

Cost-Effectiveness Analysis of RSVPreF3 OA Vaccine in Greece for Adults Aged ≥60 Years

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Digital poster
Supplemental data



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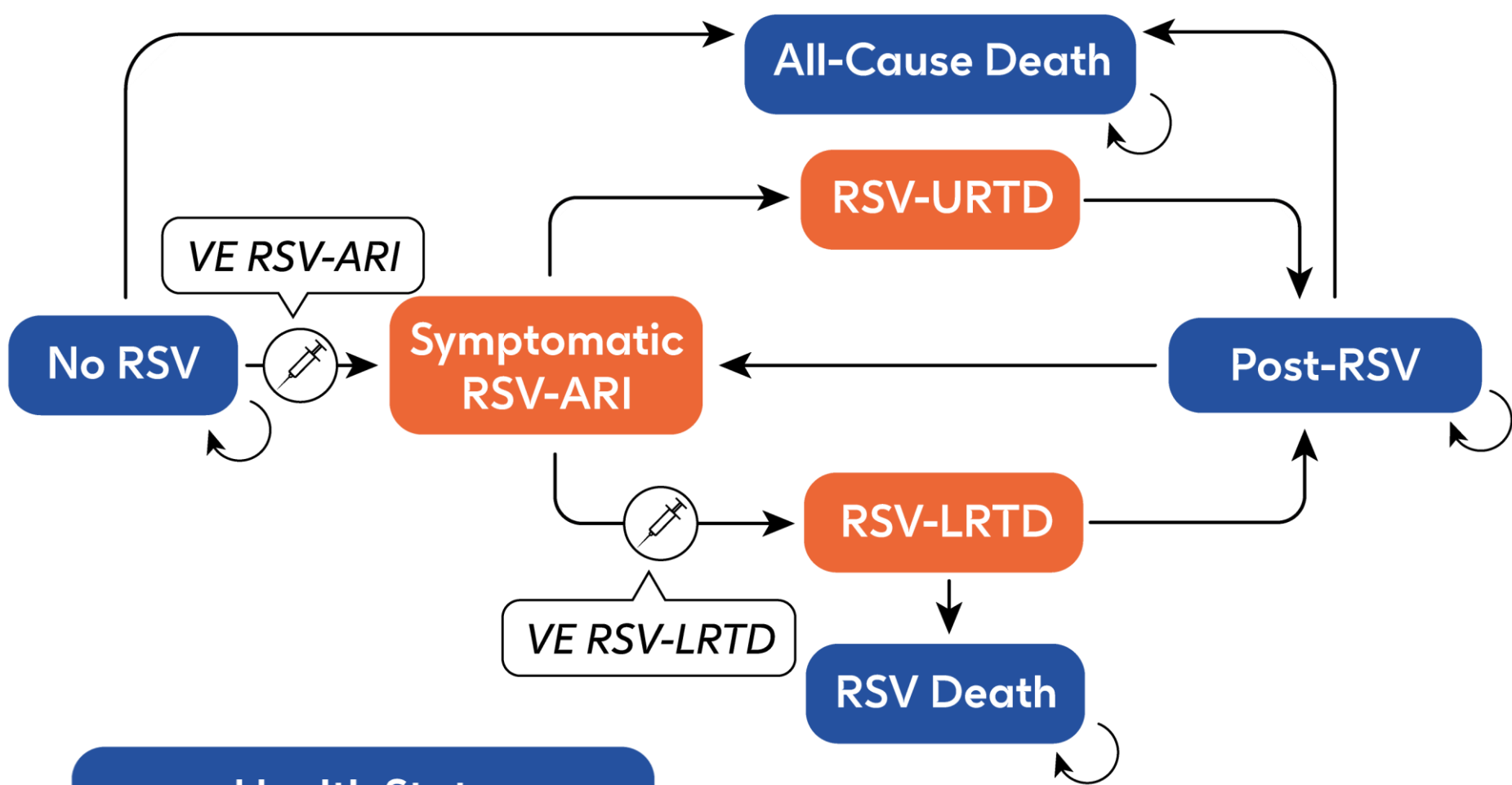
Vaccinating adults aged 70+ and those aged 60-69 with underlying medical conditions with adjuvanted RSVPreF3 is a cost-effective strategy that significantly reduces RSV's burden in Greece.

Aims

- This study aims to assess the cost-effectiveness and public health impact (PHI) of the GSK adjuvanted RSVPreF3 vaccine, one of the approved preventive interventions for respiratory syncytial virus (RSV) for ≥60 years population in Greece.

Study design

Static Markov Model Design



Health State
Disease Transition Event

A monthly-cycle static Markov model

- adults aged 60-69 years with underlying medical conditions
- adults aged ≥70 years from general population

Healthcare system perspective analyzing costs and benefits of vaccination from a healthcare system's viewpoint only

Time Horizon: 5 years

Cost per dose: € 162.5

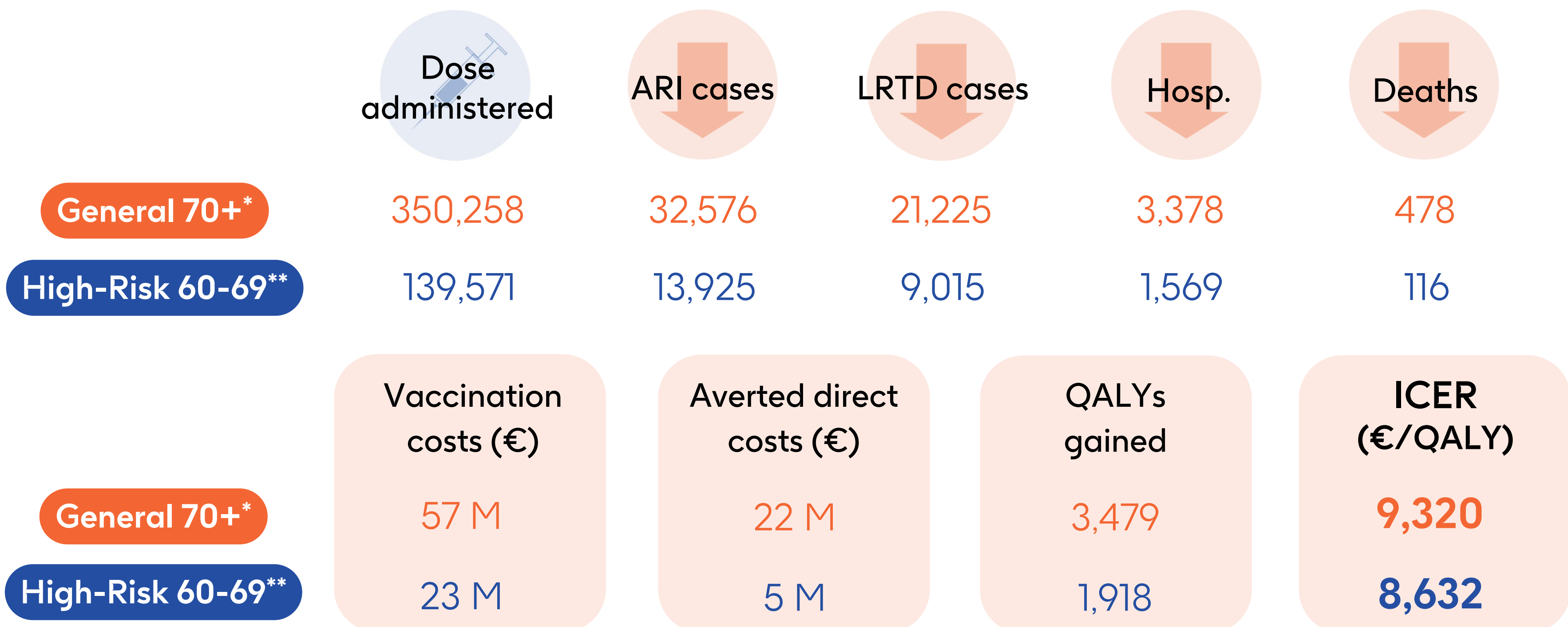
Vaccination Coverage: One-time vaccination 20% among General 70+ population and High-Risk 60-69 population

Discount rates: 3.5% for costs and utilities

Scenario: Vaccination vs No vaccination

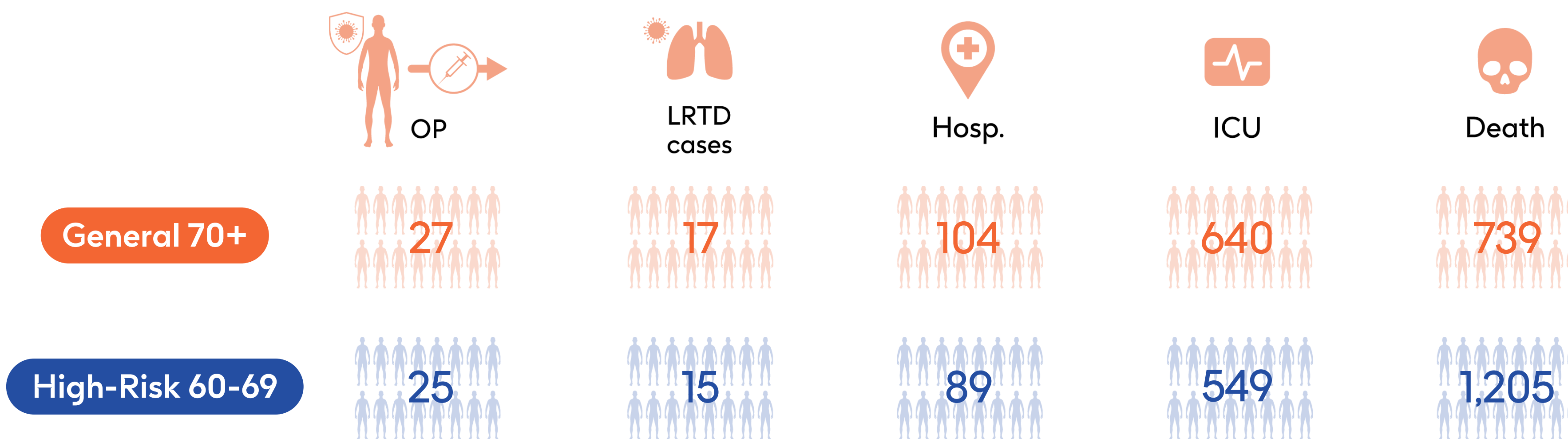
Results

Adjuvanted RSVPreF3 vaccine would substantially reduce the burden of RSV among greek adults aged ≥60 years by preventing RSV-LRTD events, hospitalizations, and deaths. Cost-effective outcomes are provided over 5 years.

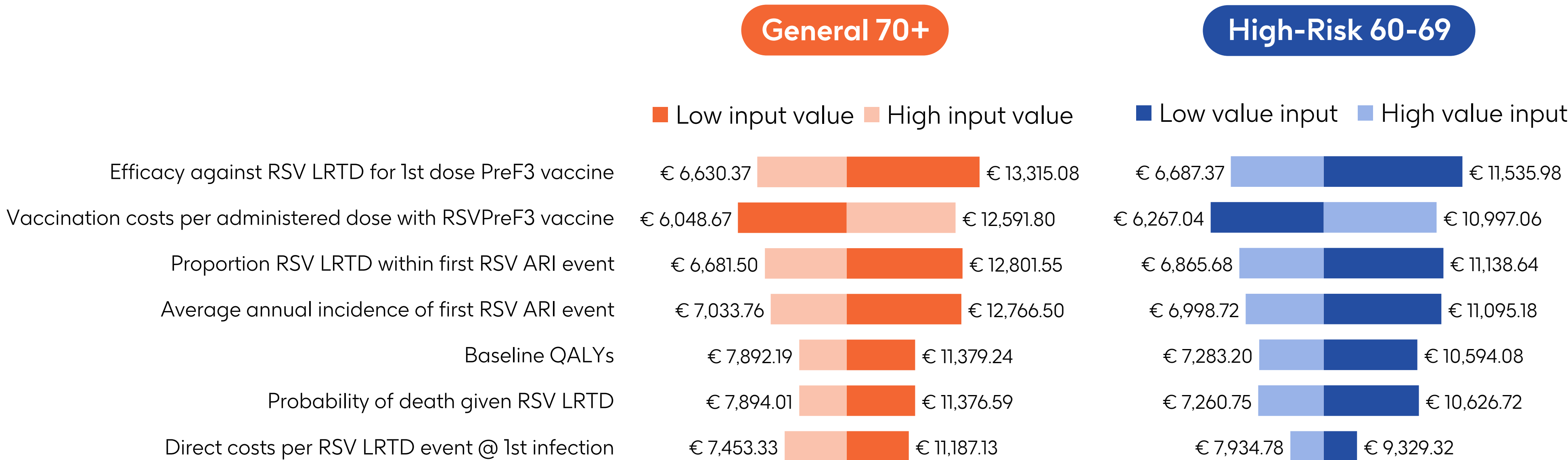


* adults aged ≥70 years from general population; **adults aged 60-69 years with underlying medical conditions

Number needed to vaccinate (NNV) to prevent one case of ARI, LRTD, hospitalization, ICU admission, and deaths.



Vaccine efficacy against LRTD and vaccination costs per administered dose drive the impact on ICER in univariate sensitivity analysis of adjuvanted RSVPreF3 vaccine.



Background

- Respiratory syncytial virus (RSV) infections pose a significant health burden among adults aged ≥60 years worldwide.¹
- US data estimates an annual RSV incidence of 3-7% in healthy older adults, compared to 4-10% in risk groups.² In adults aged ≥65 years, the U.S. sees an estimated 159,000 RSV-related hospitalizations annually, similar to over 145,000 in the same age group across the EU.³
- The vaccine has been approved for the prevention of RSV-LRTD in individuals 50 years of age and older at increased risk in Europe.⁴

Abbreviations
RSV: respiratory syncytial virus, PHI: public health impact, LRTD: lower respiratory tract disease, NNV: number needed to vaccinate, QALY: quality adjusted life year, ICER: incremental cost effectiveness ratio, Hosp: hospitalization, ICU: intensive care unit

References
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3. McLaughlin JM, et al. Open Forum Infect Dis. 2022; 9:ofac300.
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Acknowledgements
Business & Decision Life Sciences Medical Communication Service Centre provided editorial assistance and publication coordination, on behalf of GSK. (Writer: Malack Abbas)

Disclosures
Conflict of interest: EZ and AA are employed by GSK. EZ also holds financial equities in GSK. NK is a consultant working for GMAS which has received consulting fees from GSK for conducting ECONOMIC analyses. These authors declare no other financial and non-financial relationships and activities.
Funding: GSK (study identifier: VEO-000943).

Conclusions



Administering adjuvanted RSVPreF3 vaccine to adults aged 60 and older in Greece is a cost-effective approach that decreases RSV's burden, including hospitalizations, LRTD events, and deaths. It also enhances QALYs and lowers medical expenses associated with RSV.

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Vaccinating adults aged 70+ and those aged 60-69 with underlying medical conditions with RSVPreF3 OA is a cost-effective strategy that significantly reduce RSV’s burden in Greece.

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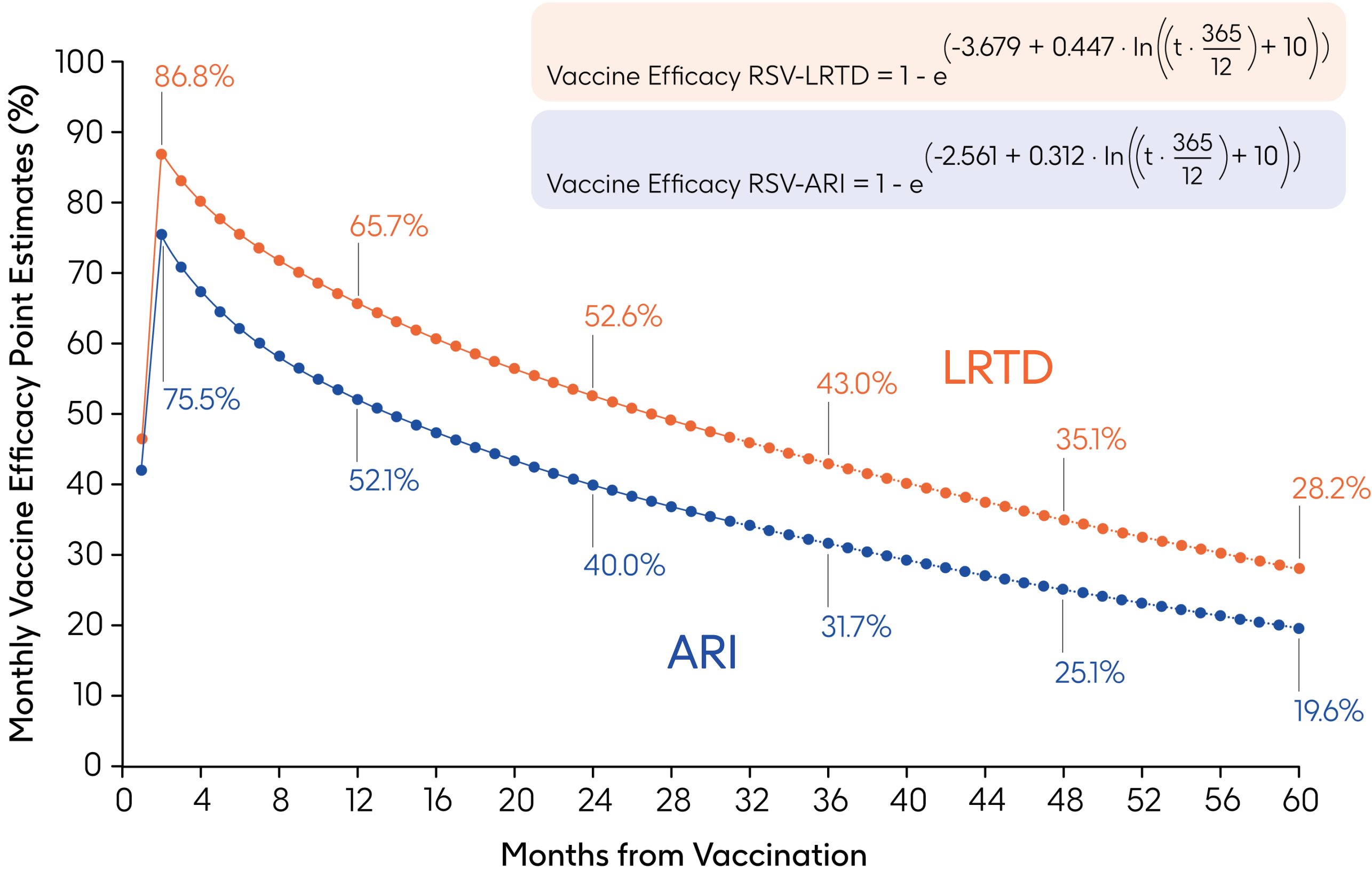


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Supplementary Material

Assumptions used in the RSV model		
Average annual incidence of first RSV ARI event (%)	General	Comorbid
60-64 years	5.67	5.67
65-69 years	5.67	5.67
70-74 years	5.67	5.67
75-79 years	5.67	5.67
80-84 years	5.67	5.67
85-89 years	5.67	5.67
90-109 years	5.67	5.67
Reference	[1]	[1]
RSV LRTD within first RSV ARI event (%)	General	Comorbid
60-64 years	50.23	50.23
65-69 years	50.23	50.23
70-74 years	50.23	50.23
75-79 years	50.23	50.23
80-84 years	50.23	50.23
85-89 years	50.23	50.23
90-109 years	50.23	50.23
Reference	[2]	[2]
Hospitalizations per RSV LRTD event (%)	General	Comorbid
60-64 years	4	12
65-69 years	11	23
70-74 years	11	23
75-79 years	18	27
80-84 years	18	27
85-89 years	18	27
90-109 years	18	27
Reference	[3]	[3,4]
General population - Coverage (%)	General	Comorbid
First Dose, 60-64 years	20	20
First Dose, 65-69 years	20	20
First Dose, 70-74 years	20	20
First Dose, 75-79 years	20	20
First Dose, 80-84 years	20	20
First Dose, 85-89 years	20	20
First Dose, 90-109 years	20	20
Reference	Assumption	Assumption
Case Fatality rate (%)	General	Comorbid
60-64 years	7	7
65-69 years	7	7
70-74 years	7	7
75-79 years	14	14
80-84 years	14	14
85-89 years	22	22
90-94 years	22	22
95-99 years	22	22
100+ years	22	22
Reference	[5]	[5]

Waning of 1st dose of adjuvanted RSVPreF3 VE Against RSV LRTD



Abbreviations

ARI: acute respiratory illness, RSV: respiratory syncytial virus, LRTD: lower respiratory tract disease, VE: vaccine efficacy.

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