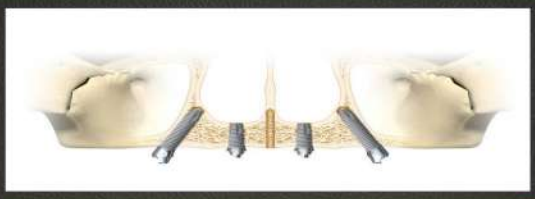
Full Arch Fixed Implant Retained Prosthesis: Hands on Workshop



Presented by: Dr. Mark Lin
Date: April 19, 2024

Topics To Be Covered:

1) Clarification of terminology
2) Comparison of traditional full arch implant reconstruction versus Proarch protocol
3) Scientific literature review
4) Diagnostic record requirements / Patient screening
5) Cone beam computer tomography (CBCT) Requirements

Topics To Be Covered:

6) Treatment planning principles for Teeth Xpress
7) Concept of stackable surgicalguides
8) Guided surgical implant placement and screw retained abutment (SRA) selection criteria
9) Immediate provisional fabrication and insertion
10) Model based hands-on workshop: Teeth Xpress

(2 participant per station; address completed)

CAUTION

- THIS TREATMENT CONCEPT IS 100% PROSTHETICALLY AND PATIENT DRIVEN WITH DIGITAL PLANNING PROTOCOL
- CONSIDERED ADVANCED FULL ARCH OR FULL MOUTH RECONSTRUCTION
- MANDATE PRECISE IMPLANT SURGICAL PROTOCOL
- TECHNIQUE SENSITIVE IMMEDIATE CONVERSIONS TO IMPLANT FIXED PROVISIONAL PROSTHESIS
- BIOMECHANICAL, BIOMATERIAL, OCCLUSION, AESTHETICALLY DRIVEN REHABILITATION OF THE FINAL IMPLANT FIXED PROSTHESIS

CLARIFICATION OF TERMINOLOGY

Generic terminology: Full Arch Immediate Implant Retained Fixed Prosthetics / TEETH IN A DAY (TIAD)

Brand name terminologies:

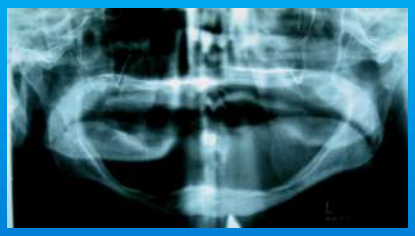
- Nobel Biocare: All-On-Four
- Straumann: Pro Arch / Smile In a Box
- Implant Direct: All-In-1 Arch
- Biohorizon: Teeth Xpress
- Camlog: Comfour System
- Biomet 3i: DIEM 2

CLARIFICATION OF TERMINOLOGY

- Generic terminology: Full Arch Immediate Implant Retained Fixed Prosthetics
- Brand name terminologies:
  - J Dental
  - Hiossen / Osstem
  - Neodent; NeoArch
  - Keystone
  - Megagen

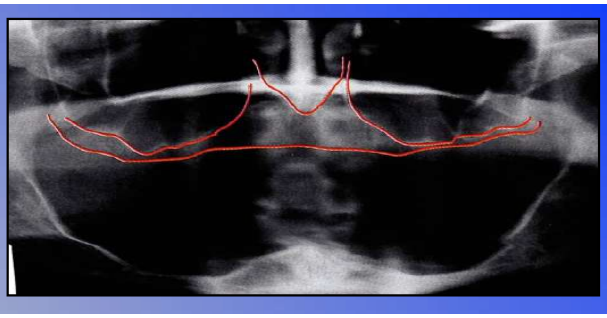
PATIENT CANDIDATES FOR PRO ARCH

Edentulous



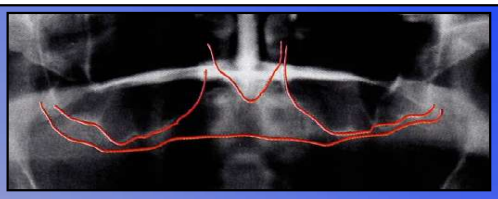
Terminal Dentition

Extractions with alveoloplasty as required to hide transition zone and gain interocclusal dimension for desired final prosthetics

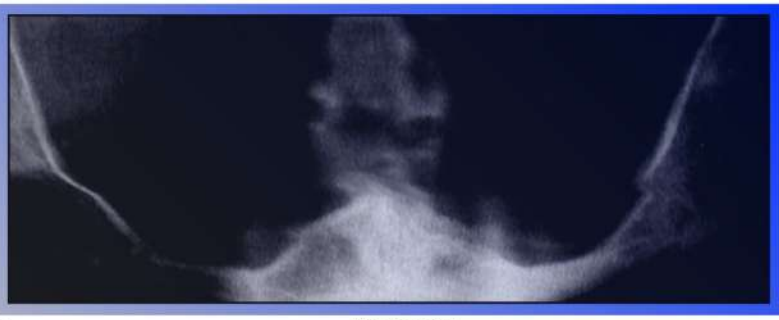


- **Diagnosis:**
- Bilateral pnumatization of maxillary sinuses
- Moderate ridge resorption composite defect to pre-maxilla
- Compromised denture base surface area for conventional complete denture

Maxillary Arch Treatment Alternatives

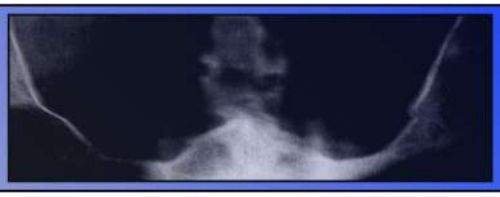


- No treatment with consequence of compromised complete denture and continue ridge resorption pattern in three dimension
- Bilateral sinus grafting with bone block grafts to pre-maxilla or potential hip graft for entire maxillary arch
- Wait 6-9 months of healing while using a loose complete denture with denture adhesives
- Another surgery for multiple 6-10 implant placements
- Wait additional 4-6 months for healing for the implants while still using a loose complete denture with denture adhesives
- Another second stage surgery for uncovering of the implants
- Restore all implants with fixed implant prosthesis

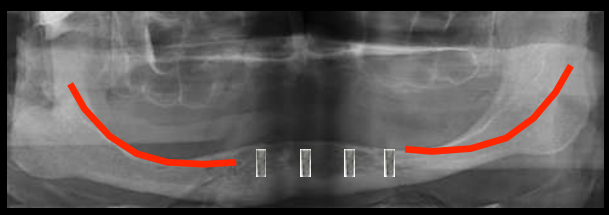


- **Diagnosis:**
- Bilateral posterior vertical residual ridge resorption bone pattern
- Moderate ridge resorption composite defect to mandible
- Compromised denture base surface area for conventional complete denture, lacks retention, stability and support

Mandibular Arch Treatment Alternatives



- No treatment with consequence of compromised complete denture and continue ridge resorption in three dimension and possible nerve compression
- Complete denture with or without implants in anterior segment for retention while posterior aspect continues to provide support to over-denture
- Lateral nerve re-positioning and implant placements
- Subperiosteal implants
- Posterior vertical bone augmentation with dental implants



Full mouth extractions with alveoloplasty as required
4 mandibular and 4 maxillary implants placed for Teeth In A Day concept
Primary stability > 35 Ncm achieved for all 8 implants
Immediate conversion of complete dentures to implant screw retained provisional with immediate loading

Immediate loaded implant screw retained provisional during 4 months of osseous integration healing period
Patient instructed with soft diet during healing period and Water Pik to maintain oral hygiene

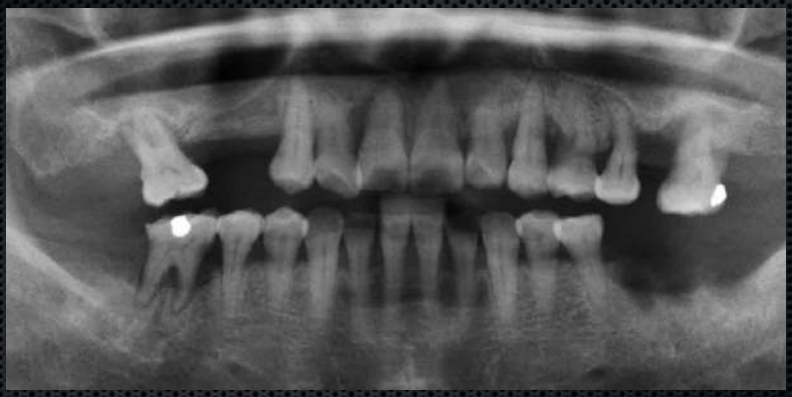
After 4 months of healing, open tray impression copings placed over multi-unit abutments in preparation for fabrication of final impression and master casts

Final impression made with custom impression tray and Polyether (Impregum) material
Verification jigs for both arches to confirm accuracy of master cast prior to fabrication of substructure in the final prosthesis
Radiographs to confirm seating of verification jigs and passive fit checked the "one screw" insertion test

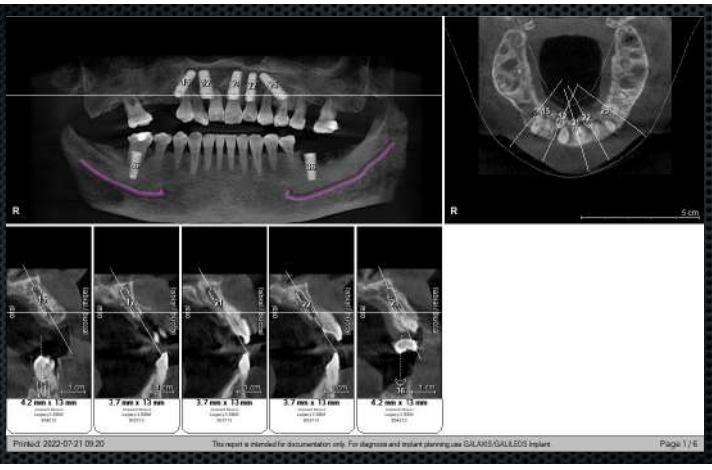
Final Implant Screw Retained Fixed Zirconia with Porcelain Layering

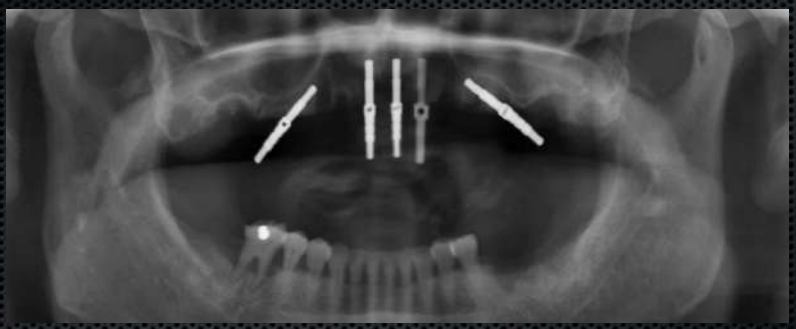
TREATMENT PLANNING VARIABLES	TRADITIONAL APPROACH	PRO ARCH
PARAFUNCTIONAL HABITS	INDICATED	CONTRA-INDICATED
NEED FOR GRAFTING	ADVANCED GRAFTING REQUIRED	MINIMAL OR NO GRAFTING
IMPLANT SURGICAL STAGES	SEVERAL STAGES REQUIRED	ONE STAGE ONLY
NUMBER OF IMPLANTS	6- 10 / ARCH	MINIMUM 4 / ARCH
PROVISIONALIZATION PHASE	REMOVABLE DENTURE	IMPLANT FIXED RETAINED
LOADING OF IMPLANTS	DELAYED LOADING	IMMEDIATE LOADING
PROFESSIONAL FEES	HIGHER FEES	LOWER FEES
TIME TO COMPLETION	> 12 MONTHS	< 6 MONTHS

Pt's CC: "My teeth are getting loose and cannot chew normal foods properly"

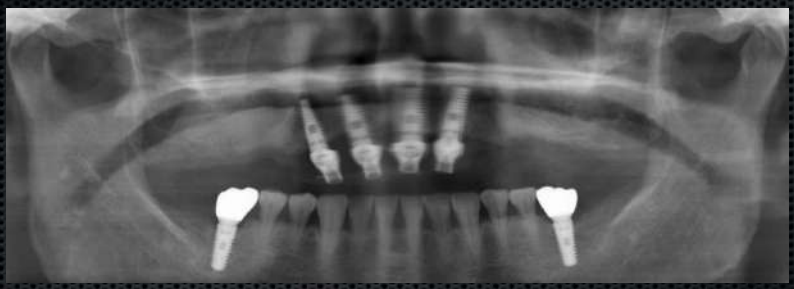


What's your diagnosis on this case?





