Clinical trial results:
MELADERM-trial: Melatonin cream against acute radiation dermatitis in patients with early breast cancer: a pivotal phase 2, double-blind, randomized, placebo-controlled trial

Summary

EudraCT number	2018-001705-91
Trial protocol	DK
Global end of trial date	13 January 2021

Results information

Result version number	v1 (current)
This version publication date	20 May 2022
First version publication date	20 May 2022

Trial information

Trial identification

Sponsor protocol code	HEHDZ02

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03716583
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Herlev Hospital
Sponsor organisation address	Borgmester Ib Juuls Vej 1, Herlev, Denmark,
Public contact	Dennis Bregner Zetner, Center for Perioperative Optimization, Department of Surgery, Herlev Hospital, dennis.zetner@gmail.com
Scientific contact	Dennis Bregner Zetner, Center for Perioperative Optimization, Department of Surgery, Herlev Hospital, dennis.zetner@gmail.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	27 January 2022
Is this the analysis of the primary completion data?	Yes
Primary completion date	13 January 2021
Global end of trial reached?	Yes
Global end of trial date	13 January 2021
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate if melatonin can protect against radiation injury in women receiving radiation therapy as part of their treatment of breast cancer.

Protection of trial subjects:

n/a

Background therapy:

Radiation therapy for breast cancer

Evidence for comparator: -

Actual start date of recruitment	01 November 2018
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	Denmark: 48
Worldwide total number of subjects	48
EEA total number of subjects	48

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)	30
From 65 to 84 years	17
85 years and over	1

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

Inclusion criteria
Diagnosed with early breast cancer
Over 49 years old
Have had radical surgery
Follows treatment regimens and follow-up at Rigshospitalet
Exclusion criteria
Inability to understand Danish
Mental illness
Previous therapy with ionizing radiation in the thoracic or neck area
Use of bolus for radiation therapy
Pregnancy

Period 1

Period 1 title	Entire period (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Data analyst, Carer, Assessor

Arms

Are arms mutually exclusive?	Yes
Arm title	Arm 1

Arm description: -

Arm type	Experimental
Investigational medicinal product name	Melatonin
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Cream
Routes of administration	Transdermal use

Dosage and administration details:

25 mg melatonin, 150 mg DMSO per 1 g cream

Arm title	Arm 2

Arm description: -

Arm type	Placebo
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Cream
Routes of administration	Transdermal use

Dosage and administration details:

Placebo cream

Number of subjects in period 1	Arm 1	Arm 2
Started	26	22
Completed	26	22

Baseline characteristics

End points

End points reporting groups	
Reporting group title	Arm 1
Reporting group description: -	
Reporting group title	Arm 2
Reporting group description: -	

Primary: RTOG-score	
End point title	RTOG-score
End point description:	
End point type	Primary
End point timeframe:	
Once weekly for duration of trial	

End point values	Arm 1	Arm 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	24	22		
Units: 5	24	22		

Statistical analyses

Statistical analysis title	t-test
Comparison groups	Arm 1 v Arm 2
Number of subjects included in analysis	46
Analysis specification	Pre-specified
Analysis type	equivalence
P-value	= 0.041
Method	t-test, 1-sided

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Three weeks follow-up after end of treatment	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	2021AB

Reporting groups	
Reporting group title	Active
Reporting group description: -	
Reporting group title	Placebo
Reporting group description: -	

Serious adverse events	Active	Placebo	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 26 (0.00%)	0 / 22 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events		0	

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

Non-serious adverse events	Active	Placebo	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	9 / 26 (34.62%)	5 / 22 (22.73%)	
Nervous system disorders			
Tiredness			
subjects affected / exposed	0 / 26 (0.00%)	1 / 22 (4.55%)	
occurrences (all)	0	1	
Respiratory, thoracic and mediastinal disorders			
Garlic like breath/odor			
subjects affected / exposed	5 / 26 (19.23%)	1 / 22 (4.55%)	
occurrences (all)	0	0	
Skin and subcutaneous tissue disorders			
Burning sensation			

subjects affected / exposed occurrences (all)	4 / 26 (15.38%) 4	3 / 22 (13.64%) 3	

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? Yes

Date	Interruption	Restart date
25 November 2019	Problems with GMP-license of subcontractor of pharmacy who produced drugs. We were interrupted by the Danish Medicines Agency.	05 June 2020

Notes:

Limitations and caveats

None reported