Clinical trial results:
Open-Label, Uncontrolled, Single Dose Study to Evaluate the Pharmacokinetics, Pharmacodynamics, and Safety of AZD7442 in Pediatric Participants Aged 29 Weeks Gestational Age to < 18 Years

Summary

EudraCT number	2021-006056-13
Trial protocol	DE BE
Global end of trial date	16 April 2024

Results information

Result version number	v2 (current)
This version publication date	01 June 2025
First version publication date	24 October 2024
Version creation reason	

Trial information

Trial identification

Sponsor protocol code	D8850C00006

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT05281601
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	AstraZeneca
Sponsor organisation address	151 85 Södertälje, Södertälje, Sweden, 15185
Public contact	Global Clinical Lead, AstraZeneca, +1 877-240-9479, information.center@astrazeneca.com
Scientific contact	Global Clinical Lead, AstraZeneca, +1 877-240-9479, information.center@astrazeneca.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	Yes
EMA paediatric investigation plan number(s)	EMEA-003079-PIP01-22, EMEA-029000-PIP01-20, EMEA-002925-PIP01-20
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?	Yes

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	21 May 2024
Is this the analysis of the primary completion data?	Yes
Primary completion date	16 April 2024
Global end of trial reached?	Yes
Global end of trial date	16 April 2024
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate the serum concentrations, safety and tolerability of AZD7442 after a single Intramuscular (IM) or Intravenous (IV) dose in pediatric participants

Protection of trial subjects:

The study was conducted in accordance with the protocol, with the consensus ethical principles derived from international guidelines including the Declaration of Helsinki and Council for International Organizations of Medical Sciences International Ethical Guidelines for Health-related Research Involving Humans and with the applicable International Council for Harmonisation (ICH) Good Clinical Practice (GCP) guidelines, as well as for any applicable laws and regulations.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	21 March 2022
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	Belgium: 3
Country: Number of subjects enrolled	Brazil: 2
Country: Number of subjects enrolled	Germany: 3
Country: Number of subjects enrolled	United Kingdom: 1
Country: Number of subjects enrolled	United States: 37
Worldwide total number of subjects	46
EEA total number of subjects	6

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	4
Children (2-11 years)	21

Adolescents (12-17 years)	21
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

The study was conducted from 21 March 2022 to 16 April 2024 at 11 sites in 5 countries worldwide.

Pre-assignment

Screening details:

Participants who met the inclusion criteria and none of the exclusion criteria were enrolled to the study. All study assessments were performed as per the schedule of assessment.

Period 1

Period 1 title	Overall Study (overall period)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Blinding implementation details:

Open-label study

Arms

Are arms mutually exclusive?	Yes
Arm title	Cohort 1

Arm description:

Participants who were SARS-CoV-2 RT-PCR negative received single dose of AZD7442 on Day 1, either as intramuscularly (IM) (AZD8895 followed by AZD1061) or as intravenously (IV) (AZD8895 + AZD1061 concurrently)

Arm type	Experimental
Investigational medicinal product name	AZD7442 (AZD8895 + AZD1061)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Concentrate for solution for infusion
Routes of administration	Intramuscular and intravenous use

Dosage and administration details:

Participants received a single dose of AZD7442 as either IM (AZD8895 followed by AZD1061) or a single IV infusion (AZD8895 and AZD1061 concurrently).

Arm title	Cohort 2

Arm description:

Participants who were SARS-CoV-2 RT-PCR positive received single dose of AZD7442 on Day 1, either as IM (AZD8895 followed by AZD1061) or as IV (AZD8895 + AZD1061 concurrently).

Arm type	Experimental
Investigational medicinal product name	AZD7442 (AZD8895 + AZD1061)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Concentrate for solution for infusion
Routes of administration	Intramuscular and intravenous use

Dosage and administration details:

Participants received a single dose of AZD7442 as either IM (AZD8895 followed by AZD1061) or a single IV infusion (AZD8895 and AZD1061 concurrently)

Number of subjects in period 1	Cohort 1	Cohort 2
Started	44	2
Completed	37	1
Not completed	7	1
Adverse event, serious fatal	1	-
Physician decision	2	-
Lost to follow-up	2	-
Withdrawal by parent/guardian	2	1

Baseline characteristics

Reporting groups	
Reporting group title	Cohort 1
Reporting group description:	
Participants who were SARS-CoV-2 RT-PCR negative received single dose of AZD7442 on Day 1, either as intramuscularly (IM) (AZD8895 followed by AZD1061) or as intravenously (IV) (AZD8895 + AZD1061 concurrently)	
Reporting group title	Cohort 2
Reporting group description:	
Participants who were SARS-CoV-2 RT-PCR positive received single dose of AZD7442 on Day 1, either as IM (AZD8895 followed by AZD1061) or as IV (AZD8895 + AZD1061 concurrently).	

Reporting group values	Cohort 1	Cohort 2	Total
Number of subjects	44	2	46
Age categorical Units: Participants			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	3	1	4
Children (2-11 years)	20	1	21
Adolescents (12-17 years)	21	0	21
Adults (18-64 years)	0	0	0
From 65-84 years	0	0	0
85 years and over	0	0	0
Sex: Female, Male Units: Participants			
Female	25	0	25
Male	19	2	21
Race/Ethnicity, Customized Units: Subjects			
Black or African American	11	0	11
Multiple	2	0	2
Not Reported	2	1	3
White	28	0	28
Other	1	1	2

End points

End points reporting groups

Reporting group title	Cohort 1

Reporting group description:

Participants who were SARS-CoV-2 RT-PCR negative received single dose of AZD7442 on Day 1, either as intramuscularly (IM) (AZD8895 followed by AZD1061) or as intravenously (IV) (AZD8895 + AZD1061 concurrently)

Reporting group title	Cohort 2

Reporting group description:

Participants who were SARS-CoV-2 RT-PCR positive received single dose of AZD7442 on Day 1, either as IM (AZD8895 followed by AZD1061) or as IV (AZD8895 + AZD1061 concurrently).

Primary: Serum concentrations of AZD7442

End point title	Serum concentrations of AZD7442[1]

End point description:

The serum concentrations of AZD7442 after a single IM or IV dose in pediatric participants was evaluated. The serum concentrations for each scheduled time point were summarized by route of administration using appropriate descriptive statistics, based on the Pharmacokinetic analysis (PK) set. Here, 'n' in each row represents the number of participants analyzed for each timepoint in each cohort. The arbitrary value, 99999 represents that data were not reported due to presence of insufficient number of participants at specific timepoints for analysis as was pre-specified in the statistical analysis plan (SAP) and 9999.9 represents that data were not reported as no participants were analyzed at specific timepoints in Cohort 2.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

IM - Day 4, Day 8, Day 11, Day 15 and Day 366; IV - Day 1, Day 4, Day 8, Day 11, Day 15 and Day 366

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	20	1		
Units: Microgram per milliliter (ug/mL)				
geometric mean (geometric coefficient of variation)				
Day 4 AZD7442 intramuscular (n: 8,0)	86.32 (± 72.72)	9999.9 (± 9999.9)		
Day 8 AZD7442 intramuscular (n: 4,0)	91.88 (± 86.03)	9999.9 (± 9999.9)		
Day 11 AZD7442 intramuscular (n: 5,0)	92.49 (± 20.91)	9999.9 (± 9999.9)		
Day 15 AZD7442 intramuscular (n: 7,0)	84.69 (± 33.69)	9999.9 (± 9999.9)		
Day 366 AZD7442 intramuscular (n: 20,0)	4.084 (± 57.91)	9999.9 (± 9999.9)		
Day 1 AZD7442 intravenous (n: 17,1)	199.9 (± 23.16)	99999 (± 99999)		

Day 4 AZD7442 intravenous (n: 3,0)	99999 (± 99999)	9999.9 (± 9999.9)		
Day 8 AZD7442 intravenous (n: 6,0)	89.47 (± 30.60)	9999.9 (± 9999.9)		
Day 11 AZD7442 intravenous (n: 6,0)	95.02 (± 20.35)	9999.9 (± 9999.9)		
Day 15 AZD7442 intravenous (n: 3,1)	99999 (± 99999)	99999 (± 99999)		
Day 366 AZD7442 intravenous (n: 13,1)	2.047 (± 74.56)	99999 (± 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Maximum serum concentration (Cmax)

End point title	Maximum serum concentration (Cmax)[2]

End point description:

The Cmax of AZD7442 after a single IM or IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
Here, 'n' in each row represents the number of participants analyzed in each cohort. The arbitrary value, 99999 represents that data were not reported in intravenous category due to presence of insufficient number of participants at that timepoint for analysis as was pre-specified in the SAP and 9999.9 represents that data were not reported in intramuscular category as no participants were analyzed.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approximately [approx.] 24 months)

Notes:

[2] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	24	1		
Units: Microgram per milliliter (ug/mL)				
geometric mean (geometric coefficient of variation)				
AZD7442 intramuscular (n: 24,0)	92.47 (± 44.22)	9999.9 (± 9999.9)		
AZD7442 intravenous (n: 19,1)	189.3 (± 27.72)	99999 (± 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Time to reach maximum serum concentration (tmax)

End point title	Time to reach maximum serum concentration (tmax)[3]

End point description:

The tmax of AZD7442 after a single IM or IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
Here, 'n' in each row represents the number of participants analyzed in each cohort. For Cohort 2, median was not calculated for a single subject as specified in the SAP. To resolve the validation error, the median is reported with the same value as min-max. The arbitrary value, 9999.9 represents that data were not reported in intramuscular category as no participants were analyzed.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[3] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	24	1		
Units: Day				
median (full range (min-max))				
AZD7442 intramuscular (n: 24,0)	11.44 (0.76 to 32.73)	9999.9 (9999.9 to 9999.9)		
AZD7442 intravenous (n: 19,1)	0.01 (0.01 to 9.95)	0.01 (0.01 to 0.01)		

Statistical analyses

No statistical analyses for this end point

Primary: Terminal half-life (t1/2)

End point title	Terminal half-life (t1/2)[4]

End point description:

The t1/2 of AZD7442 after a single IM or IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
Here, 'n' in each row represents the number of participants analyzed in each cohort. The arbitrary value, 99999 represents that data were not reported in intravenous category due to presence of insufficient number of participants at that timepoint for analysis as was pre-specified in the SAP and 9999.9 represents that data were not reported in intramuscular category as no participants were analyzed.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[4] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	22	1		
Units: Day				
geometric mean (geometric coefficient of variation)				
AZD7442 intramuscular (n: 22,0)	78.95 (± 24.21)	9999.9 (± 9999.9)		
AZD7442 intravenous (n: 17,1)	65.61 (± 22.38)	99999 (± 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Area under the serum concentration versus time curve from time zero to time of last measurable concentration (AUC0-last)

End point title	Area under the serum concentration versus time curve from time zero to time of last measurable concentration (AUC0-last)[5]

End point description:

The AUC0-last of AZD7442 after a single IM or IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
Here, 'n' in each row represents the number of participants analyzed in each cohort. The arbitrary value, 99999 represents that data were not reported in intravenous category due to presence of insufficient number of participants at that timepoint for analysis as was pre-specified in the SAP and 9999.9 represents that data were not reported in intramuscular category as no participants were analyzed.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[5] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	23	1		
Units: Day*ug/mL				
geometric mean (geometric coefficient of variation)				
AZD7442 intramuscular (n: 23,0)	9884 (± 42.84)	9999.9 (± 9999.9)		
AZD7442 intravenous (n: 19,1)	9342 (± 36.45)	99999 (± 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Area under the serum concentration versus time curve extrapolated to infinity (AUC0-inf)

End point title	Area under the serum concentration versus time curve extrapolated to infinity (AUC0-inf)[6]

End point description:

The AUC0-inf of AZD7442 after a single IM or IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
Here, 'n' in each row represents the number of participants analyzed in each cohort. The arbitrary value, 99999 represents that data were not reported in intravenous category due to presence of insufficient number of participants at that timepoint for analysis as was pre-specified in the SAP and 9999.9 represents that data were not reported in intramuscular category as no participants were analyzed.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[6] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	22	1		
Units: Day*ug/mL				
geometric mean (geometric coefficient of variation)				
AZD7442 intramuscular (n: 22,0)	11000 (± 38.03)	9999.9 (± 9999.9)		
AZD7442 intravenous (n: 17,1)	10870 (± 21.09)	99999 (± 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Time to last measurable concentration (tlast)

End point title	Time to last measurable concentration (tlast)[7]

End point description:

The tlast of AZD7442 after a single IM or IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
Here, 'n' in each row represents the number of participants analyzed in each cohort. For Cohort 2, median was not calculated for a single subject as specified in the SAP. To resolve the validation error, the median is reported with the same value as min-max. The arbitrary value, 9999.9 represents that data were not reported in intramuscular category as no participants were analyzed.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[7] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	24	1		
Units: Day				
median (full range (min-max))				
AZD7442 intramuscular (n:24,0)	351.38 (0.76 to 401.00)	9999.9 (9999.9 to 9999.9)		
AZD7442 intravenous (n:19,1)	355.97 (33.81 to 377.26)	354.90 (354.90 to 354.90)		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of AUC0-inf extrapolated to infinity (% AUCex)

End point title	Percentage of AUC0-inf extrapolated to infinity (% AUCex)[8]

End point description:

The %AUCex of AZD7442 after a single IM or IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
Here, 'n' in each row represents the number of participants analyzed in each cohort. The arbitrary value, 99999 represents that data were not reported in intravenous category due to presence of insufficient number of participants at that timepoint for analysis as was pre-specified in the SAP and 9999.9 represents that data were not reported in intramuscular category as no participants were analyzed.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[8] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	22	1		
Units: Percentage of AUC extrapolated to ∞				
geometric mean (geometric coefficient of variation)				
AZD7442 intramuscular (n: 22,0)	4.799 (± 78.26)	9999.9 (± 9999.9)		

AZD7442 intravenous (n: 17,1)	3.018 (± 179.9)	99999 (± 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Apparent total clearance (CL/F)

End point title	Apparent total clearance (CL/F)[9]

End point description:

The CL/F of AZD7442 after a single IM dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[9] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	22	0[10]		
Units: Liter/day				
geometric mean (geometric coefficient of variation)				
AZD7442 intramuscular	0.04807 (± 75.26)	()		

Notes:

[10] - No participant was analyzed for PK parameter (CL/F) from this cohort.

Statistical analyses

No statistical analyses for this end point

Primary: Volume of distribution at steady state (Vss)

End point title	Volume of distribution at steady state (Vss)[11]

End point description:

The Vss of AZD7442 after a single IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
The arbitrary value, 99999 represents that data were not reported in intravenous category due to presence of insufficient number of participants at that timepoint for analysis as was pre-specified in the SAP.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[11] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	17	1		
Units: Liter				
geometric mean (geometric coefficient of variation)				
AZD7442 intravenous	2.605 (± 20.34)	99999 (± 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Apparent volume of distribution based on terminal phase (Vz/F)

End point title	Apparent volume of distribution based on terminal phase

End point description:

The Vz/F of AZD7442 after a single IM dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[12] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	22	0[13]		
Units: Liter				
geometric mean (geometric coefficient of variation)				
AZD7442 intramuscular	5.475 (± 98.74)	()		

Notes:

[13] - No participant was analyzed for PK parameter (Vz/F) from this cohort.

Statistical analyses

No statistical analyses for this end point

Primary: Systemic clearance (CL)

End point title	Systemic clearance (CL)[14]

End point description:

The CL of AZD7442 after a single IV dose in pediatric participants was evaluated. The PK parameters were summarized by route of administration using appropriate descriptive statistics based on the PK analysis set.
The arbitrary value, 99999 represents that data were not reported in intravenous category due to presence of insufficient number of participants at that timepoint for analysis as was pre-specified in the SAP.
The PK analysis set consisted of all participants who received AZD7442 and from whom PK blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum PK observation post-dose.

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[14] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	17	1		
Units: Liter/day				
geometric mean (geometric coefficient of variation)				
AZD7442 intravenous	0.02759 (± 21.09)	99999 (± 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Number of participants with Adverse Events (AE)

End point title	Number of participants with Adverse Events (AE)[15]

End point description:

The safety and tolerability of AZD7442 after a single IM or IV dose in pediatric participants was evaluated.
Safety Analysis Set (SAF) consisted of all participants who had received investigational medicinal product (IMP).

