Clinical trial results:
A COHORT STUDY TO EVALUATE IMMUNOGENICITY FOR CHILDREN AGED 5 MONTHS TO 60 MONTHS AT THE TIME OF CLINICAL PNEUMONIA DIAGNOSIS

Summary

EudraCT number	2022-000845-34
Trial protocol	Outside EU/EEA
Global end of trial date	14 December 2021

Results information

Result version number	v1 (current)
This version publication date	17 December 2022
First version publication date	17 December 2022

Trial information

Trial identification

Sponsor protocol code	B1851196

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT05372575
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Pfizer, Inc
Sponsor organisation address	235 E 42nd Street, New York, United States, NY 10017
Public contact	Pfizer ClinicalTrials.gov Call Center, Pfizer, Inc, +1 8007181021, ClinicalTrials.gov_Inquiries@pfizer.com
Scientific contact	Pfizer ClinicalTrials.gov Call Center, Pfizer, Inc, +1 8007181021, ClinicalTrials.gov_Inquiries@pfizer.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?	Yes

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	14 December 2021
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	14 December 2021
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The primary objective of this study was to describe the antibody levels as measured by immunoglobulin G (IgG) and multiplex opsonophagocytic activity (MOPA) by 13-valent pneumococcal conjugate vaccine (13vPnC) vaccination status and vaccine type (VT) carriage status, among children 5 months to <=60 months of age with diagnosis of clinical pneumonia per local standard.

Protection of trial subjects:

This study was conducted in compliance with the ethical principles originating in or derived from the Declaration of Helsinki and in compliance with all International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH) Good Clinical Practice (GCP) Guidelines. In addition, all local regulatory requirements were followed, in particular, those affording greater protection to the safety of trial subjects.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	15 August 2019
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	China: 300
Worldwide total number of subjects	300
EEA total number of subjects	0

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)	164
Children (2-11 years)	136
Adolescents (12-17 years)	0
Adults (18-64 years)	0
From 65 to 84 years	0

85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Children hospitalized with a diagnosis of clinical pneumonia were considered for the study. Subjects participated in the study for 1 day. Subjects were followed for 12 hours after blood draw and deep respiratory aspirate if collected as a study procedure. A total of 300 subjects were enrolled in this study.

Pre-assignment

Screening details:

No vaccines were administered during the study.

Period 1

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

Arms

Are arms mutually exclusive?	Yes
Arm title	13vPnC Cohort

Arm description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnc vaccination was confirmed as received, and all other inclusion/exclusion criteria were met, this subject was enrolled and assigned to the vaccinated group (ie, 13vPnC Cohort). No vaccines were administered during the study.

Arm type	Experimental
Investigational medicinal product name	13vPnC
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use

Dosage and administration details:

No study intervention was administered during the study.

Arm title	Non-13vPnC Cohort

Arm description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnC vaccination was confirmed as not received, and all other inclusion / exclusion criteria were met, this subject was enrolled and assigned to the unvaccinated group (ie, Non-13vPnC Cohort). No vaccines were administered during the study.

Arm type	No intervention

No investigational medicinal product assigned in this arm

Number of subjects in period 1	13vPnC Cohort	Non-13vPnC Cohort
Started	101	199
Completed	94	183
Not completed	7	16
Protocol deviation	7	16

Baseline characteristics

Reporting groups	
Reporting group title	13vPnC Cohort

Reporting group description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnc vaccination was confirmed as received, and all other inclusion/exclusion criteria were met, this subject was enrolled and assigned to the vaccinated group (ie, 13vPnC Cohort). No vaccines were administered during the study.

Reporting group title	Non-13vPnC Cohort

Reporting group description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnC vaccination was confirmed as not received, and all other inclusion / exclusion criteria were met, this subject was enrolled and assigned to the unvaccinated group (ie, Non-13vPnC Cohort). No vaccines were administered during the study.

Reporting group values	13vPnC Cohort	Non-13vPnC Cohort	Total
Number of subjects	101	199	300
Age Categorical Units: Subjects			
<=4 months	1	0	1
5-12 months	27	50	77
13-24 months	39	49	88
25-60 months	34	100	134
Sex: Female, Male Units: Subjects			
Female	48	94	142
Male	53	105	158
Race/Ethnicity, Customized Units: Subjects			
Asian	101	199	300
Race/Ethnicity, Customized Units: Subjects			
Non-Hispanic/non-Latino	101	199	300

End points

End points reporting groups

Reporting group title	13vPnC Cohort

Reporting group description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnc vaccination was confirmed as received, and all other inclusion/exclusion criteria were met, this subject was enrolled and assigned to the vaccinated group (ie, 13vPnC Cohort). No vaccines were administered during the study.

Reporting group title	Non-13vPnC Cohort

Reporting group description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnC vaccination was confirmed as not received, and all other inclusion / exclusion criteria were met, this subject was enrolled and assigned to the unvaccinated group (ie, Non-13vPnC Cohort). No vaccines were administered during the study.

Subject analysis set title	13vPnC Cohort: VT+ Subgroup
Subject analysis set type	Sub-group analysis

Subject analysis set description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnc vaccination was confirmed as received, and all other inclusion/exclusion criteria were met, this subject was enrolled and assigned to the vaccinated group (ie, 13vPnC Cohort). Subjects in this subgroup had a 13vPnC VT strain isolated from the respiratory tract (VT+). No vaccines were administered during the study.

Subject analysis set title	13vPnC Cohort: VT- or Sp- Subgroup
Subject analysis set type	Sub-group analysis

Subject analysis set description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnc vaccination was confirmed as received, and all other inclusion/exclusion criteria were met, this subject was enrolled and assigned to the vaccinated group (ie, 13vPnC Cohort). Subjects in this subgroup had no 13vPnC VT strain isolated from the respiratory tract (VT-) or had negative S. pneumoniae (Sp-). No vaccines were administered during the study.

Subject analysis set title	Non-13vPnC Cohort: VT+ Subgroup
Subject analysis set type	Sub-group analysis

Subject analysis set description:

The vaccination history of 13vPnC initially was obtained either from the sujbect's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnC vaccination was confirmed as not received, and all other inclusion / exclusion criteria were met, this subject was enrolled and assigned to the unvaccinated group (ie, Non-13vPnC Cohort). Subjects in this subgroup had a 13vPnC VT strain isolated from the respiratory tract (VT+). No vaccines were administered during the study.

Subject analysis set title	Non-13vPnC Cohort: VT- or Sp- Subgroup
Subject analysis set type	Sub-group analysis

Subject analysis set description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnC vaccination was confirmed as not received, and all other inclusion / exclusion criteria were met, this subject was enrolled and assigned to the unvaccinated group (ie, Non-13vPnC Cohort). Subjects in this subgroup had no 13vPnC VT strain isolated from the respiratory tract (VT-) or had negative S. pneumoniae (Sp-). No vaccines were administered during the study.

Primary: Geometric Mean Concentrations (GMCs) of Pneumococcal Immunoglobulin G (IgG) by Cohort

End point title	Geometric Mean Concentrations (GMCs) of Pneumococcal Immunoglobulin G (IgG) by Cohort

End point description:

Approximately 5 mL of blood sample was collected within 24 hours of enrollment. Blood must have been drawn from peripheral veins (eg, arm, foot, or scalp veins). Serum concentrations of anticapsular IgG were determined by enzyme-linked immunosorbent assay (ELISA) for each of the 13 pneumococcal serotypes (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F) in all subjects with a collected blood sample. Analysis population for this endpiont included all subjects who signed the informed consent document (ICD), met all inclusion/exclusion criteria, and had at least 1 immunogenicity assay value available for analysis. Overall number of subjects analyzed indicates the total number of subjects in this analysis population.

End point type	Primary

End point timeframe:

Day 1

End point values	13vPnC Cohort	Non-13vPnC Cohort		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	92[1]	184[2]		
Units: microgram per milliliter (µg/mL)				
geometric mean (confidence interval 95%)				
Serotype: 1 (n=92,179)	1.55 (1.17 to 2.06)	0.12 (0.09 to 0.15)		
Serotype: 3 (n=92,184)	0.42 (0.32 to 0.54)	0.07 (0.06 to 0.08)		
Serotype: 4 (n=92,184)	1.36 (1.00 to 1.84)	0.08 (0.06 to 0.10)		
Serotype: 5 (n=92,184)	1.74 (1.41 to 2.15)	0.72 (0.63 to 0.82)		
Serotype: 6A (n=92,183)	2.42 (1.85 to 3.15)	0.38 (0.33 to 0.44)		
Serotype: 6B (n=92,184)	2.47 (1.90 to 3.22)	0.37 (0.32 to 0.43)		
Serotype: 7F (n=92,183)	1.81 (1.41 to 2.32)	0.19 (0.16 to 0.23)		
Serotype: 9V (n=92,184)	1.18 (0.96 to 1.46)	0.30 (0.26 to 0.36)		
Serotype: 14 (n=92,180)	4.67 (3.40 to 6.42)	0.08 (0.06 to 0.10)		
Serotype: 18C (n=92,182)	1.03 (0.79 to 1.34)	0.06 (0.05 to 0.08)		
Serotype: 19A (n=92,184)	3.19 (2.50 to 4.07)	0.75 (0.65 to 0.86)		
Serotype: 19F (n=92,181)	3.31 (2.53 to 4.31)	0.38 (0.31 to 0.46)		
Serotype: 23F (n=92,184)	2.04 (1.56 to 2.68)	0.25 (0.21 to 0.28)		

Notes:

[1] - Subjects with available data (n=X,X in category titles) were analyzed.

[2] - Subjects with available data (n=X,X in category titles) were analyzed.

Statistical analyses

Statistical analysis title	Geometric Mean Ratio (GMR) for Serotype: 1
Statistical analysis description:	
GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[3]
Parameter estimate	Geometric Mean Ratio (GMR)
Point estimate	13.16
Confidence interval	
level	95 %
sides	2-sided
lower limit	8.99
upper limit	19.28

Notes:

[3] - The 2-sided 95% confidential interval (CI) on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[4]
Parameter estimate	GMR
Point estimate	5.88
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.32
upper limit	8.01

Notes:

[4] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[5]
Parameter estimate	GMR
Point estimate	17.98

Confidence interval	
level	95 %
sides	2-sided
lower limit	12.07
upper limit	26.78

Notes:

[5] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 5

Statistical analysis description:

GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[6]
Parameter estimate	GMR
Point estimate	2.42
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.9
upper limit	3.08

Notes:

[6] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6A

Statistical analysis description:

GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[7]
Parameter estimate	GMR
Point estimate	6.35
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.68
upper limit	8.61

Notes:

[7] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6B

Statistical analysis description:

GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort

Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[8]
Parameter estimate	GMR
Point estimate	6.64
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.92
upper limit	8.97

Notes:

[8] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 7F

Statistical analysis description:

GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[9]
Parameter estimate	GMR
Point estimate	9.42
Confidence interval	
level	95 %
sides	2-sided
lower limit	6.91
upper limit	12.83

Notes:

[9] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 9V

Statistical analysis description:

GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[10]
Parameter estimate	GMR
Point estimate	3.89
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.96
upper limit	5.1

Notes:

[10] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 14
Statistical analysis description:	
GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[11]
Parameter estimate	GMR
Point estimate	62.13
Confidence interval	
level	95 %
sides	2-sided
lower limit	40.16
upper limit	96.12

Notes:

[11] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 18C
Statistical analysis description:	
GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[12]
Parameter estimate	GMR
Point estimate	16.37
Confidence interval	
level	95 %
sides	2-sided
lower limit	11.22
upper limit	23.89

Notes:

[12] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort

Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[13]
Parameter estimate	GMR
Point estimate	4.25
Confidence interval	
level	95 %
sides	2-sided
lower limit	3.22
upper limit	5.62

Notes:

[13] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[14]
Parameter estimate	GMR
Point estimate	8.73
Confidence interval	
level	95 %
sides	2-sided
lower limit	6.24
upper limit	12.21

Notes:

[14] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMC of 13vPnC Cohort)/(GMC of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[15]
Parameter estimate	GMR
Point estimate	8.33
Confidence interval	
level	95 %
sides	2-sided
lower limit	6.15
upper limit	11.29

Notes:

[15] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Primary: Geometric Mean Titers (GMTs) of Pneumococcal Multiplex Opsonophagocytic Activity (MOPA) by Cohort

End point title	Geometric Mean Titers (GMTs) of Pneumococcal Multiplex Opsonophagocytic Activity (MOPA) by Cohort

End point description:

Approximately 5 mL of blood sample was collected within 24 hours of enrollment. Blood must have been drawn from peripheral veins (eg, arm, foot, or scalp veins). Serum levels of MOPA for each of the 13 pneumococcal serotypes (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F) were determined in all 13vPnC cohort subjects with adequate blood volume. In the Non-13vPnC cohort, a sample of subjects with adequate blood volume was selected, to be equal to the number of the 13vPnC Cohort included for MOPA testing. Titer was expressed as reciprocal of the highest serum dilution. Analysis population for this endpoint included all subjects who signed the informed consent document, met all inclusion/exclusion criteria, and had at least 1 immunogenicity assay value available for analysis. Overall number of subjects analyzed indicates the total number of subjects in this analysis population.

End point type	Primary

End point timeframe:

Day 1

End point values	13vPnC Cohort	Non-13vPnC Cohort		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	92[16]	184[17]		
Units: Titers				
geometric mean (confidence interval 95%)				
Serotype: 1 (n=61,69)	70.9 (40.8 to 123.3)	14.8 (9.2 to 24.0)		
Serotype: 3 (n=61,69)	272.8 (173.9 to 428.0)	30.1 (18.7 to 48.4)		
Serotype: 4 (n=61,69)	1148.4 (755.0 to 1746.6)	79.9 (38.6 to 165.3)		
Serotype: 5 (n=61,69)	326.5 (197.8 to 538.8)	18.1 (10.8 to 30.2)		
Serotype: 6A (n=61,69)	1825.9 (1077.4 to 3094.4)	53.9 (27.0 to 107.4)		
Serotype: 6B (n=61,69)	844.8 (489.7 to 1457.4)	60.1 (31.9 to 113.4)		
Serotype: 7F (n=61,69)	3791.4 (2495.7 to 5759.6)	223.2 (115.8 to 430.2)		
Serotype: 9V (n=61,69)	919.7 (559.9 to 1510.6)	47.6 (27.2 to 83.3)		
Serotype: 14 (n=61,69)	1387.9 (921.8 to 2089.8)	132.7 (66.9 to 263.1)		
Serotype: 18C (n=61,69)	404.2 (255.9 to 638.5)	33.3 (19.6 to 56.7)		
Serotype: 19A (n=61,69)	1046.6 (620.0 to 1766.6)	44.3 (25.1 to 77.9)		
Serotype: 19F (n=61,69)	554.2 (344.6 to 891.3)	31.4 (18.5 to 53.4)		
Serotype: 23F (n=61,69)	3634.9 (2281.4 to 5791.3)	81.8 (40.1 to 166.7)		

Notes:

[16] - Subjects with available data (n=X,X in category titles) were analyzed.

[17] - Subjects with available data (n=X,X in category titles) were analyzed.

Statistical analyses

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[18]
Parameter estimate	Geometric Mean Ratio (GMR)
Point estimate	4.78
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.32
upper limit	9.86

Notes:

[18] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[19]
Parameter estimate	GMR
Point estimate	9.06
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.72
upper limit	17.39

Notes:

[19] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort

Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[20]
Parameter estimate	GMR
Point estimate	14.37
Confidence interval	
level	95 %
sides	2-sided
lower limit	6.25
upper limit	33.05

Notes:

[20] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 5

Statistical analysis description:

GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[21]
Parameter estimate	GMR
Point estimate	18.03
Confidence interval	
level	95 %
sides	2-sided
lower limit	8.84
upper limit	36.8

Notes:

[21] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6A

Statistical analysis description:

GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[22]
Parameter estimate	GMR
Point estimate	33.88
Confidence interval	
level	95 %
sides	2-sided
lower limit	14.33
upper limit	80.13

Notes:

[22] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6B
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[23]
Parameter estimate	GMR
Point estimate	14.05
Confidence interval	
level	95 %
sides	2-sided
lower limit	6.07
upper limit	32.52

Notes:

[23] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[24]
Parameter estimate	GMR
Point estimate	16.99
Confidence interval	
level	95 %
sides	2-sided
lower limit	7.85
upper limit	36.76

Notes:

[24] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort

Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[25]
Parameter estimate	GMR
Point estimate	19.31
Confidence interval	
level	95 %
sides	2-sided
lower limit	9.13
upper limit	40.84

Notes:

[25] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 14

Statistical analysis description:

GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[26]
Parameter estimate	GMR
Point estimate	10.46
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.74
upper limit	23.1

Notes:

[26] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 18C

Statistical analysis description:

GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)

Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[27]
Parameter estimate	GMR
Point estimate	12.13
Confidence interval	
level	95 %
sides	2-sided
lower limit	6
upper limit	24.51

Notes:

[27] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[28]
Parameter estimate	GMR
Point estimate	23.65
Confidence interval	
level	95 %
sides	2-sided
lower limit	10.94
upper limit	51.1

Notes:

[28] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort
Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[29]
Parameter estimate	GMR
Point estimate	17.62
Confidence interval	
level	95 %
sides	2-sided
lower limit	8.65
upper limit	35.93

Notes:

[29] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMT of 13vPnC Cohort)/(GMT of Non-13vPnC Cohort)	
Comparison groups	13vPnC Cohort v Non-13vPnC Cohort

Number of subjects included in analysis	276
Analysis specification	Pre-specified
Analysis type	superiority[30]
Parameter estimate	GMR
Point estimate	44.46
Confidence interval	
level	95 %
sides	2-sided
lower limit	19.11
upper limit	103.43

Notes:

[30] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Primary: GMCs of Pneumococcal IgG by Cohort and Vaccine Type (VT) Carriage Status - Subgroup Analysis

End point title	GMCs of Pneumococcal IgG by Cohort and Vaccine Type (VT) Carriage Status - Subgroup Analysis

End point description:

Approximately 5 mL of blood sample was collected within 24 hours of enrollment. Blood must have been drawn from peripheral veins (eg, arm, foot, or scalp veins). Serum concentrations of anticapsular IgG were determined by ELISA for each of the 13 pneumococcal serotypes (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F) in all subjects with a collected blood sample. For each cohort, subjects were assigned to 2 subgroups: subject in whom a 13vPnC VT strain had been isolated from the respiratory tract, and subject from whom a 13vPnC VT strain had not been isolated from the respiratory tract (VT carrier versus without VT carrier). Analysis population for this endpoint included all subjects who signed the informed consent document, met all inclusion/exclusion criteria, and had at least 1 immunogenicity assay value available for analysis. Overall number of subjects analyzed indicates the total number of subjects in this analysis population.

End point type	Primary

End point timeframe:

Day 1

End point values	13vPnC Cohort: VT+ Subgroup	13vPnC Cohort: VT- or Sp- Subgroup	Non-13vPnC Cohort: VT+ Subgroup	Non-13vPnC Cohort: VT- or Sp- Subgroup
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	7[31]	79[32]	20[33]	140[34]
Units: µg/mL				
geometric mean (confidence interval 95%)				
Serotype: 1 (n=7,79,20,136)	0.81 (0.28 to 2.33)	1.69 (1.23 to 2.31)	0.08 (0.04 to 0.18)	0.12 (0.09 to 0.16)
Serotype: 3 (n=7,79,20,140)	0.32 (0.10 to 1.04)	0.44 (0.33 to 0.58)	0.05 (0.03 to 0.09)	0.07 (0.06 to 0.09)
Serotype: 4 (n=7,79,20,140)	0.97 (0.26 to 3.64)	1.43 (1.02 to 2.00)	0.05 (0.02 to 0.11)	0.07 (0.05 to 0.09)
Serotype: 5 (n=7,79,20,140)	1.45 (0.51 to 4.15)	1.77 (1.41 to 2.24)	0.58 (0.40 to 0.83)	0.72 (0.61 to 0.85)
Serotype: 6A (n=7,79,20,140)	1.78 (0.73 to 4.32)	2.59 (1.93 to 3.48)	0.34 (0.22 to 0.51)	0.36 (0.31 to 0.43)
Serotype: 6B (n=7,79,20,140)	1.94 (0.78 to 4.81)	2.60 (1.93 to 3.50)	0.51 (0.31 to 0.84)	0.33 (0.28 to 0.40)

Serotype: 7F (n=7,79,20,139)	0.83 (0.36 to 1.92)	1.97 (1.50 to 2.59)	0.14 (0.07 to 0.29)	0.19 (0.15 to 0.23)
Serotype: 9V (n=7,79,20,140)	0.97 (0.37 to 2.53)	1.21 (0.96 to 1.54)	0.22 (0.10 to 0.46)	0.30 (0.25 to 0.36)
Serotype: 14 (n=7,79,19,138)	3.29 (0.49 to 21.91)	4.96 (3.54 to 6.94)	0.04 (0.02 to 0.09)	0.08 (0.06 to 0.12)
Serotype: 18C (n=7,79,20,138)	0.65 (0.30 to 1.44)	1.08 (0.81 to 1.45)	0.04 (0.02 to 0.09)	0.06 (0.05 to 0.08)
Serotype: 19A (n=7,79,20,140)	4.69 (2.35 to 9.38)	3.02 (2.30 to 3.97)	0.58 (0.37 to 0.90)	0.74 (0.63 to 0.86)
Serotype: 19F (n=7,79,20,138)	5.80 (1.41 to 23.82)	3.22 (2.41 to 4.28)	0.38 (0.21 to 0.68)	0.33 (0.26 to 0.42)
Serotype: 23F (n=7,79,20,140)	1.04 (0.47 to 2.32)	2.23 (1.65 to 3.02)	0.25 (0.15 to 0.40)	0.23 (0.20 to 0.27)

Notes:

[31] - Subjects with available data (n=X,X,X,X in category titles) were analyzed.

[32] - Subjects with available data (n=X,X,X,X in category titles) were analyzed.

[33] - Subjects with available data (n=X,X,X,X in category titles) were analyzed.

[34] - Subjects with available data (n=X,X,X,X in category titles) were analyzed.

Statistical analyses

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description: GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[35]
Parameter estimate	Geometric Mean Ratio (GMR)
Point estimate	0.48
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.16
upper limit	1.42

Notes:

[35] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description: GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[36]
Parameter estimate	GMR
Point estimate	0.74

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.27
upper limit	1.98

Notes:

[36] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[37]
Parameter estimate	GMR
Point estimate	0.68
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.21
upper limit	2.19

Notes:

[37] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 5
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[38]
Parameter estimate	GMR
Point estimate	0.82
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.36
upper limit	1.86

Notes:

[38] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6A
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	

Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[39]
Parameter estimate	GMR
Point estimate	0.68
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.25
upper limit	1.89

Notes:

[39] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6B
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[40]
Parameter estimate	GMR
Point estimate	0.74
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.27
upper limit	2.07

Notes:

[40] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[41]
Parameter estimate	GMR
Point estimate	0.42
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.16
upper limit	1.09

Notes:

[41] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[42]
Parameter estimate	GMR
Point estimate	0.8
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.35
upper limit	1.81

Notes:

[42] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 14
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[43]
Parameter estimate	GMR
Point estimate	0.66
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.2
upper limit	2.24

Notes:

[43] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 18C
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup

Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[44]
Parameter estimate	GMR
Point estimate	0.6
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.22
upper limit	1.65

Notes:

[44] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[45]
Parameter estimate	GMR
Point estimate	1.55
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.61
upper limit	3.93

Notes:

[45] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[46]
Parameter estimate	GMR
Point estimate	1.8
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.65
upper limit	4.99

Notes:

[46] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[47]
Parameter estimate	GMR
Point estimate	0.65
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.31
upper limit	1.38

Notes:

[47] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[48]
Parameter estimate	GMR
Point estimate	0.47
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.17
upper limit	1.31

Notes:

[48] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[49]
Parameter estimate	GMR
Point estimate	0.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.4
upper limit	1.24

Notes:

[49] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[50]
Parameter estimate	GMR
Point estimate	0.73
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.33
upper limit	1.59

Notes:

[50] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 5
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[51]
Parameter estimate	GMR
Point estimate	0.8
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.52
upper limit	1.25

Notes:

[51] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6A
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[52]
Parameter estimate	GMR
Point estimate	0.93
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.57
upper limit	1.52

Notes:

[52] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6B
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[53]
Parameter estimate	GMR
Point estimate	1.53
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.95
upper limit	2.47

Notes:

[53] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[54]
Parameter estimate	GMR
Point estimate	0.73
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.34
upper limit	1.57

Notes:

[54] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[55]
Parameter estimate	GMR
Point estimate	0.74
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.41
upper limit	1.34

Notes:

[55] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 14
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[56]
Parameter estimate	GMR
Point estimate	0.44
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.16
upper limit	1.18

Notes:

[56] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 18C
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[57]
Parameter estimate	GMR
Point estimate	0.59
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.25
upper limit	1.4

Notes:

[57] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[58]
Parameter estimate	GMR
Point estimate	0.79
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.5
upper limit	1.23

Notes:

[58] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[59]
Parameter estimate	GMR
Point estimate	1.14
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.6
upper limit	2.18

Notes:

[59] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMC of VT+ Subgroup)/(GMC of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[60]
Parameter estimate	GMR
Point estimate	1.08
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.68
upper limit	1.72

Notes:

[60] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[61]
Parameter estimate	GMR
Point estimate	6.17
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.07
upper limit	18.42

Notes:

[61] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[62]
Parameter estimate	GMR
Point estimate	10.3
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.44
upper limit	43.49

Notes:

[62] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[63]
Parameter estimate	GMR
Point estimate	18.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.35
upper limit	80.37

Notes:

[63] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 5
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup

Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[64]
Parameter estimate	GMR
Point estimate	2.5
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.14
upper limit	5.52

Notes:

[64] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6A
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[65]
Parameter estimate	GMR
Point estimate	5.24
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.33
upper limit	11.8

Notes:

[65] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6B
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[66]
Parameter estimate	GMR
Point estimate	3.77
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.47
upper limit	9.65

Notes:

[66] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[67]
Parameter estimate	GMR
Point estimate	5.94
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.65
upper limit	21.36

Notes:

[67] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[68]
Parameter estimate	GMR
Point estimate	4.44
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.17
upper limit	16.87

Notes:

[68] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 14
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup

Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[69]
Parameter estimate	GMR
Point estimate	90.8
Confidence interval	
level	95 %
sides	2-sided
lower limit	16.67
upper limit	494.56

Notes:

[69] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 18C
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[70]
Parameter estimate	GMR
Point estimate	17.83
Confidence interval	
level	95 %
sides	2-sided
lower limit	3.79
upper limit	83.78

Notes:

[70] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[71]
Parameter estimate	GMR
Point estimate	8.11
Confidence interval	
level	95 %
sides	2-sided
lower limit	3.6
upper limit	18.3

Notes:

[71] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[72]
Parameter estimate	GMR
Point estimate	15.29
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.64
upper limit	50.35

Notes:

[72] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMC of 13vPnC VT+ Subgroup)/(GMC of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[73]
Parameter estimate	GMR
Point estimate	4.19
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.72
upper limit	10.25

Notes:

[73] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[74]
Parameter estimate	GMR
Point estimate	13.93
Confidence interval	
level	95 %
sides	2-sided
lower limit	9.14
upper limit	21.23

Notes:

[74] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[75]
Parameter estimate	GMR
Point estimate	5.86
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.17
upper limit	8.24

Notes:

[75] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[76]
Parameter estimate	GMR
Point estimate	19.97
Confidence interval	
level	95 %
sides	2-sided
lower limit	12.8
upper limit	31.15

Notes:

[76] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 5
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[77]
Parameter estimate	GMR
Point estimate	2.46
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.87
upper limit	3.24

Notes:

[77] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6A
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[78]
Parameter estimate	GMR
Point estimate	7.12
Confidence interval	
level	95 %
sides	2-sided
lower limit	5.05
upper limit	10.03

Notes:

[78] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 6B
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[79]
Parameter estimate	GMR
Point estimate	7.78
Confidence interval	
level	95 %
sides	2-sided
lower limit	5.54
upper limit	10.92

Notes:

[79] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[80]
Parameter estimate	GMR
Point estimate	10.4
Confidence interval	
level	95 %
sides	2-sided
lower limit	7.4
upper limit	14.61

Notes:

[80] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[81]
Parameter estimate	GMR
Point estimate	4.07
Confidence interval	
level	95 %
sides	2-sided
lower limit	3.04
upper limit	5.47

Notes:

[81] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 14
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[82]
Parameter estimate	GMR
Point estimate	60.32
Confidence interval	
level	95 %
sides	2-sided
lower limit	37.25
upper limit	97.67

Notes:

[82] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 18C
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[83]
Parameter estimate	GMR
Point estimate	17.35
Confidence interval	
level	95 %
sides	2-sided
lower limit	11.37
upper limit	26.47

Notes:

[83] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[84]
Parameter estimate	GMR
Point estimate	9.68
Confidence interval	
level	95 %
sides	2-sided
lower limit	6.65
upper limit	14.08

Notes:

[84] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[85]
Parameter estimate	GMR
Point estimate	4.11
Confidence interval	
level	95 %
sides	2-sided
lower limit	3
upper limit	5.62

Notes:

[85] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMC of 13vPnC VT- or Sp- Subgroup)/(GMC of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[86]
Parameter estimate	GMR
Point estimate	9.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	6.9
upper limit	13.64

Notes:

[86] - The 2-sided 95% CI on the GMRs (the GMC of 13vPnC Cohort to the GMC of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (IgG) using Student's t distribution.

Primary: GMTs of Pneumococcal MOPA by Cohort and VT Carriage Status - Subgroup Analysis

End point title	GMTs of Pneumococcal MOPA by Cohort and VT Carriage Status - Subgroup Analysis

End point description:

Blood sample (5mL) was collected from peripheral veins within 24 hours of enrollment. Serum levels of MOPA for each of the 13 pneumococcal serotypes (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, 23F) were determined in all 13vPnC cohort subjects with adequate blood volume. In the Non-13vPnC cohort, a sample of subjects with adequate blood volume was selected, to be equal to the number of the 13vPnC Cohort included for MOPA testing. For each cohort, subjects were assigned to 2 subgroups: subject in whom a 13vPnC VT strain had been isolated from the respiratory tract, and subject from whom a 13vPnC VT strain had not been isolated from the respiratory tract. Titer was expressed as reciprocal of the highest serum dilution. Analysis population included all subjects who signed the ICD, met all inclusion/exclusion criteria, and had at least 1 immunogenicity assay value available for analysis. Overall number of subjects analyzed indicates the number of subjects in this analysis population.

End point type	Primary

End point timeframe:

Day 1

End point values	13vPnC Cohort: VT+ Subgroup	13vPnC Cohort: VT- or Sp- Subgroup	Non-13vPnC Cohort: VT+ Subgroup	Non-13vPnC Cohort: VT- or Sp- Subgroup
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	7	79	20	140
Units: Titers				
geometric mean (confidence interval 95%)				
Serotype: 1 (n=5,52,9,54)	35.0 (2.2 to 547.7)	71.1 (38.4 to 131.4)	11.1 (4.1 to 30.5)	14.6 (8.4 to 25.4)
Serotype: 3 (n=5,52,9,54)	146.6 (35.6 to 602.7)	273.7 (163.5 to 458.2)	29.2 (14.0 to 61.0)	28.6 (16.3 to 50.1)
Serotype: 4 (n=5,52,9,54)	522.0 (165.0 to 1651.2)	1154.4 (726.1 to 1835.4)	38.1 (6.7 to 216.9)	86.1 (37.4 to 198.3)
Serotype: 5 (n=5,52,9,54)	539.5 (41.4 to 7035.5)	302.7 (173.2 to 529.0)	11.1 (3.6 to 34.7)	17.6 (9.9 to 31.4)
Serotype: 6A (n=5,52,9,54)	482.4 (31.8 to 7306.4)	2110.3 (1176.4 to 3785.6)	46.1 (5.8 to 366.1)	52.5 (23.7 to 116.2)
Serotype: 6B (n=5,52,9,54)	69.4 (1.4 to 3480.8)	1099.1 (639.5 to 1889.0)	102.7 (14.2 to 742.0)	53.9 (26.4 to 110.3)
Serotype: 7F (n=5,52,9,54)	4661.3 (2222.1 to 9777.9)	3837.7 (2367.8 to 6220.2)	442.5 (87.9 to 2228.3)	180.8 (84.0 to 389.4)
Serotype: 9V (n=5,52,9,54)	215.9 (6.7 to 6985.7)	1074.9 (637.7 to 1811.9)	65.0 (13.3 to 318.0)	45.3 (23.7 to 86.6)
Serotype: 14 (n=5,52,9,54)	578.9 (89.2 to 3755.8)	1617.3 (1046.6 to 2499.2)	289.1 (22.7 to 3682.3)	125.9 (59.7 to 265.4)
Serotype: 18C (n=5,52,9,54)	364.1 (83.5 to 1587.8)	443.2 (265.2 to 740.7)	22.3 (5.3 to 93.2)	34.4 (19.2 to 61.8)
Serotype: 19A (n=5,52,9,54)	1515.6 (296.4 to 7750.1)	1122.7 (622.0 to 2026.5)	62.7 (8.6 to 456.6)	41.6 (22.1 to 78.3)

Serotype: 19F (n=5,52,9,54)	1830.0 (240.5 to 13924.9)	472.7 (279.4 to 799.7)	19.3 (5.5 to 67.5)	30.4 (16.6 to 55.7)
Serotype: 23F (n=5,52,9,54)	1092.5 (140.0 to 8523.4)	4111.0 (2442.0 to 6920.7)	104.1 (14.5 to 746.9)	84.4 (37.3 to 190.9)

Statistical analyses

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[87]
Parameter estimate	GMR
Point estimate	0.49
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.06
upper limit	3.91

Notes:

[87] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[88]
Parameter estimate	GMR
Point estimate	0.54
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.1
upper limit	2.92

Notes:

[88] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	

Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[89]
Parameter estimate	GMR
Point estimate	0.45
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.1
upper limit	2.07

Notes:

[89] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 5
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[90]
Parameter estimate	GMR
Point estimate	1.78
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.27
upper limit	11.75

Notes:

[90] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6A
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[91]
Parameter estimate	GMR
Point estimate	0.23
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.03
upper limit	1.65

Notes:

[91] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6B
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[92]
Parameter estimate	GMR
Point estimate	0.06
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.01
upper limit	0.44

Notes:

[92] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 14
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[93]
Parameter estimate	GMR
Point estimate	0.36
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.08
upper limit	1.55

Notes:

[93] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup

Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[94]
Parameter estimate	GMR
Point estimate	0.2
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.03
upper limit	1.26

Notes:

[94] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[95]
Parameter estimate	GMR
Point estimate	1.21
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.56
upper limit	2.65

Notes:

[95] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 18C
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[96]
Parameter estimate	GMR
Point estimate	0.82
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.15
upper limit	4.47

Notes:

[96] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[97]
Parameter estimate	GMR
Point estimate	1.35
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.19
upper limit	9.44

Notes:

[97] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[98]
Parameter estimate	GMR
Point estimate	3.87
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.67
upper limit	22.42

Notes:

[98] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v 13vPnC Cohort: VT- or Sp-Subgroup

Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority[99]
Parameter estimate	GMR
Point estimate	0.27
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.05
upper limit	1.52

Notes:

[99] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[100]
Parameter estimate	GMR
Point estimate	1.02
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.42
upper limit	2.46

Notes:

[100] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[101]
Parameter estimate	GMR
Point estimate	0.76
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.19
upper limit	3.07

Notes:

[101] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[102]
Parameter estimate	GMR
Point estimate	0.44
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.05
upper limit	3.73

Notes:

[102] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[103]
Parameter estimate	GMR
Point estimate	0.44
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.05
upper limit	3.73

Notes:

[103] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 5
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[104]
Parameter estimate	GMR
Point estimate	0.63
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.15
upper limit	2.73

Notes:

[104] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6A

Statistical analysis description:

GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)

Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[105]
Parameter estimate	GMR
Point estimate	0.88
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.11
upper limit	6.99

Notes:

[105] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6B

Statistical analysis description:

GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)

Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[106]
Parameter estimate	GMR
Point estimate	1.9
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.29
upper limit	12.51

Notes:

[106] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[107]
Parameter estimate	GMR
Point estimate	1.43
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.27
upper limit	7.7

Notes:

[107] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[108]
Parameter estimate	GMR
Point estimate	2.45
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.34
upper limit	17.43

Notes:

[108] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 14
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[109]
Parameter estimate	GMR
Point estimate	2.3
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.3
upper limit	17.41

Notes:

[109] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 18C
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[110]
Parameter estimate	GMR
Point estimate	0.65
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.14
upper limit	2.97

Notes:

[110] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[111]
Parameter estimate	GMR
Point estimate	1.51
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.28
upper limit	8.21

Notes:

[111] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[112]
Parameter estimate	GMR
Point estimate	0.63
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.13
upper limit	2.97

Notes:

[112] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMT of VT+ Subgroup)/(GMT of VT- or Sp- Subgroup)	
Comparison groups	Non-13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	160
Analysis specification	Pre-specified
Analysis type	superiority[113]
Parameter estimate	GMR
Point estimate	1.23
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.15
upper limit	10.24

Notes:

[113] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup

Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[114]
Parameter estimate	GMR
Point estimate	5.02
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.45
upper limit	17.39

Notes:

[114] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[115]
Parameter estimate	GMR
Point estimate	3.15
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.41
upper limit	23.91

Notes:

[115] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[116]
Parameter estimate	GMR
Point estimate	13.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.32
upper limit	141.81

Notes:

[116] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 5
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[117]
Parameter estimate	GMR
Point estimate	48.41
Confidence interval	
level	95 %
sides	2-sided
lower limit	6.16
upper limit	380.54

Notes:

[117] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6A
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[118]
Parameter estimate	GMR
Point estimate	10.47
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.48
upper limit	229.1

Notes:

[118] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6B
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup

Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[119]
Parameter estimate	GMR
Point estimate	0.68
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.02
upper limit	19.83

Notes:

[119] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[120]
Parameter estimate	GMR
Point estimate	10.53
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.98
upper limit	55.96

Notes:

[120] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[121]
Parameter estimate	GMR
Point estimate	3.32
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.19
upper limit	56.82

Notes:

[121] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 14
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[122]
Parameter estimate	GMR
Point estimate	2
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.06
upper limit	63.12

Notes:

[122] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 18C
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[123]
Parameter estimate	GMR
Point estimate	16.31
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.15
upper limit	123.48

Notes:

[123] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup

Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[124]
Parameter estimate	GMR
Point estimate	24.16
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.59
upper limit	367.81

Notes:

[124] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[125]
Parameter estimate	GMR
Point estimate	95.06
Confidence interval	
level	95 %
sides	2-sided
lower limit	13.08
upper limit	691.01

Notes:

[125] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMT of 13vPnC VT+ Subgroup)/(GMT of non-13vPnC VT+ Subgroup)	
Comparison groups	13vPnC Cohort: VT+ Subgroup v Non-13vPnC Cohort: VT+ Subgroup
Number of subjects included in analysis	27
Analysis specification	Pre-specified
Analysis type	superiority[126]
Parameter estimate	GMR
Point estimate	10.49
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.64
upper limit	171.84

Notes:

[126] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 1
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[127]
Parameter estimate	GMR
Point estimate	4.86
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.15
upper limit	10.96

Notes:

[127] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 3
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[128]
Parameter estimate	GMR
Point estimate	9.57
Confidence interval	
level	95 %
sides	2-sided
lower limit	4.5
upper limit	20.36

Notes:

[128] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 5
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[129]
Parameter estimate	GMR
Point estimate	17.15
Confidence interval	
level	95 %
sides	2-sided
lower limit	7.76
upper limit	37.91

Notes:

[129] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 4
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[130]
Parameter estimate	GMR
Point estimate	13.4
Confidence interval	
level	95 %
sides	2-sided
lower limit	5.2
upper limit	34.51

Notes:

[130] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6A
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[131]
Parameter estimate	GMR
Point estimate	40.2
Confidence interval	
level	95 %
sides	2-sided
lower limit	15.16
upper limit	106.65

Notes:

[131] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 7F
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[132]
Parameter estimate	GMR
Point estimate	21.22
Confidence interval	
level	95 %
sides	2-sided
lower limit	8.65
upper limit	52.07

Notes:

[132] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 6B
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[133]
Parameter estimate	GMR
Point estimate	20.38
Confidence interval	
level	95 %
sides	2-sided
lower limit	8.39
upper limit	49.51

Notes:

[133] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 9V
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[134]
Parameter estimate	GMR
Point estimate	23.73
Confidence interval	
level	95 %
sides	2-sided
lower limit	10.39
upper limit	54.19

Notes:

[134] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 14

Statistical analysis description:

GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)

Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[135]
Parameter estimate	GMR
Point estimate	12.84
Confidence interval	
level	95 %
sides	2-sided
lower limit	5.46
upper limit	30.22

Notes:

[135] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 18C

Statistical analysis description:

GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)

Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[136]
Parameter estimate	GMR
Point estimate	12.88
Confidence interval	
level	95 %
sides	2-sided
lower limit	5.95
upper limit	27.88

Notes:

[136] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19F
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[137]
Parameter estimate	GMR
Point estimate	15.53
Confidence interval	
level	95 %
sides	2-sided
lower limit	7.02
upper limit	34.38

Notes:

[137] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 19A
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup
Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[138]
Parameter estimate	GMR
Point estimate	26.99
Confidence interval	
level	95 %
sides	2-sided
lower limit	11.46
upper limit	63.58

Notes:

[138] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Statistical analysis title	GMR for Serotype: 23F
Statistical analysis description:	
GMR=(GMT of 13vPnC VT- or Sp- Subgroup)/(GMT of non-13vPnC VT- or Sp- Subgroup)	
Comparison groups	13vPnC Cohort: VT- or Sp- Subgroup v Non-13vPnC Cohort: VT- or Sp- Subgroup

Number of subjects included in analysis	219
Analysis specification	Pre-specified
Analysis type	superiority[139]
Parameter estimate	GMR
Point estimate	48.73
Confidence interval	
level	95 %
sides	2-sided
lower limit	18.67
upper limit	127.16

Notes:

[139] - The 2-sided 95% CI on the GMRs (the GMT of 13vPnC Cohort to the GMT of Non-13vPnC Cohort) for all 13 serotypes are provided and those 95% CIs were constructed by back transformation of the CIs for the mean difference of the measures on the logarithmically transformed scale (MOPA) using Student' s t distribution.

Adverse events

Adverse events information[1]

Timeframe for reporting adverse events:

From the time of the blood draw or aspirate collection through and including 12 hours on Day 1

Adverse event reporting additional description:

Each AE was to be assessed to determine if it met the criteria for SAEs. If an SAE occurred, expedited reporting followed local and international regulations, as appropriate.

Assessment type	Non-systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	25.0

Reporting groups

Reporting group title	Non-13vPnC Cohort

Reporting group description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnC vaccination was confirmed as not received, and all other inclusion / exclusion criteria were met, this subject might be enrolled and assigned to the unvaccinated group. No vaccines administered during the study.

Reporting group title	13vPnC Cohort

Reporting group description:

The vaccination history of 13vPnC initially was obtained either from the subject's parent/caregiver; confirmation of 13vPnC receipt from vaccine book or image of vaccine book was required. If 13vPnc vaccination was confirmed as received, and all other inclusion/exclusion criteria were met, this subject was enrolled and assigned to the vaccinated group. No vaccines administered during the study.

Serious adverse events	Non-13vPnC Cohort	13vPnC Cohort	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 199 (0.00%)	0 / 101 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events			

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

Non-serious adverse events	Non-13vPnC Cohort	13vPnC Cohort	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 199 (0.00%)	0 / 101 (0.00%)	

Notes:

[1] - There are no non-serious adverse events recorded for these results. It is expected that there will be at least one non-serious adverse event reported.
Justification: There were no non-serious adverse events reported in >=5% subjects in this study.

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported