# PERIO NEWS

IMPrESS Perio Implant Center | Dr. Noroozi, Certified Periodontist | Burnaby, BC

## From Our Office to Yours

Dear Colleagues,

This recent issue of the Perio News presents the biologic bone augmentation concept with application of autogenous bone as the gold standard to manage complex bony defects, allograft ring for 3D bone augmentation, management of terminal dentition with implants, application of acellular dermal matrix as an alternative to autogenous gingival graft for root coverage and new innovative techniques for bone preservation and augmentation. Please follow us on Instagram @impressperio to learn more about our services to your patients.

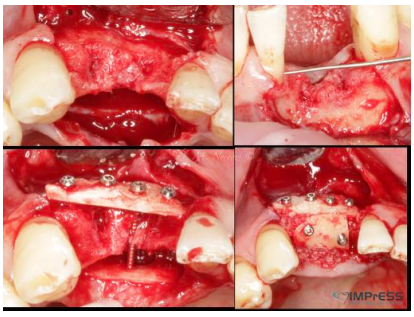


IMPrESS PERIO IMPLANT CENTER Certified Specialist in Periodontics

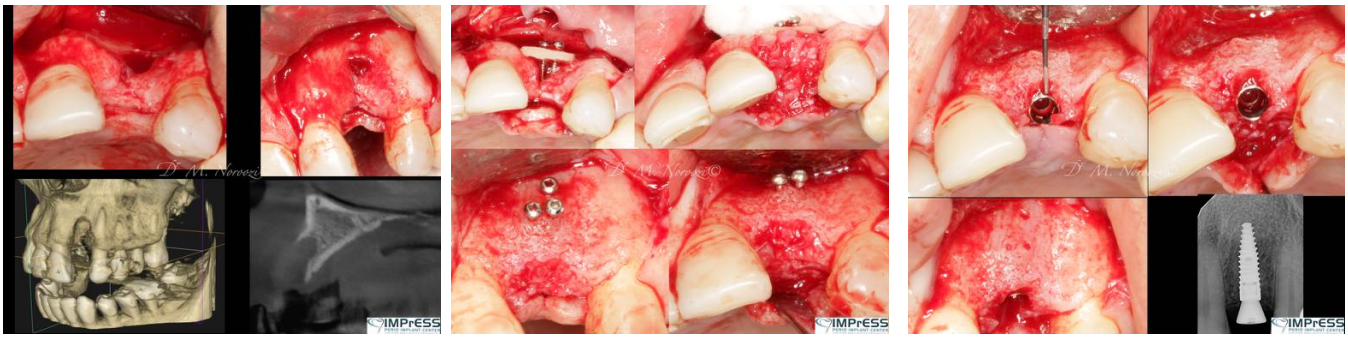
## Biologic Bone Augmentation

Trauma to teeth and the dentoalveolar process may result in a ridge defect that precludes straightforward implant therapy of the patient. Typically bone and soft tissue augmentation of the area would first be needed to adequately prepare the tissues for the implant and its restoration. Grafting of the site is substantially more difficult in cases where the ridge also lacks adequate height, and techniques to recreate a bony envelope to apply guided bone regeneration may be required. Moreover, defects in the anterior aesthetic zone that require both bone and soft tissue grafting and a restoration that harmonizes the adjacent pink and white aesthetics may be an even more significant challenge to the restorative team. **Autogenous bone grafting** has several **advantages** over other augmentation techniques including short healing times, favourable bone **quality**, lower material costs, no risk of disease transmission or antigenicity, and predictability in the repair of larger defects or greater atrophy. *BBA also is a great solution when GBR with the use of particulate bone substitutes such as allograft or xenograft failed to regenerate quality bone.*

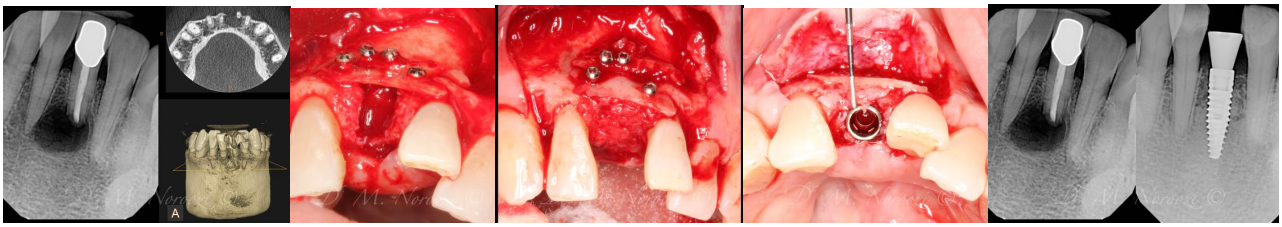
**Case 1**: Vertical and horizontal bone augmentation with Khoury bone shield technique, one of the most effective techniques in ridge bone augmentation using autogenous bone.



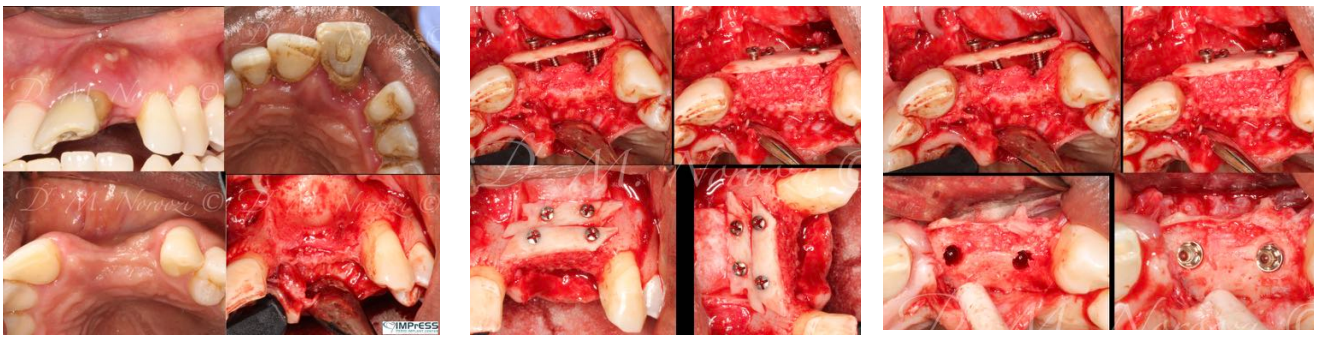
**Case II**: Significant periapical infection has led to complete loss of buccal plate. Autogenous bone from mandibular ext. oblique ridge was used to reconstruct the horizontal and vertical bone for implant therapy. 4 months re-entry shows significant bone gain and successfully integrated implant in the anterior maxilla.



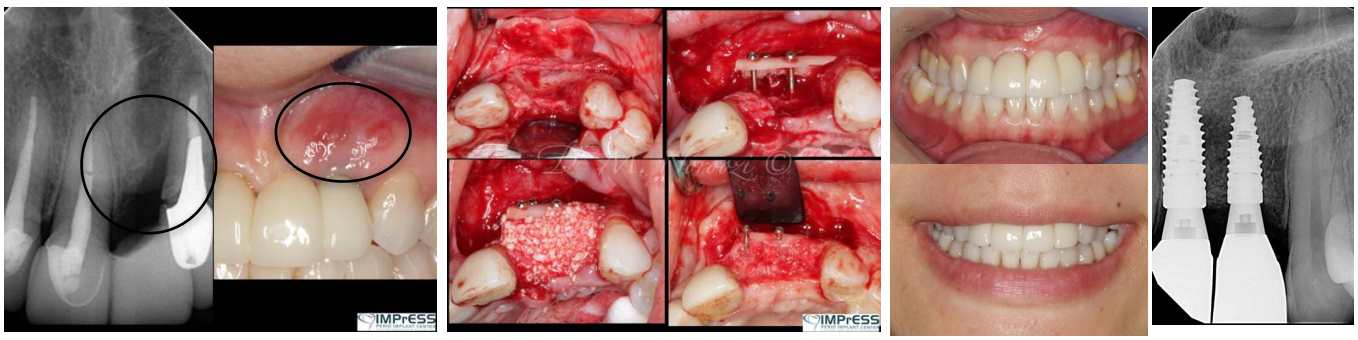
**Case III:** Autogenous bone from ext. oblique ridge was able to reconstruct alveolar bone in 3D dimensions



**Case IV**: 3D bone reconstruction with bone shield technique - Khoury technique with autograft



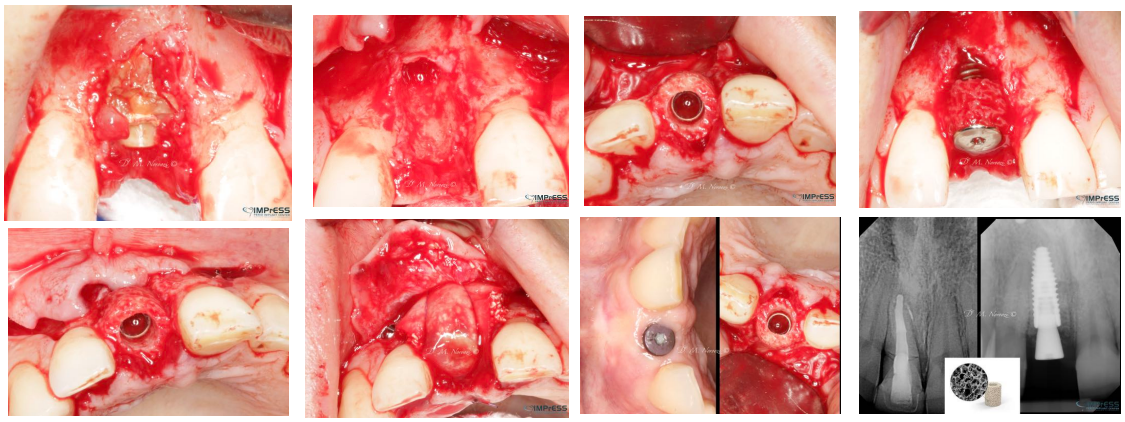
**Case V**: Complex 3D bone reconstruction of maxillary anterior region with bone plate technique



# 3D Bone Regeneration with Allograft Ring

This is an innovative solution for 3-dimensional vertical augmentation of bone defects allowing a single-stage graft and implant placement. A prefabricated ring of processed allogenic donor bone that is placed press-fit into a trephine drill-prepared ring bed. The simultaneous implant placement saves you and your patient time and a surgical step compared to a conventional bone block, reducing chair time compared to a bone block, eliminating the need for a second harvesting site and shorter time-to-teeth.

**Case VI:** Immediate implant placement in extraction socket with buccal bone deficiency; allograft ring was used to reconstruct the alveolar bone at the same time of implant surgery.



# Keys for Successful Esthetic-Zone Single Implants

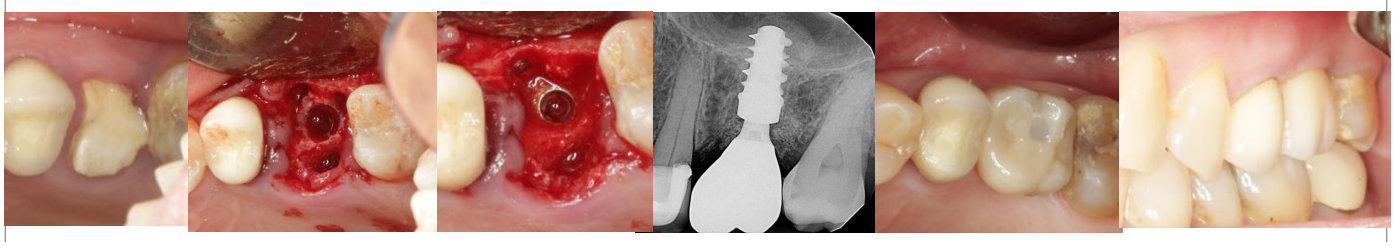
To achieve a successful esthetic result and good patient satisfaction, implant placement in the esthetic zone demands a thorough understanding of anatomic, biologic, surgical, and prosthetic principles. The ability to achieve harmonious, indistinguishable prosthesis from adjacent natural teeth in the esthetic zone is sometimes challenging. Placement of dental implants in the esthetic zone is a technique-sensitive procedure with little room for error. Partial extraction therapy, 3D guided immediate implantation and immediate screw retained provisional restoration are some of the most documented strategies to achieve aesthetic outcome (**Case VII**)

# Guided Periodontal Tissue Regeneration

In teeth where continued function requires additional periodontal support, optimal treatment requires not only controlling periodontal infection, but also regeneration of periodontal support lost to periodontal disease. Today, guided tissue regeneration (GTR) is a technique with significant clinical and histologic documentation of periodontal regeneration. Cases below demonstrate guided tissue regeneration to salvage compromised teeth with heavy subgingival deposits, severe bone loss with deep infrabony defects. Two year follow up indicated normal probing with stable bone gain and asymptomatic patient.

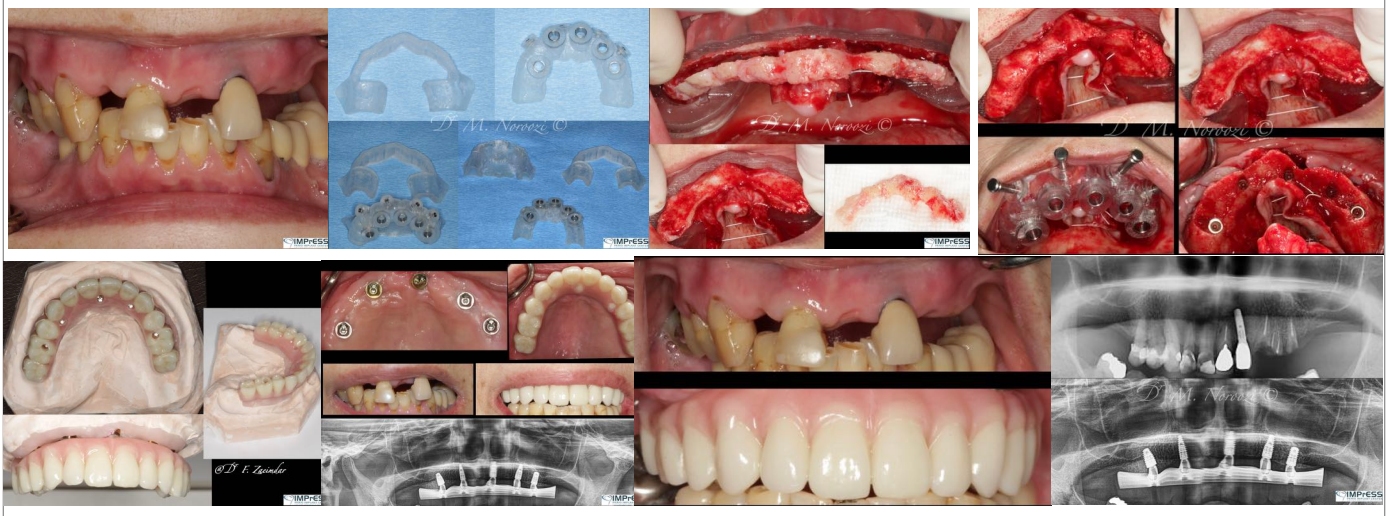

## Osseodensification, Extraction of Molar, Crestal Sinus Lift & Immediate Implant

Osseodensification is a technique that aims at bone preservation and compaction either through nonsubtractive drilling or implants with a special thread design. This can increase quantity and density of peri-implant bone. This treatment alternative offers several advantages in comparison to the classic delayed approach, namely a single surgical intervention, with a reduction in overall treatment time and, therefore, increased patient satisfaction. The case below shows atraumatic extraction, sinus lift and immediate implantation in the region of first maxillary molar. 4 months later the screw retained crown was inserted.



# All On X- Implant and Prosthetic Rehabilitation

The fixed implant supported hybrid prosthesis also known as All on 4 has become an efficient and reasonable opportunity for patients to achieve a fresh new start with their dentition. However, for the dental provider, it can also be considered as the final frontier, the last definitive opportunity for patients with terminal dentition. Success or failure is in our hands. It is incredibly important for us to properly treatment plan these cases to mitigate potential risk and complications. Certainly the greatest risk is not providing enough prosthetic space. It is paramount the surgical team create enough vertical height from the implant level to the incisal edge of the prosthesis. There has to be enough vertical height to stack components: abutments, Ti bar, the acrylic wrap and denture teeth. It is commonly reported in the literature that a minimum vertical height requirement is 15 to 16 mm from the fixture to the incisal edge. Cases below demonstrate full arch fully guided bone reduction and implant placement in preparation for implant supported hybrid prosthesis. The bone needed to be removed to gain the essential space for prosthetic components. This bone was invaluable source of autogenous bone to augment the thin bone on buccal aspect of anterior implants. Surgical and prosthetics completed by IMPrESS multispecialty team.



While All on 4 implants are an amazing tool for many people, restoring an entire arch of teeth on 4 implants isn't the "go to" full arch implants option. Instead it's a fairly specific procedure that's really only suitable in a small fraction of cases. Instead it's often better to get what are known as either a "Fixed Zirconia Bridge" or "Fixed Hybrid Bridge" restoration. These procedures use 6-8 traditional implants to support a bridge, on which the dental prosthetic (full set of upper or lower teeth) is then placed.

# Mucogingival Surgery, Palatal Connective Tissue for Lingual Recessions

The goal of this post is to demonstrate the practicality and results of increasing the zone of keratinized tissue on the lingual surface of mandibular anterior teeth. Calculus is most commonly found on the lingual surface of mandibular teeth, so they are subjected to inflammatory elements resulting in tissue deformation and destruction. Significant attention has been paid to grafting the buccal surface, but there is a paucity of information addressing the lingual surface of mandibular anterior teeth. Gingival augmentation procedures are essential before fixed restorative dentistry to prevent further recession and facilitate plaque control.


# Autogenous Gingival Graft: Root Coverage Procedure

Connective tissue gingival graft with the apical access point and tunnel technique to manage the extreme generalized gingival recessions.


Before Treatment

After Treatment

# Allograft Dermal Matrix with Modified Tunnel Technique for Soft Tissue Augmentation

Since its introduction to dentistry in 1997, Allograft Regenerative Tissue Matrix has been a widely accepted acellular dermal matrix (ADM) for soft tissue applications. It supports tissue regeneration by allowing rapid revascularization, white cell migration and cell population - ultimately being transformed into host tissue for a strong, natural repair. This product has been widely used in my practice over the past several years to substitute for autogenous gingival grafting to treat gingival recessions, to enhance the tissue phenotype and to achieve root coverage. Since the amount of tissue that can be harvested from palate is relatively limited, patients with generalized gingival recessions have to go through multiple operations with long and slow recovery. The application of donor tissue has the following benefits:

- Incision and scalpel free
- Accelerated recovery
- One visit can treat multiple areas of recession
- Less discomfort for the patient after treatment
- No need for scalpels or invasive surgical tools
- No need to take donor tissue from the patient's palate

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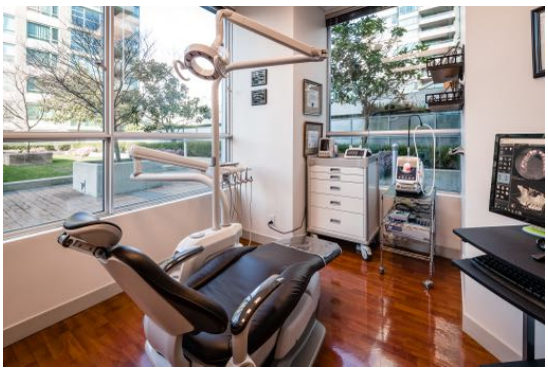
- Master of Science in Craniofacial Science (UBC)
- Doctor of Dental Surgery (University of Toronto)



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