

TABLE E-1 Antibiotic Concentrations Reported in the Included Level-III Comparative Studies*

Study	Static Spacers (<i>per 40 g bone cement</i>)	Articulating Spacers (<i>per 40 g bone cement</i>)
Fehring ¹⁸	1.2 g tobramycin	1.2 g tobramycin
Emerson ¹⁴	3.6 g tobramycin + 2 g vancomycin	3.6 g tobramycin + 2 g vancomycin
Jämsen ¹⁹	NR	NR
Freeman ¹³	1.2 to 2.4 g tobramycin + 0.5 to 1 g vancomycin	1.2 to 2.4 g tobramycin + 0.5 to 1 g vancomycin
Hsu ¹⁵	1.2 g tobramycin (or 1 g gentamicin) + 1 g vancomycin	1.2 g tobramycin (or 1 g gentamicin) + 1 g vancomycin
Park ¹⁶	1 g erythromycin + 2 g vancomycin + 4.5 g tazocin	1 g erythromycin + 2 g vancomycin + 4.5 g tazocin
Chiang ¹⁷	3 g vancomycin	2 g vancomycin

*NR = not reported.

References

23. Booth RE Jr, Lotke PA. The results of spacer block technique in revision of infected total knee arthroplasty. *Clin Orthop Relat Res.* 1989 Nov;248:57-60.
24. Borden LS, Gearen PF. Infected total knee arthroplasty. A protocol for management. *J Arthroplasty.* 1987;2(1):27-36.
25. Gacon G, Laurencon M, Van de Velde D, Giudicelli DP. [Two stages reimplantation for infection after knee arthroplasty. Apropos of a series of 29 cases]. *Rev Chir Orthop Repar Appar Mot.* 1997;83:313-23.
26. Henderson MH Jr, Booth RE Jr. The use of an antibiotic-impregnated spacer block for revision of the septic total knee arthroplasty. *Semin Arthroplasty.* 1991 Jan;2(1):34-9.
27. Hirakawa K, Stulberg BN, Wilde AH, Bauer TW, Secic M. Results of 2-stage reimplantation for infected total knee arthroplasty. *J Arthroplasty.* 1998 Jan;13(1):22-8.
28. Lonner JH, Beck TD Jr, Rees H, Roulet M, Lotke PA. Results of two-stage revision of the infected total knee arthroplasty. *Am J Knee Surg.* 2001 Winter;14(1):65-7.
29. Rosenberg AG, Haas B, Barden R, Marquez D, Landon GC, Galante JO. Salvage of infected total knee arthroplasty. *Clin Orthop Relat Res.* 1988 Jan;226:29-33.
30. Scott IR, Stockley I, Getty CJ. Exchange arthroplasty for infected knee replacements. A new two-stage method. *J Bone Joint Surg Br.* 1993 Jan;75(1):28-31.
31. Whiteside LA. Treatment of infected total knee arthroplasty. *Clin Orthop Relat Res.* 1994 Feb;299:169-72.
32. Wilde AH, Ruth JT. Two-stage reimplantation in infected total knee arthroplasty. *Clin Orthop Relat Res.* 1988 Nov;236:23-35.
33. Windsor RE, Insall JN, Urs WK, Miller DV, Brause BD. Two-stage reimplantation for the salvage of total knee arthroplasty complicated by infection. Further follow-up and refinement of indications. *J Bone Joint Surg Am.* 1990 Feb;72(2):272-8.
34. Anderson JA, Sculco PK, Heitkemper S, Mayman DJ, Bostrom MP, Sculco TP. An articulating spacer to treat and mobilize patients with infected total knee arthroplasty. *J Arthroplasty.* 2009 Jun;24(4):631-5. Epub 2008 May 14.
35. Cuckler JM. The infected total knee: management options. *J Arthroplasty.* 2005 Jun;20(4)(Suppl 2):33-6.
36. Durbhakula SM, Czajka J, Fuchs MD, Uhl RL. Antibiotic-loaded articulating cement spacer in the 2-stage exchange of infected total knee arthroplasty. *J Arthroplasty.* 2004 Sep;19(6):768-74.
37. Evans RP. Successful treatment of total hip and knee infection with articulating antibiotic components: a modified treatment method. *Clin Orthop Relat Res.* 2004 Oct;427:37-46.
38. Gooding CR, Masri BA, Duncan CP, Greidanus NV, Garbuz DS. Durable infection control and function with the PROSTALAC spacer in two-stage revision for infected knee arthroplasty. *Clin Orthop Relat Res.* 2011 Apr;469(4):985-93.
