

Immunogenicity of a 25-Valent PCV Compared with PCV20 in Healthy Infants: Evaluating a Candidate to Improve Pneumococcal Coverage in a Phase 2 Trial

Late-Breaking Abstracts: Vaccinology

Session Date & Time: October 24, 2026, 10:30 – 11:45a

Laurence Flint, MD, MPH, MBA, FAAP²

Michael Smith,¹ Laurence Flint,² James Trammel,³ Yahong Peng,³ Jeffrey Quiñones González,⁴ Martin Yudovich,⁵ Jelena Drozd,³ Ryan Newton,⁶ Peter C. Giardina,² Isis Kanevsky,² Julie Skinner,³ Ksenia Krylova,² Charu Sabharwal,² Iona Munjal², Annaliesa Anderson,² Alejandra Gurtman²

¹Division of Pediatric Infectious Diseases and Duke Vaccine and Trials Unit, Duke University, Durham, NC, USA ²Pfizer Vaccines, Pfizer Inc, Pearl River, NY, USA ³Pfizer Vaccines, Pfizer Inc, Collegeville, PA, USA ⁴Clinical Research Puerto Rico, Guayama, Puerto Rico ⁵Mercury Clinical Research, Houston, TX, USA Vaccines ⁶Pfizer Ltd; Marlow, UK

Disclosure

☐	No, nothing to disclose
☒	Yes, please specify:

Company Name	Honoraria/ Expenses	Consulting/ Advisory Board	Funded Research	Royalties/ Patent	Stock Options	Ownership/ Equity Position	Employee	Other (please specify)
Pfizer Inc.			X		X		X	

Pneumococcal Disease Represents a Family of Infections

*Caused by the bacterium *S. pneumoniae*, of which there are >100 distinct serotypes*

Streptococcus pneumoniae

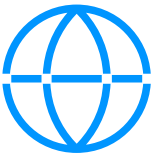


Encapsulated bacterium that is the **leading cause** of meningitis, sepsis, and pneumonia

Several Presentations of Pneumococcal Disease Defined by the Infected Anatomical Area¹

 Bacteremia (Bloodstream)	 Meningitis (Brain / Spinal Cord)
 Pneumonia (Lungs)	 Otitis Media (Ears)

Significant Pneumococcal Disease Burden



>300K

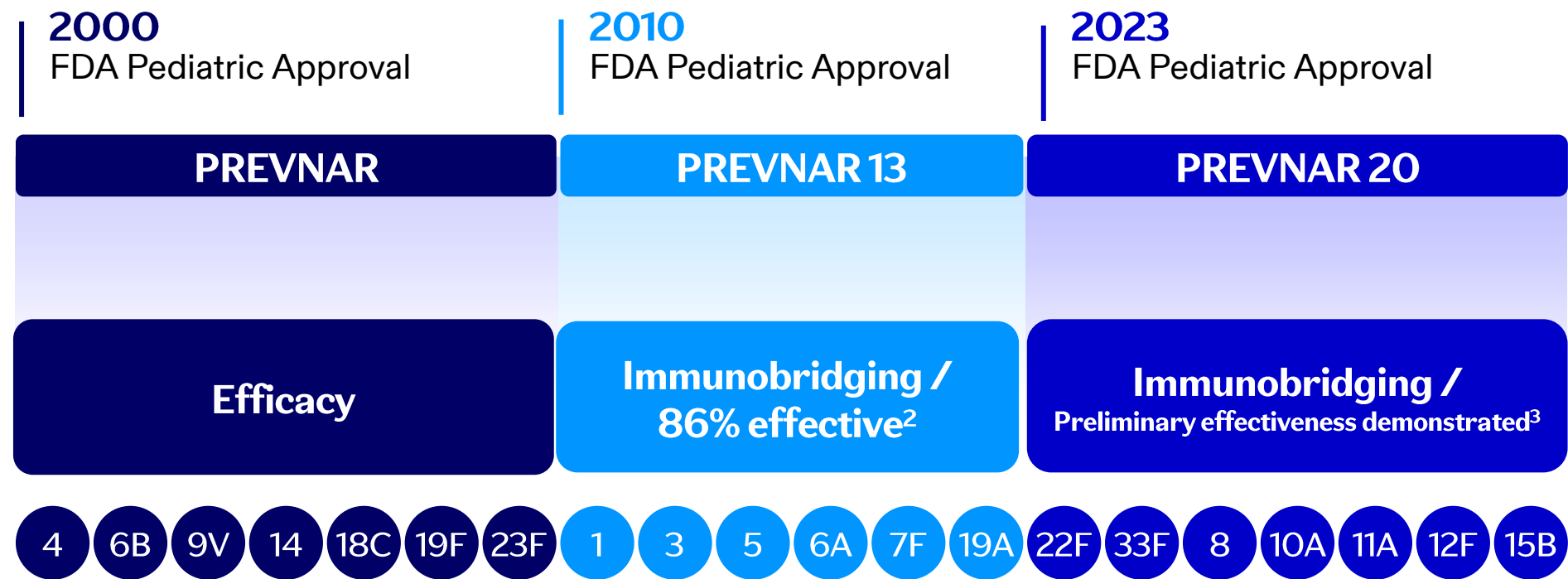
Annual global pneumococcal disease deaths in children under 5 years of age²

Invasive Infections Tend to be the Most Serious Cases of Pneumococcal Disease³

1. [About Pneumococcal Disease | Pneumococcal | CDC](#); 2. [Pneumococcal Disease Surveillance and Trends | Pneumococcal | CDC](#);

PREVNAR: >25 Years of Disease Prevention

PREVNAR led to a **95% reduction**¹ in disease burden for children. **>3 billion doses** distributed globally



PCV Expertise Extends to Manufacturing, with Each PREVNAR 20 Dose Involving

>650
Raw materials

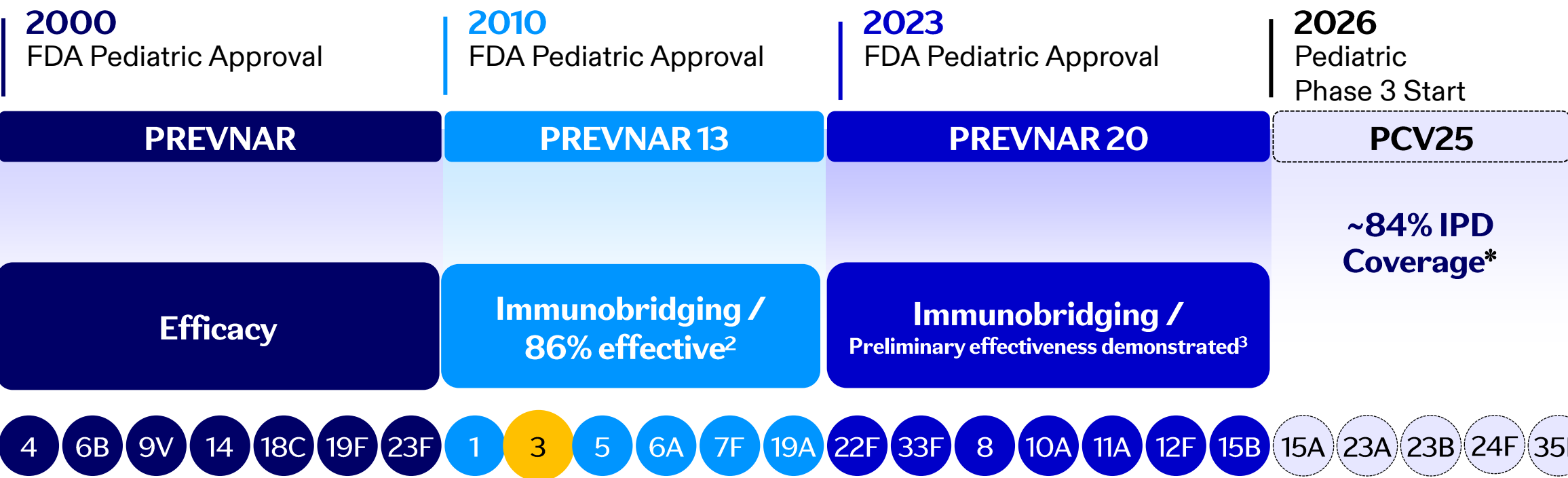
>950
Manufacturing steps

>1,200
Quality tests

1. U.S. Centers for Disease Control and Prevention (accessed March 18, 2026), data from 1998 through 2021. 2. Moore et al The Lancet Respiratory Medicine, 2016; 3 Mugal SG, et al. Poster, ISPPD-14, Copenhagen, 17–21 May 2026.

PREVNAR: >25 Years of Disease Prevention

PREVNAR led to a 95% reduction¹ in disease burden for children. >3 billion doses distributed globally



PCV Expertise Extends to Manufacturing, with Each PREVNAR 20 Dose Involving

>650
Raw materials

>950
Manufacturing steps

>1,200
Quality tests

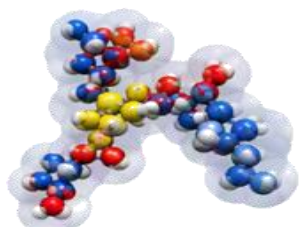
*PCV25 is an investigational vaccine designed to provide protection against *Streptococcus pneumoniae* serotypes that collectively cause approximately 84% of invasive pneumococcal infections in U.S. children less than five years old (including cross protection from serotypes not directly targeted by the vaccine; 2020-2024 average, U.S. CDC Active Bacterial Core surveillance); IPD: Invasive pneumococcal disease; 1. U.S. Centers for Disease Control and Prevention (accessed March 18, 2026), data from 1998 through 2021.. 2. Moore et al The Lancet Respiratory Medicine, 2016 3 Mugel SG, et al. Poster, ISPPD-14, Copenhagen, 17-21 May 2026. 2

Pneumococcal Serotype 3 (Pn3) Long term Protection is Suboptimal

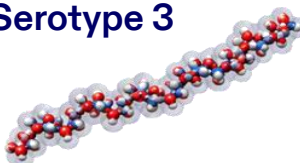
Enhancements are needed to accommodate Pn3 differences

Despite Inclusion in Vaccines, Pn3 is One of the Largest Remaining Contributors of Disease

Common polysaccharides



Serotype 3



Antigen

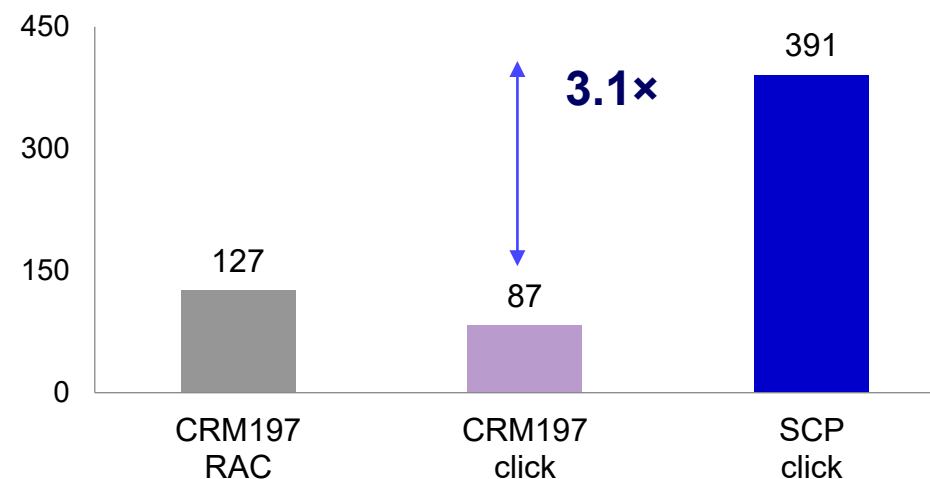
Linker

(conjugation chemistry)

Carrier Protein

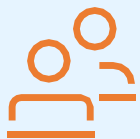
Change to Chemistry AND Carrier Improved preclinical responses¹

Nonhuman Primates
Post-dose 3 OPA GMT



1. Manuscript under review; **Conjugation chemistry** [RAC= reductive amination (RAC); click chemistry]; **Carrier protein**: CRM197, streptococcal C5a peptidase (SCP).

PCV25 Phase 2 Study Design



Participants

Healthy
Full-Term Infants
N=401



Schedule

3+1
2, 4, 6, 12-15
months



Dose

PCV25: PCV20

Primary Objective

Safety and
tolerability among
participants
receiving ≥ 1 vaccine
dose.

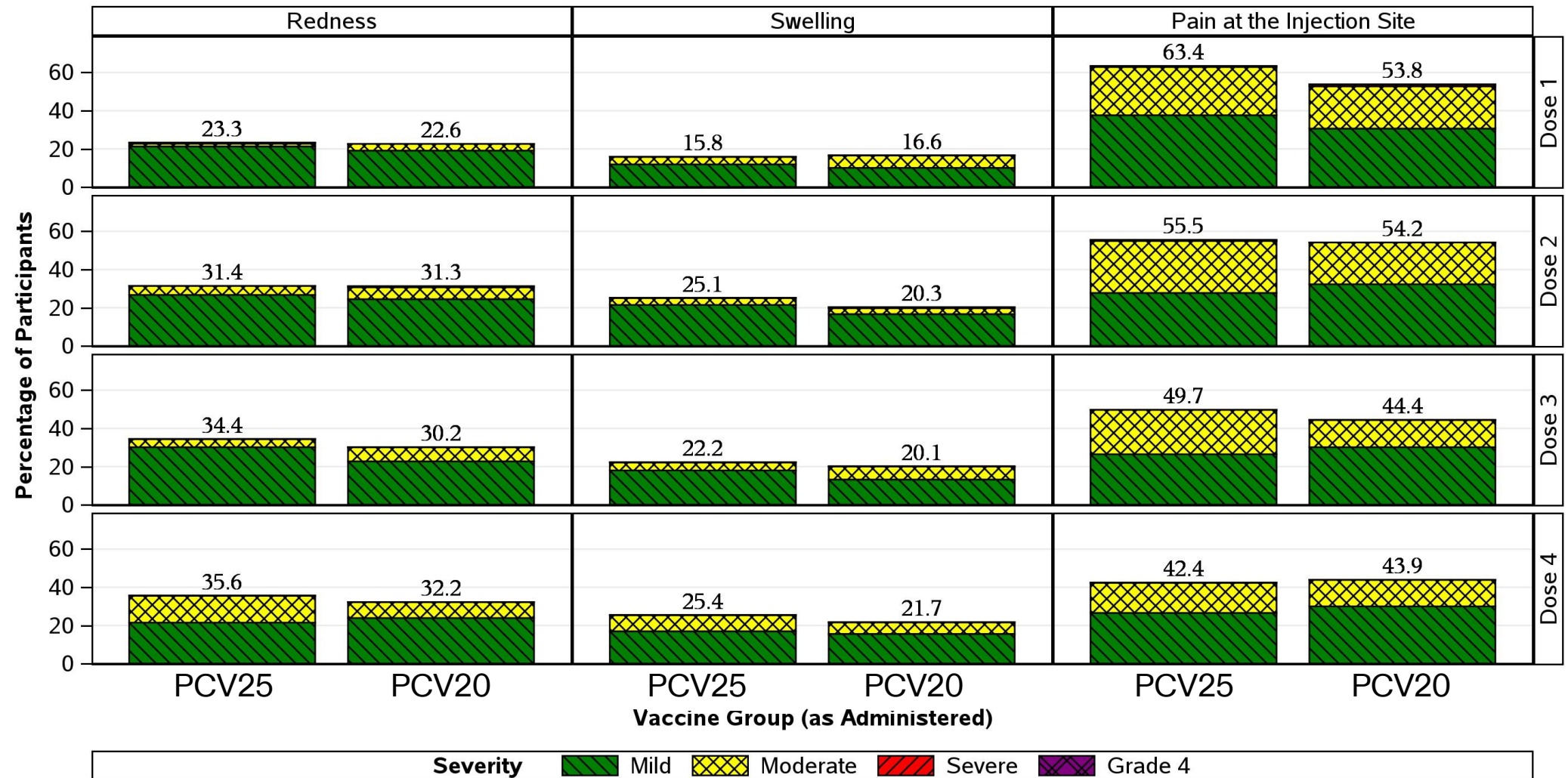
**The secondary objective evaluated PCV25 immunogenicity
1 month after Dose 3 and 1 month after Dose 4 compared to PCV20.**

Serotype-specific IgG responses

Functional Antibodies

Boosting

Local Reactions Doses 1-4: Mostly Mild to Moderate; No safety concerns

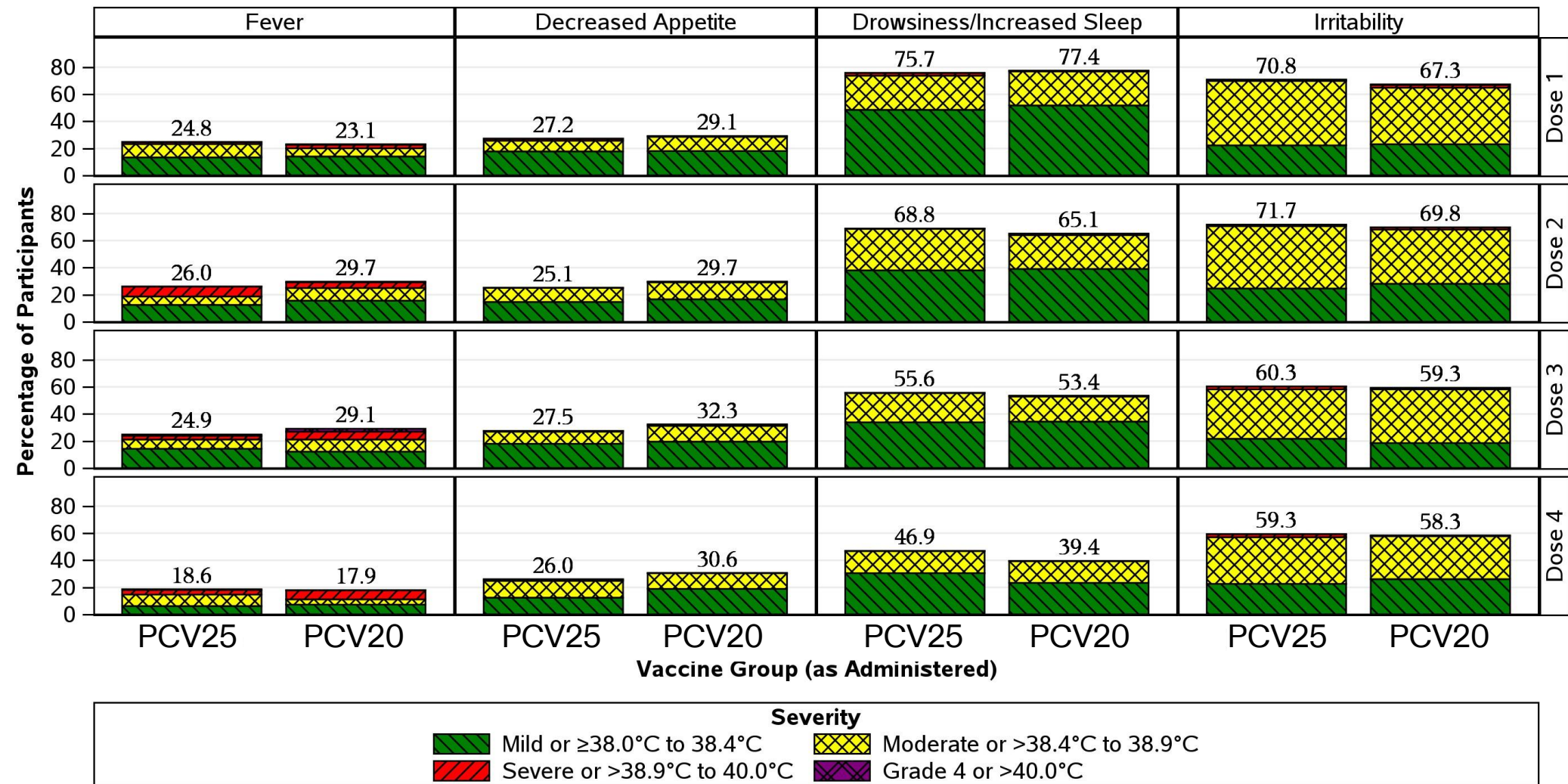


Redness and swelling severity definition: Mild= ≥ 0.5 -2cm, Moderate= >2-7 cm; Severe= >7cm; Grade 4= necrosis (or exfoliative dermatitis for redness only)

Pain at injection site severity definition: Mild=hurts with gentle touch; Moderate=cries with gentle touch; Severe=limitation of limb movement; Grade 4=ER visit or hospitalization

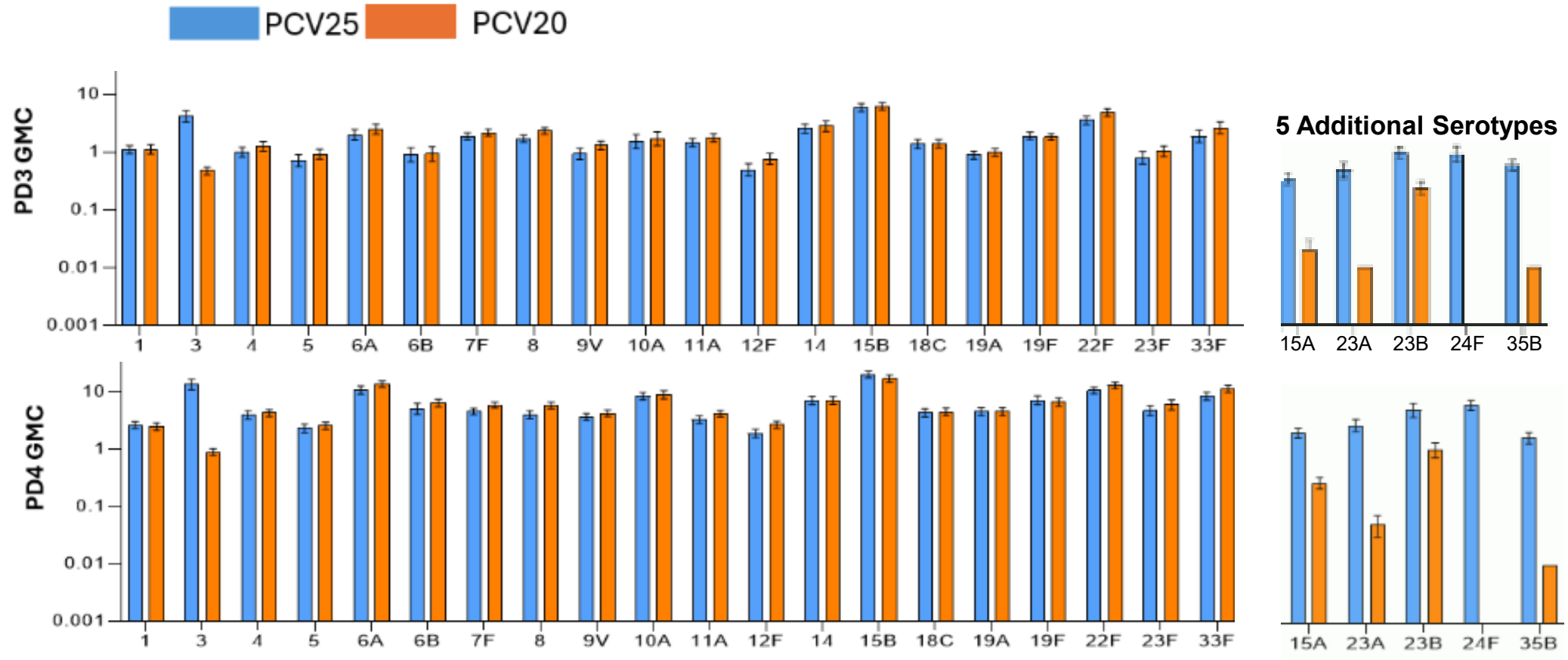
Systemic Events Doses 1-4: Mostly Mild to Moderate

Adverse events were balanced between the 2 groups; No safety concerns



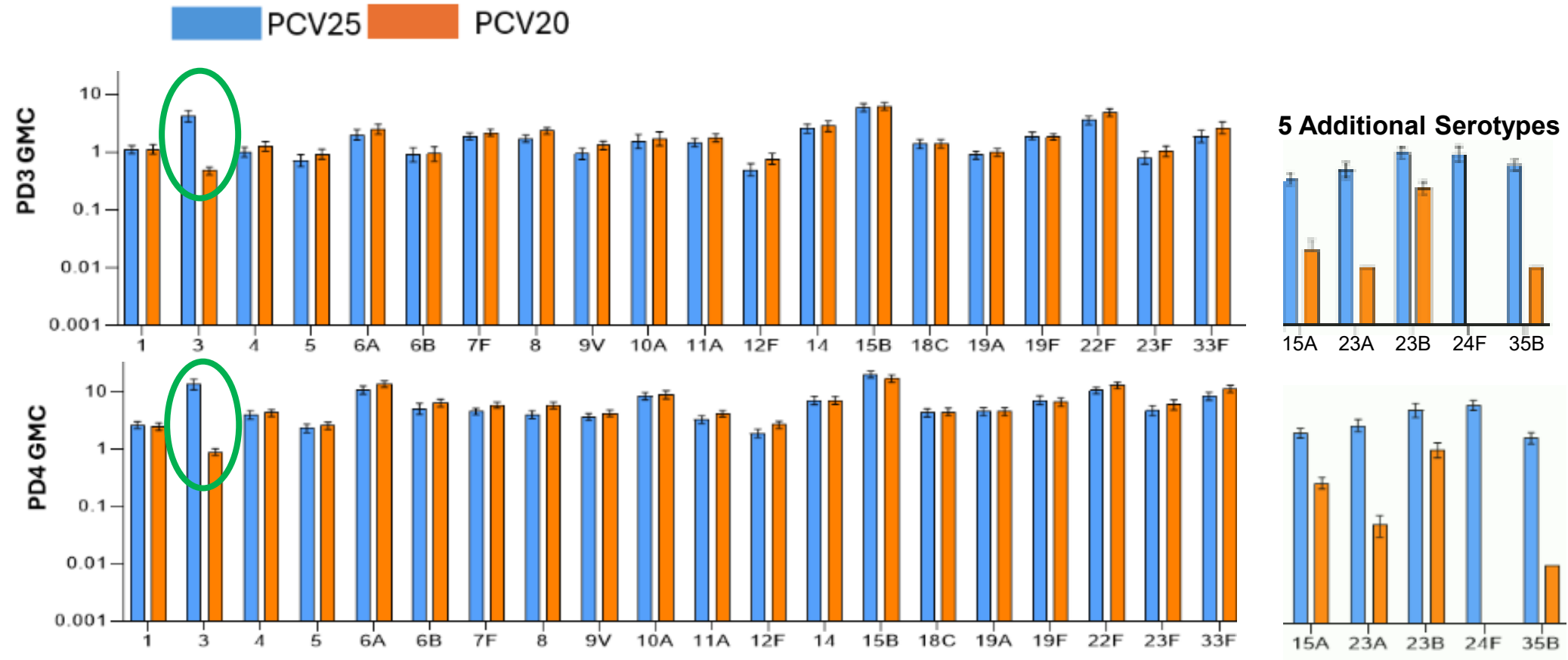
Decreased appetite severity definition: Mild=decreased interest in eating; Moderate=decreased oral intake; Severe=refusal to feed; Grade 4=ER visit or hospitalization
Drowsiness severity definition: Mild=increased/prolonged sleeping; Moderate: slightly subdued; Severe=Disabling/not interested in daily activity; Grade 4=ER visit or hospitalization
Irritability severity definition: Mild=easily consolable; Moderate=requires increased attention; Severe=inconsolable; Grade 4=ER visit or hospitalization

IgG Geometric Mean Concentration (GMC) Post Dose 3 and Post Dose 4 Data: Supported Advancing the PCV25 Program to Phase 3



Data are from one month after dose 3 and 4 for the evaluable immunogenicity population of clinical trial NCT06524414. The 20vPnC serotypes were measured in weight-based units ($\mu\text{g/mL}$); the 5plex direct Luminex immunoassay for the 5 additional serotypes; 15A, 23A, 23B, 24F, and 35B was qualified using a nonhuman primate reference standard in uncalibrated arbitrary units (U/mL) and cannot compare the responses to the 20 shared serotypes.

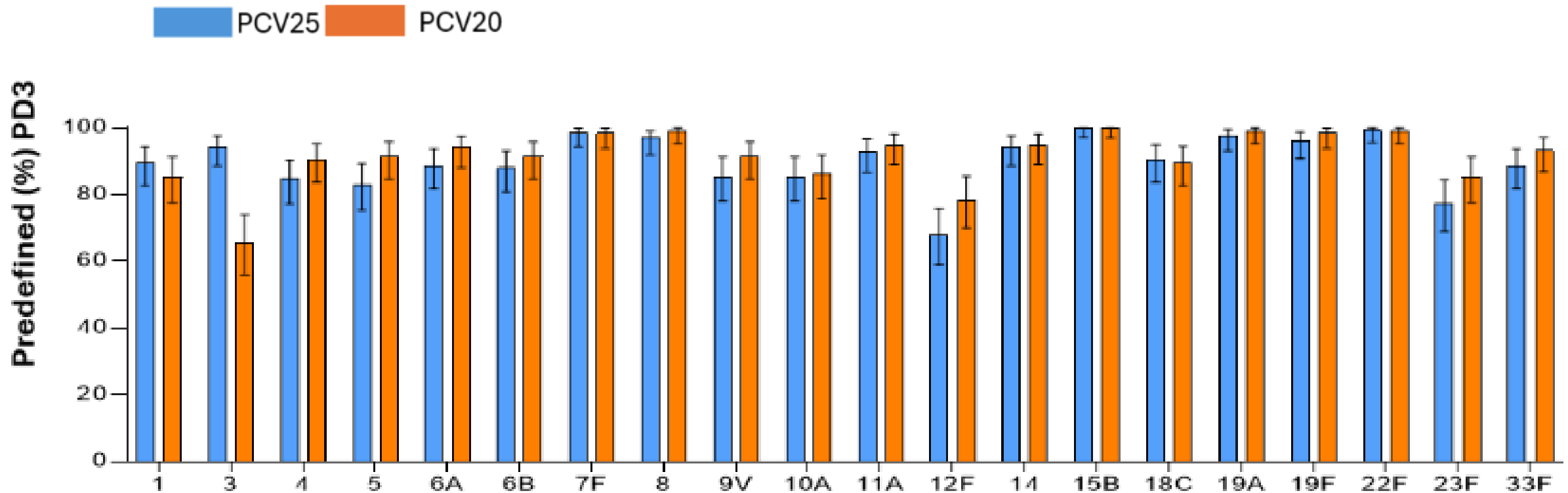
IgG Geometric Mean Concentration (GMC) Post Dose 3 and Post Dose 4 Data: Supported Advancing the PCV25 Program to Phase 3



Data are from one month after dose 3 and 4 for the evaluable immunogenicity population of clinical trial NCT06524414. The 20vPnC serotypes were measured in weight-based units ($\mu\text{g/mL}$); the 5plex direct Luminex immunoassay for the 5 additional serotypes; 15A, 23A, 23B, 24F, and 35B was qualified using a nonhuman primate reference standard in uncalibrated arbitrary units (U/mL) and cannot compare the responses to the 20 shared serotypes.

IgG Post Dose 3 Data

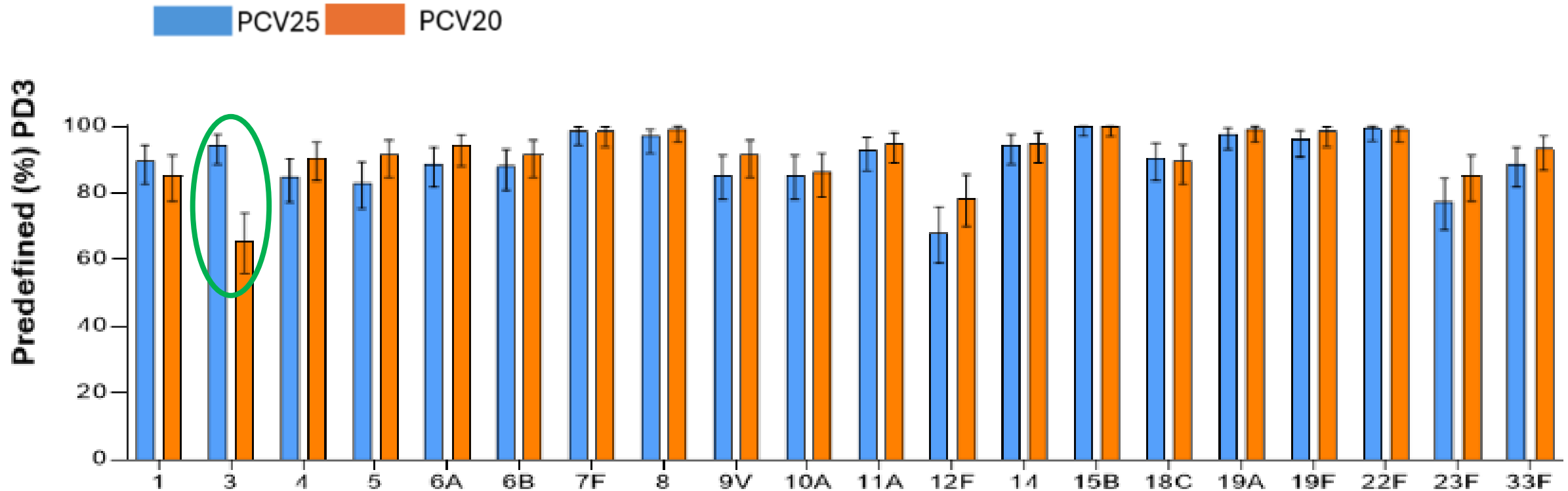
Supported Advancing the PCV25 Program to Phase 3



Shared PCV20 serotypes, data for PCV25's five distinct serotypes not shown. Data are from one month after dose 3 for the dose 3 evaluable immunogenicity population of clinical trial NCT06524414. For all serotypes except 5, 6B, and 19A the predefined threshold cutoff was 0.35 µg/mL. For serotypes 5, 6B, and 19A the predefined threshold cutoffs were 0.23 µg/mL, 0.10 µg/mL, and 0.12 µg/mL;

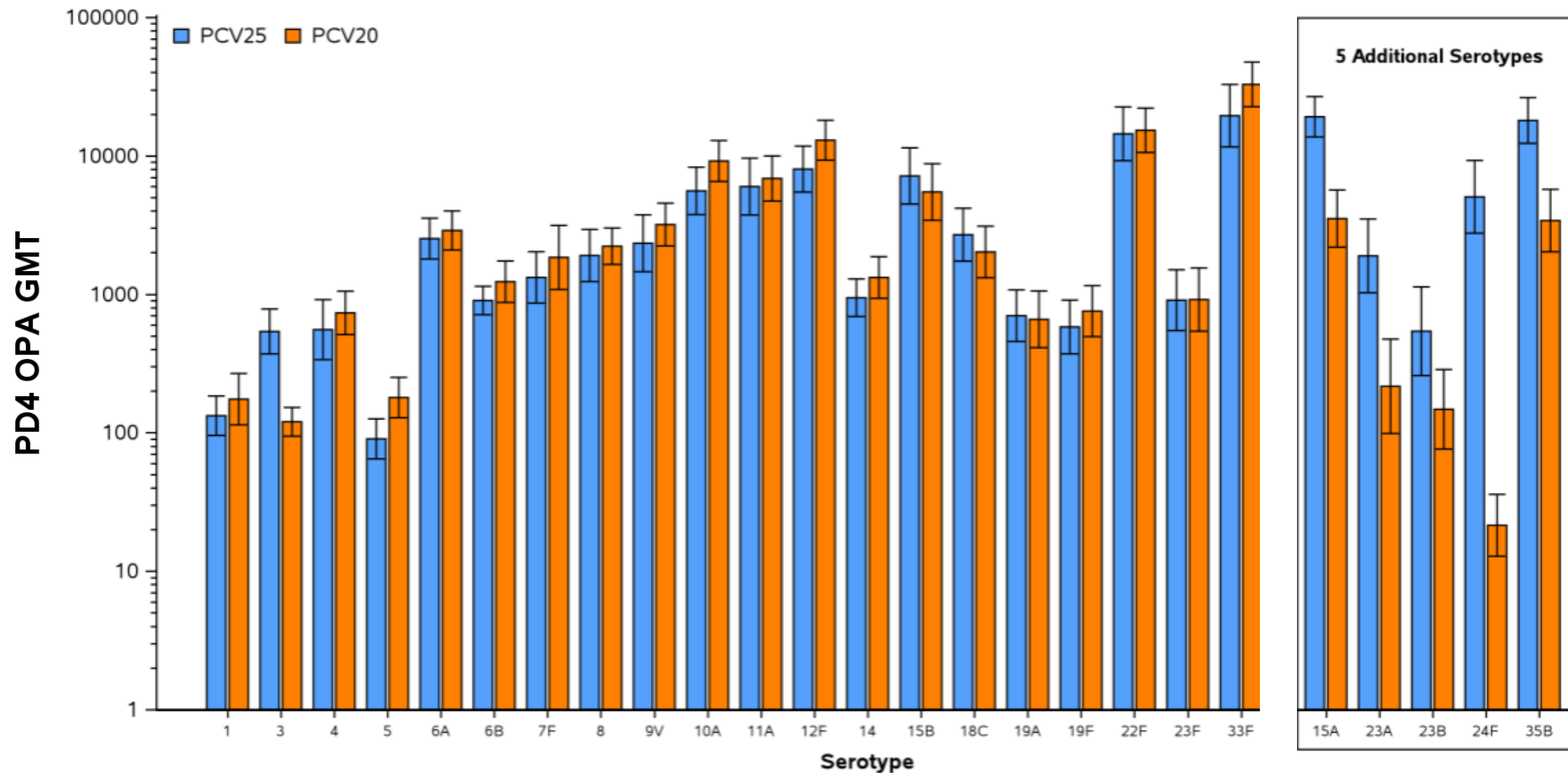
IgG Post Dose 3 Data

Supported Advancing the PCV25 Program to Phase 3



Shared PCV20 serotypes, data for PCV25's five distinct serotypes not shown. Data are from one month after dose 3 for the dose 3 evaluable immunogenicity population of clinical trial NCT06524414. For all serotypes except 5, 6B, and 19A the predefined threshold cutoff was 0.35 µg/mL. For serotypes 5, 6B, and 19A the predefined threshold cutoffs were 0.23 µg/mL, 0.10 µg/mL, and 0.12 µg/mL;

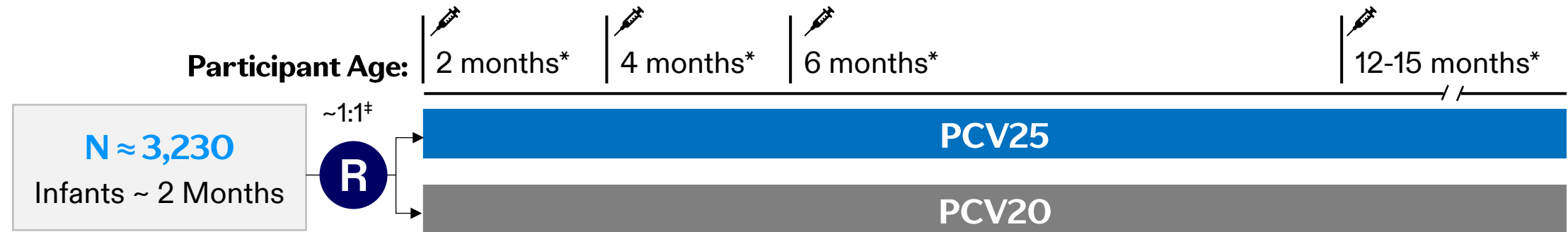
OPA Geometric Mean Titters (GMT) Post Dose 4 Supported Advancing the PCV25 Program to Phase 3



Data are from one month after dose 4 for the dose 4 evaluable immunogenicity population of clinical trial NCT06524414.

PCV25 Ph 3 Pediatrics Program Ongoing, Planned Submission in 2029

Safety and Immunogenicity Study: Anticipated Primary Completion Date in 2Q 2029



Co-primary objectives

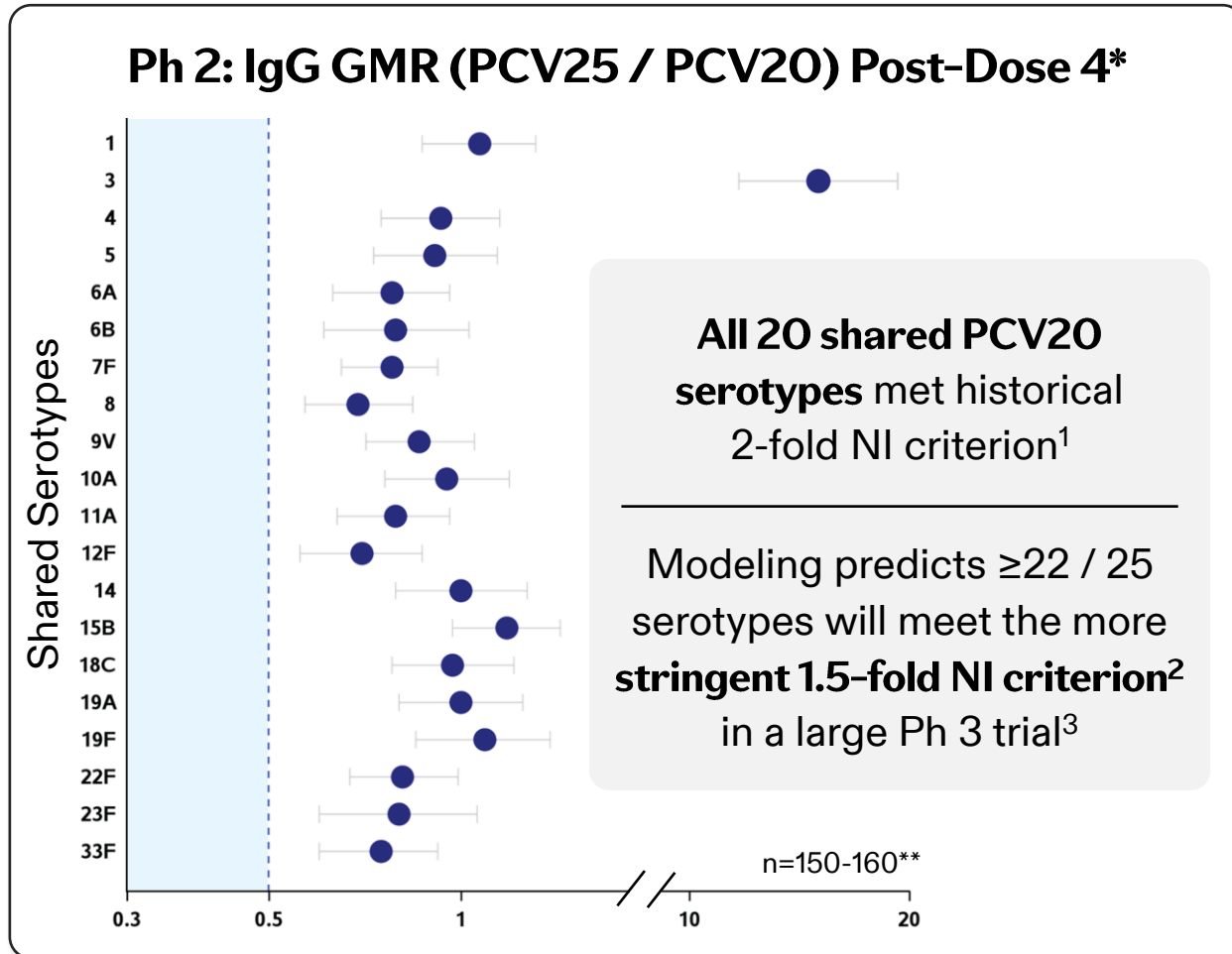
Non-inferiority based on serotype specific IgG GMRs one-month post-dose 4 (1.5-fold NI margin)¹

Non-inferiority for % with serotype specific predefined IgG concentrations one-month post-dose 3 (10% NI margin)²

Pivotal program also includes three additional Phase 3 trials: A safety study³, a catch-up study for children not fully vaccinated in infancy⁴, and a lot consistency study (fully enrolled) to demonstrate manufacturing readiness⁵

*Participant age at each dose shown is for participants in Group 1 (n≈3000), who will receive a dose of PCV25 or PCV20 at 2, 4, 6, and 12 to 15 months of age. Participants in Group 2 (n≈ 140) and Group 3 (n≈90) will receive a dose of PCV25 or PCV20 at 2 to 6, 3 to 8, 4 to 10, and 12 to 15 months of age. For more information about the trial see clinicaltrials.gov: NCT07629440; *Participants in Group 1 (n≈3000) and Group 2 (n≈ 140) will be randomized 1 : 1. Participants in Group 3 (n≈90) will be randomized 1 : 1 : 1 to receive either PCV25 into the left thigh muscle, PCV25 under the skin of the left thigh, or PCV20 into the left thigh muscle. For more information about the trial see clinicaltrials.gov: NCT07629440; **1.** Defined as the lower bound of the 95% confidence interval for IgG GMR (PCV25 / PCV20) being greater than 0.667 **2.** Defined as the lower-bound of the 95% confidence interval for the difference of percentages (PCV25 – PCV20) being greater than -10%; **3.** For more information see clinicaltrials.gov: NCT07573462; **4.** For more information see clinicaltrials.gov: NCT07660198; **5.** Lower bound of the 95% confidence interval for OPA geometric mean ratios (GMR) between each pair of PG4 vaccine lots being greater than 0.667. For more information see clinicaltrials.gov: NCT07794748; **GMR:** Geometric mean ratio; **NI:** Non-inferiority; **Ph:** Phase

PCV25 Phase 2 Data Support Potential to Protect Against All Targeted Serotypes with Enhanced Protection Against Serotype 3



Phase 2 Post-Dose 3 Predefined IgG: Key Takeaways

Point estimates for the difference in % participants with predefined IgGs for PCV25 vs. PCV20 were greater than -10% for **19 out of 20 shared serotypes**

Regulatory review for PCVs is based on a totality of evidence approach

*Figure focused on shared PCV20 serotypes, data for PCV25's five distinct serotypes not shown. Data are from one month after dose 4 for the dose 4 evaluable immunogenicity population. Error bars represent 95% confidence intervals; **Represents the range across serotypes in each vaccine group for the number of participants with valid assay results in the evaluable immunogenicity population. **1.** Defined as the lower-bound of the 95% confidence interval being greater than 0.5; **2.** Defined as the lower-bound of the 95% confidence interval being greater than 0.667; **3.** Actual Phase 3 clinical trial results may differ from expectations based on Phase 2 data; **GMR:** Geometric mean ratio; **NI:** Non-inferiority; **PCV:** Pneumococcal conjugate vaccine; **Ph:** Phase

Conclusion

~3B Doses

**Building on Established
PCV Safety and
Effectiveness**

**Strong platform for
continued expansion of
disease coverage**

25 serotypes

**Broad serotype
coverage**

**Enhanced Spn3
immunogenicity**

Phase 3

**Phase 2 Data Support
Progression to Phase 3**

**Powered to
Demonstrate NI**

Built on established PREVNAR experience. Broad serotype coverage with enhanced Spn3 protection. Data support progression to Phase 3.

PCV25 is investigational; safety and efficacy have not been established. Cross-trial comparisons do not establish clinical superiority. IPD, invasive pneumococcal disease; Spn3, serotype 3. NI: Non-inferiority;

Acknowledgments

Study participants NCT06524414

Pfizer colleagues

Site Staff and Investigators

Submission ID: 2486835

Presenting author contact information:

laurence.flint@pfizer.com



The background features a large, abstract geometric shape composed of several overlapping triangles and polygons. The colors are various shades of blue, ranging from a deep navy blue to a very light, almost white blue, creating a sense of depth and movement. The shape is positioned on the right side of the frame, leaving the left side mostly white.

Thank You