Clinical trial results:
Phase I/II study of peptide vaccination associated with GM-CT-01, a galactomannan oligomer that inhibits galestin-3, in patients with advanced metastatic melanoma

Summary

EudraCT number	2010-018638-29
Trial protocol	BE
Global end of trial date	01 March 2016

Results information

Result version number	v1 (current)
This version publication date	17 March 2021
First version publication date	17 March 2021

Trial information

Trial identification

Sponsor protocol code	LUC10-001

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01723813
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Cliniques universitaires Saint-Luc
Sponsor organisation address	Avenue Hippocrate 10, Brussels, Belgium, 1200
Public contact	Jean-François BAURAIN, Cliniques Universitaires Saint-Luc, 32 2 7645471, jean-francois.baurain@uclouvain.be
Scientific contact	Jean-François BAURAIN, Cliniques Universitaires Saint-Luc, 32 2 7645471, jean-francois.baurain@uclouvain.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	20 July 2015
Is this the analysis of the primary completion data?	Yes
Primary completion date	01 October 2013
Global end of trial reached?	Yes
Global end of trial date	01 March 2016
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To assess the safety and toxicity of the association of a peptide vaccine with GM-CT-01.
To assess the anti-tumoral efficacy of peptide vaccine plus systemic GM-CT-01.

Protection of trial subjects:

This study will be conducted according to the principles of the "Helsinki Declaration", of the, International Conference on Harmonization (ICH)'s Good Clinical Practice Guidelines, national law and reglementation pertaining to clinical studies.

Background therapy:

- GM-CT-01
- MAGE-3.A1 peptide
- NA17.A2 peptide

Evidence for comparator:

Not applicable

Actual start date of recruitment	10 November 2011
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: 6
Worldwide total number of subjects	6
EEA total number of subjects	6

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	3
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Patients were recruited from dermatology Consultation April 2012 till 2013.

Pre-assignment

Screening details:

Not applicable

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	Group 1 : systemic administration of GM-CT-01

Arm description:

Tumor specific peptides: MAGE-3.A1 and / or NA17.A2 plus Galectin-3 inhibitor: GM-CT-01 systemic injections IV.
Patients with at least one measurable lesion = assigned to group 1.

Arm type	Experimental
Investigational medicinal product name	GM-CT-01
Investigational medicinal product code	GM-CT-01
Other name	DAVANAT
Pharmaceutical forms	Solution for injection
Routes of administration	Intravenous use

Dosage and administration details:

GM-CT-01 IV : 280 mg/m², on days +3, +6, +9, +12, +15, +18 after each of the 3rd, 4th, 5th and 6th vaccination.

Investigational medicinal product name	MAGE-3.A1 peptide
Investigational medicinal product code	MAGE-3.A1
Other name	
Pharmaceutical forms	Powder for suspension for injection
Routes of administration	Intradermal use, Subcutaneous use

Dosage and administration details:

MAGE-3.A1 and NA17.A2 : each peptide will be given at a dose of 300 µg in 1 ml of sodium chloride 0.9%, every 3 weeks on 6 occasions, and will be administered at one site in arm or thigh, 20% of the dose intradermally and 80% of the dose subcutaneously.

Investigational medicinal product name	NA17.A2 peptide
Investigational medicinal product code	NA17.A2
Other name	
Pharmaceutical forms	Powder for suspension for injection
Routes of administration	Intradermal use, Subcutaneous use

Dosage and administration details:

MAGE-3.A1 and NA17.A2 : each peptide will be given at a dose of 300 µg in 1 ml of sodium chloride 0.9%, every 3 weeks on 6 occasions, and will be administered at one site in arm or thigh, 20% of the dose intradermally and 80% of the dose subcutaneously.

Arm title	Group 2 : systemic & peri-tumoral administration of GM-CT-01

Arm description:

Tumor specific peptides: MAGE-3.A1 and / or NA17.A2 plus Galectin-3 inhibitor: GM-CT-01 systemic injections IV and Galectin-3 inhibitor: GM-CT-01 Peri-tumoral administration

Patients with at least one measurable and at least 1 superficial metastasis = assigned in priority to group 2.

Arm type	Experimental
Investigational medicinal product name	GM-CT-01
Investigational medicinal product code	GM-CT-01
Other name	DAVANAT
Pharmaceutical forms	Solution for injection
Routes of administration	Intravenous use, Peritumoral use

Dosage and administration details:

GM-CT-01 IV : 280 mg/m², on days +3, +6, +9, +12, +15, +18 after each of the 3rd, 4th, 5th and 6th vaccination.

GM-CT-01 Peri-tumoral administration : 100 µg per tumor injected, on days +3, +6, +9, +12, +15, +18 after each of the 3rd, 4th, 5th and 6th vaccination. If a patient has one or two superficial metastases at day 43 of the treatment, one of these lesions will be treated. If a patient has more than two superficial metastases at day 43, two of these lesions will be treated.

Investigational medicinal product name	MAGE-3.A1 peptide
Investigational medicinal product code	MAGE-3.A1
Other name	
Pharmaceutical forms	Powder for suspension for injection
Routes of administration	Intradermal use, Subcutaneous use

Dosage and administration details:

MAGE-3.A1 and NA17.A2 : each peptide will be given at a dose of 300 µg in 1 ml of sodium chloride 0.9%, every 3 weeks on 6 occasions, and will be administered at one site in arm or thigh, 20% of the dose intradermally and 80% of the dose subcutaneously.

Investigational medicinal product name	NA17.A2 peptide
Investigational medicinal product code	NA17.A2
Other name	
Pharmaceutical forms	Powder for suspension for injection
Routes of administration	Intradermal use, Subcutaneous use

Dosage and administration details:

MAGE-3.A1 and NA17.A2 : each peptide will be given at a dose of 300 µg in 1 ml of sodium chloride 0.9%, every 3 weeks on 6 occasions, and will be administered at one site in arm or thigh, 20% of the dose intradermally and 80% of the dose subcutaneously..

Number of subjects in period 1	Group 1 : systemic administration of GM-CT-01	Group 2 : systemic & peri-tumoral administration of GM-CT-01
Started	4	2
Completed	2	1
Not completed	2	1
Lack of efficacy	2	1

Baseline characteristics

Reporting groups

Reporting group title	Group 1 : systemic administration of GM-CT-01

Reporting group description:

Tumor specific peptides: MAGE-3.A1 and / or NA17.A2 plus Galectin-3 inhibitor: GM-CT-01 systemic injections IV.
Patients with at least one measurable lesion = assigned to group 1.

Reporting group title	Group 2 : systemic & peri-tumoral administration of GM-CT-01

Reporting group description:

Tumor specific peptides: MAGE-3.A1 and / or NA17.A2 plus Galectin-3 inhibitor: GM-CT-01 systemic injections IV and Galectin-3 inhibitor: GM-CT-01 Peri-tumoral administration

Patients with at least one measurable and at least 1 superficial metastasis = assigned in priority to group 2.

Reporting group values	Group 1 : systemic administration of GM-CT-01	Group 2 : systemic & peri-tumoral administration of GM-CT-01	Total
Number of subjects	4	2	6
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)	2	1	3
From 65-84 years	2	1	3
85 years and over	0	0	0
Age continuous Units: years			
median	64.5	73.5	
inter-quartile range (Q1-Q3)	59 to 73	64 to 83	-
Gender categorical Units: Subjects			
Female	1	1	2
Male	3	1	4

End points

End points reporting groups

Reporting group title	Group 1 : systemic administration of GM-CT-01

Reporting group description:

Tumor specific peptides: MAGE-3.A1 and / or NA17.A2 plus Galectin-3 inhibitor: GM-CT-01 systemic injections IV.
Patients with at least one measurable lesion = assigned to group 1.

Reporting group title	Group 2 : systemic & peri-tumoral administration of GM-CT-01

Reporting group description:

Tumor specific peptides: MAGE-3.A1 and / or NA17.A2 plus Galectin-3 inhibitor: GM-CT-01 systemic injections IV and Galectin-3 inhibitor: GM-CT-01 Peri-tumoral administration

Patients with at least one measurable and at least 1 superficial metastasis = assigned in priority to group 2.

Primary: Tumor response

End point title	Tumor response

End point description:

The tumor response has been evaluated for all the patients of the trial according to the Response Evaluation Criteria in Solid Tumors (RECIST version 1.1) criteria. Efficacy of the combination of a peptide vaccine and GM-CT-01 injections measures performed by CT-scan or MRI.

End point type	Primary

End point timeframe:

Change from baseline at week 7 and week 20

End point values	Group 1 : systemic administration of GM-CT-01	Group 2 : systemic & peri-tumoral administration of GM-CT-01		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	2	1		
Units: percent				
number (not applicable)	0	0		

Statistical analyses

Statistical analysis title	Descriptive analysis
Comparison groups	Group 2 : systemic & peri-tumoral administration of GM-CT-01 v Group 1 : systemic administration of GM-CT-01

Number of subjects included in analysis	3
Analysis specification	Pre-specified
Analysis type	equivalence[1]
P-value	= 1
Method	descriptive

Notes:

[1] - Descriptive analysis
no response observed

Secondary: Time to Progression

End point title	Time to Progression

End point description:

Patients will be followed every three months at consultation and with radiological examination, they will be assessed up to 100 weeks.

End point type	Secondary

End point timeframe:

From date of inclusion until the date of first documented progression or date of death from any cause, which ever came first, assessed up to 100 weeks.

End point values	Group 1 : systemic administration of GM-CT-01	Group 2 : systemic & peri-tumoral administration of GM-CT-01		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	2	1		
Units: months				
number (not applicable)	3	3		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

All SAEs occurring at any time after the patient has signed the informed consent, the screening visit, and within 30 days of the last day on which the investigational agent was administered must be reported within 24 hours of awareness of the event.

Adverse event reporting additional description:

Adverse Events attributes assigned by the investigator: AE diagnosis or syndrome(s); event description; dates of onset and resolution; severity; assessment of relatedness to study treatment; and action taken.

Assessment type	Systematic

Dictionary used

Dictionary name	CTCAE GRADE
Dictionary version	4.02

Reporting groups

Reporting group title	Experimental: Group 1
Reporting group description:	
peptides + GM-CT-01 IV	
Reporting group title	Experimental: Group 2
Reporting group description:	
peptides + GM-CT-01 IV + PT	

Serious adverse events	Experimental: Group 1	Experimental: Group 2	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 4 (0.00%)	0 / 2 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	

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

Non-serious adverse events	Experimental: Group 1	Experimental: Group 2	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	3 / 4 (75.00%)	2 / 2 (100.00%)	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Pain (neck metastase			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
General disorders and administration site conditions			

Fatigue			
subjects affected / exposed	1 / 4 (25.00%)	2 / 2 (100.00%)	
occurrences (all)	1	4	
Immediate injection site reaction			
subjects affected / exposed	2 / 4 (50.00%)	0 / 2 (0.00%)	
occurrences (all)	2	0	
Pain left leg + left hip			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
Knee pain			
subjects affected / exposed	0 / 4 (0.00%)	1 / 2 (50.00%)	
occurrences (all)	0	1	
Post infusion tremor			
subjects affected / exposed	0 / 4 (0.00%)	1 / 2 (50.00%)	
occurrences (all)	0	1	
Malaise			
subjects affected / exposed	2 / 4 (50.00%)	1 / 2 (50.00%)	
occurrences (all)	3	1	
Chills			
subjects affected / exposed	1 / 4 (25.00%)	2 / 2 (100.00%)	
occurrences (all)	2	5	
Oedema left wrist			
subjects affected / exposed	0 / 4 (0.00%)	1 / 2 (50.00%)	
occurrences (all)	0	1	
Impaired general status			
subjects affected / exposed	0 / 4 (0.00%)	1 / 2 (50.00%)	
occurrences (all)	0	1	
Headache			
subjects affected / exposed	1 / 4 (25.00%)	1 / 2 (50.00%)	
occurrences (all)	1	1	
Flushing			
subjects affected / exposed	0 / 4 (0.00%)	1 / 2 (50.00%)	
occurrences (all)	0	1	
Asthenia			
subjects affected / exposed	1 / 4 (25.00%)	1 / 2 (50.00%)	
occurrences (all)	1	1	

Hypersalivation			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
Flu-like synptoms			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
Eye disorders			
Blurred vision			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
Eye pain			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
Gastrointestinal disorders			
Vomiting			
subjects affected / exposed	0 / 4 (0.00%)	1 / 2 (50.00%)	
occurrences (all)	0	2	
Diarrhea			
subjects affected / exposed	0 / 4 (0.00%)	1 / 2 (50.00%)	
occurrences (all)	0	3	
Nausea			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
Reproductive system and breast disorders			
Testicular pain			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
Respiratory, thoracic and mediastinal disorders			
Dyspnea			
subjects affected / exposed	1 / 4 (25.00%)	1 / 2 (50.00%)	
occurrences (all)	1	1	
Bronchitis			
subjects affected / exposed	1 / 4 (25.00%)	0 / 2 (0.00%)	
occurrences (all)	1	0	
Sore throat			

subjects affected / exposed occurrences (all)	1 / 4 (25.00%) 1	0 / 2 (0.00%) 0	
Skin and subcutaneous tissue disorders Itching left arm subjects affected / exposed occurrences (all)	 1 / 4 (25.00%) 1	 0 / 2 (0.00%) 0	
Musculoskeletal and connective tissue disorders Muscular pain subjects affected / exposed occurrences (all) Articular pain subjects affected / exposed occurrences (all)	 1 / 4 (25.00%) 1 1 / 4 (25.00%) 1	 1 / 2 (50.00%) 1 0 / 2 (0.00%) 0	
Infections and infestations Possible pulmonary infection subjects affected / exposed occurrences (all)	 1 / 4 (25.00%) 1	 0 / 2 (0.00%) 0	
Metabolism and nutrition disorders Loss of appetite subjects affected / exposed occurrences (all)	 1 / 4 (25.00%) 1	 0 / 2 (0.00%) 0	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
14 December 2011	Amendment 1, version 1.2

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported