



AUSTRALIAN ORTHOPAEDIC ASSOCIATION NATIONAL JOINT REPLACEMENT REGISTRY

Automated Industry Reporting System



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This presentation demonstrates four-year results for the ATTUNE® Knee System in the Australian Orthopaedic Association National joint Replacement Registry (AOANJRR) Automated Industry Reporting System (AIRS) for the Cruciate Retaining (CR) ATTUNE Knee and Posterior Stabilized (PS) ATTUNE Knee. This presentation will be updated regularly with new information.

AUTOMATED INDUSTRY REPORTING SYSTEM

- Cruciate Retaining (CR) ATTUNE® Knee
- Posterior Stabilized (PS) ATTUNE Knee

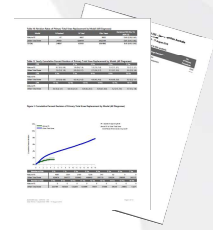


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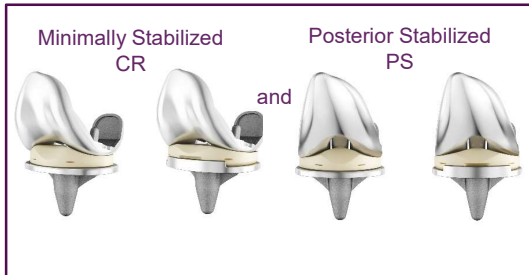
The AOANJRR publishes an annual report with outcomes data at set intervals of one, three, five-year and beyond. The published annual report records implantations up to a “cut-off” date of the prior December to allow time for report preparation. Once the annual report is published, the data are not very current. Now, however, additional survivorship data is also available more frequently to manufacturers who subscribe to the AOANJRR’s Automated Industry Report System (AIRS). The following slides are from the AOANJRR AIRS for CR and PS ATTUNE Knees, produced on May 13, 2020, with data through May 12, 2020.

INTRODUCING A RECENTLY AVAILABLE, INDEPENDENT REPORT FROM THE AOANJRR

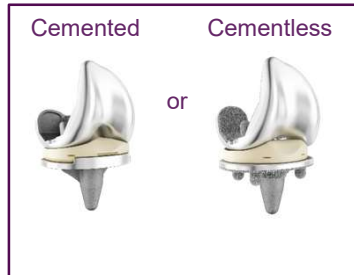
The AOANJRR publishes an annual report with outcomes data at set intervals of one, three, five-year and beyond. Additional implant survivorship data is now also available more frequently to manufacturers who subscribe to the AOANJRR's Automated Industry Report System (AIRS).



AIRS Reports are:



Reported by femoral component: Cruciate Retaining and Posterior Stabilized



Reported by fixation: cemented or cementless

AIRS Reports

- More frequent
- More current

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Attune®
Knee System

DePuy Synthes recently subscribed to the AOANJRR's Automated Industry Report System (AIRS). These reports are available more frequently than the published AOANJRR annual report.

The AIRS is the second subscription service for frequently updated registry information on the ATTUNE® Knee System and will be updated regularly with new information. The National Joint Registry for England, Wales, Northern Ireland and the Isle of Man (NJR) Implant Summary Report is the other subscription service DePuy Synthes subscribes to.

Both reports provide **independent analysis** of revision rates and implant survivorship of orthopaedic implants irrespective of surgeon experience, and including all patient demographics, which can be considered real world evidence.

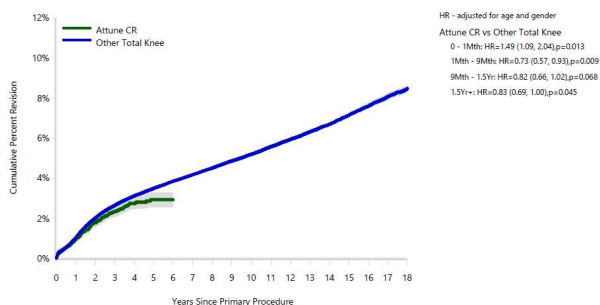
Highlights of AIRS:

- Automated, **Independent** analysis conducted by the Australian Orthopaedic Association National Joint Replacement Registry
- Data available **more recently and more frequently** than the annual published report.

- Reports are generated by Femoral Component, and available in Cruciate Retaining and Posterior Stabilized cohorts. This is consistent with how the AOANJRR presents primary Total Knee Arthroplasty (TKA) results in their published, annual report.
- Fixed Bearing and Rotating Platform tibial bases in primary Total Knee Arthroplasty are reported under their matching PS or CR femoral component.
- Reports are also generated for Cemented and Cementless constructs. Reports generated through AIRS obtained by DePuy Synthes for the ATTUNE Knee System will be separated into a Cemented Report and a Cementless Report for Primary TKA.

CR ATTUNE® KNEE IMPLANT SURVIVORSHIP

Figure 1: Cumulative Percent Revision of Primary Total Knee Replacement by Model (All Diagnoses)(AOANJRR 13MAY2020)¹



This report indicates that the 16,006 cemented CR ATTUNE® Knee cumulative percent revision of 2.9% (95% CI: 2.6, 3.3%) at six years is **performing significantly better** than all other TKA in the AOANJRR (HR 0.83 (0.69, 1.00), p=0.045).¹

All other TKA in this report had a six year estimated cumulative percent revision of 3.8% (3.8, 3.9).¹ The seven year cumulative percent revision for the CR ATTUNE Knee is based on a sample size of 10 patients.¹

Expressed as implant survivorship at six years, the CR ATTUNE Knees have a 97.1% implant survivorship (97.4, 96.7), which is performing favorably to the overall class of knees of 96.2% (96.2, 96.1) implant survivorship.¹

Number at Risk	0 Yr	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs	8 Yrs
Attune CR	16006	12957	9770	6546	3772	1617	179	10	0
Other Total Knee	711534	654143	589871	528310	468722	412283	358596	307543	260794

Table 11: Yearly Cumulative Percent Revision of Primary Total Knee Replacement by Model (All Diagnoses) AOANJRR 13MAY2020¹

CPR	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs
Attune CR	0.9 (0.8, 1.1)	1.8 (1.6, 2.0)	2.3 (2.1, 2.6)	2.7 (2.4, 3.1)	2.9 (2.6, 3.3)	2.9 (2.6, 3.3)	
Other Total Knee	1.0 (1.0, 1.0)	2.0 (2.0, 2.0)	2.6 (2.6, 2.7)	3.1 (3.1, 3.1)	3.5 (3.4, 3.5)	3.8 (3.8, 3.9)	4.2 (4.1, 4.2)

1. Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR), Automated Industry Report System (AIRS), ID No.2505 for DePuy Synthes, ATTUNE CR/ATTUNE Total Knee, (Procedures from 1 September 1999 – 12 May 2020), Accessed 13 May 2020, AOA, Adelaide: 1-17.

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CR ATTUNE KNEE TOP 5 REASONS FOR REVISION

Table 13: Yearly Cumulative Incidence Revision Diagnosis of Primary Total Knee Replacement by Model (All Diagnoses)

Model	Event	N Events	1 Yr	2 Yrs	3 Yrs	5 Yrs	10 Yrs	15 Yrs	
Attune CR	Infection	113	0.5 (0.4, 0.7)	0.7 (0.6, 0.9)	0.8 (0.7, 1.0)	0.9 (0.7, 1.1)			
	Loosening	51	0.0 (0.0, 0.1)	0.3 (0.2, 0.4)	0.4 (0.3, 0.5)	0.6 (0.4, 0.8)			
	Pain	29	0.0 (0.0, 0.1)	0.2 (0.1, 0.3)	0.2 (0.1, 0.3)	0.3 (0.2, 0.5)			
	Instability	27	0.1 (0.0, 0.1)	0.1 (0.1, 0.2)	0.2 (0.1, 0.3)	0.3 (0.2, 0.4)			
	Arthrofibrosis	23	0.0 (0.0, 0.1)	0.1 (0.1, 0.2)	0.2 (0.1, 0.3)	0.2 (0.1, 0.3)			
	Other	67	0.2 (0.1, 0.3)	0.4 (0.3, 0.5)	0.5 (0.4, 0.6)	0.6 (0.5, 0.8)			
All Revision	Deceased	346	0.4 (0.3, 0.5)	1.1 (1.0, 1.3)	2.3 (2.0, 2.6)	4.8 (4.3, 5.5)			
	All Revision	310	0.9 (0.8, 1.1)	1.8 (1.6, 2.0)	2.3 (2.0, 2.6)	2.9 (2.5, 3.2)			
	Other Total Knee	Infection	6827	0.4 (0.4, 0.5)	0.6 (0.6, 0.6)	0.7 (0.7, 0.8)	0.9 (0.9, 0.9)	1.1 (1.1, 1.1)	1.3 (1.3, 1.3)
		Loosening	7067	0.2 (0.2, 0.2)	0.4 (0.4, 0.4)	0.6 (0.5, 0.6)	0.8 (0.8, 0.8)	1.2 (1.2, 1.3)	1.7 (1.6, 1.7)
		Pain	2301	0.0 (0.0, 0.1)	0.2 (0.1, 0.2)	0.2 (0.2, 0.2)	0.3 (0.3, 0.3)	0.4 (0.4, 0.4)	0.5 (0.4, 0.5)
Instability		2444	0.1 (0.1, 0.1)	0.2 (0.2, 0.2)	0.2 (0.2, 0.2)	0.3 (0.3, 0.3)	0.4 (0.4, 0.4)	0.5 (0.5, 0.5)	
All Revision	Arthrofibrosis	1000	0.0 (0.0, 0.0)	0.1 (0.1, 0.1)	0.1 (0.1, 0.1)	0.1 (0.1, 0.2)	0.2 (0.2, 0.2)	0.2 (0.2, 0.2)	
	Other	9009	0.3 (0.2, 0.3)	0.5 (0.5, 0.6)	0.7 (0.7, 0.7)	1.0 (1.0, 1.0)	1.5 (1.5, 1.6)	2.1 (2.1, 2.2)	
	Deceased	11819	0.8 (0.7, 0.8)	1.8 (1.7, 1.8)	3.1 (3.0, 3.1)	6.6 (6.6, 6.7)	20.6 (20.4, 20.7)	39.0 (38.8, 39.3)	
	All Revision	28648	1.0 (1.0, 1.0)	2.0 (1.9, 2.0)	2.6 (2.6, 2.6)	3.4 (3.4, 3.5)	4.9 (4.8, 4.9)	6.2 (6.1, 6.3)	

Based on point estimates and confidence intervals, there is less incidence of revision for loosening with the CR ATTUNE Knee than all other Total Knee at 5 years follow-up.¹

The CR ATTUNE Knee is performing in line with the class for the remaining reasons for revision in this report.¹

The seven year cumulative incidence rates for the CR ATTUNE Knee is based on a sample size of 10 patients.¹

1. Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR), Automated Industry Report System (AIRS), ID No.2505 for DePuy Synthes, ATTUNE CR/ATTUNE Total Knee, (Procedures from 1 September 1999 – 12 May 2020), Accessed 13 May 2020, AOA, Adelaide: 1-17.

5 097403-200827 DSUS/EMEA **Disclaimer** -AOANJRR is confident in the accuracy of the data included in this report, at the time it was provided. However, it was generated using an automated reporting system and has not been reviewed by the AOANJRR personnel.



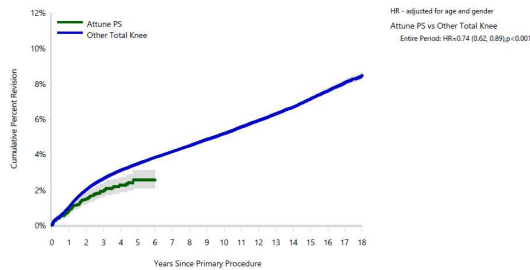
The AIRS for the CR ATTUNE Knee provides the cumulative incidence rate for each reason for revision. This is more detailed than published annual reports, which report on the reason for revision without including the time component. This data may help surgeons make better informed decisions in regards to implant survivorship. Additional data collection is ongoing to add to the body of evidence of the ATTUNE Knee System.

Based on point estimates and confidence intervals, there is not a significant difference in revision for loosening with the CR ATTUNE Knee compared to all other Total Knees at 5 years.¹

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PS ATTUNE KNEE IMPLANT SURVIVORSHIP

Figure 1: Cumulative Percent Revision of Primary Total Knee Replacement by Model (All Diagnoses)(AOANJRR 13MAY2020)²



CPR	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs
Attune PS	0.8 (0.6, 1.0)	1.5 (1.2, 1.8)	1.9 (1.6, 2.3)	2.3 (1.9, 2.7)	2.5 (2.1, 3.1)	2.5 (2.1, 3.1)	
Other Total Knee	1.0 (1.0, 1.0)	2.0 (2.0, 2.0)	2.6 (2.6, 2.7)	3.1 (3.1, 3.1)	3.5 (3.4, 3.5)	3.8 (3.8, 3.9)	4.2 (4.1, 4.2)

Table 11: Yearly Cumulative Percent Revision of Primary Total Knee Replacement by Model (All Diagnoses) AOANJRR 13MAY2020²

Number at Risk	0 Yr	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs	8 Yrs
Attune PS	7566	5940	4404	3049	1870	937	244	15	0
Other Total Knee	719974	661160	595237	531807	470624	412963	358531	307538	260794

2. Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR), Automated Industry Report System (AIRS), ID No. 2506 for DePuy Synthes, ATTUNE PS/ATTUNE Total Knee, (Procedures from 1 September 1999 – 12 May 2020), Accessed 13 May 2020, AOA, Adelaide: 1-17.

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This report indicates that the 7,566 cemented PS ATTUNE® Knee with a cumulative percent revision of 2.5% at six years (95% CI: 2.1, 3.1%) is **performing significantly better** than all other TKA in the AOANJRR (HR 0.74 (0.62, 0.89), p<0.001).²

All other TKA in this report had a six year estimated cumulative percent revision of 3.8% (3.8, 3.9).² The seven year cumulative percent revision for the PS ATTUNE Knee is based on a sample size of 15 patients.²

Expressed as implant survivorship at six years, the PS ATTUNE Knees have a 97.5% implant survivorship (97.9, 96.9), which is performing favorably to the overall class of knees of 96.2% (96.2, 96.1) implant survivorship.²

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PS ATTUNE KNEE TOP 5 REASONS FOR REVISION

Table 13: Yearly Cumulative Incidence Revision Diagnosis of Primary Total Knee Replacement by Model (All Diagnoses)

Model	Event	N Events	1 Yr	2 Yrs	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Attune PS	Infection	51	0.4 (0.3, 0.6)	0.7 (0.5, 0.9)	0.8 (0.6, 1.0)	0.9 (0.7, 1.2)		
	Loosening	26	0.1 (0.0, 0.2)	0.2 (0.1, 0.4)	0.4 (0.2, 0.6)	0.7 (0.4, 1.0)		
	Instability	15	0.1 (0.1, 0.2)	0.3 (0.1, 0.4)	0.3 (0.1, 0.4)	0.3 (0.1, 0.4)		
	Arthrofibrosis	10	0.1 (0.0, 0.1)	0.1 (0.1, 0.3)	0.2 (0.1, 0.3)	0.2 (0.1, 0.3)		
	Fracture	6	0.1 (0.0, 0.1)	0.1 (0.0, 0.1)	0.1 (0.0, 0.1)	0.2 (0.1, 0.5)		
	Other	14	0.1 (0.0, 0.2)	0.1 (0.0, 0.2)	0.3 (0.2, 0.5)	0.3 (0.2, 0.5)		
	Deceased	191	0.5 (0.3, 0.7)	1.6 (1.3, 1.9)	2.6 (2.1, 3.0)	5.3 (4.5, 6.2)		
	All Revision	122	0.8 (0.6, 1.0)	1.5 (1.2, 1.8)	1.9 (1.6, 2.3)	2.5 (2.0, 3.0)		
Other Total Knee	Infection	6889	0.4 (0.4, 0.5)	0.6 (0.6, 0.6)	0.7 (0.7, 0.8)	0.9 (0.9, 0.9)	1.1 (1.1, 1.1)	1.3 (1.3, 1.3)
	Loosening	7092	0.2 (0.2, 0.2)	0.4 (0.4, 0.4)	0.6 (0.5, 0.6)	0.8 (0.8, 0.8)	1.2 (1.2, 1.3)	1.7 (1.6, 1.7)
	Instability	2456	0.1 (0.1, 0.1)	0.2 (0.2, 0.2)	0.2 (0.2, 0.2)	0.3 (0.3, 0.3)	0.4 (0.4, 0.4)	0.5 (0.5, 0.5)
	Arthrofibrosis	1013	0.0 (0.0, 0.0)	0.1 (0.1, 0.1)	0.1 (0.1, 0.1)	0.1 (0.1, 0.2)	0.2 (0.2, 0.2)	0.2 (0.2, 0.2)
	Fracture	932	0.0 (0.0, 0.0)	0.1 (0.1, 0.1)	0.1 (0.1, 0.1)	0.1 (0.1, 0.1)	0.2 (0.1, 0.2)	0.2 (0.2, 0.3)
	Other	10454	0.3 (0.2, 0.3)	0.6 (0.6, 0.7)	0.9 (0.9, 0.9)	1.2 (1.2, 1.2)	1.8 (1.8, 1.8)	2.4 (2.3, 2.4)
	Deceased	11834	0.7 (0.7, 0.8)	1.8 (1.7, 1.8)	3.1 (3.0, 3.1)	6.6 (6.5, 6.7)	20.5 (20.4, 20.7)	39.0 (38.8, 39.2)
	All Revision	28836	1.0 (1.0, 1.0)	2.0 (1.9, 2.0)	2.6 (2.6, 2.6)	3.4 (3.4, 3.5)	4.9 (4.8, 4.9)	6.2 (6.1, 6.3)

Based on point estimates and confidence intervals, the incidence of revision for loosening with the PS ATTUNE Knee is in line with the class of all other Total Knee at 5 years follow-up.²

The PS ATTUNE Knee is performing in line with the class for the remaining reasons for revision in this report.²

The seven year cumulative incidence rates for the PS ATTUNE Knee is based on a sample size of 15 patients.²

2. Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR), Automated Industry Report System (AIRS), ID No.2506 for DePuy Synthes, ATTUNE PS/ATTUNE Total Knee, (Procedures from 1 September 1999 – 12 May 2020), Accessed 13 May 2020, AOA, Adelaide: 1-17.

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