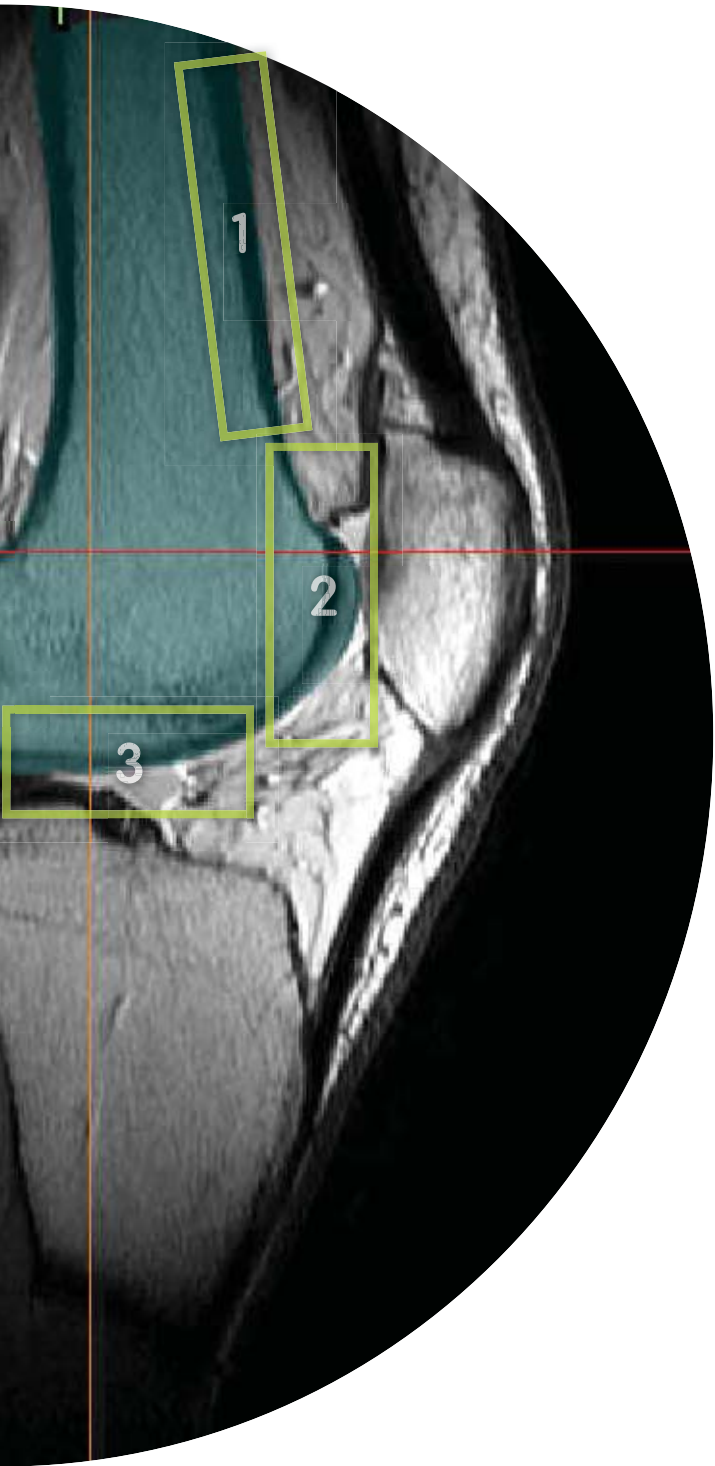


VISIONAIRE[◇]
Patient Matched Instrumentation

 A technology from **smith&nephew**

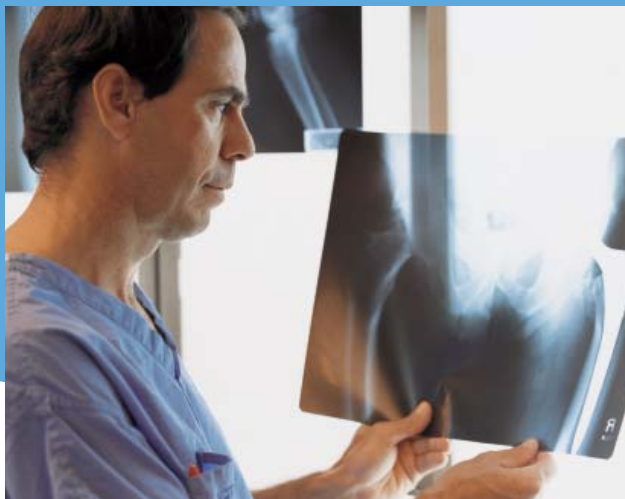


envision



Envision benefits

For the surgeon, hospital and patient



Surgeon

- Reduction of instrumentation assembly and surgical steps may lead to **greater efficiency in the OR**
- Patient specific alignment may lead to **better patient outcomes**
- **Lowered risk of complications** such as DVT due to lack of violation of the IM canal



Hospital

- Reduction of instrumentation assembly and surgical steps may lead to **greater efficiency in the OR**
- Reduction in instrument trays from an average of six to three will **reduce sterilization time, cost and inventory required**
- Greater OR efficiency may allow hospitals to **perform more surgical cases per day**



Patient

- **Lowered risk of complications** such as DVT due to lack of violation of the IM canal¹
- Patient specific alignment may result in **better outcomes**

Envision efficiency

VISIONAIRE Patient Match Technology allows the surgeon to **align**, **size** and **position** the femoral and tibial components in one step.

*VISIONAIRE[®] Patient Match Technology utilizes MRI to design instrumentation that is **unique to each patient**. In the case of total knee arthroplasty, cutting blocks are produced to **match the outer shape of the individual's distal femur and proximal tibia**.*

Size

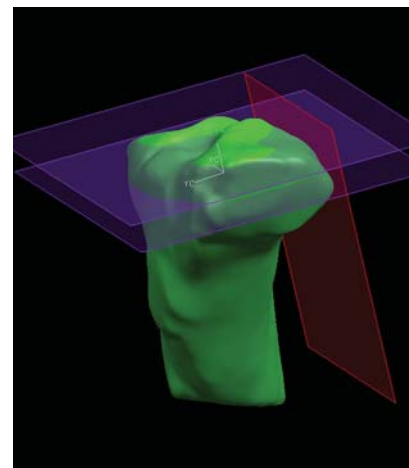
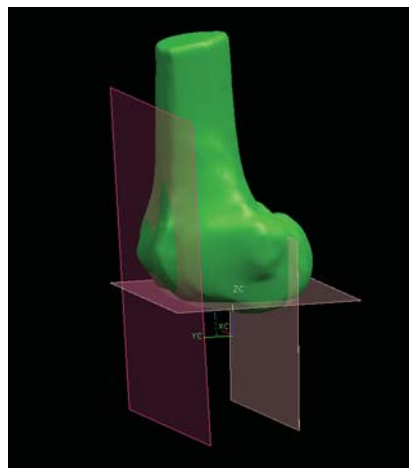
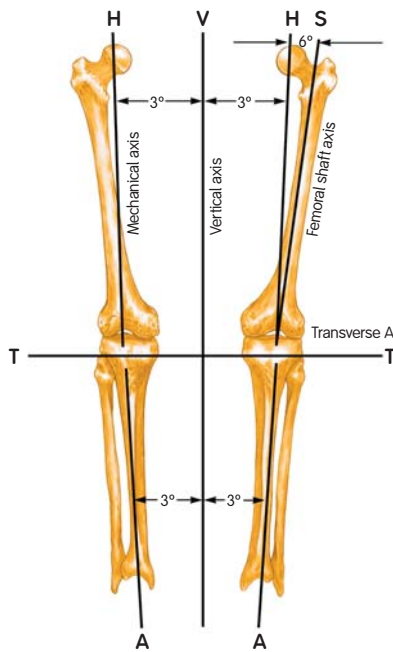
Accuracy of implant size is also a key factor in surgical success. With VISIONAIRE patient matched cutting blocks, precise sizing is **determined pre-operatively** using both **MRI and X-Ray analysis**.

Position

Accurate rotational and A-P position can be achieved with VISIONAIRE patient match technology. All of the commonly-referred anatomical landmarks (**A-P, epicondylar and posterior condylar**) are **analyzed pre-operatively**, allowing for the proper positioning of the implant for each individual.

Align

Proper alignment is critical to the success of total knee arthroplasty. VISIONAIRE Patient matched blocks substitute the traditional femoral valgus alignment and tibial alignment instrumentation and utilize the **clinically proven mechanical axis** to **determine proper component alignment**.



Envision no compromise



The Smith & Nephew advantage

As with any new technology, the benefits must not compromise the proven results of joint arthroplasty. As a manufacturer of orthopaedic implants, Smith & Nephew felt it was critically important to develop this technology internally, and not subcontract the blocks to an outside vendor. The result is a superior solution. The patient matched blocks, additional instrumentation and implants all come from one trusted source.

Proven alignment methodology

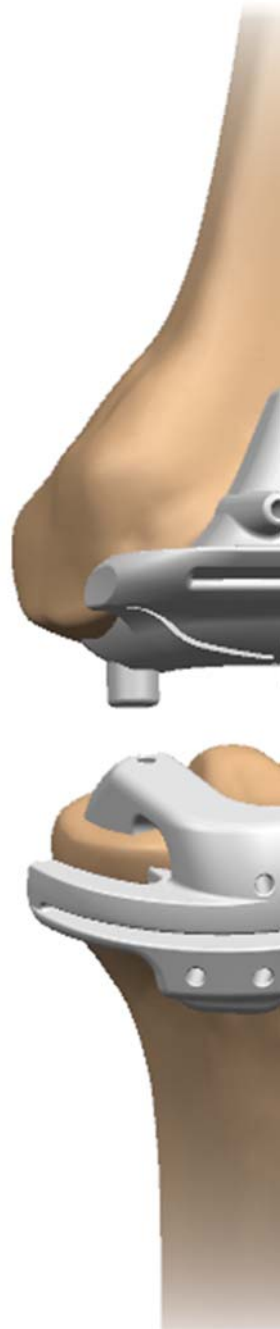
Unlike some companies who use alternate methods of alignment, Smith & Nephew VISIONAIRE[®] cutting blocks are **aligned to the mechanical axis of the knee, the gold standard**. Without this orientation to the mechanical axis, components may be implanted with incorrect alignment. The literature has shown that this can lead to early failures.

- “A tibial component with more than 3.0° of varus had increased odds of failure.”²
- “Components placed in varus alignment have a higher rate of loosening and revision when compared with components placed in neutral alignment.”³

With VISIONAIRE Patient Match Technology, surgeons can be reassured that they are implanting components in accordance with the proven standards of total knee arthroplasty.



Varus tibial alignment can result when the mechanical axis is not used for alignment, possibly leading to early implant failure





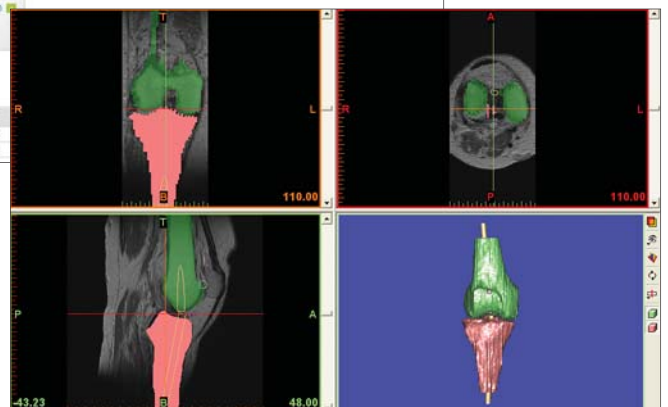
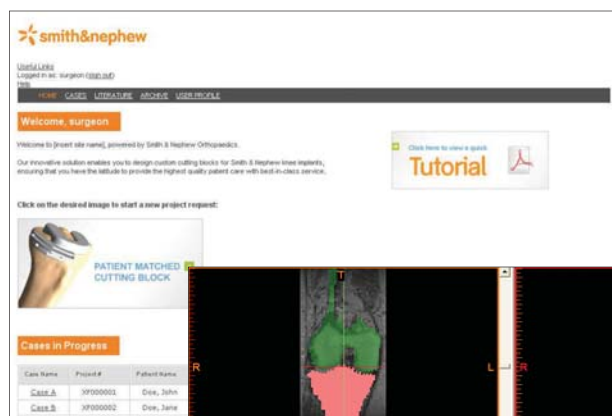
Implant choice

Some companies with this technology only allow for the use of cruciate-retaining implants or limit options to a single system. VISIONAIRE[®] Patient Match Technology is available for Smith & Nephew JOURNEY[®] BCS Bi-Cruciate Stabilized Knee System, GENESIS[®] II Total Knee System and LEGION[®] Primary Total Knee System in cruciate retaining and posterior stabilized options.* Because VISIONAIRE Technology utilizes mechanical axis alignment, surgeons may use a posterior-stabilized femoral component without concern about malalignment.

*CR implants not available for JOURNEY BCS

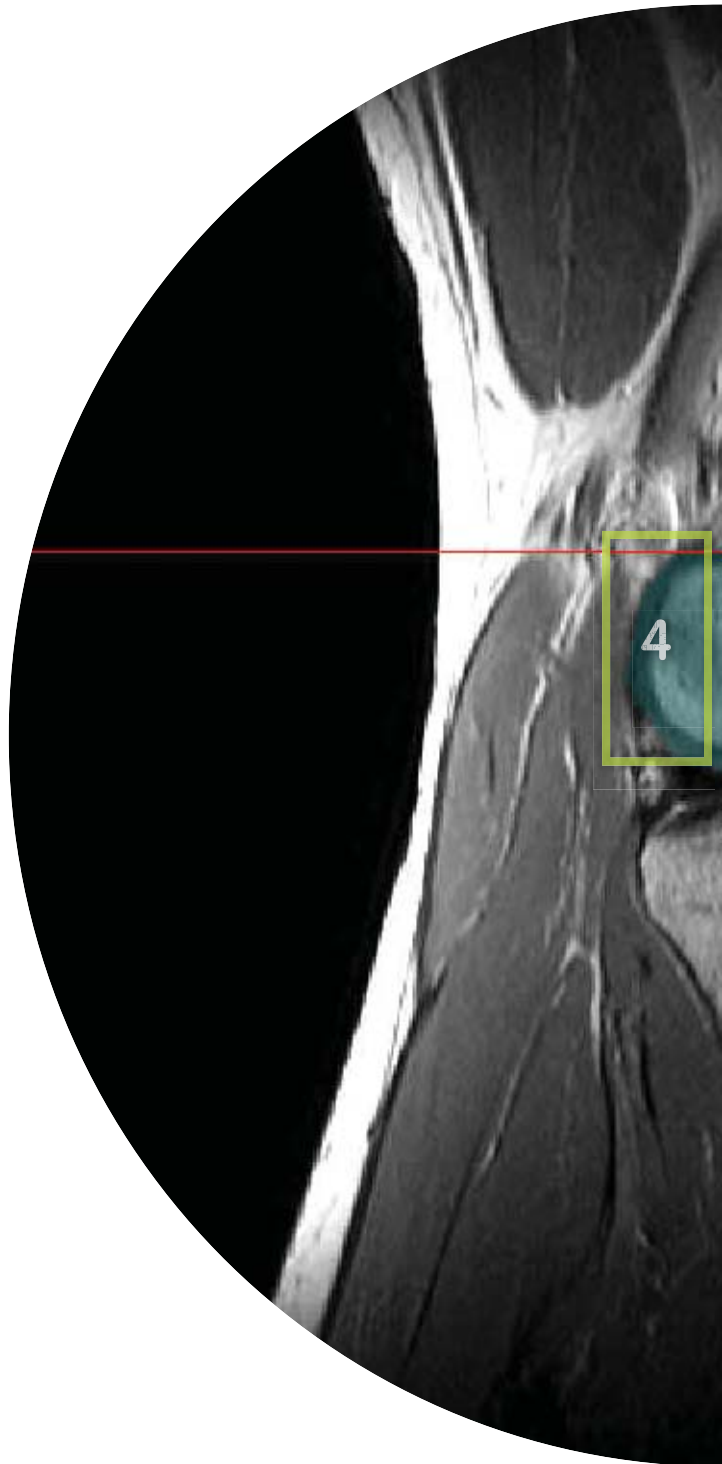
Surgeon control

VISIONAIRE Patient Match Technology is intended to enhance the surgeon's OR experience, not limit the decision-making or flexibility. The surgeon has the **ability to make changes to the pre-op plan prior surgery**. Intra-operative flexibility has also been considered in the design of the blocks, so that standard instrumentation can be utilized in the event that bone resection modifications are needed, such as additional distal resection to accommodate for a flexion contracture.



References

1. Monto RR, Garcia J, Callaghan JJ. Fatal fat embolism following total condylar knee arthroplasty. *J Arthroplasty*. 1990. (5):291–299.
2. Berend ME, Ritter MA, Meding JB, Faris PM, Keating EM, Redelman R, Faris GW, Davis KE. Tibial Component Failure Mechanisms in Total Knee Arthroplasty. *Clin Orthop Relat Res*. 2004. (428):26–34.
3. Novak EJ, Silverstein MD, Bozic KJ. The Cost Effectiveness of Computer-Assisted Navigation in Total Knee Arthroplasty. *J Bone Joint Surg Am*. 2007. (89):2389–97.



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