

Bisphosphonates: Prevention of MRONJ (BRONJ)* Protocol for TXOSS

Ref: American Association of Oral and Maxillofacial Surgeons
Position Paper on Medication-Related Osteonecrosis of the Jaws
(MRONJ)

http://www.aaoms.org/images/uploads/pdfs/mronj_position_paper.pdf

* Bisphosphonate † RANKL Inhibitor	Primary Indication	Frequency	Route
Fosamax (Alendronate*)	Osteoporosis	Weekly	Oral
Actonel (Risedronate *)	Osteoporosis	Weekly	Oral
Boniva (Ibandronate *)	Osteoporosis	Monthly	Oral IV
Skelid (Tiludronate*)	Paget's Disease	Daily	Oral
Didronel (Editronate*)	Paget's Disease Bone Disease	Daily	Oral
Aredia (Pamidronate*)	Bone Metastases	varies	IV
Zometa (Zoledronate*)	Monthly	Monthly	IV
Reclast (Zoledronate*)	Osteoporosis	Yearly	IV
Xgeva (Denosumab†)	Bone Metastases	Monthly	SQ
Prolia (Denosumab†)	Osteoporosis	6 Months	SQ

* ALWAYS SEEK PRESCRIBING PHYSICIAN'S RECOMMENDATIONS. Consent should contain risk of MRONJ.

Oral Bisphosphonates for **Osteoporosis**: Incidence of MRONJ (BRONJ–Bisphosphonate Related Osteonecrosis of Jaws) in patients taking Oral Bisphosphonates for Osteoporosis after tooth extraction (without comorbid risk factors–see below) is approximately 0.5% (1:200).

Oral Surgery (OS) Pre-Operative Protocol * for Patients on Oral Bisphosphonates ≥ 4 yrs. :(Or less than 4 yrs. with other systemic risk factors such as Diabetes, Steroid treatment) Take drug Holiday 2 mo. before and 1 month or more after (resume medication after bone healing). If on Oral Bisphosphonates < 4 years without comorbid risk factors, literature states it is safe to proceed with procedure without alteration of drug regimen.

IV Bisphosphonates or Denosumab (Xegva) for **Cancer**: Incidence of MRONJ (BRONJ) in patients taking IV Bisphosphonates or Denosumab (Xegva) for Cancer are at a significantly higher risk (2–15%) for developing MRONJ after dentoalveolar surgery.

OS Protocol*: Avoid Extractions, Consider Root canals. Seek Physician Guidance if OS absolutely necessary

IV Bisphosphonates or Denosumab (Prolia) for **Osteoporosis**: Incidence of MRONJ (BRONJ) in patients taking IV Bisphosphonates or Denosumab (Prolia) for Osteoporosis are at a low risk comparable to placebo after dentoalveolar surgery.

OS Protocol*: Proceed with procedure 1–2 months prior to next dosage, or consider performing procedure at time of next dosage and delaying that dosage 2 months with physician's approval.

CoMorbidity Risk Factors that increase risk of MRONJ (BRONJ):

- Steroid Use
- Pre-existing inflammatory disease (Periodontitis, abscess)
- Mandible is 3 x more likely than maxilla to develop MRONJ
- Immunosuppression (Diabetes, Medications, etc.)

Antiangiogenic agents used for various Cancer Treatment may increase risk of MRONJ (BRONJ) :

Sunitinib (**Sutent**®); Sorafenib (**Nexavar**®);Bevacizumab (**Avastin**®);Sirolimus (**Rapamune**®)

General Peri-Operative Protocol* for Patients on Bisphosphonates or on Drug Holiday. Primary Closure.or Resorbable Membrane. Peridex for 2–4 weeks, Oral Antibiotics x 10 days. Follow for 6 wks to 6 mo.