

Crysvita® (burosumab-twza)

When requesting Crysvita® (burosumab-twza) for non-oncology use, the individual requiring treatment must be diagnosed with the following FDA-approved indication and meet the specific coverage guidelines and applicable safety criteria for the covered indication.

FDA-Approved Non-oncology Indication

Crysvita is indicated for the treatment of X-linked hypophosphatemia (XLH) in adult and pediatric patients 6 months of age and older.

Coverage Guidelines

X-Linked Hypophosphatemia (XLH)

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

- Had a baseline (i.e., prior to any XLH treatment [e.g., Crysvita®, oral phosphate, or vitamin D]) serum phosphorus level that was below the normal range for age;
- Meets one of the following:
 - o Had a baseline (i.e., prior to any XLH treatment [e.g., Crysvita®, oral phosphate, or vitamin D]) tubular reabsorption of phosphate corrected for glomerular filtration rate (TmP/GFR) that was below the normal range for age and gender; OR
 - o Had a genetic test confirming the diagnosis of X-linked hypophosphatemia via identification of a PHEX pathogenic variant;
- Meets one of the following (*applies to patients 18 years of age and older*):
 - o Has fractures and/or pseudofractures; OR
 - o Meets both of the following:
 - Is currently exhibiting one or more signs or symptoms of X-linked hypophosphatemia (e.g., bone and joint pain, stiffness, muscle weakness, impaired mobility and/or clinical signs of osteomalacia); AND
 - Has tried oral phosphate and calcitriol therapy unless contraindicated to oral phosphate therapy, calcitriol therapy, or both;
- Crysvita is prescribed by or in consultation with an endocrinologist or nephrologist;

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 fractures/pseudofractures, or reduction in the incidence of new fractures/pseudofractures).

Approval duration (initial and renewal): 12 months

Dosing Recommendations

Adult XLH (18 years of age and older)

The recommended dose regimen is 1 mg/kg body weight, rounded to the nearest 10 mg up to a maximum dose of 90 mg, administered subcutaneously every 4 weeks.

Pediatric XLH (6 months to less than 18 years of age)

For patients who weigh less than 10 kg, the recommended starting dose is 1 mg/kg of body weight, rounded to the nearest 1 mg, administered subcutaneously every 2 weeks.

For patients who weigh 10 kg and greater, the recommended starting dose regimen is 0.8 mg/kg of body weight, rounded to the nearest 10 mg, administered subcutaneously every 2 weeks. The minimum starting dose is 10 mg up to a maximum dose of 90 mg.

References

1. Crysvita® injection [prescribing information]. Princeton, NJ: Kyowa Kirin; August 2025.
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. Bacon S, Crowley R. Developments in rare bone diseases and mineral disorders. *Ther Adv Chronic Dis.* 2018;9:51-60.
4. Haffner D, Francesco E, Seefried L, et al. Clinical practice recommendations for the diagnosis and management of X-linked hypophosphatemia. *Nat Rev Nephrol.* 2025;21(5):330-354.
5. Laurent MR, Harvengt P, Mortier GR, et al. X-linked hypophosphatemia. *GeneReviews®.* Available at: <https://www.ncbi.nlm.nih.gov/books/NBK83985/>. Updated December 14, 2023. Accessed on July 22, 2025.
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. Portale AA, Carpenter TO, Brandi ML, et al. Continued beneficial effects of burosumab in adults with X-linked hypophosphatemia: results from a 24-week treatment continuation period after a 24-week double-blind placebo-controlled period. *Calcif Tissue Int.* 2019;105(3):271-284.
10. Briot K, Portale AA, Brandi ML, et al. Burosumab treatment in adults with X-linked hypophosphatemia: 96-week patient-reported outcomes and ambulatory function from a randomized phase 3 trial and open-label extension. *RMD Open.* 2021;7(3):e001714.
11. 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.
12. Linglart A, Imel EA, Whyte MP, et al. Sustained efficacy and safety of burosumab, a monoclonal antibody to FGF23, in children with X-linked hypophosphatemia. *J Clin Endocrinol Metab.* 2022;107(3):813-824.
13. Weber TJ, Imel EA, Carpenter TO, et al. Long-term burosumab administration is safe and effective in adults with X-linked hypophosphatemia. *J Clin Endocrinol Metab.* 2022;108(1):155-165.
14. Kamenicky P, Briot K, Brandi ML, et al. Benefit of burosumab in adults with X-linked hypophosphatemia (XLH) is maintained with long-term treatment. *RMD Open.* 2023;9(1):e002676.
15. Ward LM, Hogler W, Glorieux FH, et al. Burosumab vs. conventional therapy in children with X-linked hypophosphatemia: results of the open-label, phase 3 extension period. *JBM Plus.* 2024;8(1):ziad001.
16. Sugarman J, Maruri A, Hamilton DJ, et al. The efficacy and safety of burosumab in two patients with cutaneous skeletal hypophosphatemia syndrome. *Bone.* 2023;166:116598.
17. Merz LM, Buerger F, Ziegelsch N, et al. A case report: first long-term treatment with burosumab in a patient with cutaneous-skeletal hypophosphatemia syndrome. *Front Endocrinol (Lausanne).* 2022;13:866831.
18. Ali DS, Carpenter TO, Imel EA, et al. X-linked hypophosphatemia management in children: an international working group clinical practice guideline. *J Clin Endocrinol Metab.* 2025;110(7):2055-2070.

19. Khan AA, Ali DS, Appelman-Dijkstra NM, et al. X-linked hypophosphatemia management in adults: an international working group clinical practice guideline. J Clin Endocrinol Metab. 2025;110(8):2353-2370.