i-Fix Implant

"i-Fix implants: Made in India for the World"

Dr. Mohammad Shahnawaz

Kamal Medtech
Who we are?

Global Footprint

Unit 1 - Manufacturing Facilities
at Yamuna Nagar -200Km north of Delhi

Unit 2 - Casting & Machining Facilities at Yamuna Nagar

Unit 3 - New Facility at IMT Faridabad, NCR Delhi

Kamal Medical Devices Brands

Stenoflex
Sirolimus Eluting Coronary Stent System

Everoshine
Everolimus Eluting Coronary Stent System

i-Fix™
POWERING SMILES

The Beginning……

Research Partners

Indian Institute of Technology, Delhi

iFix Dental Implant has been Conceptualized, Designed & Developed by Indian Institute of Technology (IIT), Delhi in collaboration with Maulana Azad Institute of Dental Sciences (MAIDS), Delhi

Maulana Azad Institute of Dental Sciences
New Delhi

iFix Dental Implant has been Clinically studied at Maulana Azad Institute of Dental Sciences, New Delhi

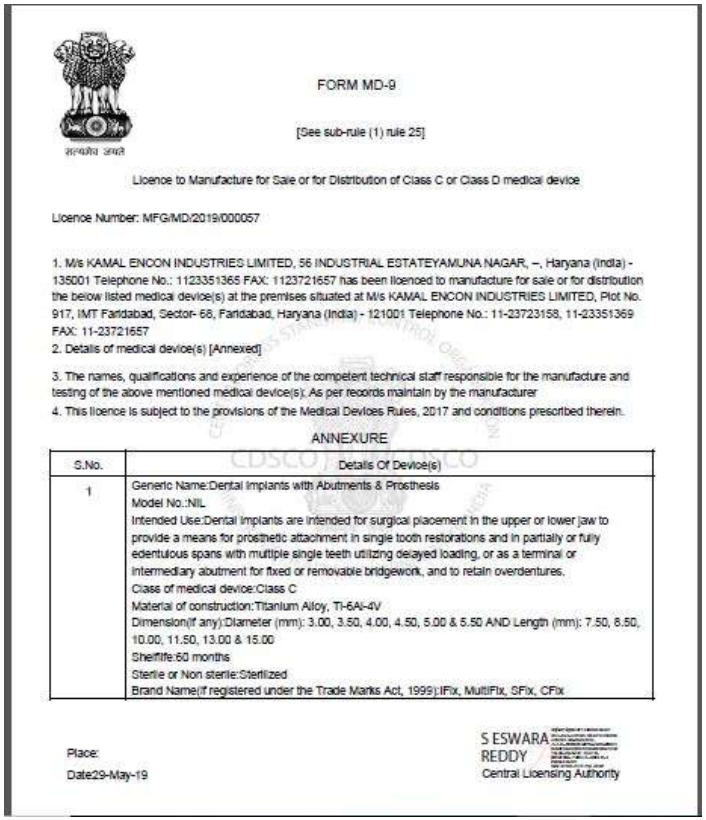
Council of Scientific and Industrial Research

Under the Patronage of Council of Scientific & Industrial Research (CSIR) - NMITLI Program

kamal

Manufacturers of high quality medical devices of global standards

Certifications: MDR 2017 & ISO 13485



FORM MD-9

[See sub-rule (1) rule 25]

Licence to Manufacture for Sale or for Distribution of Class C or Class D medical device

Licence Number: MFG/MD/2019/000057

1. M/s KAMAL ENCON INDUSTRIES LIMITED, 56 INDUSTRIAL ESTATEYAMUNA NAGAR, --, Haryana (India) - 135001 Telephone No.: 1123351365 FAX: 1123721657 has been licenced to manufacture for sale or for distribution the below listed medical device(s) at the premises situated at M/s KAMAL ENCON INDUSTRIES LIMITED, Plot No. 917, IMT Faridabad, Sector- 68, Faridabad, Haryana (India) - 121001 Telephone No.: 11-23723158, 11-23351369 FAX: 11-23721657
2. Details of medical device(s) [Annexed]

3. The names, qualifications and experience of the competent technical staff responsible for the manufacture and testing of the above mentioned medical device(s): As per records maintain by the manufacturer
4. This licence is subject to the provisions of the Medical Devices Rules, 2017 and conditions prescribed therein.

ANNEXURE

S.No.	Details Of Device(s)
1	Generic Name:Dental Implants with Abutments & Prosthesis Model No.:NIL Intended Use:Dental implants are intended for surgical placement in the upper or lower jaw to provide a means for prosthetic attachment in single tooth restorations and in partially or fully edentulous spans with multiple single teeth utilizing delayed loading, or as a terminal or intermediary abutment for fixed or removable bridgework, and to retain overdentures. Class of medical device:Class C Material of construction:Titanium Alloy, Ti-6Al-4V Dimension(if any):Diameter (mm): 3.00, 3.50, 4.00, 4.50, 5.00 & 5.50 AND Length (mm): 7.50, 8.50, 10.00, 11.50, 13.00 & 15.00 Shelflife:60 months Sterile or Non sterile:Sterilized Brand Name(if registered under the Trade Marks Act, 1999):IFix, MultiFix, SFix, CFix

Place:
Date29-May-19

S ESWARA REDDY
Central Licensing Authority

| evaluate | assess | certify |

assessors of quality

Certificate No. MD-QMS/91/R/2609

This is to certify that

Kamal Encon Industries Ltd.

Plot No. 917, Sector 68, IMT Faridabad – 121 001, Haryana, India

has been found to conform to the requirements of
Medical Devices - Quality Management System Standard

ISO 13485:2016

This certificate is valid for the following scope :

Design, Development, Manufacture and Sales of :
(1) Interventional Cardiology Products :
-Sirolimus Eluting Coronary Stent System
-Everolimus Eluting Coronary Stent System
(2) Dental Implants and Prosthesis
Manufacture and Sales of Surgical Kits

Initial Certification : 27/07/2019
Valid until : 26/07/2022

ZQA

NABCB
QM 062

Authorised Signatory

Accreditation Body: National Accreditation Board for Certification Bodies (NABCB)

Issuing Authority: Zenith Quality Assessors Pvt. Ltd.

CE CERTIFICATION

CERTIFICATE

EC Certificate No. 1434-MDD-344/2021
Full Quality Assurance System
Directive 93/42/EEC concerning medical devices

Polish Centre for Testing and Certification certifies
that the quality assurance system in the organization:

Kamal Encon Industries Limited
Plot No. 917, Sector-68,IMT, Faridabad 121001,
Haryana, INDIA

for the design, manufacture and final inspection of
medical devices, class IIb

Dental Implants & Prosthesis
The list of medical devices covered by this certificate is provided in the Annexes 1-13

complies with requirements
of Annex II (excluding Section 4) to Directive 93/42/EEC (as amended)
implemented into Polish law,
as evidenced by the audit conducted by the PCBC

Validity of the Certificate: from 25.05.2021 to 27.05.2024

The date of issue of the Certificate: 25.05.2021

The date of the first issue of the Certificate: 25.05.2021

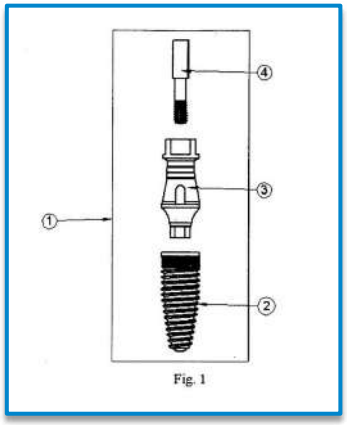
CE 1434

Issued under the Contract No. MD-80/2020
Application No: 138/2020
Certificate bears the qualified signature.
Warsaw, 25/05/2021
Module H2/3/4/5

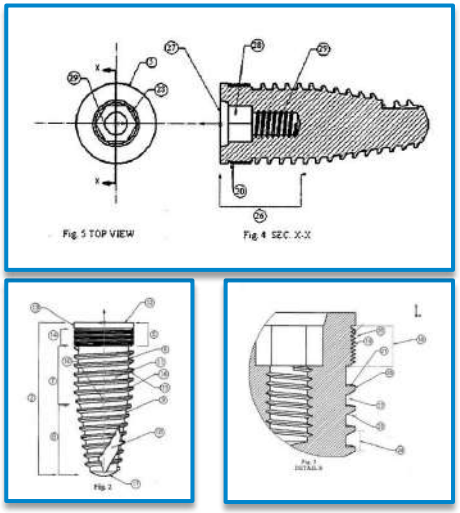
Vice-President

IIT Delhi Conceptual Design - led to Indian and US Patent

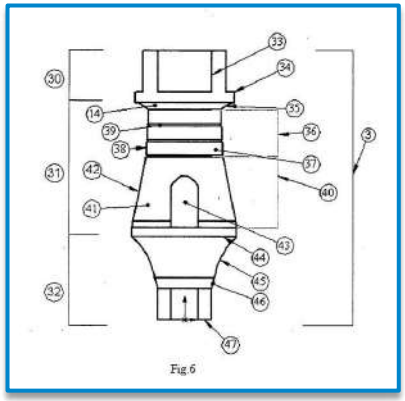
US Patent No. 9,833,300



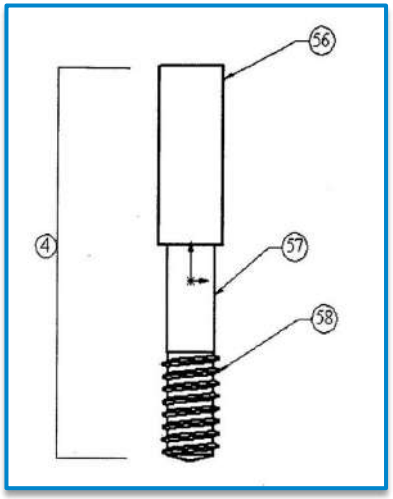
Assembly



Implant



Abutment



Screw

GRADE 5 ELI

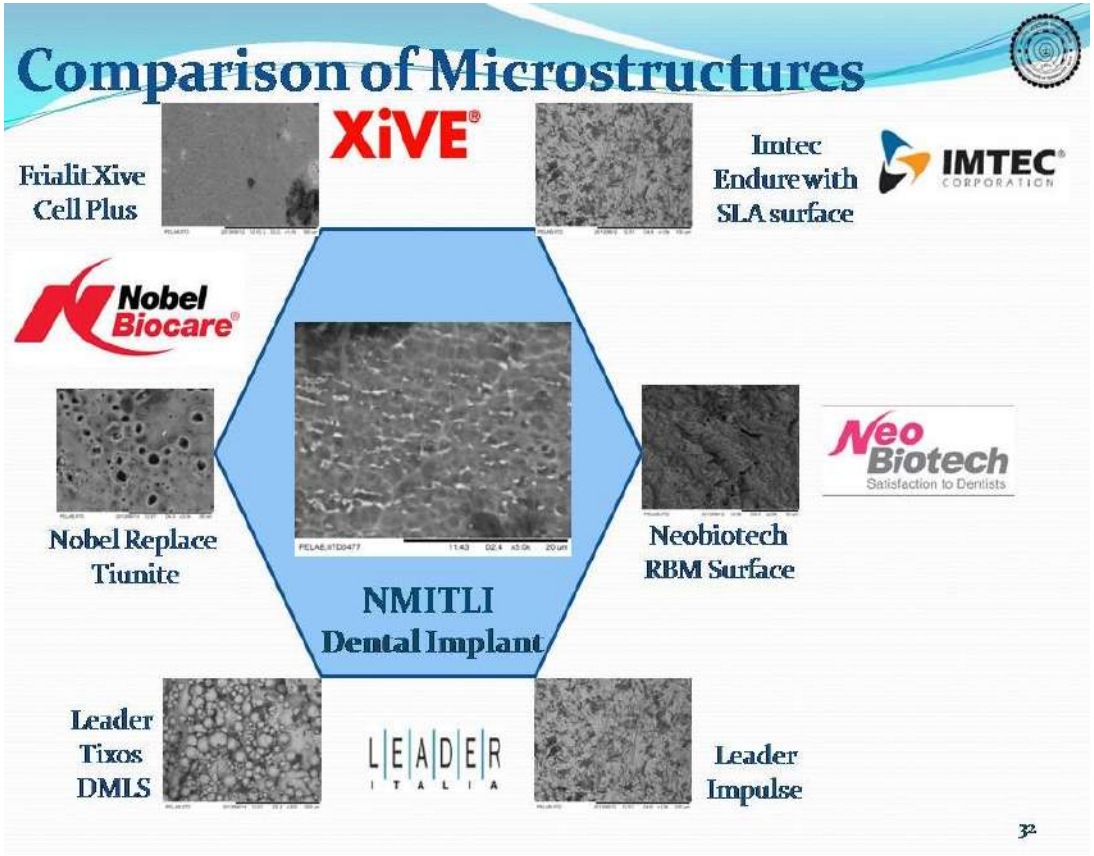
Properties		Advantages
Tensile strength	860 MPa minimum	Extremely high strength/ weight ratio
Elongation	10%	Improved ductility and fracture toughness under static and dynamic loads
Oxygen content	0.13% maximum	
Biocompatibility	Excellent	Direct structural and functional connection between bone and implant surface

Ti Grade 5 ELI

Properties		Advantages
Tensile strength	860 MPa minimum	Extremely high strength/ weight ratio
Elongation	10%	Improved ductility and fracture toughness under static and dynamic loads
Oxygen content	0.13% maximum	
Biocompatibility	Excellent	Direct structural and functional connection between bone and implant surface

- Its properties of biocompatibility, corrosion resistance, high strength, and toughness make it especially suitable for implants and other medical devices.
- ELI is also referred to as Grade 23 Titanium and ASTM F136.
- Ti6Al4V ELI contains reduced levels of oxygen, nitrogen, carbon and iron. ELI is short for “Extra Low Interstitials”, and these lower interstitials provide improved ductility and better fracture toughness for the Ti6Al4V ELI material.

A comparative study with commercially available Implants



SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A unit of Shriram Scientific and Industrial Research Foundation)

An ISO - 9001:2008 Certified Institute

TEST CERTIFICATE

000358830

Issued to :
INDIAN INSTITUTE OF TECHNOLOGY, DELHI
DEPT. OF MECHANICAL ENGINEERING
HAUZ KHAS
NEW DELHI - 110016

J.O.No. 502-111-1839
Reg.No. 1370083
Date 21-02-2015
GC-01 (REV-04)
Your Ref.No. -

Kind Attn: DR NARESH BHATNAGAR , PROFESSOR & ASSO. DEAN [R&D]

Sample Particulars : **Date**

One sample of Dental Implant labelled as Lot No. 1 DT 17.01.2015 was received.

"The sampling was not carried out by Shriram Institute for Industrial Research. The sample details provided in test certificate are based on declaration by the party."

TEST RESULTS

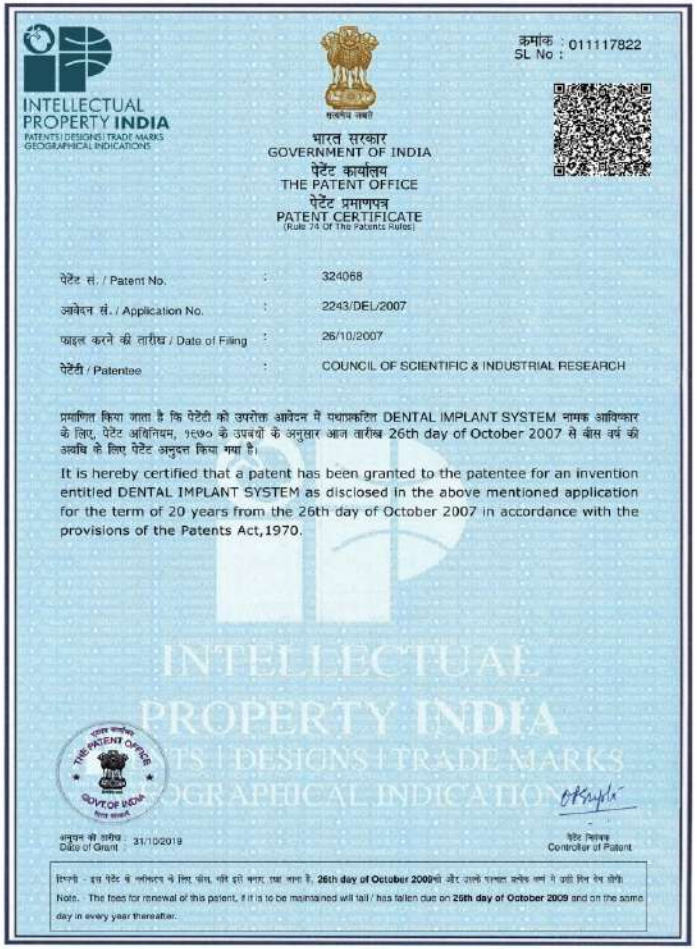
S.No	TEST	RESULT	PROTOCOL
1.	Sterility test	Sample complies with the test for sterility	As per guidelines of USP-37

NOTE: Party asked for above test only.

****

DOR: 06-02-15
DOC: 20-02-15

Indian & US Patent



INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

क्रमांक : 011117822
SL No :

भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 Of The Patents Rules)

पेटेंट सं. / Patent No.	:	324068
आवेदन सं. / Application No.	:	2243/DEL/2007
फाइल करने की तारीख / Date of Filing	:	26/10/2007
पेटेंटी / Patentee	:	COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित DENTAL IMPLANT SYSTEM नामक आविष्कार के लिए, पेटेंट अधिनियम, १९७० के उपबंधों के अनुसार आज तारीख 26th day of October 2007 से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled DENTAL IMPLANT SYSTEM as disclosed in the above mentioned application for the term of 20 years from the 26th day of October 2007 in accordance with the provisions of the Patents Act,1970.

अनुदान की तारीख Date of Grant : 31/10/2019

पेटेंट नियंत्रक Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 26th day of October 2009 को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note.- The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 26th day of October 2009 and on the same day in every year thereafter.

US009833300B2

(12) **United States Patent**
Verma et al.

(10) **Patent No.: US 9,833,300 B2**
(45) **Date of Patent: Dec. 5, 2017**

(54) **DENTAL IMPLANT SYSTEM**

(75) Inventors: **Mahesh Verma**, New Delhi (IN); **Naresh Bhatnagar**, New Delhi (IN); **Abhinav Sood**, New Delhi (IN); **Farukh Faraz**, New Delhi (IN); **Kshitij Sharma**, New Delhi (IN); **Gedela V. Rao**, New Delhi (IN); **Palani S. Kumar**, New Delhi (IN); **Shankar Iyer**, Elizabeth, NJ (US)

(73) Assignee: **Council of Scientific & Industrial Research**, New Delhi (IN)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 188 days.

(21) Appl. No.: **12/739,654**

(22) PCT Filed: **Oct. 23, 2008**

(86) PCT No.: **PCT/IN2008/000700**
§ 371 (c)(1),
(2), (4) Date: **Jan. 28, 2011**

(87) PCT Pub. No.: **WO2009/054005**
PCT Pub. Date: **Apr. 30, 2009**

(65) **Prior Publication Data**
US 2011/0117522 A1 May 19, 2011

(30) **Foreign Application Priority Data**
Oct. 26, 2007 (IN) 2243/DEL/2007

(51) **Int. Cl.**
A61C 8/00 (2006.01)

(52) **U.S. Cl.**
CPC ***A61C 8/005*** (2013.01); ***A61C 8/0022*** (2013.01); ***A61C 8/0025*** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC A61C 8/0048–8/0078
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,588,838 A * 12/1996 Hansson A61C 8/0022 433/173
6,149,432 A * 11/2000 Shaw et al. 433/174
(Continued)

FOREIGN PATENT DOCUMENTS

WO WO 03/030767 A 4/2003
WO WO 2006/081239 A 8/2006
WO WO 2007/022655 A 3/2007

OTHER PUBLICATIONS

Eskitascioglu et al., "The influence of occlusal loading location on stresses transferred to implant-supported prostheses and supporting bone: a three-dimensional finite element study," Feb. 2004, Journal of Prosthetic Dentistry, vol. 91, pp. 144-150.*

Primary Examiner — Matthew Nelson
(74) *Attorney, Agent, or Firm* — Locke Lord LLP; Daniel J. Fiorello; Joshua L. Jones

(57) **ABSTRACT**

A screw type dental implant system (**1**), having a dental implant fixture (**2**), a multifunctional component (**3**) and an abutment screw (**4**). The screw shape dental implant fixture has an external surface having buttress threads on the body and micro threads at the collar. This combination provides the advantages of: improved biomechanics at the implant abutment interface, self-tapping nature to the implant, and minimizing the stresses at the crest of the bone leading to decrease resorption of crestal bone. The multifunctional component serves the purposes of implant mount, impression analog and final abutment and has a single prosthetic platform so one component is compatible with different implant dimensions, which minimizes the inventory needed for the implant system and allows easy handling of the
(Continued)

Kamal Medtech Facility

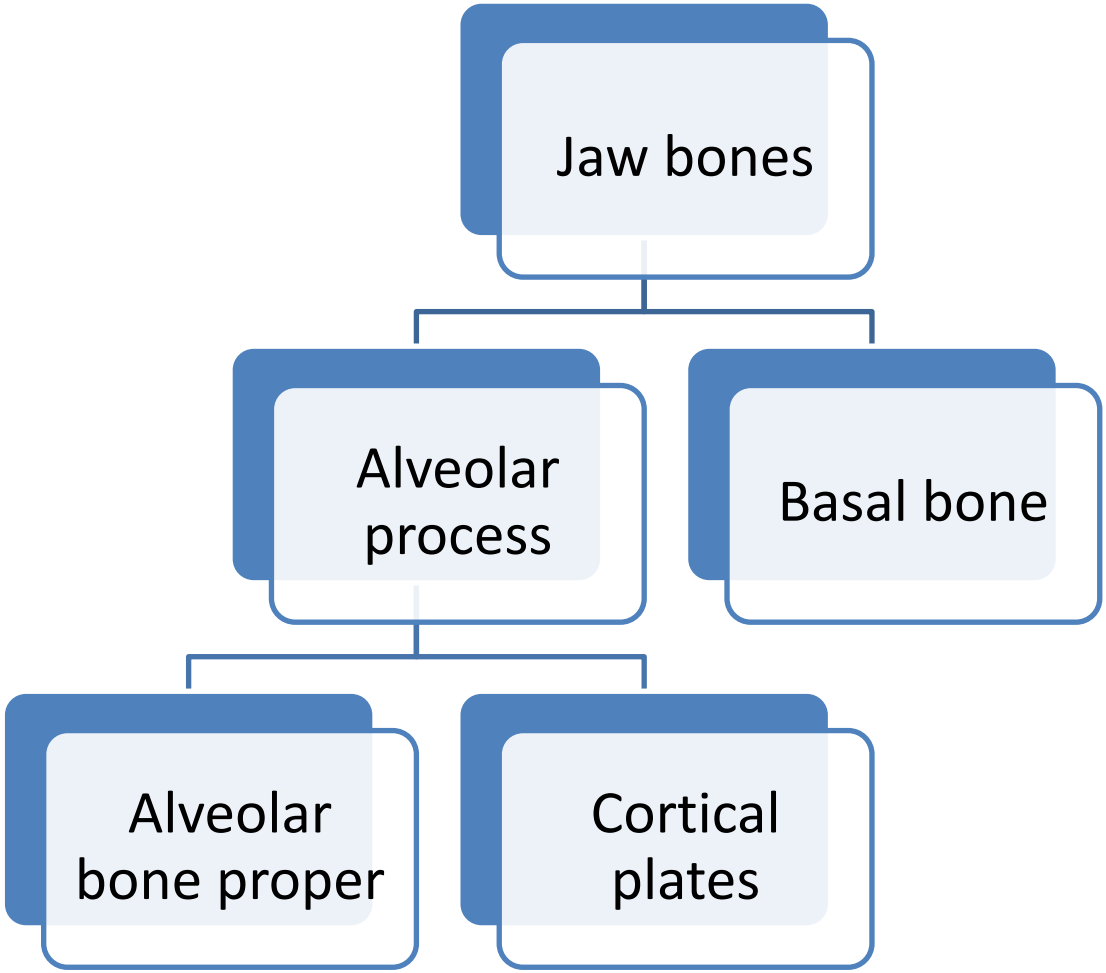
Facility Area - 50000 Sqft
State of the Art Clean Rooms 2017 & ISO 13485
High-tech QC Labs Equipments
Well Trained Man Power

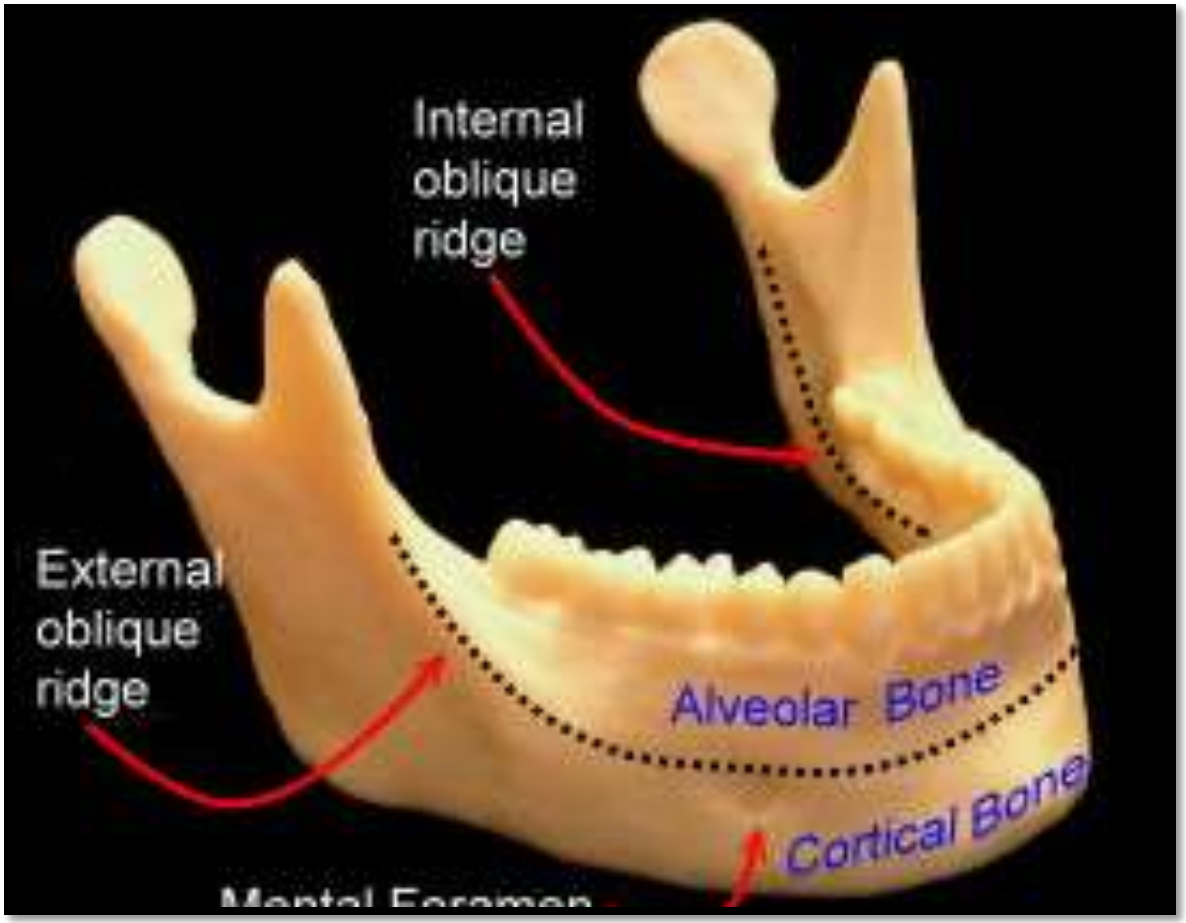
Controlled Area – 20000 Sqft
Compliant with MDR

World Class Mfg

Best-in-Class Technologies

Basal Implants


Jaw bones
Alveolar process
Basal bone
Alveolar bone proper
Cortical plates

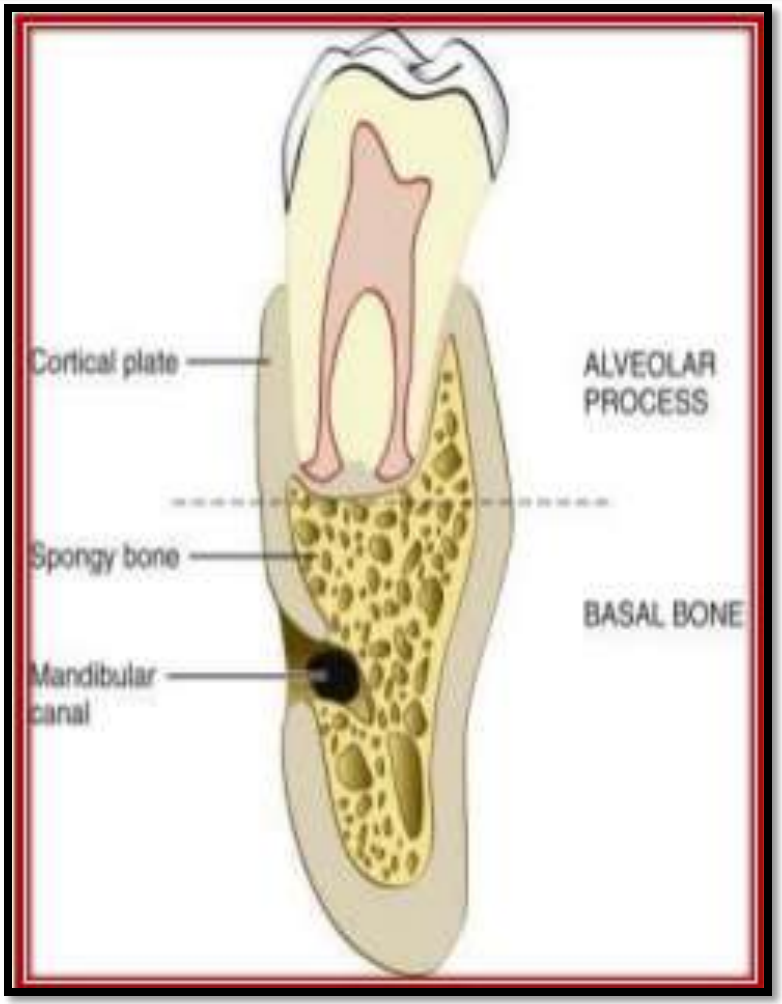

Internal
oblique
ridge
External
oblique
ridge
Alveolar Bone
Cortical Bone

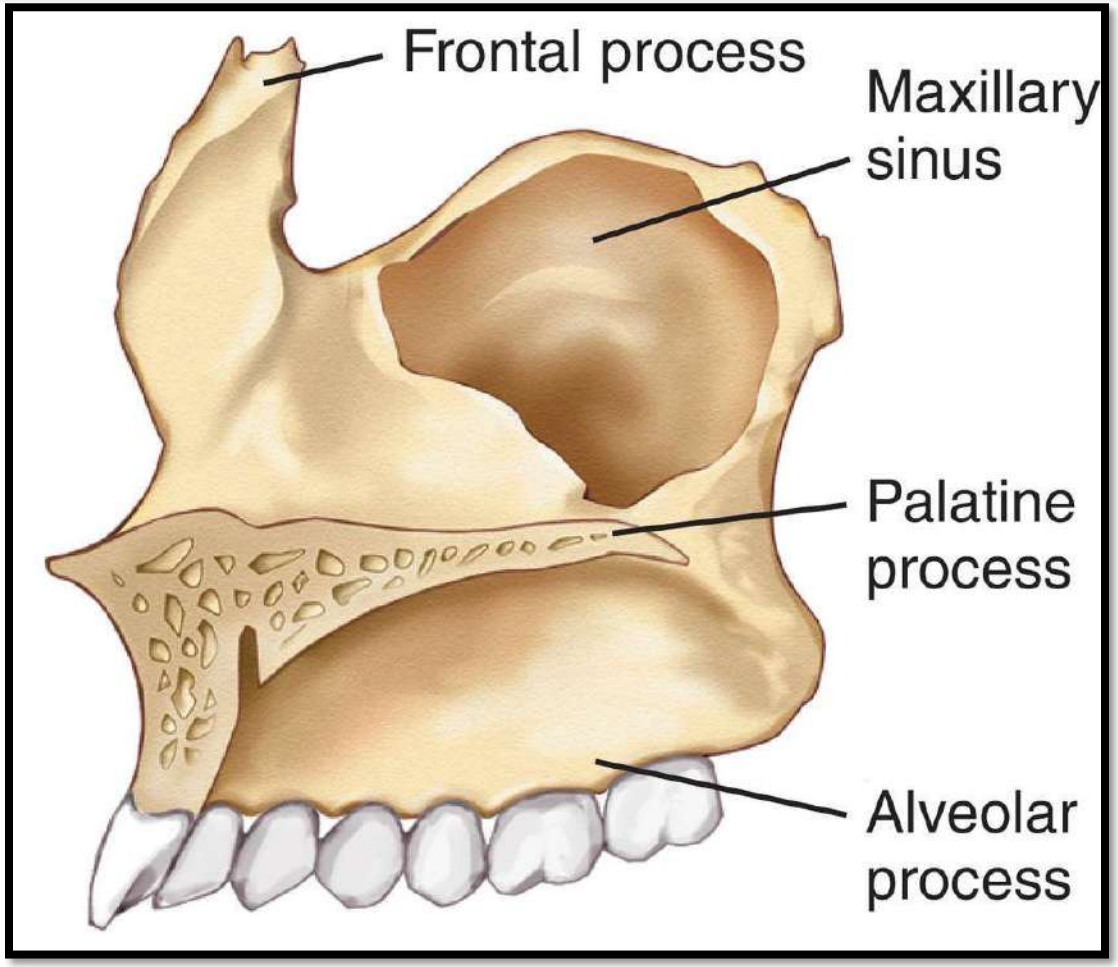
Bicortical Implants

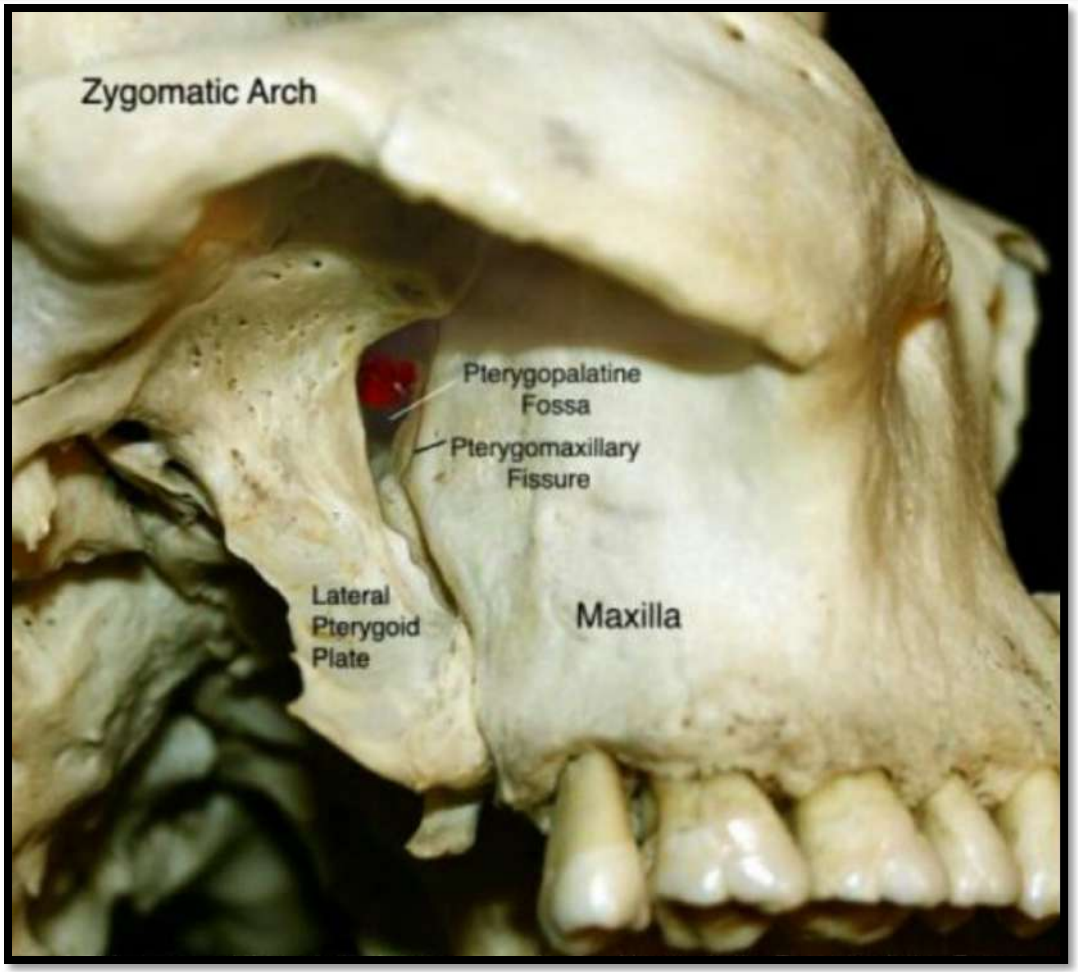
- Bicortical implants engage more than a single cortical plate when placing a dental implant.
- Typically, this is done with the cortical bone of the base of the mandible or the floor of the maxillary sinus or nasal cavity and the crestal cortical bone of the edentulous ridge.
- They depend on osseo-adaptation/mechanical retention
- Osseointegration completes after 20-24 months
- Basal bone is more stable with minimum changes in structure

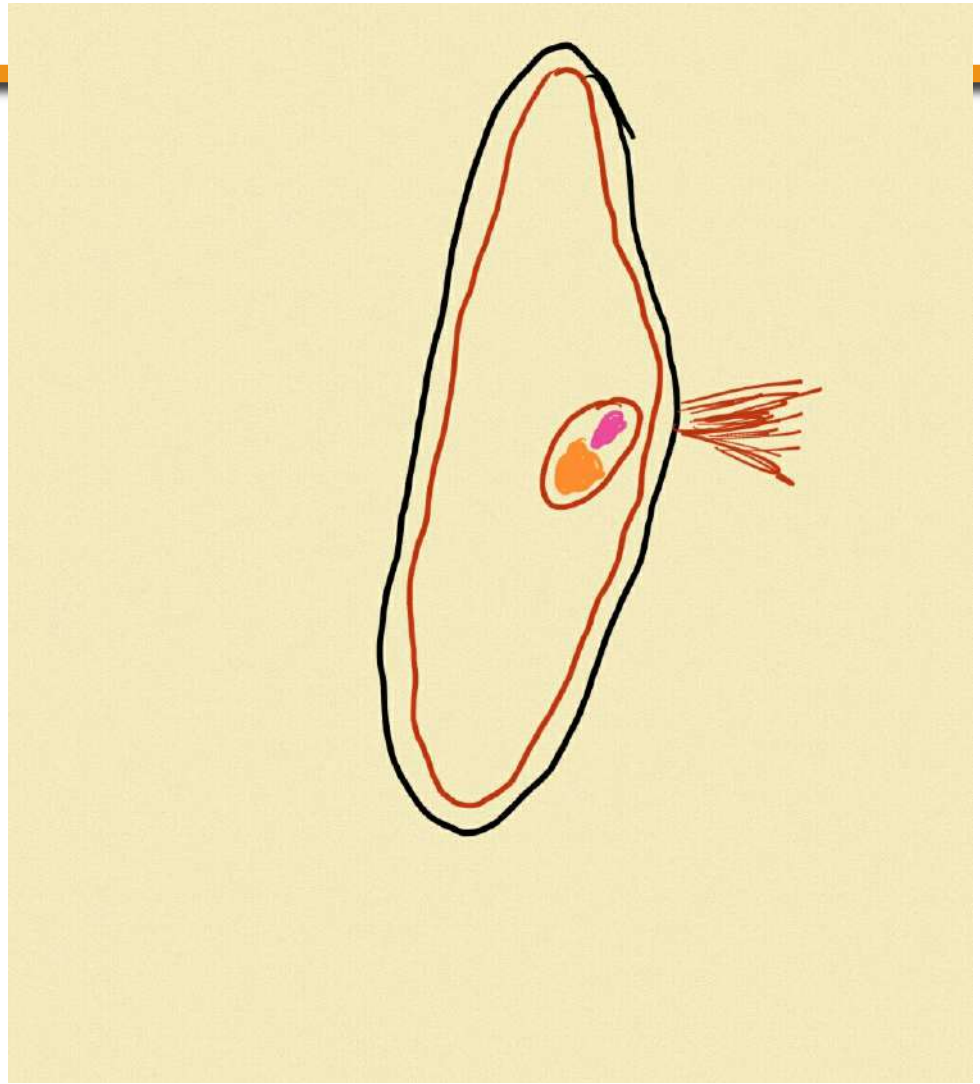
Compressive Implants

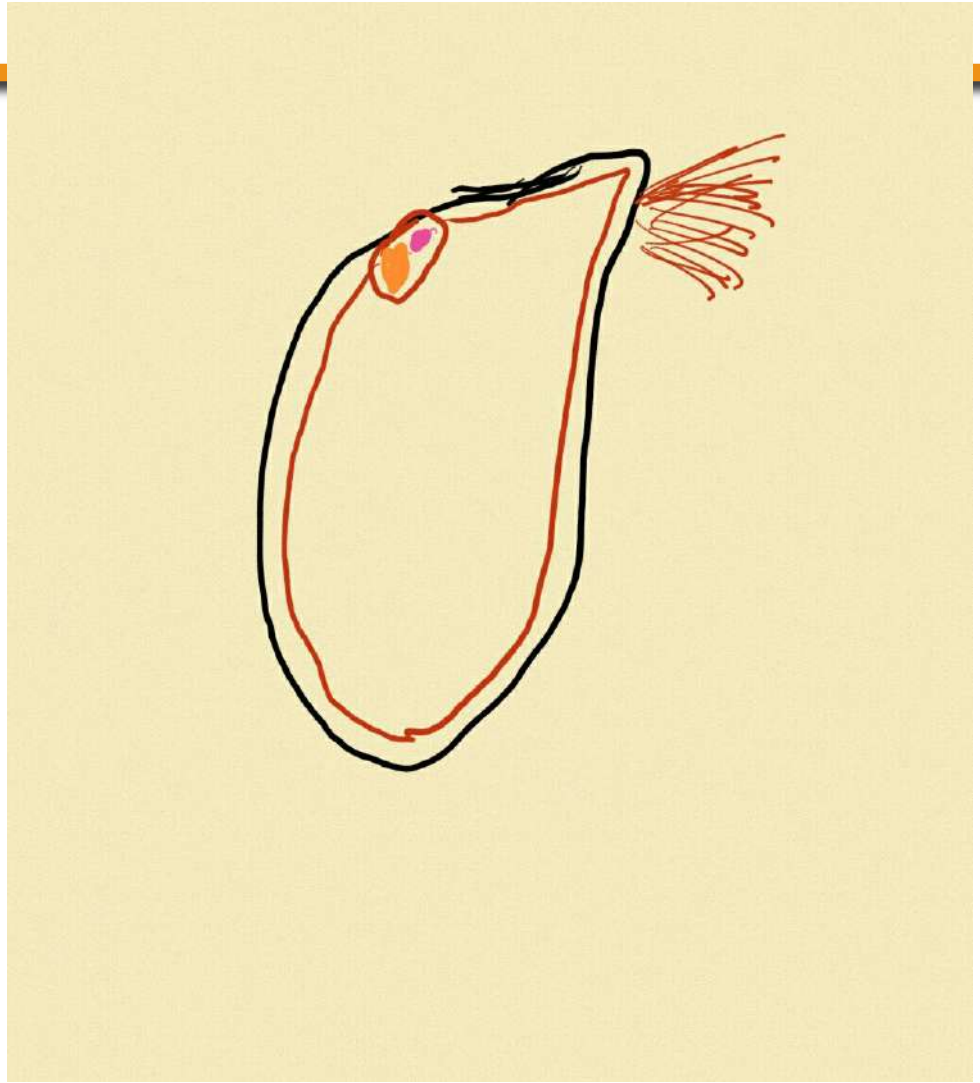
- Compressive implants are one-piece implant with compressive threads.
- The thread bearing portion is SLA treated.
- They are used for single and multiple restorations with immediate loading in the upper and lower jaws with adequate bone tissue.
- Implants can be placed by flap or flapless approach with subcrestal position of the implants.
- Implant placement is also possible immediately following tooth extraction, if sufficient bone tissue is available.


Cortical plate
ALVEOLAR PROCESS
Spongy bone
BASAL BONE
Mandibular canal

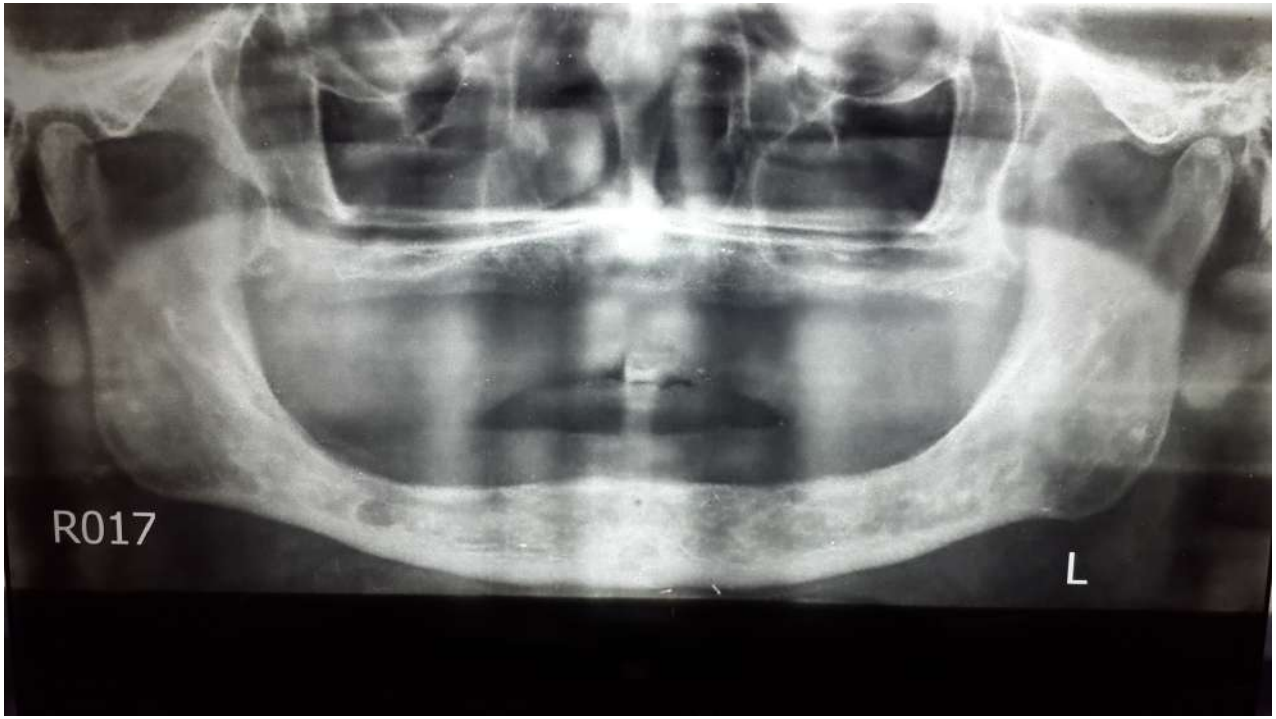

Frontal process
Maxillary sinus
Palatine process
Alveolar process

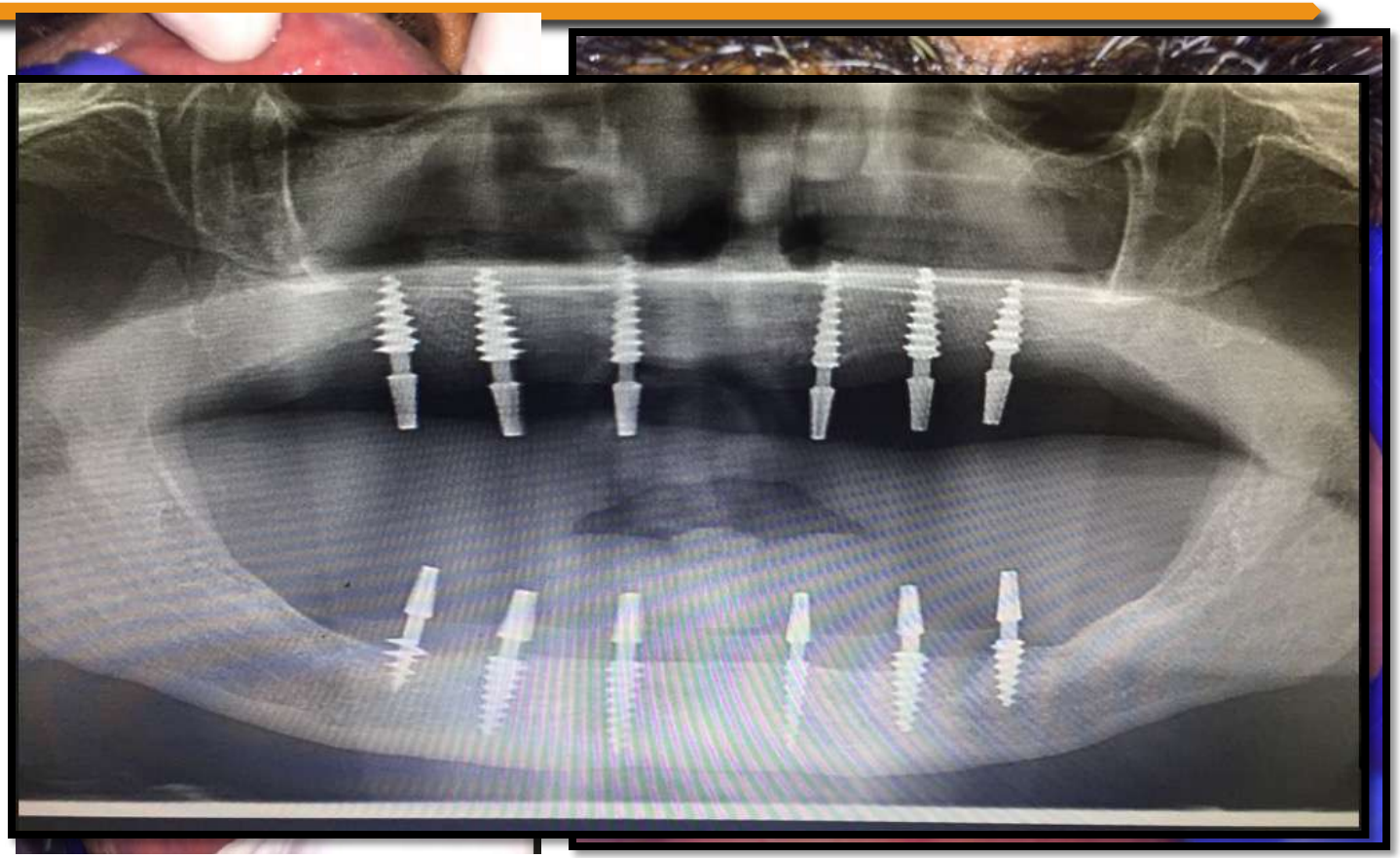

Zygomatic Arch
Pterygopalatine Fossa
Pterygomaxillary Fissure
Lateral Pterygoid Plate
Maxilla



