Accuracy of Alpha Defensin in Reviewed Literature

<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>Gold Standard</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rothman Institute*&lt;sup&gt;12&lt;/sup&gt;</td>
<td>149</td>
<td>MSIS Criteria</td>
<td>97% (95% CI: 86-100%)</td>
<td>96% (95% CI: 90-99%)</td>
</tr>
<tr>
<td>Mayo Arizona&lt;sup&gt;9&lt;/sup&gt;</td>
<td>61</td>
<td>MSIS Criteria</td>
<td>100% (95% CI: 79-100%)</td>
<td>95% (95% CI: 83-99%)</td>
</tr>
<tr>
<td>Cleveland Clinic&lt;sup&gt;13&lt;/sup&gt;</td>
<td>111</td>
<td>MSIS Criteria</td>
<td>96% (95% CI: 82-99%)</td>
<td>99% (95% CI: 93-100%)</td>
</tr>
<tr>
<td>Combined</td>
<td>321</td>
<td>MSIS Criteria</td>
<td>98% (95% CI: 92-99%)</td>
<td>98% (95% CI: 95-99%)</td>
</tr>
</tbody>
</table>

*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.

2. **a-Defensin as a predictor of periprosthetic shoulder infection.**
   Frangiamore S., Saleh A., Grosso M., Kovac M., Higuera C., Iannotti J., Richchetti E.

3. **Editorial Comment: 2014 Musculoskeletal Infection Society Meeting.**
   Zalavras C., Marculescu, C.

4. **From Bench to Bedside: Alpha-Defensin – The Biggiest Thing in Joint Replacement Infections Since Prophylactic Antibiotics?**
   Potter, B.

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.

7. **CORR Insights®: The Alpha Defensin Test for Periprosthetic Joint Infection Outperforms the Leukocyte Esterase Test Strip.**
   Sheehan, E.

Revised July 14, 2015
8. The Alpha Defensin Test for Periprosthetic Joint Infection Outperforms the Leukocyte Esterase Test Strip.

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.

    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.

12. Diagnosing Periprosthetic Joint Infection: Has the Era of the Biomarker Arrived?
    Deirmengian C, Kardos K, Kilmartin P, Cameron A, Schiller K, Parvizi J.

    Deirmengian C, Kardos K, Kilmartin P, Cameron A, Schiller K, Parvizi J.

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.

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.