

Crysvita® (burosumab-twza injection)

When requesting Crysvita® (burosumab-twa injection), the individual requiring treatment must be diagnosed with an FDA-approved indication and meet the specific coverage guidelines and applicable safety criteria for the covered indication.

FDA-approved Indication

Crysvita is indicated for the treatment of X-linked hypophosphatemia (XLH).

Coverage Guidelines

The individual must meet **all** of the following criteria for initial approval:

- Crysvita is prescribed by or in consultation with an endocrinologist or nephrologist;
- The patient has had a baseline (i.e., prior to any XLH treatment [e.g., Crysvita, oral phosphate/vitamin D therapy]) serum phosphorus level below the normal range for age; AND
- The patient has had one of the following:
 - A baseline (i.e., prior to any XLH treatment [e.g., Crysvita®, oral phosphate/vitamin D]) tubular reabsorption of phosphate corrected for glomerular filtration rate (TmP/GFR) below the normal range for age and gender; OR
 - A genetic test confirming the diagnosis of X-linked hypophosphatemia via identification of a PHEX mutation.

Approval duration: 12 months

The individual must meet the following criteria for reauthorization:

- Is continuing to benefit from Crysvita (e.g., increased phosphorus levels, radiographic improvement in deformities, healing of or reduction in the incidence of new fractures/pseudofractures).

Approval duration: 12 months

Dosing Recommendations

For adults (≥ 18 years of age), approve up to a maximum dose of 90 mg administered subcutaneously no more frequently than once every 4 weeks.

For pediatric patients (< 18 years of age), approve up to a maximum dose of 90mg administered subcutaneously no more frequently than once every 2 weeks.

References

1. Crysvita® injection [prescribing information]. Novato, CA: Ultragenyx Pharmaceuticals Inc.; September 2019.
2. Carpenter TO, Imel EA, Holm IA, et al. A clinician's guide to x-linked hypophosphatemia. *J Bone Miner Res*. 2011;26(7):1381-1388.
3. Scheinman SJ, Drezner MK. Hereditary hypophosphatemia rickets and tumor-induced osteomalacia. UpToDate, Inc. Available at: www.uptodate.com. Updated July 12, 2019. Accessed on August 12, 2019.
4. Bacon S, Crowley R. Developments in rare bone diseases and mineral disorders. *Ther Adv Chronic Dis*. 2018;9:51-60.
5. Ruppe MD. X-linked hypophosphatemia. GeneReviews®. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK83985/>. Updated April 13, 2017. Accessed on March 24, 2020.
6. Carpenter TO, Whyte MP, Imel EA, et al. Burosumab therapy in children with X-linked hypophosphatemia. *N Engl J Med*. 2018;378(21):1987-1998.
7. Whyte MP, Carpenter TO, Gottesman GS, et al. Efficacy and safety of burosumab in children aged 1-4 years with X-linked hypophosphatemia: a multicenter, open-label, phase 2 trial. *Lancet Diabetes Endocrinol*. 2019;7(3):189-199.
8. Insogna KL, Briot K, Imel EA, et al. A randomized, double-blind, placebo-controlled, phase 3 trial evaluating the efficacy of burosumab, an anti-FGF23 antibody, in adults with X-linked hypophosphatemia: week 24 primary analysis. *J Bone Miner Res*. 2018;33(8):1383-1393.
9. US National Institutes of Health. In: ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (US). 2000- [cited 2019 May 1]. Available from: <https://clinicaltrials.gov/ct2/results?cond=burosumab&term=&cntry=&state=&city=&dist=>. Search terms: burosumab and KRN23.
10. Jan de Beur S, Miller PD, Weber TJ, et al. Effects of burosumab (KRN23), a human monoclonal antibody to FGF23, in patients with tumor-induced osteomalacia (TIO) or epidermal nevus syndrome (ENS) [poster SU0325]. Presented at: the American Society for Bone and Mineral Research (ASBMR); Denver, CO; September 9-11, 2017.
11. Rothenbuhler A, Schnabel D, Hogler W, et al. Diagnosis, treatment-monitoring and follow-up of children and adolescents with X-linked hypophosphatemia (XLH). *Metabolism*. 2019 Mar 27. [Epub ahead of print].
12. Imel EA, Glorieux FH, Whyte MP, et al. Burosumab versus conventional therapy in children with X-linked hypophosphatemia: a randomized, active-controlled, open-label phase 3 trial. *Lancet*. 2019;393:2416-2427.
13. Burosumab-twza (Crysvita®). In: DRUGDEX® System Micromedex. Greenwood Village, CO: Thompson Reuters (Healthcare) Inc. [Updated; February 12, 2020; Accessed March 24, 2020].