#### **Title page**

### Title

Patient-Reported Outcomes from a Randomized, Active-Controlled, Open-Label, Phase 3 Trial of Burosumab Versus Conventional Therapy in Children with X-Linked Hypophosphatemia

## Journal name

#### Calcified Tissue International

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# **Electronic Supplementary Material**

**Table 2** Questions from the validated fixed-length short-form PROMIS pediatric self-report ( $\geq 8$  years) andparent proxy report (5 to <8 years) used in this trial</td>

PROMIS pediatric self-report questions	PROMIS parent report questions
<b>Physical function mobility</b> . In both questionnaires, re trouble," "with some trouble," "with a lot of trouble," a	
In the past 7 days	In the past 7 days
I could do sports and exercise that other kids my age could do.	My child could do sports and exercise that other kids his/her age could do.
I could get up from the floor.	My child could get up from the floor.
I could keep up when I played with other kids.	My child could keep up when he/she played with other kids.
I could walk up stairs without holding on to anything.	My child could walk up stairs without holding on to anything.
I have been physically able to do the activities I enjoy most.	My child has been physically able to do the activities he/she enjoys most.
I could carry my books in my backpack.	My child could carry his/her books in a backpack.
I could get down on my knees without holding on to something.	My child could get down on his/her knees without holding on to something.
I could get in and out of a car.	My child could get in and out of a car.
I could ride a bike.	My child could ride a bike.
I could walk more than one block.	My child could walk more than one block.
<b>Fatigue.</b> In both questionnaires, response options were "almost always."	"never," "almost never," "sometimes," "often," and
In the past 7 days	In the past 7 days
Being tired made it hard for me to play or go out with my friends as much as I'd like.	Being tired made it hard for my child to play or go out with friends as much as he/she would like.

I got tired easily.	My child got tired easily.						
I was too tired to do sports or exercise.	My child was too tired to do sports or exercise.						
I was too tired to do things outside.	My child was too tired to do things outside.						
I was too tired to enjoy the things I like to do.	My child was too tired to enjoy the things he/she likes to do.						
I felt too tired to spend time with my friends.	My child felt too tired to spend time with his/her friends.						
I needed to sleep during the day.	My child needed to sleep during the day.						
I was too tired to go up and down a lot of stairs.	My child was too tired to go up and down a lot of stairs.						
<b>Pain interference.</b> In both questionnaires, response "often," and "almost always."	options were "never," "almost never," "sometimes,"						
In the past 7 days	In the past 7 days						
I had trouble sleeping when I had pain.	My child had trouble sleeping when he/she had pain.						
It was hard for me to run when I had pain.	It was hard for my child to run when he/she had pain.						
It was hard for me to walk one block when I had pain.	It was hard for my child to walk one block when he/she had pain.						
It was hard to stay standing when I had pain.	It was hard for my child to stay standing when he/she had pain.						

PROMIS Patient-Reported Outcomes Measurement Information System

Table 3 Item response variability in PROMIS pain interference, physical function mobility, and fatigue domains for patients receiving burosumab or conventional therapy

PROMIS domain			Burosumab		Conventional therapy					7		
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)		
Pain interference	Never	Almost never	Sometimes	Often	Almost always	Never	Almost never	Sometimes	Often	Almost always		
Had trouble sleeping when I/	they had pain											
Baseline	9 (60.0)	1 (6.7)	3 (20.0)	0	2 (13.3)	10 (50.0)	3 (15.0)	5 (25.0)	1 (5.0)	1 (5.0)		
Week 64	10 (66.7)	3 (20.0)	2 (13.3)	0	0	12 (60.0)	3 (15.0)	3 (15.0)	2 (10.0)	0		
Hard to run when I/they had	pain											
Baseline	4 (26.7)	1 (6.7)	7 (46.7)	0	3 (20.0)	8 (40.0)	2 (10.0)	3 (15.0)	3 (15.0)	4 (20.0)		
Week 64	5 (33.3)	6 (40.0)	3 (20.0)	1 (6.7)	0	7 (35.0)	4 (20.0)	6 (30.0)	3 (15.0)	0		
Hard to walk when I/they had	l pain											
Baseline	4 (26.7)	2 (13.3)	6 (40.0)	1 (6.7)	2 (13.3)	10 (50.0)	2 (10.0)	3 (15.0)	2 (10.0)	3 (15.0)		
Week 64	4 (26.7)	7 (46.7)	2 (13.3)	1 (6.7)	1 (6.7)	8 (40.0)	3 (15.0)	4 (20.0)	3 (15.0)	2 (10.0)		

Hard to stand when I/they had p	pain									
Baseline	8 (53.3)	1 (6.7)	3 (20.0)	1 (6.7)	2 (13.3)	11 (55.0)	4 (20.0)	2 (10.0)	1 (5.0)	2 (10.0)
Week 64	5 (33.3)	6 (40.0)	3 (20.0)	0	1 (6.7)	10 (50.0)	4 (20.0)	3 (15.0)	3 (15.0)	0
Physical function mobility	Not able	With a	With some	With a	With no	Not able	With a	With some	With a	With no
	to do	lot of trouble	trouble	little trouble	trouble	to do	lot of trouble	trouble	little trouble	trouble
I/they could do sports and exerci	ise									
Baseline	0	1 (6.7)	6 (40.0)	3 (20.0)	5 (33.3)	1 (5.0)	2 (10.0)	0	9 (45.0)	8 (40.0)
Week 64	0	1 (6.7)	1 (6.7)	6 (40.0)	7 (46.7)	0	1 (5.0)	4 (20.0)	5 (25.0)	10 (50.0)
I/they could get up from the floo	r									
Baseline	0	0	0	1 (6.7)	14 (93.3)	0	0	0	4 (20.0)	16 (80.0)
Week 64	0	0	1 (6.7)	0	14 (93.3)	0	0	0	5 (25.0)	15 (75.0)
I/they could keep up when I/they	y played									
Baseline	0	2 (13.3)	4 (26.7)	5 (33.3)	4 (26.7)	0	3 (15.0)	6 (30.0)	4 (20.0)	7 (35.0)
Week 64	0	0	4 (26.7)	4 (26.7)	7 (46.7)	0	1 (5.0)	3 (15.0)	7 (35.0)	9 (45.0)

I/they could walk up stairs without	ut holding									
Baseline	1 (6.7)	0	2 (13.3)	4 (26.7)	8 (53.3)	1 (5.0)	2 (10.0)	2 (10.0)	2 (10.0)	13 (65.0)
Week 64	0	0	3 (20.0)	4 (26.7)	8 (53.3)	0	1 (5.0)	2 (10.0)	4 (20.0)	13 (65.0)
I/they was/were able to do the act	ivities I/they e	njoy most								
Baseline	0	0	1 (6.7)	8 (53.3)	6 (40.0)	1 (5.0)	0	3 (15.0)	4 (20.0)	12 (60.0)
Week 64	0	0	1 (6.7)	2 (13.3)	12 (80.0)	0	0	3 (15.0)	4 (20.0)	13 (65.0)
I/they could carry my/their books	s in my/their ba	ackpack								
Baseline	0	1 (6.7)	0	5 (33.3)	9 (60.0)	1 (5.0)	1 (5.0)	2 (10.0)	1 (5.0)	15 (75.0)
Week 64	0	0	1 (6.7)	1 (6.7)	13 (86.7)	0	0	3 (15.0)	5 (25.0)	12 (60.0)
I/they could get down on my/their	r knees withou	t holding								
Baseline	0	1 (6.7)	0	1 (6.7)	13 (86.7)	1 (5.0)	0	1 (5.0)	4 (20.0)	14 (70.0)
Week 64	0	0	1 (6.7)	2 (13.3)	12 (80.0)	1 (5.0)	0	1 (5.0)	4 (20.0)	14 (70.0)
I/they could get in and out of a ca	r									
Baseline	0	0	0	2 (13.3)	13 (86.7)	0	0	1 (5.0)	3 (15.0)	16 (80.0)
Week 64	0	0	2 (13.3)	0	13 (86.7)	0	0	0	4 (20.0)	16 (80.0)

I/they could ride a bike										
Baseline	0	0	1 (6.7)	1 (6.7)	13 (86.7)	1 (5.0)	1 (5.0)	3 (15.0)	3 (15.0)	12 (60.0)
Week 64	0	0	1 (6.7)	2 (13.3)	12 (80.0)	2 (10.0)	0	3 (15.0)	3 (15.0)	12 (60.0)
I/they could walk more th	an one block									
Baseline	0	1 (6.7)	1 (6.7)	4 (26.7)	9 (60.0)	3 (15.0)	2 (10.0)	0	3 (15.0)	12 (60.0)
Week 64	0	1 (6.7)	1 (6.7)	3 (20.0)	10 (66.7)	2 (10.0)	3 (15.0)	1 (5.0)	5 (25.0)	9 (45.0)
Fatigue	Never	Almost never	Sometimes	Often	Almost always	Never	Almost never	Sometimes	Often	Almost always
Being tired made it hard f	for me/them to play									
Baseline	8 (53.3)	4 (26.7)	1 (6.7)	1 (6.7)	1 (6.7)	10 (50.0)	3 (15.0)	5 (25.0)	2 (10.0)	0
Week 64	7 (46.7)	4 (26.7)	4 (26.7)	0	0	11 (55.0)	6 (30.0)	3 (15.0)	0	0
I/they got tired easily				<u> </u>						
Baseline	4 (26.7)	5 (33.3)	4 (26.7)	2 (13.3)	0	10 (50.0)	2 (10.0)	4 (20.0)	1 (5.0)	3 (15.0)
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I/they was/were too tired to	do sports or exercise	2								
Baseline	6 (40.0)	4 (26.7)	2 (13.3)	2 (13.3)	1 (6.7)	11 (55.0)	4 (20.0)	1 (5.0)	2 (10.0)	2 (10.0)
Week 64	8 (53.3)	3 (20.0)	3 (20.0)	1 (6.7)	0	11 (55)	4 (20.0)	5 (25.0)	0	0
I/they was/were too tired to	o do things outside									
Baseline	10 (66.7)	2 (13.3)	3 (20.0)	0	0	11 (55)	4 (20.0)	2 (10.0)	3 (15.0)	0
Week 64	10 (66.7)	2 (13.3)	2 (13.3)	1 (6.7)	0	13 (65.0)	2 (10.0)	5 (25.0)	0	0
I/they was/were too tired to	enjoy things I/they l	ike								
Baseline	9 (60.0)	4 (26.7)	2 (13.3)	0	0	14 (70.0)	2 (10.0)	1 (5.0)	3 (15.0)	0
Week 64	10 (66.7)	4 (26.7)	1 (6.7)	0	0	15 (75.0)	1 (5.0)	4 (20.0)	0	0
I/they felt too tired to spend	l time with friends									
Baseline	10 (66.7)	4 (26.7)	1 (6.7)	0	0	13 (65.0)	5 (25.0)	1 (5.0)	1 (5.0)	0
Week 64	10 (66.7)	4 (26.7)	1 (6.7)	0	0	13 (65.0)	4 (20.0)	3 (15.0)	0	0
I/they needed to sleep durin	ng the day									
Baseline	6 (40.0)	6 (40.0)	3 (20.0)	0	0	14 (70.0)	3 (15.0)	3 (15.0)	0	0
Week 64	9 (60.0)	2 (13.3)	4 (26.7)	0	0	13 (65.0)	4 (20.0)	3 (15.0)	0	0

I/they was/were too tired to go up and down stairs											
Baseline	6 (40.0)	4 (26.7)	5 (33.3)	0	0	9 (45.0)	5 (25.0)	3 (15.0)	1 (5.0)	2 (10.0)	
Week 64	10 (66.7)	2 (13.3)	3 (20.0)	0	0	11 (55.0)	4 (20.0)	4 (20.0)	0	1 (5.0)	

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