

Classic Implant System

Stability & Accuracy Above All



REGULATORY COMPLIANCE

Noris Medical invests significant resources in creating an optimal environment for the designing and manufacturing of its dental products. Keeping patient safety at the forefront throughout the process, Noris Medical complies with international regulatory compliance for manufacturing and quality. The entire manufacturing process is monitored and recorded for complete process traceability. All facilities are subjected to strict inspection procedures.

- Products carry the CE mark and meet the European Medical Device Directive (42/93/EEC).
- Products received the FDA Clearance Premarket Notification (510k) (K140440, K151909, K153043, K162308).
- Meticulous quality control system is in compliance with EN ISO 13485:2016 and FDA QSR 21 CFR Part 820.
- Successful MDSAP (Medical Device Single Audit Process) AUDIT are conducted annually.
This audit is recognized by United States FDA, Australia TGA, Brazil ANVISA, Japan PMDA, Canada CMDR.
- ISO 7 clean room production.

MATERIALS & SURFACE TREATMENT

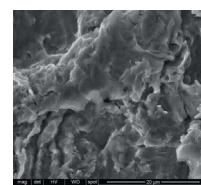
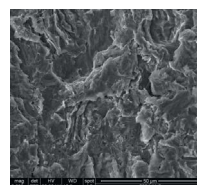
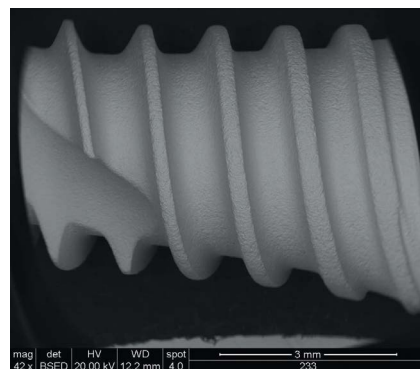
Titanium Alloys are known for their superior biocompatibility and tensile strength. Therefore, all Noris Medical Dental Implants and most prosthetic Components are produced from Titanium Alloy Ti6-Al4-V ELI (Grade 23).

Modification of Dental Implant surfaces plays a major role in osseointegration by promoting shorter healing times from implant placement to restoration. Roughened surfaces provide increased amount of bone to implant contact. The topography, down to the micron, affects the attachment and growth of bone cells on the dental implant, improving BIC - Bone Implant Contact.

Noris Medical applies RBM (Resorbable Blast Media) in order to induce the sub-micron topography.

The material used for the RBM process is Hydroxyapatite, which is a highly resorbable and biocompatible material. Hydroxyapatite as the blasting material also eliminates the need of using strong acids for the removal of blasting material remnants.

Implant surfaces that have been RBM treated are considered to be more osteoconductive. Research shows higher percentage of bone to implant contact around RBM treated implants. This finding could be especially useful in severe clinical conditions like poor bone quality and in cases of early or immediate loading.



REFERENCES

- McCracken M. Dental implant material: Commercially pure Titanium Alloy and Titanium Alloys. J Prosthet Dent 43:8-40 ;1999.
- Schwartz Z, Raz P, Zhao G, Barak Y, Tauber M, Yao H, Boyan BD. Effect of micrometer-scale roughness of the surface of Ti6-Al4-V pedicle screws in vitro and in vivo. J Bone Joint Surg Am. 98-90:2485 ;2008.
- Piattelli A, Manzon L, Scarano A, Paolantonio M, Piattelli M. Histologic and histomorphometric analysis of the bone response to machined and sandblasted Titanium Alloy implants: An experimental study in rabbits. Int J Oral Maxillofac Implants. 810-13:805;1998.
- Piattelli M, Scarano A, Quaranta M, Petrone G, Piattelli A. bone response in rabbit to machined and RBM Titanium Alloy implants. J Dent Res. 78:1126;1999.
- Piattelli M, Scarano A, Paolantonio M, Iezzi G, Petrone G, Piattelli A. Bone response to machined and resorbable blast material Titanium Alloy implants: an experimental study in rabbits. J Oral Implantol. 8-2;28;2002.

Classic Implant System

Noris Classic implants offer versatile solutions to a variety of clinical indications, enabling simple treatment and maximum flexibility, in order to achieve the best clinical and aesthetic results.

The series designed and engineered to bring a solution to a wide range of patient needs, offering a unique portfolio of materials and surfaces, and includes five different types of implants:



Bone Level

Tuff, Tuff TT and Onyx



Tissue and Bone Level

Tuff Pro and Cortical

All implants with one strong & simple, internal hex, platform for all treatments

One Connection - One Kit



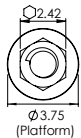
FEATURES AND BENEFITS



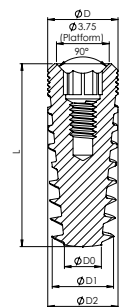
BONE LEVEL IMPLANT	NAME	TUFF	TUFF TT	ONYX
	BONE TYPES	All Bone Types		All Bone Types Recommended for Hard Bone Type
	PROSTHETICS PLATFORM	Internal Hex		
	DESIGN FEATURES	<ul style="list-style-type: none"> • Condensing variable threads design • Apically tapered threads and tapered core body • Double thread with large step • Double flutes 	<ul style="list-style-type: none"> • Condensing variable threads design • Apically tapered threads and tapered core body • Double threads with large step • Back tapered coronal portion • Double flutes 	<ul style="list-style-type: none"> • Large surface area • Cylindrical thread and core body • Double threads with small step • Triple cutting flutes
	CLINICAL BENEFITS	<ul style="list-style-type: none"> • Self tapping • High primary stability • Minimal drilling • Fast insertion – optimal for soft bone • Immediate loading - suitable for extraction sites 	<ul style="list-style-type: none"> • Self tapping • High primary stability • Minimal drilling • Reduced pressure on crestal bone • Optimal esthetic results • Immediate loading - suitable for extraction sites 	<ul style="list-style-type: none"> • Minimal pressure on hard bone • Maximum bone to implant contact area • Long term stability • Immediate loading – suitable for hard bone



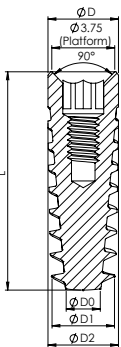
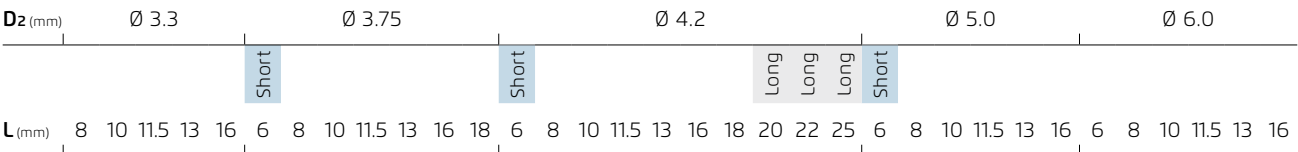
TISSUE LEVEL IMPLANT	NAME	TUFF PRO	CORTICAL
	BONE TYPES	All Bone Types	All Bone Types Recommended for Soft Bone Type
	PROSTHETICS PLATFORM	Internal Hex	
	DESIGN FEATURES	<ul style="list-style-type: none"> • Condensing variable threads design • Apically tapered threads and tapered core body • Double threads with large step • Machined surface coronal portion • Double flutes 	<ul style="list-style-type: none"> • Large cutting surface area • Tapered thread and tapered core body • Wide and sharp threads
	CLINICAL BENEFITS	<ul style="list-style-type: none"> • Self tapping • High primary stability • Minimal drilling • Fast insertion – optimal for soft bone • Immediate loading - suitable for extraction sites 	<ul style="list-style-type: none"> • Self tapping • High primary stability • Minimal drilling • Immediate loading - suitable for extraction sites