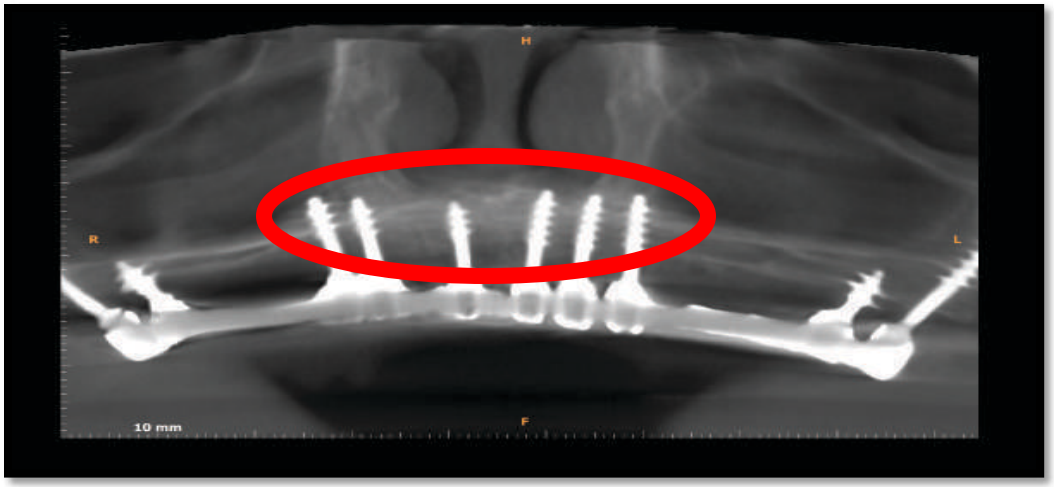



31
L

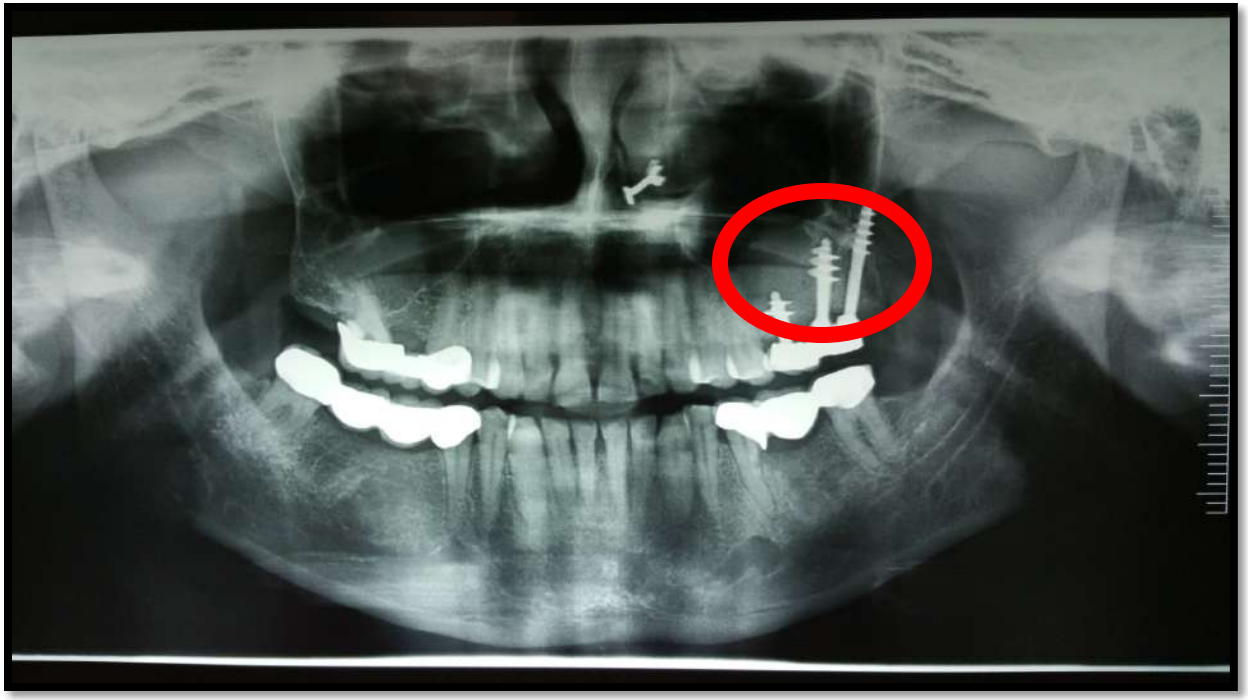

R017
L



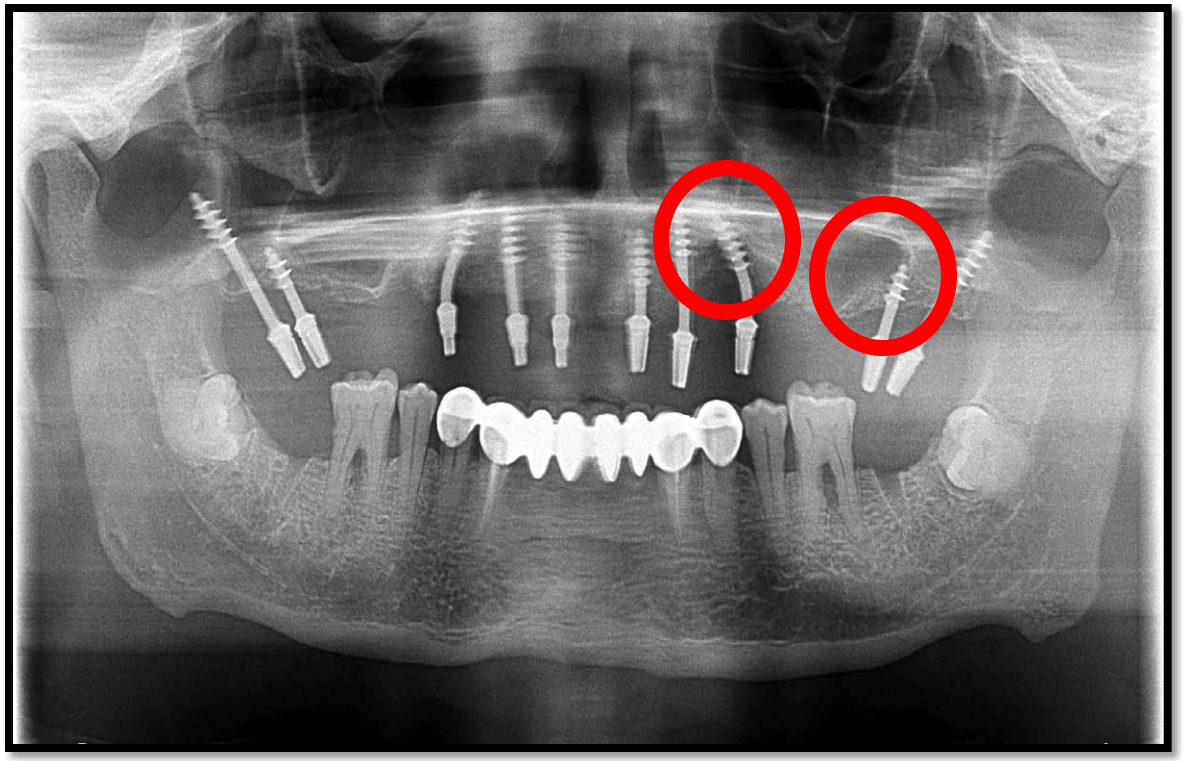
NASAL CORTICAL ENGAGEMENT



SINUS FLOOR ENGAGEMENT



SINUS SEPTA ENGAGEMENT

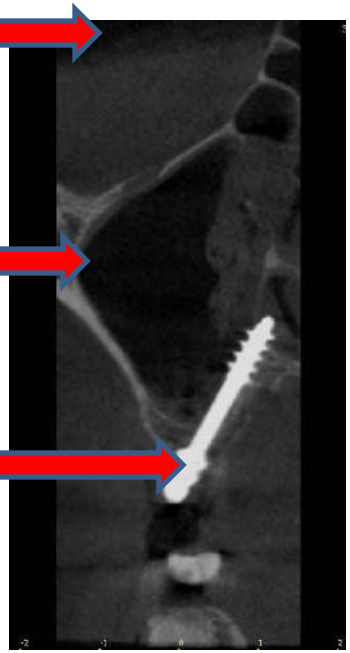


ALVEOLAR PALATINE FIXATION

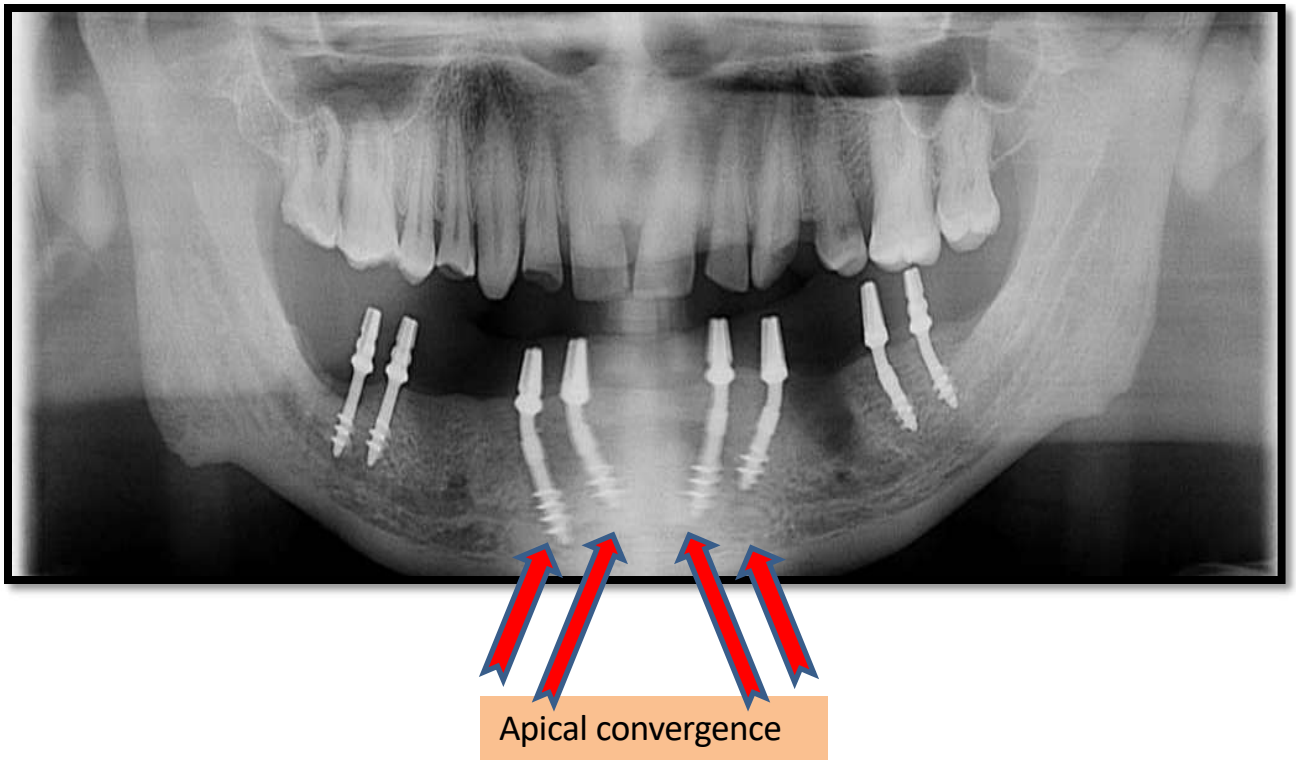
ORBITAL SPACE

MAXILLARY SINUS

IMPLANT ANCHORING
PALATAL BONE

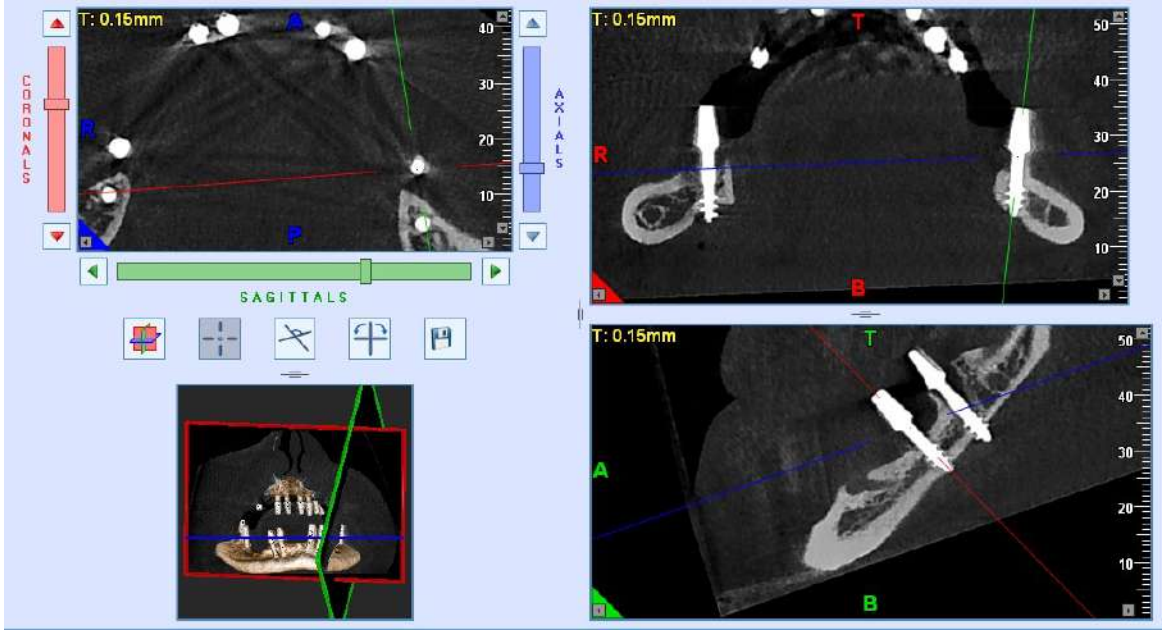


APICALLY CONVERGING IMPLANTS BETWEEN INTER-MENTAL FORAMEN



NERVE BYPASS – BUCCAL OR LINGUAL

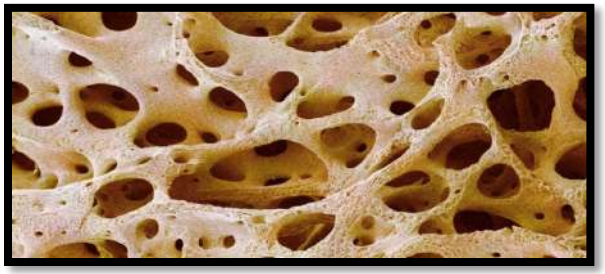
LINGUAL CORTICAL ENGAGEMENT



PALATAL & BUCCAL CORTICAL ANCHORAGE

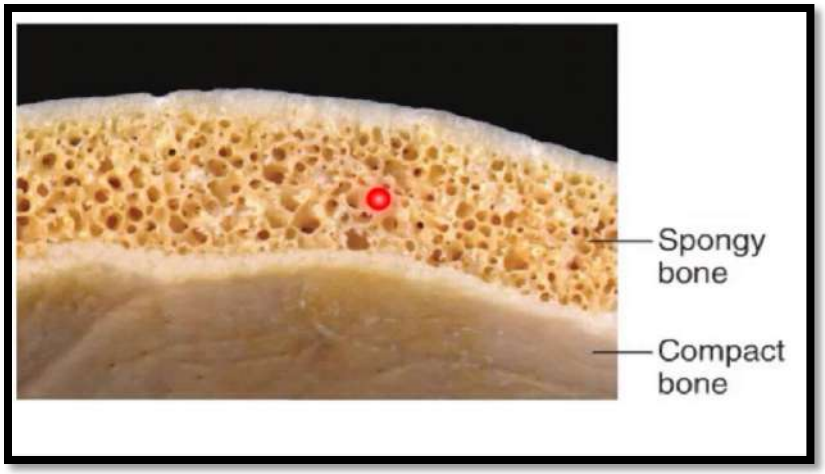
TRABECULAR/ CANCELLOUS BONE

- It’s the meshwork of spongy/ porous tissue.
- Its organized in trabeculae oriented according to the direction of the physiological load.
- Active cellular process present.
- Formation & growth of new bone
- Attracts infectious cells also.



CORTICAL BONE

- Dense tissue found at the surface.
- Mechanical load is borne along multiple axis.

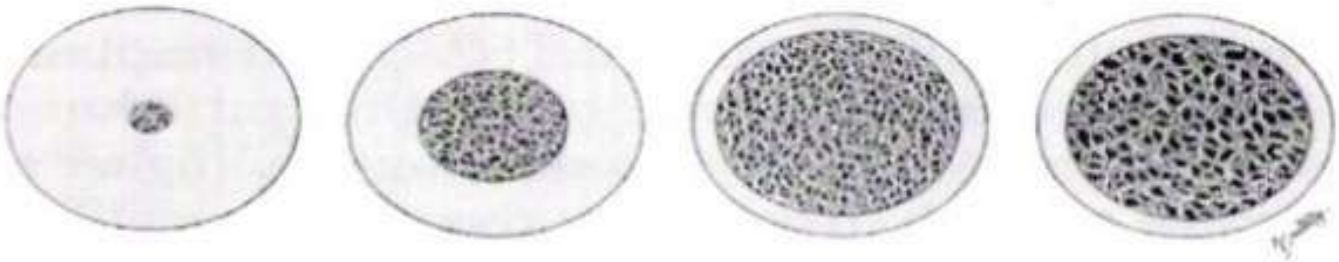


Think ….

- cortical bone as granite and
- cancellous bone as pumice.

Types of bone depending upon cortical and cancellous bone ratio

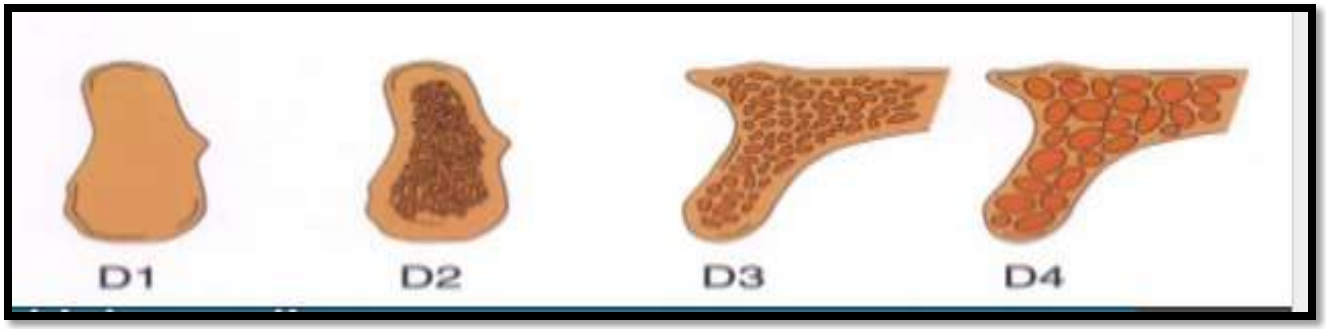
Found in the anterior region of jaw-



Quality 1	Quality 2	Quality 3	Quality 4
Composed of homogenous compact mass	**Thick layer of cortical bone surrounding dense trabeculae bone**	**Thin layer of cortical bone surrounding dense trabeculae bone**	**Thin layer of cortical bone surrounding a core of low-density trabeculae bone**

Different types of bone in different locations

Bone density	Description	Anatomical location
D1	dense cortical	Anterior mandible
D2	porous cortical and coarse trabecular	Anterior mandible Posterior mandible Anterior maxilla
D3	porous cortical (thin) and fine trabecular	Anterior maxilla, Posterior maxilla Posterior mandible
D4	fine trabecular	posterior maxilla

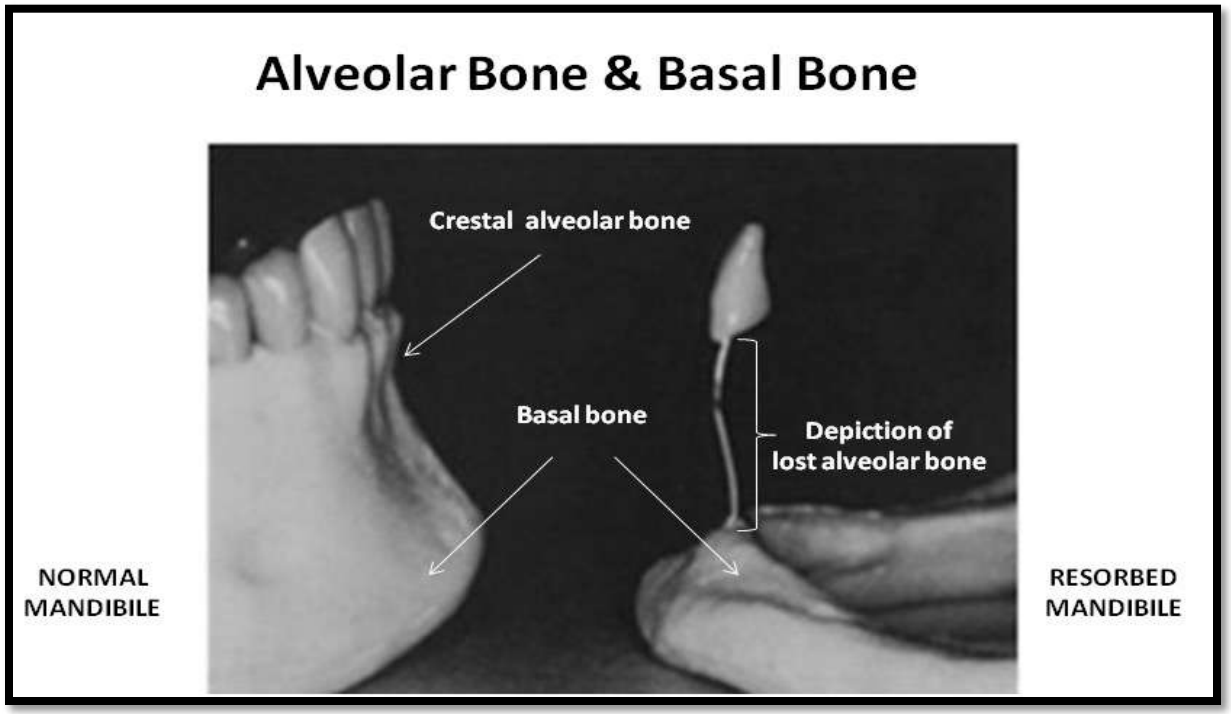


Cortical bone areas of Maxilla and Mandible

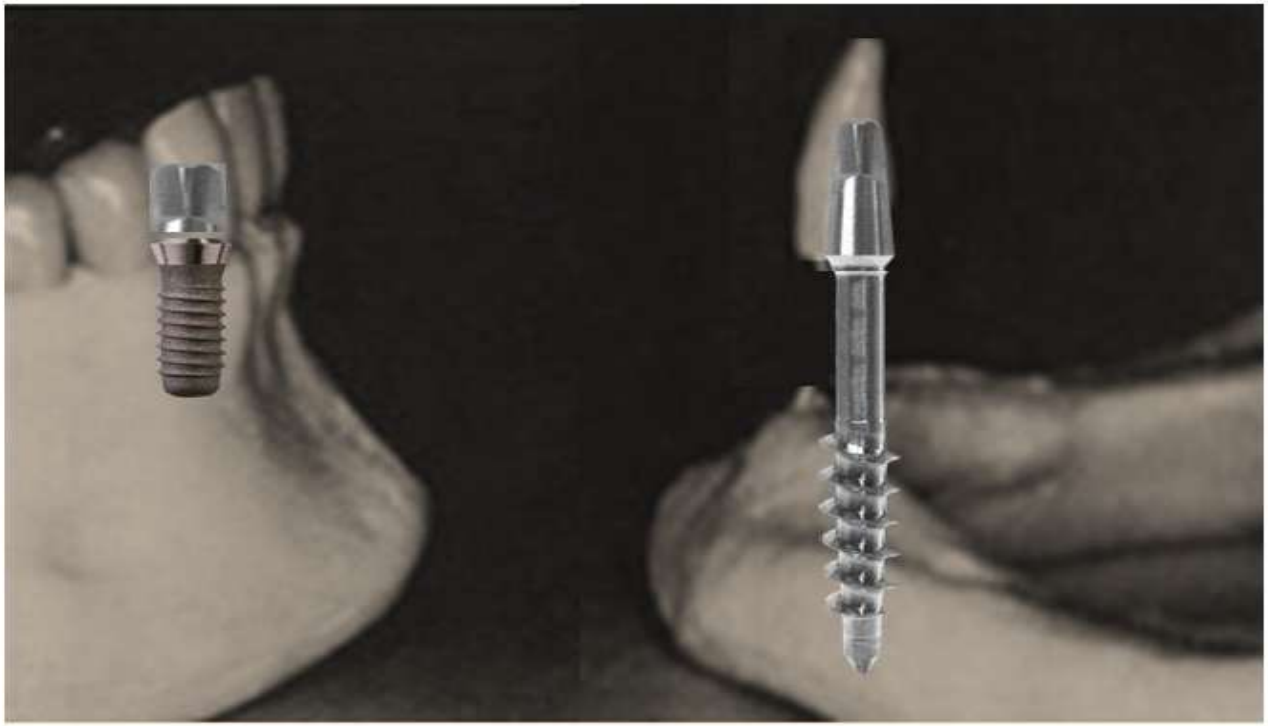
Maxilla	Mandible
➢ Maxillary tuberosity ➢ Pterygoid plate ➢ Wall & floor of maxillary sinus ➢ Nasal wall and floor ➢ Medial nasal spine ➢ Buccal & palatal cortical plate. ➢ Zygomatic process	➢ Below or at linea oblique of mandible ➢ Buccal & lingual cortical plate.

Single piece implants

What is Basal implant …?



CRESTAL & BASAL IMPLANTS



INDICATIONS FOR BASAL IMPLANTS

- **Quick and simple procedures**
- **Immediate loading**
- **Economical**
- **Can be used in patients with poor bone quality and quantity**
- **Can be used in anatomically unfavorable situations**
- **Helps avoid sinus lifts and bone augmentation / grafting procedures**
- **Overcomes disadvantages of two piece implants**

CONTRAINDICATIONS

- **Severely compromised medical conditions**
- **High risk of surgical failure**
- **High esthetic requirements**
- **Ti allergy**

REQUISITES FOR SUCCESSFUL IMMEDIATE LOADING

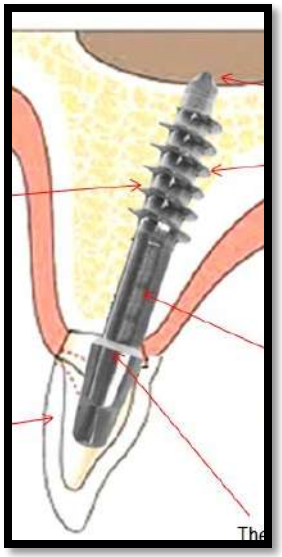
- **High density bone at implant site**
- **Implant design that increases mechanical retention**
- **Rough implant surface to increase primary stability**
- **Bicortical implant placement for increase stability**
- **Avoidance or reduction of distal cantilevers**
- **Protected occlusal scheme against overloading**

Single Piece Implants	Two – Three Piece Implants
implant and the abutment are fused	implant and the abutment are separate
Single sitting surgical procedure and very often flapless	complex surgical procedures , may involve grafting
less time consuming than that required for bridgework.	spread over 2 or 3 sittings in a period of 3-6 months
Immediate Loading	Delayed Loading
A wide range of sizes and designs are available suiting various bone types and measurements. The designs even help avoid bone augmentation and sinus lifts.	Limied sizes and designs
more cost effective in comparison with two/three piece implants	Expensive – with respect to the costs of the implants
Maintenance is very simple	more complex

Disadvantages

- **Osseointegration takes a longer time**
- **Emergence profile is hard to achieve**
- **Aesthetics are compromised**
- **Only cement retained solutions are available**
- **Transfer of multi-implant impression is technique sensitive**

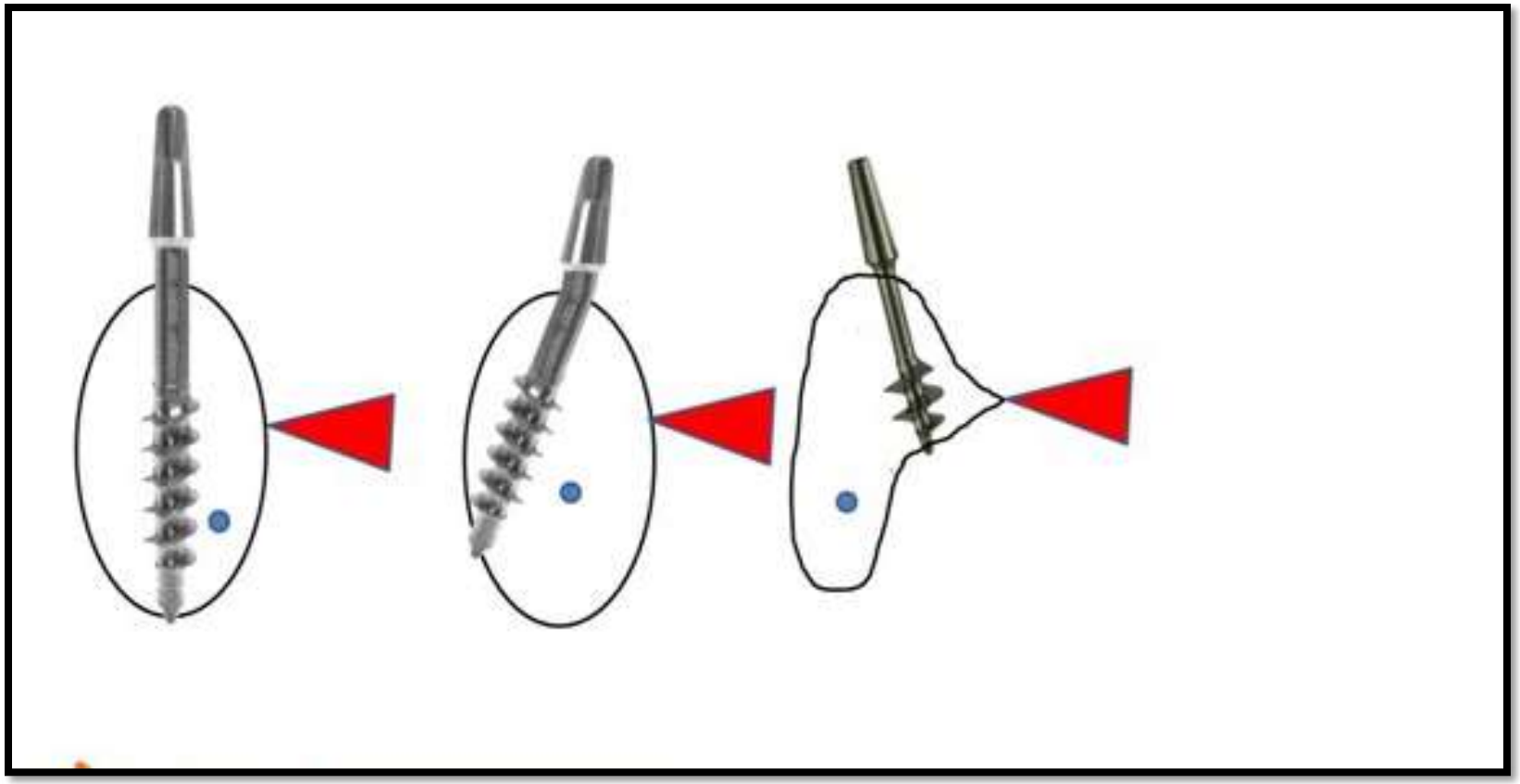
BI CORTICAL ENGAGEMENT



- Maxillary tuberosity
- Ptyerygoid plate
- Wall & floor of maxillary sinus
- Nasal wall and floor

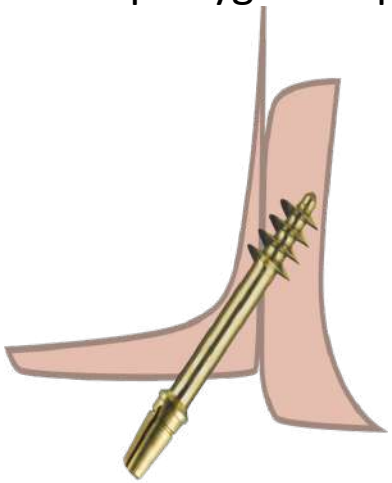
- Medial nasal spine
- Buccal & palatal cortical plate.
- Zygomatic process
- Below or at linea oblique of mandible

BI-CORTICAL ENGAGEMENT IN MANDIBLE

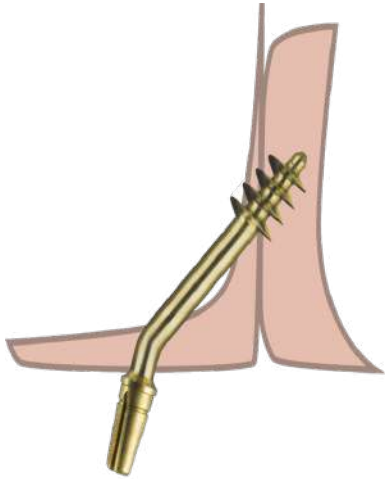


PTERYGOID IMPLANTS

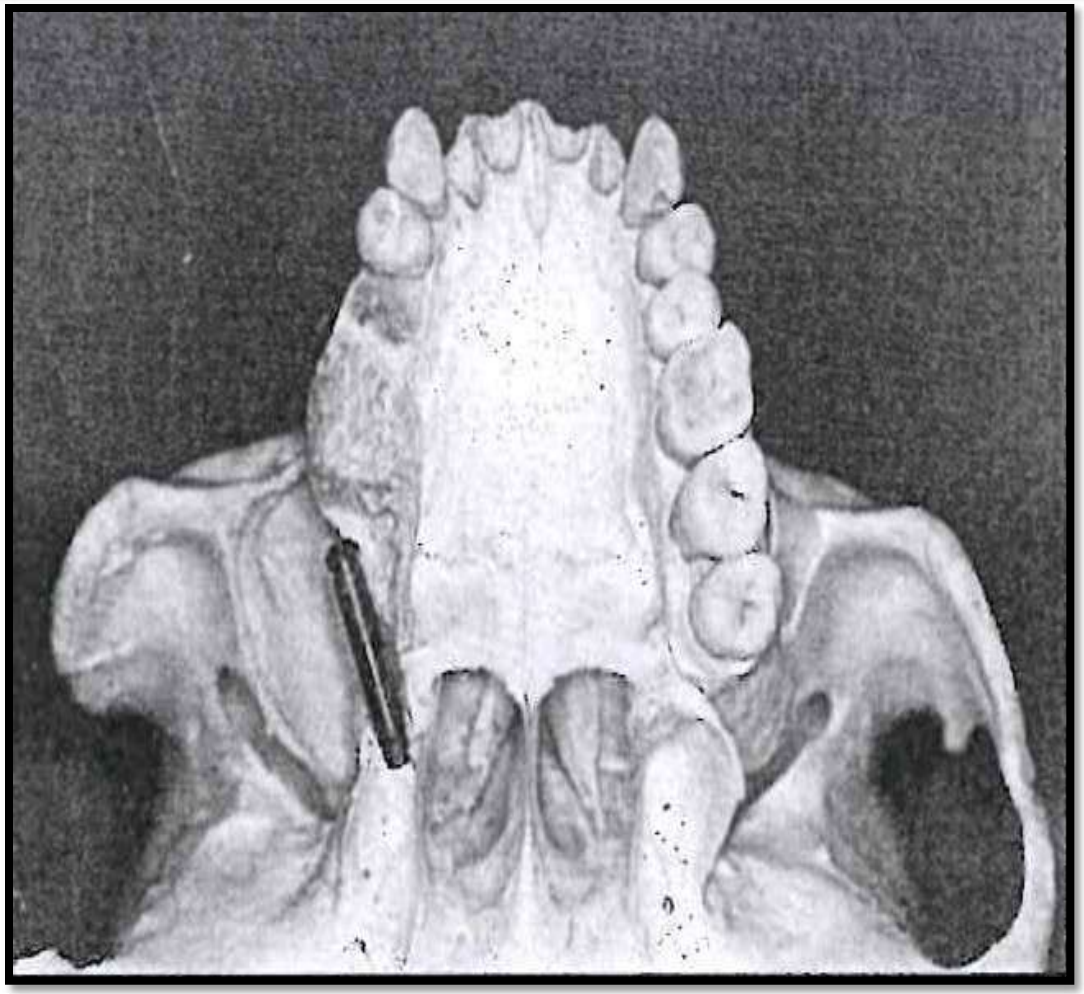
- An implant engaging the pterygoid apophysis and thus taking distal support and avoiding successfully the cantilever situation is called a pterygoid implant.

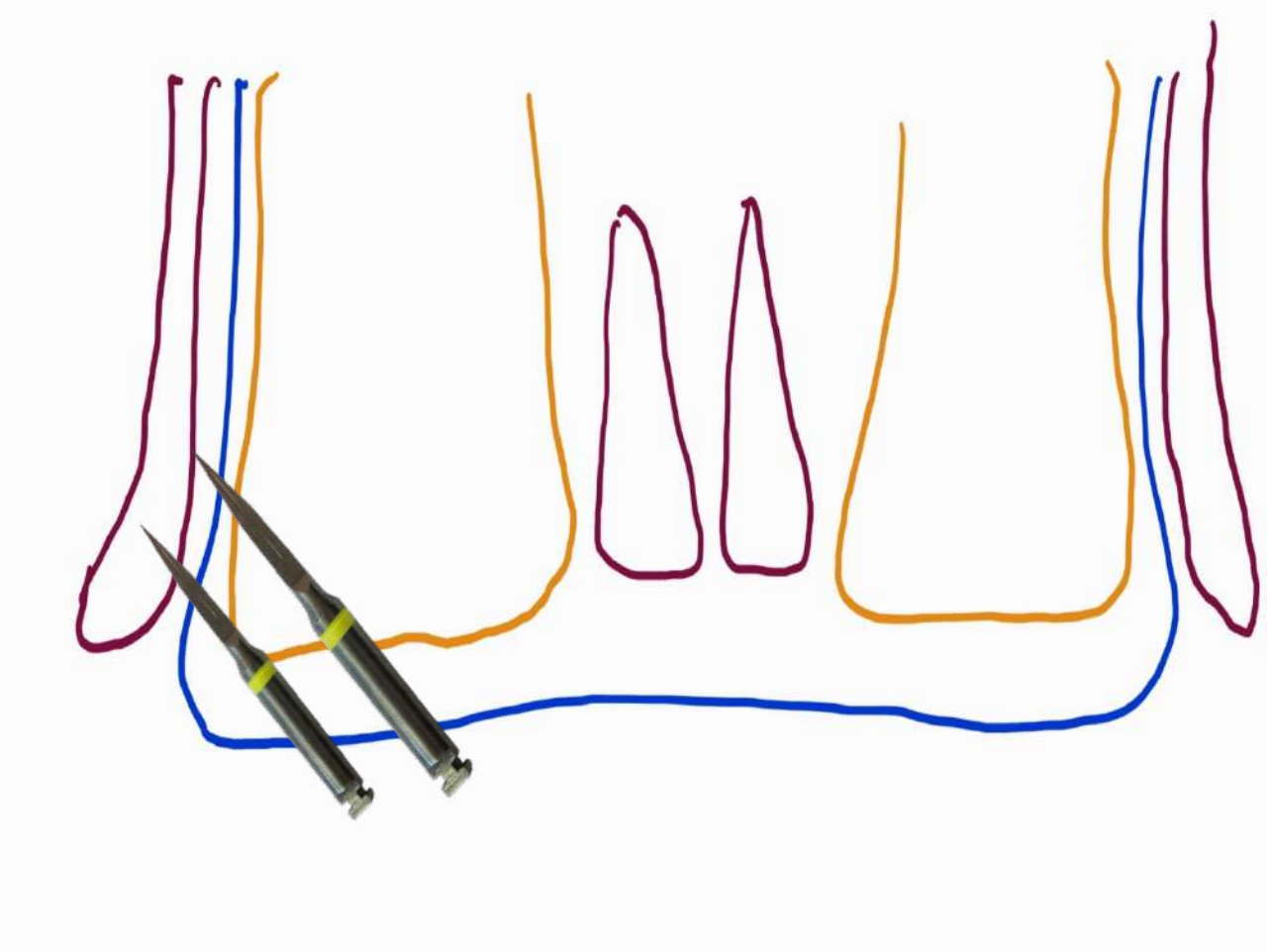


First pterygoid



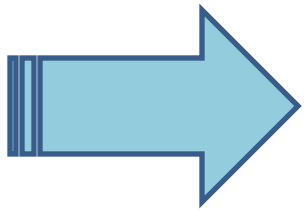
Second pterygoid



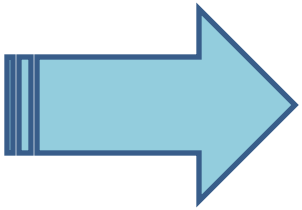


WHICH IMPLANT IN WHICH REGION…?
FOR MAXILLA

- CLEAN SOCKET
- HEALTHY BONE
- NO INFECTION
- CLEAN EDENTULOUS SPACE



- INFECTED SOCKET
- POOR BONE
- IMMEDIATE EXTRACTION
- IN IMPLANT REJECTED CASES



i-Fix One

- Implant surface is polished for protection from bacteria when placed in infected sockets
- Bicortical engagement
- Immediate loading
- Can be placed in extraction sockets
- Grade V ELI Ti
- Bendable

Indications

- Full mouth rehabilitation
- Graftless solution
- Thin ridge situation
- Bicortical engagement

	A	B	C	D	E	F	G	H
3.6x8	1	4.5	3.5	1.5	3.1			1.6
3.6x10	1	6	4	1.5	3.1			1.6
3.6x12	1	6	6	1.5	3.1			1.6
3.6x14	1	9	5	1.5	3.1			1.6
3.6x17	1	9	8	1.5	3.1	3	2.5	1.6
3.6x20	1	9	11	1.5	3.1	3	2.5	1.6
3.6x23	1	9	14	1.5	3.1	3	2.5	1.6
3.6x26	1	9	17	1.5	3.1	3	2.5	1.6

A - Tip Length
B - Thread Length
C - Shaft Length
D - Apical Core Diameter
E - Apical Major Diameter
F - Collar Length
G - Collar Diameter
H - Pich

PROSTHETIC OPTIONS

Impression Coping

i-Fix One Analog

BurnOut Cap

PRODUCT CODE

	Brand Name: i-Fix One							
	Length (in mm)							
Diameter (mm)	8	10	12	14	17	20	23	26
3.6	10360800	10360100	10360120	10360140	10360170	10360200	10360230	10360260

i-Fix C1

- SLA surface on threads
- Excellent primary stability
- Condensation of soft cancellous bone
- Minimum osteotomy required
- Excellent for narrow ridges
- Immediate loading
- Grade V ELI Ti

Indications

- Immediate Prosthetic loading
- Elimination of screw loosening
- Reduces cost & time

INDICATIONS

- ✓ Immediate Prosthetic Loading
- ✓ Elimination of screw loosening
- ✓ Reduces cost & time

	A	B	C	D	E	F	G	H	I	J
3510	0.65	10	10	2	1.8	0.9	3.5	2.56	1.55	0.5
3512	0.65	12	8	2	1.8	0.8	3.5	2.46	1.55	0.5
3514	0.65	14	7	2	1.8	0.8	3.5	2.46	1.55	0.5
3516	0.65	16	6	2	1.8	0.8	3.5	2.46	1.55	0.5
4008	0.7	8	13.5	2	2.2	1.2	4	2.95	1.55	0.5
4010	0.7	10	13	2	0.8	0.8	4	2.95	1.55	0.5
4012	0.7	12	11	2	1.8	0.8	4	2.95	1.55	0.5
4014	0.7	14	9	2	1.8	0.8	4	2.95	1.55	0.5
4016	0.7	16	8	2	1.8	0.8	4	2.95	1.55	0.5
4508	0.75	8	12.5	2.3	2.8	1.4	4.5	3.05	1.55	0.7
4510	0.75	10	13	2.3	2.3	0.9	4.5	3.05	1.55	0.7
4512	0.75	12	10.5	2.3	2.3	0.9	4.5	3.05	1.55	0.7
4514	0.75	14	9	2.3	2.3	0.9	4.5	3.05	1.55	0.7
5008	0.85	8	14	2.3	3.2	1.8	5	3.55	1.55	0.7
5010	0.85	10	14.5	2.3	2.6	1.2	5	3.55	1.55	0.7
5012	0.85	12	12	2.3	2.6	1.2	5	3.55	1.55	0.7
5014	0.85	14	11	2.3	2.3	0.9	5	3.55	1.55	0.7
5508	0.95	8	18	2.5	3.2	1.8	5.5	4.04	1.55	0.7
5510	0.95	10	18	2.5	2.5	1.1	5.5	4.04	1.55	0.7
5512	0.95	12	15	2.5	2.5	1.1	5.5	4.04	1.55	0.7

A - Tip Length
B - Thread Length
C - Total Angle
D - Shaft Diameter
E - Apical Diameter
F - Apical Core Diameter
G - Implant Crestal Diameter
H - Implant Crestal Core Diameter
I - Pitch
J - Thread Depth

PROSTHETIC OPTIONS

Impression Coping

I-Fix C1 Analog

BurnOut Cap

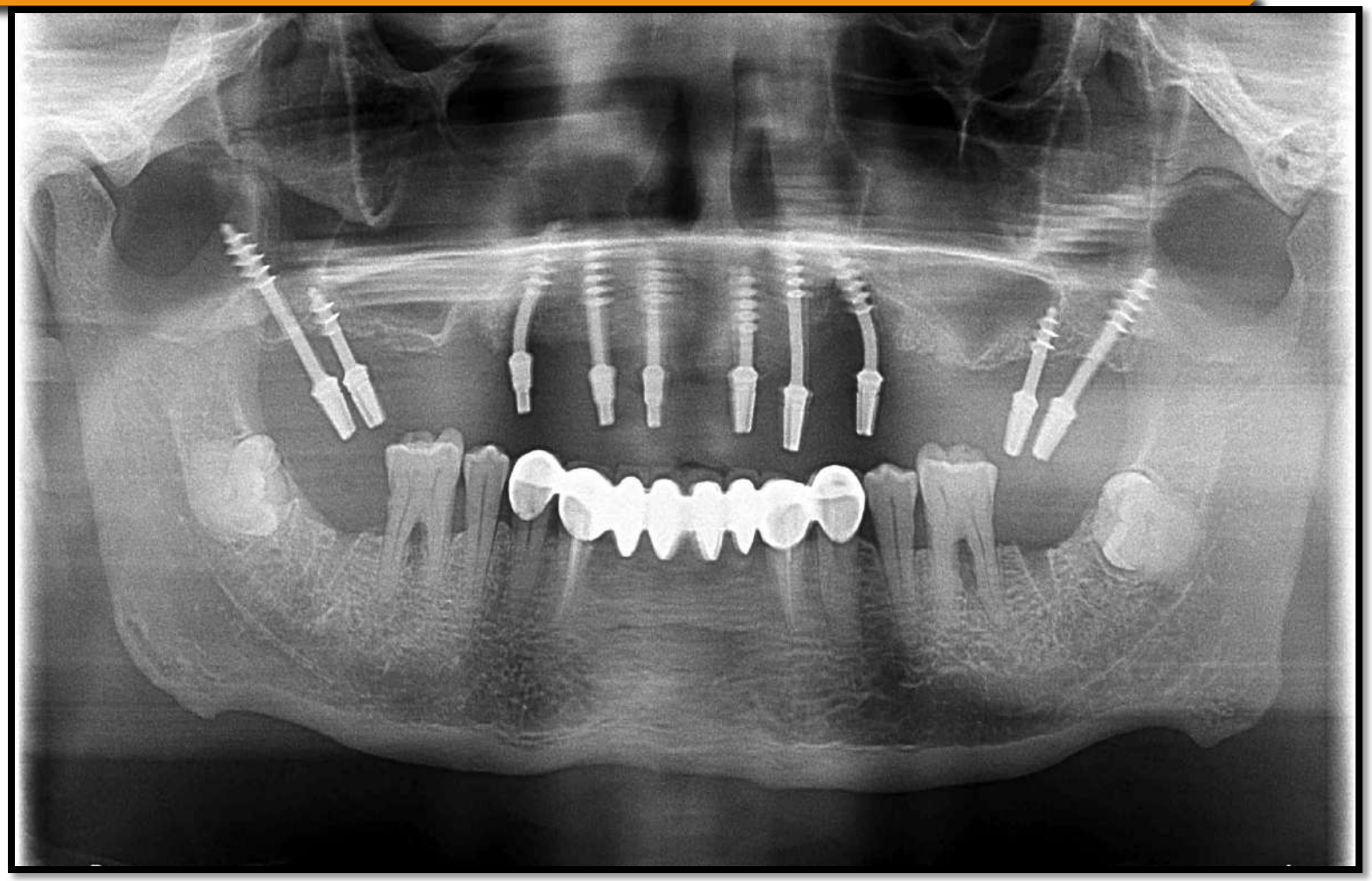
PRODUCT CODE

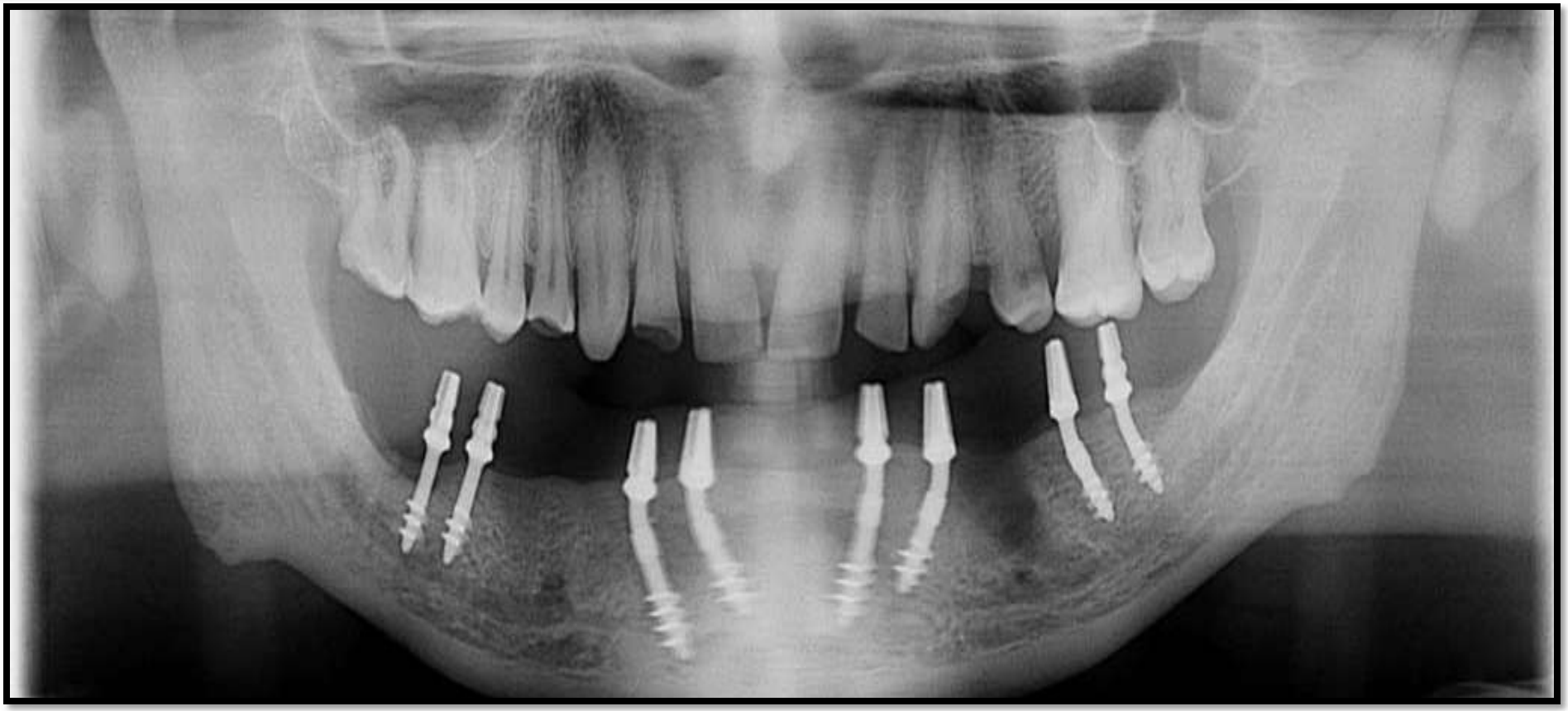
Brand Name: i-Fix C1							
	Length (in mm)						
Diameter (mm)	8	10	12	14	16	18	20
3.5	IC350800	IC350100	IC350120	IC350140	IC350160	IC350180	IC350200
4	IC400800	IC400100	IC400120	IC400140	IC400160	IC400180	IC400200
4.5	IC450800	IC450100	IC450120	IC450140	IC450160	X	X
5	IC500800	IC500100	IC500120	IC500120	X	X	X
5.5	IC550800	IC550100	IC550120	IC550140	X	X	X

WHY IMPLANTS HAS TO BE PLACED LIKE THIS..??

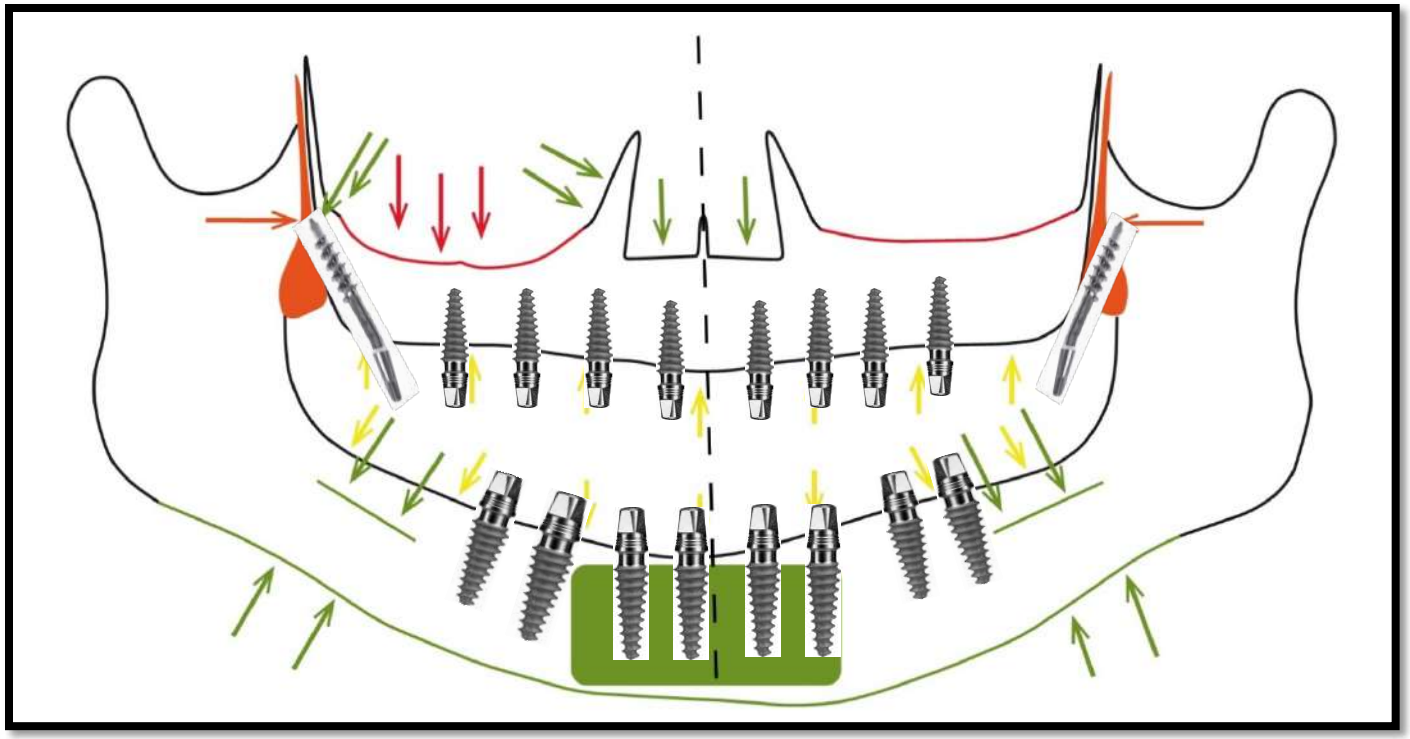
Strategic implantology is all about to place implant in good bone with bicortical engagement with good primary stability and long-term retainability….


H
R
L
F
10 mm



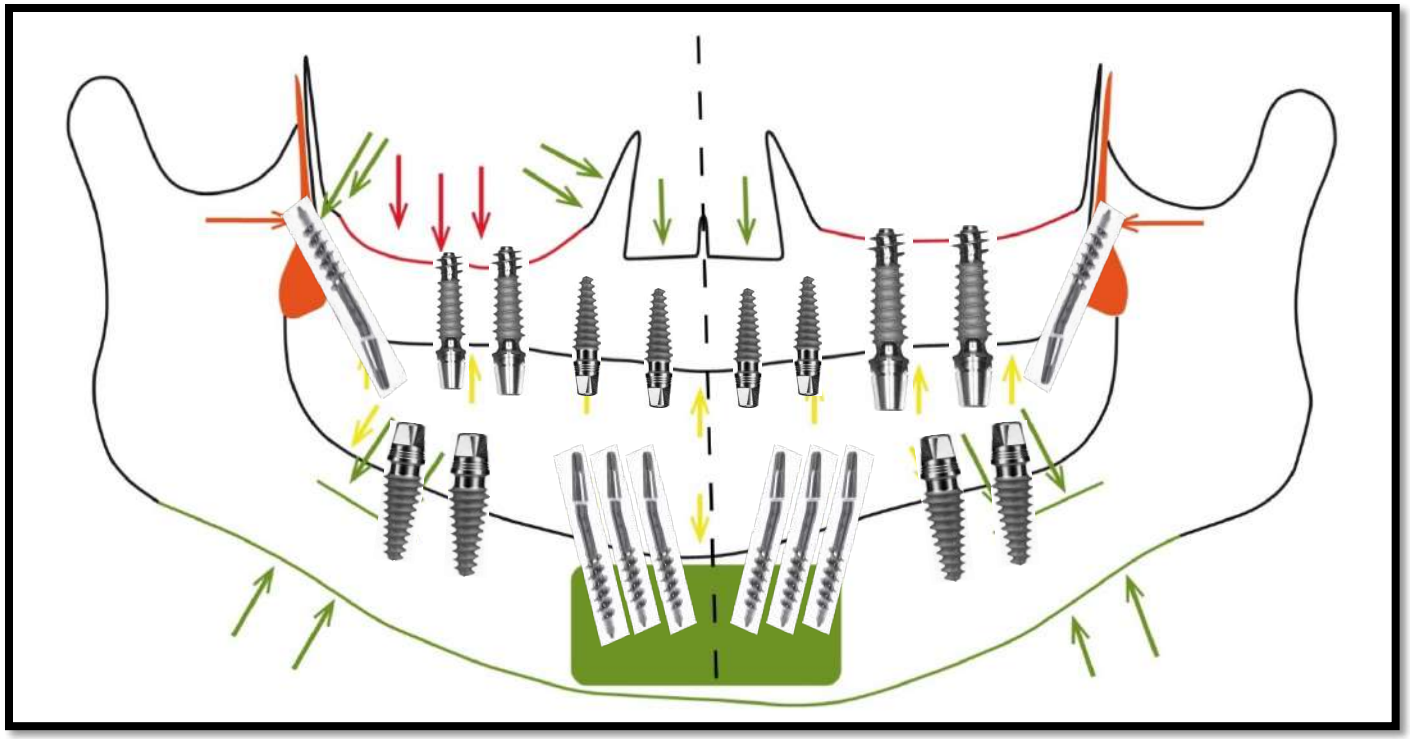


WHICH IMPLANT IN WHICH REGION…?



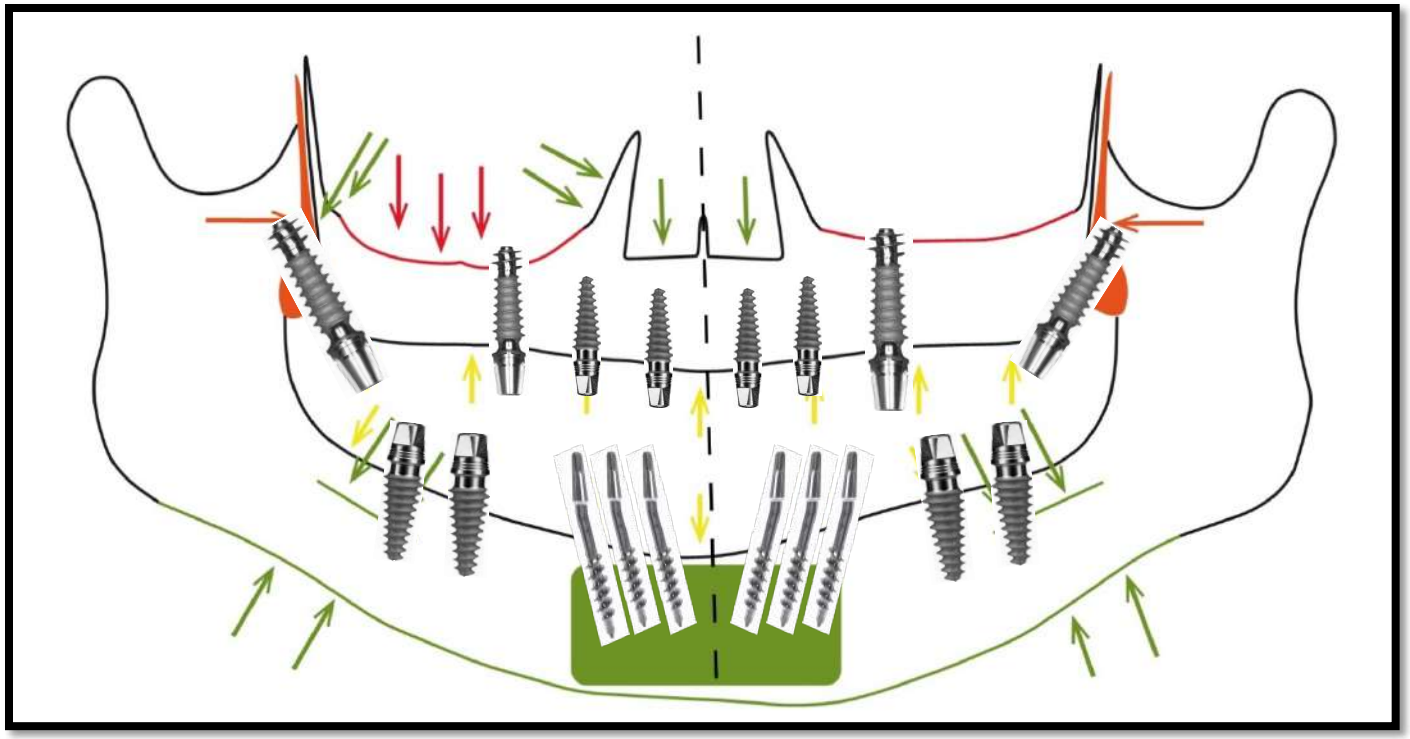
NON INFECTED CASE WITH GOOD AND HEALTHY RIDGE

WHICH IMPLANT IN WHICH REGION…?



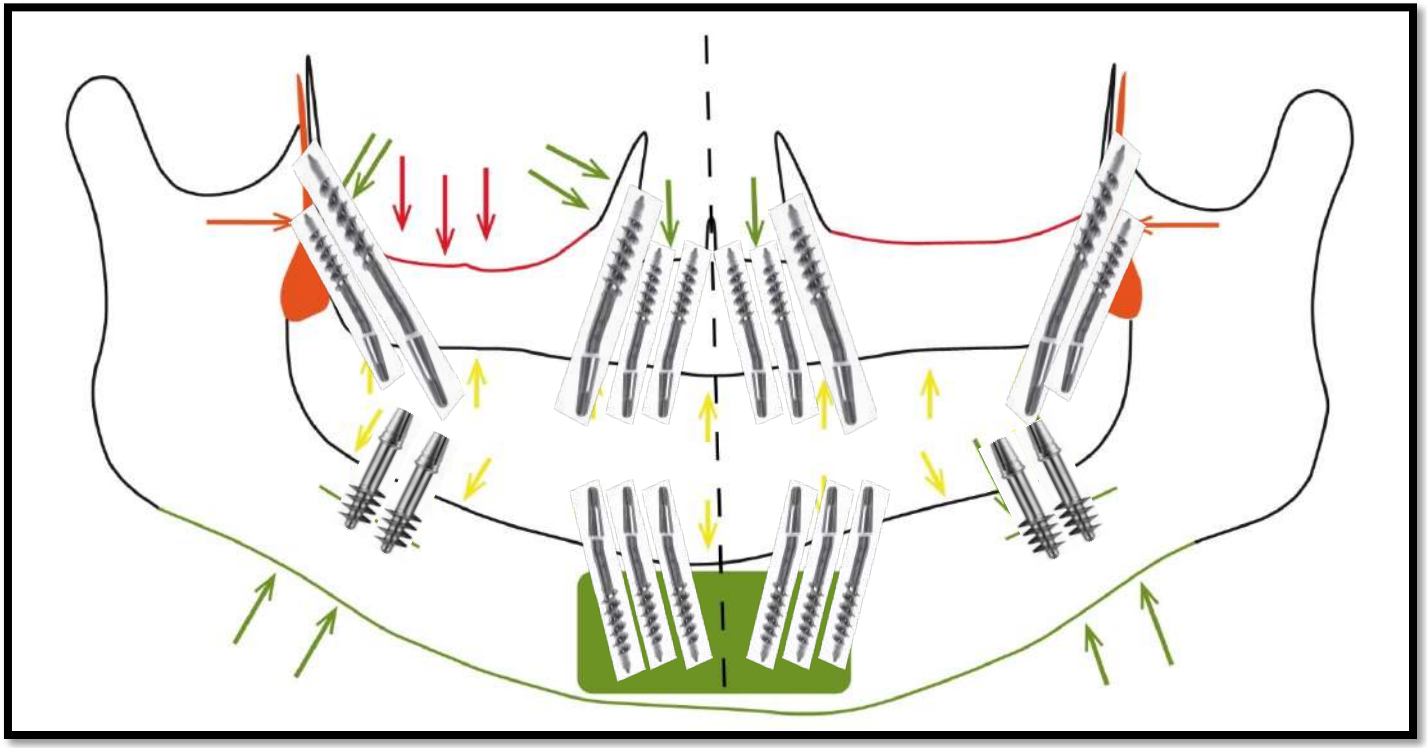
NON INFECTED CASE WITH IMPROPER RIDGE

WHICH IMPLANT IN WHICH REGION…?



NON INFECTED CASE WITH IMPROPER RIDGE

WHICH IMPLANT IN WHICH REGION…?



INFECTED CASE WITH ATROPHIC RIDGE , DIABETIC AND POOR PROGNOSIS

SURGICAL PROTOCOL BEFORE PLACEMENT OF IMPLANTS

- **Full mouth scaling has to be done 24 to 48 hours before surgery.**
- **Antibiotics 5 days course along with mouth wash has to be started 24 hours before surgery.**

SURGICAL PROTOCOL ON THE DAY OF IMPLANTS

- **Infected tooth has to be extracted completely and should be curetted completely with gauge till all the granulation tissue is removed.**
- **Use betadine gargle to clean the sockets**
- **Avoid over drilling and use proper irrigant to avoid over heating**

POST SURGICAL CARE

- **Check for good clearance of implant abutment from the opposing tooth or implants.**
- **Hybrid denture impressions has to be started on the same day after surgery and has to be delivered with in 3 days.**
- **Ask patient to continue the medication for three to five days**

COMPLICATIONS

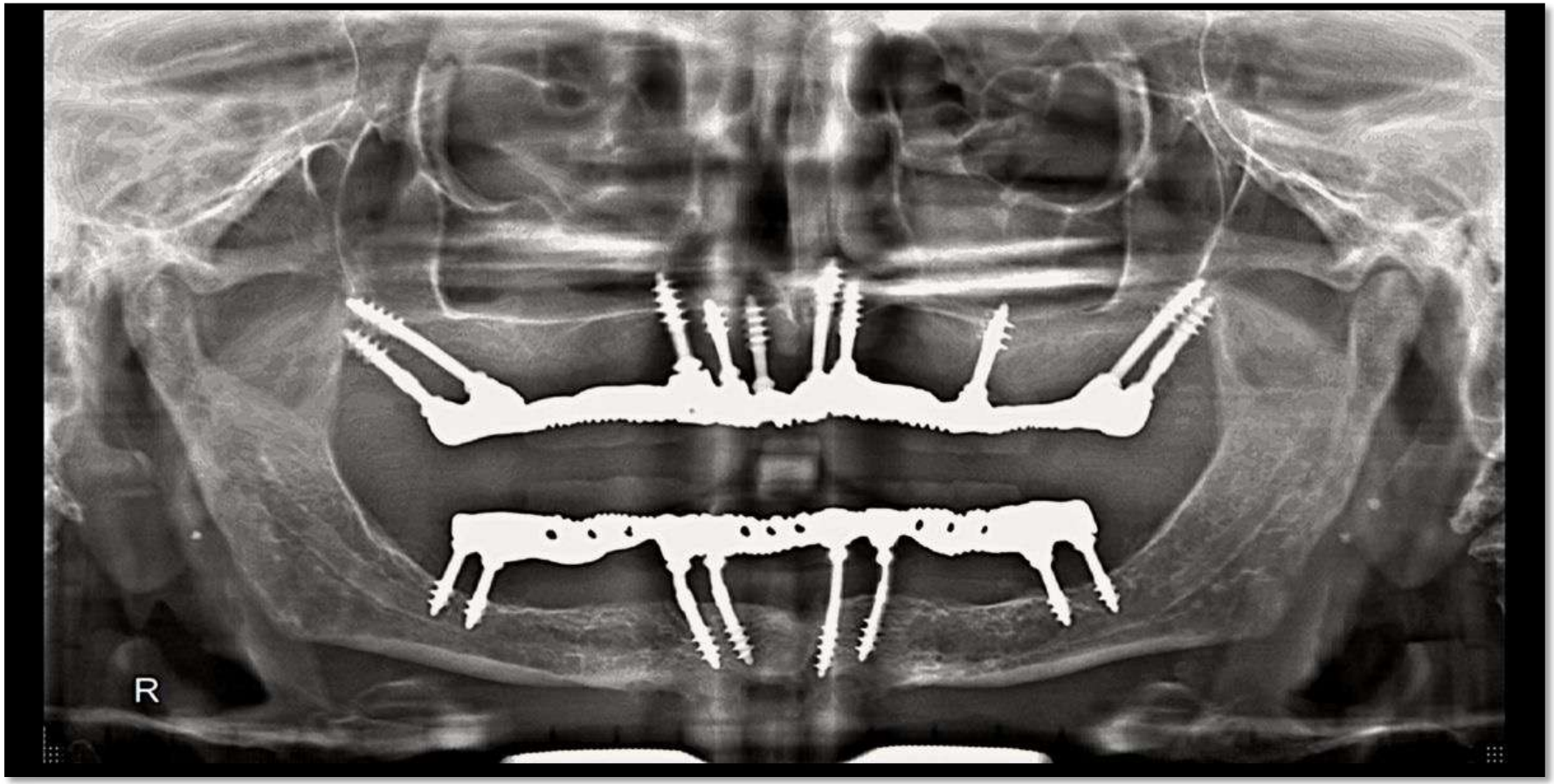
- Paresthesia
- Dysthesia
- Analgesia
- Anesthesia
- Bleeding
- Sublingual hematoma
- Airway obstruction

MANAGEMENT

- Wait till 3 months
- Nerve regenerating agents
- Homeopathic
- Micro - neurosurgeon
- Bi digital pressure
- Drainage
- Maxillofacial help

PRECAUTION

- Block - contraindicated
- Keep finger – feel the perforation , don’t dip
- Preserve lingual mucosa
- Lingual anastomosis , lateral lingual channels
- Reflect flap when in doubt
- CBCT
- After pathfinder use twist drill
- Make good friendship with maxillofacial surgeons


R

By rigid metal framework

OCCLUSION


REDMI NOTE 5 PRO
MI DUAL CAMERA
2.0
5.5
3.5
2.0
Ratchet
Insertion Tool
Machine
Insertion Tool
AHB Adapter
TORQUE WRENCH
POWERING SMILES

Pilot drill

2.0mm Drill

3.5mm

5.5 mm

AHB Adaptor

Hand Grip

CIX driver

Torque wrench

Thank you