



**HSE Prescribing Protocol
Burosumab (Crysvita®)
For
Treatment of X-Linked Hypophosphataemia**

This document is intended for use by healthcare professionals only.

This guideline should be used in conjunction with the full prescribing and administration details in the Burosumab (Crysvita®) Summary of Product Characteristics (SmPC)

https://www.ema.europa.eu/en/documents/product-information/crysvita-epar-product-information_en.pdf

INDICATION FOR USE

TREATMENT	HSE APPROVED INDICATION	ICD10	PROTOCOL CODE
Burosumab (Crysvita®)	Treatment of X-linked hypophosphataemia (XLH) with radiographic evidence of bone disease in children 1 year of age and older, and adolescents with growing skeletons	E83.30	XLH001

TREATMENT

TREATMENT	DOSE ^{1,2,3}	ROUTE	FREQUENCY	DURATION OF THERAPY
Burosumab (Crysvita®)	0.4mg/kg to 0.8 mg/kg	Subcutaneous injection	Every two weeks	Ongoing

The treatment plan must be initiated by a Consultant Endocrinologist experienced in the management of metabolic bone diseases in paediatric, adolescent, or transitional age patients.

Doses should be rounded to the nearest 10mg. The maximum recommended dose is 90mg or 2mg/kg.

Oral phosphate and active vitamin D analogues (e.g. calcitriol) should be discontinued 1 week prior to initiation of treatment. Vitamin D replacement or supplementation with inactive forms may be started or continued as per local guidelines under monitoring of serum calcium and phosphate. At initiation, fasting serum phosphate concentration should be below the reference range for age.

DOSE MODIFICATIONS

After initiation of treatment with burosumab, fasting serum phosphate should be measured every 2 weeks for the first month of treatment, every 4 weeks for the following 2 months and thereafter as appropriate. If fasting serum phosphate is within the reference range for age, the same dose should be maintained. Fasting for the purpose of this protocol is defined as 4 hours since last oral intake.

Dose increases

If fasting serum phosphate is below the reference range for age, the dose may be increased stepwise by 0.4 mg/kg up to a maximum dose of 2.0 mg/kg (maximum dose of 90 mg). Fasting serum phosphate should be measured 4 weeks after dose adjustment. Burosumab should not be adjusted more frequently than every 4 weeks.

Dose decreases

If fasting serum phosphate is above the reference range for age, the next dose should be withheld and the fasting serum phosphate reassessed within 4 weeks. The patient must have fasting serum

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AIDMP Protocol Code: XLH001	Approved by: Dr Ciara Martin, National Clinical Advisor and Group Lead, Children and Young People.	Contributors: Dr Ciara McDonnell, Dr Rachel Crowley, Reena Patel, Eadaoin White, Fionnuala King, Rhona O'Neill, Ita Quinn	Page 2 of 6
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phosphate below the reference range for age to restart burosumab at half of the previous dose, rounding the amount as described above.

Missed or delayed doses:

Treatments may be administered 3 days either side of the scheduled treatment date if needed for practical reasons. If a patient misses a dose, burosumab should be resumed as soon as possible at the prescribed dose.

Dose conversion at age 18 years:

In adolescents with evidence of continued bone growth at 18 years of age, conversion to the adult dose and dosing regimen may be considered although continuation at paediatric levels is acceptable if puberty is delayed for age.

Refer to the Summary of Product Characteristics for further information.

ELIGIBILITY CRITERIA

- Patient is aged greater than one year.
- Patient has confirmed diagnosis (clinical or genetic) of XLH and has radiographic evidence of disease.
- Patient is accessing treatment subject to the commercial in confidence agreement approved with the Marketing Authorisation Holder (MAH).
- Patient must attend for medical appointments and investigations as determined by the clinical team.

EXCLUSION CRITERIA

Patients who do not met the eligibility criteria above.

CONTRAINDICATIONS

- Hypersensitivity to the active ingredient or excipients.
- Concurrent administration with oral phosphate or active Vitamin D analogues.
- Fasting serum phosphate above the normal range for age due to risk of hyperphosphataemia.
- Patients with severe renal impairment or end stage renal disease.

See SmPC for full details.

SPECIAL WARNINGS AND PRECAUTION FOR USE

See SmPC for full details.

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BASELINE TESTS AND MONITORING

Disease monitoring should be in line with the patient's treatment plan and any other test/s as directed by the supervising Consultant.

See also **DOSE MODIFICATIONS** section above (regarding fasting serum phosphate)

Table 1: Recommended schedule of assessments for patients treated with burosumab

ASSESSMENT	BASELINE	3 MONTHLY	6 MONTHLY	ANNUAL
Phosphate-regulating endopeptidase homolog, X-linked (PHEX) mutation or variant of uncertain significance in either the patient or in a directly related family member with appropriate X-linked inheritance	X			
Radiographic evidence of rickets	X			
Renal ultrasound for signs and symptoms of nephrocalcinosis	X			X
Plasma: <ul style="list-style-type: none"> Alkaline Phosphatase Calcium Parathyroid hormone (PTH) Creatinine 	X	X ⁺	X ⁺	
FGF23 levels	X [§]			
Urine: <ul style="list-style-type: none"> Calcium Phosphate 	X	X ⁺	X ⁺	
Tubular maximum reabsorption of phosphate per glomerular filtration rate (TmP/GFR)	X [*]	X ^{**}	X ^{**}	
Vitamin D and 1,25 Dihydroxy vitamin D serum levels	X	X ⁺	X ⁺	
Urine calcium:creatinine ratio	X [*]	X ^{**}	X ^{**}	

+ every 3 months for initial 1-2 years then six-monthly on an ongoing basis

§ check pre dose and then once post dose and as needed if concerns regarding compliance

* depending on age and dose modifications

STOPPING CRITERIA (if applicable)

Information on long term efficacy of this medicinal product is not yet available. The need for continuation of therapy should be reviewed regularly and considered on an individual basis depending on the patient's clinical presentation and response to the therapy. If treatment is tolerated and there are no adverse effects, treatment should continue until there is radiological evidence of cessation of skeletal growth.

Burosumab is intended for long-term treatment. A decision to continue the therapy should be made at least annually based on assessment of response.

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Treatment should be discontinued if:

- burosumab therapy is not tolerated
OR
- Radiological evidence of epiphyseal fusion indicating cessation of skeletal growth. A bone age is recommended once height velocity is $<2\text{cm}/\text{year}^2$
OR
- Lack of clinical evidence of response.

ADVERSE EFFECTS

See SmPC for full details.

DRUG INTERACTIONS

See SmPC for full details.

ATC CODE

M05BX05

REIMBURSEMENT CATEGORY

Hospital Reimbursement

REFERENCES

1. Summary of Product Characteristics Crysvita 10mg / 20mg/ 30mg solution for injection / solution for injection in pre-filled syringe. Available from: https://www.ema.europa.eu/en/documents/product-information/crysvita-epar-product-information_en.pdf
2. Haffner, D., Emma, F., Seefried, L. et al. Clinical practice recommendations for the diagnosis and management of X-linked hypophosphataemia. Nat Rev Nephrol (2025). <https://doi.org/10.1038/s41581-024-00926-x>
3. Padidela R, Cheung MS, Saraff V, Dharmaraj P. Clinical guidelines for burosumab in the treatment of XLH in children and adolescents: British paediatric and adolescent bone group recommendations. Endocr Connect. 2020;9(10):1051-1056. doi:10.1530/EC-20-0291
4. 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 Feb 17:dgaf093. doi: 10.1210/clinem/dgaf093. Epub ahead of print. PMID: 39960858.

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APPENDIX

Revision History

Revision Number	Revision Date	Summary of Changes
2.0	September 2025	<ul style="list-style-type: none"> Layout changed to align with other AIDMP Protocols Removed: Additional administration details, Special warnings and precautions for use, Pregnancy and Breastfeeding, Adverse Drug Reactions (available in SmPC) Added: Burosumab should not be adjusted more frequently than every 4 weeks (as per SmPC) References updated

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