

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) in adult and pediatric patients 1 year of age and older.

Coverage Guidelines

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

- Prescribed by or in consultation with an endocrinologist or nephrologist; AND
- The patient has had a baseline (i.e., prior to any XLH treatment [e.g., Crysvita®, oral phosphate/vitamin D therapy]) serum phosphorus level that was below the normal range for age; AND
- The patient has had 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) that was below the normal range for age and gender.

Approval duration: 12 months

Dosing Recommendations

- Initial dose in adults (≥ 18 years of age) is 1 mg/kg (rounded to the nearest 10 mg up to a maximum dose of 90 mg) once every 4 weeks as a subcutaneous (SC) injection;¹ OR
- Initial dose in pediatric patients (< 18 years of age) is 0.8 mg/kg (rounded to the nearest 10 mg; minimum initial dose of 10 mg/maximum initial dose of 90 mg) once every 2 weeks as a SC injection OR
- The dose has been adjusted as follows (i AND ii):
 - o The dose has been adjusted based on serum phosphorus levels; AND
 - o Maximum dose is 90 mg given as a SC injection once every 4 weeks in adults or once every 2 weeks in pediatric patients.

References

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4. Ruppe MD. X-linked hypophosphatemia. GeneReviews®. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK83985/>. Updated April 13, 2017. Accessed on March 28, 2018.
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- [oral presentation 1154]. Presented at: the American Society for Bone and Mineral Research (ASBMR); Denver, CO; September 9-11, 2017.
6. Padidela R, Hogler W, Portale A, et al. A randomized, open-label phase 2 study of burosumab (KRN23), an investigational fully human anti-FGF23 monoclonal antibody, in children with x-linked hypophosphatemia (XLH) [oral communication 26]. Presented at: the 8th International Conference on Children's Bone Health (ICCBH); Wurzburg, Germany; June 10-13, 2017.
 7. Carpenter T, Imel E, Boot A, et al. A randomized, open-label phase 2 study of KRN23, a fully human anti-FGF23 monoclonal antibody, in 52 children with x-linked hypophosphatemia (WLH): 40-week results [oral presentation 1154]. Presented at: the American Society for Bone and Mineral Research (ASBMR); Atlanta, GA; September 17-19, 2016.
 8. Data on file. Investigational burosumab (KRN23) for X-linked hypophosphatemia: clinical program summary. Ultragenyx Pharmaceutical, Inc.; April 2018.
 9. Imel E, Carpenter T, Gottesman GS, et al. Burosumab (KRN23): effects on phosphate and vitamin D dysregulation in children < 5 years old with X-linked hypophosphatemia (XLH) [oral communication 24]. Presented at: the 8th International Conference on Children's Bone Health (ICCBH); Wurzburg, Germany; June 10-13, 2017.
 10. Imel E, Carpenter TO, Gottesman GS, et al. The effects of burosumab (KRN23), a fully human anti-FGF23 monoclonal antibody, on phosphate metabolism and rickets in 1 to 4-year old children with X-linked hypophosphatemia [poster MO0695]. Presented at: the American Society for Bone and Mineral Research (ASBMR); Denver, CO; September 9-11, 2017.
 11. Insogna K, Briot K, Imel E, et al. A phase 3 randomized, 24 week, double-blind, placebo-controlled study evaluating the efficacy of burosumab, and anti-FGF23 antibody, in adults with x-linked hypophosphatemia (XLH) [oral presentation 1159]. Presented at: the American Society for Bone and Mineral Research (ASBMR); Denver, CO; September 11, 2017.
 12. Data on File. Medical Science Liason (MSL) Slide Deck: a randomized, double-blind, placebo-controlled, phase 3 study with open-label extension to assess the efficacy and safety of burosumab (KRN23) in adults with x-linked hypophosphatemia (XLH). Ultragenyx Pharmaceutical, Inc.; February 2015.
 13. US National Institutes of Health. In: ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (US). 2000- [cited 2018 Mar 28]. Available from: <https://clinicaltrials.gov/ct2/results?term=daratumumab&Search=Search>. Search terms: burosumab and KRN23.
 14. 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.

Other References Utilized

1. Carpenter T, Imel E, Linglart A, et al. Effects of burosumab (KRN23), a fully human anti-FGF23 monoclonal antibody, on functional outcomes in children with X-linked hypophosphatemia (XLH): final results from a randomized, 64-week, open-label phase 2 study [poster FR0331]. Presented at: the American Society for Bone and Mineral Research (ASBMR); Denver, CO; September 9-11, 2017.
2. Imel E, Carpenter T, Linglart A, et al. Effects of burosumab (KRN23), a fully human anti-FGF23 monoclonal antibody, on functional outcomes in children with x-linked hypophosphatemia (XLH): results from a randomized, open-label phase 2 study [Poster 063]. Presented at: the 8th International Conference on Children's Bone Health (ICCBH); Wurzburg, Germany; June 10-13, 2017.