



Clinical trial results:

A Phase IIb, Randomized, Double-blind, Placebo-controlled, Multicenter, Dose-ranging

Study to Assess the Efficacy and Safety of MSTT1041A in Patients with Uncontrolled Severe Asthma

Summary

| | |
|--------------------------|----------------|
| EudraCT number | 2016-001549-13 |
| Trial protocol | BE DE CZ PL |
| Global end of trial date | 26 July 2019 |

Results information

| | |
|--------------------------------|----------------|
| Result version number | v1 (current) |
| This version publication date | 02 August 2020 |
| First version publication date | 02 August 2020 |

Trial information

Trial identification

| | |
|-----------------------|---------|
| Sponsor protocol code | GB39242 |
|-----------------------|---------|

Additional study identifiers

| | |
|------------------------------------|-------------|
| ISRCTN number | - |
| ClinicalTrials.gov id (NCT number) | NCT02918019 |
| WHO universal trial number (UTN) | - |

Notes:

Sponsors

| | |
|------------------------------|---|
| Sponsor organisation name | Hoffmann-La Roche |
| Sponsor organisation address | Grenzacherstrasse 124, Basel, Switzerland, 4070 |
| Public contact | F. Hoffmann-La Roche AG, Hoffmann-La Roche, +41 616878333, global.trial_information@roche.com |
| Scientific contact | F. Hoffmann-La Roche AG, Hoffmann-La Roche, +41 616878333, global.trial_information@roche.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 | 26 July 2019 |
| Is this the analysis of the primary completion data? | No |
| Global end of trial reached? | Yes |
| Global end of trial date | 26 July 2019 |
| Was the trial ended prematurely? | No |

Notes:

General information about the trial

Main objective of the trial:

This was a study to evaluate the efficacy, safety, and pharmacokinetics of astegolimab (MSTT1041A) compared to placebo as add-on therapy in participants with severe, uncontrolled asthma receiving medium- or high-dose inhaled corticosteroid (ICS) therapy and at least one of the following additional controller medications: long-acting beta-agonists (LABA), leukotriene modifier (LTM), long-acting muscarinic antagonist (LAMA), or long-acting theophylline preparation.

Protection of trial subjects:

All participants were required to sign an informed consent form.

Background therapy: -

Evidence for comparator: -

| | |
|---|-------------------|
| Actual start date of recruitment | 20 September 2016 |
| 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 | Argentina: 33 |
| Country: Number of subjects enrolled | Belgium: 5 |
| Country: Number of subjects enrolled | Bulgaria: 52 |
| Country: Number of subjects enrolled | Canada: 7 |
| Country: Number of subjects enrolled | Czech Republic: 40 |
| Country: Number of subjects enrolled | Germany: 13 |
| Country: Number of subjects enrolled | Korea, Republic of: 5 |
| Country: Number of subjects enrolled | New Zealand: 2 |
| Country: Number of subjects enrolled | Peru: 26 |
| Country: Number of subjects enrolled | Poland: 68 |
| Country: Number of subjects enrolled | Romania: 13 |
| Country: Number of subjects enrolled | Russian Federation: 38 |
| Country: Number of subjects enrolled | Ukraine: 72 |
| Country: Number of subjects enrolled | United States: 111 |
| Country: Number of subjects enrolled | South Africa: 17 |
| Worldwide total number of subjects | 502 |
| EEA total number of subjects | 191 |

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) | 427 |
| From 65 to 84 years | 75 |
| 85 years and over | 0 |

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

Adult participants with severe, uncontrolled asthma receiving medium- or high-dose inhaled corticosteroid (ICS) therapy and at least one additional controller medication

Period 1

| | |
|------------------------------|--------------------------------|
| Period 1 title | Overall Study (overall period) |
| Is this the baseline period? | Yes |
| Allocation method | Randomised - controlled |
| Blinding used | Double blind |
| Roles blinded | Subject, Investigator |

Arms

| | |
|------------------------------|---------|
| Are arms mutually exclusive? | Yes |
| Arm title | Placebo |

Arm description:

Participants received subcutaneous (SC) placebo matched to astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|--|------------------------|
| Arm type | Placebo |
| Investigational medicinal product name | Placebo |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Solution for injection |
| Routes of administration | Subcutaneous use |

Dosage and administration details:

Participants received SC placebo matched to astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|------------------|------------------------------|
| Arm title | Astegolimab (MSTT1041A) 70mg |
|------------------|------------------------------|

Arm description:

Participants received 70mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|--|------------------------|
| Arm type | Experimental |
| Investigational medicinal product name | Astegolimab |
| Investigational medicinal product code | |
| Other name | MSTT1041A |
| Pharmaceutical forms | Solution for injection |
| Routes of administration | Subcutaneous use |

Dosage and administration details:

Participants received 70mg SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|------------------|-------------------------------|
| Arm title | Astegolimab (MSTT1041A) 210mg |
|------------------|-------------------------------|

Arm description:

Participants received 210mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|----------|--------------|
| Arm type | Experimental |
|----------|--------------|

| | |
|--|------------------------|
| Investigational medicinal product name | Astegolimab |
| Investigational medicinal product code | |
| Other name | MSTT1041A |
| Pharmaceutical forms | Solution for injection |
| Routes of administration | Subcutaneous use |

Dosage and administration details:

Participants received 210mg SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|------------------|-------------------------------|
| Arm title | Astegolimab (MSTT1041A) 490mg |
|------------------|-------------------------------|

Arm description:

Participants received 490mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|--|------------------------|
| Arm type | Experimental |
| Investigational medicinal product name | Astegolimab |
| Investigational medicinal product code | |
| Other name | MSTT1041A |
| Pharmaceutical forms | Solution for injection |
| Routes of administration | Subcutaneous use |

Dosage and administration details:

Participants received 490mg SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| Number of subjects in period 1 | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg |
|--------------------------------|---------|------------------------------|-------------------------------|
| | | | |
| Started | 127 | 127 | 126 |
| Completed | 121 | 117 | 117 |
| Not completed | 6 | 10 | 9 |
| Physician decision | 1 | 3 | 2 |
| Consent withdrawn by subject | 3 | 4 | 6 |
| Adverse event, non-fatal | - | 1 | - |
| Death | - | - | 1 |
| Protocol deviation | 1 | 1 | - |
| Lost to follow-up | 1 | 1 | - |
| Principal investigator request | - | - | - |

| Number of subjects in period 1 | Astegolimab (MSTT1041A) 490mg |
|--------------------------------|-------------------------------|
| Started | 122 |
| Completed | 113 |
| Not completed | 9 |
| Physician decision | - |
| Consent withdrawn by subject | 4 |
| Adverse event, non-fatal | 1 |
| Death | - |
| Protocol deviation | 2 |

| | |
|--------------------------------|---|
| Lost to follow-up | 1 |
| Principal investigator request | 1 |

Baseline characteristics

Reporting groups

| | |
|---|-------------------------------|
| Reporting group title | Placebo |
| Reporting group description: Participants received subcutaneous (SC) placebo matched to astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50. | |
| Reporting group title | Astegolimab (MSTT1041A) 70mg |
| Reporting group description: Participants received 70mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50. | |
| Reporting group title | Astegolimab (MSTT1041A) 210mg |
| Reporting group description: Participants received 210mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50. | |
| Reporting group title | Astegolimab (MSTT1041A) 490mg |
| Reporting group description: Participants received 490mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50. | |

| Reporting group values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg |
|--|---------|------------------------------|-------------------------------|
| Number of subjects | 127 | 127 | 126 |
| Age Categorical Units: Subjects | | | |
| Adults (18-64 years) | 111 | 106 | 107 |
| From 65-84 years | 16 | 21 | 19 |
| Age Continuous Units: years | | | |
| arithmetic mean | 51.4 | 52.4 | 52.5 |
| standard deviation | ± 12.2 | ± 11.9 | ± 12.0 |
| Gender Categorical Units: Subjects | | | |
| Female | 82 | 81 | 90 |
| Male | 45 | 46 | 36 |
| Race (NIH/OMB) Units: Subjects | | | |
| American Indian or Alaska Native | 5 | 5 | 8 |
| Asian | 6 | 4 | 4 |
| Black | 8 | 9 | 6 |
| White | 107 | 105 | 108 |
| Multiple | 1 | 4 | 0 |
| Ethnicity (NIH/OMB) Units: Subjects | | | |
| Hispanic or Latino | 18 | 19 | 15 |
| Not Hispanic or Latino | 109 | 108 | 110 |
| Not Stated | 0 | 0 | 1 |

