



Clinical trial results:

A Randomized, Double-blind, Active-controlled, Phase 3 Study Evaluating the Efficacy and Safety of ABP 959 Compared With Eculizumab in Adult Subjects With Paroxysmal Nocturnal Hemoglobinuria (PNH)

Summary

| | |
|--------------------------|-------------------------------------|
| EudraCT number | 2017-001418-27 |
| Trial protocol | DE ES NL GB CZ NO SI IE FI SE PT IT |
| Global end of trial date | 12 July 2022 |

Results information

| | |
|--------------------------------|---------------|
| Result version number | v1 (current) |
| This version publication date | 13 April 2023 |
| First version publication date | 13 April 2023 |

Trial information

Trial identification

| | |
|-----------------------|----------|
| Sponsor protocol code | 20150168 |
|-----------------------|----------|

Additional study identifiers

| | |
|------------------------------------|-------------|
| ISRCTN number | - |
| ClinicalTrials.gov id (NCT number) | NCT03818607 |
| WHO universal trial number (UTN) | - |

Notes:

Sponsors

| | |
|------------------------------|---|
| Sponsor organisation name | Amgen Inc. |
| Sponsor organisation address | One Amgen Center Drive, Thousand Oaks, CA, United States, |
| Public contact | Study Director, Amgen Inc., medinfo@amgen.com |
| Scientific contact | Study Director, Amgen Inc., medinfo@amgen.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 | 12 July 2022 |
| Is this the analysis of the primary completion data? | No |
| Global end of trial reached? | Yes |
| Global end of trial date | 12 July 2022 |
| Was the trial ended prematurely? | No |

Notes:

General information about the trial

Main objective of the trial:

The primary objective of the study was to evaluate the efficacy of ABP 959 compared with that of eculizumab based on control of intravascular hemolysis.

Protection of trial subjects:

The study was conducted in accordance with the Note for Guidance on Good Clinical Practice (International Council for Harmonisation Guideline E6 [R1] and 21 Code of Federal Regulations Parts 50, 56, and 312), the general principles indicated in the Declaration of Helsinki, and all applicable regulatory requirements.

Background therapy: -

Evidence for comparator: -

| | |
|---|-----------------|
| Actual start date of recruitment | 22 January 2019 |
| 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 | Italy: 9 |
| Country: Number of subjects enrolled | United Kingdom: 6 |
| Country: Number of subjects enrolled | Sweden: 5 |
| Country: Number of subjects enrolled | Czechia: 4 |
| Country: Number of subjects enrolled | Turkey: 3 |
| Country: Number of subjects enrolled | Finland: 2 |
| Country: Number of subjects enrolled | Netherlands: 2 |
| Country: Number of subjects enrolled | Norway: 2 |
| Country: Number of subjects enrolled | Portugal: 2 |
| Country: Number of subjects enrolled | Slovenia: 2 |
| Country: Number of subjects enrolled | Spain: 2 |
| Country: Number of subjects enrolled | France: 1 |
| Country: Number of subjects enrolled | Ireland: 1 |
| Country: Number of subjects enrolled | United States: 1 |
| Worldwide total number of subjects | 42 |
| EEA total number of subjects | 32 |

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 | 12 |
| 85 years and over | 0 |

Subject disposition

Recruitment

Recruitment details:

Participants were enrolled at 25 research centers in 14 countries including the Czech Republic, Finland, France, Ireland, Italy, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Turkey, the United Kingdom, and the United States, and participated from 22 January 2019 to 12 July 2022

Pre-assignment

Screening details:

42 adult participants with PNH were enrolled and randomized in a 1:1 ratio to receive each investigational product (ABP 959 and eculizumab) in 1 of 2 treatment sequences. Randomization was stratified by red blood cell (RBC) transfusion received within the last 12 months before randomization. There was no washout between Periods 1 and 2.

Period 1

| | |
|------------------------------|---------------------------------------|
| Period 1 title | Period 1 (Week 1 to Week 52) |
| Is this the baseline period? | Yes |
| Allocation method | Randomised - controlled |
| Blinding used | Double blind |
| Roles blinded | Subject, Investigator, Monitor, Carer |

Arms

| | |
|------------------------------|--------------------|
| Are arms mutually exclusive? | Yes |
| Arm title | ABP 959/Eculizumab |

Arm description:

Participants received ABP 959 900 mg administered intravenously (IV) every 14 ± 2 days for 52 weeks in Period 1 followed by eculizumab 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2.

| | |
|--|-----------------------|
| Arm type | Experimental |
| Investigational medicinal product name | ABP 959 |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Solution for infusion |
| Routes of administration | Intravenous use |

Dosage and administration details:

ABP 959 900 mg was administered IV every 14 ± 2 days for 52 weeks in Period 1.

| | |
|------------------|--------------------|
| Arm title | Eculizumab/ABP 959 |
|------------------|--------------------|

Arm description:

Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1 followed by ABP 959 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2.

| | |
|--|---------------------------------------|
| Arm type | Active comparator |
| Investigational medicinal product name | Eculizumab |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Concentrate for solution for infusion |
| Routes of administration | Intravenous use |

Dosage and administration details:

Eculizumab 900 mg was administered IV every 14 ± 2 days for 52 weeks in Period 1.

| Number of subjects in period 1 | ABP 959/Eculizumab | Eculizumab/ABP 959 |
|--------------------------------|--------------------|--------------------|
| Started | 20 | 22 |
| Participants treated | 20 | 22 |
| Completed | 20 | 21 |
| Not completed | 0 | 1 |
| Adverse event, non-fatal | - | 1 |

Period 2

| | |
|------------------------------|---------------------------------------|
| Period 2 title | Period 2 (Week 53 to Week 79) |
| Is this the baseline period? | No |
| Allocation method | Randomised - controlled |
| Blinding used | Double blind |
| Roles blinded | Subject, Investigator, Monitor, Carer |

Arms

| | |
|------------------------------|--------------------|
| Are arms mutually exclusive? | Yes |
| Arm title | ABP 959/Eculizumab |

Arm description:

Participants received ABP 959 900 mg administered intravenously (IV) every 14 ± 2 days for 52 weeks in Period 1 followed by eculizumab 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2.

| | |
|--|---------------------------------------|
| Arm type | Active comparator |
| Investigational medicinal product name | Eculizumab |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Concentrate for solution for infusion |
| Routes of administration | Intravenous use |

Dosage and administration details:

Eculizumab 900 mg was administered IV every 14 ± 2 days for 26 weeks in Period 2

| | |
|------------------|--------------------|
| Arm title | Eculizumab/ABP 959 |
|------------------|--------------------|

Arm description:

Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1 followed by ABP 959 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2.

| | |
|--|-----------------------|
| Arm type | Experimental |
| Investigational medicinal product name | ABP 959 |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Solution for infusion |
| Routes of administration | Intravenous use |

Dosage and administration details:

ABP 959 900 mg was administered IV every 14 ± 2 days for 26 weeks in Period 2.

| Number of subjects in period 2 | ABP 959/Eculizumab | Eculizumab/ABP 959 |
|---------------------------------------|--------------------|--------------------|
| Started | 20 | 21 |
| Participants treated | 20 | 21 |
| Completed | 19 | 20 |
| Not completed | 1 | 1 |
| Consent withdrawn by subject | 1 | - |
| Participant's personal needs | - | 1 |

