Clinical trial results:
The intraoperative use of fluorescent tracers and multimodal imaging techniques in treatment of head and neck cancer

Summary

EudraCT number	2013-003578-28
Trial protocol	DK
Global end of trial date	20 January 2017

Results information

Result version number	v1 (current)
This version publication date	27 May 2018
First version publication date	27 May 2018
Summary attachment (see zip file)	Study 1 (Study 1_Christensen et al.pdf) Study 2 - Study repport (Study repport and statistics_study 2.pptx)

Trial information

Trial identification

Sponsor protocol code	2013070001

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	Rigshospitalet
Sponsor organisation address	Blegdamsvej 9, Copenhagen, Denmark, 2100
Public contact	Department of Clinical Clinical Physiology, Nuclear Medine & PET , Rigshospitalet, 0045 35454216, andreas.kjaer@regionh.dk
Scientific contact	Department of Clinical Clinical Physiology, Nuclear Medine & PET , Rigshospitalet, 0045 35454216, andreas.kjaer@regionh.dk

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	08 March 2018
Is this the analysis of the primary completion data?	Yes
Primary completion date	20 January 2017
Global end of trial reached?	Yes
Global end of trial date	20 January 2017
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To examine and implement the intraoperative use of fluorescent tracers and optical imaging in the treatment of oral cancer.

Study 1: Near-infrared Fluorescence Tracer Imaging in sentinel Node Biopsi for oral cavity cancer patients

Study 2: Near-infrared Fluorescence assisted neck dissection in oral cancer

Protection of trial subjects:

I accordance with national ethical approval

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 October 2013
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	Yes

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Denmark: 61
Worldwide total number of subjects	61
EEA total number of subjects	61

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)	41
From 65 to 84 years	20

85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Patients with primary oral cancer referred to Rigshospitalet for surgery as first treatment modality
Study 1: Patients planed for SNB-staging surgery
Study 2: Patients planed for therapeutic neck dissction

Pre-assignment

Screening details:

Histology verified squamous cell carcinoma of the oral cavity
CT and/or MRI og the neck

Period 1

Period 1 title	over-all trial (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	NIRF-Neck

Arm description:

Study 2:
Arm 1: NIR-Fluorescence-guided neck dissection

Arm type	Experimental
Investigational medicinal product name	Indocyanine Green
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Concentrate and solvent for solution for injection/infusion
Routes of administration	Soft tissue use

Dosage and administration details:

Study 1: 0,05 mg ICG
STudy 2: 0,2 mg ICG

Arm title	Conventional neck dissection

Arm description:

Study 2

Arm 2: Cenventional neck dissection

Arm type	conventional surgery

No investigational medicinal product assigned in this arm

Arm title	Study 1 - NIRF-SNB

Arm description:

One arm study

Arm type	Feasibility - no control arm
Investigational medicinal product name	Indocyanine Green
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Concentrate and solvent for solution for injection/infusion
Routes of administration	Soft tissue use

Dosage and administration details:

Study 1: 0,05 mg ICG
STudy 2: 0,2 mg ICG

Number of subjects in period 1	NIRF-Neck	Conventional neck dissection	Study 1 - NIRF-SNB
Started	16	15	30
Completed	16	15	30

Baseline characteristics

Reporting groups	
Reporting group title	over-all trial

Reporting group description: -

Reporting group values	over-all trial	Total	
Number of subjects	61	61	
Age categorical Units: Subjects			
In utero		0	
Preterm newborn infants (gestational age < 37 wks)		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)		0	
From 65-84 years		0	
85 years and over		0	
Age continuous Units: years			
arithmetic mean	62		
standard deviation	± 3	-	
Gender categorical Units: Subjects			
Female	20	20	
Male	41	41	

End points

End points reporting groups

Reporting group title	NIRF-Neck
Reporting group description:	
Study 2: Arm 1: NIR-Fluorescence-guided neck dissection	

Reporting group title	Conventional neck dissection
Reporting group description:	
Study 2 Arm 2: Cenventional neck dissection	

Reporting group title	Study 1 - NIRF-SNB
Reporting group description:	
One arm study	

Primary: Study 1: Additional sentinel nodes identified by NIRF-guidance.

End point title	Study 1: Additional sentinel nodes identified by NIRF-
End point description:	
Study 1: Additional sentinel nodes only identified due to the additional use of NIR fluorescence intraoperatively	

End point type	Primary
End point timeframe:	
post-surgery	

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: The endpoint in study 1 is additional sentinel lymph nodes identified due to use of NIRF imaging - no analysis kan be presented apart from a numerical number.
[2] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The endpoint in study 1 is additional sentinel lymph nodes identified due to use of NIRF imaging - no analysis kan be presented apart from a numerical number.

End point values	Study 1 - NIRF-SNB			
Subject group type	Reporting group			
Number of subjects analysed	30			
Units: number of lymph nodes	11			

Statistical analyses

No statistical analyses for this end point

Primary: Study 2: Number of lymph nodes in the neck dissecion specimen from level Ib-III

End point title	Study 2: Number of lymph nodes in the neck dissecion specimen from level Ib-III[3][4]

End point description:

study 2:
Number of lymph nodes harvested in the neck dissecion specimen in level Ib-III

End point type	Primary

End point timeframe:

post-operatively

Notes:

[3] - 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: The endpoint in study 2 is simple the number of harvested lymph nodes in the control Group vs. the NIRF-Neck Group. The stastistics is reported in the attachment report.
[4] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The endpoint is simple the number of harvested lymph nodes in the control Group vs. the NIRF-Neck Group. The stastistics is reported in the attachment report.

End point values	NIRF-Neck	Conventional neck dissection		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	16[5]	15[6]		
Units: number of lymph nodes	406	317		

Notes:

[5] - 16 patients and 17 neck-sides for analysis

[6] - 15 patients and 17 neck sides for evaluation

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information[1]	
Timeframe for reporting adverse events:	
From time of injection of tracer substance to two weeks post-surgery	
Adverse event reporting additional description:	
No adverse events was recorded	
Assessment type	Systematic

Dictionary used	
Dictionary name	clinical examination
Dictionary version	1

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

Notes:

[1] - There are no non-serious adverse events recorded for these results. It is expected that there will be at least one non-serious adverse event reported.
Justification: No adverse events was seen.

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

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

None

Notes:

Online references

http://www.ncbi.nlm.nih.gov/pubmed/26467454