

What does our data analysis say about how various things impact knee outcome?



Women in more pain have more increase in function and pain relief.

Females reported better outcomes on the lower extremity function and numeric pain scales; this was observed among patients presenting with lower function or higher pain levels.

In a multivariate analysis, Knee improvement was defined as 9 points increase on LEFS (a functional scale) and two points decrease on NPS (pain) scale. For female, the odds ratios were 3.4 for LEFS improvement and 2.6 for NPS improvement compared to the male control. This effect was noticed with the lower baseline functioning level (LEFS ≥ 45) and the higher baseline pain level (NPS ≥ 5). These differences were statistically significant.

There is **NO** association between older age and outcome.

Patients older than 60 years had comparable outcomes to patients between 50 to 60, and those who are younger than 50 years

The odds ratios of reporting >50% improvement rating were 1.4 and 1.5 for patients aged 51-60 and >60 years respectively as compared to the control group (age ≤ 50); these results were not statistically significant. Similarly, there was no statistical significance in the functional and pain differences.

There is **NO** association between body weight and outcome.

Having a BMI higher than 25 or 30 did not decrease the likelihood of improvement when compared to normal weight (BMI=18-25)

The odds ratios of reporting >50% improvement rating were 1.2 and 1 for patients with >30 BMI and 25-30 BMI respectively as compared to the control group (BMI<25); these results were not statistically significant. Similarly, there was no statistical significance in the pain difference.

There is **NO** association between arthritis severity and outcome.

Severity grades based on the KL radiological features had comparable function and pain outcomes after knee treatment

In the multivariate analysis, disease severity was not associated with LEFS and VAS outcomes. Although KL2 grades were more likely to report 50% improvement rating compared to KL3-4 grade (odds ratio= 2.2); KL1 grade effect was not statistically significant.

Patients with arthritis in many joints have a less robust outcome.

Having arthritis in 3 or more joints did reduce the likelihood of success after knee treatment

Patients with <3 joints involved reported 17 points increase on LEFS, 26 points increase on the IKDC, 2.4 points drop on VAS and average of 58% improvement rating. These findings were compared to -0.6 change on LEFS, 4 points increase on IKDC, 0.4 drop on VAS and average of 19% improvement rating patients with ≥ 3 joints involved. These differences were statistically significant.