



Minimal important change for the knee injury and osteoarthritis outcome score (KOOS) in patients with knee osteoarthritis

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AIM

CONCLUSION

To define Minimal Important Change (MIC) values for the Knee injury and Osteoarthritis Outcome Score (KOOS) in patients with knee osteoarthritis (OA) receiving physical therapy (PT) or undergoing total knee replacement (TKR).

For the KOOS, Mean Change MIC values in patients with knee OA varied with intervention and increased with length of follow-up, indicating MIC being context dependent.

To determine the MIC in different study contexts, adequate anchor questions should supplement administration of the KOOS score in future studies.

RESULTS

Mean Change MIC values for the five KOOS subscales increased with the length of follow-up.

Higher Mean Change MIC values were found for patients treated with TKR (range 20.6-38.2 and 27.9-48.5 at 6 and 12 months, respectively) than patients treated with physical therapy (range 10.9-15.3 at 4 weeks), Figure 1.

The ROC MIC values were based on a limited number of unchanged patients (13 and 3-12 for PT and TKR, respectively), indicating results being unreliable and therefore not presented.

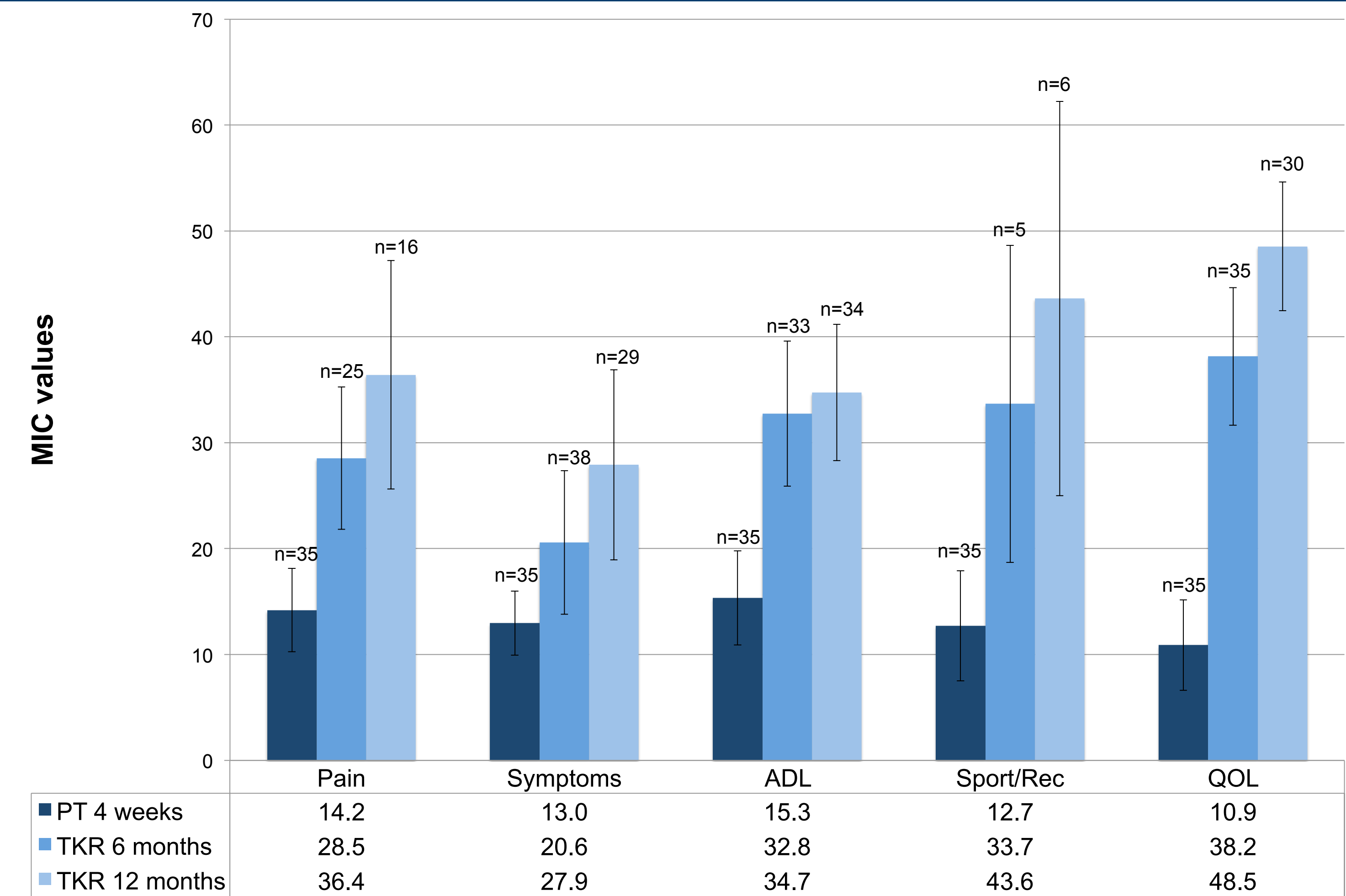


Figure 1: Mean change MIC values with 95% CI's. n is the number of patients responding “a little bit better” and “somewhat better” after 4 weeks of PT and “better” after 6 and 12 months following TKR, respectively.

