



**Early results demonstrate:**  
Improved PATELLOFEMORAL outcomes with the PS ATTUNE® Knee System

IMPROVED PATELLOFEMORAL OUTCOMES **CONSISTENTLY** DEMONSTRATED ACROSS FOUR INDEPENDENT STUDIES<sup>2-5</sup>

**Multiple** independent, peer-reviewed studies have arrived at the same conclusion: **improved patellofemoral outcomes** with the ATTUNE® Knee, when compared to the well performing SIGMA® Knee.<sup>2-5</sup> The ATTUNE Knee System has demonstrated **reduced anterior knee pain** when compared to the well performing SIGMA Knee in two studies.<sup>2,3</sup>

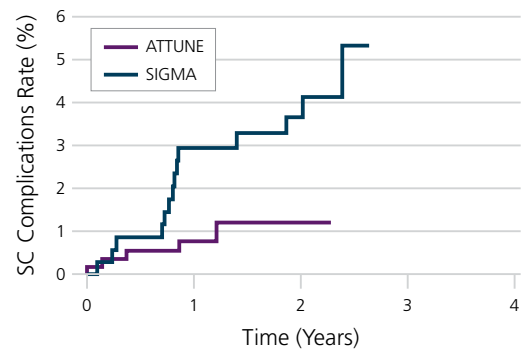
Author	Sample Size		Patellofemoral Outcome
	ATTUNE PS	SIGMA PS	
Ranawat et al. <sup>2</sup>	N=100 (61 PS FB, 39 PS RP)	N=100 (83 PS FB, 17 PS RP)	<b>Reduced Incidence Symptomatic crepitus, min 2 yr follow-up</b> <ul style="list-style-type: none"> <li>• ATTUNE Knee vs. SIGMA Knee (1.0% vs. 4.1%; Not statistically significant)</li> <li>• The overall incidence of anterior knee pain was significantly lower with the ATTUNE Knee compared to that of the PFC SIGMA Knee (12.5% vs. 25.8%; p=0.02).</li> </ul>
Indelli et al. <sup>3</sup>	N=100	N=100	<b>Reduced Incidence Symptomatic crepitus, min 2 yr follow-up</b> <ul style="list-style-type: none"> <li>• ATTUNE Knee vs. SIGMA Knee (1.0% vs. 5.0%;, p=0.007)</li> <li>• Implant group 2 showed a statistically significant decrease in postoperative mild anterior knee pain (p=0.006).</li> </ul>
Toomey et al. <sup>4</sup>	N=584	N=364	<b>Lower Cumulative Incidence Rate (CIR) of Symptomatic crepitus at 1 and 2 years</b> ATTUNE Knee vs. SIGMA Knee (1.21% vs. 3.67%; log-rank p-value=0.017)
Martin et al. <sup>5</sup>	N=728	N=1165	<b>Reduced Incidence Symptomatic crepitus, min 1 yr follow-up</b> ATTUNE Knee vs. SIGMA Knee (0.14% vs. 2.7%; p<0.001)

# REDUCED INCIDENCE OF PAINFUL CREPITATION ACROSS FOUR STUDIES<sup>2-5</sup>

As noted on the previous page, four studies have demonstrated Reduced Incidence of Symptomatic Crepitus (SC) with the ATTUNE Knee, when compared to the well performing SIGMA Knee. In one of the four studies, interim results of patients implanted with the posterior stabilized (PS) ATTUNE Knee demonstrated a cumulative incidence rate of SC that was **less than half** that of patients implanted with the PS SIGMA Knee.<sup>4</sup>

In the same study, the ATTUNE Knee demonstrated statistically lower cumulative incidence rate of overall patellofemoral complications.<sup>4</sup>

Kaplan-Meier Plot of the Cumulative Incidence Rate of Symptomatic Crepitus Only ATTUNE Knee vs. SIGMA Knee<sup>4</sup>



Cumulative Incidence Rate of Symptomatic Crepitus (SC) for ATTUNE PS Knees compared to SIGMA PS Knees. Results demonstrated a statistically significant decrease in Symptomatic Crepitus (log-rank p-value=0.017)<sup>4</sup>

## IMPROVED BIOMECHANICS WITH ATTUNE KNEE ANATOMIC PATELLA

One in vivo biplanar fluoroscopy study<sup>1</sup> concluded the biomechanics of the PS RP ATTUNE Knee with medialized anatomic patella more closely resembles the biomechanics of the natural knee than the medialized dome patella.<sup>1</sup>

### References:

1. Azhar A, Mannen E, Smoger L, et al. Evaluation of in-Vivo Mechanics for Medialized Dome and Medialized Anatomic Patellofemoral Geometries During Knee Extension and Lunge. International Society for Technology in Arthroplasty (ISTA):e-Poster, Boston, MA, 10-5-2016.
2. Ranawat, C. S., White, P. B., West, S., Ranawat, A. S. (2016). Clinical and Radiographic Results of Attune and PFC Sigma Knee Designs at 2-Year Follow-Up: A Prospective Matched-Pair Analysis. *Journal of Arthroplasty*, 32(2), 431-436. This study compared the PS ATTUNE Knee to the PS SIGMA Knee.
3. Indelli, P. F., Gennaro, P., Johnson, P., Graceffa, A., Massimiliano, M. (2016). Posterior-stabilized total knee arthroplasty: a matched pair analysis of a classic and its evolutionary design. *Arthroplasty Today* 2(4), 193-198. This study compared the PS ATTUNE Knee to the PS SIGMA Knee.
4. Toomey, S., Daccach, J., Shah, J., Himden, S., Lesko, J., Hamilton, W. G. (2016). Comparing the Incidence of Patellofemoral Complications in a New TKA System vs. Currently Available Products in Two, Worldwide, Multi-center, Prospective Clinical Studies. *Journal of Arthroplasty* (2017), doi: 10.1016/j.arth.2017.04.014. This study compared the PS ATTUNE Knee to the PS SIGMA Knee.
5. Martin, J., Jennings, J., Watters, T., Levy, D., McNabb, D., Dennis, D. (2016). Femoral Implant Design Modification Decreases the Incidence of Patellar Crepitus in Total Knee Arthroplasty. *Journal of Arthroplasty*, 32(4), 1310-1313. This study compared the PS ATTUNE Knee to the PS SIGMA Knee.



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