

KNEE SYSTEM solutions

# ADVANCE<sup>®</sup>

STEMMED MEDIAL PIVOT



A Bone Conserving Revision Knee System

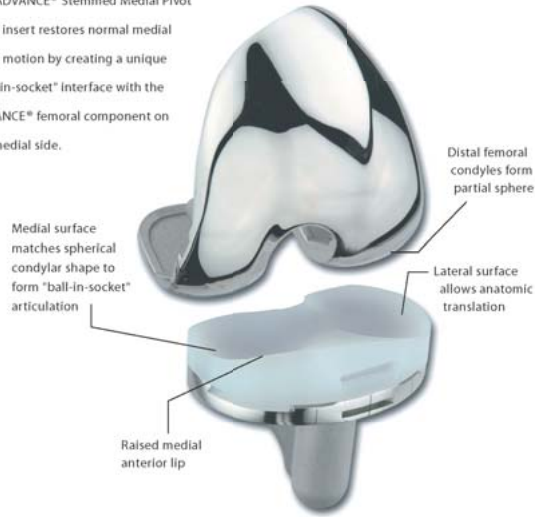
## A/P Stability with Natural Mobility



The lateral tibiofemoral surfaces are highly congruent in the coronal plane while anterior-posterior translation is allowed with a semi-congruent arcuate path.

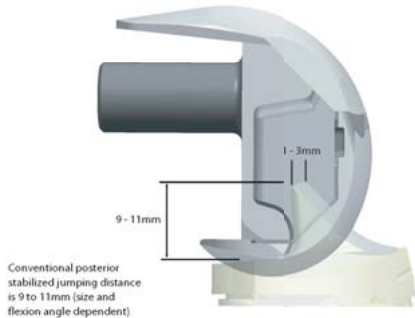
### Anatomic Kinematics, Minimized Wear

The ADVANCE® Stemmed Medial Pivot tibial insert restores normal medial pivot motion by creating a unique "ball-in-socket" interface with the ADVANCE® femoral component on the medial side.



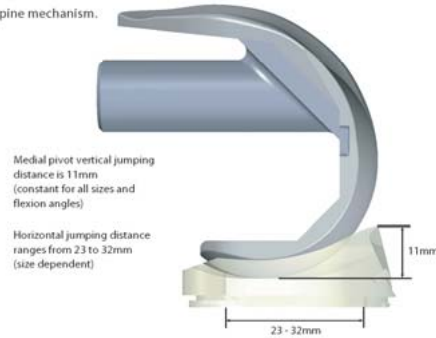
### Enhanced A/P and Deep Flexion Stability

**A** Conventional revision femoral with a posterior stabilized insert has a vertical jumping distance of 9 to 11mm and varies through ROM. Conventional horizontal jumping distance (the A/P length of the spine apex) may be as short as 1 to 3mm.



Conventional posterior stabilized jumping distance is 9 to 11mm (size and flexion angle dependent)

**B** The ADVANCE® Stemmed Medial Pivot vertical jumping distance is a constant 11mm through range of motion. The ADVANCE® Stemmed Medial Pivot horizontal jumping distance is 23 to 32mm, depending on component size. The stability is achieved with a medial ball-in-socket, thus avoiding complications that may occur with a traditional cam/spine mechanism.



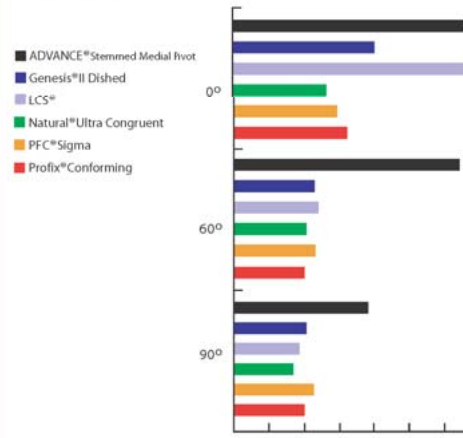
Medial pivot vertical jumping distance is 11mm (constant for all sizes and flexion angles)

Horizontal jumping distance ranges from 23 to 32mm (size dependent)

## Constant Radius - Constant Contact

### Enhanced Tibiofemoral Contact Area<sup>1,2</sup>

CONTACT AREA (mm<sup>2</sup>)



### Constant Radius



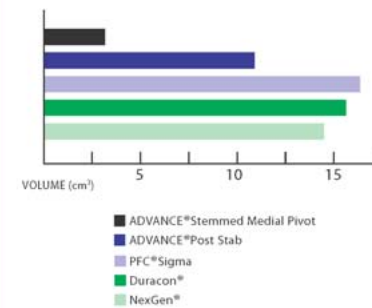
Because many contemporary femoral designs incorporate a decreasing radius of curvature through flexion, contact areas also decrease. The constant radius of the ADVANCE® femoral component maintains high contact area with the insert deep into flexion, thereby lowering the long-term polyethylene wear rates.

## Exercise Your Option to Save Bone

The ADVANCE® Stemmed Medial Pivot

femoral components offer all the features of a traditional revision femoral component and posterior stabilized insert such as augments, stem extensions and stability; however, the ADVANCE® Stemmed Medial Pivot offers all this with 60 - 80% less bone removal than other traditional revision femoral components.

### Volume of Bone Removed<sup>3</sup>



ADVANCE® Stemmed Medial Pivot Femoral

Traditional Revision Femoral

# Customized Fit for Each Patient

Porous left and right femoral components with standard 5° valgus angulation allow attachment of cemented or canal filling stem extensions.



Non-porous left and right femoral components with standard 5° valgus angulation allow attachment of cemented or canal filling stem extensions, along with posterior or distal augments.



Canal filling stems (1mm increments) with spline and flute design provide immediate rigid fixation and resistance to torsional movements. A flexible slot provides a dynamic structure to address long-term endosteal bone changes.



Tapered cemented stem extensions for both the femur and tibia are offered in a variety of diameters to meet specific patient needs.



Posterior and distal femoral augments (5 and 10mm) can be placed independently to address loss of femoral bone stock.

Block (5, 10 and 15mm) and wedge (15°) augments can be independently placed on the tibial base to address varying degrees of bone loss.

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ADVANCE® is covered by one or more of the following patents:  
 U.S. Patents: 4,298,992; 4,718,413; 5,219,362; 5,662,656; 5,672,178; 5,702,458; 6,013,103  
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## References:

1. Greenwald, A.S., Heim, C.S., Postak, P.D.: Tibial Plateau Surface Stresses in TKA. Presented at the 65th Annual AAOS Meeting, 1998.
2. Wright Medical Technology Engineering Report, TR97-0076.
3. Wright Medical Technology Engineering Report, ER02-0009.



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