39. Ha CW. A technique for intraoperative construction of antibiotic spacers. *Clin Orthop Relat Res.* 2006 Apr;445:204-9.
40. Haddad FS, Masri BA, Campbell D, McGraw RW, Beauchamp CP, Duncan CP. The PROSTALAC functional spacer in two-stage revision for infected knee replacements. Prosthesis of antibiotic-loaded acrylic cement. *J Bone Joint Surg Br.* 2000 Aug;82(6):807-12.
41. Hofmann AA, Kane KR, Tkach TK, Plaster RL, Camargo MP. Treatment of infected total knee arthroplasty using an articulating spacer. *Clin Orthop Relat Res.* 1995 Dec;321:45-54.
42. Hofmann AA, Goldberg T, Tanner AM, Kurtin SM. Treatment of infected total knee arthroplasty using an articulating spacer: 2- to 12-year experience. *Clin Orthop Relat Res.* 2005 Jan;430:125-31.
43. Huang HT, Su JY, Chen SK. The results of articulating spacer technique for infected total knee arthroplasty. *J Arthroplasty.* 2006 Dec;21(8):1163-8.
44. MacAvoy MC, Ries MD. The ball and socket articulating spacer for infected total knee arthroplasty. *J Arthroplasty.* 2005 Sep;20(6):757-62.
45. Masri BA, Kendall RW, Duncan CP, Beauchamp CP, McGraw RW, Bora B. Two-stage exchange arthroplasty using a functional antibiotic-loaded spacer in the treatment of the infected knee replacement: the Vancouver experience. *Semin Arthroplasty.* 1994 Jul;5(3):122-36.
46. Meek RM, Masri BA, Dunlop D, Garbuz DS, Greidanus NV, McGraw R, Duncan CP. Patient satisfaction and functional status after treatment of infection at the site of a total knee arthroplasty with use of the PROSTALAC articulating spacer. *J Bone Joint Surg Am.* 2003 Oct;85(10):1888-92.
47. Ocguder A, Firat A, Tecimel O, Solak S, Bozkurt M. Two-stage total infected knee arthroplasty treatment with articulating cement spacer. *Arch Orthop Trauma Surg.* 2010 Jun;130(6):719-25. Epub 2010 Feb 09.
48. Pascale V, Pascale W. Custom-made articulating spacer in two-stage revision total knee arthroplasty. An early follow-up of 14 cases of at least 1 year after surgery. *HSS J.* 2007 Sep;3(2):159-63.
49. Pitto RP, Castelli CC, Ferrari R, Munro J. Pre-formed articulating knee spacer in two-stage revision for the infected total knee arthroplasty. *Int Orthop.* 2005 Oct;29(5):305-8. Epub 2005 Aug 05.
50. Shen H, Zhang X, Jiang Y, Wang Q, Chen Y, Wang Q, Shao J. Intraoperatively-made cement-on-cement antibiotic-loaded articulating spacer for infected total knee arthroplasty. *Knee.* 2010 Dec;17(6):407-11. Epub 2010 Mar 04.
51. Siebel T, Kelm J, Porsch M, Regitz T, Neumann WH. Two-stage exchange of infected knee arthroplasty with an prosthesis-like interim cement spacer. *Acta Orthop Belg.* 2002 Apr;68(2):150-6.
52. Van Thiel GS, Berend KR, Klein GR, Gordon AC, Lombardi AV, Della Valle CJ. Intraoperative molds to create an articulating spacer for the infected knee arthroplasty. *Clin Orthop Relat Res.* 2011 Apr;469(4):994-1001.

53. Villanueva-Martínez M, Ríos-Luna A, Pereiro J, Fahandez-Saddi H, Villamor A. Hand-made articulating spacers in two-stage revision for infected total knee arthroplasty: good outcome in 30 patients. *Acta Orthop*. 2008 Oct;79(5):674-82.
54. Wan Z, Karim A, Momaya A, Incavo SJ, Mathis KB. Prefomed articulating knee spacers in 2-stage total knee revision arthroplasty: minimum 2-year follow-up. *J Arthroplasty*. 2012 Sep;27(8):1469-73. Epub 2012 Mar 14.