



Investor Science Event

Getting ahead of respiratory syncytial virus disease in older adults

IDWeek 2022, 19 - 23, October 2022, Washington, DC

Conference call and webcast for investors and analysts

Cautionary statement regarding forward-looking statements

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A number of adjusted measures are used to report the performance of our business, which are non-IFRS measures. These measures are defined and reconciliations to the nearest IFRS measure are available in our second quarter 2022 earnings release and Annual Report on Form 20-F for FY 2021.

All outlooks, ambitions, and considerations should be read together with pages 5-7 of the stock-exchange announcement relating to an update to investors dated 23 June 2021, paragraph 19 of Part 7 of the Circular to shareholders relating to the demerger of Haleon plc dated 1 June 2022 and the Guidance, assumptions and cautionary statements in the Q2 2022 earnings release.

Basis of preparation: GSK satisfied the formal criteria according to IFRS 5 for treating Consumer Healthcare as a 'Discontinued operation' effective from 30 June 2022. The amounts presented in this presentation for continuing operations and Adjusted results excludes the Consumer Healthcare business discontinued operation. Comparative figures have been restated on a consistent basis. Earnings per share, Adjusted earnings per share and Dividends per share have been adjusted to reflect the GSK Share Consolidation on 18 July 2022.

Speakers



Dr Tony Wood
Chief Scientific Officer



Dr Phil Dormitzer
SVP, Global Head,
Vaccines R&D



Dr Michael G Ison
Professor of Medicine and
Surgery Northwestern
Medicine



Roger Connor
President, Vaccines and
Global Health



Luke Miels
Chief Commercial Officer

Why we're here

Agenda

01

Innovation leadership in vaccines

Dr Tony Wood

02

Prevention of RSV disease in older adults

Dr Phil Dormitzer

03

AReSVi-006 phase III results and potential impact

Dr Michael Ison

04

Commercial opportunity

Roger Connor, Luke Miels

Q&A

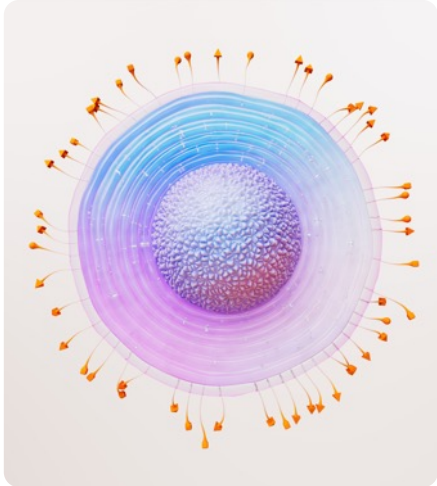


Innovation leadership in vaccines

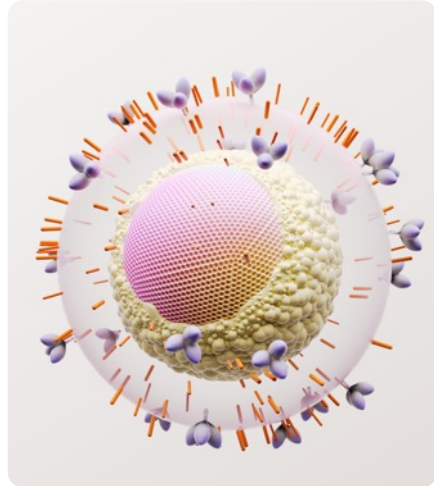
Dr Tony Wood, Chief Scientific Officer

A new biopharma company

Uniting science, technology, and talent to get ahead of disease together



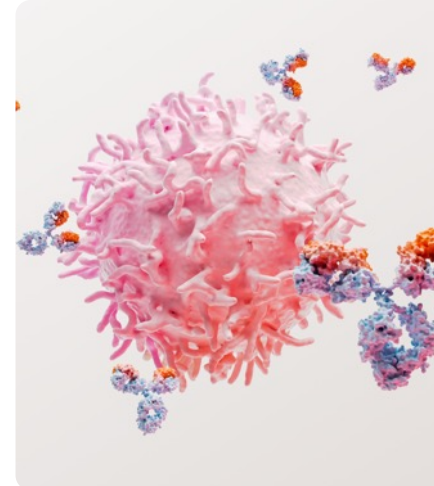
**Infectious
Diseases**



HIV



Oncology



**Immunology
/ Respiratory**

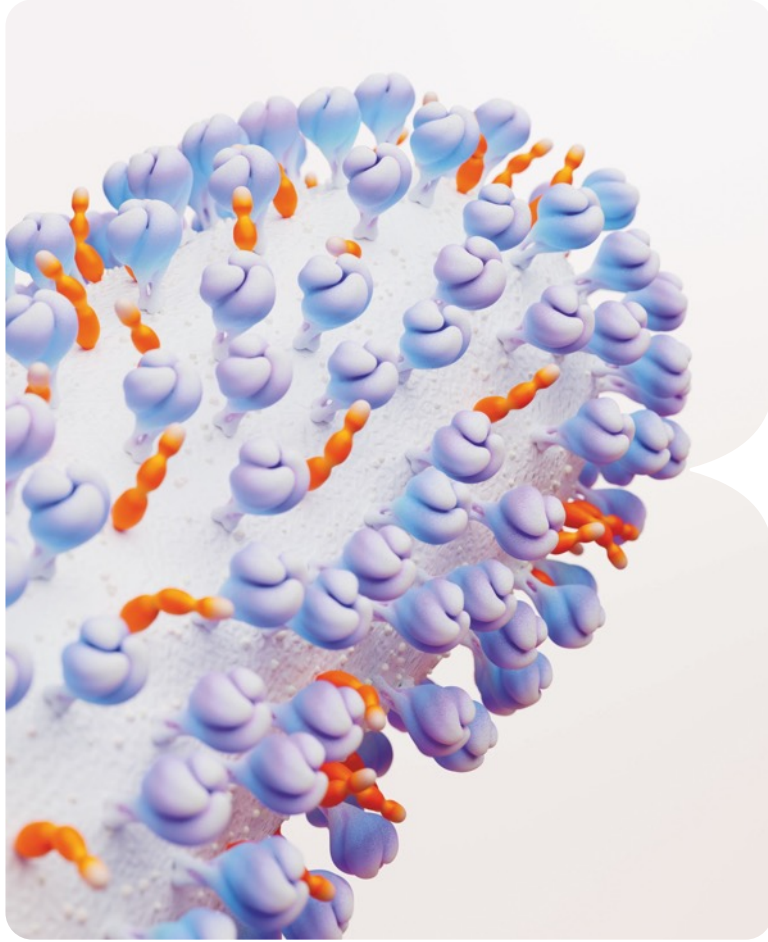


**Opportunity
Driven***

*Includes high-potential late-stage pipeline assets and internally/externally sourced assets consistent with R&D focus on the science of the immune system and human genetics.

Innovation in vaccines

IDWeek 2022, 19-23 October 2022, Washington, DC



1. Respiratory syncytial virus.

Potential best-in-class clinical profile for novel RSV¹ vaccine candidate in older adults

- 94.1% reduction in severe RSV disease in older adults
- 82.6% overall vaccine efficacy in older adults
- Favourable safety profile
- Co-administration of RSV vaccine candidate with influenza vaccines in older adults

Extending vaccines leadership position in shingles prevention

- *Shingrix* duration of protection against shingles extends to 10 years

RSV data: the highlight of strong year of vaccines R&D delivery

Exceptional

and consistent phase III results for RSV¹ vaccine candidate in older adults

Regulatory

approvals achieved including *Priorix* for MMR² (US); *Boostrix* maternal³ (US), *Menveo* liquid (US)

Advanced

novel vaccine candidates to FTIH including mRNA flu; mRNA COVID; Therapeutic HSV⁴; HPV-9

Affinivax

acquisition strengthens portfolio, adds key MAPS⁵ technology

Significant

news flow expected over balance of 2022 including late-stage readout on MenABCWY

FTIH: first time in human

1. Respiratory syncytial virus, 2. Measles, mumps, and rubella, 3. *Boostrix* was approved for immunisation during pregnancy for the prevention of whooping cough in new-born infants 4. Herpes Simplex Virus, 5. Multiple Antigen Presenting System, a trademark of Affinivax, Inc.

RSV programme leveraged unique vaccines R&D capabilities

Focus on science of immune system to both treat and prevent disease

- Leadership in infectious diseases
- One capital allocation approach
- One Development organisation
- Broadest suite of platform technologies



Advanced technology platforms are central to our R&D approach

- Proprietary adjuvanted RSV vaccine candidate, building on *Shingrix* heritage
- Excellence in clinical trial design and execution based on infectious disease leadership and capabilities
- Potential best-in-class phase III data for RSV vaccine candidate in older adults



Prevention of RSV in older adults

Dr Phil Dormitzer, Senior Vice President and Global Head, Vaccines R&D

Significant unmet medical need and disease burden

Currently, no vaccine or specific treatment for adults

>1 billion aged 60+ at risk of annual exposure to RSV

- Common contagious virus
- Older adults and those with underlying medical conditions at increased health risk
- Can exacerbate medical conditions such as COPD¹, asthma, chronic heart failure, and diabetes
- Increases risk of severe outcomes (pneumonia, hospitalisation, death)
- Associated with substantial clinical and economic burden^{2,3,4}
- Immune response after RSV natural infection is not long-lasting, and re-infections occur throughout life^{5,6}

420k

Hospitalisations
Developed countries

29K

Deaths
Developed countries

177k

Hospitalisations
US (65+ years)

14k

Deaths
US (65+ years)

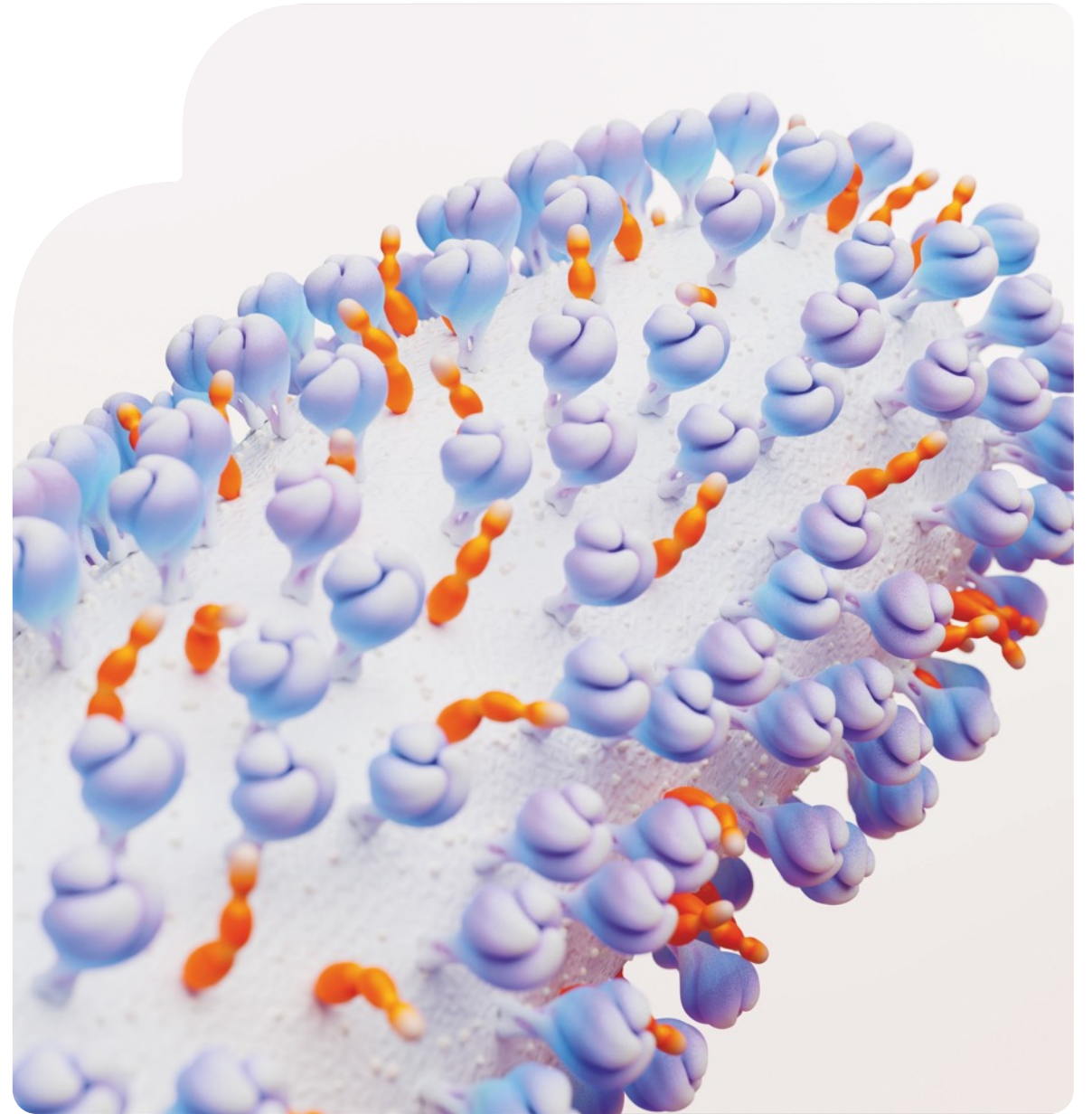
1. Chronic obstructive pulmonary disease, 2. CDC, 2020. RSV in older adults and adults with chronic medical conditions. <https://www.cdc.gov/rsv/high-risk/older-adults.html> (accessed November 2021); 3. Amand C et al. *BMC Health Serv Res* 2018;18:294. 4. Falsey AR et al. *N Engl J Med* 2005;352:1749–1759; 5. Graham BS. *Immunol Rev* 2011;239:149–166. 6. Anderson LJ et al. *Vaccine* 2013;31S:B209–B215.

Designing a potentially effective RSV vaccine for older adults

Vaccines R&D strategic priorities

- Proteins +/- adjuvant
- mRNA platform
- MAPS/bacterial technology

Hypothesis: combine viral surface antigen with adjuvant to deliver very high efficacy in older adults



RSV candidate vaccine for older adults

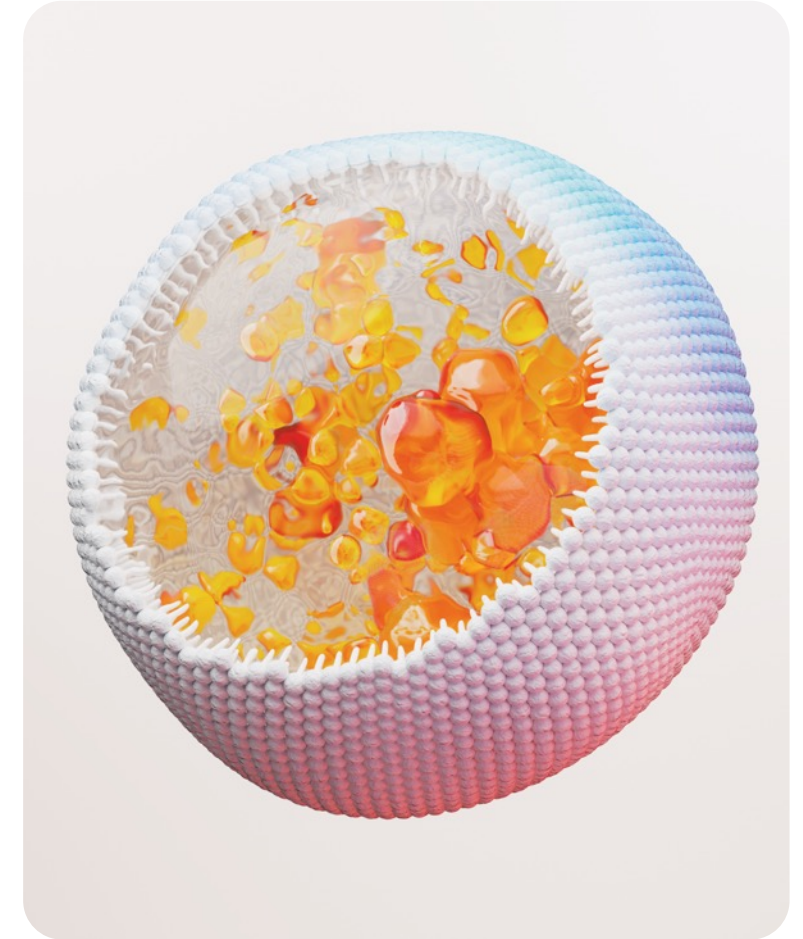
Designed to protect vulnerable adults against RSV disease

RSVPreF3 antigen

- Engineered to preferentially maintain the pre-fusion conformation and display potent neutralizing epitopes¹
- Induction / boosting of neutralising antibodies to enhance inhibition of viral replication^{2,3}

AS01_E

- Boosts cellular immune response and restores the RSVPreF3 CD4+ T-cell level in older adults to a similar range as that of young adults^{4,5}
- Defective T-cell responses may contribute to severe disease progression in older adults⁶



1. Graham BS et al. *Curr Opin Immunol* 2015;35:30–38 ; 2. GSK, 2020. Press release. <https://www.gsk.com/en-gb/media/press-releases/gsk-presents-positive-clinical-data-on-maternal-and-older-adults-rsv-candidate-vaccines/> (accessed Nov 2021); 3. Boyoglu-Barnum S et al. *Front Immunol* 2019;10:1675; 4. Guiñazú JR et al., *Open Forum Infectious Diseases*, 2020;7 (Supp 1), S188-S189. https://academic.oup.com/ofid/article/7/Supplement_1/S188/6058593; 5. GSK Investor update: RSV older adults and maternal vaccine candidates. Data presented at ID Week 2020, Oct 2020. https://www.gsk.com/media/6184/gsk_id-week-rsv-analyst-presentation-22-oct-2020.pdf; 6. Openshaw PJM, et al. *Annu Rev Immunol* 2017;35:501–32; 7. Ruckwardt TJ et al. *Immunity Rev* 2019;51:429-442; 6. Cherukuri A et al. *Clin Vaccine Immunol* 2013; 20:239-247.

Comprehensive clinical programme targeted to adults at greatest risk

Phase	Trial	Population	Comment	Status
Phase I/II	RSV OA=ADJ-002 NCT03814590	Adults and older adults, 18-40 or 60-80 years old	First-in-human (Phase I) Safety, immunogenicity, formulation and dosing selection (Phase II)	Complete
Phase II	RSV OA=ADJ-011 NCT04657198	Adults ≥60 years old	Persistence and safety and immunogenicity of revaccination	Complete
Phase III	RSV OA=ADJ-007 NCT04841577	Adults ≥60 years old	Safety, reactogenicity, immunogenicity when co-administered with FLU-QIV ¹	Complete; results to be presented at IDWeek 2022
Phase III	AReSVi-004 NCT04732871	Adults ≥60 years old	Safety, reactogenicity, immunogenicity, persistence & revaccination	Active, not recruiting; results presented at IDWeek 2022
Phase III	AReSVi-006 NCT04886596	Adults ≥60 years old	Pivotal efficacy study	Active, not recruiting; primary endpoint met. results presented at IDWeek 2022
Phase III	AReSVi-009 NCT05059301	Adults ≥60 years old	Safety and reactogenicity of three lots of RSVPreF3 OA as a single dose	Active, not recruiting; primary endpoint met

Note: RSV '002 and '006 had independent data monitoring committee oversight. 1. Seasonal quadrivalent influenza vaccine.

Number of participants
recruited into RSV older
adult vaccine candidate
trials

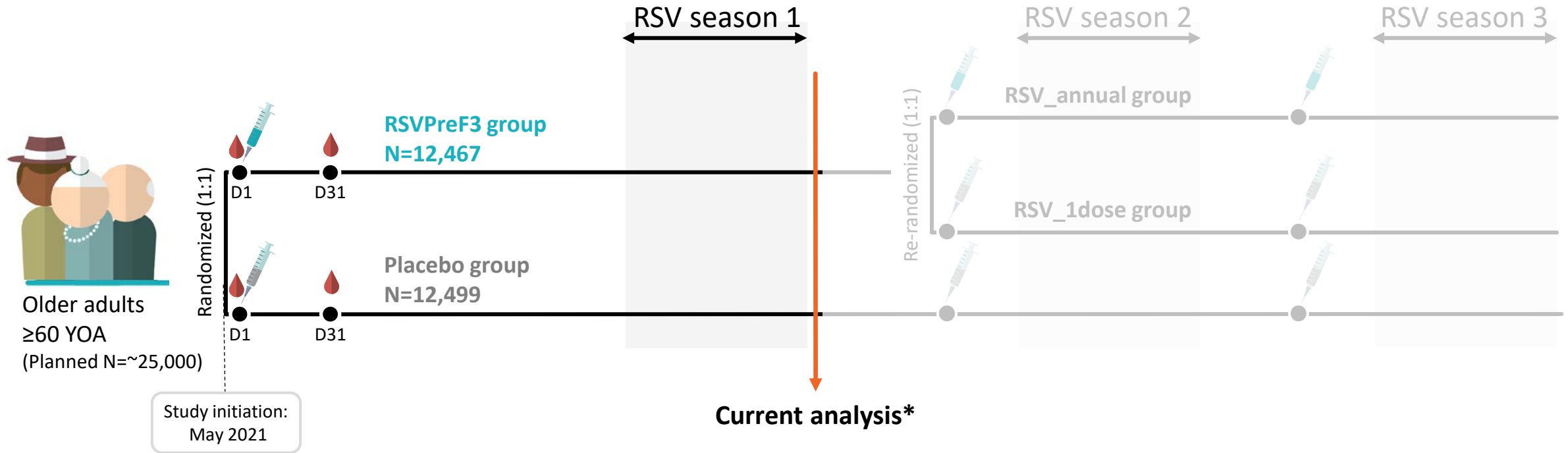
>29k



AReSVi-006 phase III results and potential impact

Dr Michael Ison, Professor of Medicine and Surgery, Northwestern Medicine

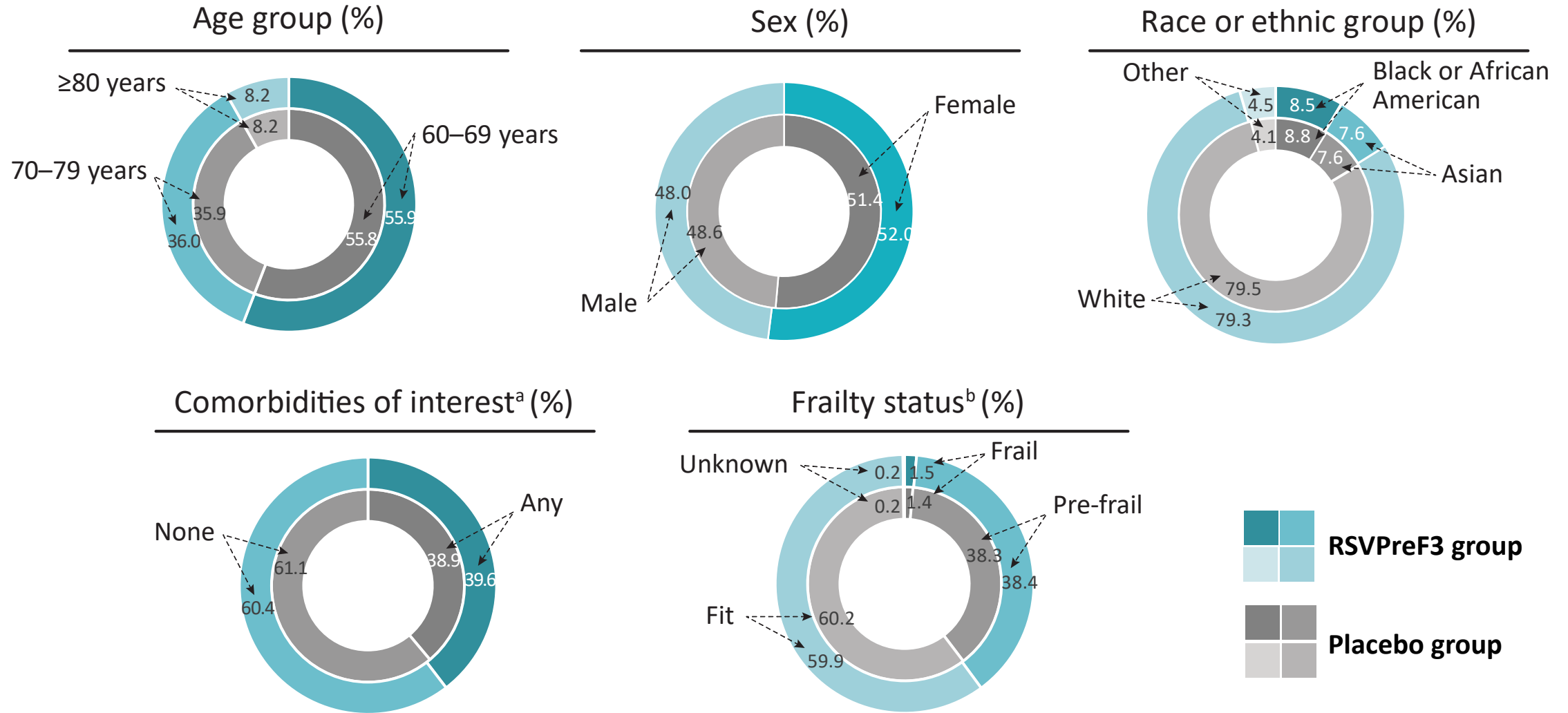
Methods: Ongoing, phase 3, randomized, observer-blind, placebo-controlled, multi-country study (NCT04886596)



Primary endpoint: VE of a single dose of RSVPreF3 OA in preventing RSV-LRTD in adults ≥60 YOA during the first RSV season (criterion: lower limit of the 2-sided confidence interval [CI] for VE >20%)

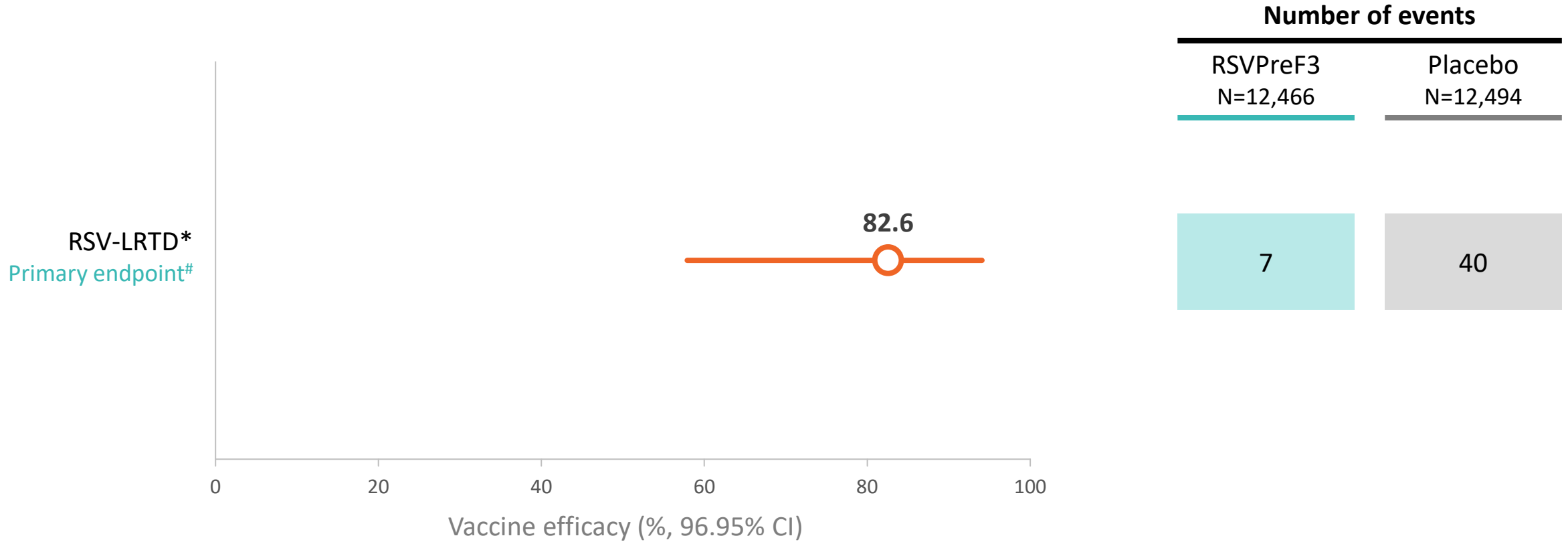
Secondary endpoints: VE against severe RSV-LRTD, RSV-ARI, RSV-LRTD and RSV-ARI by RSV subtype (RSV-A and RSV-B), RSV-LRTD by age, baseline comorbidity and frailty status, reactogenicity and safety

Results: Demographic characteristics were similar between groups



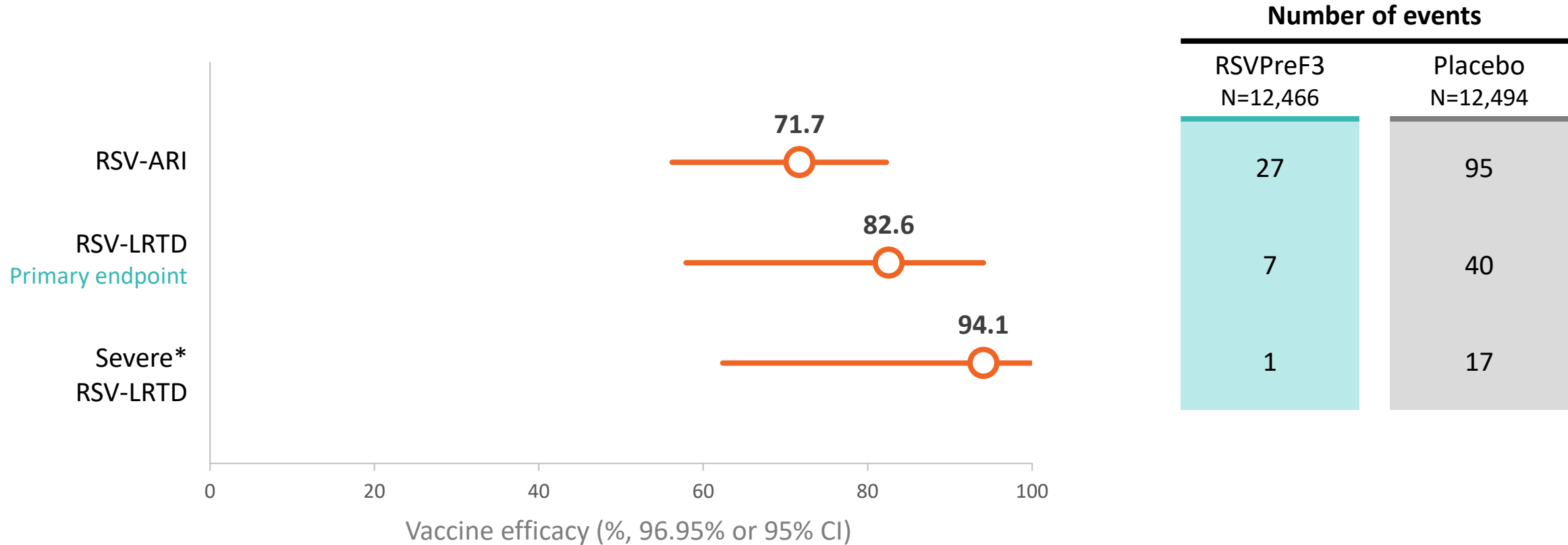
^aComorbidities of interest included chronic obstructive pulmonary disease (COPD), asthma, any chronic respiratory/pulmonary disease, chronic heart failure, diabetes mellitus type 1 or type 2 and advanced liver or renal disease. ^bAssessed using a gait speed test: frail, walking speed <0.4 m/s or not able to perform the test; pre-frail, walking speed 0.4–0.99 m/s; fit, walking speed ≥1 m/s.

Results: The primary endpoint (vaccine efficacy against RSV-LRTD) was demonstrated



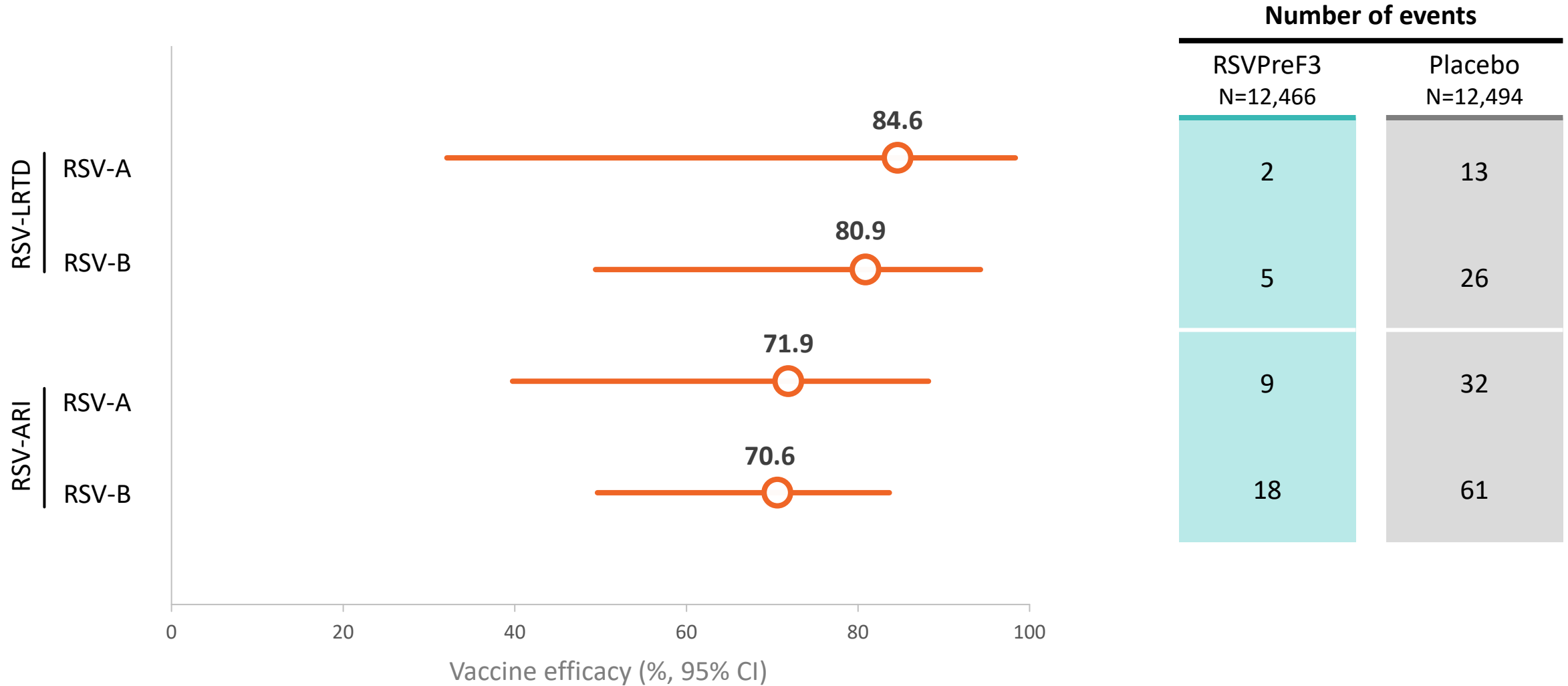
*An event meeting the case definition of LRTD (Presence of: ≥ 2 lower respiratory symptoms/signs for ≥ 24 hours including ≥ 1 lower respiratory sign OR ≥ 3 lower respiratory symptoms for ≥ 24 hours) with ≥ 1 RSV-positive swab detected by quantitative reverse transcription-polymerase chain reaction (qRT-PCR). #criterion: the lower limit of the 2-sided CI for VE $> 20\%$. N, number of participants in the modified exposed set (mES). RSV etiology was confirmed by qRT-PCR. All RSV-LRTDs were confirmed by an external adjudication committee.

Results: A single dose of RSVPreF3 OA is highly efficacious against the full spectrum of RSV disease, from RSV-ARI to severe RSV-LRTD

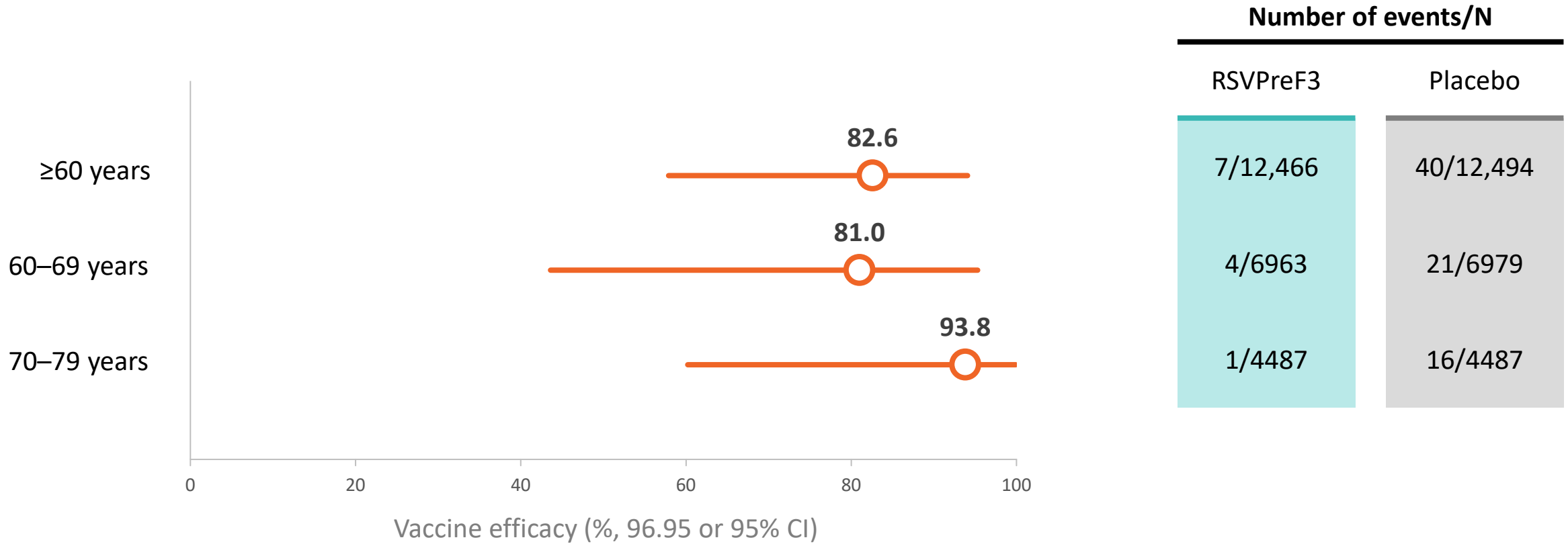


N, number of participants in the mES. RSV etiology was confirmed by qRT-PCR. All RSV-LRTDs were confirmed by an external adjudication committee. Error bars represent 96.95% CI for the primary endpoint and 95% CI for other endpoints. *Severe disease according to either of the 2 case definitions (definition 1 based on clinical signs/investigator assessment or definition 2 based on supportive therapy). All 18 severe cases met case definition 1; 2 of the 18 cases were confirmed by the adjudication committee as also meeting case definition 2 (group allocation still blinded). In addition to these 2 cases, another 2 needed oxygen supplementation but were not confirmed by the adjudication committee as meeting case definition 2 at the time of the efficacy data lock point.

Results: Consistently high VE was observed regardless of RSV subtype



Results: High VE against RSV-LRTD was seen across different age groups

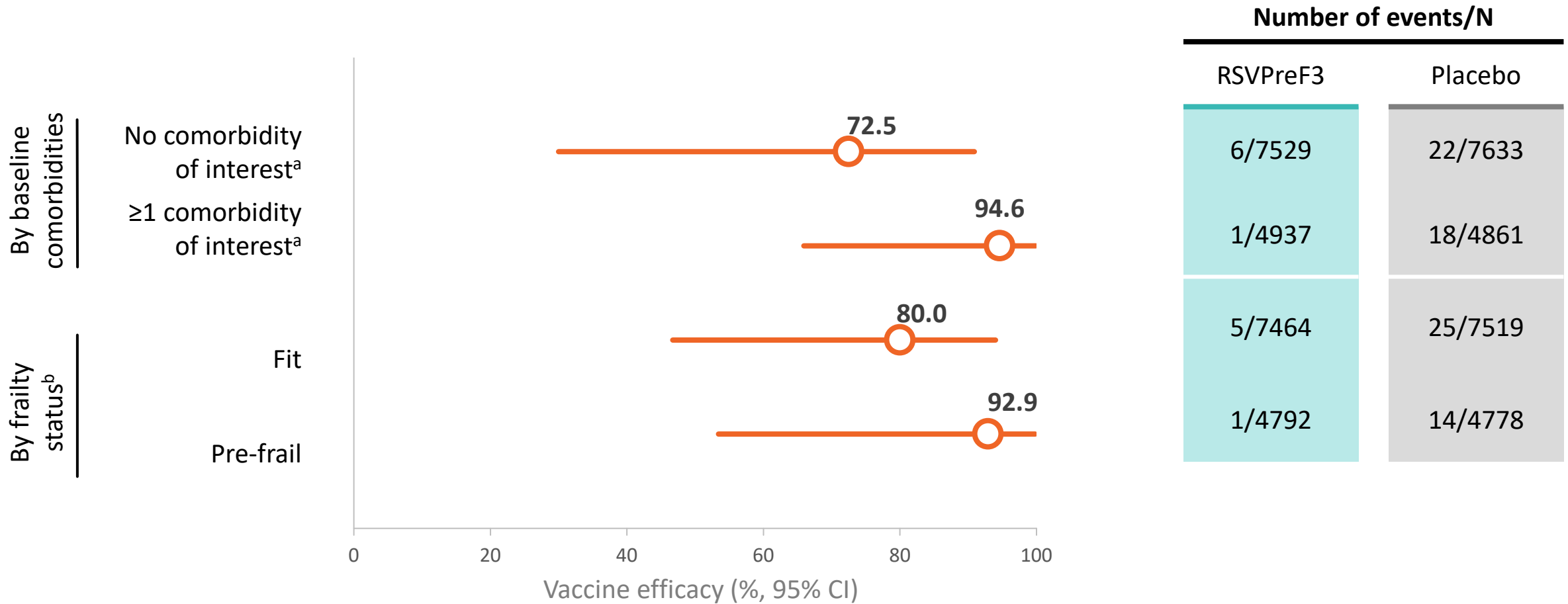


Note: VE in adults ≥80 years was inconclusive due to too few cases (2/1016 in RSVPreF3 vs 3/1028 in Placebo)

Results: Robust immune response to RSV-A and RSV-B regardless of age



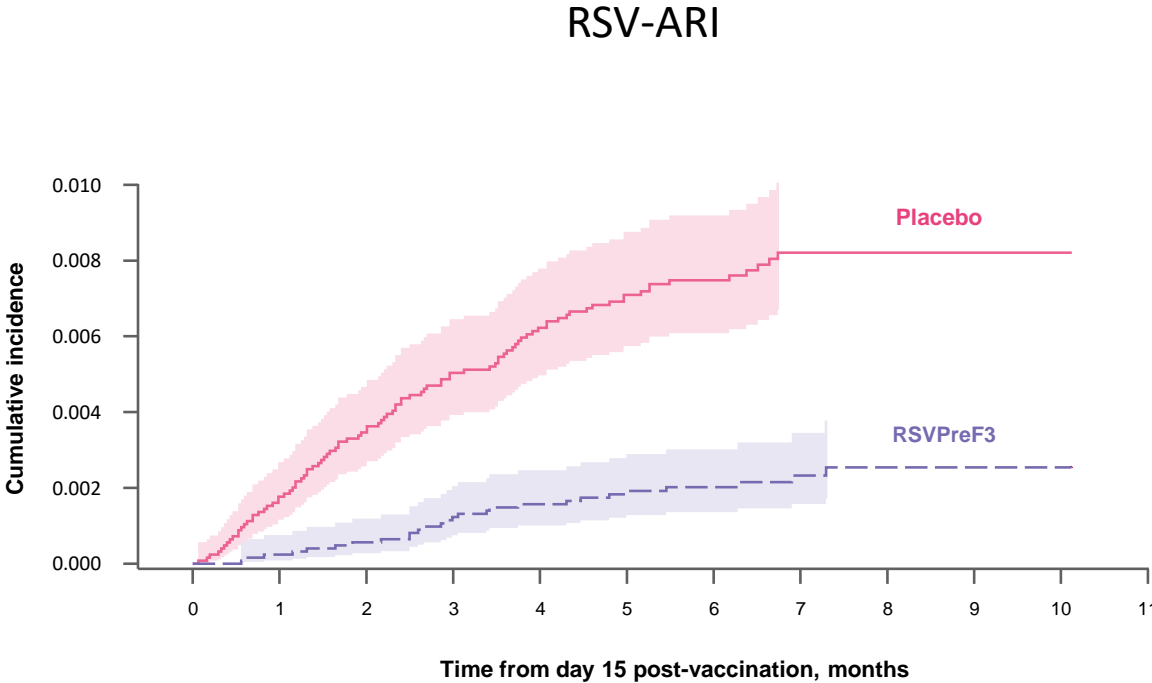
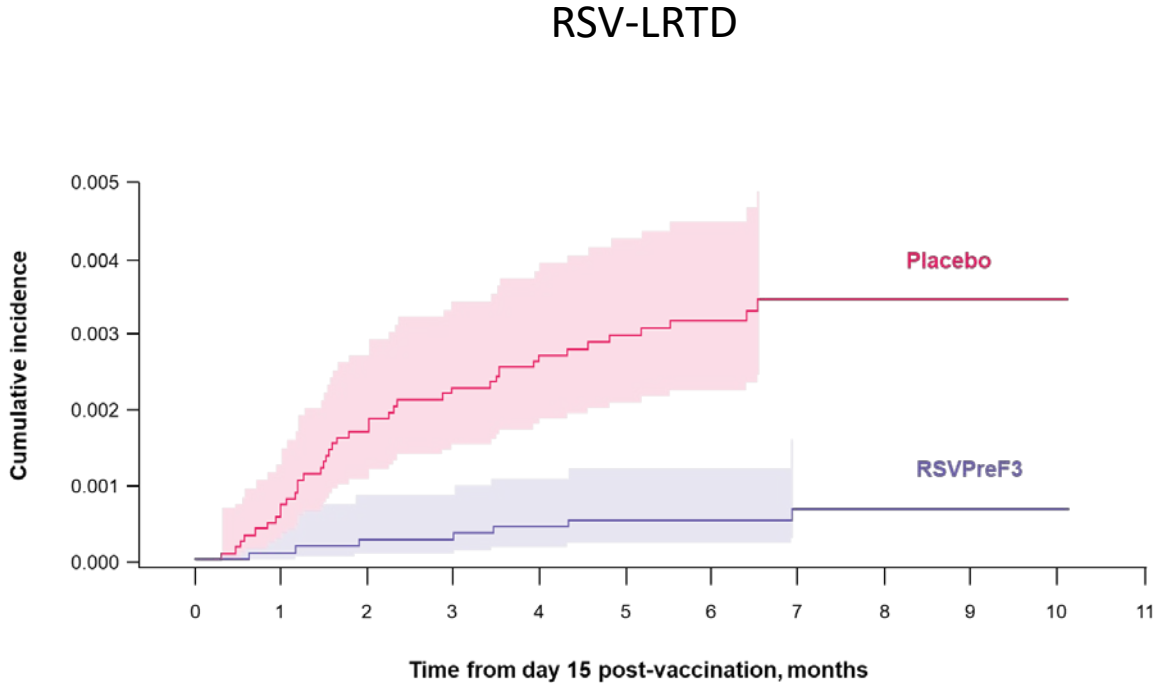
Results: High VE against RSV-LRTD was observed in participants with pre-existing comorbidities and in pre-frail and fit participants



Note: ~39% of participants had comorbidities and ~38% were pre-frail; VE in frail adults was inconclusive due to too few cases and the smaller number of participants (1/189 in RSVPreF3 vs 1/177 in Placebo)

^aComorbidities of interest included COPD, asthma, any chronic respiratory/pulmonary disease, chronic heart failure, diabetes mellitus type 1 or type 2 and advanced liver or renal disease. ^bAssessed using a gait speed test: frail, walking speed <0.4 m/s or not able to perform the test; pre-frail, walking speed 0.4–0.99 m/s; fit, walking speed ≥1 m/s. N, number of participants in the mES. All RSV cases were confirmed by qRT-PCR. RSV etiology was confirmed by an external adjudication committee. Error bars represent 95% CI.

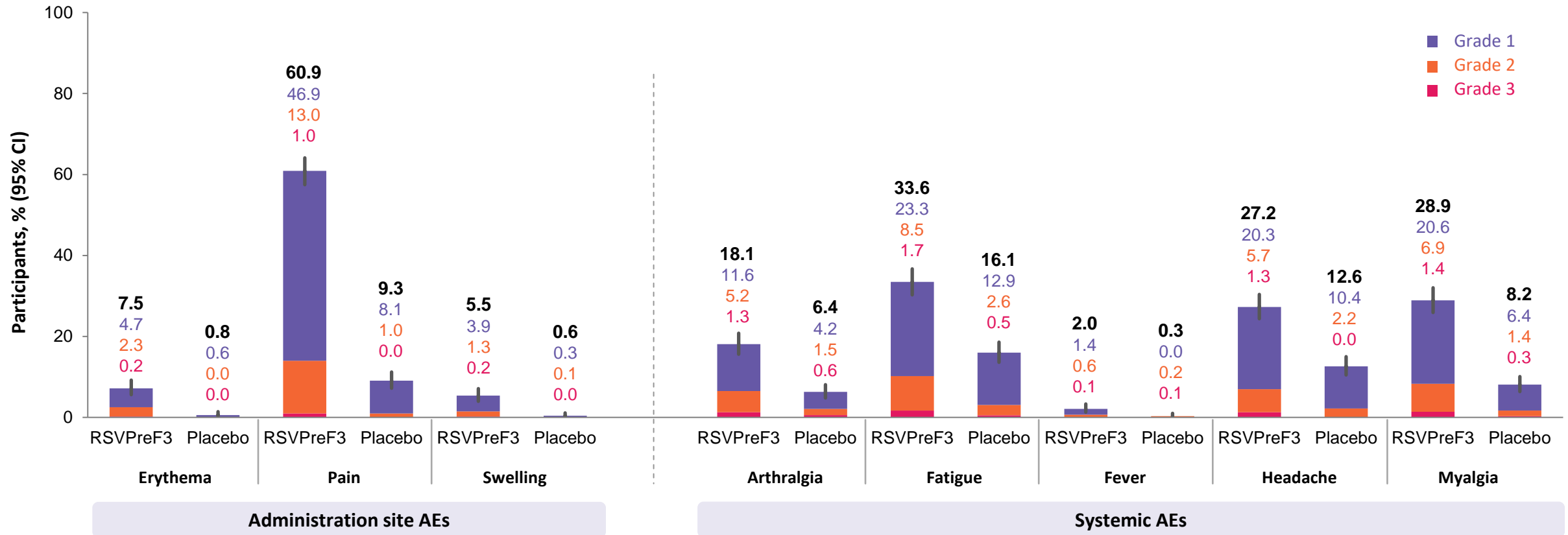
Results: High VE against RSV-LRTD was observed over the median follow-up period of 6.7 months, supporting efficacy over the course of an RSV season



The shaded areas represent 96.95% CI for RSV-LRTD and 95% CI for RSV-ARI.

Results: RSVPreF3 OA was well tolerated, and most solicited AEs were mild or moderate and resolved within the 4-day solicitation period (mean duration: 1–2 days)

Percentage of participants with solicited AEs (SSS, N=1757)



- No imbalances were observed between the RSVPreF3 OA and Placebo groups in the overall rates of SAEs, vaccination-related SAEs, fatal SAEs, pIMDs or vaccination-related pIMDs

Conclusions



The primary endpoint was demonstrated



A single dose of RSVPreF3 OA vaccine is highly efficacious in preventing RSV-ARI, RSV-LRTD and severe RSV-LRTD in adults ≥ 60 YOA over one RSV season



Vaccine efficacy was similar against RSV-A and RSV-B subtypes and was consistently high in 60–69 and 70–79-year-olds, in pre-frail older adults and in those with comorbidities



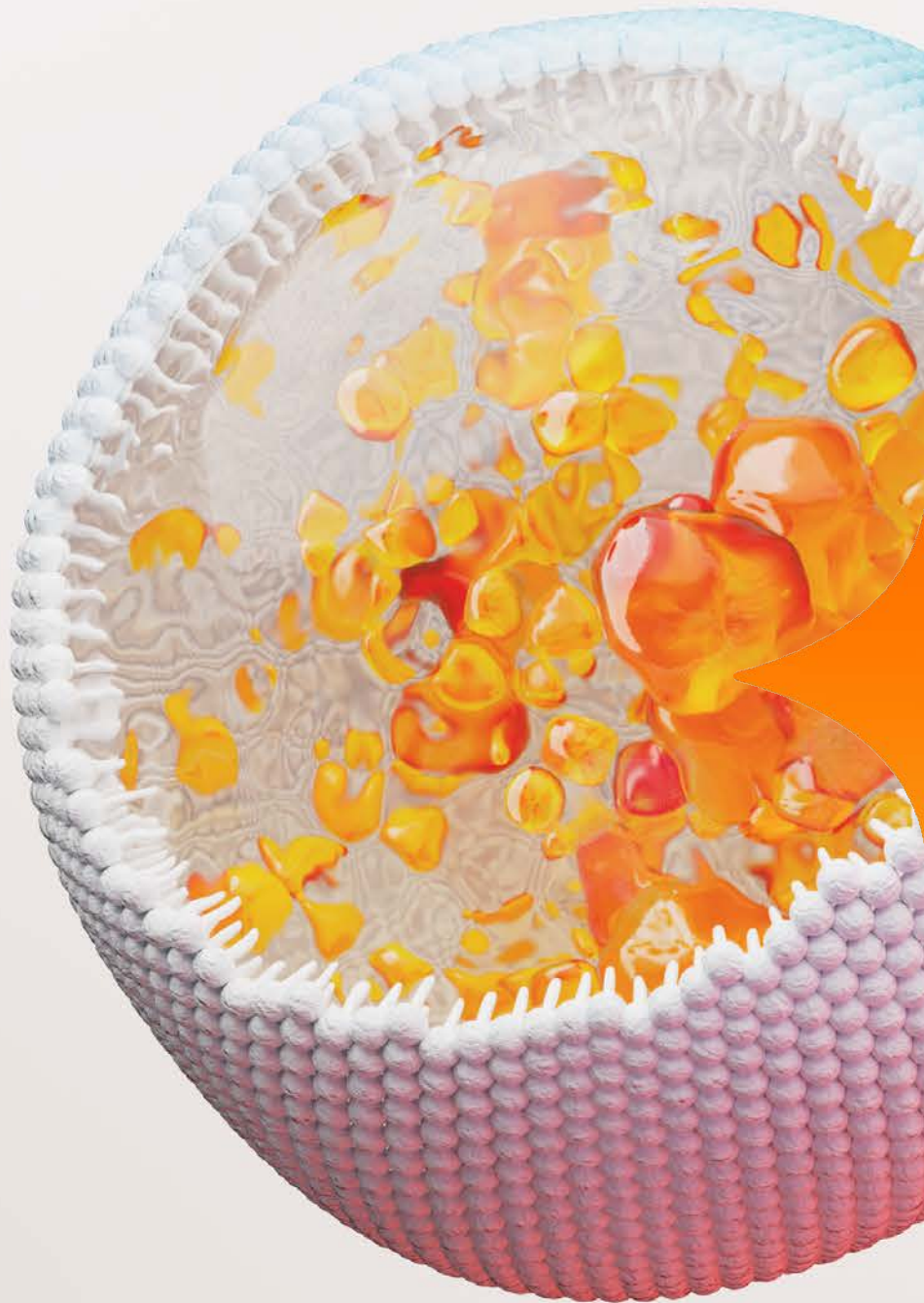
RSVPreF3 OA vaccine was well tolerated and had an acceptable safety profile



The study is ongoing and will follow participants to evaluate both an annual revaccination schedule and long-term protection over multiple RSV seasons

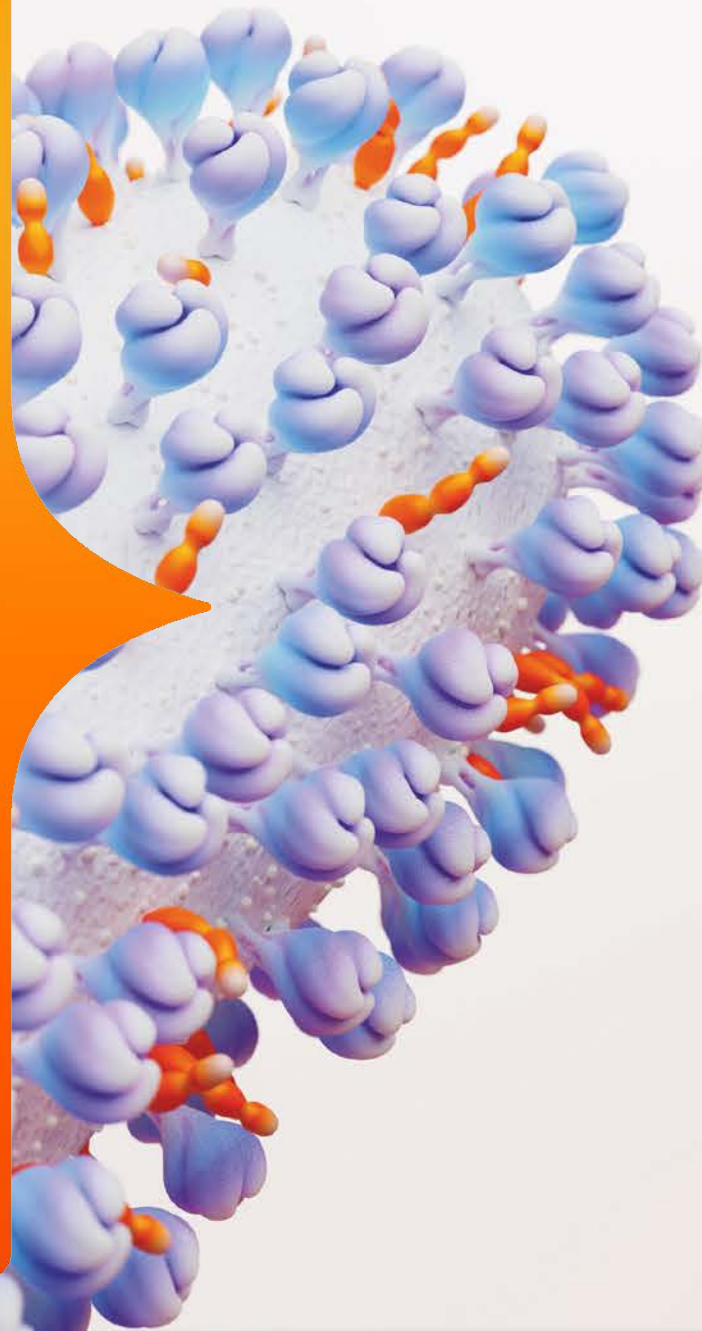
What do these important data mean when addressing the burden of RSV disease? What do they mean for physicians and for older adults?





**How did study investigators
determine degree of severity
of lower respiratory tract
disease?**

What was the rationale for the clinical study design, specifically with an end point focused on adults with comorbidities?





Commercial opportunity

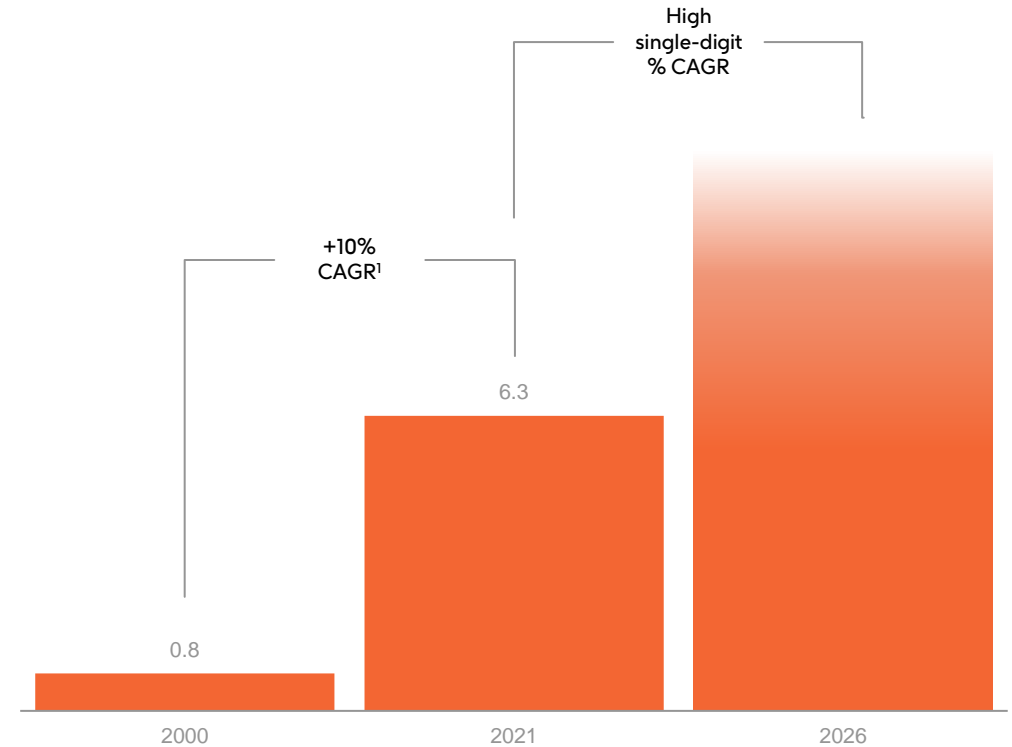
Roger Connor, President Vaccines and Global Health
Luke Miels, Chief Commercial Officer

A long history of innovation leadership

Vaccine leadership

- c.70-year history of vaccine development (introduced polio vaccines in 1950s)
- Broadest portfolio in the industry with 25 vaccines supplied across 160 countries
- >15 new product launches since 2000
- Market leading in multiple categories eg shingles, meningitis, and paediatrics

Driving innovative vaccines sales £m¹



¹ Excluding pandemic solutions (flu and COVID-19) and at CER. Please also refer to page 2 of the second quarter 2022 results announcement. All outlooks, targets, ambitions and expectations regarding future performance and the dividend should be read together with the "Guidance, assumptions and cautionary statements" on page 69 of our second quarter 2022 earnings release. 2021-26 CAGR is for the 5 years to 2026, using 2021 as the base year.

Data at IDWeek 2022 further strengthen GSK's vaccines position

RSV OA¹ data suggests potential to expand vaccine portfolio for elderly

Vaccines approved in growing OA segment

Vaccine	Indication
<i>Shingrix</i>	Herpes zoster (shingles)
<i>Boostrix</i>	Tetanus, diphtheria, and pertussis
<i>Fluarix/FluLaval QV</i>	Influenza A & B
<i>Havrix/Engerix-B/Twinrix</i>	Hepatitis A & B

Shingrix duration data sets new standard for shingles prevention

- Unprecedented high efficacy for 10 years
- Unconstrained supply supports geographic expansion (from 23 countries to >35 by 2024)
- Active LCM² (potential label expansion, eg auto-immune disease; fully liquid formulation)
- Confident in ambition to double *Shingrix* sales by 2026³, protecting more than 100m adults

1. Older adults, 2. Life cycle management, 3. Ambition uses 2020 as the base year.

Data offers potential best-in-class profile in the most vulnerable adults

Consistent high efficacy

Reduction in severe disease

94.1%

Efficacy in those with comorbidities

94.6%

Efficacy in those aged 70-79 years

93.8%

Key risk factors are age and comorbidities

- Older adults at increased risk from RSV disease due to reduced immune function
- Those with comorbidities eg cardiovascular, respiratory, and diabetes, are at even higher risk of severe outcomes¹
- CDC: >90% of hospitalised adults have underlying medical conditions (c.50%: 3+)¹
- RSV has substantial economic burden with direct medical costs c.\$3bn² in US alone³

1. Introduction to ACIP's Adult Respiratory Syncytial Virus Work Group: <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-06-22-23/01-RSV-Kotton-508.pdf>; 2. Herring, W. et al. (2021), Carrico, J et al (2022); 3. Additional impact from lost productivity, long-term health consequences and care costs. Note: Comorbidities included in '006 study included those with pre-existing chronic conditions such as chronic obstructive pulmonary disease, asthma, any chronic respiratory/pulmonary disease, chronic heart failure, diabetes mellitus type-1 or type-2 and advanced liver or renal disease. Around 39% of participants in both the placebo and the vaccine groups had these pre-existing comorbidities.

RSV OA vaccine candidate represents significant opportunity

Q4 2022: US FDA submission acceptance; EU regulatory submission

Consistent high efficacy offers a best-in-class profile

- 94.1% efficacy against severe RSV disease
- Magnitude of benefit consistent across key subgroups
- Well tolerated
- Builds on GSK legacy of vaccine innovation and respiratory expertise

Substantial unmet need and market opportunity

- Older adults and those with comorbidities at risk of severe outcomes
- One of highest-value unmet needs in infectious disease
- Multi-billion *Shingrix*-like sales potential

Launch readiness and long-term differentiation

- US launch bulk prepared and ready for swift launch, post approval
- Launch priorities include value-based pricing and raising disease awareness
- Co-administration, annual revaccination, multi-season duration being examined

Q & A

Case definitions for evaluation of vaccine efficacy

Endpoint	Case definition
ARI (trigger for swabbing)	Presence of: <ul style="list-style-type: none"> at least two respiratory symptoms/signs for at least 24 hours OR <ul style="list-style-type: none"> at least one respiratory symptom/sign + one systemic symptom/sign for at least 24 hours
RSV-ARI ^a	An event meeting the case definition of ARI with at least one RSV-positive swab detected by qRT-PCR ^b
LRTD	Presence of: <ul style="list-style-type: none"> at least two lower respiratory symptoms/signs for at least 24 hours including at least one lower respiratory sign OR <ul style="list-style-type: none"> at least three lower respiratory symptoms for at least 24 hours
RSV-LRTD ^a	An event meeting the case definition of LRTD with at least one RSV-positive swab detected by qRT-PCR ^b
severe RSV-LRTD – Definition 1 – Clinical symptomology ^a	Presence of an LRTD with at least one of the following criteria: <ul style="list-style-type: none"> at least two lower respiratory signs an LRTD episode assessed as severe by the investigator^c AND <ul style="list-style-type: none"> at least one RSV-positive swab detected by qRT-PCR^b
severe RSV-LRTD – Definition 2 – Supportive therapy ^a	Presence of an LRTD with at least one of the following criteria ^d : <ul style="list-style-type: none"> Need for oxygen supplementation^e Need for positive airway pressure therapy (eg CPAP) Need for other types of mechanical ventilation AND <ul style="list-style-type: none"> with at least one RSV-positive swab detected by qRT-PCR^b

CPAP, continuous positive airway pressure. ^aThroat and/or nasal swab samples collected at ARI visits for qRT-PCR testing were collected within 6D after ARI onset (ie up to D7). In special circumstances (for example in case of suspected COVID-19 infection and pending COVID-19 test result, or self-quarantine) and if it was not possible to perform the ARI visit within 6D after ARI onset (ie within D3 to D7), then the interval for this visit and the site swab collection could be extended up to maximum 14D after ARI onset (ie until D15). Swabs testing positive within this window were considered as related to the ARI. ^bAt least 1 swab (self-swab or swab taken by study personnel) positive for RSV-A or RSV-B by qRT-PCR. ^cThe investigator graded each ARI as mild, moderate or severe. ^dIn case the participant was already receiving any of these for treating/controlling any pre-existing condition, any significant change or adaptation in the used therapy had to be taken into account. ^eReported by the investigator