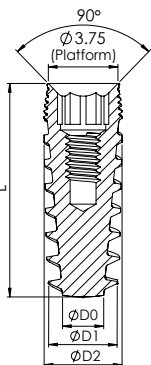
PROSTHETICS PLATFORM
Internal Hex



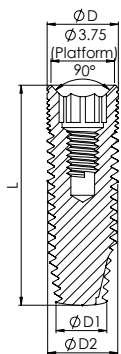
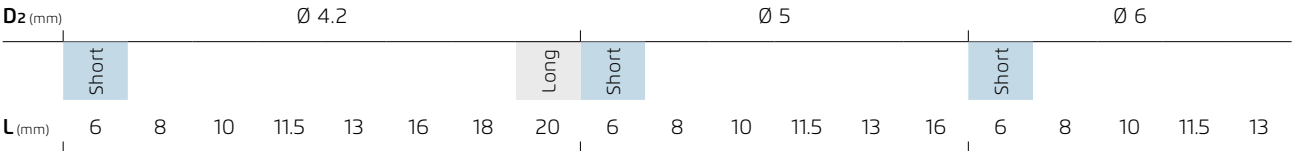
TUFF



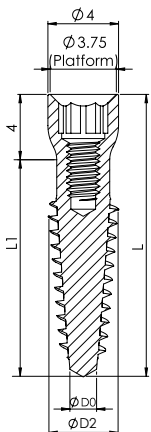
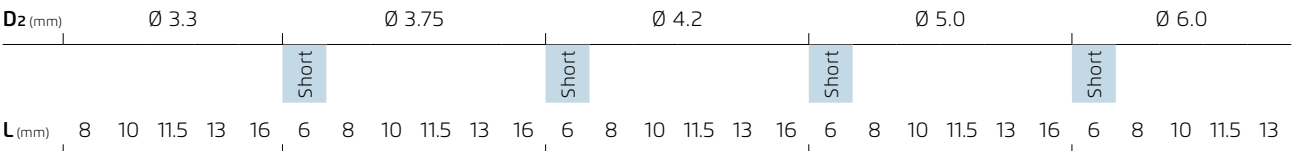
TUFF PRO



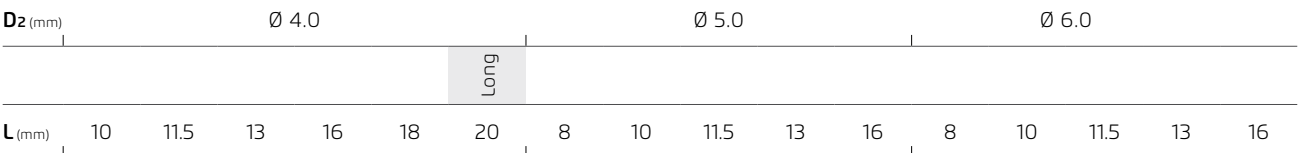
TUFF TT



ONYX



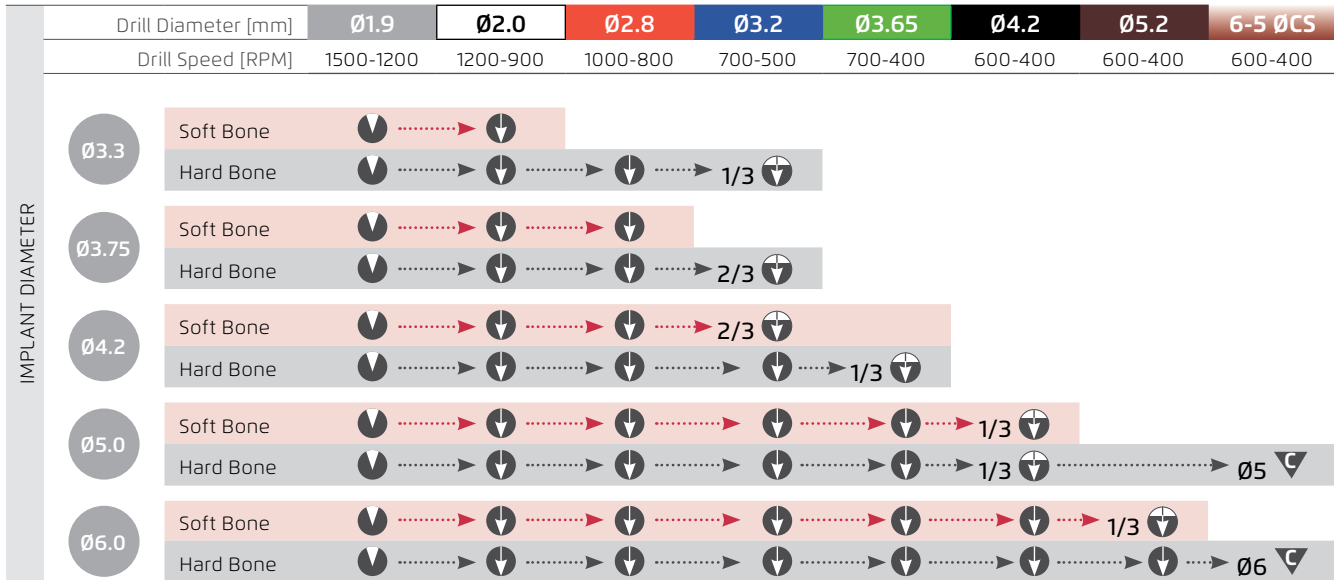
CORTICAL



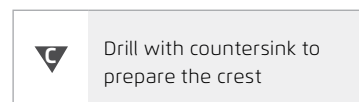
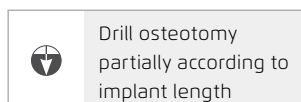
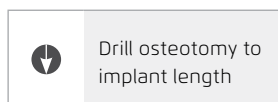
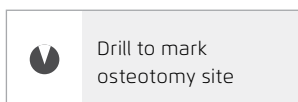
RECOMMENDED DRILL PROTOCOL

TUFF

RECOMMENDED STRAIGHT DRILL PROTOCOL



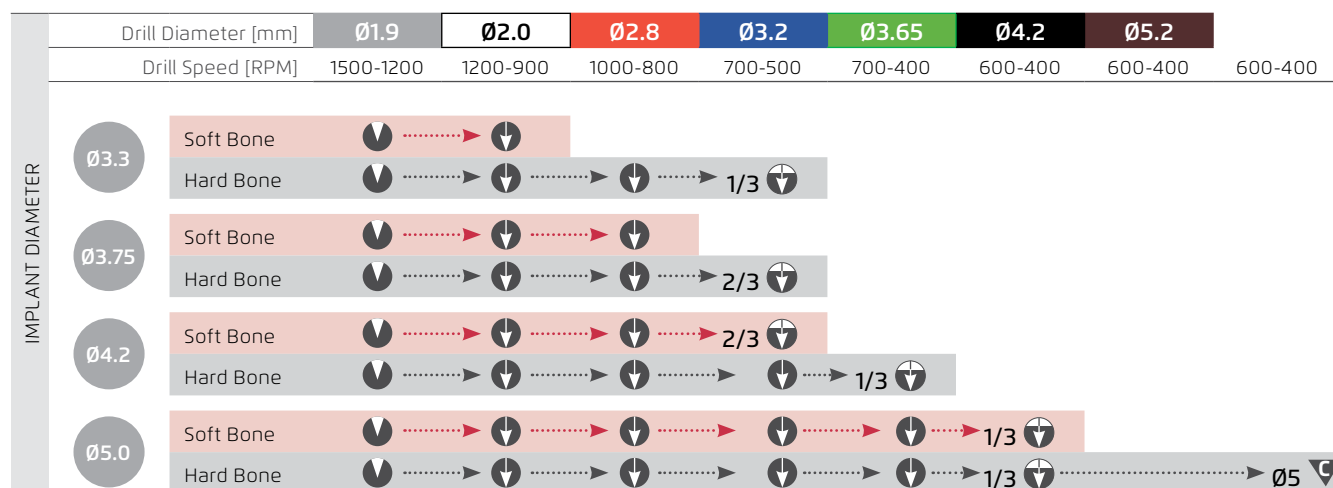
RECOMMENDED STEP DRILL PROTOCOL



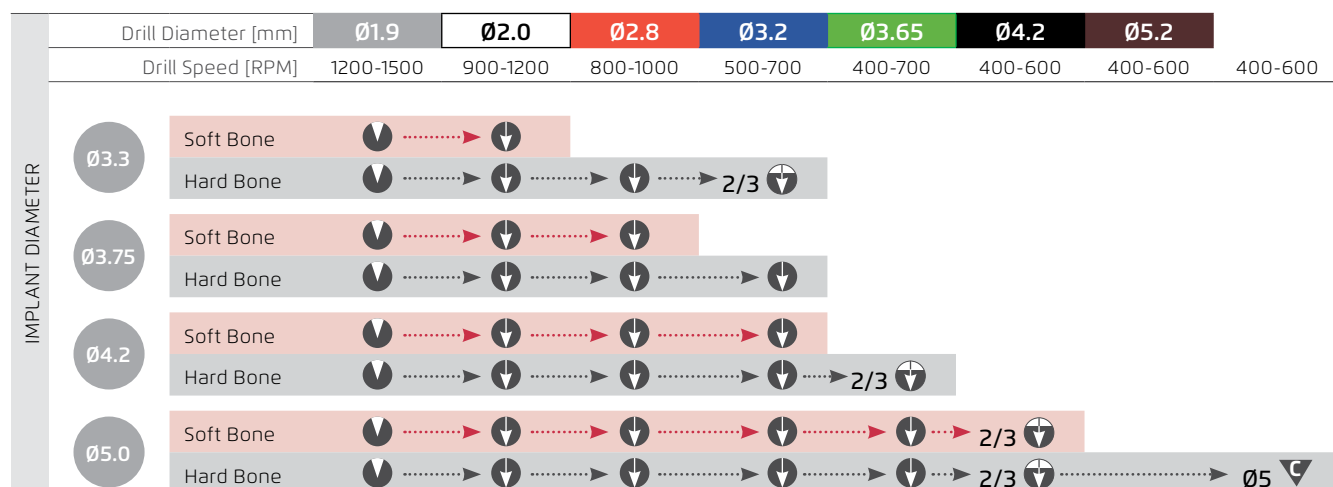
* The recommended drill protocol procedure should not replace the dentist's/surgeon's judgment.
The implants may be loaded for immediate function when good primary stability (above 35 Ncm) has been achieved and with appropriate occlusal loading.

TUFF PRO

RECOMMENDED STRAIGHT DRILL PROTOCOL



RECOMMENDED STEP DRILL PROTOCOL



Drill to mark osteotomy site

Drill osteotomy to implant length

Drill osteotomy partially according to implant length

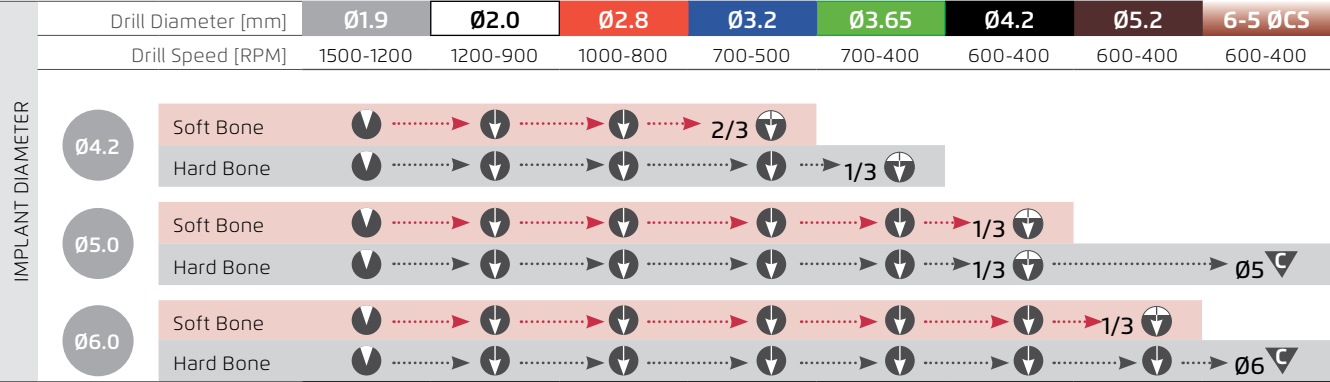
Drill with countersink to prepare the crest

* The recommended drill protocol procedure should not replace the dentist's/surgeon's judgment.
The implants may be loaded for immediate function when good primary stability (above 35 Ncm) has been achieved and with appropriate occlusal loading.

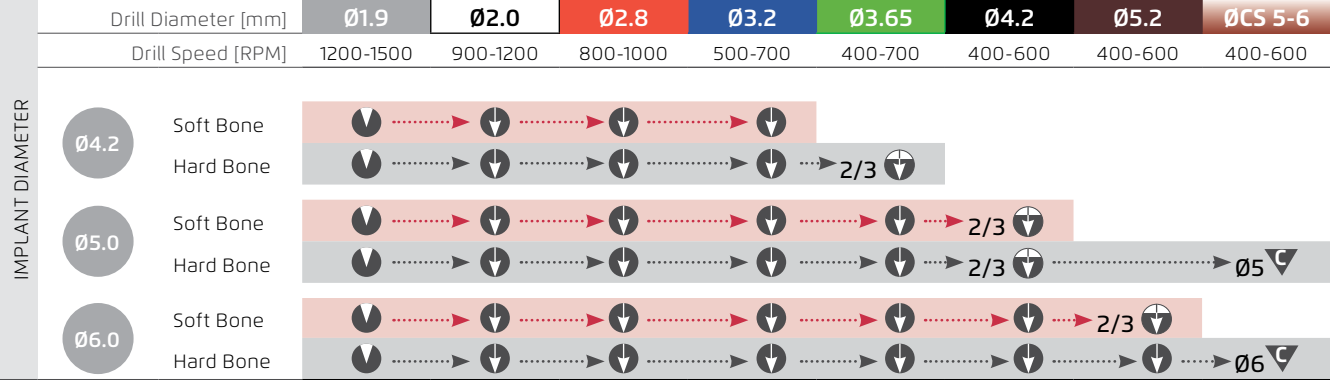
RECOMMENDED DRILL PROTOCOL

TUFF TT

RECOMMENDED STRAIGHT DRILL PROTOCOL



RECOMMENDED STEP DRILL PROTOCOL



Drill to mark osteotomy site

Drill osteotomy to implant length

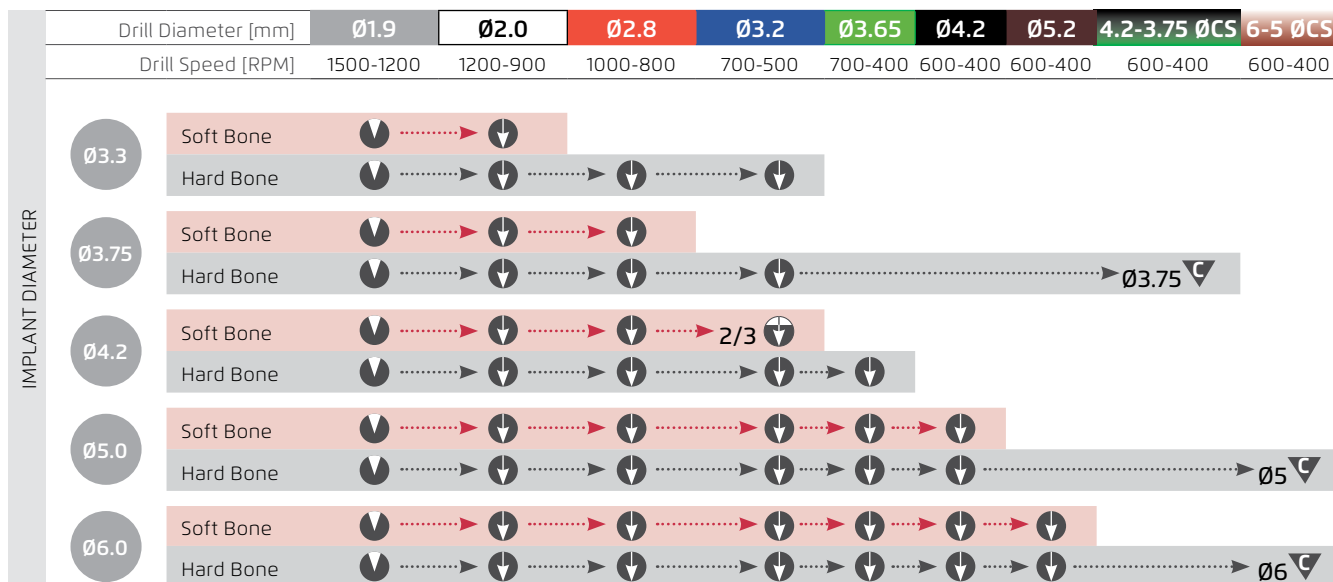
Drill osteotomy partially according to implant length

Drill with countersink to prepare the crest

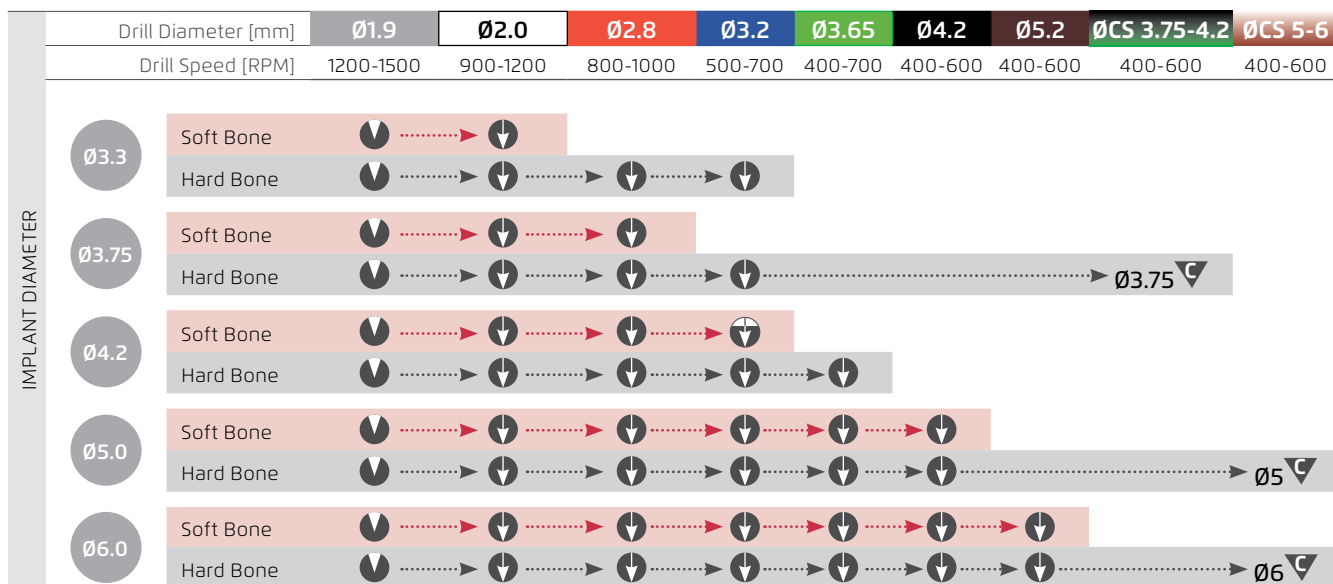
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The implants may be loaded for immediate function when good primary stability (above 35 Ncm) has been achieved and with appropriate occlusal loading.

ONYX

RECOMMENDED STRAIGHT DRILL PROTOCOL



RECOMMENDED STEP DRILL PROTOCOL



	Drill to mark osteotomy site		Drill osteotomy to implant length		Drill osteotomy partially according to implant length		Drill with countersink to prepare the crest
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The implants may be loaded for immediate function when good primary stability (above 35 Ncm) has been achieved and with appropriate occlusal loading.

RECOMMENDED DRILL PROTOCOL

CORTICAL

RECOMMENDED STRAIGHT DRILL PROTOCOL

Drill Diameter [mm]		Ø1.9	Ø2.0	Ø2.8	Ø3.2	Ø3.65
Drill Speed [RPM]		1200-1500	900-1200	800-1000	500-700	400-700
IMPLANT DIAMETER	Ø4.0	Soft Bone				
		Hard Bone				
	Ø5.0	Soft Bone				
		Hard Bone				
	Ø6.0	Soft Bone				
		Hard Bone				

RECOMMENDED STEP DRILL PROTOCOL

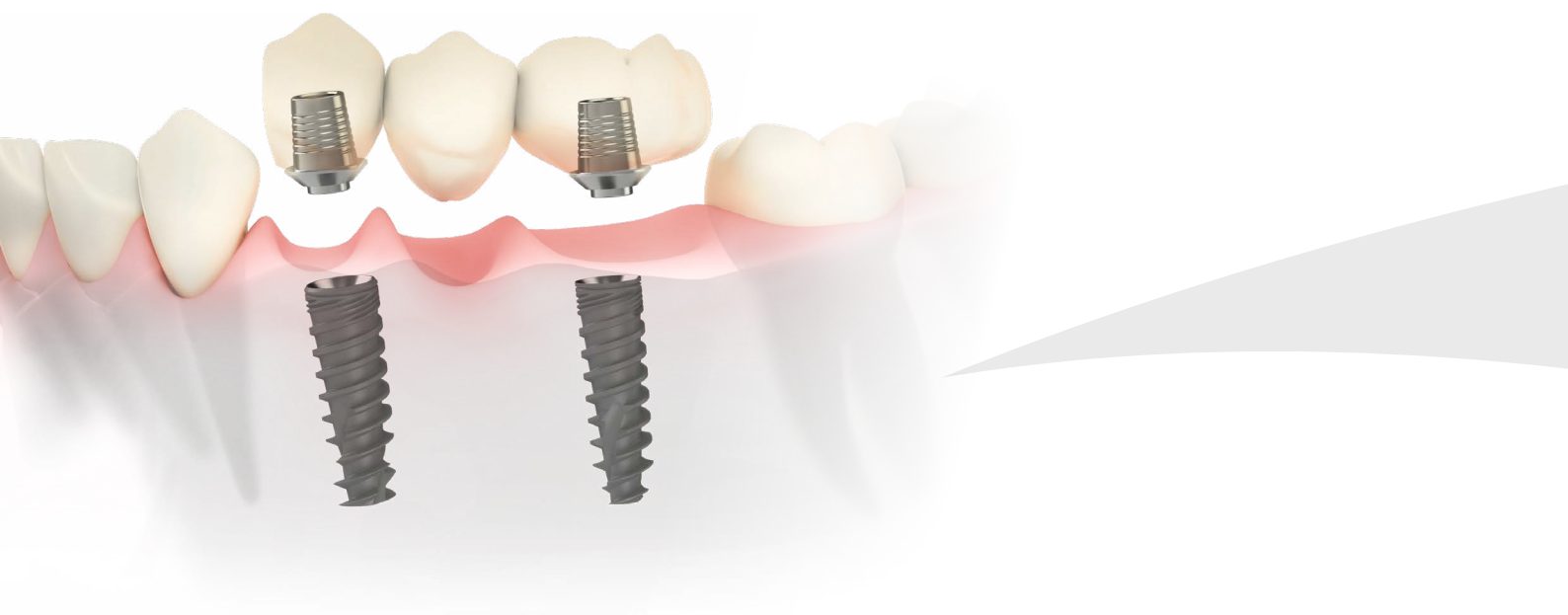
Drill Diameter [mm]		Ø1.9	Ø2.0	Ø2.8	Ø3.2	Ø3.65
Drill Speed [RPM]		1200-1500	900-1200	800-1000	500-700	400-700
IMPLANT DIAMETER	Ø4.0	Soft Bone				
		Hard Bone				
	Ø5.0	Soft Bone				
		Hard Bone				
	Ø6.0	Soft Bone				
		Hard Bone				

Drill to mark osteotomy site

Drill osteotomy to implant length

Drill osteotomy partially according to implant length

* The recommended drill protocol procedure should not replace the dentist's/surgeon's judgment. The implants may be loaded for immediate function when good primary stability (above 35 Ncm) has been achieved and with appropriate occlusal loading.



CLINICAL RESEARCH

The Noris Medical Dental Implants system is cleared for marketing in Europe and USA.

A total of 27 implants were placed in 7 patients (5 Male and 2 Female) during years 2015-2021 in Israel Bnai Zion Medical Center. In the following report we present the long-term results of several patients implanted with the Tuff Implants. This retrospective study included 7 patients (2 females and 5 males) with 27 Tuff implants. The patients were on average 64 (46–75) years old.

The results of one site - Bnai Zion Medical Center - are presented in this report. Patients required dental extraction and immediate replacement. The implants were placed during the years 2015 to 2021. Patients were treated with Tuff Noris Medical Dental Implants. Panoramic radiographs and CT were taken Pre-op and Panoramic radiographs immediately after implantation and after at least 6 month follow up. The criteria for successful implants in the first year after implantation is 1.0 mm of Bone loss. After first year is 0.2 mm annually. Bone density was between III- IV low density cancellous bones. End point: A continuous stability of implant with no inflammation after at least 6 months was considered as a success end point. The results in all these cases demonstrated that bone is not lost in long term follow-up (1.1-4.2 years). Moreover, there is no soft tissue down-growth to interfere with the bone healing.

The rehabilitation was successfully completed on most of the implants with no adverse event reported by the patient.

For more info and results please scan here



CLINICAL CASES



Performed by
Dr. Gadi Schneider
Periodontist

Immediate Implantation

In this article we present the case of a 65-years-old male patient, With generalized severe chronic periodontitis and teeth 12-21 with 2-3 mobility grade and hopeless prognosis. The patient demands are for teeth in a day, meaning extraction, immediate implantation, bone augmentation and immediate loading in the same day.

Nowadays we find more and more cases of patients who demand fast and effective solutions have severe bone atrophy, so to meet these for their tooth loss problems. Often, these demands we should offer them immediate implantation and loading with classic implants and with respective GBR (guided bone regeneration) surgeries. This type of treatment is reliable and quite predictable.

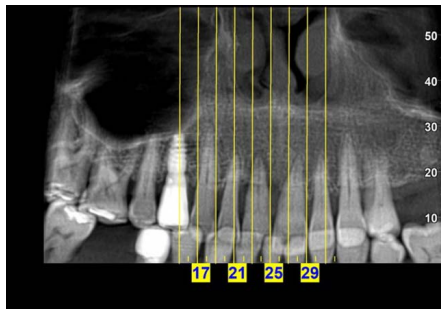
CLINICAL CASE

A 65-year-old man comes to our clinic with generalized severe chronic periodontitis, hopeless 12-21 teeth. he underwent a clinical examination, photographs, a complete RX series, and a CT scan. We plan periodontal treatment that includes initial preparation, root planning, and re-evaluation after 1 month., later extraction of teeth 12-21 and immediate placement of TUFF classic implants in areas 12-21. Given the demands of the patient to have teeth immediately and not to wait too long to finish the whole treatment, leads us to choose immediate implantation and loading combined with bone augmentation and flapless surgery.

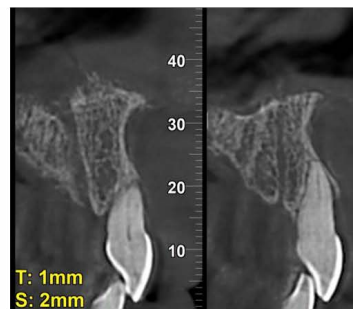
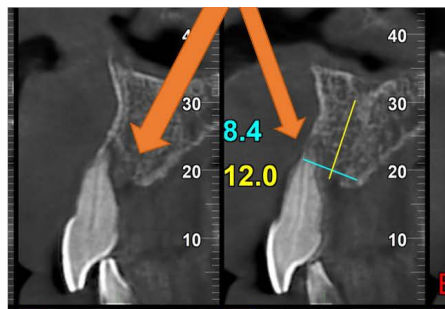
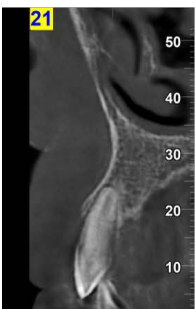
After the initial preparation, we proceeded to extractions and 3 TUFF implant placement surgery that we had planned... All of them are placed with a minimum torque of 40Ncm so we can use the upper implants to support the cemented-retained provisional immediate prosthesis.



Pre surgery



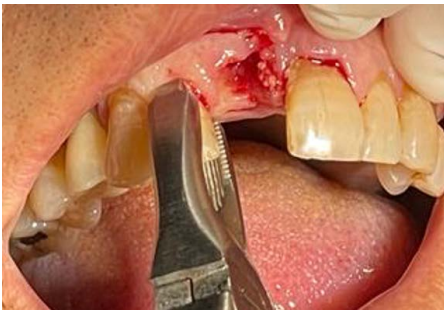
Panoramic view



*Tooth 11
Periapical and buccal defects*

SURGICAL PROCEDURE

- Extractions 12-21
- Preparing a pouch in the buccal part of 11
- Intact buccal plates
- Placing collagen membrane



Extraction and debridement of the inflamed tissues



Using molt 9 to separate the periost Around the buccal defect without raising flap



1. Checking the size of the collagen membrane



2. Trimming the membrane to cover the defect



3. Placing the collagen membrane Between the periost and the bone



4. penetrating the collagen membrane Until the upper part is under the buccal tissue



SURGICAL PROCEDURE

- Drill 2 mm – guiding pins and parallel examination
- Palatal position and inclination
- Intact buccal plates



1. Drilling with 2mm drill Palatal position and inclination



2. Checking paralelism and directions

SURGICAL PROCEDURE

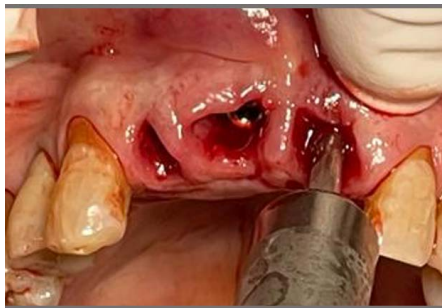
- Drill 2.8 mm – 3.2 mm only expanding the coronal part of the osteotomy
- Placing 3 3.75/11.5 Tuff implants 11-21-22
- Insertion torque > 40 Ncm
- Placing bovine bone between the implants and buccal plates



3. Drilling 2.8mm and position the implant



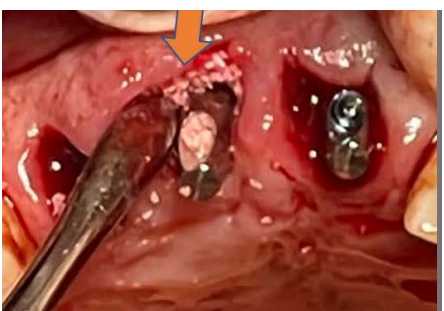
4. Placing 3.75/13 mm TUFF implants



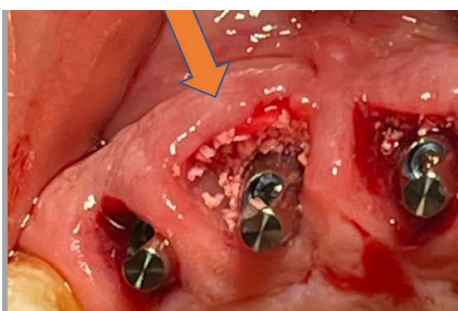
Placing 3 3.75/13 mm TUFF implants
With control on the palatal position.
Final torque > 35 Ncm



Placing 3 15 degrees 9 mm Noris abutment
Closing with torque ratchet at 30 Ncm



Placing Bovine bone into the socket of
Implant 11 between the implant and the
Collagen membrane



Placing Bovine bone into the rest of the
sockets of Implants 12 21
between the implant and the buccal plate

DISCUSSION

The success of the procedure depends on the skill of the clinician since it is not an easily used technique and not all surgeons are qualified to perform it. On the other hand, late implants are much easier to place, since their use has become very widespread in recent years, and they have become a conventional treatment.

Even so, for the teeth-a-day cases, the clinician must also have certain skills, since we are talking about cases of large maxillary bone atrophies where the placement of conventional implants is done with regenerative techniques of certain complications, such as sinus lifts bone augmentations, soft tissues repairs and flapless surgeries.

On the other hand, we believe that time can be a more determining factor since nowadays, the demands of our patients are increasingly greater. If we place immediate implants, we could have the complete rehabilitation finished, with a definitive prosthesis, in 4/5 months, while late implants with bone grafts would take longer than that time.

In addition, the indisputable advantage of being able to wear a fixed temporary prosthesis from the first moment, while, if we perform late implants, the only prosthesis we could use would be a removable one, and not in all cases.

SUMMARY AND CONCLUSIONS

- Immediate implantation and loading is the treatment of choice if it is possible according to the diagnosis
- The surgery should be done flapless if there are no soft or very large bone defects present
- The procedure is very technique-sensitive and hence high surgical skills are needed
- The position of the implants is the key factor for the best clinical and aesthetic results
- Immediate implantation and loading procedures have very high success rates the same as conventional implantation and even higher in a lot of articles



Clinical Cases



Performed by
Dr. Gadi Schneider
Periodontist

Immediate Implantation and Loading

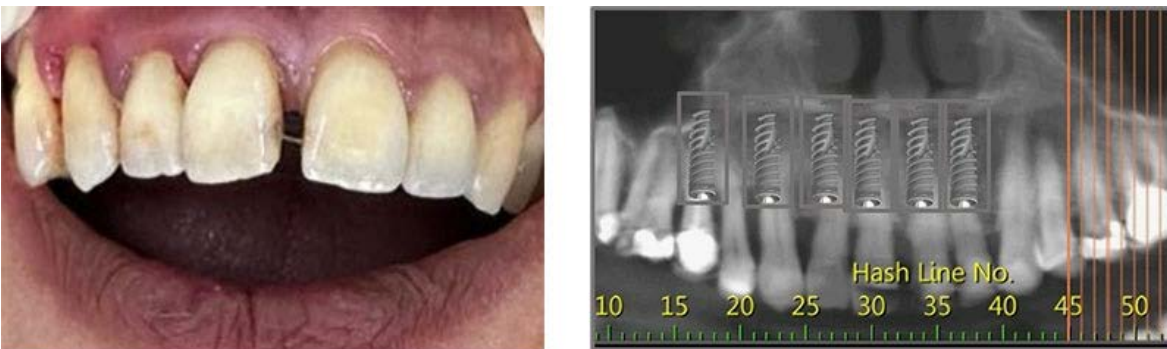
In this article, we present the case of a 56-year-old female patient, With generalized severe chronic periodontitis and teeth 15-22 with 2-3 mobility grade and a hopeless prognosis. The patient demands are for teeth in a day meaning extraction, immediate implantation, bone augmentation, and immediate loading on the same day.

Nowadays we find more and more cases of patients who demand a fast and effective solution for their tooth loss problems. Often, these patients have severe bone atrophy, so to meet these demands we should offer them immediate implantation with classic implants and loading with their respective GBR (guided bone regeneration) surgeries since this type of treatment is reliable and quite predictable.

CLINICAL CASE

A 56-year-old woman comes to our clinic with generalized severe chronic periodontitis, hopeless 15-22 teeth. She underwent a clinical examination, photographs, a complete RX series, and a CT scan. We plan periodontal treatment that includes initial preparation, root planning, and re-evaluation after 1 month., later extraction of teeth 15-22 and immediate placement of TUFF classic implants in areas 15-22. Given the demands of the patient to have teeth immediately and not to wait too long to finish the whole treatment, leads us to choose immediate implantation and loading combined with bone augmentation and flapless surgery.

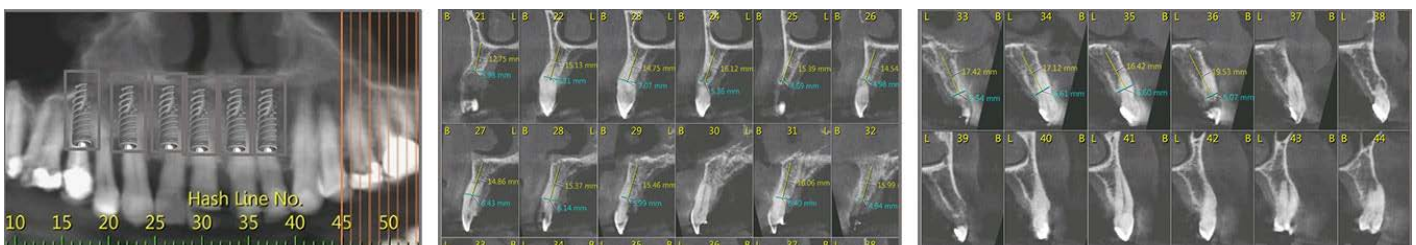
After the initial preparation, we proceeded to extractions and 6 TUFF implant placement surgery that we had planned. All of them are placed with a minimum torque of 40Ncm so we can use the upper implants to support the cemented-retained provisional immediate prosthesis that the patient will wear. The patient's mouth is scanned with a Sirona scanner and sent to the laboratory where a PMMA prosthesis is manufactured and placed in the patient after the implantations.



Initial photo and CT scan of the patient

TREATMENT PLAN

- Periodontal treatment and re-evaluation
- Extraction 15-22
- Immediate implantation of TUFF implants 15-14-13-11-21-22
- Bone augmentation – in the sockets between the implants and the buccal plates
- Immediate loading with PMMA bridge 15-22
- Final rehabilitation – 15-22 screw-retained zirconia bridge



SURGICAL PROCEDURE

- Extractions 15-22
- Drill 2 mm – guiding pins and parallel examination
- Palatal position and inclination
- Intact buccal plates
- Placing 6 3.75/11.5 Tuff implants 15-14-13-11-21-22
- Drill 2.8 mm – 3.2 mm only expanding the coronal part of the osteotomy
- Palatal position and inclination
- Intact buccal plates
- Placing bovine bone between the implants and buccal plates
- Insertion torque > 40 Ncm



DISCUSSION

The success of the procedure depends on the skill of the clinician since it is not an easily used technique and not all surgeons know how to perform it. These implants, On the other hand, late implants are much easier to place, since their use has become very widespread in recent years, and they have become a conventional treatment.

Even so, for the "teeth in a day" cases, the clinician must also have certain skills, since we are talking about cases of large maxillary bone atrophies where the placement of conventional implants is done with regenerative techniques of certain complications, such as sinus lifts bone augmentations, soft tissues repairs, and flapless surgeries.

Therefore, the level of skill may be an important point in determining between one technique and another, but it is by no means a determining factor.

On the other hand, we believe that time can be a more determining factor since nowadays, the demands of our patients are increasingly greater. If we place immediate implants, we could have the complete rehabilitation finished, with a definitive prosthesis, in 4/5 months, while late implants with bone grafts would take longer than that time.

In addition, the indisputable advantage of being able to wear a fixed temporary prosthesis from the first moment, while, if we perform late implants, the only prosthesis we could use would be a removable one, and not in all cases.

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Performed by
Dr. Fabio M. Filannino
DDS

Noris Cortical Implants for Full Arch Immediate Loading

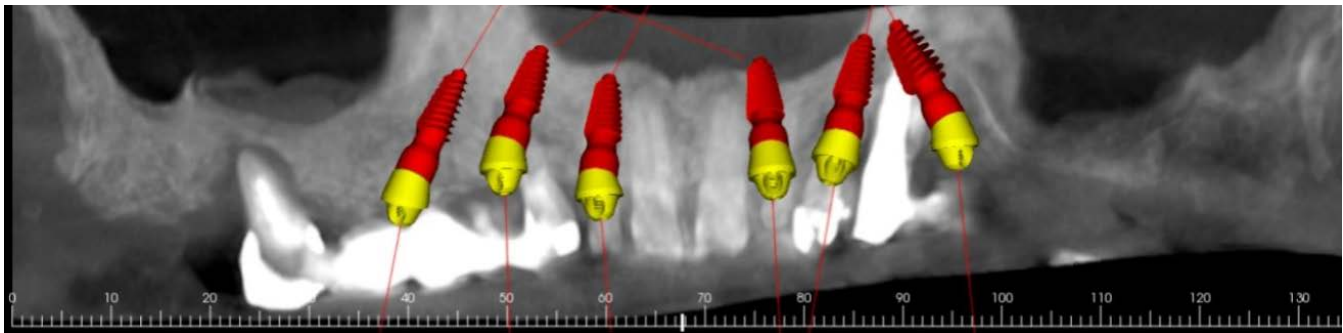
The Noris cortical implant enables bi-cortical anchorage thus increasing the primary stability which is required for immediate loading.

The Noris Cortical System can be used in extraction sites. It's available in different sizes to suit any implantation site. The sharp and deep threads, orthogonal to occlusion load are the key for remarkable initial stability.

CLINICAL CASE

The patient presented here is a nice lady who wants her upper jaw to be rehabilitated with a fixed prosthesis.

From the CBCT she has only 3 frontal teeth that can be maintained but with periodontal problems, so we decided together to extract them all and to restore the maxilla as a full arch on 6 implants using guided surgery and immediate loading protocol.



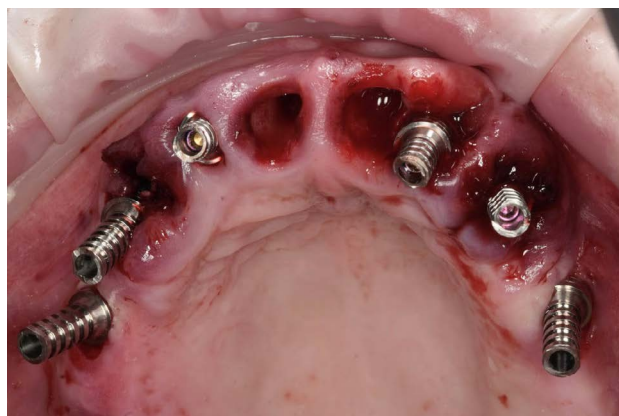
Cortical implants by Noris Medical were selected to improve primary stability.

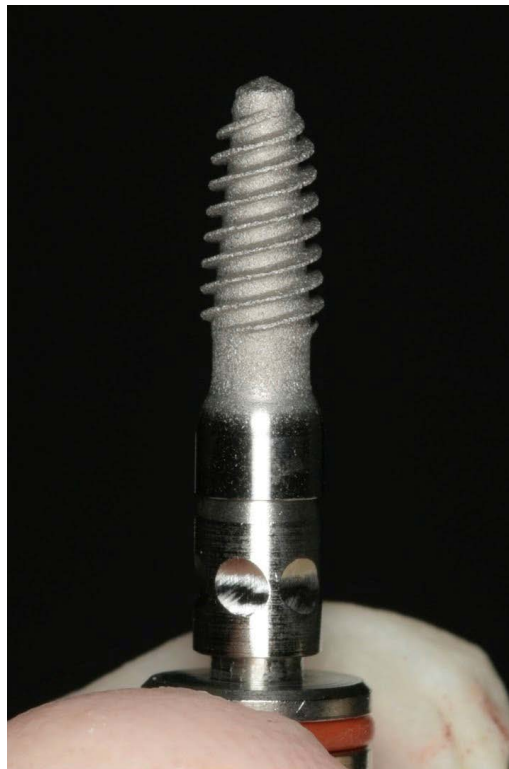
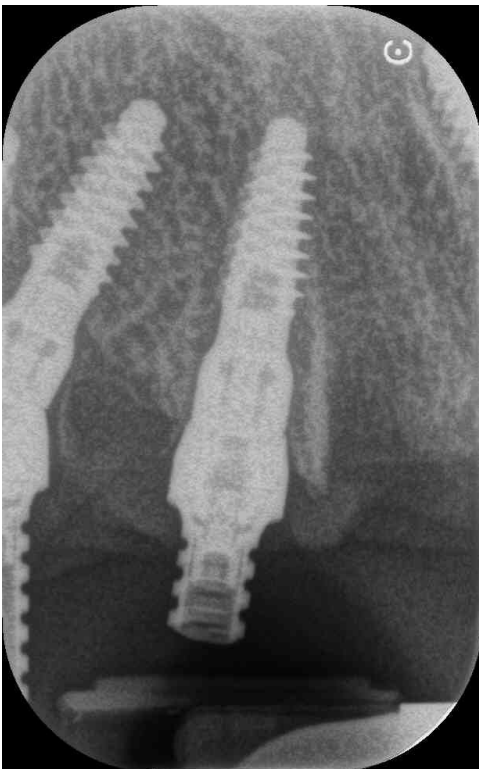
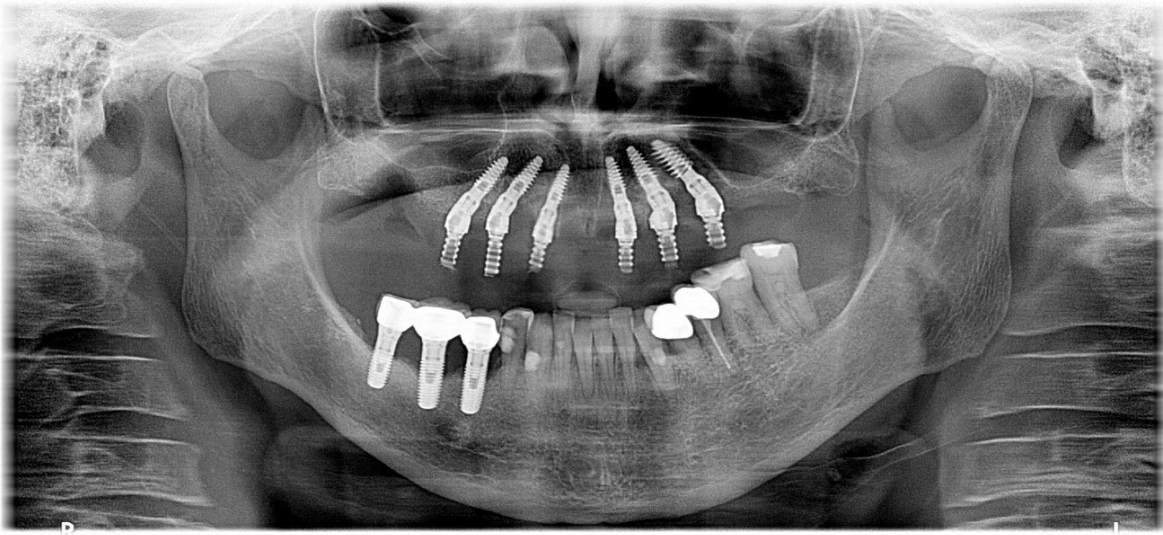
After the old prosthesis was removed, the right maxillary second and the left first premolar came out with it.