6 Years Later In Function



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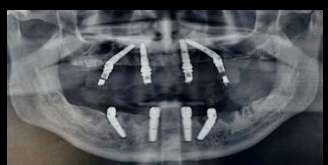

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Grafting Of All Implant Recipient Sites

Wait for 4-9 months for graft healing

Surgical Implant Placement

Wait for 3-6 months for Osseous Integration

Start Fabrication of Final Fixed Implant Prosthesis

Extractions, alveoloplasty, Immediate Implant Placement and Immediate loading of fixed provisional prosthesis

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$50,000 / Arch

$30,000 / Arch

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Diagnostic Records Required

- Patient's CC and desires for treatment goals
- Panoramic radiographs, PA's, recommend CBCT
- Extra oral, intra oral, dental and periodontal charting
- Diagnostic impressions with and without removable prosthesis
- Photographic series
- Patient's existing VDO, current shade and desired shade

CT associated with diagnostic software	Multiple implant Reconstruction procedures Pathology Implant planning	Three dimensional Bone density evaluation Disease identification Measurements No film necessary Ability to measure bone quantity and quality Adjust gray scale to study critical structures Most accurate imaging Remote examination	Increased radiation Limited availability Technique sensitive Additional software cost Additional training

ADVANTAGES OF COMPUTER AIDED IMPLANT SURGERY

1) Prosthetically driven treatment planning for proper 3-dimensional position and angulation for implant placement

2) Confirmation of danger zones to enhance safety during surgery

3) Evaluate 3-dimensional anatomy of bone for implant recipient site

4) Perform electronic treatment planning and surgery

5) Conversion of electronic planning to surgical guide for live patient surgery

6) Potential of immediate provisionalization fabrication

TREATMENT SEQUENCE

1) Diagnostic Wax up of proposed final implant prosthesis

2) Fabricate CBCT radiographic template from wax set up

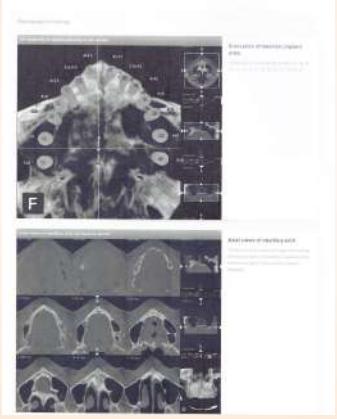
3) CBCT scan of patient with radiographic guide in place

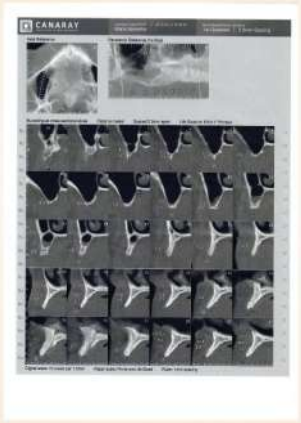
4) Evaluate anatomical structures and electronic implant treatment plan using computer software

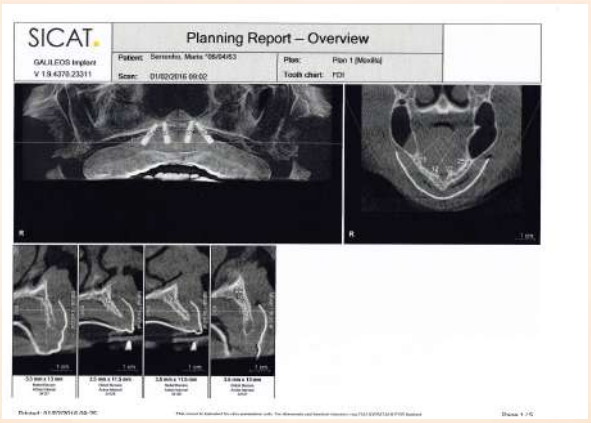
5) Confirm and order surgical guides from software

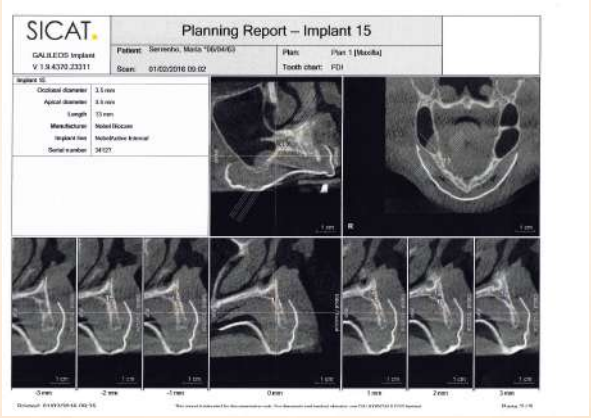
6) Perform implant surgery with surgical guide

7) Potential fabrication of immediate provisional prior to implant surgery




CANARAY


SICAT.
Planning Report – Overview
GALILEOS Implant
V 1.9.4370.23311
Patient: Sermenho, Maria *06/04/63
Plan: Plan 1 [Maxilla]
Scan: 01/02/2016 09:02
Tooth chart: FDI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Planning Report – Implant 15
GALILEOS Implant
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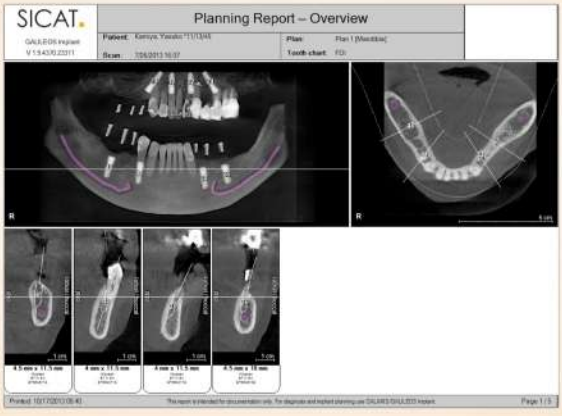
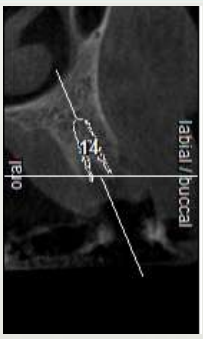

SICAT.
Planning Report – Overview
GALILEOS Implant
Patient: Kamiya, Yasuko *11/13/45
Plan: Plan 1 [Maxilla]
Tooth chart: FDI

EVALUATION OF CBCT

1) Adequate volume of bone beyond socket apex 2-3.0mm
2) Adequate volume of width of bone buccal / lingual aspect (with or without grafting)
3) Evaluation for bone density / quality of bone
4) Confirmation avoidance of danger zones (anterior vs posterior)
5) Final determination for staged versus immediate protocol

Mandatory CBCT Evaluation



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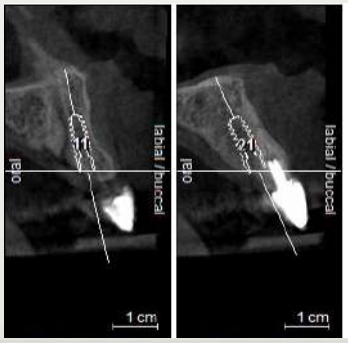

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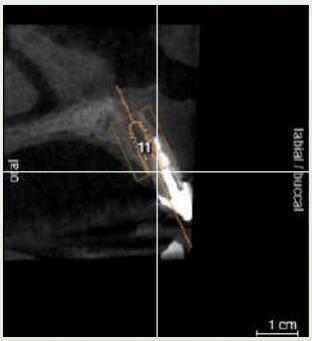

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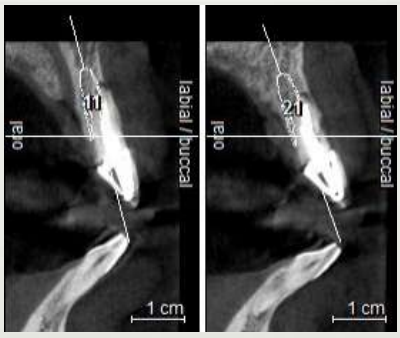

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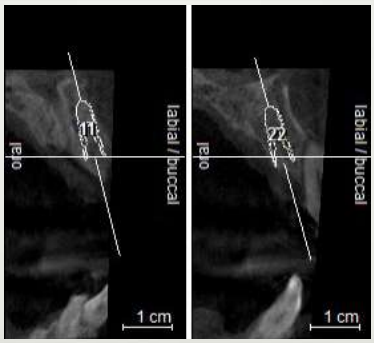
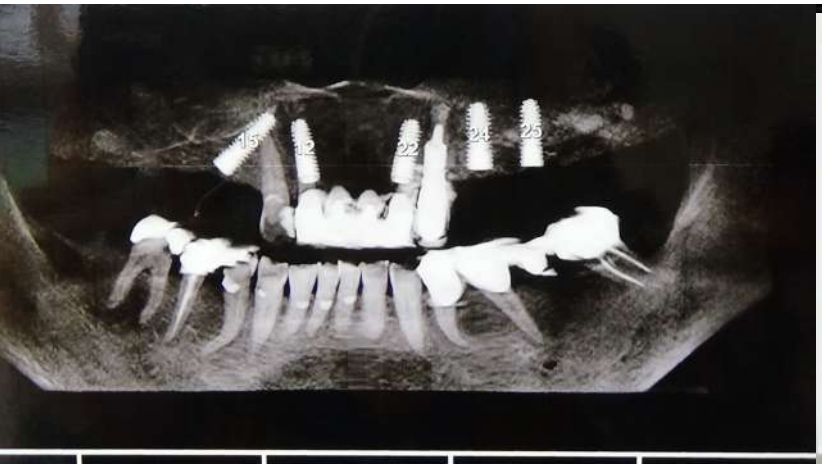
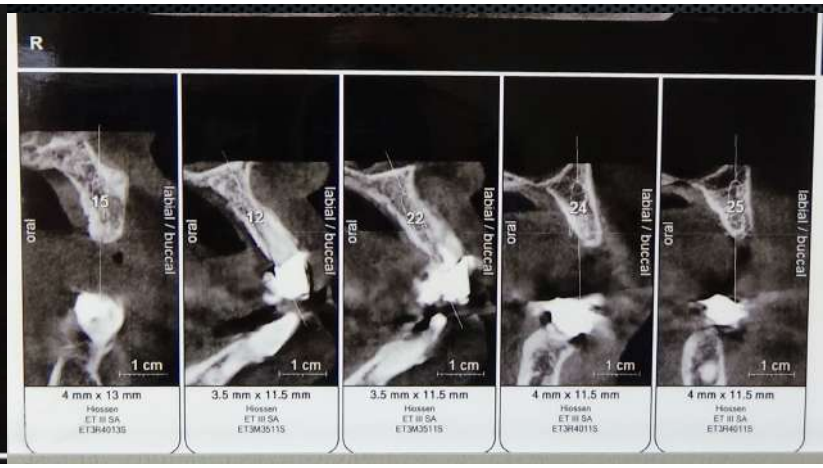






Refer To Diagnostic Evaluations

Diagnostic Evaluation For Full Arch Implant Rehabilitation
Teeth In A Day / All On Four Treatment

Patient Name: _____ **Date:** _____

Tx Planning	Low Risk	Medium Risk	High Risk
1) Medical Status	ASA 1	ASA 2	> ASA 3
2) Smoking Status	None	Yes / Min duration and quantity	Yes / Long duration and large quantity
3) Reasons For Tooth Lost	Caries, trauma and other reasons	Periodontal Disease	Parafunctional Habits
4) Duration of Tooth Lost	< 1 year	> 1-3 years	> 3 years
5) Residual Bone Pattern	Tooth Only defect	Mild-Moderate Composite RRR	Advance Composite RRR
6) Muscular Dynamics	Normal Tonacity	Moderate Tonacity	Hard Tonacity
7)) TMJ Evaluation	Asymptomatic	Clicking / Popping without discomfort and normal ROM	Unstable / Discomfort / Unable to Load with limited ROM
8) Jaw Relations Record	Consistently Repeatable	Needs Manipulation	Unstable and inconsistent Position
9) Parafunctional Habits	None	Moderate Wear / Attrition	Heavy Wear / Attrition
10) Oral Hygiene	Good	Fair	Poor

Refer To Diagnostic Evaluations

11) Anatomical Confirmation	Clinical Examination / Panoramic	Clinical Examination/ Panoramic / CBCT	Clinical Examination / Panoramic / CBCT / Software Planning
12) Existing Teeth / Prosthesis	Ideal Teeth Position	Minor Alterations Required	Major Alterations Required
13) Radiographic Guide Requirement	Not Required	Required by DUPLICATION of existing prosthesis / teeth	Required by RECONSTRUCTION of new prosthesis / teeth
14) Transition Line	Cervical To Lip Line	At / slightly incisal to Lip Line	Incisal to Lip Line (Needs Alveloplasty)
15) Alveoplasty Requirement	None	Minor	Major

Refer To Diagnostic Evaluations

16) Natural Teeth Condition	None	Require Extraction	Require Extraction / Alveloplasty
17) Skeletal Relationship	Class 1	Class 2 Division 1 or 2	Class 3
18) Incisal Edge Positions	Minimal Overjet / Overbite	Moderate Overjet / Overbite	Deep Overjet / Overbite
19) Maxillary Occlusal Plane	Ideal	Require Minor Alternations	Require Major Alterations
20) Mandibular Occlusal Plane	Ideal	Require Minor Alterations	Require Major Alterations
21) Vertical Dimension of Occlusion	Ideal	Require Minor Alterations	Require Major Alterations
22) Implant Surgery	Low Risk	Medium Risk	High Risk
23) Surgical Guide	Provided from wax set up	Provided but needs alterations	Not provided

Refer To Diagnostic Evaluations

24) Implant Sizes	Diameter	Length	Back up Inventory
Position 1			
Position 2			
Position 3			
Position 4			
Positon 5			
Position 6			
25)Primary Stability Achieved	> 35 Ncm	30-35 Ncm	< 30 Ncm
26) Grafting Requirement	None	Potential	Required
27) Immediate Loading	None	Yes / patient compliant with soft diet	Yes / Potential parafunctional habits
28) Occlusion Scheme	Balanced Occlusion	Group Function	Canine Guidance
29)Diet Recommendation	Liquid / Ultra Soft	Soft	Hard
30) Immediate Maintenance	< 2 weeks	2-4 weeks	> 4 weeks

Pre-Prosthetic Considerations For Pro Arch

- 1) Smile line show the residual ridge during relaxed lip and smiling state for the **transitional zone**

Pre-Prosthetic Considerations Pro Arch

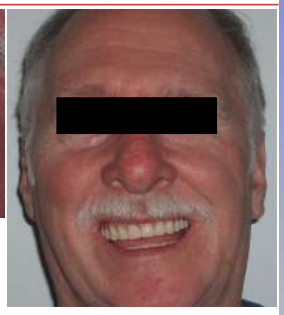
- 2) Sequence of full mouth reconstruction evaluations:
- maxillary incisal edge and occlusal plane
- smile line, transitional zone or gingival display
- gingival harmony and symmetry
- vertical dimension of occlusion
- interocclusal record in Centric Relation
- mandibular occlusal plane
- occlusion design (balanced, canine protected)

Esthetic Alliance

Objective findings – extra-oral

Face

- Vertical dimension
- Lip support
- Naso-labial angle
- Labial commisure
- Midline
- Transition line
- Lip size – flat and thin
- Tooth display at rest, and when speaking
- Angular cheilitis
- Lip dynamics



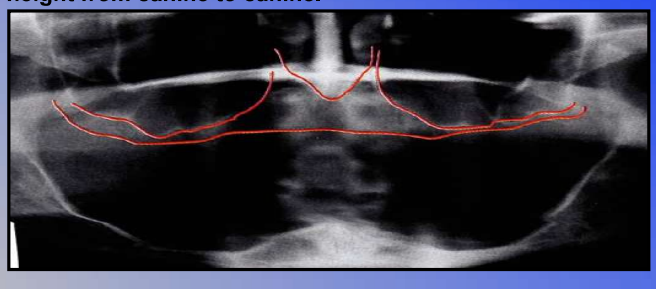
Photos courtesy of Dr. Richard Sullivan, USA

Pre-Surgical Considerations

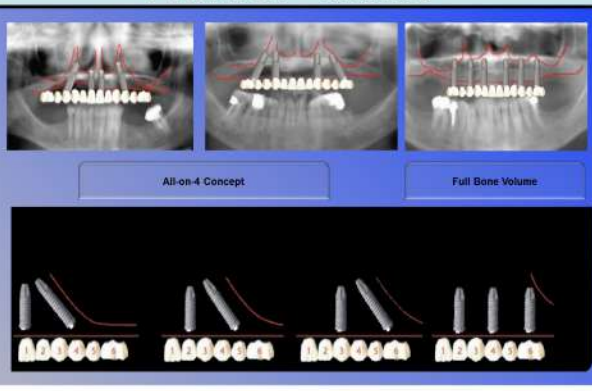
- 3) The amount of bone available in the separate zones with a panoramic radiography

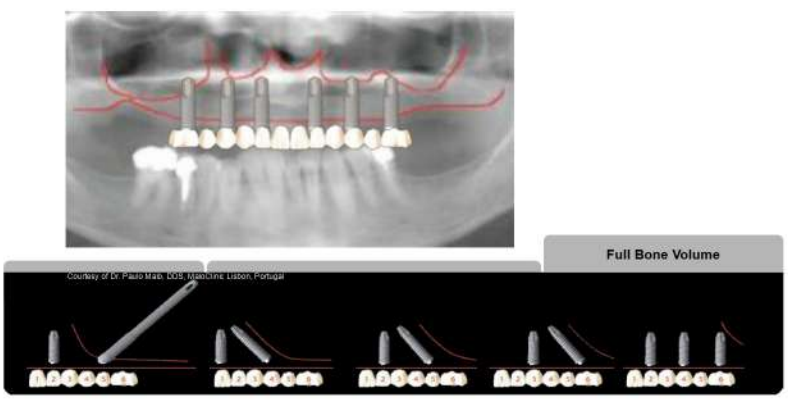
Indications

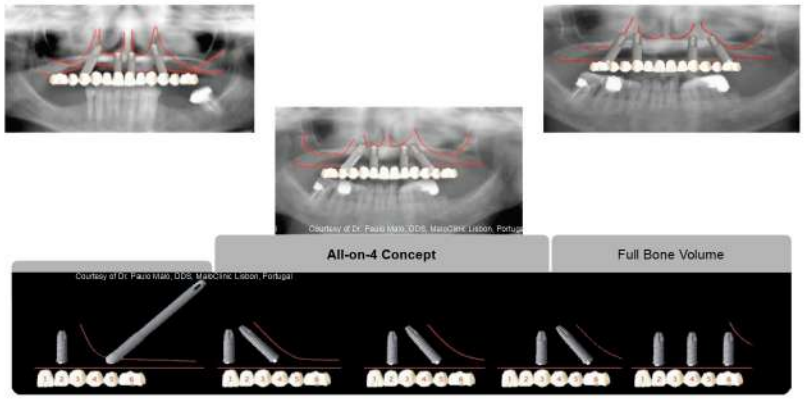
Totally edentulous maxilla: min. bone 5mm Width and 10mm height from canine to canine.



Pro Arch - Maxilla

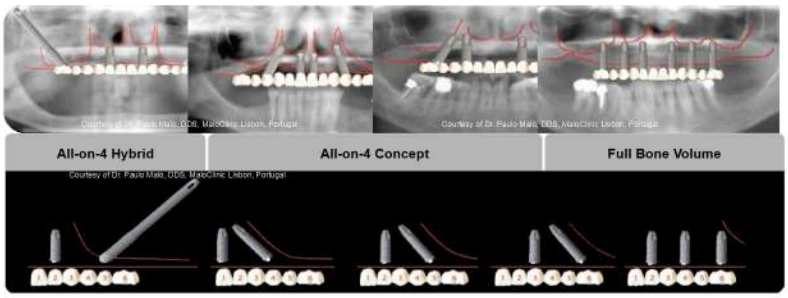






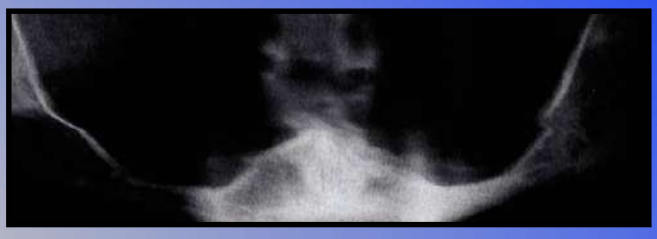
Important: Stress= Force / Area

- Parafunctional habits is a risk factor and may be contraindicated for AO4 / Pro Arch and immediate loading
- Consider more than 4 implants in maxillary arch from4-6 if available bone
- Carefully screen patients for parafunctional habits as denture users may still exhibit bruxism and grinding habits



Indications

Totally edentulous mandible: min. bone 5mm width and 8mm height between the mental foramina.



