



Clinical trial results:

Prospective study of 18F-RGD PET-CT in assessment of response to antiangiogenic treatment in patients with renal cancer and comparison with perfusion CT

Summary

| | |
|--------------------------|------------------|
| EudraCT number | 2011-002833-20 |
| Trial protocol | GB |
| Global end of trial date | 03 November 2015 |

Results information

| | |
|--------------------------------|------------------|
| Result version number | v1 (current) |
| This version publication date | 12 November 2016 |
| First version publication date | 12 November 2016 |

Trial information

Trial identification

| | |
|-----------------------|------------|
| Sponsor protocol code | EP-TSC-663 |
|-----------------------|------------|

Additional study identifiers

| | |
|------------------------------------|-------------|
| ISRCTN number | - |
| ClinicalTrials.gov id (NCT number) | NCT01492192 |
| WHO universal trial number (UTN) | - |

Notes:

Sponsors

| | |
|------------------------------|--|
| Sponsor organisation name | Oxford University Hospitals NHS Foundation Trust |
| Sponsor organisation address | Churchill Hospital, Oxford, United Kingdom, OX37LJ |
| Public contact | Trial Administration Team, The Early Phase Research Hub, Dept Oncology, 44 1865235312, earlyphasehub@oncology.ox.ac.uk |
| Scientific contact | Trial Administration Team, The Early Phase Research Hub, Dept Oncology, 44 1865235312, earlyphasehub@oncology.ox.ac.uk |

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 | 22 December 2014 |
| Is this the analysis of the primary completion data? | Yes |
| Primary completion date | 22 December 2014 |
| Global end of trial reached? | Yes |
| Global end of trial date | 03 November 2015 |
| Was the trial ended prematurely? | Yes |

Notes:

General information about the trial

Main objective of the trial:

To evaluate whether changes of uptake on 18F-RGD PET-CT before, during and after anti-angiogenic therapy are associated with tumour response in patients with cancer.

Protection of trial subjects:

Since the adverse event profile of Fluciclatide (18F) Injection has not yet been fully established in humans, safety was monitored closely in this study given the small risk of anaphylaxis. Patients were observed for an hour following 18F injection for: Physical examination; blood pressure and pulse.

Background therapy:

Patients will be given a Tyrosine Kinase Inhibitor (TKI) as per standard of care for their metastatic renal cell cancer (RCC). TKI to be given as per the current cancer network treatment protocol. The most commonly prescribed TKI for metastatic RCC is sunitinib. Other TKIs may be used for the patient to participate..

Sunitinib is typically taken orally at a dosage of 50mg once daily for 4 consecutive weeks with a 2-week rest period (that is, a complete treatment cycle of 6 weeks). Participants will be treated for 3 cycles. If significant progression is not demonstrated then patients will have continuous therapy (with restaging every 3 cycles) of sunitinib until significant progression or death.

Evidence for comparator:

Not applicable

| | |
|---|---------------------|
| Actual start date of recruitment | 03 August 2012 |
| Long term follow-up planned | Yes |
| Long term follow-up rationale | Scientific research |
| Long term follow-up duration | 12 Months |
| Independent data monitoring committee (IDMC) involvement? | No |

Notes:

Population of trial subjects

Subjects enrolled per country

| | |
|--------------------------------------|--------------------|
| Country: Number of subjects enrolled | United Kingdom: 10 |
| Worldwide total number of subjects | 10 |
| EEA total number of subjects | 10 |

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) | 3 |
| From 65 to 84 years | 7 |
| 85 years and over | 0 |

Subject disposition

Recruitment

Recruitment details:

Patients were recruited between 08May 2013 and 30Sept2015 from a single site in the UK.

Pre-assignment

Screening details:

22 patients were screened and twelve declined.

Period 1

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

Arms

| | |
|-----------|---------------|
| Arm title | Overall trial |
|-----------|---------------|

Arm description:

All trial subjects

| | |
|--|------------------------|
| Arm type | Experimental |
| Investigational medicinal product name | 18F Fluciclatide |
| Investigational medicinal product code | AH111585 |
| Other name | |
| Pharmaceutical forms | Solution for injection |
| Routes of administration | Intravenous use |

Dosage and administration details:

Given as a single bolus dose given over 20 seconds, on three occasions for three separate PET scans.
Total dose 20 µg microgram(s)

| Number of subjects in period 1 | Overall trial |
|--------------------------------|---------------|
| Started | 10 |
| Completed | 10 |

Baseline characteristics

Reporting groups

| | |
|-----------------------|---------------|
| Reporting group title | Overall Trial |
|-----------------------|---------------|

Reporting group description: -

| Reporting group values | Overall Trial | Total | |
|------------------------|---------------|-------|--|
| Number of subjects | 10 | 10 | |
| Age categorical | | | |
| Units: Subjects | | | |
| Adults (18-64 years) | 3 | 3 | |
| From 65-84 years | 7 | 7 | |
| Gender categorical | | | |
| Units: Subjects | | | |
| Female | 1 | 1 | |
| Male | 9 | 9 | |

End points

End points reporting groups

| | |
|------------------------------|---------------|
| Reporting group title | Overall trial |
| Reporting group description: | |
| All trial subjects | |

Primary: Correlation between tumour response to TKI therapy and change in SUVmax from baseline

| | |
|-----------------|--|
| End point title | Correlation between tumour response to TKI therapy and change in SUVmax from baseline ^[1] |
|-----------------|--|

End point description:

The null hypothesis assumed no correlation between change in SUVmax and tumour response; H0: $r=0$; where r =Pearson's correlation coefficient. To assess the primary endpoint of study volume and SUVpeak measurements of the tumour deposits were used. SUVpeak was chosen over SUVmax as it is more accurate. Volume of the lesions was calculated as: $\text{Volume}=4/3\pi xyz$ (where x,y and z are the dimensions of tumour deposits in orthogonal planes). Change in volume and SUVpeak between scans were determined percentages. The percentage change for each patient was calculated as an average of the target and non-target lesions. Percentage changes were correlated using a Pearson's correlation. SUVpeak change between baseline and 2nd PET-CT scan had a significant correlation with change in volume between the baseline and both the 2nd and 3rd PET-CT scans ($R=0.66$ $P=0.04$ and $R=0.67$, $P=0.03$, respectively) No correlation demonstrated between change in SUVpeak at baseline and 3rd PET-CT scans and volume changes.

| | |
|----------------|---------|
| End point type | Primary |
|----------------|---------|

End point timeframe:

Changes in tumour uptake (% change in SUVmax) of 18F between baseline scan and second scan after 4 weeks TKI treatment.

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: This is a single arm study with no comparator hence statistical analysis cannot be completed

| End point values | Overall trial | | | |
|-----------------------------|-----------------|--|--|--|
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 10 | | | |
| Units: Tumour volume in mm | | | | |
| number (not applicable) | 10 | | | |

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Safety reporting period was for 24 hours from time of administration of the fluciclatide tracer for each 18F PET-CT scan.

| | |
|-----------------|------------|
| Assessment type | Systematic |
|-----------------|------------|

Dictionary used

| | |
|--------------------|-----------|
| Dictionary name | NCI CTCAE |
| Dictionary version | 4 |

Reporting groups

| | |
|-----------------------|---------------|
| Reporting group title | Overall Trial |
|-----------------------|---------------|

Reporting group description: -

| Serious adverse events | Overall Trial | | |
|---|----------------|--|--|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | | |
| number of deaths (all causes) | 4 | | |
| number of deaths resulting from adverse events | 0 | | |

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

| Non-serious adverse events | Overall Trial | | |
|---|-----------------|--|--|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 3 / 10 (30.00%) | | |
| Gastrointestinal disorders | | | |
| Vomiting | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | | |
| occurrences (all) | 1 | | |
| Respiratory, thoracic and mediastinal disorders | | | |
| Cough | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | | |
| occurrences (all) | 1 | | |
| Pain on cough | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | | |
| occurrences (all) | 1 | | |
| Psychiatric disorders | | | |

| | | | |
|--|----------------------|--|--|
| Sleep disorder subjects affected / exposed occurrences (all) | 1 / 10 (10.00%) 1 | | |
|--|----------------------|--|--|

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

| Date | Amendment |
|-------------------|--|
| 29 September 2014 | Substantial amendment SA01 to update the Investigator Brochure used for Reference Safety Information |

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

The trial failed to recruit the 40-50 patients required to achieve statistical significance and hence is significantly under powered.

Notes: