



Accuracy of Alpha Defensin in Reviewed Literature

Study	N	Gold Standard	Sensitivity	Specificity
Rothman Institute¹²	149	MSIS Criteria	97% (95% CI: 86-100%)	96% (95% CI: 90-99%)
Mayo Arizona⁹	61	MSIS Criteria	100% (95% CI: 79-100%)	95% (95% CI: 83-99%)
Cleveland Clinic¹³	111	MSIS Criteria	96% (95% CI: 82-99%)	99% (95% CI: 93-100%)
Combined	321	MSIS Criteria	98% (95%CI: 92-99%)	98% (95% CI: 95-99%)

***Note: Items in bold denote external publications**

2015 Alpha Defensin and Synovial Fluid Biomarker Publications:

1. The Alpha-defensin Test for Periprosthetic Joint Infection Responds to a Wide Spectrum of Organisms.
Deirmengian C, Kardos K, Kilmartin P, Gulati S, Citrano P, Booth RE Jr.
Clin Orthop Relat Res. 2015 Jul; 473(7): 2229-35.
2. **a-Defensin as a predictor of periprosthetic shoulder infection.**
Frangiamore S., Saleh A., Grosso M., Kovac M., Higuera C., Iannotti J., Richchetti E.
J Shoulder Elbow Surg. 2015 Jul; 24(7): 1021-7.
3. **Editorial Comment: 2014 Musculoskeletal Infection Society Meeting.**
Zalavras C., Marculescu, C.
Clin Orthop Relat Res. (2015) 473:2227–2228.
4. **From Bench to Bedside: Alpha-Defensin – The Biggest Thing in Joint Replacement Infections Since Prophylactic Antibiotics?**
Potter, B.
Clin Orthop Relat Res. 2015 Apr 14. [Epub ahead of print]
5. **The Diagnosis of Periprosthetic Joint Infection.**
Springer, B.
J. Arthroplasty. 2015 March 13. [Epub ahead of print]
6. **CORR Insights®: The Alpha Defensin Test for Periprosthetic Joint Infection Responds to a Wide Spectrum of Organisms**
Springer, B.
Clin Orthop Relat Res. (2015) 473:204–205.
7. **CORR Insights®: The Alpha Defensin Test for Periprosthetic Joint Infection Outperforms the Leukocyte Esterase Test Strip.**
Sheehan, E.
Clin Orthop Relat Res. 2015 Jan; 473(1):204-5.

8. The Alpha Defensin Test for Periprosthetic Joint Infection Outperforms the Leukocyte Esterase Test Strip.
Deirmengian C, Kardos K, Kilmartin P, Cameron A, Schiller K, Booth RE Jr, Parvizi J.
Clin Orthop Relat Res. 2015 Jan; 473(1):198-203.

2014 Alpha Defensin and Synovial Fluid Biomarker Publications:

9. **The Alpha Defensin-1 Biomarker Assay can be Used to Evaluate the Potentially Infected Total Joint Arthroplasty**
Bingham J, Clarke H, Spangehl M, Schwartz A, Beauchamp C, Goldberg B.
Clin Orthop Relat Res. 2014 Dec; 472(12):4006-9.
10. **Editorial Comment: 2013 Musculoskeletal Infection Society Meeting.**
Zalavras C.
Clin Orthop Relat Res. 2014 Oct; 472:3273-3274
11. **Editor's Spotlight/Take 5: Diagnosing Periprosthetic Joint Infection: Has the Era of the Biomarker Arrived?**
Wongworawat M.
Clin Orthop Relat Res. 2014 Oct; 472:3250-3253.
12. Diagnosing Periprosthetic Joint Infection: Has the Era of the Biomarker Arrived?
Deirmengian C, Kardos K, Kilmartin P, Cameron A, Schiller K, Parvizi J.
Clin Orthop Relat Res. 2014 Oct; 472:3254-3262.
13. Combined Measurement of Synovial Fluid α -Defensin and C-Reactive Protein Levels: Highly Accurate for Diagnosing Periprosthetic Joint Infection.
Deirmengian C, Kardos K, Kilmartin P, Cameron A, Schiller K, Parvizi J.
J Bone Joint Surg Am. 2014 Sep 3; 96(17):1439-45.

External Alpha Defensin and Synovial Fluid Biomarker Abstracts:

14. **Alpha Defensin Accuracy to Diagnose Periprosthetic Joint Infection – Best available Test?**
M Farias-Kovac, J Masch, A Saleh, S Frangiamore, R Molloy, W Barsoum, C Higuera.
Accepted for presentation at the annual meeting of The American Association of Hip and Knee Surgeons (AAHKS). 2014 Nov 8.

Foundation Papers

15. Synovial Fluid Biomarker for Periprosthetic Joint Infection
Deirmengian C, Hallab N, Tarabishy A, Della Valle C, Jacobs J, Lonner J, Booth R.
Clin Orthop Relat Res. 2010 Aug; 468:2017–2023.
16. The Mark Coventry Award: White Blood Cell Gene Expression A New Approach toward the Study and Diagnosis of Infection
Deirmengian C, Lonner J, Booth R.
Clin Orthop Relat Res. 2005 Nov; 440:38-44.