



Accolade® II

clinical quick guide

Accolade® II key clinical studies

Fit

Collopy D et al. (2017)	1
Wuestemann T et al. (2011)	2
Issa K et al. (2011)	3

Subsidence

Dammerer D et al. (2022)	4
---------------------------------------	---

Survivorship

Kolisek F et al. (2016)	5
Colacchio N et al. (2017)	6

Competitive comparisons

Gabor J et al. (2020)	7
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Disclaimer

.....	8
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Fit

Title

A prospective single-centre case series using roentgen stereophotogrammetric analysis (RSA) to evaluate stem micromotion of the Stryker Accolade II cementless hip stem to two years post-surgery

Reference

Collopy, D. (2017). A prospective single-centre case series using roentgen stereophotogrammetric analysis (rsa) to evaluate stem micromotion of the Stryker Accolade II cementless hip stem to two years post-surgery. *Journal of Bone and Joint Surgery-british Volume*, 77-77.

Institution

Journal of Bone and Joint Surgery-British

Conclusion

The mean MTPM from this study falls well below the average for uncemented collarless stems suggested by de Vries et al. (2014). This, together with the negligible distal stem migration, affirms excellent immediate stability of the Accolade II design. These RSA results imply successful biologic fixation and a high survival rate can be expected with the Accolade II stem.

[Link to study](#)



Fit

Title

A novel tapered hip stem design optimized for femoral fit in a wide array of bone types.

Reference

Wuestemann T, Bastian A, Parvizi J, Nessler J, Kolisek F (2011). A novel tapered hip stem design optimized for femoral fit in a wide array of bone types. Orthopaedic Proceedings Vol. 94-B, No. SUPP_XXXVII

Institution

Stryker

Conclusion

The cementless, tapered wedge stem design is used in large numbers globally due to its ease of use and reproducibility. However, changing patient demographics and associated bone morphology represents a challenge for existing designs to achieve a proximal fit. The novel tapered stem design presented here was adapted to these influencing factors by optimizing the proximal to distal ratio with respect to the whole patient group resulting in a particularly marked improvement in proximal fit in the male 40–60 age group compared to predicate stem designs.

[Link to study](#)



Fit

Title

Radiographic fit and fill analysis of a new second-generation proximally coated cementless stem compared to its predicate design

Reference

Issa K, Pivec R, Wuestemann T, Tatevossian T, Nevelos J, Mont MA. Radiographic fit and fill analysis of a new second-generation proximally coated cementless stem compared to its predicate design. *J Arthroplasty*. 2014 Jan;29(1):192-8. doi: 10.1016/j.arth.2013.04.029. Epub 2013 May 21. PMID: 23706811.

Institution

Rubin Institute for Advanced Orthopedics, Center for Joint Preservation and Replacement, Sinai Hospital of Baltimore, Baltimore, Maryland.

Conclusion

A new tapered, proximally porous-coated second-generation cementless stem, designed based on femoral morphometric measurements, had a significantly better canal fit demonstrated by higher proportion of Type I and lower proportion of Type II fits when compared to the older first-generation design. In addition, the new stem design had significantly better middle and distal canal fill, both in terms of stem-to-canal fill percentage, as well as mean medial and lateral gap to the cortical bone which can be explained by the difference in distal design of the new stem.

[Link to study](#)



Subsidence

Title

Subsidence of a metaphyseal-anchored press-fit stem after 4-year follow-up: an EBRA-FCA analysis

Reference

Dammerer, D., Blum, P., Putzer, D., Krappinger, D., Liebensteiner, M. C., Nogler, M., & Thaler, M. (2021). Subsidence of a metaphyseal-anchored press-fit stem after 4-year follow-up: An ebra-FCA analysis. *Archives of Orthopaedic and Trauma Surgery*, 142(8), 2075–2082.

Institution

Department of Orthopaedics and Traumatology, Medical University of Innsbruck, Austria

Conclusion

Migration pattern of the metaphyseal-anchored stem and a low subsidence rate at final follow-up may predict a good long-term clinical result.

[Link to study](#)



Survivorship

Title

Mid-Term Follow Up of Newer-Generation Morphometric Wedge Stems for Total Hip Arthroplasty (THA)

Reference

Kolisek FR, Jaggard CE, Milto AJ, Malkani AL, Smith LS, Remily EA, Wilkie WA, Mohamed NS, Delanois RE. Mid-Term Follow Up of Newer-Generation Morphometric Wedge Stems for Total Hip Arthroplasty (THA). Surg Technol Int. 2020 May 28;36:399-403. PMID: 32243564.

Institution(s)

Department of Orthopaedic Surgery, OrthoIndy South, Greenwood, Indiana; Department of Orthopaedic Surgery, University of Louisville, Louisville, Kentucky; Center for Joint Preservation and Replacement, Sinai Hospital of Baltimore, Baltimore, Maryland

Conclusion

Newer-generation morphometric wedge femoral stems for THA [Accolade® II femoral hip stems] exhibit excellent radiographic stability, patient satisfaction, and clinical outcomes at five years post implantation. This work supports the validity of earlier findings that these stems designed to mimic the native anatomy of patient femoral canals can provide excellent outcomes and survivorship with few complications at longer-term follow up.

[Link to study](#)



Survivorship

Title

Total Hip Intraoperative Femur Fracture: Do the Design Enhancements of a Second-Generation Tapered-Wedge Stem Reduce the Incidence?

Reference

Colacchio, N. D., Robbins, C. E., Aghazadeh, M. S., Talmo, C. T., Bono, J. V. (2017). Total hip intraoperative femur fracture: Do the design enhancements of a second-generation tapered-wedge stem reduce the incidence? *The Journal of Arthroplasty*, 32(10), 3163–3168.

Institution

Department of Orthopedic Surgery, New England Baptist Hospital, Boston, Massachusetts

Conclusion

Prior investigation has established that a new tapered, proximally porous-coated second-generation cementless stem with design enhancements including a size-specific medial curvature design based on femoral morphometric measurements (the Accolade® II) has a significantly better canal fit than its predicate design (the Accolade® TMZF), as demonstrated by higher proportion of proximal and distal engagement and better middle and distal canal fill [Issa K, et al. *J. Arthroplasty* 2014;29:192e8]. The present study adds to our understanding of the potential benefits of this more anatomic femoral stem design, as it found that standard tapered-wedge femoral stem instrumentation system (the Accolade® TMZF) resulted in significantly higher incidence of IFF (>4 times) than its second-generation successor (the Accolade® II) used for primary uncemented THA. Identifying risk factors for IFF is necessary to facilitate implant system improvements



and thus maximize patient outcomes. As the number of THAs performed annually continues to increase, and as different surgical approaches, techniques, and implant systems continue to be investigated, this finding could have increasingly important implications for patients in order to minimize complications and optimize results. Further prospective investigation is needed to elucidate the potential for a size-specific medial curvature femoral stem to decrease intraoperative complications, prolong implant survival, improve patient outcomes, and decrease overall healthcare expenditures.

[Link to study](#)



Competitive comparison

Title

Outcomes with Two Tapered Wedge Femoral Stems in Total Hip Arthroplasty Using an Anterior Approach [Accolade® II compared to Anthology®]

Reference

Gabor JA, Singh V, Padilla JA, Schwarzkopf R, Davidovitch RI. Outcomes with Two Tapered Wedge Femoral Stems in Total Hip Arthroplasty Using an Anterior Approach. *J Orthop.* 2020 Aug 17;22:341-345. doi: 10.1016/j.jor.2020.08.010. PMID: 32904196; PMCID: PMC7452259.

Institution(s)

NYU Langone Orthopedic Hospital, Zucker School of Medicine at Hofstra/Northwell Health

Conclusion

Surgeons who routinely perform an anterior approach for THA can expect largely similar clinical outcomes using both stem designs explored in the present study. Our results suggest modestly improved clinical and radiographic outcomes, especially with regards to hip and thigh pain, subsidence, and malalignment in patients who received a morphometric femoral stem with a size-specific medial radius of curvature. Further studies are warranted to assess the long-term performance of these implants.

[Link to study](#)



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