Clinical trial results:
Radium-223 in patients with PSA progression and without clinical metastases following maximal local therapy: a pilot study

Summary

EudraCT number	2014-002833-70
Trial protocol	BE
Global end of trial date	12 December 2020

Results information

Result version number	v1 (current)
This version publication date	22 December 2021
First version publication date	22 December 2021
Summary attachment (see zip file)	manuscript (1-s2.0-S1078143921001927-main.pdf)

Trial information

Trial identification

Sponsor protocol code	s56892

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	UZ Leuven
Sponsor organisation address	Herestraat 49, Leuven, Belgium, 3000
Public contact	Clinical Trial Center (CTC), UZLeuven, 0032 16341998, CTC@uzleuven.be
Scientific contact	Clinical Trial Center (CTC), UZLeuven, 0032 16341998, CTC@uzleuven.be

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	18 February 2021
Is this the analysis of the primary completion data?	Yes
Primary completion date	12 December 2020
Global end of trial reached?	Yes
Global end of trial date	12 December 2020
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To assess the clinical safety/tolerability of Radium-223 treatment in patients affected by prostate cancer with biochemical relapse after maximal local treatment with high risk of metastatic progression. Safety and feasibility results could be used to plan an eventual phase II/III trial.

Protection of trial subjects:

Subjects had to sign informed consent before starting the study and could leave the study at any time. Subjects were followed clinically by dedicated medical staff and they had free and direct contact with the clinical trial staff in order to permit them to solve any personal, clinical or administrative issue. Patients could contact the medical staff at any time.

Background therapy: -

Evidence for comparator:

/

Actual start date of recruitment	25 April 2016
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Belgium: 8
Worldwide total number of subjects	8
EEA total number of subjects	8

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	2

From 65 to 84 years	6
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

8 patients included in the study at UZLeuven between April 2016 and December 2017.

Pre-assignment

Screening details:

INCLUSION CRITERIA (main): Male≥ 18 years with histological confirmation of prostatic adenocarcinoma, Biochemical progression following to RP, PLND and adjuvant or salvage EBRT or following to salvage LND in patients treated formerly by RP and adjuvant or salvage EBRT , No metastases on 68 Ga-PSMA-11 PET/CT and whole body MRI.

Period 1

Period 1 title	overall trial (overall period)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Blinding implementation details:

Single arm.

Arms

Arm title	Radium-223 arm

Arm description:

6 injections with Radium-223 (xofigo) every 4 weeks

Arm type	Experimental
Investigational medicinal product name	Radium-223
Investigational medicinal product code	
Other name	Xofigo
Pharmaceutical forms	Solution for infusion
Routes of administration	Infusion

Dosage and administration details:

See publication.

Number of subjects in period 1	Radium-223 arm
Started	8
Completed	8

Baseline characteristics

Reporting groups	
Reporting group title	Radium-223 arm
Reporting group description:	
6 injections with Radium-223 (xofigo) every 4 weeks	

Reporting group values	Radium-223 arm	Total	
Number of subjects	8	8	
Age categorical Units: Subjects			
Adults (18-64 years)	2	2	
From 65-84 years	6	6	
Gender categorical Units: Subjects			
Female	0	0	
Male	8	8	

Subject analysis sets	
Subject analysis set title	Treated patients
Subject analysis set type	Full analysis
Subject analysis set description:	
Patients treated with study drug	

Reporting group values	Treated patients		
Number of subjects	8		
Age categorical Units: Subjects			
Adults (18-64 years)	2		
From 65-84 years	6		
Gender categorical Units: Subjects			
Female	0		
Male	8		

End points

End points reporting groups

Reporting group title	Radium-223 arm
Reporting group description: 6 injections with Radium-223 (xofigo) every 4 weeks	
Subject analysis set title	Treated patients
Subject analysis set type	Full analysis
Subject analysis set description: Patients treated with study drug	

Primary: Safety an tolerability

End point title	Safety an tolerability[1]
End point description:	
End point type	Primary
End point timeframe: April 2016 to Dec 2020	

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: safety and tolerability are reported in the section adverse events.

End point values	Radium-223 arm	Treated patients		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	8	8		
Units: proportion (%)	8	8		

Statistical analyses

No statistical analyses for this end point

Secondary: Time to PSA progression

End point title	Time to PSA progression
End point description:	
End point type	Secondary
End point timeframe: April 2016 to December 2020	

End point values	Radium-223 arm	Treated patients		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	8	8		
Units: Months				
median (confidence interval 95%)	5.5 (5.1 to 7.4)	5.5 (5.1 to 7.4)		

Statistical analyses

Statistical analysis title	Time to PSA progression
Comparison groups	Radium-223 arm v Treated patients
Number of subjects included in analysis	16
Analysis specification	Pre-specified
Analysis type	other[2]
P-value	< 0.05
Method	t-test, 2-sided
Parameter estimate	Mean difference (final values)
Point estimate	5.5
Confidence interval	
level	95 %
sides	2-sided
lower limit	5.1
upper limit	7.4

Notes:

[2] - This is a single arm study with a total of 8 patients included in the analyses.

Adverse events

Adverse events information	
Timeframe for reporting adverse events: April 2016 to December 2020	
Adverse event reporting additional description: see manuscript	
Assessment type	Systematic

Dictionary used	
Dictionary name	CTCAE
Dictionary version	4.03

Reporting groups	
Reporting group title	Radium-223 treatment

Reporting group description: -

Serious adverse events	Radium-223 treatment		
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 8 (0.00%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		

Frequency threshold for reporting non-serious adverse events: 0 %

Non-serious adverse events	Radium-223 treatment		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	5 / 8 (62.50%)		
Nervous system disorders			
Taste disorder	Additional description: Metal taste		
subjects affected / exposed	1 / 8 (12.50%)		
occurrences (all)	1		
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	3 / 8 (37.50%)		
occurrences (all)	3		
Blood and lymphatic system disorders			
Lymphopenia			

subjects affected / exposed	1 / 8 (12.50%)		
occurrences (all)	1		
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	4 / 8 (50.00%)		
occurrences (all)	4		
Appetite disorder	Additional description: Loss of appetite		
subjects affected / exposed	1 / 8 (12.50%)		
occurrences (all)	1		
Nausea			
subjects affected / exposed	1 / 8 (12.50%)		
occurrences (all)	1		
Musculoskeletal and connective tissue disorders			
Joint effusion			
subjects affected / exposed	1 / 8 (12.50%)		
occurrences (all)	1		
Arthralgia			
subjects affected / exposed	2 / 8 (25.00%)		
occurrences (all)	2		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
23 September 2015	- Protocol amendement PART 1 and 2 - PI change from Prof. H. Van Poppel to Prof S. Joniau - IC amended according to different languages - FOLLOW-UP schedule - Investigator Brochure

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported