

Literaturliste

digital dentistry 4/18

Sofortimplantation und digitaler Workflow

Autor: Dr. Stefan Scherg

1. Arnhart C, Kielbassa AM, Martinez-de Fuentes R, Goldstein M, Jackowski J, Lorenzoni M, Maiorana C, Mericske-Stern R, Pozzi A, Rompen E, Sanz M, Strub JR. Comparison of variable-thread tapered implant designs to a standard tapered implant design after immediate loading. A 3-year multicenter randomized controlled trial. *Eur J Oral Implant.* 2012 Summer; 5(2):123-36.
2. McAllister BS, Cherry JE, Kolinski ML, Parrish KD, Pumphrey DW, Schroering RL. Two-year Evaluation of a Variable-Thread Tapered Implant in Extraction Sites with Immediate Temporization: A Multicenter Clinical Trial. *Int J Oral Maxillofac Implants.* 2012 May-Jun; 27:611-18.
3. Cosyn J, De Bruyn H, Cleymaet R. Soft tissue preservation and pink aesthetics around single immediate implant restorations: A 1-year prospective study. *Clin Implant Dent Relat Res.* 2012 [Epub ahead of print].
4. Kielbassa AM, Martinez-de Fuentes R, Goldstein M, Arnhart C, Barlattani A, Jackowski J, Knauf M, Lorenzoni M, Maiorana C, Mericske-Stern R, Rompen E, Sanz M. Randomized controlled trial comparing a variable-thread novel tapered and a standard tapered implant: interim one-year results. *J Prosthet Dent.* 2009 May; 101:293-305.
5. Demanet M, Merheb J, Simons W-F, Leroy R, Quirynen M. The outcome of a novel tapered implant in a private practice limited to Periodontology. *Le Dentiste* 2011 Septembre 16; No 426:22-5.
6. Babbush CA, Kutsko GT, Brokloff J. The all-on-four immediate function treatment concept with NobelActive implants: a retrospective study. *J Oral Implantol.* 2011 Aug;37:431-45.
7. Aspriello SD, Rasicci P, Ciolino F, Zizzi A, Rubini C, Procaccini M, Piemontese M. Immediate loading of NobelActive implants in postmenopausal osteoporotic women: 2-years follow up study. *Clin Oral Implants Res* 2011 22:Abstract 222.
8. Gultekin BA, Gultekin P, Leblebicioglu B, Basegmez C, Yalcin S. Clinical evaluation of marginal bone loss and stability in two types of submerged dental implants. *Int J Oral Maxillofac Implants.* 2013;28(3):815-23.
9. Irinakis T, Wiebe C. Initial torque stability of a new bone condensing dental implant. A cohort study of 140 consecutively placed implants. *J Oral Implantol.* 2009;35:277-82.
10. Irinakis T, Wiebe C. Clinical evaluation of the NobelActive implant system; a case series of 107 consecutively placed implants and a review of the implant features. *J Oral Implantol.* 2009;35:283-88.
11. Kolinski ML, Cherry JE, McAllister BS, Parrish KD, Pumphrey DW, Schroering RL. Evaluation of a variable-thread tapered implant in extraction sites with immediate temporization: A 3-year multi-center clinical study. *J Periodontol.* 2014;85(3):386-94.

12. Galindo DF, Butura CC. Immediately loaded mandibular fixed implant prostheses using the all-on-four protocol: a report of 183 consecutively treated patients with 1 year of function in definitive prostheses. *Int J Oral Maxillofac Implants*. 2012;27:628-33.
13. Cherry JE, Kolinski ML, McAllister BS, Parrish KD, Pumphrey DW, Schroering RL. One-year follow-up of NobelActive™ variable-thread, tapered implant, in extraction sites. Poster presentation at the 26th AO meeting, Washington D.C., March 2011
14. Pozzi A, Agliardi E, Tallarico M, Barlattani A. Clinical and radiological outcomes of two implants with different prosthetic interfaces and neck configurations: randomized, controlled, split-mouth clinical trial. *Clin Implant Dent Relat Res*. 2014;16:96-106.
15. Polizzi G, Cantoni T, Polizzi B. NobelActive implants in maxillary postextraction sockets using NobelGuide system: retrospective analysis of 4 year outcomes [#294]. 22nd Annual Scientific Meeting of the European Association for Osseointegration. Dublin, Ireland: Wiley, 2013:144.
16. Pozzi A, Tallarico M, Barlattani A. Monolithic lithium disilicate full-contour crowns bonded on CAD/CAM zirconia complete-arch implant bridges with 3 to 5 years of follow-up. *J Oral Implantol*. 2013 [epub ahead of print].
17. Babbush CA, Kanawati A, Brokloff J. A New Approach to the All-on-Four Treatment Concept Using Narrow Platform NobelActive Implants. *J Oral Implantol*. 2013 [Epub ahead of print].
18. Russe P, Cherry J, Hermans M, Polizzi G, Sisodia N, Villata L. A tapered variable-thread design implant with a 3.0 mm diameter placed in the anterior region. Interim results of a retrospective study with 1-year follow-up. International Symposium Osteology, Monaco, May 2-4, 2013, Poster abstract #133.
19. Babbush CA, Kanawati A, Kotsakis GA, Hinrichs JE. Patient-Related and Financial Outcomes Analysis of Conventional Full-Arch Rehabilitation Versus the All-on-4 Concept: A Cohort Study. *Implant Dent*. 2014;23:218-24.
20. Karl M, Albrektsson T. Clinical Performance of Dental Implants with a Moderately Rough (TiUnite) Surface: A Meta-Analysis of Prospective Clinical Studies. *Int J Oral Maxillofac Implants*. 2017 Jul/Aug;32(4):717-734. doi: 10.11607/jomi.5699. PubMed PMID: 28708905.
21. Atieh MA, Ibrahim HM, Atieh HA. Platform switching for marginal bone preservation around dental implants: a systematic review and meta-analysis, *J Periodontol*. 2010;81(10):1350-66.
22. Zipprich H, Weigl P, Lange B, Lauer HC. Erfassung, Ursachen und Folgen von Mikrobewegungen am Implantat-Abutment-Interface. *Implantologie*. 2007;15(1):31–46.
23. Vandeweghe S, De Bruyn H. A within-implant comparison to evaluate the concept of platform switching: a randomised controlled trial. *Eur J Oral Implantol*. 2012 Autumn;5(3):253-62.
24. Canullo L, Quaranta A, Teles RP. The microbiota associated with implants restored with platform switching: a preliminary report. *J Periodontol*. 2010 Mar;81(3):403-11. doi: 10.1902/jop.2009.090498. PubMed PMID: 20192867.
25. Achilli A., Tura F., Euwe E.: Immediate/early function with tapered implants supporting

maxillary and mandibular posterior fixed partial dentures: preliminary results of a prospective multicenter study. *J Prosthet Dent* 2007; 97 (6 suppl): p. S.52-58.

26. De Rouck T., Collys K., Cosyn J.: Immediate single-tooth implants in the anterior maxilla: a 1-year case cohort study on hard and soft tissue response. *J Clin Periodontol* 2008; 35(7): S.649-657.

27. Evaluation of NobelActive™ Implants. Five-year randomized controlled multi-center study in 12 centers. Clinical Research Department, Nobel Biocare Services AG. Cumulative survival rate from unpublished data.

28. Esposito M, Grusovin MG, Maghaireh H, Worthington HV. Interventions for replacing missing teeth: different times for loading dental implants. *Cochrane Database Syst Rev*. 2013 Mar 28;(3):CD003878. doi 10.1002/14651858.CD003878.pub5. Review. PubMed PMID: 23543525.

29. Cosyn J, Eghbali A, De Bruyn H, Collys K, Cleymaet R, De Rouck T. Immediate single-tooth implants in the anterior maxilla: 3-year results of a case series on hard and soft tissue response and aesthetics. *J Clin Periodontol*. 2011 Aug;38(8):746-53. doi: 10.1111/j.1600-051X.2011.01748.x. PubMed PMID: 21752044.

30. Raes F, Cosyn J, Crommelinck E, Coessens P, De Bruyn H. Immediate and conventional single implant treatment in the anterior maxilla: 1-year results of a case series on hard and soft tissue response and aesthetics. *J Clin Periodontol*. 2011 Apr;38(4):385-94. doi: 10.1111/j.1600-051X.2010.01687.x. Epub 2011 Jan 27. PubMed PMID: 21272052.

31. Zipprich H, Miatke S, Hmaidouch R, Lauer HC. A New Experimental Design for Bacterial Microleakage Investigation at the Implant-Abutment Interface: An In Vitro Study. *Int J Oral Maxillofac Implants*. 2016 Jan-Feb;31(1):37-44. doi: 10.11607/jomi.3713. PubMed PMID: 26800161.

32. Malo P, de Araujo Nobre M and Lopes A. The prognosis of partial implant-supported fixed dental prostheses with cantilevers. A 5-year retrospective cohort study. *Eur J Oral Implantol*. 2013;6:51-9.

33. Malo P, de Araujo Nobre M, Lopes A, Moss SM and Molina GJ. A longitudinal study of the survival of All-on-4 implants in the mandible with up to 10 years of follow-up. *J Am Dent Assoc*. 2011;142:310-20.

34. Lekholm U, Grondahl K and Jemt T. Outcome of oral implant treatment in partially edentulous jaws followed 20 years in clinical function. *Clin Implant Dent Relat Res*. 2006;8:178-86.

35. Chan MH and Holmes C. Contemporary "All-on-4" concept. *Dent Clin North Am*. 2015;59:421-70.

36. Takahashi T, Shimamura I and Sakurai K. Influence of number and inclination angle of implants on stress distribution in mandibular cortical bone with All-on-4 Concept. *J Prosthodont Res*. 2010;54:179-84.

37. Bedrossian E, Sullivan R, Fortin Y, Malo P, Indresano T. Fixed-prosthetic Implant Restoration of the Edentulous Maxilla: A Systematic Pretreatment Evaluation Method. *J Oral Maxillofac Surg* 2008;66:112-122.

38. Karl M, Irastorza-Landa A. Does implant design affect primary stability in extraction sites? *Quintessence Int.* 2017;48(3):219-224. doi: 10.3290/j.qi.a37690. PubMed PMID: 28168242.
39. Puig CP. A retrospective study of edentulous patients rehabilitated according to the 'all-on-four' or the 'all-on-six' immediate function concept using flapless computer-guided implant surgery. *Eur J Oral Implantol* 2010;3(2):155-63.
40. Ho DS, Yeung SC, Zee KY, Curtis B, Hell P, Tumuluri V. Clinical and radiographic evaluation of NobelActive(TM) dental implants. *Clin Oral Implants Res.* 2013 Mar;24(3):297-304. doi: 10.1111/j.1600-0501.2011.02313.x. Epub 2011 Sep 29. PubMed PMID: 22092589.
41. Wang TM, Lee MS, Wang JS, Lin LD. The effect of implant design and bone quality on insertion torque, resonance frequency analysis, and insertion energy during implant placement in low or low- to medium-density bone. *Int J Prosthodont.* 2015 Jan-Feb;28(1):40-7. doi: 10.11607/ijp.4063. PubMed PMID: 25588172.
42. Cochran DL, Morton D, Weber HP: Consensus statements and recommended clinical procedures regarding loading protocols for endosseous dental implants. *Int J Oral Maxillofac Implants* 19, 109– 113 (2004).
43. Jung RE, Zembic A, Pjetursson BE, Zwahlen M, Thoma DS. Systematic review of the survival rate and the incidence of biological, technical, and aesthetic complications of single crowns on implants reported in longitudinal studies with a mean follow-up of 5 years. *Clin Oral Implants Res.* 2012 Oct;23 Suppl 6:2-21. doi: 10.1111/j.1600-0501.2012.02547.x. Review. PubMed PMID: 23062124.
44. Grunder U: Stabilität der Mukosatopographie um Einzelzahnimplantate und benachbarte Zähne: Einjahres-Ergebnisse. *Int J Par Rest Zahneilkf* 2000; 1:20-17.
45. Atieh MA, Ibrahim HM, Atieh HA, Platform switching for marginal bone preservation around dental implants: a systematic review and meta-analysis, *J Periodontol.* 2010;81(10):1350-66.
46. van der Velden U. Regeneration of the interdental soft tissues following denudation procedures. *J Clin Periodontol.* 1982 Nov;9(6):455-9.
47. Stoecklin-Wasmer C, Rutjes AW, da Costa BR, Salvi GE, Jüni P, Sculean A. Absorbable collagen membranes for periodontal regeneration: a systematic review. *J Dent Res.* 2013;92(9):773-781.
48. Grunder U, Gracis S, Capelli M. Influence of the 3-D bone-to-implant relationship on esthetics. *Int J Periodontics Restorative Dent.* 2005 Apr;25(2):113-9.
49. Choquet V, Hermans M, Adriaenssens P, Daelemans P, Tarnow DP, Malevez C. Clinical and radiographic evaluation of the papilla level adjacent to singletooth dental implants. A retrospective study in the maxillary anterior region. *J Periodontol.* [Comparative Study]. 2001 Oct;72(10):1364-71.
50. Kan JY, Rungcharassaeng K, Umezu K, Kois JC. Dimensions of peri-implant mucosa: an evaluation of maxillary anterior single implants in humans. *J Periodontol.* [Research Support, Non-U.S. Gov't]. 2003 Apr; 74(4):557-62.
51. Zipprich H, Weigl P, Lange B, Lauer HC. Erfassung, Ursachen und Folgen von Mikrobewegungen am Implantat-Abutment-Interface. *Implantologie.* 2007;15(1):31–46.

52. Vandeweghe S, De Bruyn H. A within-implant comparison to evaluate the concept of platform switching: a randomised controlled trial. *Eur J Oral Implantol*. 2012 Autumn;5(3):253-62.
53. Linkevicius T, Apse P, Grybauskas S, Puisys A. Influence of thin mucosal tissues on crestal bone stability around implants with platform switching: a 1-year pilot study. *J Oral Maxillofac Surg*. 2010 Sep;68(9):2272-7.
54. Schwarz F, Sager M, Rothamel D, Herten M, Sculean A, Becker J. Einsatz nativer und quervernetzter Kollagenmembranen für die gesteuerte Gewebe- und Knochenregeneration *Schweiz Monatsschr Zahnmed*. 2006;116(11):1112-1123.
55. Kohal RJ, Hürzeler MB. Bioresorbable barrier membranes for guided bone regeneration around dental implants. *Schweiz Monatsschr Zahnmed*. 2002;112(12):1222-9. German. PubMed PMID: 12585214.
56. Bozkurt A, Apel C, Sellhaus B, van Neerven S, Wessing B, Hilgers R-D, Pallua N. Differences in degradation behavior of two non-cross-linked collagen barrier membranes: an in vitro and in vivo study. *Clin. Oral Impl. Res.* 00, 2013, 1–9 doi: 10.1111/clr.12284.
57. Wessing B, Bozkurt A, Sellhaus B, Emmerich M. GBR with a mechanically stable resorbable membrane as a potential alternative to the use of autogenous bone block grafts. *Clin Oral Impl Res*. October 2013;24(Supplement s9);153-154.
58. Buser D, Wittneben J, Bornstein MM, Grütter L, Chappuis V, Belser UC. Stability of contour augmentation and esthetic outcomes of implant-supported single crowns in the esthetic zone: 3-year results of a prospective study with early implant placement postextraction. *J Periodontol*. 2011 Mar; 82(3):342-9. doi: 10.1902/jop.2010.100408. Epub 2010 Sep 10. PubMed PMID: 20831371.
59. Chen ST, Buser D. Clinical and esthetic outcomes of implants placed in postextraction sites. *Int J Oral Maxillofac Implants*. 2009; 24 Suppl:186-217. Review PubMed PMID: 19885446.
60. Achilli A., Tura F., Euwe E.: Immediate/early function with tapered implants supporting maxillary and mandibular posterior fixed partial dentures: preliminary results of a prospective multicenter study. *J Prosthet Dent* 2007; 97 (6 suppl): p. S.52-58.
61. De Rouck T., Collys K., Cosyn J.: Immediate single-tooth implants in the anterior maxilla: a 1-year case cohort study on hard and soft tissue response. *J Clin Periodontol* 2008; 35(7): S.649-657.
62. Evaluation of NobelActive™ Implants. Five-year randomized controlled multi-center study in 12 centers. Clinical Research Department, Nobel Biocare Services AG. Cumulative survival rate from unpublished data.
63. Saadoun AP. Periimplant tissue considerations for optimal implant results. *The Cosmetic Dentistry Edition* 1995. *Pract Periodont and Aesthet Dent* 1995;3: 53- 60
64. Beuer F., Edelhoff D. Digitale Zahnmedizin – Update 2011, Teamwork spezial *J Cont Dent* 2011: 6-17.
65. Dimitriou R, Mataliotakis GI, Calori GM, Giannoudis PV. The role of barrier membranes for guided bone regeneration and restoration of large bone defects: current experimental and clinical evidence. *BMC Med*. 2012;10:81.

66. Behring J, Junker R, Walboomers XF, Chessnut B, Jansen JA. Toward guided tissue and bone regeneration: morphology, attachment, proliferation, and migration of cells cultured on collagen barrier membranes. A systematic review. *Odontology*. 2008 Jul;96(1):1-11.
67. Nguyen TT, Mui B, Mehrabzadeh M, Chea Y, Chaudhry Z, Chaudhry K, Tran SD. Regeneration of tissues of the oral complex: current clinical trends and research advances. *J Can Dent Assoc*. 2013;79:d1.
68. Parrish LC, Miyamoto T, Fong N, Mattson JS, Cerutis DR. Non-bioabsorbable vs. bioabsorbable membrane: assessment of their clinical efficacy in guided tissue regeneration technique. A systematic review. *J Oral Sci*. 2009;51(3):383-400.
69. Rakhmatia YD, Ayukawa Y, Furuhashi A, Koyano K. Current barrier membranes: titanium mesh and other membranes for guided bone regeneration in dental applications. *J Prosthodont Res*. 2013;57(1):3-14.
70. Retzepi M, Donos N. Guided Bone Regeneration: biological principle and therapeutic applications. *Clin Oral Implants Res*. 2010;21(6):567-576.
71. Sanz-Sánchez I, Ortiz-Vigón A, Sanz-Martín I, Figuero E, Sanz M. Effectiveness of Lateral Bone Augmentation on the Alveolar Crest Dimension: A Systematic Review and Meta- analysis. *J Dent Res*. 2015 Sep;94(9 Suppl):128S-42S.
72. Canullo L, Quaranta A, Teles RP. The microbiota associated with implants restored with platform switching: a preliminary report. *J Periodontol*. 2010 Mar;81(3):403-11. doi: 10.1902/jop.2009.090498. PubMed PMID: 20192867.
73. Schropp L, Wenzel A, Kostopoulos L & Karring T, Bone healing and soft tissue contour changes following single-tooth extraction: a clinical and radiographic 12-month prospective study, *Int J Periodontics Restorative Dent* 2003,23,313-323.
74. Buser D. 20 Years of Guided Bone Regeneration. Quintessence Publishing 2010. p. 2-4.
75. Quirynen M, Van Assche N, Botticelli D, Berglundh T. How does the timing of implant placement to extraction affect outcome? *Int J Oral Maxillofac Implants* 2007; 22(Suppl), 203-223.
76. Esposito M, Grusovin MG, Polyzos IP, Felice P, Worthington HV. Timing of implant placement after tooth extraction: immediate, immediate-delayed or delayed implants? A Cochrane systematic review. *Eur J Oral Implantol* 2010; 3, 189-205.
77. Lang NP, Pun L, Lau KY, Li KY, Wong MC. A systematic review on survival and success rates of implants placed immediately into fresh extraction sockets after at least 1 year. *Clin Oral Implants Res* 2012; 23 (Suppl 5), 39-66.
78. Chrcanovic BR, Albrektsson T, Wennerberg A. Dental implants inserted in fresh extraction sockets versus healed sites: a systematic review and meta-analysis. *J Dent* 2015; 43, 16-41.
79. Clementini M, Tiravia L, De Risi V, Vittorini Orgeas G, Mannocci A, de Sanctis M. Dimensional changes after immediate implant placement with or without simultaneous regenerative procedures: a systematic review and meta-analysis. *J Clin Periodontol*. 2015 July (Suppl 7), 666-77. doi: 10.1111/jcpe.12423. Epub 2015 Jul 14.
80. Neugebauer J, Traini T, Thams U, Piattelli A, Zöller JE. Peri-implant bone

organization under immediate loading state. Circularly polarized light analyses: a minipig study. *J Periodontol* 2006; 77, 152-160.

81. González-Martín O, Lee EA, Veltri M. CBCT fractal dimension changes at the apex of immediate implants placed using undersized drilling. *Clin Oral Implants Res* 2012; 23, 954-957.

82: Pommer B, Becker K, Arnhart C, Fabian F, Rathe F, Stigler RG. How meta-analytic evidence impacts clinical decision making in oral implantology: a Delphi opinion poll. *Clin Oral Implants Res* 2014; Epub ahead of print.

83. Den Hartoog L, Slater JJ, Vissink A, Meijer HJ, Raghoobar GM. Treatment outcome of immediate, early and conventional single-tooth implants in the aesthetic zone: a systematic review to survival, bone level, soft-tissue, aesthetics and patient satisfaction. *J Clin Periodontol*. 2008 Dec; 35 (12), 1073-86.

84. Kelly JR, Rungruanganunt P. Fatigue Behavior of Computer-Aided Design/Computer-Assisted Manufacture Ceramic Abutments as a Function of Design and Ceramics Processing. *Int J Oral Maxillofac Implants*. 2016 May-Jun;31(3):601-9.

85. Behr M, Schneider-Feyrer S, Spiess T, Rostentritt M: Reinigungsprotokolle für individuelle Implantatabutments: Welche Veränderungen zeigen sich bei den Kompositklebern? *DZZ* 73 (3): 144-147 (2018).

86. Linkevicius T, Vindasiute E, Puisys A, Linkeviciene L, Maslova N, Puriene A. The influence of the cementation margin position on the amount of undetected cement. A prospective clinical study. *Clin Oral Implants Res*. 2013 Jan;24(1):71-6. doi: 10.1111/j.1600-0501.2012.02453.x. Epub 2012 Apr 8. PubMed PMID: 22487018.

87. Linkevicius T, Vindasiute E, Puisys A, Peciuliene V. The influence of margin location on the amount of undetected cement excess after delivery of cement-retained implant restorations. *Clin Oral Implants Res*. 2011 Dec;22(12):1379-84. doi: 10.1111/j.1600-0501.2010.02119.x. Epub 2011 Mar 8. PubMed PMID: 21382089.

88. Wilson TG Jr.: The positive relationship between excess cement and peri-implant disease: a prospective clinical endoscopic study. *J Periodontol*. 2009 Sep;80(9):1388-92

89. Korsch M, Walther W. Peri-Implantitis Associated with Type of Cement: A Retrospective Analysis of Different Types of Cement and Their Clinical Correlation to the Peri-Implant Tissue. *Clin Implant Dent Relat Res*. 2015 Oct;17 Suppl 2:e434-43. doi: 10.1111/cid.12265. Epub 2014 Sep 2. PubMed PMID: 25180598.

90. Sailer I, Mühlemann S, Zwahlen M, Hämmerle CH, Schneider D. Cemented and screw-retained implant reconstructions: a systematic review of the survival and complication rates. *Clin Oral Implants Res*. 2012 Oct;23 Suppl 6:163-201.

91. Linkevicius T, Puisys A, Vindasiute E, Linkeviciene L, Apse P. Does residual cement around implant-supported restorations cause peri-implant disease? A retrospective case analysis. *Clin Oral Implants Res*. 2013 Nov;24(11):1179-84. doi: 10.1111/j.1600-0501.2012.02570.x. PubMed PMID: 22882700.

92. Wittneben JG, Millen C, Brägger U. Clinical performance of screw- versus cement-retained fixed implant-supported reconstructions--a systematic review. *Int J Oral Maxillofac Implants*. 2014;29 Suppl:84-98. doi: 10.11607/jomi.2014suppl.g2.1. Review. PubMed PMID: 24660192.