

The proven solution when a TKA is more surgery than your patient needs

Patient-Matched CT-based drill template

In addition to the CT-based implant and drill template, a CT bone model is provided for each case to confirm the design and plan for osteophyte removal when required.

KineMatch® Patient-Matched Patello-Femoral Replacement (PFR)

Designed specifically for the small but challenging group of patients with isolated, end-stage patello-femoral disease, the *KineMatch* PFR offers a uniquely effective and conservative resurfacing solution. Because the device is precisely manufactured to fit the patient's anatomy using CT data, no resection of femoral bone is required, thus preserving bone stock for the future. The design of the front (articulating) and back (bone fitting) sides of the implant are "decoupled" so that optimization of an intimate, bone-sparing fit, as well as proper kinematics and control of patella tracking, can be achieved. Overstuffing is avoided¹ with a deep groove that accommodates the patella, while thicker medial and lateral margins provide stability.² The patellar groove can be rebuilt, even in a patient with a dysplastic trochlea.¹ The *KineMatch* all poly patella is used in conjunction with the Patient-Matched *KineMatch* femoral component.

The *KineMatch* device is implanted in a simple and reliable surgical procedure with minimal joint disruption.⁵ A patient-matched drill template, having the same exact femoral trochlea bone surface fit and perimeter shape as the actual implant, is provided for each case. The patient-matched template is used to mark the implant margin for cartilage removal and then to guide drilling of the femoral component peg holes. The CoCr femoral and UHMWPe patella implants are fixed using bone cement.

Because the KineMatch surgery requires no femoral bone cuts or sculpting, and avoids violation of the intramedullary space, this device is particularly well suited to an "episode of care" reimbursement model because the post-operative pain, morbidity, and rehabilitation associated with patellofemoral replacement are often significantly reduced as compared to total knee arthroplasty.³

Benefits of *KineMatch* Patient-Matched PFR

- Addresses intractable patello-femoral disease when other treatment options have failed.
- Accurate, fast and reliable femoral component placement.
- Replicates normal kinematics by re-establishing the patient's trochlear groove alignment and depth, which in turn maintains proper patella offset for efficient quadriceps function.
- Eliminates femoral bone resection by utilizing CT modeling technology to achieve a custom fit to the patient's femoral anatomy for both the drill guide and implant.
- Reduces problems of soft tissue impingement often seen with "off-the shelf" patello-femoral implant designs due to their improper fit.
- May reduce post-operative pain, morbidity and physical therapy requirements as compared to alternate treatment options.

Clinically Proven Results

The *KineMatch* device has achieved unparalleled clinical results. In 25 consecutive implantations in 22 patients (3 bilateral), with a mean 73 month (32-119 mo.) follow-up, all implants were in place and functioning well. Using the Knee Society scoring system, there were 18 excellent and 7 good results with a mean functional score of 89 points and mean objective score of 91 points. No patients required additional surgery.⁴ At an average of 11.3 years, all 25 implants were still in place and all patients reported being 'Very Satisfied'.⁸

- 1. Grelsamer R, Cavallaro BS (2014) Does the Kinematch Prosthesis Impair Knee Flexion in Patients with Trochlear Dysplasia? Reconstructive Review 4: 42-45.
- 2. Lombardi AV (2011) Patellofemoral Arthroplasty: Custom Inlay Technique Offers A Patient Specific Approach. Presented at the Annual Meeting of the AAOS.
- 3. Arendt EA et al (2011) Patellofemoral Arthritis. Presented at the ISAKOS Biennial Meeting. Brazil.
- 4. Sisto DJ, Sarin VK (2006) Custom Patellofemoral Arthroplasty of the Knee. J Bone Joint Surg. 88-A: 1475-1480.
- 5. Sisto DJ, Sarin VK (2007) Custom Patellofemoral Arthroplasty of the Knee: surgical technique. J Bone Joint Surg. 89 (Suppl 2, Part 2): 214-25.
- 6. Sisto DJ, Sarin VK (2008) Patellofemoral Arthoplasty with a Customized Trochlear Prosthesis. Orthop Clin N Am. 39: 355-36.
- 7. Sisto DJ, Grelsamer RP, Sarin VK (2012) Patient-Specific Patellofemoral Arthroplasty. In: Recent Advances in Hip and Knee Arthroplasty, Edited by S.K. Fokter. InTech Publishing. Rijeka, Croatia.
- 8. Sisto DJ, Sarin VK (2011) Custom Patello-femoral Arthroplasty of the Knee: An Eleven Year Follow-Up. Presented at the Orthopaedic Research Society Annual Meeting. Long Beach, CA.



Scan or Click for 3-D Animation Video



Scan or Click for Surgical video with Adolph V. Lombardi, Jr., MD, FACS

KineMatch® Patient-Matched Patello-Femoral Replacement (PFR)

Description

KineMatch® Patient-Matched Implants KineMatch PFR Patient-Matched Femoral Implant, Left, Right

KineMatch[®] Patient-Matched Instrumentation KineMatch PFR Patient-Matched Drill Guide. Left. Right

Patella Implant

Patella Implant, Domed, Tri-Peg, Sz 1, 2, 3, 4

Accompanying Materials

Patient-Matched Bone Model, Right, Left Autoclavable Patient-Matched Bone Model (Optional), Right, Left KineMatch PFR Surgical Technique

Surgeon Testimonials

"This patient specific design and manufacturing technique ensures accurate and precise anatomic fit while simultaneously providing proper patellofemoral alignment and medial lateral constraint."

> Adolph V. Lombardi, Jr., MD, FACS Joint Implant Surgeons, Inc New Albany, Ohio

"I have been performing KineMatch custom-fit patellofemoral arthroplasty since 2007. I am very pleased with the rapid pain relief, quick return of range of motion and function, as well as the short operative time and learning curve."

> Ronald P. Grelsamer, M.D. Chief of Patello-Femoral Reconstruction Mount Sinai Medical Center, New York, NY

Catalog No.

22-100-1001, -2

22-800-2004, -5

20-420-0101, -2, -3, -4

N/A (unique to each patient) CUSTOM 260, 261 B00083

"The KineMatch device has offered a remarkable benefit and return to function for a number of my patients with intractable patello-femoral disease who were otherwise facing the prospect of TKR."

> Domenick J. Sisto, MD Sherman Oaks, California

"I have tried several of the off-the-shelf patello-femoral arthroplasty implants and have concluded that the KineMatch Patient-Matched PFR is consistently the best option for my patients requiring patellofemoral arthroplasty. The concept of using CT data to customize the backside of the implant to intimately fit the trochlea without need for bone resection is conservative, effective, and simplifies and speeds the surgical procedure."

> Russell Cecil, M.D., Mohawk Valley Orthopedics, Amsterdam, NY

Patient Testimonials

"I can tell you with great pleasure that I am completely back to normal. The knee is doing so well that at times I forget that I had the surgery. I can do the stairs without using the railing. As one who has gone through so many painful joint surgeries, the advancements that have been made in this field are truly amazing. You as a doctor must be thrilled with the results." – Susan S.

"The reason that this custom joint preservation plan that Dr. Henry performed was so successful was because it's just what I needed. I didn't need my whole knee replaced. I didn't have to recover from a whole knee replacement. Once I had the procedures and healed from them, I'm back to doing whatever I want. My restrictions that Dr. Henry gave me were... 'no restrictions'."

– Britt S.



For more information:

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*Caution: Federal law restricts this device to sale by or on the order of a physician. Prior to use of a Kinamed device, please review the instructions for use and surgical technique for a complete listing of indications, contraindications, warnings, precautions, and directions for use.

*US Patent Nos. 6,712,856, 6,905,514, 7,517,365; 7,935,150; 8,419,741; 8,771,281; 8,936,601; 8,936,602 and 8,961,529. Additional US and Foreign Patents Pending. © Kinamed Inc. 2020 B00086H