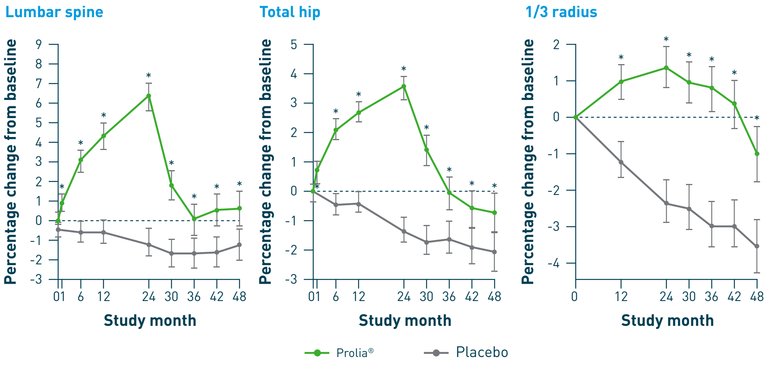
Discontinuation of Prolia® therapy for osteoporosis

A systematic review and position statement by ECTS

Results

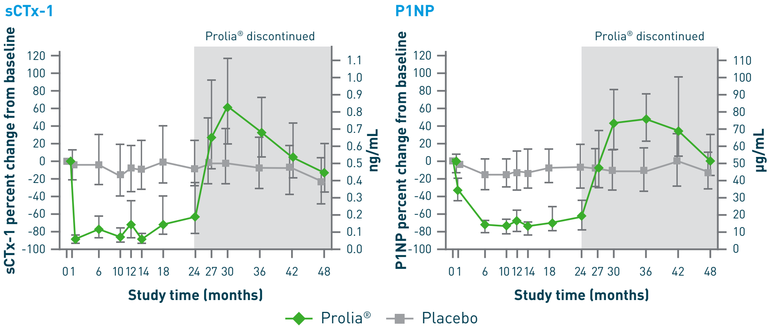
Prolia® discontinuation leads to a reversal in treatment effect



*p<0.01
Adapted from Bone HG, et al. *J Clin Endocrinol Metab* 2011;96:972–80.

Data from Phase II and III clinical trials indicate a rapid reversal of done mineral density accrual gained during the treatment period after stopping Prolia®; but bone mineral density remaining higher than the previously treated placebo group.

Change from baseline in markers of bone strength during Prolia® treatment and after Prolia® discontinuation



Adapted from Bone HG, et al. *J Clin Endocrinol Metab* 2011;96:972–80.

In addition, a rapid increase in bone turnover marker concentrations to above pre-treatment baseline levels after Prolia® discontinuation has been observed. Concentrations of sCTx-1 and P1NP are reported to increase above baseline within 3 and 6 months of discontinuation, and return to baseline by 48 months.

Effects of pre- and post-treatment with bisphosphonates

Studies have indicated treatment with bisphosphonates after Prolia® discontinuation is associated with stabilization of bone mineral density and only small increases in bone turnover markers.

A possible bone mineral density protective effect with zoledronic acid after Prolia® treatment is suggested; however, an ongoing study will address the question of whether a single infusion of zoledronic acid can prevent the increases in bone turnover markers and decreases in bone mineral density observed after discontinuation of Prolia®.

Conclusion

- Clinicians and patients should be aware that there appears to be an increased risk of multiple vertebral fractures after Prolia® discontinuation.
- Treatment with Prolia® should not be stopped without considering an alternative anti-resorptive treatment.
  - Re-evaluation of therapy should be performed after 5 years of Prolia® treatment, and within 1.5 years after last injection of Prolia® if no alternative antiresoprtive therapy is initiated.
  - Patients at **high risk** of fracture should continue therapy for up to 10 years. There is no evidence supporting treatment beyond 10 years and patients should switch to an alternative treatment to reduce bone turnover marker rebound.
  - For patients at **lower risk** of fracture, Prolia® treatment cessation is possible after 5 years, but bisphosphonate therapy should be considered to reduce bone turnover marker rebound. However, as the optimal follow-up treatment is currently unknown, continuation of Prolia® for up to 10 years can be considered until results from ongoing trials become available.

Prolia® safety profile information can be found in the Summary of Product Characteristics. Please click here.

ECTS: European Calcified Tissue Society; P1NP: N-terminal propeptide of type 1 procollagen; sCTx-1: serum C-terminal telopeptide of type 1 collagen.
References: Tsourdi E, et al. *Bone* 2017;105:11–17.

prolia® denosumab
ACT BEFORE IMPACT

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