Cortical implants can be positioned bone level, tissue level or minimally subcrestal; In this case we've chosen to insert them bone level.

After the implant insertion we've used 30° and 17° degrees MUA to correct the angulation as we planned before.

After fixing the temporary cylinders with the full arch prosthesis, our laboratory spent some time refining the prosthesis that was delivered to the patient just after 6 hours from the first intraoral picture when we started the surgery.





Cortical Implant gives us:

- Self-tapping
- High primary stability
- Minimal drilling
- Immediate loading – an excellent solution for implantation in extractions sites



Performed by
Dr. Vladimir Garcia Lozada
DDS, MS, PhD

All-on-X treatment with TUFF Noris Medical Implant System

This patient is a 54-year-old female ASA 1 classification, wanting to have fixed teeth in the maxilla.

Upon examination, we noted teeth mobility grade 3 in #13, 22, 23, a radicular rest in #12 with bone defect caused by a cyst, radicular rest in #17 and the tooth #16 invading the posterior occlusal space.

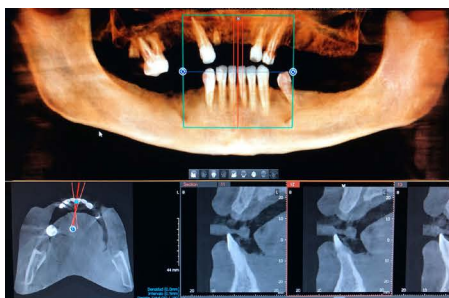
CLINICAL CASE

Local anesthesia was administered, and the remanent hopeless teeth were extracted, a crestal incision was made, with a full-thickness flap, cyst enucleation and debridement of the maxilla bone was performed.

6 Noris Medical TUFF implants System were placed and distributed properly in the maxilla.

The torque insertion of each implants were over 70 Ncm, and flap were closed with 3-0 silk sutures. There were no complications and the protocol of Immediate loading of the maxilla (provisional fixed teeth the same day) was done.

After 5 month of healing the final fixed restoration was performed, and now a day the rehabilitation has 5 years of follow-up with a very happy patient with life quality recovering.



1a. Preop



1b. Preop



1c. Preop



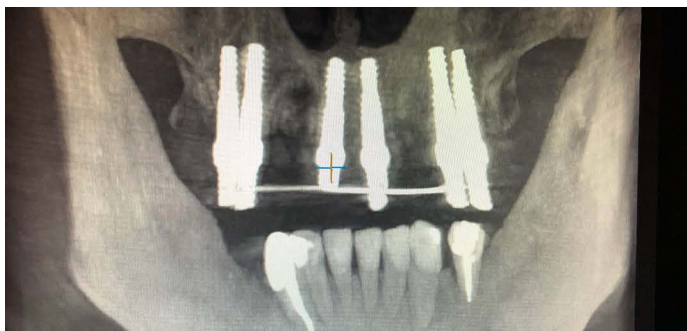
2a. Clinical



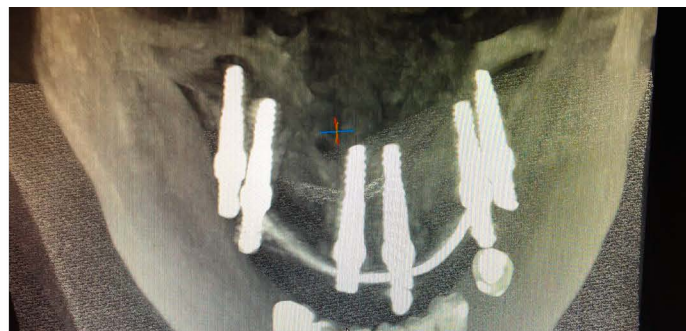
2b. Clinical



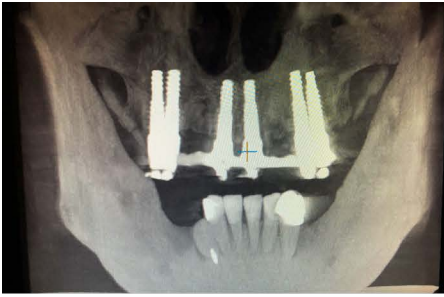
2c. Clinical



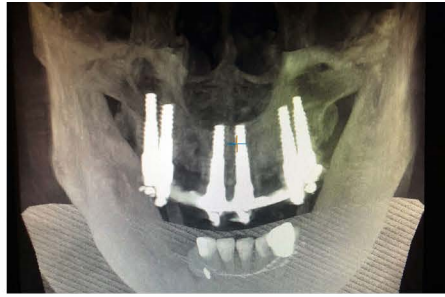
3a. postop immediate loading



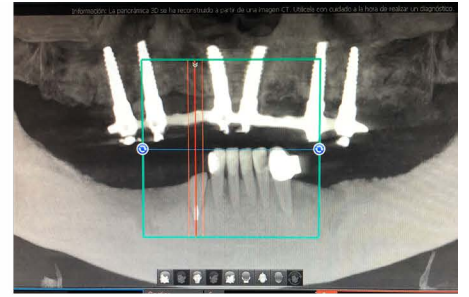
3b. postop immediate loading



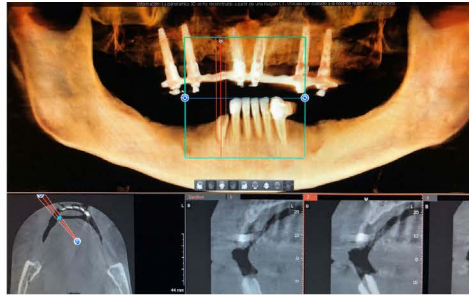
4a. Final restoration



4b. Final restoration



4c. Final Restoration



5a. 5 years follow up



It's a
Classic
Case

