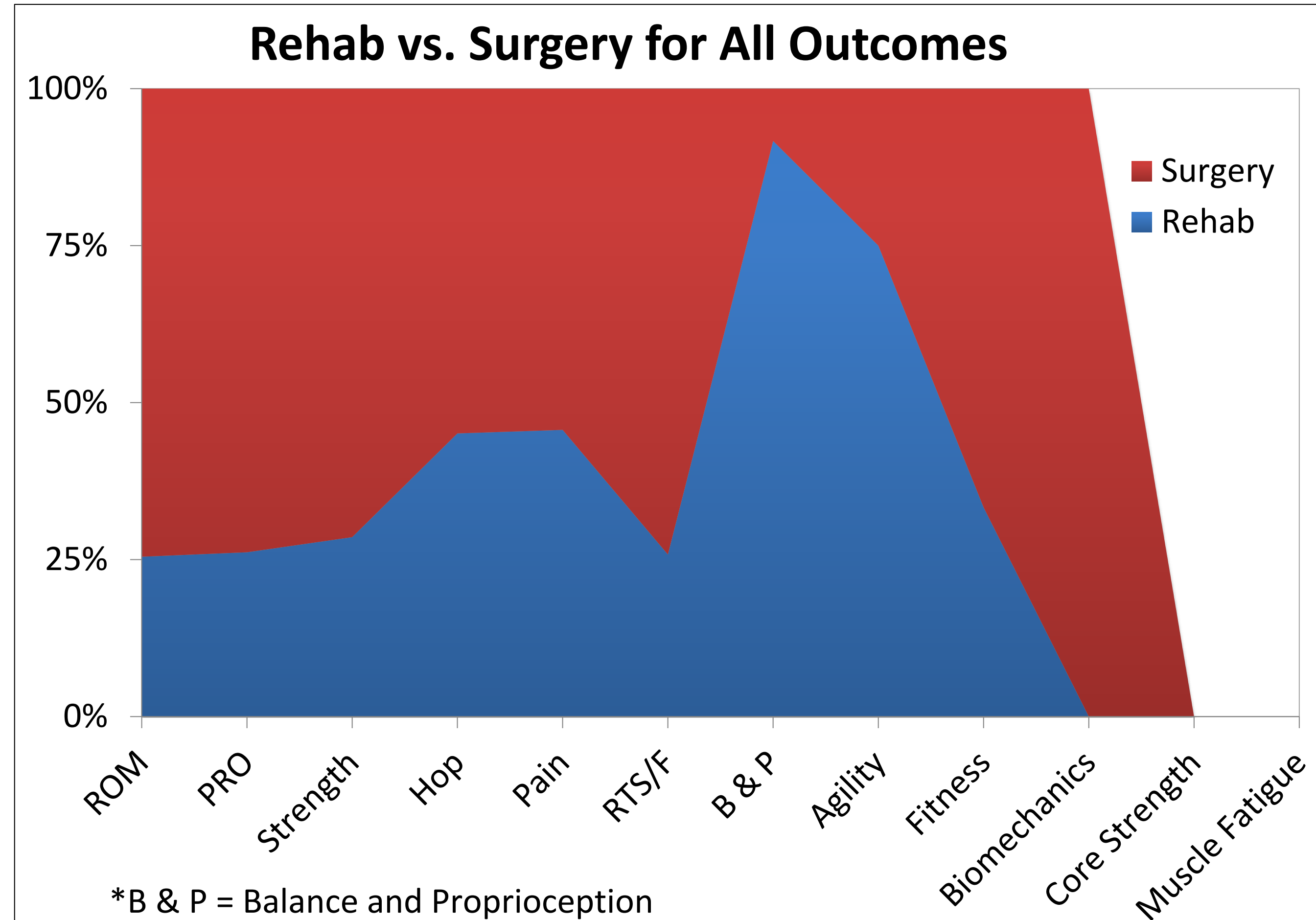
- Fourteen areas of functional outcome measures were reviewed: range of motion (ROM), strength, balance, proprioception, pain, return to sport/function (RTS/F), patient reported outcomes (PRO), hopping, agility and speed, biomechanics, fitness, anaerobic, core strength, and muscle fatigue
- The use of these measures were compared between surgical (S) and rehab (R) interventions, and trends across five year spans



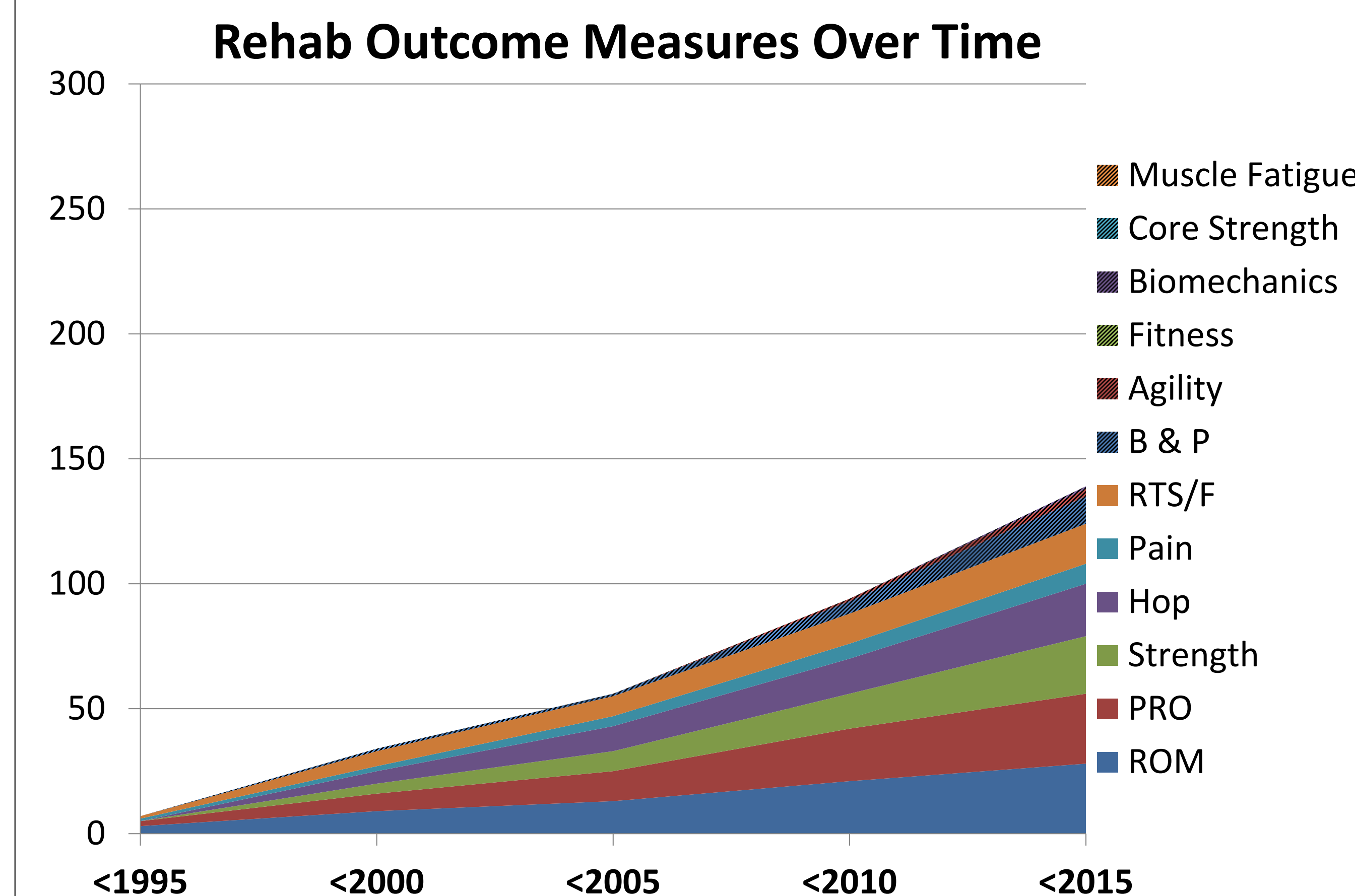
Analysis

- Studies were analyzed for type of outcome measure used
- Analysis of trends across time, S vs. R, and S vs. R across time were performed using proportions of outcomes to account for discrepancy in the number of R and S articles

Results

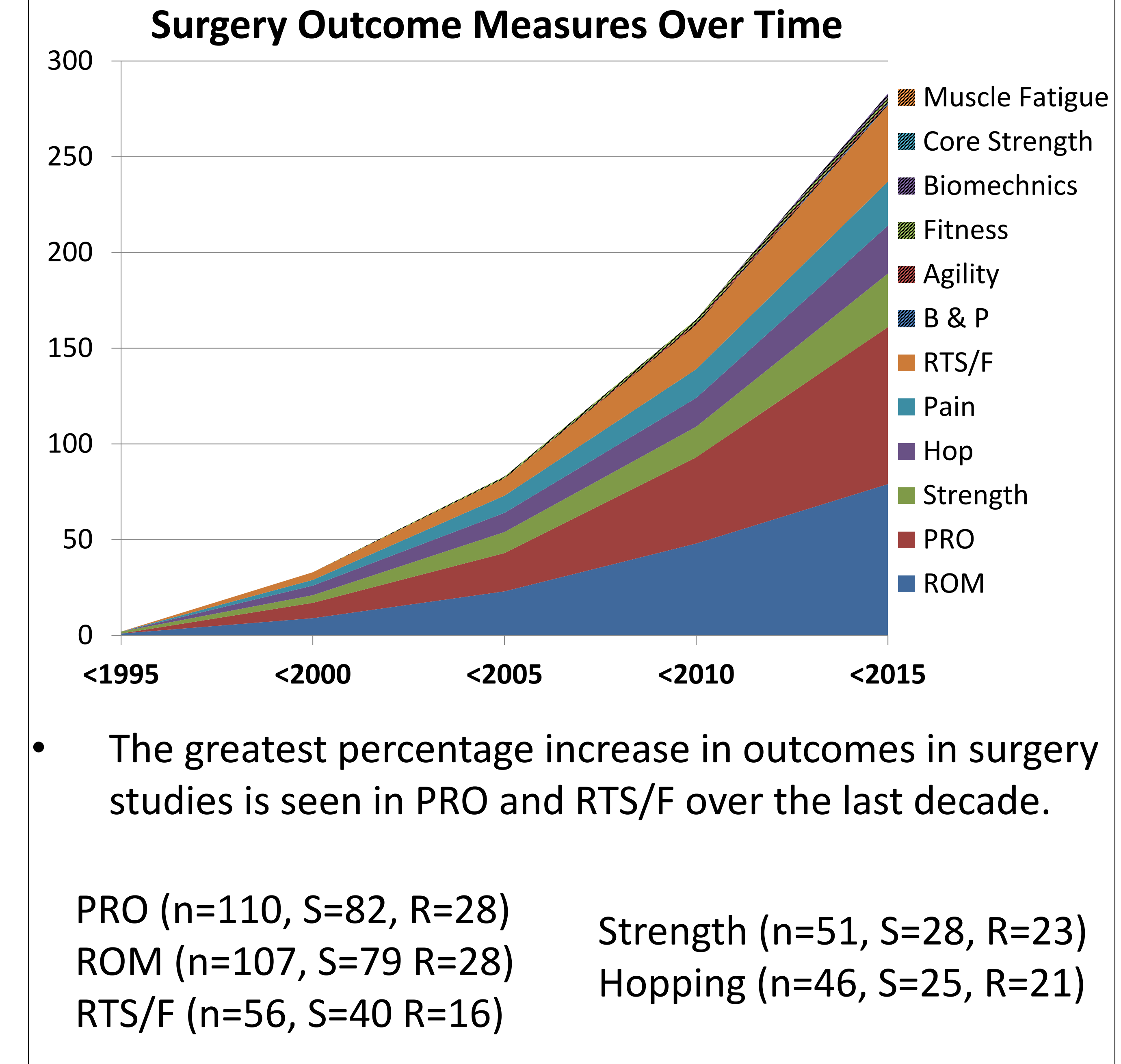


- Surgical intervention studies have a greater focus on impairment based measures, while rehab studies tend to have a greater focus on performance based measures.



- The greatest percentage increase in outcomes in rehab studies is seen in strength and B&P over the last decade.

Results



Conclusions

- There is a strong preference towards using impairment based and subjective measures, rather than physical performance measures
- Rehab focused studies examined more physical performance measures
- Physical performance measures have been increasingly utilized over time

Clinical Relevance

Currently, the primary focus of functional outcome measures following ACLR targets subjective and impairment based measures. There is a need for future studies to include physical performance measures to fully elucidate the success of interventions for patient to improve their ability to successfully return to prior sport/function.

Acknowledgements

We thank Leila Ledbetter for her assistance with formatting our searches and her expertise in search engines and open-source reference management software.