Baseline characteristics

Reporting groups

| | |
|---|--------------------|
| Reporting group title | ABP 959/Eculizumab |
| Reporting group description: | |
| Participants received ABP 959 900 mg administered intravenously (IV) every 14 ± 2 days for 52 weeks in Period 1 followed by eculizumab 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2. | |
| Reporting group title | Eculizumab/ABP 959 |
| Reporting group description: | |
| Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1 followed by ABP 959 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2. | |

| Reporting group values | ABP 959/Eculizumab | Eculizumab/ABP 959 | Total |
|--|--------------------|--------------------|-------|
| Number of subjects | 20 | 22 | 42 |
| Age categorical | | | |
| Units: Subjects | | | |
| In Utero | 0 | 0 | 0 |
| Pre-term newborn - gestational age < 37 wk | 0 | 0 | 0 |
| Newborns (0-27 days) | 0 | 0 | 0 |
| Infants and toddlers (28 days-23 months) | 0 | 0 | 0 |
| Children (2-11 years) | 0 | 0 | 0 |
| Adolescents (12-17 years) | 0 | 0 | 0 |
| Adults (18-64 years) | 15 | 15 | 30 |
| Elderly (From 65-84 years) | 5 | 7 | 12 |
| Elderly 85 years and over | 0 | 0 | 0 |
| Age Continuous | | | |
| Units: years | | | |
| arithmetic mean | 50.2 | 50.2 | - |
| standard deviation | ± 16.73 | ± 16.90 | |
| Sex: Female, Male | | | |
| Units: Participants | | | |
| Female | 11 | 11 | 22 |
| Male | 9 | 11 | 20 |
| Race/Ethnicity, Customized | | | |
| Units: Subjects | | | |
| White | 16 | 17 | 33 |
| Asian | 0 | 1 | 1 |
| Not allowed to collect | 4 | 4 | 8 |
| RBC Transfusion Within 12 Months Before Randomization per Electronic Case Report Form (eCRF) | | | |
| Units: Subjects | | | |
| Yes | 2 | 3 | 5 |
| No | 18 | 19 | 37 |
| Mean Number of Packed RBC Units Received in Last 12 Months | | | |
| Number of units of packed RBCs that were transfused in the 12 months prior to enrollment. | | | |
| Units: Packed RBC Units | | | |
| arithmetic mean | 1.5 | 1.7 | |

| | | | |
|--------------------|------------|------------|---|
| standard deviation | ± 0.71 | ± 1.15 | - |
|--------------------|------------|------------|---|

End points

End points reporting groups

| | |
|--|--------------------|
| Reporting group title | ABP 959/Eculizumab |
| Reporting group description: Participants received ABP 959 900 mg administered intravenously (IV) every 14 ± 2 days for 52 weeks in Period 1 followed by eculizumab 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2. | |
| Reporting group title | Eculizumab/ABP 959 |
| Reporting group description: Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1 followed by ABP 959 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2. | |
| Reporting group title | ABP 959/Eculizumab |
| Reporting group description: Participants received ABP 959 900 mg administered intravenously (IV) every 14 ± 2 days for 52 weeks in Period 1 followed by eculizumab 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2. | |
| Reporting group title | Eculizumab/ABP 959 |
| Reporting group description: Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1 followed by ABP 959 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2. | |
| Subject analysis set title | ABP 959 |
| Subject analysis set type | Full analysis |
| Subject analysis set description: Participants in the modified FAS who received ABP 959 900 mg in Period 1 (administered IV every 14 ± 2 days for 52 weeks) or ABP 959 900 mg in Period 2 (administered IV every 14 ± 2 days for 26 weeks). | |
| Subject analysis set title | Eculizumab |
| Subject analysis set type | Full analysis |
| Subject analysis set description: Participants in the modified FAS who received eculizumab 900 mg in Period 1 (administered IV every 14 ± 2 days for 52 weeks) or eculizumab 900 mg in Period 2 (administered IV every 14 ± 2 days for 26 weeks). | |
| Subject analysis set title | ABP 959 |
| Subject analysis set type | Full analysis |
| Subject analysis set description: Participants who received ABP 959 900 mg in Period 1 (administered IV every 14 ± 2 days for 52 weeks) or ABP 900 mg in Period 2 (administered IV every 14 ± 2 days for 26 weeks). | |
| Subject analysis set title | Eculizumab |
| Subject analysis set type | Full analysis |
| Subject analysis set description: Participants who received eculizumab 900 mg in Period 1 (administered IV every 14 ± 2 days for 52 weeks) or eculizumab 900 mg in Period 2 (administered IV every 14 ± 2 days for 26 weeks). | |
| Subject analysis set title | ABP 959 |
| Subject analysis set type | Full analysis |
| Subject analysis set description: Participants received ABP 959 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1. | |
| Subject analysis set title | Eculizumab |
| Subject analysis set type | Full analysis |
| Subject analysis set description: Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1. | |
| Subject analysis set title | ABP 959 |
| Subject analysis set type | Safety analysis |
| Subject analysis set description: Participants who received ABP 959 900 mg in Period 1 (administered IV every 14 ± 2 days for 52 weeks) or ABP 959 900 mg in Period 2 (administered IV every 14 ± 2 days for 26 weeks). | |
| Subject analysis set title | Eculizumab |

| | |
|---|--|
| Subject analysis set type | Safety analysis |
| Subject analysis set description: | |
| Participants who received eculizumab 900 mg in Period 1 (administered IV every 14 ± 2 days for 52 weeks) or eculizumab 900 mg in Period 2 (administered IV every 14 ± 2 days for 26 weeks). | |
| Subject analysis set title | ABP 959/Eculizumab |
| Subject analysis set type | Full analysis |
| Subject analysis set description: | |
| Participants received ABP 959 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1 followed by eculizumab 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2. | |
| Subject analysis set title | Eculizumab/ABP 959 |
| Subject analysis set type | Full analysis |
| Subject analysis set description: | |
| Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1 followed by ABP 959 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2. | |
| Primary: LDH Level at Week 27 (Parallel Comparison) | |
| End point title | LDH Level at Week 27 (Parallel Comparison) |
| End point description: | |
| The primary analysis for the parallel comparison was hemolysis as measured by LDH at Week 27 by initial treatment received (Period 1). | |
| The full analysis set (FAS) included all randomized participants. | |
| End point type | Primary |
| End point timeframe: | |
| Week 27 | |

| End point values | ABP 959 | Eculizumab | | |
|--|---------------------------|---------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: U/L | | | | |
| least squares mean (confidence interval 95%) | 205.69 (191.23 to 221.24) | 193.53 (180.80 to 207.17) | | |

Statistical analyses

| | |
|---|---|
| Statistical analysis title | Ratio of Week 27 LDH levels (ABP959/eculizumab) |
| Comparison groups | ABP 959 v Eculizumab |
| Number of subjects included in analysis | 42 |
| Analysis specification | Pre-specified |
| Analysis type | non-inferiority ^[1] |
| Parameter estimate | Geometric LS mean ratio (GMR) |
| Point estimate | 1.0628 |
| Confidence interval | |
| level | Other: 97.5 % |
| sides | 1-sided |
| upper limit | 1.1576 |

Notes:

[1] - The clinical similarity of the Week 27 LDH between treatments was assessed by comparing the 1-sided 97.5% upper confidence interval (CI) limit for the geometric mean ratio of LDH at Week 27 between ABP 959 treatment and eculizumab treatment with a non-inferiority margin of 2.873.

Primary: Time-adjusted Area Under the Effect Curve (AUEC) of LDH (Crossover Comparison)

| | |
|-----------------|--|
| End point title | Time-adjusted Area Under the Effect Curve (AUEC) of LDH (Crossover Comparison) |
|-----------------|--|

End point description:

The primary analysis for the crossover comparison was hemolysis, as measured by the time-adjusted AUEC of LDH, according to treatment per randomized sequence regardless of treatment actually received.

The modified FAS included all randomized participants with an LDH-time profile evaluable for the time-adjusted AUEC, according to treatment per the randomized sequence regardless of treatment actually received.

| | |
|----------------|---------|
| End point type | Primary |
|----------------|---------|

End point timeframe:

From Week 13 to Week 27, from Week 39 to Week 53, and from Week 65 to Week 79

| End point values | ABP 959 | Eculizumab | | |
|--|---------------------------------|---------------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 40 | 40 | | |
| Units: U*day/L/week | | | | |
| least squares mean (confidence interval 95%) | 1445.76 (1295.63 to 1613.28) | 1473.44 (1321.86 to 1642.41) | | |

Statistical analyses

| Statistical analysis title | Ratio of LDH levels (ABP 959/eculizumab) |
|---|--|
| Comparison groups | ABP 959 v Eculizumab |
| Number of subjects included in analysis | 80 |
| Analysis specification | Pre-specified |
| Analysis type | other ^[2] |
| Parameter estimate | GMR |
| Point estimate | 0.9812 |
| Confidence interval | |
| level | 90 % |
| sides | 2-sided |
| lower limit | 0.9403 |
| upper limit | 1.0239 |

Notes:

[2] - The clinical similarity of the AUEC between treatments was assessed by comparing 2-sided 90% CI for the GMR of the time-adjusted AUEC of LDH (Week 13 to Week 27, Week 39 to Week 53, and Week 65 to Week 79) between ABP 959 treatment and eculizumab treatment with a similarity margin of (0.77, 1.30).

Secondary: Mean Total Complement (50% Total Hemolytic Complement Activity [CH50])

| | |
|-----------------|---|
| End point title | Mean Total Complement (50% Total Hemolytic Complement |
|-----------------|---|

End point description:

Total complement (%) was measured in serum using an assay method and compared the total hemolytic complement activity to the lower limit of the normal human reference (LLN) of 58 U/mL for all CH50 values. The percent of LLN of CH50 at each time point was calculated as mean CH50 results/LLN x 100%.

Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Results are presented for participants in the FAS with data available at each time point. The FAS included all randomized participants.

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

End point timeframe:

Baseline, Week 27, Week 39, Week 53, Week 65, and Week 79

| End point values | ABP 959/Eculizuma b | Eculizumab/AB P 959 | | |
|---|---------------------------|------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: Percent of LLN for all CH50 values | | | | |
| arithmetic mean (standard deviation) | | | | |
| Baseline (N = 20; 22) | 6.4 (± 13.48) | 2.6 (± 4.11) | | |
| Week 27 (N = 19; 21) | 7.5 (± 16.68) | 6.3 (± 12.25) | | |
| Week 39 (N = 17; 21) | 7.4 (± 23.80) | 5.1 (± 10.36) | | |
| Week 53 (N = 20; 21) | 12.0 (± 34.29) | 4.6 (± 6.84) | | |
| Week 65 (N = 16; 18) | 25.6 (± 65.27) | 7.8 (± 11.37) | | |
| Week 79 (N = 18; 20) | 15.8 (± 35.65) | 6.5 (± 12.67) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Mean Total Hemoglobin Levels

| | |
|-----------------|------------------------------|
| End point title | Mean Total Hemoglobin Levels |
|-----------------|------------------------------|

End point description:

Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Results are presented for participants in the FAS with data available at each time point. The FAS included all randomized participants.

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

End point timeframe:

Baseline, Week 27, Week 39, Week 53, Week 65, and Week 79

| End point values | ABP 959/Eculizuma b | Eculizumab/AB P 959 | | |
|--------------------------------------|---------------------------|------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: g/L | | | | |
| arithmetic mean (standard deviation) | | | | |
| Baseline (N = 20; 21) | 113.0 (± 15.03) | 113.8 (± 16.09) | | |
| Week 27 (N = 18; 20) | 110.6 (± 15.19) | 116.1 (± 16.08) | | |
| Week 39 (N = 16; 20) | 114.6 (± 14.12) | 115.0 (± 15.39) | | |
| Week 53 (N = 19; 21) | 109.8 (± 15.17) | 115.8 (± 15.20) | | |
| Week 65 (N = 15; 18) | 106.9 (± 17.74) | 115.7 (± 18.36) | | |
| Week 79 (N = 19; 20) | 113.0 (± 16.78) | 115.7 (± 16.75) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Mean Serum-free Hemoglobin Levels

| | |
|--|-----------------------------------|
| End point title | Mean Serum-free Hemoglobin Levels |
| End point description: | |
| Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Results are presented for participants in the FAS with data available at each time point. The FAS included all randomized participants. | |
| End point type | Secondary |
| End point timeframe: | |
| Baseline, Week 27, Week 39, Week 53, Week 65, and Week 79 | |

| End point values | ABP 959/Eculizuma b | Eculizumab/AB P 959 | | |
|--------------------------------------|---------------------------|------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: mg/dL | | | | |
| arithmetic mean (standard deviation) | | | | |
| Baseline (N = 20; 22) | 9.30 (± 26.960) | 3.76 (± 2.758) | | |
| Week 27 (N = 17; 21) | 5.38 (± 14.839) | 3.10 (± 2.920) | | |
| Week 39 (N = 17; 21) | 3.74 (± 5.093) | 10.25 (± 27.926) | | |
| Week 53 (N = 18; 21) | 13.60 (± 33.793) | 3.08 (± 2.529) | | |
| Week 65 (N = 16; 18) | 3.22 (± 2.249) | 2.75 (± 2.077) | | |
| Week 79 (N = 17; 15) | 6.59 (± 10.232) | 13.89 (± 41.634) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Mean Haptoglobin Levels

| | |
|-----------------|-------------------------|
| End point title | Mean Haptoglobin Levels |
|-----------------|-------------------------|

End point description:

Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Results are presented for participants in the FAS with data available at each time point. The FAS included all randomized participants.

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

End point timeframe:

Baseline, Week 27, Week 39, Week 53, Week 65, and Week 79

| End point values | ABP 959/Eculizuma b | Eculizumab/AB P 959 | | |
|--------------------------------------|---------------------------|------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: g/L | | | | |
| arithmetic mean (standard deviation) | | | | |
| Baseline (N = 20; 22) | 0.200 (± 0.2562) | 0.286 (± 0.3714) | | |
| Week 27 (N = 19; 21) | 0.201 (± 0.2809) | 0.300 (± 0.4153) | | |
| Week 39 (N = 18; 21) | 0.196 (± 0.3085) | 0.301 (± 0.4266) | | |
| Week 53 (N = 20; 21) | 0.196 (± 0.2571) | 0.383 (± 0.6550) | | |
| Week 65 (N = 16; 18) | 0.201 (± 0.2521) | 0.466 (± 0.5624) | | |
| Week 79 (N = 19; 20) | 0.201 (± 0.2473) | 0.335 (± 0.4744) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Mean Bilirubin Levels

| | |
|-----------------|-----------------------|
| End point title | Mean Bilirubin Levels |
|-----------------|-----------------------|

End point description:

Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Results are presented for participants in the FAS with data available at each time point. The FAS included all

randomized participants.

| | |
|---|-----------|
| End point type | Secondary |
| End point timeframe: | |
| Baseline, Week 27, Week 39, Week 53, Week 65, and Week 79 | |

| End point values | ABP 959/Eculizumab | Eculizumab/ABP 959 | | |
|--------------------------------------|-----------------------|-----------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: micromol/L | | | | |
| arithmetic mean (standard deviation) | | | | |
| Baseline (N = 20; 22) | 23.63 (± 12.537) | 21.12 (± 13.872) | | |
| Week 27 (N = 19; 21) | 28.69 (± 22.529) | 24.30 (± 19.209) | | |
| Week 39 (N = 18; 21) | 24.08 (± 14.258) | 24.15 (± 16.655) | | |
| Week 53 (N = 20; 21) | 25.76 (± 17.156) | 21.32 (± 14.036) | | |
| Week 65 (N = 16; 18) | 24.51 (± 16.736) | 20.02 (± 13.808) | | |
| Week 79 (N = 19; 20) | 23.73 (± 16.161) | 23.15 (± 17.286) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Degree of Hemoglobinuria

| | |
|---|--------------------------|
| End point title | Degree of Hemoglobinuria |
| End point description: | |
| The degree of hemoglobinuria was categorized as negative, trace, small, moderate, and large based on the analysis of urine samples collected from each participant at the specified timepoints. Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Data is presented for the number of urine samples assessed at each timepoint for the FAS which included all randomized participants. | |
| End point type | Secondary |
| End point timeframe: | |
| Baseline, Week 27, Week 39, Week 53, Week 65, and Week 79 | |

| End point values | ABP 959/Eculizuma b | Eculizumab/AB P 959 | | |
|---------------------------------|---------------------------|------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: Participants | | | | |
| Baseline: Negative (N = 20; 21) | 17 | 21 | | |
| Baseline: Trace (N = 20; 21) | 0 | 0 | | |
| Baseline: Small (N = 20; 21) | 2 | 0 | | |
| Baseline: Moderate (N = 20; 21) | 0 | 0 | | |
| Baseline: Large (N = 20; 21) | 1 | 0 | | |
| Week 27: Negative (N = 19; 21) | 17 | 20 | | |
| Week 27: Trace (N = 19; 21) | 0 | 1 | | |
| Week 27: Small (N = 19; 21) | 1 | 0 | | |
| Week 27: Moderate (N = 19; 21) | 0 | 0 | | |
| Week 27: Large (N = 19; 21) | 1 | 0 | | |
| Week 39: Negative (N= 17; 21) | 16 | 20 | | |
| Week 39: Trace (N= 17; 21) | 1 | 1 | | |
| Week 39: Small (N= 17; 21) | 0 | 0 | | |
| Week 39: Moderate (N= 17; 21) | 0 | 0 | | |
| Week 39: Large (N= 17; 21) | 0 | 0 | | |
| Week 53: Negative (N = 19; 20) | 16 | 19 | | |
| Week 53: Trace (N = 19; 20) | 1 | 1 | | |
| Week 53: Small (N = 19; 20) | 1 | 0 | | |
| Week 53: Moderate (N = 19; 20) | 1 | 0 | | |
| Week 53: Large (N = 19; 20) | 0 | 0 | | |
| Week 65: Negative (N =16; 18) | 15 | 17 | | |
| Week 65: Trace (N =16; 18) | 0 | 1 | | |
| Week 65: Small (N = 16; 18) | 0 | 0 | | |
| Week 65: Moderate (N = 16; 18) | 0 | 0 | | |
| Week 65: Large (N = 16; 18) | 1 | 0 | | |
| Week 79: Negative (N = 18; 20) | 16 | 19 | | |
| Week 79: Trace (N = 18; 20) | 0 | 1 | | |
| Week 79: Small (N = 18; 20) | 1 | 0 | | |
| Week 79: Moderate (N = 18; 20) | 0 | 0 | | |
| Week 79: Large (N = 18; 20) | 1 | 0 | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Mean Percentage of Type III Erythrocytes

| | |
|--|--|
| End point title | Mean Percentage of Type III Erythrocytes |
| End point description: | |
| As a measure of hemolysis the mean percentage of Type III erythrocytes was measured at the specified timepoints. | |
| Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Results are presented for participants in the FAS with data available at each time point. The FAS included all randomized participants. | |
| End point type | Secondary |

End point timeframe:

Baseline, Week 27, Week 39, Week 53, Week 65 and Week 79

| End point values | ABP 959/Eculizumab | Eculizumab/ABP 959 | | |
|--|----------------------|----------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: Percentage of Type III Erythrocytes | | | | |
| arithmetic mean (standard deviation) | | | | |
| Baseline (N = 18; 21) | 39.9197 (± 25.36275) | 36.7478 (± 29.93810) | | |
| Week 27 (N = 17; 21) | 40.9121 (± 23.17684) | 40.1304 (± 30.01551) | | |
| Week 39 (N = 16; 20) | 41.2158 (± 24.81071) | 43.3663 (± 29.65777) | | |
| Week 53 (N = 19; 21) | 41.8196 (± 23.23819) | 40.4676 (± 31.14150) | | |
| Week 65 (N = 15; 17) | 39.1192 (± 22.20104) | 37.5379 (± 28.76642) | | |
| Week 79 (N = 15; 16) | 43.7609 (± 21.51712) | 42.5501 (± 30.20582) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: LDH Levels at Week 53 and Week 79

| | |
|---|-----------------------------------|
| End point title | LDH Levels at Week 53 and Week 79 |
| End point description: The analysis of the crossover comparison of hemolysis, as measured by LDH at Week 53 and Week 79. Results are presented for participants in the FAS with data available at each time point. The FAS included all randomized participants. | |
| End point type | Secondary |
| End point timeframe: Week 53 (first week of Period 2) and Week 79 (last week of Period 2) | |

| End point values | ABP 959 | Eculizumab | | |
|--|-----------------------------|-----------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 39 | 40 | | |
| Units: U/L | | | | |
| least squares mean (confidence interval 95%) | 209.95 (183.817 to 239.802) | 203.56 (178.387 to 232.295) | | |

Statistical analyses

| | |
|---|--------------------------|
| Statistical analysis title | GMR (ABP 959/Eculizumab) |
| Comparison groups | ABP 959 v Eculizumab |
| Number of subjects included in analysis | 79 |
| Analysis specification | Pre-specified |
| Analysis type | other |
| Parameter estimate | GMR |
| Point estimate | 1.0314 |
| Confidence interval | |
| level | Other: 97.5 % |
| sides | 1-sided |
| upper limit | 1.1201 |

Secondary: Mean LDH Levels by Visit up to Week 79

| | |
|------------------------|---|
| End point title | Mean LDH Levels by Visit up to Week 79 |
| End point description: | Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Results are presented for participants in the FAS with data available at each time point. The FAS included all randomized participants. |
| End point type | Secondary |
| End point timeframe: | Baseline, Week 3, Week 7, Week 13, Week 15, Week 19, Week 25, Week 27, Week 29, Week 33, Week 39, Week 41, Week 43, Week 45, Week 47, Week 49, Week 51, Week 53, Week 55, Week 59, Week 65, Week 67, Week 69, Week 71, Week 73, Week 75, Week 77, and Week 79 |

| End point values | ABP 959/Eculizumab | Eculizumab/ABP 959 | | |
|--------------------------------------|----------------------|----------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: U/L | | | | |
| arithmetic mean (standard deviation) | | | | |
| Baseline (N = 20; 22) | 199.7 (± 61.06) | 193.9 (± 45.09) | | |
| Week 3 (N = 19; 20) | 210.7 (± 77.80) | 185.8 (± 42.22) | | |
| Week 7 (N = 19; 21) | 201.4 (± 48.41) | 194.0 (± 38.33) | | |
| Week 13 (N = 18; 21) | 207.7 (± 76.14) | 206.2 (± 63.82) | | |
| Week 15 (N = 17; 22) | 213.4 (± 105.86) | 197.0 (± 55.63) | | |

| | | | | |
|----------------------|------------------|-----------------|--|--|
| Week 19 (N = 19; 21) | 188.5 (± 27.58) | 201.0 (± 59.21) | | |
| Week 25 (N = 18; 21) | 230.5 (± 76.07) | 190.2 (± 46.91) | | |
| Week 27 (N = 18; 20) | 191.7 (± 35.99) | 192.2 (± 63.83) | | |
| Week 29 (N = 19; 21) | 207.2 (± 50.35) | 202.1 (± 58.46) | | |
| Week 33 (N = 17; 20) | 194.6 (± 29.36) | 206.8 (± 59.44) | | |
| Week 39 (N = 18; 21) | 188.1 (± 37.55) | 196.9 (± 66.73) | | |
| Week 41 (N = 19; 21) | 196.1 (± 49.21) | 199.7 (± 51.00) | | |
| Week 43 (N = 18; 21) | 215.9 (± 62.41) | 207.1 (± 79.95) | | |
| Week 45 (N = 19; 21) | 202.8 (± 53.15) | 199.4 (± 66.14) | | |
| Week 47 (N = 19; 20) | 199.4 (± 51.72) | 197.6 (± 65.25) | | |
| Week 49 (N = 19; 21) | 216.2 (± 111.26) | 203.2 (± 68.65) | | |
| Week 51 (N = 19; 21) | 229.9 (± 125.47) | 197.7 (± 57.02) | | |
| Week 53 (N = 20; 21) | 224.0 (± 64.49) | 184.7 (± 46.32) | | |
| Week 55 (N = 18; 19) | 213.9 (± 103.58) | 188.0 (± 48.91) | | |
| Week 59 (N = 19; 18) | 209.4 (± 98.42) | 191.4 (± 79.01) | | |
| Week 65 (N = 16; 18) | 230.6 (± 135.26) | 180.9 (± 55.50) | | |
| Week 67 (N = 19; 17) | 196.1 (± 40.61) | 186.2 (± 50.57) | | |
| Week 69 (N = 19; 17) | 200.1 (± 38.12) | 186.2 (± 38.48) | | |
| Week 71 (N = 18; 18) | 196.8 (± 36.36) | 186.6 (± 48.02) | | |
| Week 73 (N = 19; 19) | 210.3 (± 43.90) | 181.9 (± 49.31) | | |
| Week 75 (N = 17; 19) | 207.9 (± 67.51) | 191.4 (± 65.08) | | |
| Week 77 (N = 14; 20) | 209.6 (± 54.35) | 181.4 (± 38.72) | | |
| Week 79 (N = 19; 19) | 229.2 (± 116.85) | 185.8 (± 45.11) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Mean number of packed RBC Units Transfused per Month

| End point title | Mean number of packed RBC Units Transfused per Month |
|-----------------|--|
|-----------------|--|

End point description:

Baseline was defined as the last non-missing assessment taken prior to the first dose of IP. Results are presented for participants in the FAS who had packed RBC units transfused. The FAS included all randomized participants.

| | |
|--|-----------|
| End point type | Secondary |
| End point timeframe: | |
| Baseline to End of Study (up to Week 79) | |

| End point values | ABP 959/Eculizumab | Eculizumab/ABP 959 | | |
|--------------------------------------|----------------------|----------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 2 | 6 | | |
| Units: packed RBC units per month | | | | |
| arithmetic mean (standard deviation) | 0.200 (± 0.1980) | 0.238 (± 0.2078) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Total and Unbound Pharmacokinetics (PK) Area Under the Curve (AUC) of ABP 959 and Eculizumab From Week 13 to Week 15 (Period 1)

| | |
|-----------------|---|
| End point title | Total and Unbound Pharmacokinetics (PK) Area Under the Curve (AUC) of ABP 959 and Eculizumab From Week 13 to Week 15 (Period 1) |
|-----------------|---|

End point description:

The total and unbound PK concentration AUC values from Week 13 to Week 15 in Period 1 are presented by actual treatment received.

The PK parameter analysis set consisted of a subset of participants from the safety analysis set with an evaluable ABP 959 or eculizumab serum concentration time profile from Week 13 to Week 15

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

End point timeframe:

PK samples were collected predose and immediately postdose Week 13, 7 days post the Week 13 dose (Week 14), and predose at Week 15

| End point values | ABP 959 | Eculizumab | | |
|---|----------------------|----------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 18 | 19 | | |
| Units: µg*day/mL | | | | |
| geometric mean (geometric coefficient of variation) | | | | |
| Total PK AUC | 3898.05 (± 37.5) | 4273.28 (± 30.6) | | |
| Unbound PK AUC | 2761.19 (± 51.3) | 2903.93 (± 40.6) | | |

Statistical analyses

| | |
|---|---|
| Statistical analysis title | Unbound PK AUC GMR (ABP 959/Eculizumab) |
| Comparison groups | ABP 959 v Eculizumab |
| Number of subjects included in analysis | 37 |
| Analysis specification | Pre-specified |
| Analysis type | |
| Parameter estimate | GMR |
| Point estimate | 0.9508 |
| Confidence interval | |
| level | 90 % |
| sides | 2-sided |
| lower limit | 0.7454 |
| upper limit | 1.213 |

| | |
|---|---------------------------------------|
| Statistical analysis title | Total PK AUC GMR (ABP 959/Eculizumab) |
| Comparison groups | ABP 959 v Eculizumab |
| Number of subjects included in analysis | 37 |
| Analysis specification | Pre-specified |
| Analysis type | |
| Parameter estimate | GMR |
| Point estimate | 0.9122 |
| Confidence interval | |
| level | 90 % |
| sides | 2-sided |
| lower limit | 0.7586 |
| upper limit | 1.0968 |

Secondary: Total and Unbound Trough Serum Concentrations of ABP 959 and Eculizumab

| | |
|-----------------|---|
| End point title | Total and Unbound Trough Serum Concentrations of ABP 959 and Eculizumab |
|-----------------|---|

End point description:

The total and unbound serum trough concentrations are presented by treatment sequence received for the prespecified time points. Baseline was defined as the last non-missing assessment taken prior to the first dose of IP.

The PK concentration analysis set consisted of a subset of participants from the safety analysis set with at least one serum concentration (including results below the quantifiable limit) of ABP 959 or eculizumab, with data analyzed according to actual treatment received. Participants with data available at each time point are presented.

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

End point timeframe:

PK samples were collected predose at the prespecified timepoints: baseline, Week 3, Week 7, Week 13, Week 15, Week 19, Week 27, Week 33, Week 39, Week 45, Week 51, Week 53, Week 55, Week 59, Week 65, Week 71, Week 77, and Week 79

| End point values | ABP 959/Eculizuma b | Eculizumab/AB P 959 | | |
|--|---------------------------|------------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: µg/mL | | | | |
| geometric mean (geometric coefficient of variation) | | | | |
| Baseline: Total (N = 20; 22) | 200.15 (± 52.8) | 202.58 (± 44.3) | | |
| Baseline: Unbound (N = 20; 22) | 94.62 (± 100.1) | 117.48 (± 71.5) | | |
| Week 3: Total (N = 20; 21) | 205.25 (± 48.8) | 197.67 (± 42.9) | | |
| Week 3: Unbound (N = 20; 21) | 113.99 (± 91.5) | 116.87 (± 68.9) | | |
| Week 7: Total (N = 20; 20) | 213.51 (± 50.1) | 194.80 (± 42.5) | | |
| Week 7: Unbound (N = 20; 20) | 116.57 (± 92.1) | 98.34 (± 108.9) | | |
| Week 13: Total (N = 20; 21) | 215.54 (± 55.8) | 201.60 (± 45.6) | | |
| Week 13: Unbound (N = 20; 21) | 114.40 (± 98.4) | 123.73 (± 69.1) | | |
| Week 15: Total (N = 18; 21) | 192.80 (± 49.1) | 205.07 (± 36.9) | | |
| Week 15: Unbound (N = 18; 21) | 98.68 (± 87.0) | 123.11 (± 66.1) | | |
| Week 19: Total (N = 19; 21) | 216.46 (± 46.3) | 200.51 (± 49.1) | | |
| Week 19: Unbound (N = 19; 21) | 133.39 (± 75.2) | 120.54 (± 77.3) | | |
| Week 25: Total (N = 18; 21) | 217.75 (± 50.2) | 200.59 (± 51.7) | | |
| Week 25: Unbound (N = 18; 21) | 134.37 (± 95.5) | 112.73 (± 96.4) | | |
| Week 27: Total (N = 19; 21) | 198.17 (± 58.9) | 203.19 (± 45.3) | | |
| Week 27: Unbound (N = 19; 21) | 112.02 (± 111.0) | 122.00 (± 83.8) | | |
| Week 33: Total (N = 17; 21) | 211.62 (± 55.5) | 196.57 (± 49.1) | | |
| Week 33: Unbound (N = 17; 21) | 130.12 (± 117.3) | 126.36 (± 78.4) | | |
| Week 39: Total (N = 17; 21) | 183.57 (± 68.3) | 201.47 (± 48.1) | | |
| Week 39: Unbound (N = 17; 21) | 131.50 (± 104.8) | 129.89 (± 75.1) | | |
| Week 45: Total (N = 18; 21) | 204.62 (± 52.7) | 197.67 (± 47.9) | | |
| Week 45: Unbound (N = 18; 21) | 130.30 (± 92.0) | 126.36 (± 77.3) | | |
| Week 51: Total (N = 18; 21) | 207.20 (± 59.6) | 200.41 (± 45.5) | | |
| Week 51: Unbound (N = 18; 21) | 130.32 (± 117.4) | 123.27 (± 68.3) | | |
| Week 53: Total (N = 20; 21) | 193.77 (± 54.4) | 198.89 (± 46.3) | | |
| Week 53: Unbound (N = 20; 21) | 108.40 (± 130.3) | 124.82 (± 74.6) | | |
| Week 55: Total (N = 19; 20) | 210.22 (± 59.0) | 185.34 (± 48.4) | | |

| | | | | |
|-------------------------------|------------------|------------------|--|--|
| Week 55: Unbound (N = 19; 20) | 132.20 (± 125.4) | 117.93 (± 77.2) | | |
| Week 59: Total (N = 19; 20) | 184.38 (± 58.9) | 192.66 (± 46.6) | | |
| Week 59: Unbound (N = 19; 20) | 111.48 (± 121.5) | 122.01 (± 78.5) | | |
| Week 65: Total (N = 16; 18) | 190.09 (± 62.0) | 202.83 (± 51.5) | | |
| Week 65: Unbound (N = 16; 18) | 110.57 (± 146.9) | 120.72 (± 87.7) | | |
| Week 71: Total (N = 17; 16) | 160.43 (± 99.5) | 188.05 (± 58.6) | | |
| Week 71: Unbound (N = 17; 16) | 101.66 (± 156.7) | 104.82 (± 115.0) | | |
| Week 77: Total (N = 15; 17) | 211.80 (± 47.2) | 198.24 (± 54.8) | | |
| Week 77: Unbound (N = 15; 17) | 140.07 (± 98.3) | 111.83 (± 99.8) | | |
| Week 79: Total (N = 18; 20) | 178.29 (± 60.7) | 199.91 (± 50.0) | | |
| Week 79: Unbound (N = 18; 20) | 101.98 (± 133.1) | 116.28 (± 96.5) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With Treatment-Emergent Adverse Events (TEAEs)

| | |
|-----------------|---|
| End point title | Number of Participants With Treatment-Emergent Adverse Events (TEAEs) |
|-----------------|---|

End point description:

TEAEs are any adverse event (AE) that began or increased in severity or frequency at or after the time of first treatment up to end of study (up to Week 79). A treatment-emergent serious adverse event (SAE) was a TEAE that met at least 1 of the following criteria: was fatal, life-threatening, required or prolonged inpatient hospitalization, resulted in persistent or significant disability/incapacity, was a congenital anomaly/birth defect, or was another medically important serious event.

The treatment-emergent events of interest (EOI) prespecified for this study included serious infections (meningococcus aspergillus, and other serious infections/sepsis), and infusion reactions. The safety analysis set included all treated participants, with treatment assigned based on actual treatment received.

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

End point timeframe:

Day 1 to End of Study (up to Week 79)

| End point values | Eculizumab | ABP 959 | | |
|---|----------------------|----------------------|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 42 | 41 | | |
| Units: Participants | | | | |
| All TEAEs | 39 | 33 | | |
| Any Treatment-emergent SAE | 2 | 7 | | |
| Any Treatment-emergent EOI: Infusion reaction | 15 | 15 | | |

| | | | | |
|---|---|---|--|--|
| Any Treatment-emergent EOI: Serious infection | 0 | 3 | | |
|---|---|---|--|--|

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants with Antidrug Antibodies (ADAs)

| | |
|-----------------|--|
| End point title | Number of Participants with Antidrug Antibodies (ADAs) |
|-----------------|--|

End point description:

Any samples that tested positive for binding antibodies were also tested for neutralizing antibodies. Treatment boosted ADAs were defined as a positive immunoassay result at baseline and at least 1 postbaseline immunoassay result that was ≥ 4 times the magnitude of the baseline result. Baseline was defined as the last non-missing assessment taken prior to the first dose of IP.

Ab = antibody; NAb = neutralizing antibody; +ve = positive; -ve = negative; BL = baseline

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

End point timeframe:

Blood samples for ADA assessments were taken predose at baseline, Week 3, Week 7, Week 13, Week 19, Week 25, Week 27, Week 33, Week 39, Week 45, Week 51, Week 53, Week 55, Week 59, Week 65, Week 71, Week 77 and Week 79.

| End point values | ABP 959/Eculizumab | Eculizumab/ABP 959 | | |
|---|-----------------------|-----------------------|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 20 | 22 | | |
| Units: Participants | | | | |
| Binding Ab +ve anytime | 0 | 2 | | |
| NAb +ve anytime | 0 | 0 | | |
| Binding Ab +ve at/before BL | 0 | 0 | | |
| NAb +ve at/before BL | 0 | 0 | | |
| Treatment boosted Ab +ve | 0 | 0 | | |
| Binding Ab +ve post-BL with -ve/no result at BL | 0 | 2 | | |
| NAb +ve post-BL with -ve/no result at BL | 0 | 0 | | |

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Day 1 to End of Study (up to Week 79)

Adverse event reporting additional description:

All-cause mortality is reported for all participants enrolled/randomized in the study. Serious adverse events and other adverse events are reported for all participants who received at least one dose of study drug.

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

Dictionary used

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

| | |
|--------------------|------|
| Dictionary version | 24.1 |
|--------------------|------|

Reporting groups

| | |
|-----------------------|-------------------|
| Reporting group title | Period 1: ABP 959 |
|-----------------------|-------------------|

Reporting group description:

Participants received ABP 959 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1.

| | |
|-----------------------|-------------------|
| Reporting group title | Period 2: ABP 959 |
|-----------------------|-------------------|

Reporting group description:

Participants received ABP 959 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2.

| | |
|-----------------------|----------------------|
| Reporting group title | Period 2: Eculizumab |
|-----------------------|----------------------|

Reporting group description:

Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 26 weeks in Period 2.

| | |
|-----------------------|----------------------|
| Reporting group title | Period 1: Eculizumab |
|-----------------------|----------------------|

Reporting group description:

Participants received eculizumab 900 mg administered IV every 14 ± 2 days for 52 weeks in Period 1.

| Serious adverse events | Period 1: ABP 959 | Period 2: ABP 959 | Period 2: Eculizumab |
|---|-------------------|-------------------|----------------------|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 3 / 20 (15.00%) | 4 / 21 (19.05%) | 1 / 20 (5.00%) |
| number of deaths (all causes) | 0 | 0 | 0 |
| number of deaths resulting from adverse events | | | |
| Injury, poisoning and procedural complications | | | |
| Meniscus injury | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 1 / 21 (4.76%) | 0 / 20 (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 |
| Cardiac disorders | | | |
| Cardiac failure | | | |

| | | | |
|---|----------------|----------------|----------------|
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences causally related to treatment / all | 0 / 4 | 0 / 0 | 0 / 3 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Cardiac failure chronic | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Nervous system disorders | | | |
| Vertigo CNS origin | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences causally related to treatment / all | 1 / 1 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Blood and lymphatic system disorders | | | |
| Anaemia | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 1 / 21 (4.76%) | 0 / 20 (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 |
| Hepatobiliary disorders | | | |
| Cholecystitis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences causally related to treatment / all | 0 / 2 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Psychiatric disorders | | | |
| Depression | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 1 / 21 (4.76%) | 0 / 20 (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 |
| Infections and infestations | | | |
| Gastroenteritis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (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 |
| COVID-19 | | | |

| | | | |
|---|----------------|----------------|----------------|
| subjects affected / exposed | 0 / 20 (0.00%) | 1 / 21 (4.76%) | 0 / 20 (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 |

| Serious adverse events | Period 1: Eculizumab | | |
|---|-------------------------|--|--|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| number of deaths (all causes) | 0 | | |
| number of deaths resulting from adverse events | | | |
| Injury, poisoning and procedural complications | | | |
| Meniscus injury | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Cardiac disorders | | | |
| Cardiac failure | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Cardiac failure chronic | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Nervous system disorders | | | |
| Vertigo CNS origin | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Blood and lymphatic system disorders | | | |
| Anaemia | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Hepatobiliary disorders | | | |
| Cholecystitis | | | |

| | | | |
|---|----------------|--|--|
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Psychiatric disorders | | | |
| Depression | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Infections and infestations | | | |
| Gastroenteritis | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| COVID-19 | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences causally related to treatment / all | 0 / 0 | | |
| deaths causally related to treatment / all | 0 / 0 | | |

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

| Non-serious adverse events | Period 1: ABP 959 | Period 2: ABP 959 | Period 2: Eculizumab |
|---|-------------------|-------------------|----------------------|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 15 / 20 (75.00%) | 17 / 21 (80.95%) | 18 / 20 (90.00%) |
| Neoplasms benign, malignant and unspecified (incl cysts and polyps) | | | |
| Lipoma | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Vascular disorders | | | |
| Hypertension | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Flushing | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Hypotension | | | |

| | | | |
|---|---------------------|---------------------|---------------------|
| subjects affected / exposed occurrences (all) | 1 / 20 (5.00%) 1 | 0 / 21 (0.00%) 0 | 0 / 20 (0.00%) 0 |
| General disorders and administration site conditions | | | |
| Asthenia | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 2 / 21 (9.52%) | 3 / 20 (15.00%) |
| occurrences (all) | 0 | 2 | 4 |
| Chills | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Catheter site pruritus | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Fatigue | | | |
| subjects affected / exposed | 2 / 20 (10.00%) | 2 / 21 (9.52%) | 1 / 20 (5.00%) |
| occurrences (all) | 2 | 3 | 1 |
| Influenza like illness | | | |
| subjects affected / exposed | 2 / 20 (10.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 4 | 0 | 0 |
| Pyrexia | | | |
| subjects affected / exposed | 6 / 20 (30.00%) | 3 / 21 (14.29%) | 1 / 20 (5.00%) |
| occurrences (all) | 9 | 4 | 2 |
| Pain | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Malaise | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Immune system disorders | | | |
| Hypersensitivity | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Reproductive system and breast disorders | | | |
| Vaginal discharge | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Intermenstrual bleeding | | | |

| | | | |
|--|---------------------|---------------------|---------------------|
| subjects affected / exposed occurrences (all) | 1 / 20 (5.00%) 1 | 0 / 21 (0.00%) 0 | 0 / 20 (0.00%) 0 |
| Respiratory, thoracic and mediastinal disorders | | | |
| Oropharyngeal pain | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Epistaxis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Dyspnoea | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 1 | 0 | 1 |
| Cough | | | |
| subjects affected / exposed | 2 / 20 (10.00%) | 2 / 21 (9.52%) | 1 / 20 (5.00%) |
| occurrences (all) | 2 | 2 | 1 |
| Sinonasal obstruction | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Investigations | | | |
| C-reactive protein increased | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Vitamin D decreased | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Weight increased | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Injury, poisoning and procedural complications | | | |
| Animal bite | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Contusion | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Vaccination complication | | | |

| | | | |
|---|---|---|---|
| subjects affected / exposed occurrences (all) | 1 / 20 (5.00%) 1 | 2 / 21 (9.52%) 2 | 2 / 20 (10.00%) 2 |
| Cardiac disorders Palpitations subjects affected / exposed occurrences (all) | 0 / 20 (0.00%) 0 | 0 / 21 (0.00%) 0 | 1 / 20 (5.00%) 1 |
| Nervous system disorders Vertigo CNS origin subjects affected / exposed occurrences (all) Somnolence subjects affected / exposed occurrences (all) Migraine subjects affected / exposed occurrences (all) Headache subjects affected / exposed occurrences (all) Dizziness subjects affected / exposed occurrences (all) | 1 / 20 (5.00%) 1 1 / 20 (5.00%) 1 1 / 20 (5.00%) 1 3 / 20 (15.00%) 3 2 / 20 (10.00%) 2 | 0 / 21 (0.00%) 0 0 / 21 (0.00%) 0 0 / 21 (0.00%) 0 2 / 21 (9.52%) 2 2 / 21 (9.52%) 3 | 0 / 20 (0.00%) 0 0 / 20 (0.00%) 0 1 / 20 (5.00%) 2 0 / 20 (0.00%) 0 |
| Blood and lymphatic system disorders Anaemia subjects affected / exposed occurrences (all) Haemolysis subjects affected / exposed occurrences (all) Thrombocytopenia subjects affected / exposed occurrences (all) Neutropenia subjects affected / exposed occurrences (all) Leukopenia | 4 / 20 (20.00%) 5 2 / 20 (10.00%) 3 0 / 20 (0.00%) 0 1 / 20 (5.00%) 2 | 3 / 21 (14.29%) 3 0 / 21 (0.00%) 0 2 / 21 (9.52%) 3 2 / 21 (9.52%) 3 | 1 / 20 (5.00%) 1 2 / 20 (10.00%) 5 0 / 20 (0.00%) 0 0 / 20 (0.00%) 0 |

| | | | |
|--|---|---|---|
| subjects affected / exposed occurrences (all) | 1 / 20 (5.00%) 2 | 1 / 21 (4.76%) 1 | 0 / 20 (0.00%) 0 |
| Ear and labyrinth disorders Ear pain subjects affected / exposed occurrences (all) | 0 / 20 (0.00%) 0 | 0 / 21 (0.00%) 0 | 0 / 20 (0.00%) 0 |
| Eye disorders Eye pruritus subjects affected / exposed occurrences (all) Neovascular age-related macular degeneration subjects affected / exposed occurrences (all) | 1 / 20 (5.00%) 1 0 / 20 (0.00%) 0 | 1 / 21 (4.76%) 1 0 / 21 (0.00%) 0 | 0 / 20 (0.00%) 0 1 / 20 (5.00%) 1 |
| Gastrointestinal disorders Haemorrhoids subjects affected / exposed occurrences (all) Nausea subjects affected / exposed occurrences (all) Dyspepsia subjects affected / exposed occurrences (all) Diarrhoea subjects affected / exposed occurrences (all) Abdominal pain upper subjects affected / exposed occurrences (all) Abdominal pain subjects affected / exposed occurrences (all) Abdominal distension subjects affected / exposed occurrences (all) | 0 / 20 (0.00%) 0 3 / 20 (15.00%) 3 1 / 20 (5.00%) 1 3 / 20 (15.00%) 4 0 / 20 (0.00%) 0 1 / 20 (5.00%) 1 1 / 20 (5.00%) 1 | 1 / 21 (4.76%) 1 0 / 21 (0.00%) 0 1 / 21 (4.76%) 1 1 / 21 (4.76%) 2 2 / 21 (9.52%) 2 0 / 21 (0.00%) 0 0 / 21 (0.00%) 0 | 1 / 20 (5.00%) 1 1 / 20 (5.00%) 1 0 / 20 (0.00%) 0 1 / 20 (5.00%) 1 0 / 20 (0.00%) 0 |
| Hepatobiliary disorders | | | |

| | | | |
|--|-----------------|----------------|----------------|
| Cholelithiasis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Cholecystitis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 2 | 0 | 0 |
| Ocular icterus | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 1 | 0 | 1 |
| Hyperbilirubinaemia | | | |
| subjects affected / exposed | 2 / 20 (10.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 8 | 0 | 0 |
| Skin and subcutaneous tissue disorders | | | |
| Rash pruritic | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 1 / 21 (4.76%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 1 | 1 |
| Pruritus | | | |
| subjects affected / exposed | 2 / 20 (10.00%) | 1 / 21 (4.76%) | 1 / 20 (5.00%) |
| occurrences (all) | 2 | 2 | 1 |
| Erythema | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Eczema | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 1 | 0 | 2 |
| Renal and urinary disorders | | | |
| Pollakiuria | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Haemoglobinuria | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Chromaturia | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 1 / 21 (4.76%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 1 | 1 |
| Bilirubinuria | | | |

| | | | |
|--|---------------------|---------------------|---------------------|
| subjects affected / exposed occurrences (all) | 0 / 20 (0.00%) 0 | 0 / 21 (0.00%) 0 | 1 / 20 (5.00%) 1 |
| Musculoskeletal and connective tissue disorders | | | |
| Arthralgia | | | |
| subjects affected / exposed | 2 / 20 (10.00%) | 1 / 21 (4.76%) | 0 / 20 (0.00%) |
| occurrences (all) | 3 | 1 | 0 |
| Arthritis | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Back pain | | | |
| subjects affected / exposed | 2 / 20 (10.00%) | 1 / 21 (4.76%) | 1 / 20 (5.00%) |
| occurrences (all) | 2 | 2 | 1 |
| Flank pain | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Pain in extremity | | | |
| subjects affected / exposed | 2 / 20 (10.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 2 | 0 | 0 |
| Myalgia | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Muscle fatigue | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Infections and infestations | | | |
| Diverticulitis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Enterovirus infection | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Gingivitis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Influenza | | | |

| | | | |
|------------------------------------|-----------------|-----------------|-----------------|
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Lyme disease | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Nasopharyngitis | | | |
| subjects affected / exposed | 5 / 20 (25.00%) | 4 / 21 (19.05%) | 1 / 20 (5.00%) |
| occurrences (all) | 8 | 4 | 1 |
| Pharyngitis | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Cystitis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 1 / 21 (4.76%) | 1 / 20 (5.00%) |
| occurrences (all) | 1 | 1 | 1 |
| Conjunctivitis | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 0 / 21 (0.00%) | 1 / 20 (5.00%) |
| occurrences (all) | 0 | 0 | 1 |
| Upper respiratory tract infection | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 2 | 0 | 0 |
| COVID-19 | | | |
| subjects affected / exposed | 0 / 20 (0.00%) | 3 / 21 (14.29%) | 5 / 20 (25.00%) |
| occurrences (all) | 0 | 3 | 5 |
| Urinary tract infection | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 1 / 21 (4.76%) | 1 / 20 (5.00%) |
| occurrences (all) | 1 | 1 | 1 |
| Vulvovaginal candidiasis | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Wound infection | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Metabolism and nutrition disorders | | | |
| Decreased appetite | | | |
| subjects affected / exposed | 1 / 20 (5.00%) | 0 / 21 (0.00%) | 0 / 20 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |

| | | | |
|--|---------------------|---------------------|---------------------|
| Vitamin B12 deficiency subjects affected / exposed occurrences (all) | 0 / 20 (0.00%) 0 | 0 / 21 (0.00%) 0 | 1 / 20 (5.00%) 1 |
|--|---------------------|---------------------|---------------------|

| Non-serious adverse events | Period 1: Eculizumab | | |
|---|--|--|--|
| Total subjects affected by non-serious adverse events subjects affected / exposed | 20 / 22 (90.91%) | | |
| Neoplasms benign, malignant and unspecified (incl cysts and polyps) Lipoma subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Vascular disorders Hypertension subjects affected / exposed occurrences (all) Flushing subjects affected / exposed occurrences (all) Hypotension subjects affected / exposed occurrences (all) | 5 / 22 (22.73%) 5 0 / 22 (0.00%) 0 0 / 22 (0.00%) 0 | | |
| General disorders and administration site conditions Asthenia subjects affected / exposed occurrences (all) Chills subjects affected / exposed occurrences (all) Catheter site pruritus subjects affected / exposed occurrences (all) Fatigue subjects affected / exposed occurrences (all) Influenza like illness | 1 / 22 (4.55%) 2 0 / 22 (0.00%) 0 1 / 22 (4.55%) 1 2 / 22 (9.09%) 3 | | |

| | | | |
|---|--|--|--|
| <p>subjects affected / exposed</p> <p>occurrences (all)</p> <p>Pyrexia</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> <p>Pain</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> <p>Malaise</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>2 / 22 (9.09%)</p> <p>2</p> <p>1 / 22 (4.55%)</p> <p>1</p> <p>2 / 22 (9.09%)</p> <p>2</p> <p>0 / 22 (0.00%)</p> <p>0</p> | | |
| <p>Immune system disorders</p> <p>Hypersensitivity</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>0 / 22 (0.00%)</p> <p>0</p> | | |
| <p>Reproductive system and breast disorders</p> <p>Vaginal discharge</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> <p>Intermenstrual bleeding</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>0 / 22 (0.00%)</p> <p>0</p> <p>0 / 22 (0.00%)</p> <p>0</p> | | |
| <p>Respiratory, thoracic and mediastinal disorders</p> <p>Oropharyngeal pain</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> <p>Epistaxis</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> <p>Dyspnoea</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> <p>Cough</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> <p>Sinonasal obstruction</p> | <p>0 / 22 (0.00%)</p> <p>0</p> <p>1 / 22 (4.55%)</p> <p>2</p> <p>1 / 22 (4.55%)</p> <p>1</p> <p>3 / 22 (13.64%)</p> <p>3</p> | | |

| | | | |
|---|----------------------|--|--|
| subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Investigations C-reactive protein increased subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Vitamin D decreased subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Weight increased subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Injury, poisoning and procedural complications Animal bite subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Contusion subjects affected / exposed occurrences (all) | 2 / 22 (9.09%) 4 | | |
| Vaccination complication subjects affected / exposed occurrences (all) | 5 / 22 (22.73%) 6 | | |
| Cardiac disorders Palpitations subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Nervous system disorders Vertigo CNS origin subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Somnolence subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Migraine subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |

| | | | |
|--|-----------------------|--|--|
| Headache subjects affected / exposed occurrences (all) | 9 / 22 (40.91%) 11 | | |
| Dizziness subjects affected / exposed occurrences (all) | 2 / 22 (9.09%) 2 | | |
| Blood and lymphatic system disorders | | | |
| Anaemia subjects affected / exposed occurrences (all) | 4 / 22 (18.18%) 12 | | |
| Haemolysis subjects affected / exposed occurrences (all) | 2 / 22 (9.09%) 3 | | |
| Thrombocytopenia subjects affected / exposed occurrences (all) | 2 / 22 (9.09%) 2 | | |
| Neutropenia subjects affected / exposed occurrences (all) | 2 / 22 (9.09%) 2 | | |
| Leukopenia subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Ear and labyrinth disorders | | | |
| Ear pain subjects affected / exposed occurrences (all) | 2 / 22 (9.09%) 2 | | |
| Eye disorders | | | |
| Eye pruritus subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Neovascular age-related macular degeneration subjects affected / exposed occurrences (all) | 0 / 22 (0.00%) 0 | | |
| Gastrointestinal disorders | | | |
| Haemorrhoids | | | |

| | | | |
|--|----------------|--|--|
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Nausea | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 1 | | |
| Dyspepsia | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Diarrhoea | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 2 | | |
| Abdominal pain upper | | | |
| subjects affected / exposed | 2 / 22 (9.09%) | | |
| occurrences (all) | 2 | | |
| Abdominal pain | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Abdominal distension | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Hepatobiliary disorders | | | |
| Cholelithiasis | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Cholecystitis | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Ocular icterus | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Hyperbilirubinaemia | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 1 | | |
| Skin and subcutaneous tissue disorders | | | |
| Rash pruritic | | | |

| | | | |
|--|--------------------------------|--|--|
| <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>0 / 22 (0.00%)</p> <p>0</p> | | |
| <p>Pruritus</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>1 / 22 (4.55%)</p> <p>2</p> | | |
| <p>Erythema</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>2 / 22 (9.09%)</p> <p>2</p> | | |
| <p>Eczema</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>1 / 22 (4.55%)</p> <p>1</p> | | |
| <p>Renal and urinary disorders</p> <p>Pollakiuria</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>0 / 22 (0.00%)</p> <p>0</p> | | |
| <p>Haemoglobinuria</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>0 / 22 (0.00%)</p> <p>0</p> | | |
| <p>Chromaturia</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>1 / 22 (4.55%)</p> <p>2</p> | | |
| <p>Bilirubinuria</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>0 / 22 (0.00%)</p> <p>0</p> | | |
| <p>Musculoskeletal and connective tissue disorders</p> <p>Arthralgia</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>1 / 22 (4.55%)</p> <p>1</p> | | |
| <p>Arthritis</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>0 / 22 (0.00%)</p> <p>0</p> | | |
| <p>Back pain</p> <p>subjects affected / exposed</p> <p>occurrences (all)</p> | <p>1 / 22 (4.55%)</p> <p>1</p> | | |
| <p>Flank pain</p> | | | |

| | | | |
|-----------------------------|----------------|--|--|
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Pain in extremity | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 1 | | |
| Myalgia | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 1 | | |
| Muscle fatigue | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Infections and infestations | | | |
| Diverticulitis | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Enterovirus infection | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Gingivitis | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Influenza | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Lyme disease | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Nasopharyngitis | | | |
| subjects affected / exposed | 2 / 22 (9.09%) | | |
| occurrences (all) | 3 | | |
| Pharyngitis | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Cystitis | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 1 | | |

| | | | |
|------------------------------------|----------------|--|--|
| Conjunctivitis | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Upper respiratory tract infection | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 1 | | |
| COVID-19 | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 1 | | |
| Urinary tract infection | | | |
| subjects affected / exposed | 1 / 22 (4.55%) | | |
| occurrences (all) | 1 | | |
| Vulvovaginal candidiasis | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Wound infection | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Metabolism and nutrition disorders | | | |
| Decreased appetite | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |
| Vitamin B12 deficiency | | | |
| subjects affected / exposed | 0 / 22 (0.00%) | | |
| occurrences (all) | 0 | | |

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

| Date | Amendment |
|-------------------|--|
| 17 September 2018 | <ul style="list-style-type: none">- To allow randomization ≤ 8 days before the first dose of IP administration and add RBC transfusion received within the last 12 months as stratification factor.- To update text describing dosing schedule for participants who require dose adjustments for IP based on signs and symptoms of intravascular hemolysis, including LDH levels.- To update statistical sections- To clarify study discontinuation procedures for participants who develop meningococcal infection, who become pregnant, or who require continuous dose adjustments for IP.- To clarify urine collection for hemoglobinuria assessment.- To add dates for concomitant medications.- To remove outcome from blood transfusion data collected.- To clarify laboratory testing category for hemolysis-related laboratory tests.- To update site geographical regions.- To update inclusion/exclusion criteria.- To update sampling schedule for serum chemistry, hematology, hemolysis-related tests, and coagulation.- To add follow-up period information.- To reduce liver Doppler ultrasound assessments to screening only.- To add and clarify C-reactive protein sample collection. |
| 29 April 2019 | <ul style="list-style-type: none">- To update the planned number of sites from 12 to 25 and to clarify that the study would be performed globally and not only in Europe.- To update the planned study duration from approximately 24 months to approximately 27 months.- To update the planned study start and end dates.- To remove subgroup analyses by age and ethnicity for the safety analysis set. |
| 05 March 2020 | <ul style="list-style-type: none">- To update the number of planned study sites from 25 to 45.- To update the threshold of the aggregated intra-subject coefficient of variation (CV).- To update the primary endpoint for the crossover comparison to include an additional assessment period.- To add the End of Study definition as last participant, last visit.- To clarify text in the Prior and Concomitant Therapy section to include prophylactic antibiotics as concomitant medications.- To update the timing the first blinded interim check of CV.- To clarify the criteria for discontinuation. |

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported