



Clinical trial results:

A Multi-Centre, Open-Label, Randomised Trial Evaluating Two Subcutaneous Injection Techniques and Intramuscular Administration of Degarelix in Patients with Prostate Cancer

Summary

EudraCT number	2015-000357-20
Trial protocol	DE FR FI
Global end of trial date	22 June 2017

Results information

Result version number	v1 (current)
This version publication date	10 August 2018
First version publication date	10 August 2018

Trial information

Trial identification

Sponsor protocol code	000184
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT02526784
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Ferring Pharmaceuticals
Sponsor organisation address	Kay Fiskers Plads 11, Copenhagen, Denmark, DK-2300
Public contact	Clinical Development Support, Ferring Pharmaceuticals A/S, DK0-Disclosure@ferring.com
Scientific contact	Clinical Development Support, Ferring Pharmaceuticals A/S, DK0-Disclosure@ferring.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	07 August 2017
Is this the analysis of the primary completion data?	Yes
Primary completion date	30 May 2017
Global end of trial reached?	Yes
Global end of trial date	22 June 2017
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The primary objective is to compare the severity of injection site reaction related pain following degarelix subcutaneous (SC) administrations with two different injection techniques and intramuscular (IM) administration in prostate cancer subjects during the 7-month trial period.

Protection of trial subjects:

During the trial, the investigator followed-up on each adverse event until it was resolved or until the medical condition of the subject was stable.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	10 December 2015
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	Finland: 33
Country: Number of subjects enrolled	France: 26
Country: Number of subjects enrolled	Germany: 61
Worldwide total number of subjects	120
EEA total number of subjects	120

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	100

85 years and over	5
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Subject disposition

Recruitment

Recruitment details:

Subjects were recruited from 12 medical centres in Europe. The participating subjects were recruited among the subjects attending the clinics included in the trial.

Pre-assignment

Screening details:

A total of 122 subjects were screened, of which 2 subjects were screening failures. The reasons for screening failure were- subject not fulfilling inclusion/exclusion criteria (N=1) and subject withdrew consent (N=1).

Period 1

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

Blinding implementation details:

The trial was not blinded due to different injection techniques (standard and optimised), administration routes (SC and IM), and injection areas (abdominal wall and ventrogluteal muscle). However, subjects randomised to SC injections (standard or optimised) were blinded with regards to the SC injection technique used for investigational medicinal product (IMP) administration. The SC standard injections and SC optimised injections were not given by the same IMP administrator.

Arms

Are arms mutually exclusive?	Yes
Arm title	Standard SC injection
Arm description: -	
Arm type	Active comparator
Investigational medicinal product name	Degarelix
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Starting dose of 240 mg (40 mg/mL) at Month 0 followed by 6 maintenance doses of 80 mg (20 mg/mL) at monthly intervals (240/80 mg dose regimen), administered using standard SC technique.

Arm title	Optimised SC injection
Arm description: -	
Arm type	Experimental
Investigational medicinal product name	Degarelix
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Starting dose of 240 mg (40 mg/mL) at Month 0 followed by 6 maintenance doses of 80 mg (20 mg/mL) at monthly intervals (240/80 mg dose regimen), administered using optimised SC technique.

Arm title	IM injection
Arm description: -	
Arm type	Experimental

Investigational medicinal product name	Degarelix
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Starting dose of 240 mg (40 mg/mL) at Visit 2 followed by 6 maintenance doses of 80 mg (20 mg/mL) at monthly intervals (240/80 mg dose regimen), administered using IM injection.

Number of subjects in period 1^[1]	Standard SC injection	Optimised SC injection	IM injection
Started	31	27	61
Completed	27	22	55
Not completed	4	5	6
Consent withdrawn by subject	1	-	-
other reasons	-	2	2
Adverse event, non-fatal	1	-	1
Protocol deviation	1	3	2
Lack of efficacy	1	-	1

Notes:

[1] - The number of subjects reported to be in the baseline period are not the same as the worldwide number enrolled in the trial. It is expected that these numbers will be the same.

Justification: Baseline characteristics were reported for subjects in the Full analysis set (FAS). All randomised and dosed subjects with at least one assessment of injection site pain after treatment initiation comprised the FAS.

Overall, 120 subjects were randomised (Intention-to-Treat analysis set) but only 119 subjects were dosed as one subject withdrew from the trial and did not receive IMP.

Baseline characteristics

Reporting groups

Reporting group title	Standard SC injection
Reporting group description: -	
Reporting group title	Optimised SC injection
Reporting group description: -	
Reporting group title	IM injection
Reporting group description: -	

Reporting group values	Standard SC injection	Optimised SC injection	IM injection
Number of subjects	31	27	61
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days) Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years) Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: years			
arithmetic mean	72.7	76.7	73.7
standard deviation	± 7.65	± 7.08	± 8.50
Gender categorical Units: Subjects			
Female	0	0	0
Male	31	27	61
Stage of prostate cancer at time of diagnosis Units: Subjects			
Localised	8	8	18
Locally advanced	7	5	17
Metastatic	8	3	4
Not classifiable	8	11	22

Reporting group values	Total		
Number of subjects	119		
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days)	0 0 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 standard deviation	-		
Gender categorical Units: Subjects			
Female	0		
Male	119		
Stage of prostate cancer at time of diagnosis Units: Subjects			
Localised	34		
Locally advanced	29		
Metastatic	15		
Not classifiable	41		

Subject analysis sets

Subject analysis set title	Full analysis set
Subject analysis set type	Full analysis

Subject analysis set description:

All randomised and dosed subjects with at least one assessment of injection site pain after treatment initiation comprised the Full Analysis Set (FAS). All analyses were performed based on the planned (randomised) treatment.

Reporting group values	Full analysis set		
Number of subjects	119		
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days) Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years) Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: years arithmetic mean standard deviation	74.1 ± 8.05		

Gender categorical Units: Subjects			
Female	0		
Male	119		
Stage of prostate cancer at time of diagnosis Units: Subjects			
Localised	34		
Locally advanced	29		
Metastatic	15		
Not classifiable	41		

End points

End points reporting groups

Reporting group title	Standard SC injection
Reporting group description: -	
Reporting group title	Optimised SC injection
Reporting group description: -	
Reporting group title	IM injection
Reporting group description: -	
Subject analysis set title	Full analysis set
Subject analysis set type	Full analysis
Subject analysis set description:	
All randomised and dosed subjects with at least one assessment of injection site pain after treatment initiation comprised the Full Analysis Set (FAS). All analyses were performed based on the planned (randomised) treatment.	

Primary: Difference in mean subject reported injection site pain score-Overall

End point title	Difference in mean subject reported injection site pain score-Overall
End point description:	
Difference in the mean subject reported injection site pain scores measured on an ordinal scale ranging from 0 to 10 (0=no pain, 10=worst possible pain) between subjects receiving the optimised and standard SC injections, as well as between subjects receiving the IM and standard SC injections, over the duration of the trial.	
End point type	Primary
End point timeframe:	
Period from starting dose to end of trial (EoT).	

End point values	Standard SC injection	Optimised SC injection	IM injection	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	31	27	61	
Units: score on scale				
least squares mean (standard error)	1.51 (± 0.13)	1.60 (± 0.14)	1.12 (± 0.09)	

Statistical analyses

Statistical analysis title	Optimised SC vs. standard SC injection
Comparison groups	Standard SC injection v Optimised SC injection
Number of subjects included in analysis	58
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.8447
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	0.09

Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.28
upper limit	0.46

Statistical analysis title	IM injection vs. standard SC injection
Comparison groups	IM injection v Standard SC injection
Number of subjects included in analysis	92
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0228
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	-0.39
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.7
upper limit	-0.09

Secondary: Subject reported injection site pain scores after degarelix starting dose

End point title	Subject reported injection site pain scores after degarelix starting dose
End point description:	
Subject reported injection site pain scores (0=no pain, 10=worst possible pain) evaluated for degarelix SC injection techniques and degarelix IM injection after degarelix starting dose.	
End point type	Secondary
End point timeframe:	
Pain scores collected 30 minutes after the injection and at bedtime for 7 days following the starting dose.	

End point values	Standard SC injection	Optimised SC injection	IM injection	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	31	26	61	
Units: score on scale				
least squares mean (standard error)	1.63 (± 0.23)	1.43 (± 0.26)	1.24 (± 0.17)	

Statistical analyses

Statistical analysis title	Optimised SC vs. standard SC injection
Comparison groups	Standard SC injection v Optimised SC injection
Number of subjects included in analysis	57
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.5662
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	-0.2
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.89
upper limit	0.49

Statistical analysis title	IM injection vs. standard SC injection
Comparison groups	IM injection v Standard SC injection
Number of subjects included in analysis	92
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1823
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	-0.38
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.95
upper limit	0.18

Secondary: Subject reported injection site pain scores after degarelix maintenance dose

End point title	Subject reported injection site pain scores after degarelix maintenance dose
End point description: Subject reported injection site pain scores (0=no pain, 10=worst possible pain) evaluated for degarelix SC injection techniques and degarelix IM injection after degarelix maintenance doses.	
End point type	Secondary
End point timeframe: Pain scores collected from first maintenance dose until EoT.	

End point values	Standard SC injection	Optimised SC injection	IM injection	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	29	25	61	
Units: score on the scale				
least squares mean (standard error)	1.47 ($\pm$ 0.14)	1.60 ($\pm$ 0.15)	1.10 ($\pm$ 0.10)	

Statistical analyses

Statistical analysis title	Optimised SC vs. standard SC injection
Comparison groups	Optimised SC injection v Standard SC injection
Number of subjects included in analysis	54
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.5213
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	0.13
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.27
upper limit	0.52

Statistical analysis title	IM injection vs. standard SC injection
Comparison groups	IM injection v Standard SC injection
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0253
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	-0.37
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.69
upper limit	-0.05

Secondary: Difference in mean change from pre-injection skin colour values at the injection site

End point title	Difference in mean change from pre-injection skin colour values at the injection site
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End point description:

Difference in skin colour values (average of 4 measurements on skin redness [a*-axis: red-green; CIE

L*a*b* system] at the injection site using DSM II ColorMeter) between pre- and post-injection for all injection techniques.

End point type	Secondary
End point timeframe:	
30 minutes and 2 days post-injection.	

End point values	Standard SC injection	Optimised SC injection	IM injection	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	31	27	61	
Units: score on scale				
least squares mean (standard error)				
30 minutes post-injection	1.71 ($\pm$ 0.30)	1.32 ($\pm$ 0.33)	1.14 ($\pm$ 0.22)	
2 days post-injection	3.89 ($\pm$ 0.39)	4.03 ($\pm$ 0.43)	1.73 ($\pm$ 0.28)	

Statistical analyses

Statistical analysis title	Optimised SC vs. standard SC injection (30 min)
Comparison groups	Optimised SC injection v Standard SC injection
Number of subjects included in analysis	58
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.378
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	-0.39
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.26
upper limit	0.48

Statistical analysis title	IM injection vs. standard SC injection (30 min)
Comparison groups	IM injection v Standard SC injection
Number of subjects included in analysis	92
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1198
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	-0.57

Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.29
upper limit	0.15

Statistical analysis title	Optimised SC vs. standard SC injection (2 days)
Comparison groups	Optimised SC injection v Standard SC injection
Number of subjects included in analysis	58
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.8134
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	0.14
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1
upper limit	1.27

Statistical analysis title	IM injection vs. standard SC injection (2 days)
Comparison groups	IM injection v Standard SC injection
Number of subjects included in analysis	92
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.0001
Method	ANCOVA
Parameter estimate	Mean difference (final values)
Point estimate	-2.17
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.11
upper limit	-1.22

Secondary: Estimated probability of a positive change of >1.5 units on redness scale after injection

End point title	Estimated probability of a positive change of >1.5 units on redness scale after injection
End point description:	
Estimated probability of a positive change of more than 1.5 units on the redness scale after injection (measured by DSM II ColorMeter CIE L*a*b* system as a change in the a* axis).	
End point type	Secondary

End point timeframe:
30 minutes and 2 days post-injection.

End point values	Standard SC injection	Optimised SC injection	IM injection	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	31	27 ^[1]	61	
Units: estimated probability				
number (not applicable)				
30 minutes post-injection	52.5	42.6	34.2	
2 days post-injection	77.4	74.7	42.8	

Notes:

[1] - N=27 analysed 30 minutes post-injection; N=26 analysed 2 days post-injection

Statistical analyses

Statistical analysis title	Optimised SC vs. standard SC injection (30 min)
Comparison groups	Optimised SC injection v Standard SC injection
Number of subjects included in analysis	58
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1231
Method	Regression, Logistic
Parameter estimate	Relative risk
Point estimate	0.82
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.64
upper limit	1.05

Statistical analysis title	IM injection vs. standard SC injection (30 min)
Comparison groups	IM injection v Standard SC injection
Number of subjects included in analysis	92
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.002
Method	Regression, Logistic
Parameter estimate	Relative risk
Point estimate	0.69
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.55
upper limit	0.87

Statistical analysis title	Optimised SC vs. standard SC injection (2 days)
Statistical analysis description:	
Number of subject included in analysis: N=57	
Comparison groups	Optimised SC injection v Standard SC injection
Number of subjects included in analysis	58
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.7389
Method	Regression, Logistic
Parameter estimate	Relative risk
Point estimate	0.96
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.76
upper limit	1.21

Statistical analysis title	IM injection vs. standard SC injection (2 days)
Comparison groups	IM injection v Standard SC injection
Number of subjects included in analysis	92
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0001
Method	Regression, Logistic
Parameter estimate	Relative risk
Point estimate	0.6
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.46
upper limit	0.78

Secondary: Treatment satisfaction of degarelix starting dose and maintenance doses

End point title	Treatment satisfaction of degarelix starting dose and maintenance doses
End point description:	
Treatment satisfaction of degarelix starting dose and maintenance doses.	
Treatment satisfaction was measured on a scale from 1-7 (1=extremely satisfied and 7=extremely dissatisfied).	
End point type	Secondary
End point timeframe:	
V=Visit; M=Month	
V2/M0/starting dose, V4/M1/maintenance dose 1,	

End point values	Standard SC injection	Optimised SC injection	IM injection	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	31 ^[2]	27 ^[3]	61 ^[4]	
Units: subjects				
V2-Extremely satisfied	7	8	11	
V2-Very satisfied	9	7	23	
V2-Satisfied	7	7	20	
V2-Somewhat satisfied	1	1	3	
V2-Dissatisfied	1	0	0	
V2-Very dissatisfied	2	0	3	
V2-Extremely dissatisfied	2	1	1	
V4-Extremely satisfied	8	7	14	
V4-Very satisfied	10	6	21	
V4-Satisfied	7	6	13	
V4-Somewhat satisfied	0	1	2	
V4-Dissatisfied	1	0	2	
V4-Very dissatisfied	1	1	4	
V4-Extremely dissatisfied	1	1	2	
V6-Extremely satisfied	10	7	18	
V6-Very satisfied	8	8	21	
V6-Satisfied	7	7	12	
V6-Somewhat satisfied	0	1	2	
V6-Dissatisfied	0	0	1	
V6-Very dissatisfied	2	0	1	
V6-Extremely dissatisfied	0	0	2	
V8-Extremely satisfied	7	3	18	
V8-Very satisfied	9	10	18	
V8-Satisfied	5	7	15	
V8-Somewhat satisfied	2	1	2	
V8-Dissatisfied	0	0	0	
V8-Very dissatisfied	2	0	1	
V8-Extremely dissatisfied	0	1	2	
V9-Extremely satisfied	10	7	17	
V9-Very satisfied	11	8	19	
V9-Satisfied	5	5	14	
V9-Somewhat satisfied	0	0	0	
V9-Dissatisfied	0	1	1	
V9-Very dissatisfied	1	0	2	
V9-Extremely dissatisfied	0	0	2	
V10-Extremely satisfied	10	9	19	
V10-Very satisfied	11	6	22	
V10-Satisfied	5	5	9	
V10-Somewhat satisfied	0	0	1	
V10-Dissatisfied	0	1	0	
V10-Very dissatisfied	1	0	0	

V10-Extremely dissatisfied	0	1	1	
V11-Extremely satisfied	13	6	22	
V11-Very satisfied	7	7	20	
V11-Satisfied	4	3	7	
V11-Somewhat satisfied	0	2	2	
V11-Dissatisfied	0	0	1	
V11-Very dissatisfied	1	1	0	
V11-Extremely dissatisfied	0	1	1	
EoT-Extremely satisfied	14	8	25	
EoT-Very satisfied	10	7	22	
EoT-Satisfied	4	4	8	
EoT-Somewhat satisfied	0	2	2	
EoT-Dissatisfied	1	1	2	
EoT-Very dissatisfied	1	1	0	
EoT-Extremely dissatisfied	0	2	2	

Notes:

[2] - N=29 (V2), N=28 (V4), N=27 (V6, V9, V10), N=25 (V8, V11), N=30 (EoT)

[3] - N=24 (V2), N=22 (V4, V8, V10), N=23 (V6), N=21 (V9), N=20 (V11), N=25 (EoT)

[4] - N=61 (V2, EoT), N=58 (V4), N=57 (V6), N=56 (V8), N=55 (V9), N=52 (V10), N=53 (V11)

Statistical analyses

No statistical analyses for this end point

Secondary: Serum levels of testosterone in the IM treatment group

End point title	Serum levels of testosterone in the IM treatment group ^[5]
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End point description:

Serum levels of testosterone at baseline, Month 1, Month 7, and EoT in the IM treatment group.

End point type	Secondary
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End point timeframe:

Baseline, Month 1, Month 7, and EoT.

Notes:

[5] - 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: This end point is specific to the IM treatment group.

End point values	IM injection			
Subject group type	Reporting group			
Number of subjects analysed	61 ^[6]			
Units: ng/mL				
median (full range (min-max))				
Baseline	4.15 (1.38 to 7.23)			
Month 1	0.12 (0.03 to 0.49)			
Month 7	0.09 (0.01 to 0.26)			
EoT	0.09 (0.01 to 0.26)			

Notes:

[6] - N=57 at baseline; N=59 at Month 1, N=54 at Month 7, N=60 at EoT/last assessment for a subject.

Statistical analyses

No statistical analyses for this end point

Secondary: Proportion of subjects with serum testosterone at castrate level (≤ 0.5 ng/mL) in the IM treatment group

End point title	Proportion of subjects with serum testosterone at castrate level (≤ 0.5 ng/mL) in the IM treatment group ^[7]
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End point description:

Proportion of subjects with testosterone at castrate level (≤ 0.5 ng/mL) at Month 7 in the IM treatment group.

End point type	Secondary
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End point timeframe:

Month 7.

Notes:

[7] - 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: This end point is specific to the IM treatment group.

End point values	IM injection			
Subject group type	Reporting group			
Number of subjects analysed	54			
Units: percent				
number (confidence interval 95%)	100 (93.4 to 100.0)			

Statistical analyses

No statistical analyses for this end point

Secondary: Frequency and severity of adverse events

End point title	Frequency and severity of adverse events
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End point description:

Frequency and severity of adverse events.

End point type	Secondary
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End point timeframe:

From the time of obtaining informed consent until the last trial visit.

End point values	Standard SC injection	Optimised SC injection	IM injection	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	31	27	61	
Units: subjects				
Mild adverse events	20	14	35	
Moderate adverse events	10	11	23	
Severe adverse events	3	5	7	

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

From the time of obtaining informed consent until the last trial visit.

Adverse event reporting additional description:

Data is presented for the safety analysis set. The safety analysis set comprised all dosed subjects and was analysed according to the actual treatment received.

Assessment type	Systematic
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Dictionary used

Dictionary name	MedDRA
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Dictionary version	20.0
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Reporting groups

Reporting group title	Standard SC injection
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Reporting group description: -

Reporting group title	Optimised SC injection
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Reporting group description: -

Reporting group title	IM injection
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Reporting group description: -

Serious adverse events	Standard SC injection	Optimised SC injection	IM injection
Total subjects affected by serious adverse events			
subjects affected / exposed	2 / 31 (6.45%)	4 / 27 (14.81%)	6 / 61 (9.84%)
number of deaths (all causes)	0	1	0
number of deaths resulting from adverse events	0	1	0
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Neoplasm prostate			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Prostate cancer			
subjects affected / exposed	0 / 31 (0.00%)	1 / 27 (3.70%)	0 / 61 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 1	0 / 0
Injury, poisoning and procedural complications			
Chest injury			

subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Femoral neck fracture			
subjects affected / exposed	0 / 31 (0.00%)	1 / 27 (3.70%)	0 / 61 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 2	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Humerus fracture			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Rib fracture			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Sternal fracture			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cardiac disorders			
Myocardial infarction			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Surgical and medical procedures			
Lung neoplasm surgery			
subjects affected / exposed	0 / 31 (0.00%)	1 / 27 (3.70%)	0 / 61 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Blood and lymphatic system disorders			
Febrile neutropenia			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

General disorders and administration site conditions			
Asthenia			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastrointestinal disorders			
Abdominal pain upper			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Psychiatric disorders			
Delirium			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Renal and urinary disorders			
Nocturia			
subjects affected / exposed	0 / 31 (0.00%)	1 / 27 (3.70%)	0 / 61 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Ureteric stenosis			
subjects affected / exposed	0 / 31 (0.00%)	0 / 27 (0.00%)	1 / 61 (1.64%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Musculoskeletal and connective tissue disorders			
Bone pain			
subjects affected / exposed	1 / 31 (3.23%)	0 / 27 (0.00%)	0 / 61 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Urinary tract infection bacterial			
subjects affected / exposed	0 / 31 (0.00%)	1 / 27 (3.70%)	0 / 61 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Product issues			

Device failure			
subjects affected / exposed	1 / 31 (3.23%)	0 / 27 (0.00%)	0 / 61 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

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

Non-serious adverse events	Standard SC injection	Optimised SC injection	IM injection
Total subjects affected by non-serious adverse events			
subjects affected / exposed	18 / 31 (58.06%)	18 / 27 (66.67%)	41 / 61 (67.21%)
Investigations			
Weight increased			
subjects affected / exposed	0 / 31 (0.00%)	2 / 27 (7.41%)	3 / 61 (4.92%)
occurrences (all)	0	2	3
Injury, poisoning and procedural complications			
Injury, poisoning and procedural complications			
subjects affected / exposed	1 / 31 (3.23%)	2 / 27 (7.41%)	2 / 61 (3.28%)
occurrences (all)	1	2	2
Vascular disorders			
Hot flush			
subjects affected / exposed	10 / 31 (32.26%)	9 / 27 (33.33%)	22 / 61 (36.07%)
occurrences (all)	10	9	24
Flushing			
subjects affected / exposed	0 / 31 (0.00%)	2 / 27 (7.41%)	1 / 61 (1.64%)
occurrences (all)	0	2	1
Nervous system disorders			
Nervous system disorders			
subjects affected / exposed	0 / 31 (0.00%)	2 / 27 (7.41%)	9 / 61 (14.75%)
occurrences (all)	0	4	10
General disorders and administration site conditions			
Injection site pain			
subjects affected / exposed	7 / 31 (22.58%)	11 / 27 (40.74%)	19 / 61 (31.15%)
occurrences (all)	20	18	40
Injection site erythema			

subjects affected / exposed occurrences (all)	7 / 31 (22.58%) 10	4 / 27 (14.81%) 8	3 / 61 (4.92%) 3
Fatigue subjects affected / exposed occurrences (all)	1 / 31 (3.23%) 2	0 / 27 (0.00%) 0	6 / 61 (9.84%) 6
Pyrexia subjects affected / exposed occurrences (all)	1 / 31 (3.23%) 1	1 / 27 (3.70%) 2	4 / 61 (6.56%) 5
Gastrointestinal disorders Diarrhoea subjects affected / exposed occurrences (all)	2 / 31 (6.45%) 2	1 / 27 (3.70%) 1	2 / 61 (3.28%) 2
Constipation subjects affected / exposed occurrences (all)	2 / 31 (6.45%) 2	0 / 27 (0.00%) 0	1 / 61 (1.64%) 1
Skin and subcutaneous tissue disorders Skin and subcutaneous tissue disorders subjects affected / exposed occurrences (all)	2 / 31 (6.45%) 2	3 / 27 (11.11%) 3	3 / 61 (4.92%) 3
Psychiatric disorders Psychiatric disorders subjects affected / exposed occurrences (all)	1 / 31 (3.23%) 1	0 / 27 (0.00%) 0	5 / 61 (8.20%) 6
Renal and urinary disorders Renal and urinary disorders subjects affected / exposed occurrences (all)	3 / 31 (9.68%) 3	3 / 27 (11.11%) 4	8 / 61 (13.11%) 11
Musculoskeletal and connective tissue disorders Back pain subjects affected / exposed occurrences (all)	1 / 31 (3.23%) 1	1 / 27 (3.70%) 1	5 / 61 (8.20%) 5
Arthralgia subjects affected / exposed occurrences (all)	1 / 31 (3.23%) 1	2 / 27 (7.41%) 2	2 / 61 (3.28%) 2
Myalgia			

subjects affected / exposed occurrences (all)	3 / 31 (9.68%) 4	0 / 27 (0.00%) 0	2 / 61 (3.28%) 2
Bone pain subjects affected / exposed occurrences (all)	2 / 31 (6.45%) 3	0 / 27 (0.00%) 0	0 / 61 (0.00%) 0
Infections and infestations Viral upper respiratory tract infection subjects affected / exposed occurrences (all)	2 / 31 (6.45%) 3	0 / 27 (0.00%) 0	3 / 61 (4.92%) 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? No

Limitations and caveats

None reported