End point type	Primary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[15] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	44	2		
Units: Participants				
Any AE	39	2		
Any Serious Adverse Event (SAE)	8	1		
Any Severe AE	6	0		
Any SAE with outcome death	1	0		
Any AE leading to study discontinuation	0	0		
Any possibly related AE	3	0		
Any possibly related SAE	0	0		
Any possibly related Severe AE	0	0		
Any possibly related AE of Special Interest (AESI)	1	0		

Statistical analyses

No statistical analyses for this end point

Primary: Number of participants with Adverse event of special interest (AESI)

End point title	Number of participants with Adverse event of special interest (AESI)[16]

End point description:

Number of pediatric participants with AESI after a single IM or IV dose were evaluated.
An AESI is a pre-specified medically significant event that has the potential to be causally associated with a vaccine product.
SAF consisted of all participants who had received IMP.

End point type	Primary

End point timeframe:

Day 1 to day 366 or early discontinuation visit (approx. 24 months)

Notes:

[16] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: This study did not plan any formal hypothesis testing, only descriptive endpoints.

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	44	2		
Units: Participants				
Intramuscular administration	1	0		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants with positive antidrug antibodies (ADA) result to AZD7442.

End point title	Number of participants with positive antidrug antibodies (ADA)

	result to AZD7442.

End point description:

The immunogenicity profile of AZD7442 after a single IM or IV dose in pediatric participants was evaluated.
The AZD7442 ADA Evaluable Analysis Set (ADS3) consisted of all participants who were AZD8895 ADA evaluable and/or AZD1061 ADA evaluable.
A participant is defined as ADA-positive to AZD7442 if they have a positive ADA result to AZD8895 and/or AZD1061 at any time, including baseline and all postbaseline.

End point type	Secondary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	44	2		
Units: Participants				
AZD7442 intramuscular ADA positive subject	2	0		
AZD7442 intravenous ADA positive subject	2	0		

Statistical analyses

No statistical analyses for this end point

Secondary: Cohort 2 - Percentage of participants with progression of COVID-19 through Day 29

End point title	Cohort 2 - Percentage of participants with progression of COVID-19 through Day 29[17]

End point description:

Percentage of participants with progression of COVID-19 through Day 29 in Cohort 2 in pediatric participants was evaluated.
SAF consisted of all participants who had received IMP.

End point type	Secondary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[17] - 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: For this endpoint, only participants for one of the cohorts were analysed and the same has been presented.

End point values	Cohort 2			
Subject group type	Reporting group			
Number of subjects analysed	2			
Units: Percentage of participants				
number (not applicable)	0			

Statistical analyses

No statistical analyses for this end point

Secondary: Cohort 1 (Prophylaxis) - Number of participants with SARS-CoV-2 infections

End point title	Cohort 1 (Prophylaxis) - Number of participants with SARS-CoV-2 infections[18]

End point description:

Number of participants with SARS-CoV-2 infections with or without COVID-19 symptoms after a single IM or IV dose of AZD7442 in pediatric participants were evaluated.
SAF consisted of all participants who had received IMP.

End point type	Secondary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[18] - 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: For this endpoint, only participants for one of the cohorts were analysed and the same has been presented.

End point values	Cohort 1			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: Participants				
Overall	10			
Intramuscular administration	7			
Intravenous administration	3			

Statistical analyses

No statistical analyses for this end point

Secondary: Cohort 2 - Number of participants with COVID-19 related death occurring after dosing with IMP through 90 days

End point title	Cohort 2 - Number of participants with COVID-19 related death occurring after dosing with IMP through 90 days[19]

End point description:

Number of participants with COVID-19 related death occurring after dosing with IMP through 90 days in Cohort 2 in pediatric participants were evaluated.
SAF consisted of all participants who had received IMP.

End point type	Secondary

End point timeframe:

Day 1 to Day 366 or early discontinuation visit (approx. 24 months)

Notes:

[19] - 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: For this endpoint, only participants for one of the cohorts were analysed and the same has been presented.

End point values	Cohort 2			
Subject group type	Reporting group			
Number of subjects analysed	2			
Units: Participants	0			

Statistical analyses

No statistical analyses for this end point

Secondary: Titre of SARS-CoV-2 neutralizing antibodies

End point title	Titre of SARS-CoV-2 neutralizing antibodies

End point description:

The pharmacodynamics of AZD7442 after a single dose in pediatric participants was evaluated.
The result for overall vaccination status were presented.
Here, 'n' in each row represents the number of participants analyzed in each cohort. For Cohort 2, geometric mean was not calculated for a single subject as specified in the SAP. To resolve the validation error, the geometric mean is reported with the same value as min-max. The arbitrary value, 9999.9 represents that data were not reported in intramuscular category as no participants were analyzed at that timepoint.
SARS-CoV-2 nAb Evaluable Analysis Set (SES) consisted of all participants in the Safety Analysis Set from whom blood samples were assumed not to be affected by factors such as protocol violations, and who had at least one quantifiable serum titer observation post dose.

End point type	Secondary

End point timeframe:

Day 31 to Day 366 or early discontinuation visit (approx. 24 months)

End point values	Cohort 1	Cohort 2		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	23	1		
Units: ug/mL				
geometric mean (full range (min-max))				
Intramuscular Day 31 (n:23,0)	52720 (355 to 139000)	9999.9 (9999.9 to 9999.9)		
Intramuscular Day 366 (n:22,0)	1699 (143 to 4340)	9999.9 (9999.9 to 9999.9)		
Intravenous Day 31 (n:18,1)	52950 (20800 to 120000)	19800 (19800 to 19800)		
Intravenous Day 366 (n:11,1)	1078 (398 to 4460)	252 (252 to 252)		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Day 1 to Day 366 or early discontinuation visit (approx. 24 months)	
Adverse event reporting additional description:	
The SAF consisted of all participants who had received IMP.	
Assessment type	Non-systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	26.1

Reporting groups	
Reporting group title	Cohort 2
Reporting group description:	
Participants who were SARS-CoV-2 RT-PCR positive received single dose of AZD7442 on Day 1, either as IM (AZD8895 followed by AZD1061) or as IV (AZD8895 + AZD1061 concurrently).	
Reporting group title	Cohort 1
Reporting group description:	
Participants who were SARS-CoV-2 RT-PCR negative received single dose of AZD7442 on Day 1, either as IM (AZD8895 followed by AZD1061) or as IV (AZD8895 + AZD1061 concurrently)	

Serious adverse events	Cohort 2	Cohort 1	
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 2 (50.00%)	8 / 44 (18.18%)	
number of deaths (all causes)	0	1	
number of deaths resulting from adverse events	0	0	
Nervous system disorders			
Epilepsy			
subjects affected / exposed	1 / 2 (50.00%)	0 / 44 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Blood and lymphatic system disorders			
Febrile neutropenia			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 5	
deaths causally related to treatment / all	0 / 0	0 / 0	
Febrile bone marrow aplasia			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Immune system disorders			
Anaphylactic reaction			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Stomatitis			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Reproductive system and breast disorders			
Ovarian cyst ruptured			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory, thoracic and mediastinal disorders			
Respiratory failure			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Asthma			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Skin and subcutaneous tissue disorders			
Henoch-Schonlein purpura			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal and urinary disorders			
Nephrotic syndrome			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue			

disorders			
Back pain			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Croup infectious			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Device related sepsis			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 1	
Viral upper respiratory tract infection			
subjects affected / exposed	1 / 2 (50.00%)	0 / 44 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Sepsis			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Rhinovirus infection			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastroenteritis Escherichia coli			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Lower respiratory tract infection bacterial			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Metapneumovirus infection			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory tract infection viral			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Metabolism and nutrition disorders			
Type 2 diabetes mellitus			
subjects affected / exposed	0 / 2 (0.00%)	1 / 44 (2.27%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Cohort 2	Cohort 1	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	2 / 2 (100.00%)	34 / 44 (77.27%)	
Investigations			
Influenza A virus test positive			
subjects affected / exposed	1 / 2 (50.00%)	0 / 44 (0.00%)	
occurrences (all)	1	0	
SARS-CoV-2 test positive			
subjects affected / exposed	0 / 2 (0.00%)	3 / 44 (6.82%)	
occurrences (all)	0	3	
Nervous system disorders			
Headache			
subjects affected / exposed	0 / 2 (0.00%)	4 / 44 (9.09%)	
occurrences (all)	0	4	
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	1 / 2 (50.00%)	7 / 44 (15.91%)	
occurrences (all)	1	13	
Gastrointestinal disorders			

Abdominal pain			
subjects affected / exposed	0 / 2 (0.00%)	3 / 44 (6.82%)	
occurrences (all)	0	3	
Vomiting			
subjects affected / exposed	0 / 2 (0.00%)	4 / 44 (9.09%)	
occurrences (all)	0	4	
Nausea			
subjects affected / exposed	0 / 2 (0.00%)	4 / 44 (9.09%)	
occurrences (all)	0	4	
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	0 / 2 (0.00%)	10 / 44 (22.73%)	
occurrences (all)	0	10	
Skin and subcutaneous tissue disorders			
Rash			
subjects affected / exposed	1 / 2 (50.00%)	0 / 44 (0.00%)	
occurrences (all)	1	0	
Infections and infestations			
Upper respiratory tract infection			
subjects affected / exposed	0 / 2 (0.00%)	12 / 44 (27.27%)	
occurrences (all)	0	27	
Viral infection			
subjects affected / exposed	0 / 2 (0.00%)	11 / 44 (25.00%)	
occurrences (all)	0	13	
COVID-19			
subjects affected / exposed	0 / 2 (0.00%)	10 / 44 (22.73%)	
occurrences (all)	0	10	
Acute sinusitis			
subjects affected / exposed	0 / 2 (0.00%)	4 / 44 (9.09%)	
occurrences (all)	0	7	
Otitis media acute			
subjects affected / exposed	0 / 2 (0.00%)	4 / 44 (9.09%)	
occurrences (all)	0	4	
Pharyngitis streptococcal			
subjects affected / exposed	0 / 2 (0.00%)	4 / 44 (9.09%)	
occurrences (all)	0	4	

Influenza			
subjects affected / exposed	0 / 2 (0.00%)	3 / 44 (6.82%)	
occurrences (all)	0	3	
Nasopharyngitis			
subjects affected / exposed	0 / 2 (0.00%)	3 / 44 (6.82%)	
occurrences (all)	0	7	
Ear infection			
subjects affected / exposed	1 / 2 (50.00%)	0 / 44 (0.00%)	
occurrences (all)	2	0	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
25 October 2023	Amendment 4: Global changes to protocol - Updated last study visit from Day 457 to Day 366, removing the safety follow-up at Day 457. Section 1.1 Synopsis; Overall Design - Changed inclusion of participants in the study from 15 to 12 months following administration of IMP. Section 1.1 Synopsis; Intervention Groups and Duration - Changed monitoring of participants from 15 to 12 months after AZD7442 administration. Section 1.2 Schematic; Figures 1 and 2 - Changed Day 457 to Day 366 in Figure 1. Changed Week 65 to Week 52 in Figure 2. Section 1.3 Schedule of Activities; Tables 2 and 3 - Deleted the column related to Day 457 safety follow-up assessment in both tables. Deleted the footnote related to Day 457 safety follow-up assessment under both tables. Section 4.1 Overall Design - Deleted "Follow-up will continue through Day 457 (± 15 days) when participants will receive a telephone call to assess safety." Changed the maximum duration of the study for each participant, including screening, from 479 to 388 days. Section 4.2.1 Rationale for Choice of Endpoints - Changed the following "The revised study duration of 366 days will allow follow-up of dosed participants through approximately 4 AZD7442 half-lives,". Section 6.1.1 Investigational Product - Changed the following "All eligible participants will receive a single dose of AZD7442 on Day 1, either IM (AZD8895 followed by AZD1061 administered separately) or a single IV infusion (AZD8895 and AZD1061 co-administered), and participants will be monitored for 365 days after IMP administration". Section 7.4.1 Stopping Rules for an Individual Participant, at Any Time in the Study - Changed the following "Unless consent for follow-up is withdrawn, participants discontinued after receiving a partial dose of IMP will be followed for the full study period (up to and including Day 366, 52 weeks after IMP dosing)".

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported