Clinical trial results:
A Phase III Clinical Trial to evidence the safety and efficacy of the radio-drug 18f-Fluorocholine (18F-FCH), using Positron Emission Tomography (PET) for the diagnosis of the prostate carcinoma in patients with biochemical relapse.

Summary

EudraCT number	2013-004397-99
Trial protocol	ES
Global end of trial date	30 June 2016

Results information

Result version number	v1 (current)
This version publication date	11 July 2018
First version publication date	11 July 2018
Summary attachment (see zip file)	CSR in Spanish (informe COLTRACER estudio_def limpio.pdf)

Trial information

Trial identification

Sponsor protocol code	MBCC28040

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	Instituto Tecnológico PET, S.A.U. (ITP)
Sponsor organisation address	Calle de Manuel Bartolomé Cossío, 10, Madrid, Spain, 28040
Public contact	Emilio Viñas Navarro, Instituto Tecnológico PET, S.A.U. (ITP), 34 915344896135, evinas@petmadrid.com
Scientific contact	Emilio Viñas Navarro, Instituto Tecnológico PET, S.A.U. (ITP), 34 915344896135, evinas@petmadrid.com

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	16 December 2016
Is this the analysis of the primary completion data?	Yes
Primary completion date	30 June 2016
Global end of trial reached?	Yes
Global end of trial date	30 June 2016
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate the diagnostic efficiency in terms of the classification probabilities (sensitivity and specificity) of the PET CT with 18F-FCH in demonstrating the recurrence of prostate cancer in patients with biochemical relapse who have undergone radical primary treatment, using as reference standard the histology of the lesions (in some cases the confirmation of the diagnosis can be made with clinical follow-up)

Protection of trial subjects:

The Sponsor of the study has an insurance policy that conforms to current legislation (Royal Decree 223/2004 of February 6, which regulates clinical trials with drugs), which will provide compensation in case of impairment of your health or injuries that may occur in connection with your participation in the study. This policy is contracted with Catlin Europe S.E Iberia Branch, with policy number CE3000414697

In case medical care is needed, the costs incurred for this are the responsibility of the Sponsor.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	07 November 2014
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	Spain: 114
Worldwide total number of subjects	114
EEA total number of subjects	114

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)	15
From 65 to 84 years	95
85 years and over	4

Subject disposition

Recruitment

Recruitment details:

End of recruitment dated on October 06, 2015
The first patient was recruited on November 7, 2014 so the period of recruitment lasted 11 months

Pre-assignment

Screening details:

1.Male.2.Age≥18 years.3. Patients with biochemical relapse of Prostate Carcinoma who have reached any of the following serum PSA levels after a previous primary radical treatment: In patient treated with radical prostatectomy must have passed at least 3 months from the urgery and PSA value will be: (a) higher than 1.0 ng / mL. Continue in Protocol.

Period 1

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

Arms

Are arms mutually exclusive?	Yes
Arm title	Treatment (baseline)

Arm description: -

Arm type	Experimental
Investigational medicinal product name	[18F]-fluorometilcolina; [18F]-fluorocolina; 18F-FCH. COLTRACER
Investigational medicinal product code	V09IX07
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intravenous use

Dosage and administration details:

- Half-life of the radioisotope: 110 minutes.
- Dose: 4.0 MBq per kg body weight

Arm title	Treatment (end data)

Arm description: -

Arm type	Experimental
Investigational medicinal product name	[18F]-fluorometilcolina; [18F]-fluorocolina; 18F-FCH. COLTRACER
Investigational medicinal product code	V09IX07
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intravenous use

Dosage and administration details:

- Half-life of the radioisotope: 110 minutes.
- Dose: 4.0 MBq per kg body weight

Number of subjects in period 1	Treatment (baseline)	Treatment (end data)
Started	57	57
Completed	57	57

Baseline characteristics

Reporting groups	
Reporting group title	Treatment (baseline)
Reporting group description: -	
Reporting group title	Treatment (end data)
Reporting group description: -	

Reporting group values	Treatment (baseline)	Treatment (end data)	Total
Number of subjects	57	57	114
Age categorical Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	0	0	0
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	7	8	15
From 65-84 years	48	47	95
85 years and over	2	2	4
Age continuous Units: years			
arithmetic mean	71.9	71.9	
standard deviation	± 6.5	± 6.5	-
Gender categorical Units: Subjects			
Female	0	0	0
Male	57	57	114

Subject analysis sets	
Subject analysis set title	Treatment
Subject analysis set type	Full analysis
Subject analysis set description: Treatment arm (baseline)	
Subject analysis set title	Treatment (end data)
Subject analysis set type	Full analysis
Subject analysis set description: Treatment (end data)	

Reporting group values	Treatment	Treatment (end data)	
Number of subjects	57	57	
Age categorical Units: Subjects			
In utero	0	0	

Preterm newborn infants (gestational age < 37 wks)	0	0	
Newborns (0-27 days)	0	0	
Infants and toddlers (28 days-23 months)	0	0	
Children (2-11 years)	0	0	
Adolescents (12-17 years)	0	0	
Adults (18-64 years)	7	8	
From 65-84 years	48	47	
85 years and over	2	2	
Age continuous			
Units: years			
arithmetic mean	71.9	71.9	
standard deviation	± 6.5	± 6.5	
Gender categorical			
Units: Subjects			
Female	0	0	
Male	57	57	

End points

End points reporting groups	
Reporting group title	Treatment (baseline)
Reporting group description: -	
Reporting group title	Treatment (end data)
Reporting group description: -	
Subject analysis set title	Treatment
Subject analysis set type	Full analysis
Subject analysis set description: Treatment arm (baseline)	
Subject analysis set title	Treatment (end data)
Subject analysis set type	Full analysis
Subject analysis set description: Treatment (end data)	

Primary: Diagnostic efficiency of the PET-CT on an individual level	
End point title	Diagnostic efficiency of the PET-CT on an individual level
End point description: The corresponding specialist will consider the test positive if there is evidence of abnormal catchment in any location under evaluation. Likewise, the reference compare will be positive if there is evidence of a clinical relapse in any location.	
End point type	Primary
End point timeframe: All imaging tests evaluated in the study objectives will be performed within the period of 15 days before or after the PET-TC with 18f-FCH has been performed.	

End point values	Treatment (baseline)	Treatment (end data)	Treatment	Treatment (end data)
Subject group type	Reporting group	Reporting group	Subject analysis set	Subject analysis set
Number of subjects analysed	57	57	57	57
Units: percentage	83	83	83	83

Statistical analyses

Statistical analysis title	PET-TC efficiency
Statistical analysis description: SAS v9.1	
Comparison groups	Treatment (baseline) v Treatment (end data)
Number of subjects included in analysis	114
Analysis specification	Pre-specified
Analysis type	other[1]
P-value	> 0.05 [2]
Method	t-test, 1-sided
Parameter estimate	diagnostic yield

Confidence interval	
level	Other: 97.5 %
sides	1-sided
upper limit	0.9479
Variability estimate	Standard deviation

Notes:

[1] - The diagnostic performance of PET-CT was evaluated at the individual level. The test was considered positive if abnormal uptake was evidenced in any location assessed by the corresponding specialists.
The reference pattern was positive if the presence of clinical recurrence was evidenced in any location. We calculated empirical estimates of the classification probabilities (TPF, FPF), and their 95% two-dimensional confidence region, using exact methods based on the binomial distribution.
[2] - Evaluation of the sensitivity and specificity of PET-CT with 18F-FCH in the demonstration of clinical recurrence of prostate cancer in patients with biochemical recurrence, using the histology of the lesions as a reference standard (binomial distr.)

Secondary: Secondary endpoints

End point title	Secondary endpoints

End point description:

1.-Demonstration, in separate, of the clinical relapses, local-regional and at distance. 2. - Evaluate the impact of the PET-CT over the reasonable diagnostic. 3. - Evaluate the secondary objectives related to the accuracy of the diagnostic with other imaging technics (CT with contrast, MRI and bone gamagraphy). 4. - Evaluate the influence of several factors over the efficiency of the diagnostic with PET-CT. 5.- Complete empiric estimations for the ROC curve. 6.- Analyze the safety of the radio tracer.

End point type	Secondary

End point timeframe:

During the performance of the imaging test. During the following 24 hours to the performance of the image test. During each patient's participation in the study (except those occurring in the course of the image test or within the following 24 hours)

End point values	Treatment (baseline)	Treatment (end data)	Treatment	Treatment (end data)
Subject group type	Reporting group	Reporting group	Subject analysis set	Subject analysis set
Number of subjects analysed	57	57	57	57
Units: Percentage	83	83	83	83

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Any AE, or any abnormal laboratory result that was considered clinically relevant, was followed until a satisfactory resolution was reached, until it was stabilized, or until it could be explained by other causes.

Adverse event reporting additional description:

All AEs were registered in the e-CRF, accompanied by the following information:
• Nature of AE
• When the AE occurred for the first time (beginning).
• When the AE ended and / or how long it lasted.
• If the AE was serious.
• Intensity of the AE.
• Measures taken.
• Final (or last known) ending.
• Relationship with IMP

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	19.0

Reporting groups

Reporting group title	Treatment

Reporting group description: -

Serious adverse events	Treatment		
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 114 (0.00%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events			

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	Treatment		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	1 / 114 (0.88%)		
Social circumstances			
Alopecia			
subjects affected / exposed	1 / 114 (0.88%)		
occurrences (all)	1		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported