What To Do With Patients on Denosumab?
A NEW OPTION !!
by Randolph R. Resnik, DMD, MDS

Denosumab is a human monoclonal antibody used in the treatment of osteoporosis (Prolia®) and metastatic bone disease (Xgeva®). Denosumab’s mechanism of action is at the surface receptors on pre-osteoclasts called RANK (Receptor Activation of Nuclear Kappa-B). Denosumab is a RANK inhibitor, which decreases the maturation of osteoclasts. This ultimately protects the bone from resorbing and counters the progression of bone disease. In contrast to Bisphosphonates (half-life = 10 years), Denosumab has a very short half-life (25–32 days) and does not incorporate into bone, therefore bone cellular remodeling recovers rapidly after drug cessation.

Both Denosumab and Bisphosphonates have been linked to Medication-related osteonecrosis of the jaw (MRONJ). Although there exist several oral triggers to developing MRONJ, invasive surgical procedures (e.g. extractions, implant placement, bone grafting) appear to place patients at a higher risk.

Patients on Xgeva are usually on a monthly regimen with a higher dose of Denosumab. Because of this, any invasive surgeries are classified as an ABSOLUTE CONTRAINDICTION. However, there exists great debate on how dentists should treat patients on Prolia, which is administered every 6 months. Most commonly, three treatment options have been used for many years with no general consensus or literature supporting a particular ideal treatment regimen.

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1.) No Treatment: There exists one school of thought which classifies any type of dental surgery with patients on Prolia as an ABSOLUTE CONTRAINDICATION. However, there exists little to no literature that supports this position.

2.) No Modification of Prolia: Another school of thought is to not modify the medication in any way and treat the patient accordingly.

Potential Risk: Many case studies have reported an association between invasive dental surgery and the development of MRONJ with patients on Prolia. Although the reported incidence is very low, the resultant debilitating effects can be significant. In addition, even with informed consent, clinicians may place themselves in a possible medical-legal issue if a significant adverse event results.

3.) Drug Holiday / Drug Cessation of Prolia: The cessation of Prolia has become a very popular treatment protocol. The patient is informed that the administration of Prolia will be delayed for a period of time until the surgical procedure and complete healing are complete.

Potential Risk: Studies have shown that the treatment interruption of Denosumab leads to the reversal of the bone mineral density effect to pretherapy levels within one year of discontinuation. In addition, it has been reported that patients at an increased risk of fragility fractures, drug cessation has been associated with a high risk of rebound vertebral fractures. Therefore, many physicians are reluctant to approve a discontinuation of the drug.

Potential Risk: A one month post-postponement of Prolia has been shown not to compromise bone mineral density and the fracture risk remains very low. Therefore, there are no significant risks with this protocol.

DELAYED DOSING PROTOCOL

1. Surgery Date: determine the 5th month after the last administration of Prolia. Schedule the procedure within a 15 day window after the 5th month.

2. Medical Clearance: consult directly with the patient’s physician concerning the delayed dosing window. The physician should contact the patient to modify the administration date.

3. Prophylactic Antibiotics: make sure the patient is treated with pre- and post-op prophylactic antibiotics (Beta-Lactam).

4. Surgical Procedure: minimize the invasiveness of the proposed surgery and reduce surgical duration.

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**References:**


What is Umbrella Insurance?

Umbrella insurance is a supplementary insurance policy that extends beyond your traditional personal auto and your traditional homeowners insurance policy. If a claim is made against you and that claim exceeds your insurance policy limits, then the umbrella policy may make up the amount beyond your traditional insurance maximum. This supplemental umbrella policy is an extra layer of protection against an unanticipated event. Generally, you must have traditional auto or homeowners’ insurance coverage, then add an umbrella policy as an additional source of protection.

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How does an umbrella policy work.

Traditional auto and homeowners insurance will cover the initial damages up to the maximum coverage allowed, then the umbrella policy is utilized. As an example, you may have someone slip and fall at your home, rental property, or dental office, and the claim made against you is made for $500,000. This claim may be for medical bills, pain and suffering, property damage, etc. Your homeowner or commercial policy may cover only have $350,000 worth of coverage. The traditional policy will cover the $350,000 maximum and the umbrella policy will then cover the additional $150,000. Without this umbrella policy, you may have to provide $150,000 from your personal funds. This places your personal funds at risk, which is not ideal from an asset protection standpoint.

Umbrella Policy does not cover all expenses.

The traditional umbrella policy typically covers what your auto or homeowners policy routinely covers. That is, property damage you or your dependents cause, and bodily injuries to others. The umbrella policy usually does NOT cover your own injuries, damage to your own property, or injuries and damage caused by intentional or criminal acts.

Common Examples of Best Use of Umbrella Policy

An insured’s teenage son was driving, lost control of the car and his girlfriend in the passenger seat was ejected sustaining permanent injuries and brain damage. The passenger sued the parents and was awarded five Million dollars.

An insured was having an anniversary party at his home, serving alcoholic beverages. A guest, while driving home injured a pedestrian resulting in paralysis. The claim was settled for Two Million dollars.

Pool Parties, Trampolines, Off Road Vehicles and Motor Boat Injuries are not uncommon, and these are additional considerations for an extended Umbrella Policy.

Ronald J. Trevisani DMD, JD, RPh
Oral and Maxillofacial Surgeon/Attorney

* Dr. Trevisani may be reached with comments or questions at rontrev001@gmail.com
**QUESTIONS OF THE MONTH**

**1 CBCT Question of the Month**

This patient presented 8 weeks after full mouth extractions and placed of an interim prosthesis. The patient related significant pain in the maxillary right posterior region. What is this foreign body in the maxillary right sinus?

**2 Implant Question of the Month**

Chlorhexidine is often used as a pre-operative rinse. What % of microbes in the oral cavity are reduced by a pre-implant surgery rinse with 0.12% chlorhexidine? (~ 30 sec.)

- a. 70 %
- b. 80 %
- c. 90 %
- d. 100 %

**3 Trivia Question of the Month**

Since 2009, how many full coverage crowns has Glidewell Laboratories fabricated?

- a. 1.5 million
- b. 4 million
- c. 7.5 million
- d. 23 million
The Misch Institute is dedicated to providing a safe, healthy environment for our future meetings. Strict social-distancing protocols will be implemented along with COVID-19 prevention supplies being made available to all staff and attendees. In addition, the Misch Institute has integrated the following CDC recommended strategies and guidelines:

- All lectures will be in an enlarged space (Main Ballroom)
- One attendee per 6-foot table
- Enlarged Exhibitor space and tables
- Hand Sanitizer, Disposable Facemasks, and Trash Baskets available
- Service stations to be sanitized once per hour along with common and high-traffic areas
- Coffee and other breakout times will be served with disposable cups.
- Bottled water in lieu of water carafes on meeting tables
- Temperature evaluation and questionnaire completion prior to meeting

The Misch Institute along with the Margaritaville Resort and Hotel will continually monitor the latest CDC guidelines and implement new policies as necessary. We appreciate everyone’s understanding and flexibility with this very difficult situation. If you have any questions, please contact Heidi at 248-642-3199.

~ Randolph R. Resnik DMD, MDS
Director of Misch Institute

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“best implant book from the best implantologists”
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### FIXED PROSTHETIC LECTURE TOPICS

- Fixed Occlusal Concepts
- Fixed Treatment Planning
- FP-1, FP-2, FP-3:
  - Step By Step Protocol
- Monolithic Zirconia Prostheses
- Lithium Silicate Prostheses
- Screw vs. Cement Prosthetics
- Re-Establish Vertical Dimension
- Biometrics
- Treatment of Parafunction
- Fixed Prosthesis Cementation Protocol
- Immediate Load Prosthesis
- Progressive Bone Loading for Fixed Prosthesis
- Complications of Fixed Prosthesis

### FIXED HANDS-ON LAB

- Screw and Cement Retained Protocol
- Direct and Indirect Impression Technique
- Fixed Prosthesis Insertion Technique
- Multi-Unit Abutment Lab
- PMMA Temporary Prosthesis
- Digital Impressions
- T-Scan Lab
- Progressive Loading
- Resonance Frequency Analysis (RFA)

### REMOVABLE LECTURE TOPICS

- Removable Occlusal Concepts
- Removable Treatment Planning
- RP-4, RP-5 Prosthesis
  - Step By Step Protocol
- Independent vs. Bar
- Overdenture Attachments
- Screw vs. Cement Prosthetics
- Progressive Bone Loading for Removable Prostheses
- Complications - Removable Prosthesis
- Screw Loosening
- Overdenture Maintenance
- Treatment of Peri-Implant Disease

### REMOVABLE HANDS-ON LAB

- Removable Impression Technique
- Locator Attachment Protocol
- Attachment Abutment Selection
- Digital Impression Technique
- Direct vs. Indirect Attachment Repair
- Full Arch Digital Impression Technique
MISCH “HANDS-ON” SURGERY COURSE

DATE: October 7-8, 2021
LOCATION: SmileFaith Advanced Training & Research Institute Tampa, Florida

- State of the art 35,000 sq. ft. Training Center
- Patients provided for all attendees
- Florida State License provided for attendees
- Attendees perform live surgery with the assistance of the Misch faculty
- Attendees may select specific surgical procedures to complete:
  * Single/Multiple site Implant Placement
  * Immediate Implant Placement
  * Edentulous Implant Placement
  * Extraction / Socket Grafting
  * Guided Bone Regeneration
  * Sinus Grafting (Crestal & Lateral Wall)

THE DATE IS SET!

ANSWERS to the QUESTIONS of the MONTH

1. CBCT Question of the Month

   ANSWER:
   Tissue Conditioner from relining the maxillary prosthesis-

2. Implant Question of the Month

   ANSWER:
   90%

3. Trivia Question

   ANSWER:
   d. 23 million crowns have been fabricated