Pre-Surgical Considerations

- 4) Determine interocclusal space requirement for various types of implant fixed prosthesis

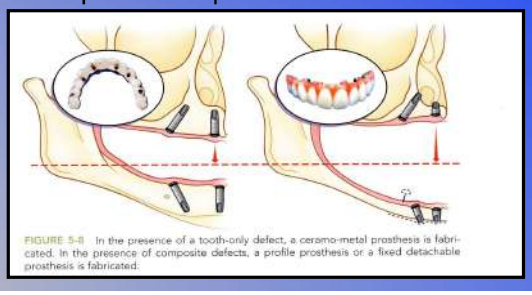
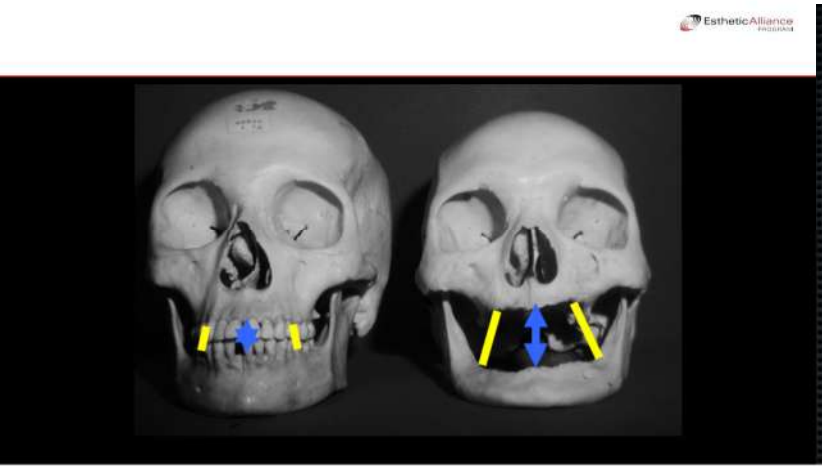
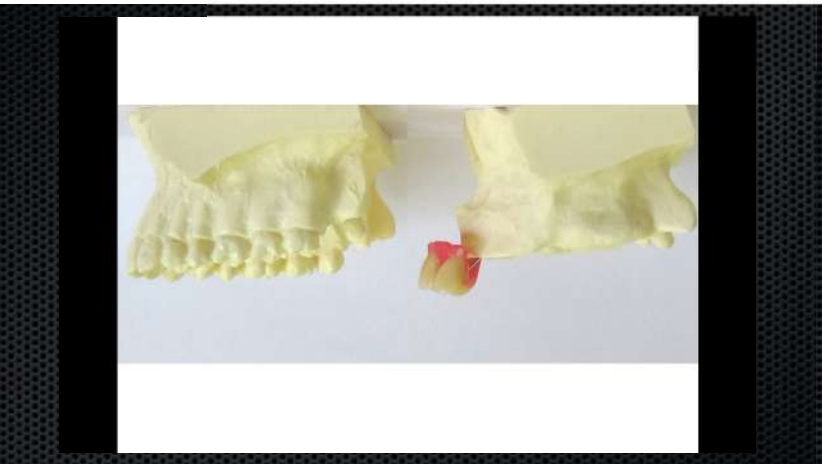


FIGURE 5-8 In the presence of a tooth-only defect, a ceramo-metal prosthesis is fabricated. In the presence of composite defects, a profile prosthesis or a fixed detachable prosthesis is fabricated.





Pre-Surgical Work Up Appointment

- 1) Confirm and review medical status suitable for implant surgery.
- 2) Review of Consent Forms and Q/A period.
- 3) Pre-operative and post-operative prescriptions.
- 4) Local Anesthetic, oral sedation, Nitrous sedation, IV sedation, G.A.
- 5) Fabrication of wax up and Surgical guide(s) and all lab components and provisional to be converted
- 6) Confirm implant inventory for number, diameter and length required for surgery and all conversion components
- 7) Schedule appointment and confirm for implant surgery.
- 8) Confirm financial arrangement with deposit paid in full prior to scheduling of surgical time.


Cheng, Hoi Fai
August 13th, 2021
Toronto Dental Specialists
88 Finch Avenue East
North York, Ontario
Pre-op Pictures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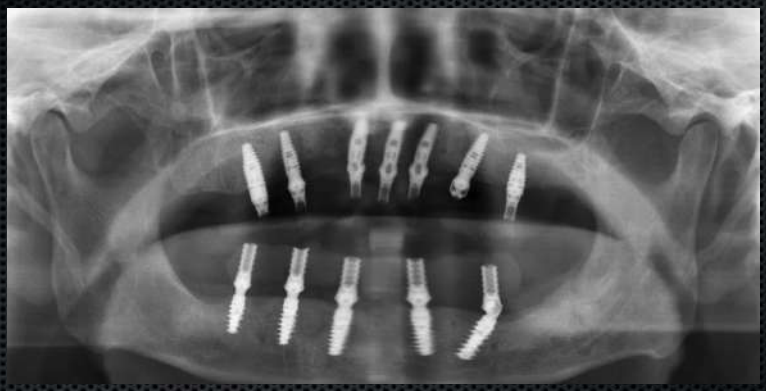
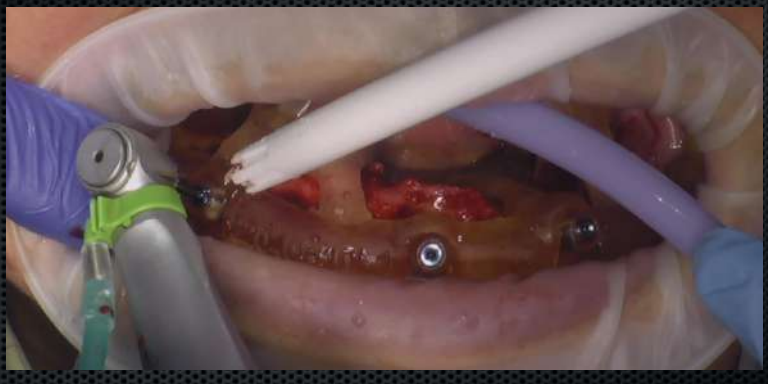


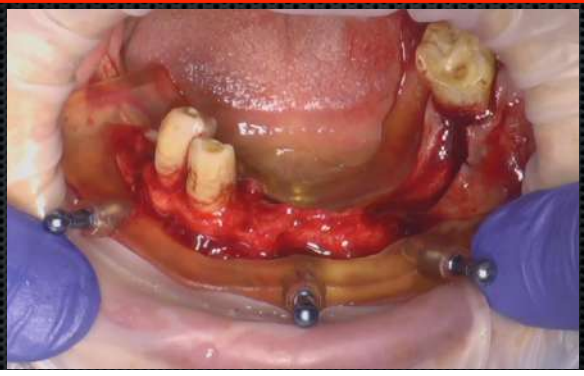
Initial Tooth Engaged Guide For Retention Pins

Surgical pilot osteotomies for Retention Pins

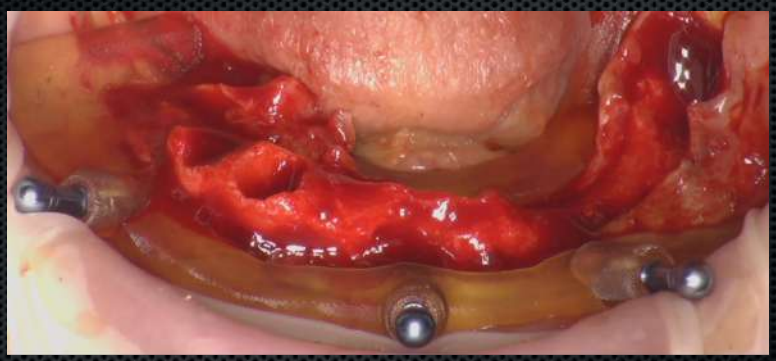


Confirmation of stability of guide with retention pins

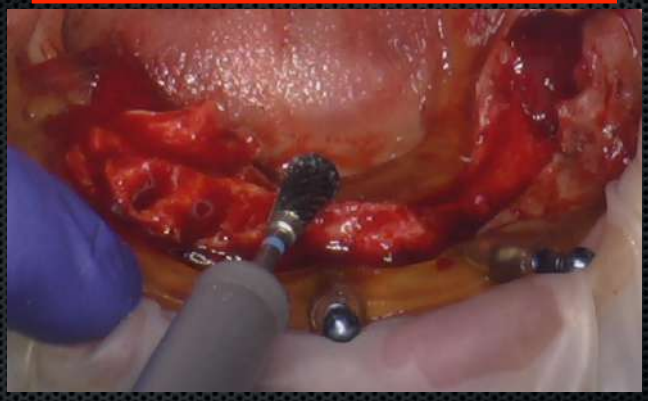
Placement of Bone Reduction Guide Confirmation of stability of guide with retention pins



Extraction of Remaining Non-restorable Teeth

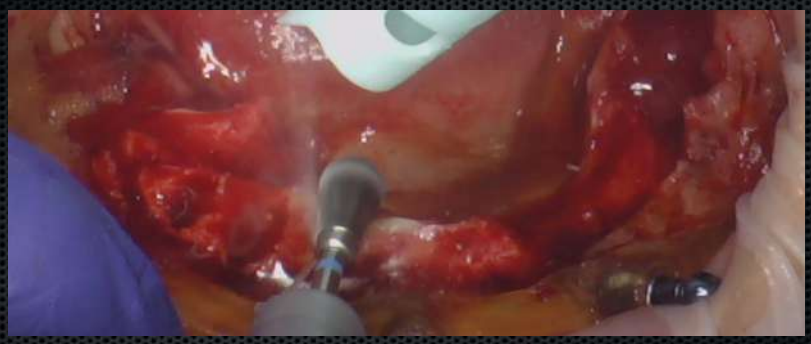


Alveoplasty With Bone Reduction Guide



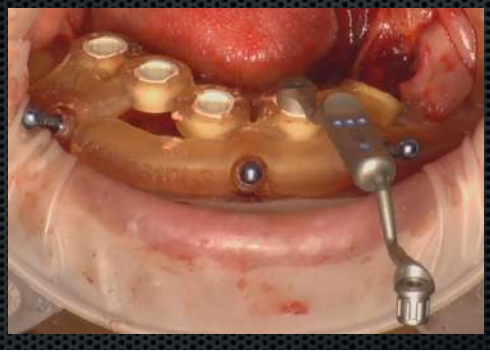
Requirements for Bone Reduction

1. Create required interocclusal space for final restoration, 12-15 mm from top of SRA to incisal edge for each arch
2. Avoid or minimize need for grafting by alveoplasty procedure
3. Implant placement into higher density of basal bone rather alveolar bone which may be less dense and higher chance of peri-implant bone loss
4. For maxillary arch, alveoplasty to hide transition zone below smile line
5. Corrections for over-eruption or extrusion of dental alveolar complex



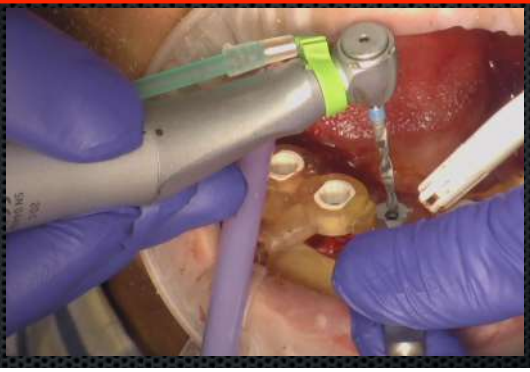
Stack Next Guide To Prepare Osteotomy With Guided Surgical Protocol

Use Corresponding Key Slots To Drill Diameter to Prepare Each Site



Use Corresponding Key Slots To Drill Diameter to Prepare Each Site

Use Corresponding Key Slots To Drill Diameter to Prepare Each Site

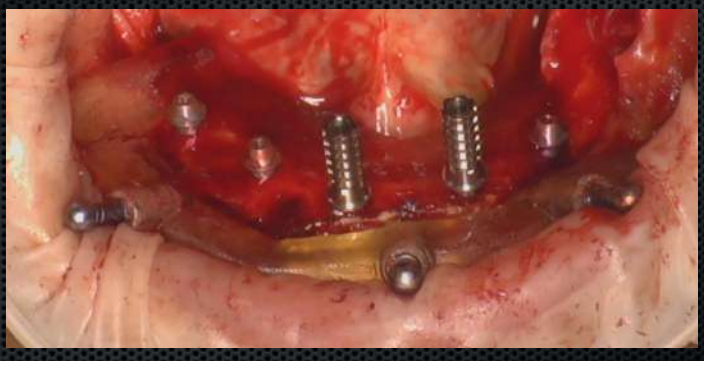


Use Corresponding Key Slots To Drill Diameter to Prepare Each Site

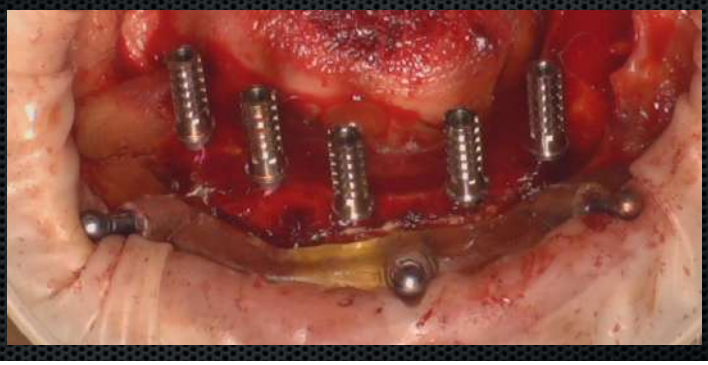
Implant Placement Through Surgical Guide To Depth

Implant Placement Through Surgical Guide To Depth

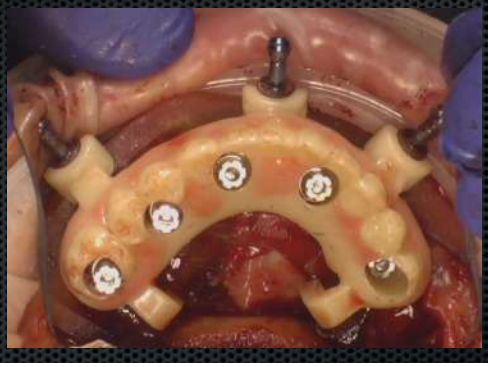
Placement of Predetermined SRA To Each Implant And Placement Of Titanium Copings



Placement of Predetermined SRA To Each Implant And Placement Of Titanium Copings



Modification to Prefabricated PMMA Temporary To Fit Over Each Of the Titanium Copings



Intral Oral Pick Up Of Each Coping With Triad Resin

Unscrew Each Coping And Confirm Pick Up With Stability

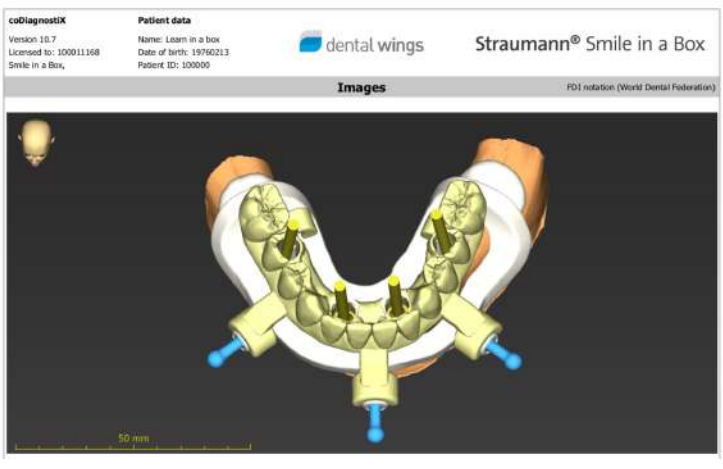
Unscrew Each Coping And Confirm Pick Up With Stability

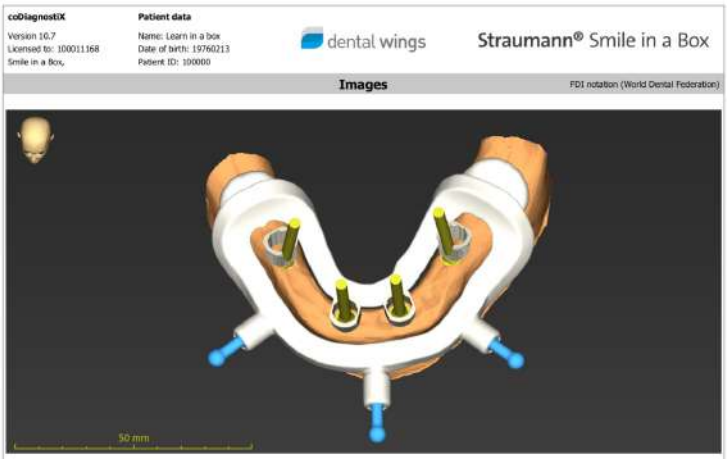
Unscrew Each Coping And Confirm Pick Up With Stability

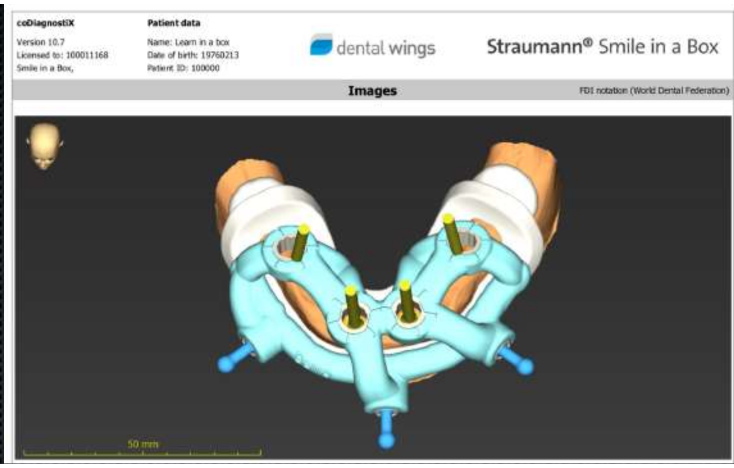
Placement Of Healing Caps With GBR And Suturing

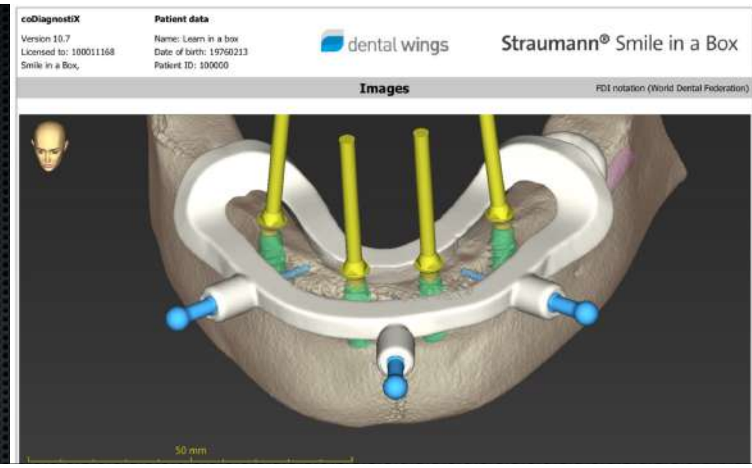
Laboratory To Refill Gaps With Acrylic Resin And Polish For Insertion

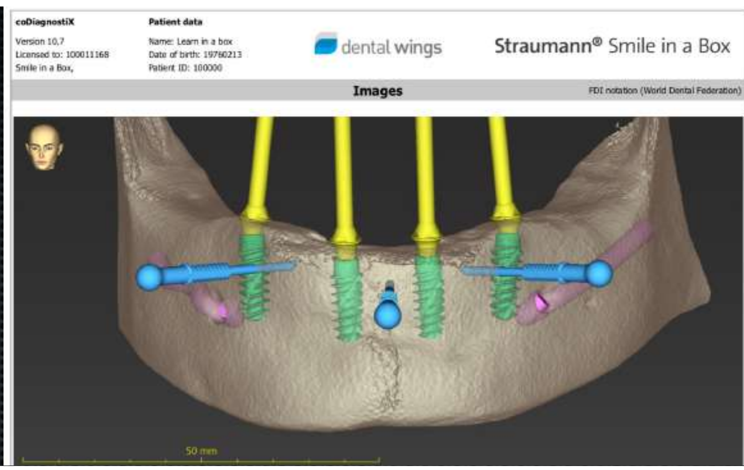
Insertion Torque of 15 Ncm, Verify Vertical Dimension Of Occlusion, Midline And Mutually Protected Occlusion

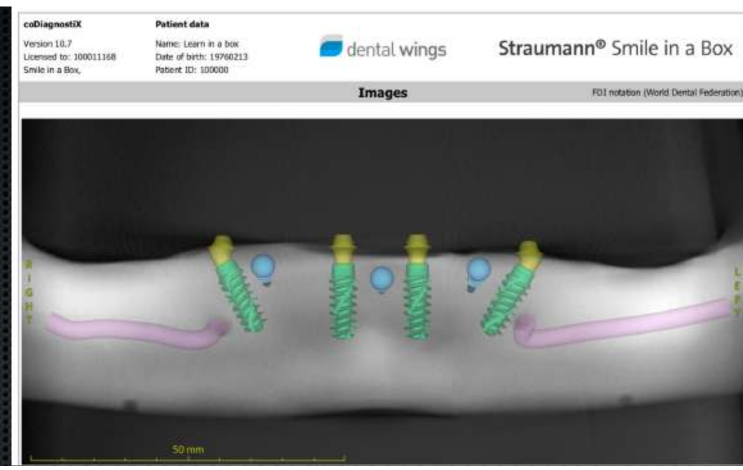












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Patient data
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Date of birth: 19760213
Patient ID: 100000

dental wings

Straumann® Smile in a Box

Material list

FDI notation (World Dental Federation)

Learn in a Box BLX - Implants

Article no.	Position	Manufacturer	Model	Length	ø 1	ø 2
061.6312	35	Straumann	Bone Level X Roxolid® SLActive® (RB)	12.00 mm	4.50 mm	4.20 mm
061.6312	32	Straumann	Bone Level X Roxolid® SLActive® (RB)	12.00 mm	4.50 mm	4.20 mm
061.6312	42	Straumann	Bone Level X Roxolid® SLActive® (RB)	12.00 mm	4.50 mm	4.20 mm
061.6312	45	Straumann	Bone Level X Roxolid® SLActive® (RB)	12.00 mm	4.50 mm	4.20 mm
034.282	XX	Straumann	Template Fixation Pin, Ø 1.3mm	28.00 mm	1.30 mm	1.30 mm
034.282	XX	Straumann	Template Fixation Pin, Ø 1.3mm	28.00 mm	1.30 mm	1.30 mm
034.282	XX	Straumann	Template Fixation Pin, Ø 1.3mm	28.00 mm	1.30 mm	1.30 mm

Learn in a Box BLX - Sleeves

Article no.	Position	Manufacturer	Model	Length	Diameter	Quantity
034.053V4	35	Straumann	T-sleeve, SST	5.00 mm	5.00 mm	2
034.053V4	32	Straumann	T-sleeve, SST	5.00 mm	5.00 mm	2
034.053V4	42	Straumann	T-sleeve, SST	5.00 mm	5.00 mm	2
034.053V4	45	Straumann	T-sleeve, SST	5.00 mm	5.00 mm	2
034.283	XX	Straumann Guided Surgery	T-Sleeve for Template Fixation Pin	7.50 mm	2.50 mm	3

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Material list

FDI notation (World Dental Federation)

Learn in a Box BLX - Sleeves

Article no.	Position	Manufacturer	Model	Length	Diameter	Quantity
034.283	XX	Straumann Guided Surgery	T-Sleeve for Template Fixation Pin	7.50 mm	2.50 mm	3
034.283	XX	Straumann Guided Surgery	T-Sleeve for Template Fixation Pin	7.50 mm	2.50 mm	3

Learn in a Box BLX - Abutments

Article no.	Position	Manufacturer	Model	Length	Diameter
062.4743S	35	Straumann	RB/WB Screw-retained, angled 30°	3.50 mm	4.60 mm
062.4723S	32	Straumann	RB/WB Screw-retained, straight 0°	2.50 mm	4.60 mm
062.4723S	42	Straumann	RB/WB Screw-retained, straight 0°	2.50 mm	4.60 mm
062.4743S	45	Straumann	RB/WB Screw-retained, angled 30°	3.50 mm	4.60 mm

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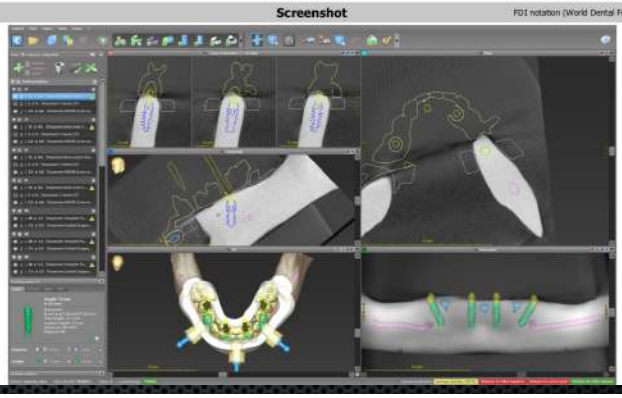
Screenshot

FDI notation (World Dental Federation)



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Implant details

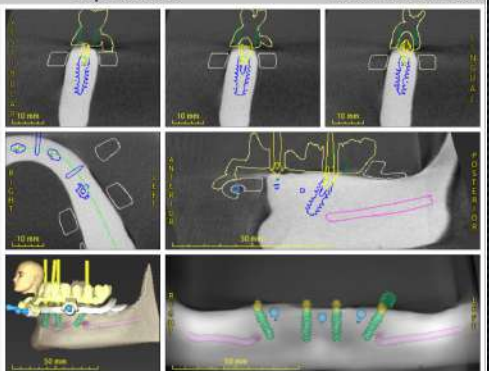
FDI notation (World Dental Federation)

Plan: Learn in a Box BLX
Position: 35

Sleeve
Straumann
T-sleeve, SST
Article number: 034.053V4
Sleeve length: 5.00 mm
Diameter: 5.00 mm

Implant
Straumann
Bone Level X Roxolid® SLActive® (RB)
Article number: 061.6312
Length: 12.00 mm
Diameter 1: 4.50 mm
Diameter 2: 4.20 mm

Surgical protocol
Sleeve position: H4 (4 mm)
Drill length: ≡ long
Drill handle: ●●● +3 mm
Milling cutter: 4.2 mm



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Implant details

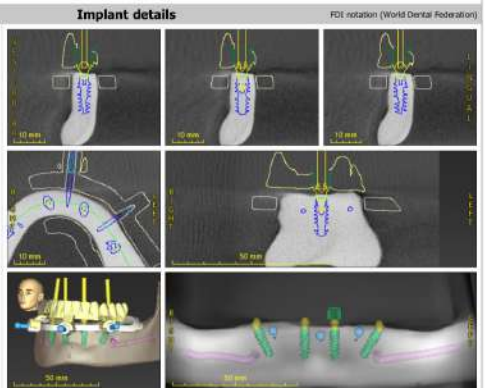
FDI notation (World Dental Federation)

Plan: Learn in a Box BLX
Position: 32

Sleeve
Straumann
T-sleeve, SST
Article number: 034.053V4
Sleeve length: 5.00 mm
Diameter: 5.00 mm

Implant
Straumann
Bone Level X Roxolid® SLActive® (RB)
Article number: 061.6312
Length: 12.00 mm
Diameter 1: 4.50 mm
Diameter 2: 4.20 mm

Surgical protocol
Sleeve position: H4 (4 mm)
Drill length: ≡ long
Drill handle: ●●● +3 mm
Milling cutter: 4.2 mm



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Implant details

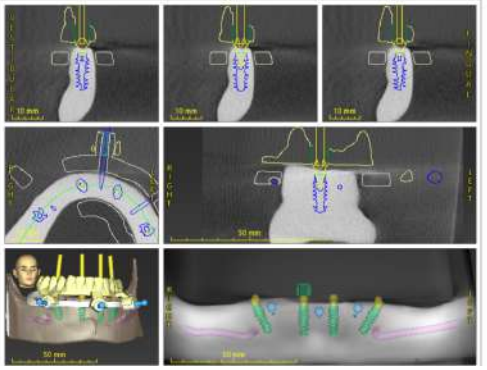
FDI notation (World Dental Federation)

Plan: Learn in a Box BLX
Position: 42

Sleeve
Straumann
T-sleeve, SST
Article number: 034.053V4
Sleeve length: 5.00 mm
Diameter: 5.00 mm

Implant
Straumann
Bone Level X Roxolid® SLActive® (RB)
Article number: 061.6312
Length: 12.00 mm
Diameter 1: 4.50 mm
Diameter 2: 4.20 mm

Surgical protocol
Sleeve position: H4 (4 mm)
Drill length: ≡ long
Drill handle: ●●● +3 mm
Milling cutter: 4.2 mm



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Implant details

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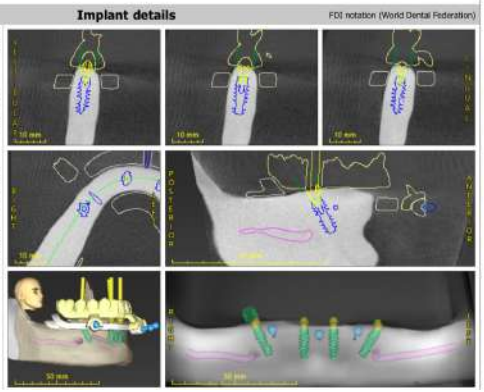
Plan: Learn in a Box BLX
Position: 45

Sleeve
Straumann
T-sleeve, SST
Article number: 034.053V4
Sleeve length: 5.00 mm
Diameter: 5.00 mm

Implant
Straumann
Bone Level X Roxolid® SLActive® (RB)
Article number: 061.6312
Length: 12.00 mm
Diameter 1: 4.50 mm
Diameter 2: 4.20 mm

Surgical protocol
Sleeve position: H4 (4 mm)
Drill length: ≡ long
Drill handle: ●●● +3 mm
Milling cutter: 4.2 mm



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Patient data
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Date of birth: 19760213
Patient ID: 100000

dental wings

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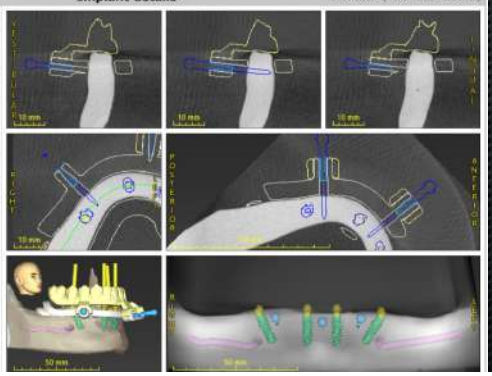
Implant details

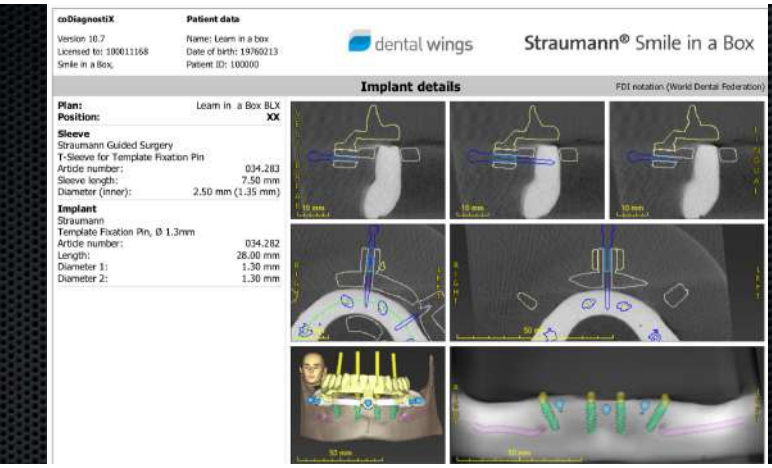
FDI notation (World Dental Federation)

Plan: Learn in a Box BLX
Position: XX

Sleeve
Straumann Guided Surgery
T-Sleeve for Template Fixation Pin
Article number: 034.283
Sleeve length: 7.50 mm
Diameter (inner): 2.50 mm (1.35 mm)

Implant
Straumann
Template Fixation Pin, Ø 1.3mm
Article number: 034.282
Length: 28.00 mm
Diameter 1: 1.30 mm
Diameter 2: 1.30 mm





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Patient data
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dental wings

Straumann® Smile in a Box

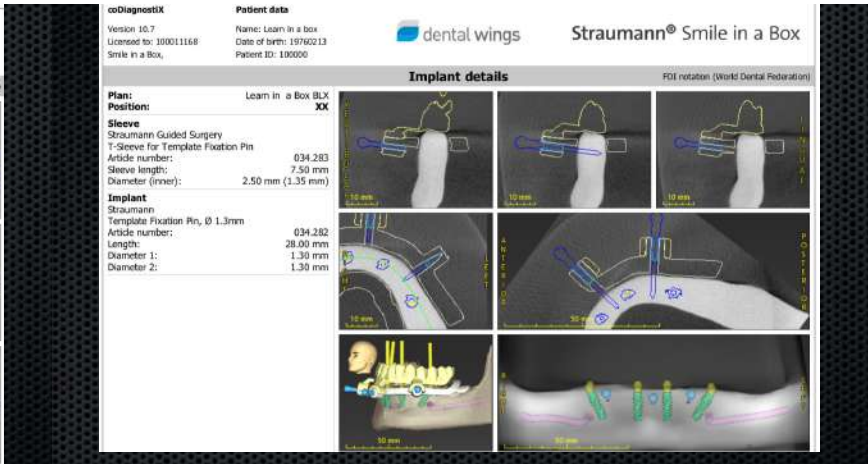
Implant details

FDI notation (World Dental Federation)

Plan: Learn in a Box BLX
Position: XX

Sleeve
Straumann Guided Surgery
T-Sleeve for Template Fixation Pin
Article number: 034.283
Sleeve length: 7.50 mm
Diameter (inner): 2.50 mm (1.35 mm)

Implant
Straumann
Template Fixation Pin, Ø 1.3mm
Article number: 034.282
Length: 28.00 mm
Diameter 1: 1.30 mm
Diameter 2: 1.30 mm



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Straumann® Smile in a Box

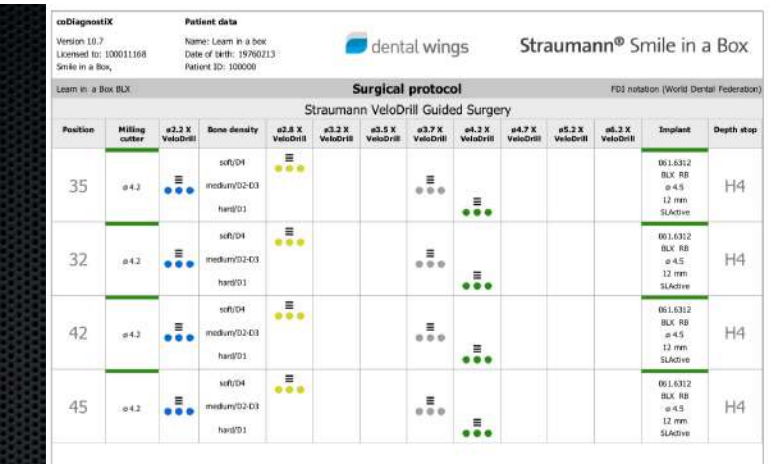
Implant details

FDI notation (World Dental Federation)

Plan: Learn in a Box BLX
Position: XX

Sleeve
Straumann Guided Surgery
T-Sleeve for Template Fixation Pin
Article number: 034.283
Sleeve length: 7.50 mm
Diameter (inner): 2.50 mm (1.35 mm)

Implant
Straumann
Template Fixation Pin, Ø 1.3mm
Article number: 034.282
Length: 28.00 mm
Diameter 1: 1.30 mm
Diameter 2: 1.30 mm



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Patient data
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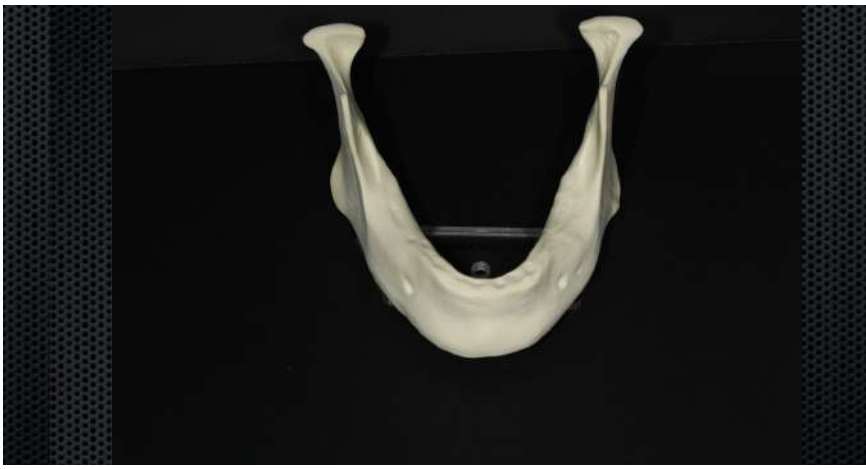
Learn in a Box BLX

Surgical protocol

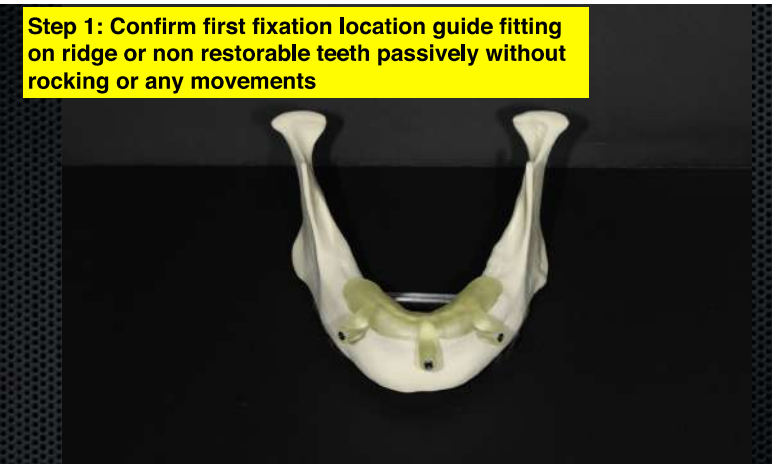
FDI notation (World Dental Federation)

Straumann VeloDrill Guided Surgery

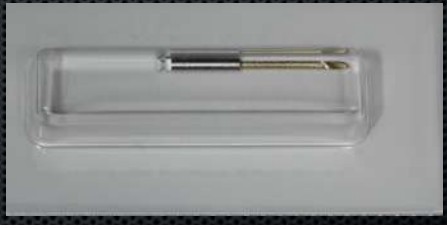
Position	Milling cutter	ø2.2 X VeloDrill	Bone density	ø2.8 X VeloDrill	ø3.2 X VeloDrill	ø3.5 X VeloDrill	ø3.7 X VeloDrill	ø4.2 X VeloDrill	ø4.7 X VeloDrill	ø5.2 X VeloDrill	ø6.2 X VeloDrill	Implant	Depth stop
35	ø4.2		soft/D4 medium/D2-D3 hard/D1									061.6312 BLX RB ø 4.5 12 mm SLActive	H4
32	ø4.2		soft/D4 medium/D2-D3 hard/D1									061.6312 BLX RB ø 4.5 12 mm SLActive	H4
42	ø4.2		soft/D4 medium/D2-D3 hard/D1									061.6312 BLX RB ø 4.5 12 mm SLActive	H4
45	ø4.2		soft/D4 medium/D2-D3 hard/D1									061.6312 BLX RB ø 4.5 12 mm SLActive	H4



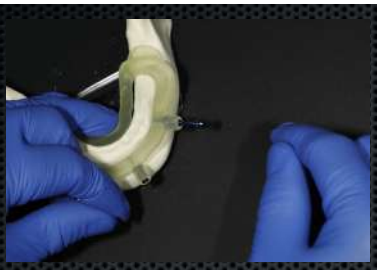
Step 1: Confirm first fixation location guide fitting on ridge or non restorable teeth passively without rocking or any movements



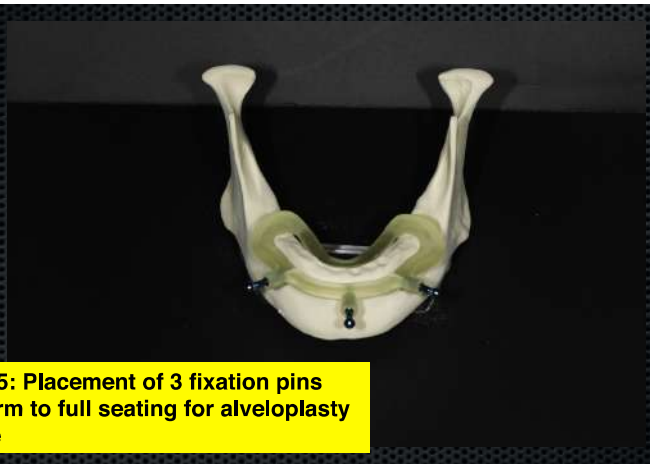
Step 2: Use fixation pin drill, 1.3 mm diameter to prepare into bone at 1500-2000 rpm with irrigation



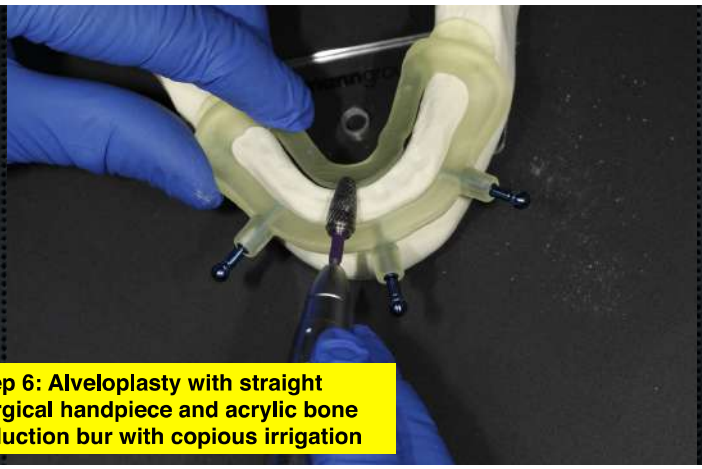
Step 3: Prepare fixation drill to depth into guide to confirm mono-cortical penetration into trabecular bone



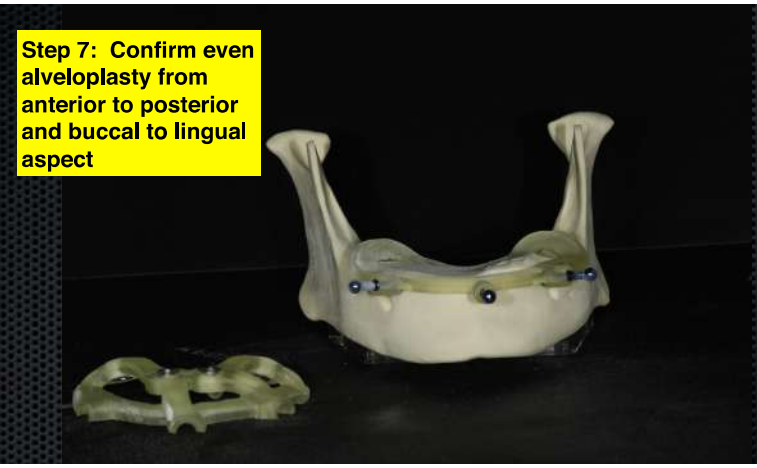
Step 4: Removal of first guide and placement of second guide, alveloplasty guide with placement of 3 fixation pins confirm to full seating



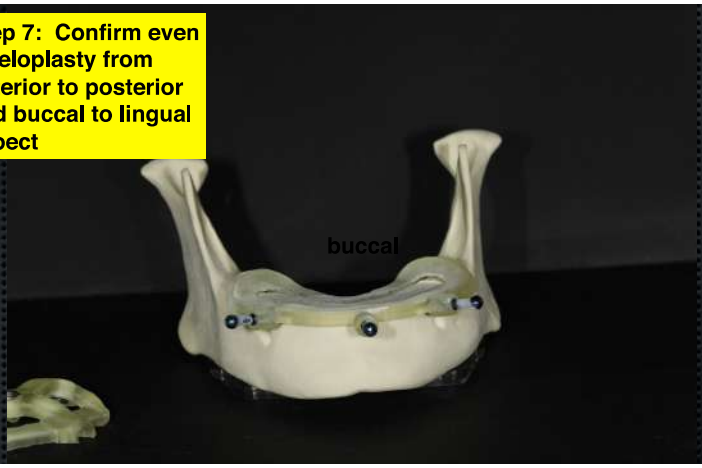
Step 5: Placement of 3 fixation pins confirm to full seating for alveloplasty guide



Step 6: Alveloplasty with straight surgical handpiece and acrylic bone reduction bur with copious irrigation



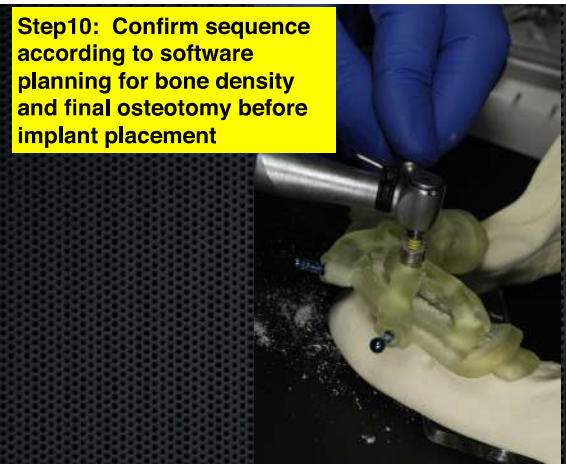
Step 7: Confirm even alveloplasty from anterior to posterior and buccal to lingual aspect



Step 7: Confirm even alveloplasty from anterior to posterior and buccal to lingual aspect

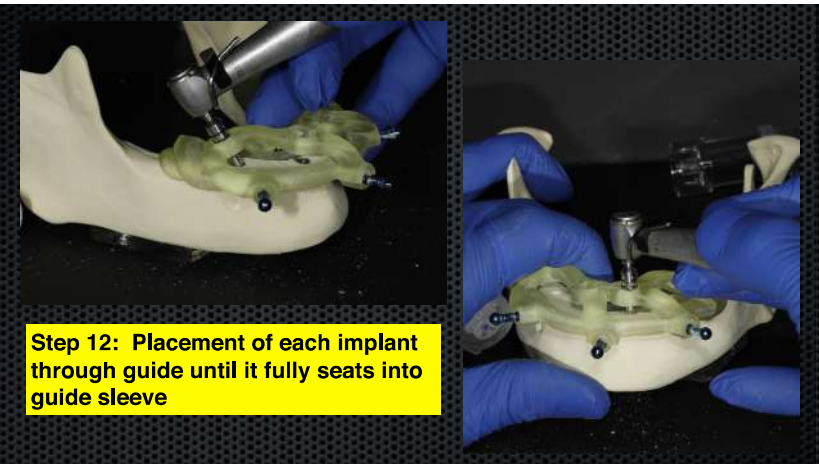
Step 8: Placement and stack third guide for guided surgical implant placement

Step9: Guided surgery to sequentially enlarge osteotomy with corresponding key and bur

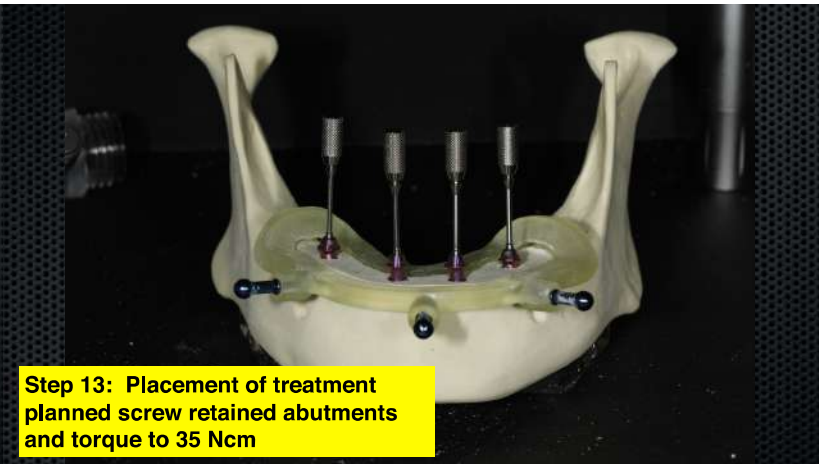


Step10: Confirm sequence according to software planning for bone density and final osteotomy before implant placement

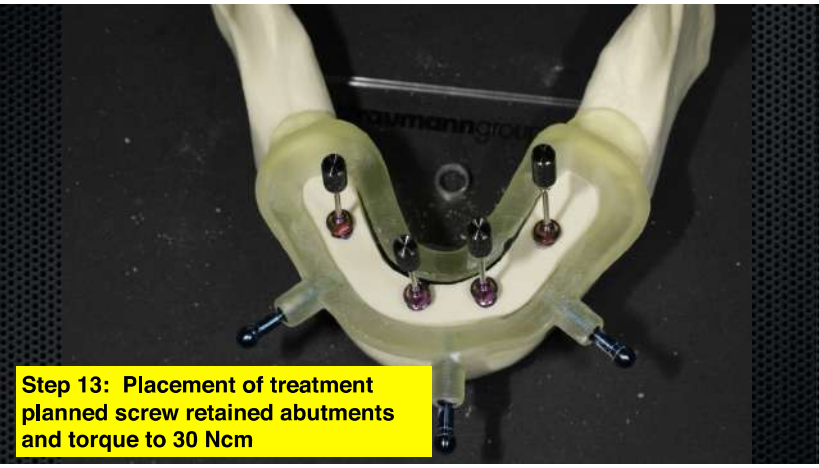
Step 11: Utilize implant driver and implant for insertion into guide



Step 12: Placement of each implant through guide until it fully seats into guide sleeve

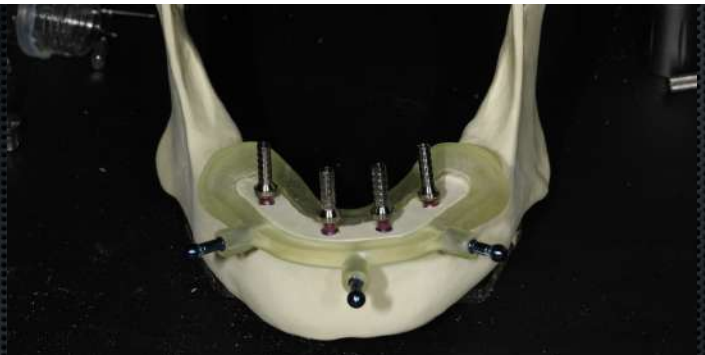


Step 13: Placement of treatment planned screw retained abutments and torque to 35 Ncm



Step 13: Placement of treatment planned screw retained abutments and torque to 30 Ncm

Step 13: Placement of treatment planned screw retained abutments and torque to 35 Ncm

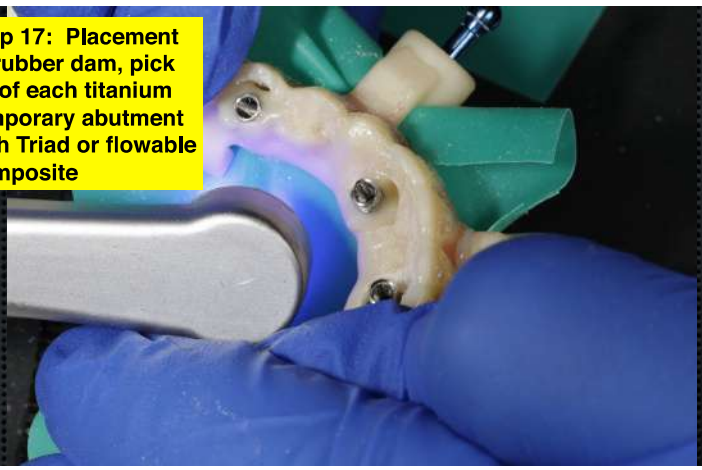


Step 14: Placement of titanium temporary abutment and hand tighten to SRA level

Step 15: Try in of PMMA onto guide, confirm passive seating onto wings

Step 16: Adjust provisional until passive fitting and confirm seating to wings

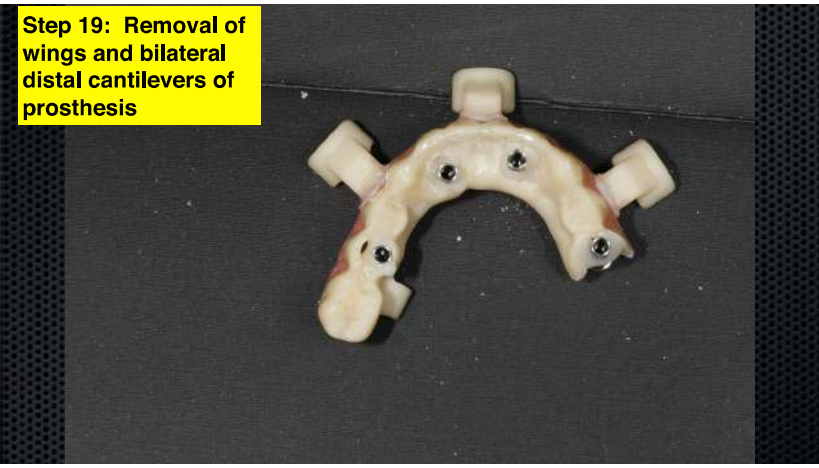
Step 17: Placement of rubber dam, pick up of each titanium temporary abutment with Triad or flowable composite



Step 17: Placement of rubber dam, pick up of each titanium temporary abutment with Triad or flowable composite

Step 18: Unscrew all abutments and prosthesis

Step 19: Removal of wings and bilateral distal cantilevers of prosthesis



Step 20: Contour and polish for insertion

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