| | | | |
|------------------------|-------------------------------|-------|--|
| Reporting group values | Astegolimab (MSTT1041A) 490mg | Total | |
|------------------------|-------------------------------|-------|--|

| | | | |
|----------------------------------|--------|-----|--|
| Number of subjects | 122 | 502 | |
| Age Categorical | | | |
| Units: Subjects | | | |
| Adults (18-64 years) | 103 | 427 | |
| From 65-84 years | 19 | 75 | |
| Age Continuous | | | |
| Units: years | | | |
| arithmetic mean | 51.4 | | |
| standard deviation | ± 12.0 | - | |
| Gender Categorical | | | |
| Units: Subjects | | | |
| Female | 79 | 332 | |
| Male | 43 | 170 | |
| Race (NIH/OMB) | | | |
| Units: Subjects | | | |
| American Indian or Alaska Native | 4 | 22 | |
| Asian | 9 | 23 | |
| Black | 6 | 29 | |
| White | 102 | 422 | |
| Multiple | 1 | 6 | |
| Ethnicity (NIH/OMB) | | | |
| Units: Subjects | | | |
| Hispanic or Latino | 14 | 66 | |
| Not Hispanic or Latino | 108 | 435 | |
| Not Stated | 0 | 1 | |

End points

End points reporting groups

| | |
|---|-------------------------------|
| Reporting group title | Placebo |
| Reporting group description: Participants received subcutaneous (SC) placebo matched to astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50. | |
| Reporting group title | Astegolimab (MSTT1041A) 70mg |
| Reporting group description: Participants received 70mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50. | |
| Reporting group title | Astegolimab (MSTT1041A) 210mg |
| Reporting group description: Participants received 210mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50. | |
| Reporting group title | Astegolimab (MSTT1041A) 490mg |
| Reporting group description: Participants received 490mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50. | |

Primary: Reduction in Rate of Asthma Exacerbations

| | |
|--|---|
| End point title | Reduction in Rate of Asthma Exacerbations |
| End point description: Asthma exacerbation was defined as new or increased asthma symptoms (wheezing, coughing, dyspnea, chest tightness, and/or nighttime awakenings due to these symptoms) that result in one or both of the following: Hospitalization or emergency department visit with administration of systemic corticosteroid treatment; Treatment with systemic corticosteroids for at least 3 days, or a long-acting depot corticosteroid preparation with a therapeutic effectiveness of at least 3 days. | |
| End point type | Primary |
| End point timeframe: Baseline to Week 54 | |

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|-----------------------------|--------------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 127 ^[1] | 127 ^[2] | 126 ^[3] | 122 ^[4] |
| Units: Percentage | | | | |
| number (not applicable) | 9999 | 36.9 | 21.9 | 43 |

Notes:

- [1] - 9999= value not reported
- [2] - adjusted rate reported
- [3] - adjusted rate reported
- [4] - adjusted rate reported

Statistical analyses

| | |
|----------------------------|---|
| Statistical analysis title | MSTT1041A 490mg/Placebo |
| Comparison groups | Placebo v Astegolimab (MSTT1041A) 490mg |

| | |
|---|--------------------|
| Number of subjects included in analysis | 249 |
| Analysis specification | Pre-specified |
| Analysis type | other |
| P-value | = 0.0049 |
| Method | Poisson regression |
| Parameter estimate | Rate Ratio |
| Point estimate | 0.57 |
| Confidence interval | |
| level | 95 % |
| sides | 2-sided |
| lower limit | 0.39 |
| upper limit | 0.84 |

Secondary: Absolute Change in Pre-Bronchodilator Forced Expiratory Volume in 1 Second (FEV1)

| | |
|------------------------|--|
| End point title | Absolute Change in Pre-Bronchodilator Forced Expiratory Volume in 1 Second (FEV1) |
| End point description: | FEV1 measures how much air a person can exhale during the first second of a forced breath. |
| End point type | Secondary |
| End point timeframe: | Baseline to Week 54 |

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|---|--------------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 120 ^[5] | 117 ^[6] | 115 ^[7] | 113 ^[8] |
| Units: Milliliters (mL) | | | | |
| arithmetic mean (confidence interval 95%) | 107 (47 to 167) | 130 (70 to 191) | 154 (93 to 215) | 172 (110 to 234) |

Notes:

[5] - adjusted mean reported

[6] - adjusted mean reported

[7] - adjusted mean reported

[8] - adjusted mean reported

Statistical analyses

No statistical analyses for this end point

Secondary: Time to First Asthma Exacerbation

| | |
|-----------------|-----------------------------------|
| End point title | Time to First Asthma Exacerbation |
|-----------------|-----------------------------------|

End point description:

Asthma exacerbation was defined as new or increased asthma symptoms (wheezing, coughing, dyspnea, chest tightness, and/or nighttime awakenings due to these symptoms) that result in one or both of the following: Hospitalization or emergency department visit with administration of systemic corticosteroid treatment; Treatment with systemic corticosteroids for at least 3 days, or a long-acting depot corticosteroid preparation with a therapeutic effectiveness of at least 3 days.

| | |
|----------------------|-----------|
| End point type | Secondary |
| End point timeframe: | |
| 52 Weeks | |

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|----------------------------------|---------------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 127 ^[9] | 127 ^[10] | 126 ^[11] | 122 ^[12] |
| Units: Weeks | | | | |
| median (confidence interval 95%) | 9999 (46.6 to 9999) | 9999 (9999 to 9999) | 9999 (9999 to 9999) | 9999 (9999 to 9999) |

Notes:

[9] - 9999 = Value not estimable due to insufficient no. of participants with event

[10] - 9999 = Value not estimable due to insufficient no. of participants with event

[11] - 9999 = Value not estimable due to insufficient no. of participants with event

[12] - 9999 = Value not estimable due to insufficient no. of participants with event

Statistical analyses

No statistical analyses for this end point

Secondary: Achievement in Improvement in Standardized Asthma Quality-of-Life Questionnaire (AQLQ(S)) Score

| | |
|-----------------|---|
| End point title | Achievement in Improvement in Standardized Asthma Quality-of-Life Questionnaire (AQLQ(S)) Score |
|-----------------|---|

End point description:

The AQLQ measures the functional problems (physical, emotional, social, and occupational) most troublesome to adults (17-70 years) with asthma. There are 32 questions in 4 domains - symptoms, activity limitation, emotional function, and environmental stimuli - scored on a 7 point scale, with 7= no impairment and 1= severely impaired. For this study, improvement achievement was defined as an increase of at least 0.5 points from baseline to week 54.

| | |
|----------------------|-----------|
| End point type | Secondary |
| End point timeframe: | |
| Week 54 | |

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|-----------------------------|---------------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 116 ^[13] | 116 ^[14] | 115 ^[15] | 112 ^[16] |
| Units: Percentage | | | | |
| number (not applicable) | | | | |
| Week 54 - Responder | 55.3 | 64.8 | 61.3 | 68.9 |
| Week 54 - Non-responder | 44.7 | 35.2 | 38.7 | 31.1 |

Notes:

[13] - adjusted rate reported

[14] - adjusted rate reported

[15] - adjusted rate reported

[16] - adjusted rate reported

Statistical analyses

No statistical analyses for this end point

Secondary: Absolute Change in Patient-Reported Use of Short-Acting Rescue Therapy

| | |
|-----------------|--|
| End point title | Absolute Change in Patient-Reported Use of Short-Acting Rescue Therapy |
|-----------------|--|

End point description:

9999 = adjusted mean value is equal to zero. 9999 is reported due to limitations in the EudraCT results reporting system.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to Week 54

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|-----------------------------|-----------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 107 | 106 | 102 | 99 |
| Units: Usage | | | | |
| number (not applicable) | 9999 | 9999 | 9999 | 9999 |

Statistical analyses

No statistical analyses for this end point

Secondary: Proportion of Weeks Without Patient-Reported Asthma-Related Nighttime Awakenings

| | |
|-----------------|--|
| End point title | Proportion of Weeks Without Patient-Reported Asthma-Related Nighttime Awakenings |
|-----------------|--|

End point description:

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline through Week 54

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|-----------------------------|---------------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 127 ^[17] | 126 ^[18] | 126 ^[19] | 122 ^[20] |
| Units: Percentage | | | | |
| number (not applicable) | 0.4 | 0.4 | 0.3 | 0.3 |

Notes:

[17] - adjusted mean reported

[18] - adjusted mean reported

[19] - adjusted mean reported

[20] - adjusted mean reported

Statistical analyses

No statistical analyses for this end point

Secondary: Absolute Change in Patient-Reported Daytime Asthma Symptom Severity as Measured by the Asthma Daily Symptom Diary (ADSD)

| | |
|-----------------|--|
| End point title | Absolute Change in Patient-Reported Daytime Asthma Symptom Severity as Measured by the Asthma Daily Symptom Diary (ADSD) |
|-----------------|--|

End point description:

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to Week 54

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|-----------------------------|---------------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 126 ^[21] | 124 ^[22] | 125 ^[23] | 122 ^[24] |
| Units: Units on a scale | | | | |
| number (not applicable) | -1 | -2 | -1 | -1 |

Notes:

[21] - adjusted mean reported

[22] - adjusted mean reported

[23] - adjusted mean reported

[24] - adjusted mean reported

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Participants with Adverse Events

| | |
|-----------------|--|
| End point title | Percentage of Participants with Adverse Events |
|-----------------|--|

End point description:

An adverse event is any untoward medical occurrence in a participant administered a pharmaceutical product and which does not necessarily have to have a causal relationship with the treatment. An adverse event can therefore be any unfavorable and unintended sign (including an abnormal laboratory finding, for example), symptom, or disease temporally associated with the use of a pharmaceutical

product, whether or not considered related to the pharmaceutical product. Preexisting conditions which worsen during a study are also considered as adverse events.

| | |
|----------------------|-----------|
| End point type | Secondary |
| End point timeframe: | |
| Baseline to Week 54 | |

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|-----------------------------|-----------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 127 | 127 | 126 | 122 |
| Units: Percentage | | | | |
| number (not applicable) | 77.2 | 70.9 | 72.2 | 72.1 |

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Participants with Anti-Drug Antibodies (ADAs)

| | |
|---|---|
| End point title | Percentage of Participants with Anti-Drug Antibodies (ADAs) |
| End point description: The prevalence of ADAs at baseline was defined as the proportion of the evaluable participant population in a study that is ADA positive at baseline. | |
| End point type | Secondary |
| End point timeframe: Baseline | |

| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|-----------------------------|-----------------|------------------------------|-------------------------------|-------------------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 124 | 126 | 126 | 121 |
| Units: Percentage | | | | |
| number (not applicable) | 5.6 | 0.8 | 1.6 | 1.7 |

Statistical analyses

No statistical analyses for this end point

Secondary: Serum Concentration of Astegolimab (MSTT1041A)

| | |
|------------------------|--|
| End point title | Serum Concentration of Astegolimab (MSTT1041A) ^[25] |
| End point description: | |

| | | | | |
|--|---|-------------------------------|-------------------------------|-----------------|
| End point type | Secondary | | | |
| End point timeframe: | | | | |
| Baseline to Week 54 | | | | |
| Notes: | | | | |
| [25] - 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: Values were only collected for arms receiving active treatment, which did not include the placebo arm. | | | | |
| End point values | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg | |
| | Subject group type | Reporting group | Reporting group | Reporting group |
| | Number of subjects analysed | 125 | 126 | 117 |
| | Units: ug/mL | | | |
| | geometric mean (geometric coefficient of variation) | | | |
| | Week 26 pre-dose | 4.75 (± 123.3) | 16.9 (± 167.3) | 40.5 (± 161.2) |
| | Week 54 | 4.47 (± 144.1) | 17.4 (± 155.4) | 38.7 (± 226.4) |

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Participants with Treatment-Emergent ADAs

| | |
|--|---|
| End point title | Percentage of Participants with Treatment-Emergent ADAs |
| End point description: | |
| The incidence of ADAs at post-baseline timepoints was defined as the proportion of the study population found to have developed treatment-emergent ADAs. | |
| End point type | Secondary |
| End point timeframe: | |
| Post-baseline | |

| | | | | |
|-----------------------------|-----------------|------------------------------|-------------------------------|-------------------------------|
| End point values | Placebo | Astegolimab (MSTT1041A) 70mg | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 126 | 125 | 123 | 120 |
| Units: Percentage | | | | |
| number (not applicable) | 7.1 | 9.6 | 8.9 | 3.3 |

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Baseline to Week 54

| | |
|-----------------|----------------|
| Assessment type | Non-systematic |
|-----------------|----------------|

Dictionary used

| | |
|-----------------|--------|
| Dictionary name | MedDRA |
|-----------------|--------|

| | |
|--------------------|------|
| Dictionary version | 22.0 |
|--------------------|------|

Reporting groups

| | |
|-----------------------|---------|
| Reporting group title | Placebo |
|-----------------------|---------|

Reporting group description:

Participants received subcutaneous (SC) placebo matched to astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|-----------------------|-------------------------------|
| Reporting group title | Astegolimab (MSTT1041A) 210mg |
|-----------------------|-------------------------------|

Reporting group description:

Participants received 210mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|-----------------------|-------------------------------|
| Reporting group title | Astegolimab (MSTT1041A) 490mg |
|-----------------------|-------------------------------|

Reporting group description:

Participants received 490mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| | |
|-----------------------|------------------------------|
| Reporting group title | Astegolimab (MSTT1041A) 70mg |
|-----------------------|------------------------------|

Reporting group description:

Participants received 70mg of SC astegolimab (MSTT1041A) at randomization (Week 2), Week 6, and every 4 weeks (Q4W) thereafter through Week 50.

| Serious adverse events | Placebo | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|---|-----------------|-------------------------------|-------------------------------|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 8 / 127 (6.30%) | 9 / 126 (7.14%) | 6 / 122 (4.92%) |
| number of deaths (all causes) | 0 | 1 | 1 |
| number of deaths resulting from adverse events | | | |
| Vascular disorders | | | |
| Deep vein thrombosis | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Hypertension | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 1 / 126 (0.79%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 1 | 0 / 1 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Hypertensive crisis | | | |

| | | | |
|--|-----------------|-----------------|-----------------|
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 1 / 122 (0.82%) |
| 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 | | | |
| Chest pain | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Death | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 1 / 126 (0.79%) | 1 / 122 (0.82%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 1 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 1 | 0 / 1 |
| Immune system disorders | | | |
| Anaphylactic reaction | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 0 / 126 (0.00%) | 0 / 122 (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 |
| Reproductive system and breast disorders | | | |
| Vaginal prolapse | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Respiratory, thoracic and mediastinal disorders | | | |
| Asthma | | | |
| subjects affected / exposed | 2 / 127 (1.57%) | 4 / 126 (3.17%) | 1 / 122 (0.82%) |
| occurrences causally related to treatment / all | 0 / 2 | 0 / 4 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 1 | 0 / 0 |
| Chronic rhinosinusitis with nasal polyps | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 0 / 126 (0.00%) | 0 / 122 (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 |
| Pulmonary embolism | | | |

| | | | |
|---|-----------------|-----------------|-----------------|
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Vocal cord disorder | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 1 / 122 (0.82%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Investigations | | | |
| Alanine aminotransferase increased | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 1 / 126 (0.79%) | 0 / 122 (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 |
| Aspartate aminotransferase increased | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 1 / 126 (0.79%) | 0 / 122 (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 |
| Injury, poisoning and procedural complications | | | |
| Ankle fracture | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 0 / 126 (0.00%) | 0 / 122 (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 |
| Concussion | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Pubis fracture | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 0 / 126 (0.00%) | 0 / 122 (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 |
| Road traffic accident | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |

| | | | |
|---|-----------------|-----------------|-----------------|
| Cardiac disorders | | | |
| Atrial fibrillation | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 2 / 126 (1.59%) | 0 / 122 (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 |
| Atrial tachycardia | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 0 / 126 (0.00%) | 0 / 122 (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 |
| Nervous system disorders | | | |
| Headache | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 1 / 126 (0.79%) | 0 / 122 (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 |
| Migraine | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Syncope | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Eye disorders | | | |
| Cataract | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 1 / 122 (0.82%) |
| 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 | | | |
| Rectal haemorrhage | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Hepatobiliary disorders | | | |
| Cholecystitis acute | | | |

| | | | |
|---|-----------------|-----------------|-----------------|
| subjects affected / exposed | 0 / 127 (0.00%) | 1 / 126 (0.79%) | 0 / 122 (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 |
| Drug-induced liver injury | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Hepatotoxicity | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Skin and subcutaneous tissue disorders | | | |
| Livedo reticularis | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Musculoskeletal and connective tissue disorders | | | |
| Back pain | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Osteoarthritis | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Infections and infestations | | | |
| Bacteraemia | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 0 / 122 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Cellulitis | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | 0 / 126 (0.00%) | 1 / 122 (0.82%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |

| | | | |
|---|-----------------|-----------------|-----------------|
| Chronic sinusitis | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 0 / 126 (0.00%) | 0 / 122 (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 |
| Pneumonia | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 0 / 126 (0.00%) | 1 / 122 (0.82%) |
| occurrences causally related to treatment / all | 0 / 1 | 0 / 0 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Pyelonephritis | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 0 / 126 (0.00%) | 0 / 122 (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 |

| Serious adverse events | Astegolimab (MSTT1041A) 70mg | | |
|--|---------------------------------|--|--|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 14 / 127 (11.02%) | | |
| number of deaths (all causes) | 0 | | |
| number of deaths resulting from adverse events | | | |
| Vascular disorders | | | |
| Deep vein thrombosis | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Hypertension | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Hypertensive crisis | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| General disorders and administration site conditions | | | |
| Chest pain | | | |

| | | | |
|---|-----------------|--|--|
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Death | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Immune system disorders | | | |
| Anaphylactic reaction | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Reproductive system and breast disorders | | | |
| Vaginal prolapse | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Respiratory, thoracic and mediastinal disorders | | | |
| Asthma | | | |
| subjects affected / exposed | 2 / 127 (1.57%) | | |
| occurrences causally related to treatment / all | 0 / 2 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Chronic rhinosinusitis with nasal polyps | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Pulmonary embolism | | | |
| subjects affected / exposed | 2 / 127 (1.57%) | | |
| occurrences causally related to treatment / all | 0 / 2 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Vocal cord disorder | | | |

| | | | |
|---|-----------------|--|--|
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Investigations | | | |
| Alanine aminotransferase increased | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Aspartate aminotransferase increased | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Injury, poisoning and procedural complications | | | |
| Ankle fracture | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Concussion | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Pubis fracture | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Road traffic accident | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Cardiac disorders | | | |
| Atrial fibrillation | | | |

| | | | |
|---|-----------------|--|--|
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Atrial tachycardia | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Nervous system disorders | | | |
| Headache | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Migraine | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Syncope | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Eye disorders | | | |
| Cataract | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Gastrointestinal disorders | | | |
| Rectal haemorrhage | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Hepatobiliary disorders | | | |
| Cholecystitis acute | | | |

| | | | |
|---|-----------------|--|--|
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Drug-induced liver injury | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Hepatotoxicity | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Skin and subcutaneous tissue disorders | | | |
| Livedo reticularis | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 1 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Musculoskeletal and connective tissue disorders | | | |
| Back pain | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Osteoarthritis | | | |
| subjects affected / exposed | 2 / 127 (1.57%) | | |
| occurrences causally related to treatment / all | 0 / 2 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Infections and infestations | | | |
| Bacteraemia | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Cellulitis | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |

| | | | |
|---|-----------------|--|--|
| Chronic sinusitis | | | |
| subjects affected / exposed | 0 / 127 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Pneumonia | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Pyelonephritis | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |

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

| Non-serious adverse events | Placebo | Astegolimab (MSTT1041A) 210mg | Astegolimab (MSTT1041A) 490mg |
|---|-------------------|-------------------------------------|-------------------------------------|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 76 / 127 (59.84%) | 75 / 126 (59.52%) | 68 / 122 (55.74%) |
| Nervous system disorders | | | |
| Headache | | | |
| subjects affected / exposed | 6 / 127 (4.72%) | 6 / 126 (4.76%) | 14 / 122 (11.48%) |
| occurrences (all) | 6 | 7 | 20 |
| General disorders and administration site conditions | | | |
| Injection site reaction | | | |
| subjects affected / exposed | 1 / 127 (0.79%) | 8 / 126 (6.35%) | 6 / 122 (4.92%) |
| occurrences (all) | 3 | 23 | 107 |
| Respiratory, thoracic and mediastinal disorders | | | |
| Asthma | | | |
| subjects affected / exposed | 58 / 127 (45.67%) | 53 / 126 (42.06%) | 39 / 122 (31.97%) |
| occurrences (all) | 108 | 83 | 61 |
| Musculoskeletal and connective tissue disorders | | | |
| Arthralgia | | | |
| subjects affected / exposed | 2 / 127 (1.57%) | 4 / 126 (3.17%) | 4 / 122 (3.28%) |
| occurrences (all) | 3 | 5 | 4 |

| | | | |
|---|-------------------------|-------------------------|-------------------------|
| Back pain subjects affected / exposed occurrences (all) | 7 / 127 (5.51%) 8 | 5 / 126 (3.97%) 5 | 4 / 122 (3.28%) 4 |
| Infections and infestations | | | |
| Influenza subjects affected / exposed occurrences (all) | 5 / 127 (3.94%) 5 | 2 / 126 (1.59%) 2 | 7 / 122 (5.74%) 7 |
| Nasopharyngitis subjects affected / exposed occurrences (all) | 13 / 127 (10.24%) 18 | 21 / 126 (16.67%) 30 | 16 / 122 (13.11%) 23 |
| Rhinitis subjects affected / exposed occurrences (all) | 7 / 127 (5.51%) 8 | 3 / 126 (2.38%) 3 | 2 / 122 (1.64%) 3 |
| Sinusitis subjects affected / exposed occurrences (all) | 3 / 127 (2.36%) 3 | 3 / 126 (2.38%) 3 | 5 / 122 (4.10%) 7 |
| Upper respiratory tract infection subjects affected / exposed occurrences (all) | 12 / 127 (9.45%) 19 | 8 / 126 (6.35%) 9 | 6 / 122 (4.92%) 6 |

| | | | |
|---|---------------------------------|--|--|
| Non-serious adverse events | Astegolimab (MSTT1041A) 70mg | | |
| Total subjects affected by non-serious adverse events subjects affected / exposed | 65 / 127 (51.18%) | | |
| Nervous system disorders | | | |
| Headache subjects affected / exposed occurrences (all) | 8 / 127 (6.30%) 10 | | |
| General disorders and administration site conditions | | | |
| Injection site reaction subjects affected / exposed occurrences (all) | 10 / 127 (7.87%) 38 | | |
| Respiratory, thoracic and mediastinal disorders | | | |
| Asthma subjects affected / exposed occurrences (all) | 42 / 127 (33.07%) 68 | | |
| Musculoskeletal and connective tissue disorders | | | |

| | | | |
|-----------------------------------|------------------|--|--|
| Arthralgia | | | |
| subjects affected / exposed | 7 / 127 (5.51%) | | |
| occurrences (all) | 7 | | |
| Back pain | | | |
| subjects affected / exposed | 5 / 127 (3.94%) | | |
| occurrences (all) | 5 | | |
| Infections and infestations | | | |
| Influenza | | | |
| subjects affected / exposed | 2 / 127 (1.57%) | | |
| occurrences (all) | 2 | | |
| Nasopharyngitis | | | |
| subjects affected / exposed | 12 / 127 (9.45%) | | |
| occurrences (all) | 21 | | |
| Rhinitis | | | |
| subjects affected / exposed | 7 / 127 (5.51%) | | |
| occurrences (all) | 11 | | |
| Sinusitis | | | |
| subjects affected / exposed | 7 / 127 (5.51%) | | |
| occurrences (all) | 9 | | |
| Upper respiratory tract infection | | | |
| subjects affected / exposed | 9 / 127 (7.09%) | | |
| occurrences (all) | 10 | | |

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

| Date | Amendment |
|-----------------|---|
| 10 October 2017 | Addition/clarification of primary and secondary endpoints; eligibility criteria updates |
| 23 January 2019 | Updated timepoints for efficacy objectives |

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.

Further development of the investigational medical product (IMP) has been discontinued.

Notes: