12 TLX clinical cases from renowned experts

Straumann[®] TLX Implant System Iconic Tissue Level meets Immediacy









Prof. Ronald Jung Zurich, Switzerland

Dear colleague,

WHEN SAFETY MEETS INNOVATION

Modifying existing elements with the aim of improving them or offering new possibilities is the essence of innovation. Tissue Level implants have excelled over the decades in preserving the health of peri-implant tissues compared to other types of implants. This is due to their hybrid design that combines a smooth, machined portion in contact with soft tissues and an efficient SLActive[®] surface at the intraosseous level to achieve an excellent osseointegration. Therefore, with the recent introduction of the TLX implant it is possible to take advantage of the established features and extensive scientific documentation of Tissue Level implants in combination with an innovative and different geometry, especially idealized to allow high primary stability.



This fusion of two worlds opens up a range of new possibilities in implantology, where procedures previously not considered for a Tissue Level implant are now favorable thanks to the arrival of the new TLX Implant. The installation of implants in postextraction sockets, as well as immediate provisionalization options are the alternatives that are enabled by this new generation of implants. All this, while maintaining the level of safety for peri-implant tissues that we have come to know and appreciate. It is important to note that the TLX implant is indicated not only for somewhat more challenging situations, as conventional treatments can also benefit from improved primary stability at the time of implant placement.

While it is now feasible to consider new treatment possibilities, it is up to us to make the right case selection in order to safely take advantage of the benefits of this innovative option. Accordingly, this casebook, prepared by talented and experienced clinicians, seeks to provide a clinical basis for its use.

Best regards, Prof. Ronald Jung

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DR. ALGIRDAS PUISYS

SINGLE UNIT



MEET THE EXPERT & GENERAL COMMENTS



DR ALGIRDAS PUIŠYS DDS, PHD, SPECIALIST IN PERIODONTOLOGY

Executive Director VIC clinic. Graduated as dentist from the University of Vilnius, Lithuania 2002. Graduated as Periodontist from the University of Kaunas 2006 and defended PhD in 2016.

International lecturer on implantology.

ITI Fellow.

WORKFLOW

- Healed site
- Lower first molar
- Free-hand surgery
- Conventional loading
- Full monolithic zirconia crown on Variobase[®] abutment









CASE STUDY



1. INITIAL SITUATION | Initial situation



3. SURGERY | Flap elevation

2. SURGERY | Supra crestal incision





4. SURGERY | Molar extraction and full flap release

CASE STUDY



5. SURGERY | Round bur for ridge leveling



7. SURGERY | Implant bed ready to receive the implant



6. SURGERY | Bone ridge after leveling



8. SURGERY | Straumann[®] TLX SP Ø 3.75 RT SLActive[®] 12 mm Roxolid[®]

CASE STUDY



9. SURGERY | Implant partially into the osteotomy



11. SURGERY | 3 mm RT healing cap and sutured site



10. SURGERY | Implant in final position





12. HEALING | 4 weeks soft tissue healing

CASE STUDY



13. HEALING | 4 weeks soft tissue healing



15. FINAL | Lateral view - Final



14. HEALING | 4 weeks soft tissue healing





16. FINAL | Occlusal view - Final

CASE STUDY



17. FINAL | Final crown cemented to Variobase[®] abutment screw-retained in final position



Immediate implant placement and restoration of Lower Molar with endodontic perforation

DR. ADRIANO AZARIPOUR

SINGLE UNIT



Immediate implant placement and restoration of Lower Molar with endodontic perforation

MEET THE EXPERT & GENERAL COMMENTS



DR. ADRIANO AZARIPOUR MSC, PHD

Associate Professor, Department of Periodontology and Restorative Dentistry, Clinic for Oral and Maxillofacial surgery, University medical center of the Johannes Gutenberg University, Germany.

WORKFLOW

- Extraction
- Immediate implant placement, axially positioned
- Free-hand surgery
- Immediate chair-side provisional restoration, out of occlusion
- 6 months of soft tissue maturation
- Full monolithic zirconia crown on Variobase[®] abutment with the digital workflow







Immediate implant placement and restoration of Lower Molar with endodontic perforation

CASE STUDY



1. INITIAL SITUATION | Initial situation presents a Lower First Molar with external resorption – Buccal view



3. SURGERY | Minimally traumatic extraction



2. INITIAL SITUATION | Initial situation presents a Lower First Molar with external resorption – Occlusal view



4. SURGERY | Straumann[®] TLX Ø 3.75 RT SLActive[®] 12 mm Roxolid[®], in final position

Immediate implant placement and restoration of Lower Molar with endodontic perforation

CASE STUDY



5. **RESTORATION** | Immediate provisional crown



7. HEALING | Immediate post operative radiograph

6. RESTORATION | Immediate provisional crown undercontoured allowing for soft tissue growth



8. HEALING | One month follow-up

Immediate implant placement and restoration of Lower Molar with endodontic perforation

CASE STUDY



9. HEALING | Six months follow up with complete soft tissue maturation



11. FINAL RESTORATION | Monolithic zirconia crown on Variobase[®] ready for final restoration (images courtesy of Laboratorio Antonelli)

10. HEALING | Gingival emergence profile enabled by the immediate provisional crown

Immediate implant placement and restoration of Lower Molar with endodontic perforation

CASE STUDY



12. FINAL RESTORATION | Final crown on 3D-printed model – Occlusal view



14. FINAL RESTORATION | Final crown delivered – Occlusal view





13. FINAL RESTORATION | Final crown on 3D-printed model – Buccal view

15. FINAL RESTORATION | Final crown delivered – Buccal view

Immediate implant placement and restoration of Lower Molar with endodontic perforation

CASE STUDY



16. FINAL RESTORATION | Final radiograph with outstanding bone stability

DR. MARINA SIEGENTHALER | PROF. SVEN MÜHLEMANN | PROF. RONALD E. JUNG

SINGLE UNIT



MEET THE EXPERTS



DR. MARINA SIEGENTHALER DR. MED. DENT.

Dentist. Graduated in Dental Medicine from the University of Bern, Switzerland. Resident physician at the Clinic of Reconstructive Dentistry, University of Zurich, Switzerland.

She is completing a 3 year postgraduate program which will lead to a specialization in prosthodontics and a Master of Science in implantology.



PROF. SVEN MÜHLEMANN

PD DR. MED. DENT.

Dentist. Clinical and scientific focus areas: Implantology, Fixed Prosthodontics, Digital Technologies. Graduated in Dental Medicine from the University of Zurich, Switzerland. Faculty at the Clinic of Reconstructive Dentistry, Center of Dental Medicine, University of Zurich, Switzerland.

Lecturer on national and international level and renowned researcher with numerous scientific articles in high ranked journals. President of the Swiss Society of Implantology (SGI), member of the Board of EAO junior committee, ITI fellow.



PROF. RONALD E. JUNG PROF. DR. MED. DENT., PHD

Head Division of Implantology at the Clinic of Reconstructive Dentistry, Center of Dental Medicine, University of Zurich. Trained in oral surgery, prosthodontics and implant therapy. Accomplished and internationally renowned lecturer and researcher, best known for his work in the field of hard and soft tissue management and his research on new technologies in implant dentistry.

President Elect of the EAO, past President of the Swiss Society of Reconstructive Dentistry and member of the Board of Directors of the Osteology Foundation.





GENERAL COMMENTS

WORKFLOW

- Extraction
- Free-hand surgery
- Immediate implant placement non central in lower molar
- Gap management and socket preservation
- Conventional loading
- Full monolithic zirconia crown on Variobase[®] abutment with the Digital workflow



CASE STUDY



1. INITIAL SITUATION | Intraoral occlusal image of lower molar (36) presenting carious roots



3. INITIAL SITUATION | Periapical radiograph showing a molar (36) with interradicular and periapical infection

2. INITIAL SITUATION | Intraoral occlusal image of lower molar (36) with missing crown



4. **SURGERY** | Cleansed socket with intact socket walls and septum after gentle extraction of molar roots by flap elevation



CASE STUDY



5. SURGERY | Implant site preparation. Alignment pin in position into the mesial tooth socket after osteotomy with Pilot VeloDrill^M Ø 2.2 mm



7. SURGERY | Selection of healing cap according to the gingival height and application of bone substitute material into infra-bony defects and distal root socket.



6. SURGERY | Straumann[®] TLX SP implant, Ø 4.5 RT SLActive[®]; 12 mm Immediately placed into the mesial root socket



8. SURGERY | Adaptive single and cross sutures without application of a protective membrane onto the bone substitute material

CASE STUDY



9. HEALING | 1 week post implantation - post suture removal

11. HEALING | Periapical radiograph confirming adequate healing

10. HEALING | Uneventful healing 3 months after implant placement, occlusal view with healing cap

12. HEALING | Uneventful healing 3 months after implant placement, occlusal view without healing cap

CASE STUDY

13. RESTORATION | Optical impression taking (Trios[®] 3, 3Shape) CARES[®] Mono Scanbody in situ, occlusal view

15. RESTORATION | CAD (exocad software) of monolithic implant crown

Optical impression taking (Trios[®] 3, 3Shape) CARES[®] Mono 14. RESTORATION Scanbody in situ, lateral view

16. RESTORATION | CAD (exocad software) of monolithic implant crown with distal cantilever design

CASE STUDY

17. RESTORATION | Try-in of monolithic zirconia implant crown fabricated by means of CAM, occlusal view

19. RESTORATION | Final implant crown on digital implant model

18. RESTORATION | Try-in of monolithic zirconia implant crown, buccal view

20. RESTORATION | Screw-retained implant crown with Variobase[®]

CASE STUDY

21. RESTORATION | Screw-retained implant crown with Variobase[®]

23. OUTCOME | Screw access sealed with PTFE tape and composite

22. RESTORATION | Delivery of final implant crown and patient instruction regarding cleansability

24. OUTCOME | Buccal view with proper occlusion

CASE STUDY

25. OUTCOME | Final crown in position - frontal view

Immediate replacement of severely compromised single maxillary molar with digital workflow

PROF. WALDEMAR POLIDO | PROF. WEI SHAO LIN | PROF. DEAN MORTON

SINGLE UNIT

Immediate replacement of severely compromised single maxillary molar with digital workflow

MEET THE EXPERTS

PROF. WALDEMAR D. POLIDO DDS, MS, PHD

Professor and Acting Chairman of Oral and Maxillofacial Surgery at the Indiana University School of Dentistry, acting also as Co-Director of the Center for Implant, Esthetic and Innovative Dentistry and Pre-Doctoral Program Director. Prof. Polido is an active member of associations such as the ITI, IAOMS, and Academy of Osseointegration, AAOMS and AO-CMF, and serves as a reviewer for the main journals in the OMFS and Implant Dentistry.

He has many publications and lectures worldwide on several topics, including Digital Tools, Team approach, Contemporary Solutions, Bone Grafts, Orthognathic Surgery, Short Implants, Treatment of the Esthetic Area, Surgical Complications, and the treatment of completely edentulous patients.

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Diplomate of the American Board of Prosthodontics and Fellow of the International Team for Implantology (ITI) and the American College of Prosthodontists. Editorial boards and is an associate editor for the Journal of Prosthodontics.

PROF. DEAN MORTON BDS, MS

Indiana Dental Association Professor, Department of Prosthodontics at Indiana University School of Dentistry. Assistant Dean for Strategic Partnerships and Innovation, as Director of the Center for Implant, Esthetic and Innovative Dentistry and is Chair of the ITI Scholarship Center. Director, examiner and Diplomate of the American Board of Prosthodontics. Fellow of the ITI and serves on the Board of Directors. He is past Chair of ITI Section USA. Fellow or member of numerous organizations including the Royal College of Surgeons (Edinburgh), the American College of Prosthodontics and the Academy of Prosthodontics. Associate Editor for the International Journal of Oral and Maxillofacial Implants and as a reviewer for numerous journals. He has authored more than 120 peer-reviewed articles and abstracts and lectures nationally and internationally on dental implants, prosthodontics and esthetic dentistry.

Immediate replacement of severely compromised single maxillary molar with digital workflow

GENERAL COMMENTS

WORKFLOW

- Digital planning
- Extraction
- Guided surgery
- Immediate implant placement in upper molar
- Immediate 3D-printed provisional restoration and chair-side pickup on temporary abutment out of occlusion
- Full monolithic zirconia crown on Variobase[®] abutment with the Digital workflow

Immediate replacement of severely compromised single maxillary molar with digital workflow

CASE STUDY

1. INITIAL SITUATION | Initial – Buccal view

3. INITIAL SITUATION | Initial periapical radiograph

2. INITIAL SITUATION | Initial – Occlusal view

4. PLANNING | Initial CBCT view

Immediate replacement of severely compromised single maxillary molar with digital workflow

CASE STUDY

5. PLANNING | coDiagnostiX[®] plan

7. **PLANNING** | Guide design – Buccal view

6. PLANNING | Planned Implant and crown position

8. PLANNING | Guide design – Occlusal view

Immediate replacement of severely compromised single maxillary molar with digital workflow

CASE STUDY

11. PLANNING | Provisional crown 3D printed

12. PLANNING | Provisional crown on model

Immediate replacement of severely compromised single maxillary molar with digital workflow

CASE STUDY

13. SURGERY | Surgical guide

15. SURGERY | Surgical guide in position with alignment pin – Occlusal view

14. SURGERY | Intraoperatory view after extraction – socket

16. SURGERY | Surgical guide in position with alignment pin – Buccal view
Immediate replacement of severely compromised single maxillary molar with digital workflow

CASE STUDY



17. SURGERY | Straumann[®] TLX SP implant, Ø 5.5 WT SLActive[®]; 8 mm



19. SURGERY | Intraoperative view – bone graft in the gap around implant



18. SURGERY | Intraoperative view – Implant placed



20. IMMEDIATE RESTORATION | Provisional abutment and crown ready for chairside pickup

Immediate replacement of severely compromised single maxillary molar with digital workflow

CASE STUDY



21. IMMEDIATE RESTORATION | Provisional abutment and crown during chairside pickup



23. IMMEDIATE RESTORATION | Immediate Provisional crown out of occlusion delivered – Buccal view



22. IMMEDIATE RESTORATION | Immediate Provisional crown delivered – Occlusal view



24. IMMEDIATE RESTORATION | Immediate periapical radiograph





Immediate replacement of severely compromised single maxillary molar with digital workflow

CASE STUDY



25. FINAL RESTORATION | Final crown on 3D printed model – Buccal view



27. FINAL RESTORATION | Healing condition 2 months after procedure



26. FINAL RESTORATION | Final crown on 3D printed model – Occlusal view



28. FINAL OUTCOME | Final restoration – Occlusal view

Immediate replacement of severely compromised single maxillary molar with digital workflow

CASE STUDY



29. FINAL OUTCOME | Final restoration – Buccal view

30. FINAL OUTCOME | Final periapical radiograph



DR. ANDRE CHEN | DR. JOÃO BORGES

SINGLE UNIT



MEET THE EXPERTS



DR. ANDRE CHEN DDS, MSC, PH.D

Co-founder International Advanced Dentistry IAD. Professor Oral Surgery and implant Department Lisbon University. Post graduated in Implant Dentistry NYU – College of Dentistry - New York.

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Co-founder International Advanced Dentistry IAD. Invited professor prosthodontics UIC Barcelona.

Post graduated in advanced Aesthetic restorative Dentistry – UIC Barcelona.

Co-Director ITI Lisbon 2 Study Club.



GENERAL COMMENTS

WORKFLOW

- Digital planning
- Guided surgery
- Implant placement in lower first molar
- Horizontal bone augmentation
- Immediate 3D-printed provisional restoration, out of occlusion
- Final restoration: Full monolithic zirconia crown on Variobase[®] abutment with the digital workflow



CASE STUDY



1. INITIAL SITUATION | Pre-operative intra-oral scanning



3. SURGERY | Try in – Surgical Guide



4. SURGERY | Bone ridge exposed after flap elevation

CASE STUDY



5. SURGERY | Self locking drill handle



7. SURGERY | Osteotomy with pilot VeloDrill[™] Ø 2.8 mm



6. SURGERY | Osteotomy with pilot VeloDrill^M \emptyset 2.2 mm





8. SURGERY | Osteotomy with pilot VeloDrill[™] Ø 3.5 mm

CASE STUDY



9. SURGERY | Prosthetically driven osteotomy finalized



11. SURGERY | Placement of Straumann[®] TLX SP Ø 4.5 NT SLActive[®], 8 mm Roxolid®

10. SURGERY | Straumann[®] TLX SP Ø 4.5 NT SLActive[®], 8 mm Roxolid[®]





12. SURGERY | Ideal position confirmed through the surgical guide

CASE STUDY



13. SURGERY | Implant in final position ready for bone augmentation



15. SURGERY | Collagen Membrane preventing soft tissue in-growth on biomaterial

14. SURGERY | Thread exposure coverage and horizontal volume restored with Xenograft



16. SURGERY | Flap repositined and final suture

CASE STUDY



CARES[®] Mono Scanbody



CARES[®] Mono Scanbody

CASE STUDY





23. HEALING | Outstanding soft tissue healing and volume after 60 days



24. HEALING | Outstanding soft tissue healing and volume after 60 days

CASE STUDY



25. FINAL RESTORATION | Screw-retained zirconia crown (on Variobase[®]) ready for placement



27. OUTCOME | Crown finalized – occlusal view



26. OUTCOME | Crown finalized – lateral view

28. OUTCOME | Final peri-apical radiograph

DR. EIK SCHIEGNITZ

MULTI UNIT



MEET THE EXPERT & GENERAL COMMENTS



DR. EIK SCHIEGNITZ

Section Head Implantology and Augmentation Surgery – University of Mainz/Germany. Specialist in oral, maxillofacial and maxillofacial surgery. Master of Science Implantology and Periodontology. Business economist for health economics.

WORKFLOW

- Healed site
- First and second molar
- Free-hand surgery
- Conventional loading
- Full monolithic zirconia crowns on Variobase[®] abutment







CASE STUDY



1. INITIAL SITUATION | Initial clinical situation



3. SURGERY | Tridimensional verification with Alignment Pin \emptyset 2.2 mm and Depth Gauge \emptyset 2.8 mm

2. INITIAL SITUATION | Initial clinical situation



4. SURGERY | Implant bed ready for a Straumann[®] TLX implant

CASE STUDY



5. SURGERY | Straumann[®] TLX SP Ø 4.5 RT SLActive[®] 10 mm, Roxolid[®]



7. SURGERY | Implants in final position on sites #36 and #37

6. SURGERY | Implant placement with TorcFit[™] Implant Driver for Handpiece





8. SURGERY | Healing Caps and final sutures



CASE STUDY



Lateral view



11. OUTCOME | Final control radiograph

Oclusal view

DR. EIRIK SALVESEN

MULTI UNIT



MEET THE EXPERT & GENERAL COMMENTS



DR. EIRIK AASLAND SALVESEN DDS, SPECIALIST IN PERIODONTOLOGY

Executive Director Oris Academy. Graduated as dentist from the University of Bergen, Norway, 1999 and graduated as Periodontist from the University of Bergen 2007.

Chief Clinical Development Officer of Oris Dental. International lecturer on implantology.

ITI Fellow.

WORKFLOW

- Upper premolar and first molar
- Free-hand surgery
- Conventional loading
- Full monolithic zirconia crowns on Variobase[®] abutment







CASE STUDY



1. INITIAL SITUATION | Initial situation panoramic radiograph



3. INITIAL SITUATION | Initial situation – lower arch



2. INITIAL SITUATION | Initial situation – upper arch





4. SURGERY | Tridimensional verification with Alignment Pin Ø 2.2 mm

CASE STUDY



5. SURGERY | Tridimensional verification with Alignment Pin \emptyset 2.2 mm and depth gauge \emptyset 2.8 mm



7. SURGERY | Placement of Straumann[®] TLX SP Ø 3.75 RT SLActive[®] 12 mm and 8 mm Roxolid®



6. SURGERY | Implant bed ready for a Straumann[®] TLX implant

8. HEALING | Immediate post operatory radiograph

CASE STUDY



9. HEALING | 28 days post operatory radiograph



11. OUTCOME | Final monolithic zirconia crown on Variobase[®]



in position

CASE STUDY



12. INITIAL SITUATION | Initial situation



14. FINAL OUTCOME | 6 months follow-up

13. FINAL OUTCOME | Final results

DR. SANTO GAROCCHIO

MULTI UNIT



MEET THE EXPERT & GENERAL COMMENTS



DR. SANTO GAROCCHIO DDS, SPECIALIST IN PERIODONTOLOGY

Fellow ITI and book author.

Specialised in Implantology and Periodontology at NYU.

Focuses his practice activity on guided surgery and digital workflows in dental implantology.

WORKFLOW

- Upper Premolar (14) and Molar (16)
- Free-hand surgery and immediate implant placement
- Chair-side pick-up. Provisional 3-unit bridge
- Zirconia bridge on Variobase[®] abutment with digital workflow





CASE STUDY



1. INITIAL SITUATION | Initial Situation



3. SURGERY | Hopeless Molar extracted

2. SURGERY | Failed bridge removed



4. SURGERY | Try-in of the pre-fabricated temporary prosthesis

CASE STUDY



5. SURGERY | 3-dimensional assessment with alignment pins



7. SURGERY | Placement Straumann[®] TLX SP Ø 3.75 RT SLActive[®] 12 mm, Roxolid[®] on site #16





6. SURGERY | Straumann[®] TLX SP Ø 3.75 RT SLActive[®] 12 mm, Roxolid[®]



8. SURGERY | Placement of Straumann[®] TLX SP Ø 3.75 RT SLActive[®] 12 mm, Roxolid[®] in final position on site #14 and #16

CASE STUDY



9. SURGERY | Placement of temporary abutments for bridge



11. RESTORATION | Pre-fabricated temporary bridge in position for abutment pick-up

10. RESTORATION | Rubber dam to protect surgical site during chairside pick-up



12. RESTORATION | Temporary restoration finalized and adjusted out of occlusion

CASE STUDY



13. HEALING | Outstanding soft tissue healing outcome



15. FINAL RESTORATION | Final restoration of the zirconia bridge cemented on the Variobase[®] for Bridge/Bar

14. FINAL RESTORATION | Intra-oral scan with CARES[®] Mono Scanbody

16. FINAL RESTORATION | Final fit of the zirconia bridge on the Variobase[®] for Bridge/Bar

CASE STUDY



17. FINAL RESTORATION | Final fit of the zirconia bridge on the Variobase[®] for Bridge/Bar before closing the screw-channels

Immediate implant placement and provisional restoration of fractured teeth in the anterior region with Smile in a Box®

DR. ABID FAQIR

MULTI UNIT



Immediate implant placement and provisional restoration of fractured teeth in the anterior region with Smile in a Box®

MEET THE EXPERT & GENERAL COMMENTS



DR. ABID FAQIR BDS, MFDSRCSED, MSC DIPIMPDENT

Master's degree from Glasgow University and his Diploma in Implant dentistry from Edinburgh Royal college.

Immediate past president of the Association of Dental Implantology (ADI).

Private practice dedicated to dental implants and the management of complex restorative cases, with a special focus on immediate loading and digital dentistry.

WORKFLOW

- Upper anterior region
- Smile in a Box[®] planning
- Extraction
- Guided surgery
- Immediate implant placement
- Immediate provisional restoration enabled via Smile in a Box®
- Gap management and soft tissue augmentation
- Final restoration: zirconia bridge on Variobase[®] abutment with digital workflow







Immediate implant placement and provisional restoration of fractured teeth in the anterior region with Smile in a Box®

CASE STUDY



1. INITIAL SITUATION | Medium smile line



3. INITIAL SITUATION | Fracture roots observed after crown removal

2. INITIAL SITUATION | Initial situation – Intra oral/frontal view



4. SURGERY | Minimally traumatic extractions

Immediate implant placement and provisional restoration of fractured teeth in the anterior region with Smile in a Box®

CASE STUDY



5. SURGERY | Surgical guide provided with the Straumann[®] Smile in a Box[®]



7. SURGERY | Surgical guide fitted



6. SURGERY | Surgical guide fitted



8. SURGERY | Preparation for first drill with the guided drill protocol
CASE STUDY



9. SURGERY | Straumann[®] TLX Ø 3.75 RT SLActive[®] length 14 mm Roxolid[®]



11. SURGERY | Precise implant positining through guided surgery



10. SURGERY | Precise implant positining through guided surgery



12. SURGERY | Implants in optimal position allowing for screw-retained restoration

CASE STUDY



13. SURGERY | Restoration screw channels precisely as planned



15. RESTORATION | 4-unit bridge pre-fabricated as planned via Straumann[®] Smile in a Box[®]



14. RESTORATION | 4-unit bridge pre-fabricated as planned via Straumann[®] Smile in a Box[®]



16. RESTORATION | 4-unit bridge pre-fabricated as planned via Straumann[®] Smile in a Box[®]

CASE STUDY



17. RESTORATION | Variobase[®] for bridge in positions #11 and #21



19. RESTORATION | Try-in of the temporary restoration onto the Variobase[®] to assess proper fit

18. RESTORATION | Try-in of the temporary restoration onto the implants to assess accurate position



20. RESTORATION | Try-in of the temporary restoration onto the Variobase[®] to assess proper fit

CASE STUDY



21. SURGERY | Connective tissue harvested from the palate to ensure long-term soft tissue stability



23. SURGERY | Bone substitute in place – occlusal view



22. SURGERY | Bone substitute application into the gap between implant and labial wall



24. SURGERY | Sutures to stabilize the connective tissue grafting

CASE STUDY



25. SURGERY | Immediate post operatory frontal view



27. FINAL RESTORATION | CARES[®] Mono Scanbody in position for digital impression



26. HEALING | Initializing the final restorative phase after 2 months healing



28. FINAL RESTORATION | CARES[®] Mono Scanbody in position for digital impression

CASE STUDY



29. FINAL RESTORATION | Soft tissue stability after 90 days



31. FINAL OUTCOME | Final outcome smile pictures

30. FINAL OUTCOME | Seamless emergence profile



32. FINAL OUTCOME | Final outcome smile pictures

CASE STUDY



33. FINAL OUTCOME | Final outcome smile pictures

DR. LOUWRENS SWART

FULL ARCH



MEET THE EXPERT



DR. LOUWRENS SWART BCHD, MCHD (MFOS)

Private practice in Cape Town since 1995, focusing on the immediate treatment protocols.

an honorary consultant to the Dean of UWC.

Osseointegration and has lectured extensively with publications both nationally and internationally.



- Dr. Swart received his dental degree in 1986 from Stellenbosch University, Cape Town, South Africa, and his master's degree in MFOS in 1994 (Cum Laude).
- Ambassador board of the EAO. He is a honorary consultant in the department of MFOS, University of Western Cape (UWC) on dental implants, as well as
- He serves on the faculty of gIDE and is a member of various dental and MFOS societies. He is the next president of the Southern African Association of
- Dr. Swart received Merit Awards for his contributions to implantology from the South African Society for Dental Implantology in 2008 and 2012.
- Provides courses: Predictable and consistent results with immediate placement protocol as well as edentulous implant treatment protocols.

GENERAL COMMENTS

WORKFLOW

- Lower edentulous
- Digital planning
- Free-hand surgery
- Immediate provisional restoration
- Final restoration: milled bar with acrylic wrap-around





CASE STUDY



1. INITIAL SITUATION | Assessing labial sealing and vertical dimension of wax-up



3. INITIAL SITUATION | Assessing labial sealing and vertical dimension of wax-up



2. INITIAL SITUATION | Assessing labial sealing and vertical dimension of wax-up



4. INITIAL SITUATION | Assessment of smile line, Spee-Curve and Buccal corridor

CASE STUDY



5. INITIAL SITUATION | Assessment of smile line, Spee-Curve and Buccal corridor



7. INITIAL SITUATION | Upper arch clinical examination



corridor



8. INITIAL SITUATION | Lower arch clinical examination

CASE STUDY



9. INITIAL SITUATION | Initial panoramic radiograph



11. SURGERY | Delimitation incision design based on the CBCT scan

10. INITIAL SITUATION | Treatment planning in coDiagnostiX[®]



12. SURGERY | Incision design based on the CBCT scan information

CASE STUDY



13. SURGERY | Leveling of the mandibular bone ridge



15. SURGERY | Transparent multi-functional guide

14. SURGERY | Leveling of the mandibular bone ridge



16. SURGERY | Try in of the transparent multi-functional guide

CASE STUDY



17. SURGERY | Marking of the desired implants positions with round bur



19. SURGERY | Alignment pins Ø 2.2 mm



18. SURGERY | All desired implants position marked





20. SURGERY | Alignment pins Ø 2.2 mm

CASE STUDY



21. SURGERY | Osteotomy with VeloDrill[™] Ø 2.8 mm



23. SURGERY | Osteotomy with VeloDrill[™] Ø 2.8 mm

22. SURGERY | Straumann[®] TLX SP Ø 3.75 RT SLActive[®] 12 mm Roxolid[®]





24. SURGERY | Osteotomy with VeloDrill[™] Ø 3.2 mm

CASE STUDY



Roxolid®



27. SURGERY | Impression posts and final sutures



28. SURGERY | Impression taking

CASE STUDY





31. RESTORATION | Bite registration



32. RESTORATION | Bite registration in occlusion

CASE STUDY



33. RESTORATION | Teeth set-up in wax



35. RESTORATION | Immediate post-operatory panoramic radiograph

34. RESTORATION | Teeth set-up in wax



36. RESTORATION | Hybrid prosthesis in place – Occlusal view

CASE STUDY



37. RESTORATION | Hybrid prosthesis and denture in occlusion



39. FINAL OUTCOME | Clinical situation with six months follow-up – Intra-oral frontal view

38. RESTORATION | Hybrid prosthesis in place – Frontal view



40. FINAL OUTCOME | Frontal smile with six months follow up

CASE STUDY



occlusal view

DR. MATTHIEU COLLIN

FULL ARCH



MEET THE EXPERT & GENERAL COMMENTS



DR. MATTHIEU COLLIN

Degree in Dental Surgery, University Claude Bernard of Lyon (France). University degree in Oral Surgery and Oral Implantology (Dijon) and in Pre and Peri-implant Surgery (Paris). National clinical instructor on full-arch rehabilitation systems.

Private practice in Sanary-sur-Mer, France specializing in dental implantology and buccal surgery with the focus on severe bone atrophy. Practice in Clinic St Roch of Toulon, France for complex / advanced surgeries under general anesthesia.

ITI Member.

WORKFLOW

- Upper
- Digital planning
- Extraction
- Guided surgery
- Immediate implant placement
- Immediate provisional restoration
- Final restoration: full monolithic zirconia framework with digital workflow





CASE STUDY



1. INITIAL SITUATION | Initial situation



3. INITIAL SITUATION | Panoramic radiograph



2. INITIAL SITUATION | Initial situation



4. PLANNING | Tridimensional view from Cone Beam CT

CASE STUDY



5. PLANNING | Panorama picture of the planned implants



7. PLANNING | Study model to asses occlusion and vertical dimension



6. PLANNING | Generation of the surgical template based on the planning in the coDiagnostix[®] software



8. PLANNING | Vertical dimension correction planning on model



CASE STUDY



9. PLANNING | Multi functional guide with proper vertical dimension



11. SURGERY | Oclusal view after extractions keeping pre-defined teeth for surgical guide retention

10. SURGERY | Intra-sulcular incision for minimally traumatic extration



12. SURGERY | Surgical guide precise fit and osteotomy according to implant selection

CASE STUDY



13. SURGERY | Surgical guide precise fit and osteotomy according to implant selection



15. SURGERY | Depth Gauge, \emptyset 2.8 mm

14. SURGERY | Palatally oriented osteotomy



16. SURGERY | Straumann[®] TLX SP Ø 4.5 RT SLActive[®] 12 mm Roxolid[®]



CASE STUDY



17. SURGERY | Placement of the TLX implant



19. RESTORATION | Landmarks teeth already extracted



18. SURGERY | RT Impression Post Open Tray



20. RESTORATION | Dental floss to support the splinting resin

CASE STUDY



21. RESTORATION | Resin to splint the impression posts avoiding distortion in impression taking



23. RESTORATION | Bite registration with the corrected vertical dimension



impression taking



24. RESTORATION | Temporary restoration immediately loaded

CASE STUDY



25. HEALING | Immediate post operative panoramic radiograph



27. HEALING | Healing condition after 2 months

26. HEALING | Healing condition after 2 months



28. FINAL RESTORATION | Bite registration

CASE STUDY



29. FINAL RESTORATION | Application of impression material to copy the new gingival contour after healing remodeling



31. FINAL RESTORATION | Zirconia bridge on Variobase[®] for Bridge/Bar



30. FINAL RESTORATION | Dimensional healing change observed with the impression material



32. FINAL OUTCOME | Natural contours

CASE STUDY



33. FINAL OUTCOME | Intra oral image of restoration finalized



35. FINAL OUTCOME | 1 year follow up clinical and radiographic examination

34. FINAL OUTCOME | 1 year follow up clinical and radiographic examination

DR. FARESH DESAI

FULL ARCH





MEET THE EXPERT & GENERAL COMMENTS



DR. FARESH DESAI BDS MFGDP DIPRESTDENT RCS (ENG) DIPIMPDENT RCS (ENG) ADV CERT DIPCONSED (NCL) Clinical Director/Co founder at Ascent Dental Care (UK). Focus areas: Surgical & restorative implantology, Edentulous implant rehabilitation.

WORKFLOW

- Lower healed site
- Free-hand surgery
- Immediate implant placement
- Conventional loading
- Chairside denture conversion





CASE STUDY



1. INITIAL SITUATION | Smile line



3. INITIAL SITUATION | Intra oral picture – right side in occlusion

2. INITIAL SITUATION | Intra Oral



4. INITIAL SITUATION | Intra oral picture – left side in occlusion

CASE STUDY



5. INITIAL SITUATION | Initial panoramic radiograph



7. INITIAL SITUATION | Edentulous maxilla displaying adequate ridge



6. INITIAL SITUATION | Residual dentition in the lower arch



8. INITIAL SITUATION | Partially dentate mandible presenting teeth with poor prognosis. Shallow sulcus and atrophic posterior regions.
Removable Full-Arch restoration with Novaloc[®] abutments

CASE STUDY





11. SURGERY | Placement of the first Straumann[®] TLX SP 4.5 RT SLActive[®] 8 mm, Roxolid®





12. SURGERY | Torque value of 75 Ncm with the implant in final position

Removable Full-Arch restoration with Novaloc[®] abutments

CASE STUDY



13. SURGERY | Straumann[®] TLX SP 4.5 mm SLActive[®], 8 mm Roxolid[®] picked up from vial cap



15. SURGERY | Straumann[®] TLX implants in situ prior to bone augmentation in extraction sites with autogenous bone collected from anterior mandible region



14. SURGERY | Implant insertion in the posteior region with surgical motor



16. SURGERY | Immediate post operative radiograph displaying position of implant and good Anterior/Posterior distribution



Removable Full-Arch restoration with Novaloc[®] abutments

CASE STUDY





19. RESTORATION | Preparation of Novaloc[®] abutment with Titanium Matrix Housing for chairside denture conversion



20. RESTORATION | Novaloc[®] inserts in removable prosthesis. PEEK inserts placed

Removable Full-Arch restoration with Novaloc® abutments

CASE STUDY



21. FINAL OUTCOME | Final upper removable acrylic prosthesis and lower removable implant overdenture



23. FINAL OUTCOME | Left lateral view in occlusion

22. FINAL OUTCOME | Retracted frontal view



24. FINAL OUTCOME | Right lateral view in occlusion



The TLX Team

DR. CHRISTIAN JARRY | STEFANO BESIO | SÉBASTIEN BARRIÈRE

DEAR READER,

Greetings from the TLX project team!

In the middle of a global pandemic, we have been truly privileged to get to know and work alongside outstanding clinicians during the project development and editorial process of this e-book.

The TLX Implant System is in large part the outcome of listening closely to our customers' needs and expectations; shared insights which they gain while striving to provide their patients with the most effective implant treatment possible.

A great number of talented Straumann colleagues contributed to this demanding, but very rewarding, development journey: from development concepts, to prototyping and testing thousands of samples to prove high strength, seamless functionality and Swiss precision, to finally initiating a large pre-clinical and clinical program to enable the global launch of TLX in 2021. With this input, we proudly serve clinicians worldwide, offering our special gratitude to those who shared their experience and expectations with us along the way.



The TLX Implant System was designed to expand your treatment options with increased confidence. And what makes us especially proud is that it brings together two Straumann strengths: loyalty to our heritage, and our passion for innovation.

Heritage, because TLX has been built on 35 years of experience and on the extensive evidence base of our iconic Tissue Level design. TLX retains what has made Tissue Level a reliable standard: its strong focus on peri-implant health preservation.

Innovation, because TLX evolves the Tissue Level concept further by adding new features that clearly make it fit to serve the evolving trends in dentistry: where immediate treatments and digital ecosystems become more important in order to meet rising patient expectations and to provide dentists with new opportunities.

The TLX Team

DR. CHRISTIAN JARRY STEFANO BESIO SÉBASTIEN BARRIÈRE



DR CHRISTIAN JARRY



STEFANO BESIO





The feedback from clinicians is overwhelmingly positive as regards the results they were able to achieve. We know that variability is a clinical reality: clinical indications, patient preferences, financial resources all vary from one patient to another. That is why we are proud to offer you an efficient yet simple solution.

The cases featured in this book capture some of the clinical scenarios for which TLX is indicated, and more importantly, where patients' lives were positively impacted.

We hope you have gained valuable insights from reading it and share in our excitement for the TLX Implant System.

Christian, Stefano, Sébastien.

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