

**FIVE TO SEVEN YEAR RESULTS  
OF THE  
ADVANCE® MEDIAL-PIVOT KNEE**

---

---

MARC GOOSSENS, MD AND CATHERINE VAN DER STRAETEN, MD  
MARIA MIDDELARES HOSPITAL  
GENT, BELGIUM

---

# FIVE TO SEVEN YEAR RESULTS OF THE ADVANCE® MEDIAL-PIVOT KNEE

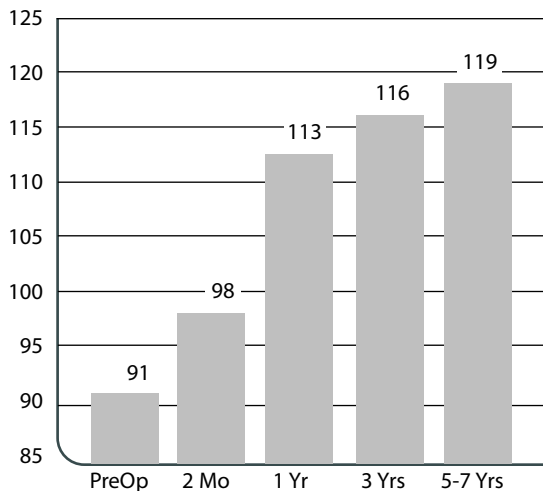
MARC GOOSSENS, MD AND CATHERINE VAN DER STRAETEN, MD  
MARIA MIDDELARES HOSPITAL  
GENT, BELGIUM

**Introduction**

The ADVANCE® Medial-Pivot Knee is designed to mimic the medial-pivot motion of the normal knee through a tibio-femoral articulation which combines medial rotation with controlled A-P translation. This increases tibio-femoral contact area, restores the normal axis of rotation and maximizes range of motion.

**Methods**

Between September 1998 and August 2000, 164 patients were implanted with the ADVANCE® Medial-Pivot Knee, including 158 primary and 6 revision procedures. Five patellae were unresurfaced and one had undergone previous patellectomy. The posterior cruciate ligament (PCL) was sacrificed in all cases.

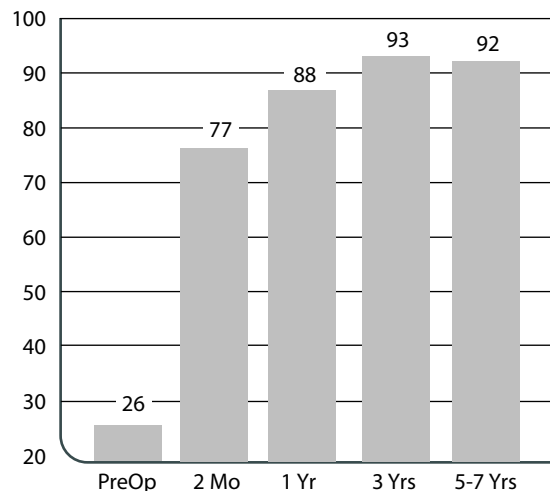


**Table 1 |** Range of Motion values in cohort at 5 to 7 years

**Results**

Of the 164 patients, 9 died due to unrelated causes, 2 underwent revision for infection, 1 underwent revision of a tibial tray that loosened due to trauma, and 7 were lost to follow-up. This left 145 patients between 5 and 7 years after surgery. The investigator maintained telephone contact with all 7 who were lost to follow-up and none have reported failure.

Mean age of the returning patients was 76 years with a range of 37 to 89 years. Mean latest follow-up was 70 months (60 to 84 months). Twenty percent (20%) of the 145 patients were males and 80% females. Overall implant survivorship in the 155 patients still living was 98.1%. Preoperative mean Knee Society Score (KSS) and range of motion was 26 points and 91°, respectively, improving at latest follow-up to 92 points and 119°



**Table 2 |** Knee Society Score in cohort at 5 to 7 years

TYPE OF COMPLICATION	NUMBER OF COMPLICATION	THERAPEUTIC MEASURE
Insufficient ROM at 2 Months	6	Mobilization: n = 5, Insert Revision: n = 1
Anterior Subluxation of Insert	1	Insert Revision
Click of Insert Upon Flexion	1	Insert Revision
Posterior Dislocation of the Knee	1	Insert Revision, Patella Resurfacing
Patella Fracture (resurfaced)	2	Patellectomy: n = 1, Conservative: n = 1
Deep Venous Thrombosis	2	Prolonged Enoxaparin
Transient Peroneal Palsy	1	No Specific Treatment
Septic Knee	2	Two-Stage Knee Revision
Traumatic Loosening of Tibial Component	1	Tibia Component Revision, Femoral Comp in Place

**Table 3 |** Complications

**Discussion**

This series of 164 patients implanted with the ADVANCE® Medial-Pivot Knee shows excellent survivorship (98.1%) at an average of 70 months postoperative. Although the study population is comprised of older patients (mean age 76 years), KSS and range of motion postoperative values improved markedly over preoperative.

Bhan, *et al*<sup>1</sup>, compared fixed (Insall-Burstein II) and mobile bearing (LCS) knee designs in bilateral patients, each patient receiving one of each device. At an average of 6 years postoperative, mean range of motion was 106.9° and 105.6°, respectively. In the current series, mean range of motion was 119° at an average of 5.8 years postoperative indicating very favorable function in the medial pivot design.

The results of this study support the rationale of the ADVANCE® Medial-Pivot Knee, namely that medial rotation and controlled A-P translation optimizes function in the replaced knee.

1. Bhan S, *et al*. A comparison of fixed-bearing and mobile bearing total knee arthroplasty at a minimum follow-up of 4.5 years. *J Bone and Joint Surg Am.* 87:2290-96, 2005.



**Wright Medical Technology, Inc.**

5677 Airline Road  
Arlington, TN 38002  
901.867.9971 phone  
800.238.7188 toll-free  
[www.wmt.com](http://www.wmt.com)

**Wright Medical Europe, SA**

Rue Pasteur BP 222  
83089 Toulon Cedex 9  
France  
011.33.49.408.7788 phone  
[www.wmt-emea.com](http://www.wmt-emea.com)

™Trademarks and ®Registered marks of Wright Medical Technology, Inc.  
ADVANCE® is covered by one or more of the following U.S. Patents: 4,298,992; 4,718,413; 5,219,362;  
5,662,656; 5,672,178; 5,702,458; 6,013,103, Patent Pending  
©2006 Wright Medical Technology, Inc. All Rights Reserved.

MK 079-306