METHODS

195 patients receiving PT in Portugal and 102 patients undergoing TKR in Sweden were included. KOOS was administered with a set of anchor questions at 4 weeks following PT and at 6 and 12 months and 5 years post-TKR. KOOS baseline values were obtained pre-surgery and before PT initiation. The anchor questions asked the patients to rate their perceived change on a scale ranging from “much improved” too “much worse”, Figure 2. The PT cohort used a 15-point global rating of change scale. The TKR cohort used 5-point scales relating to each KOOS domains. MIC values were calculated for each cohort, time point and KOOS subscale with the Mean Change method and the Visual anchor-based approach (ROC analysis).

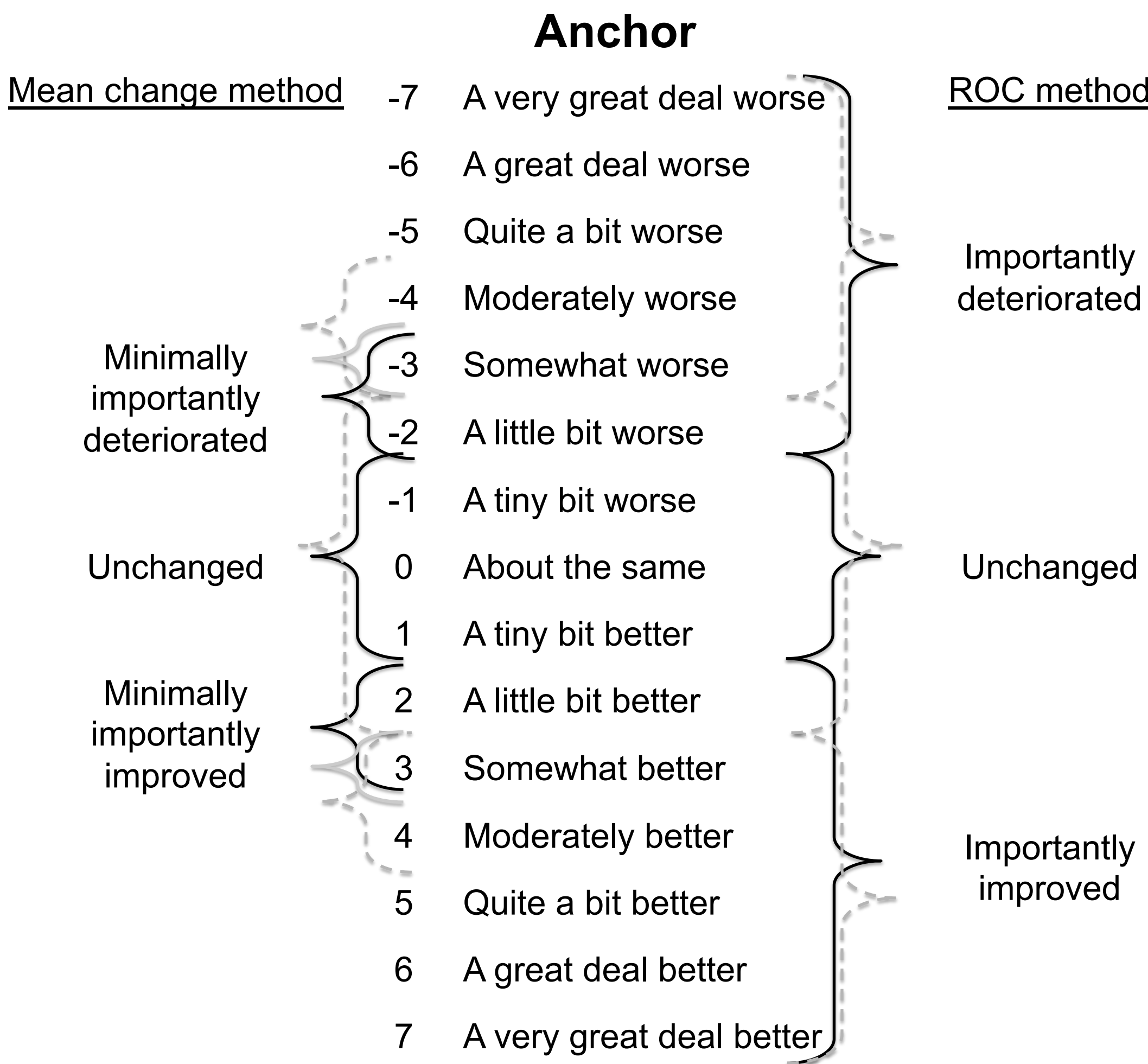


Figure 2: Anchor used in the PT cohort including chosen cut-offs for important improvement/deterioration (full lines) and sensitivity analyses (grey and stapled lines).

