Acceptance Code: EE271

Cost-Effectiveness Analysis of RSVPreF3 OA Vaccine for Adults 60 Years or Older in Austria

Zarkadoulas E[1], Uhl G[2], Rouha H[2]

[1]GSK, Wavre, Belgium; [2]GSK, Vienna, Austria.

Vaccinating adults aged 75+ and those aged 60-74 with underlying medical conditions with adjuvanted RSVPreF3 is a cost-effective strategy that significantly reduces RSV's burden in Austria.

Digital poster
Supplemental data

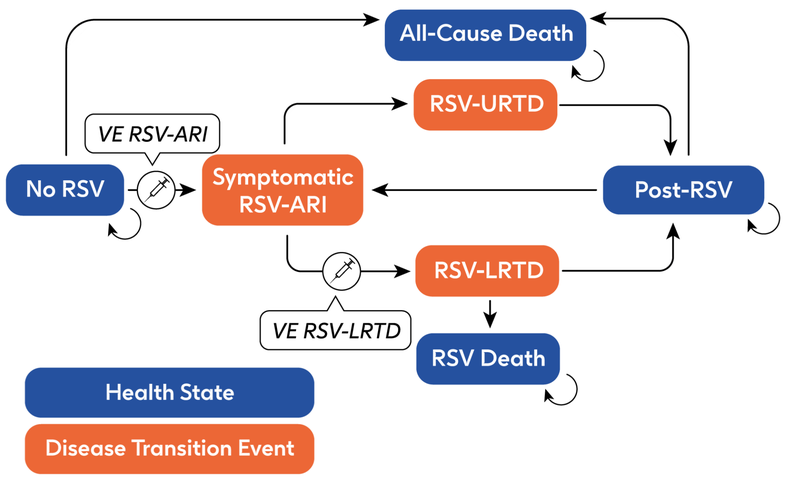
SCAN ME

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 Austria.

Study design

Static Markov Model Design



A **monthly-cycle static Markov model**
- adults aged **60-74 years with underlying medical conditions**
- adults aged **≥75 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: €165

Vaccination Coverage:
One-time seasonal vaccination
60-74: 43%, ≥ 75+: 53%

Discount rates: 3% for costs and utilities

Willingness to pay: €49,500

Scenario: Vaccination vs No vaccination

Results

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

	Dose administered	ARI cases	LRTD cases	Hosp.	ICU	Deaths
General 75+*	439,447	42,554	27,376	5,037	816	622
High-Risk 60-74**	289,301	31,326	21,014	3,321	538	164

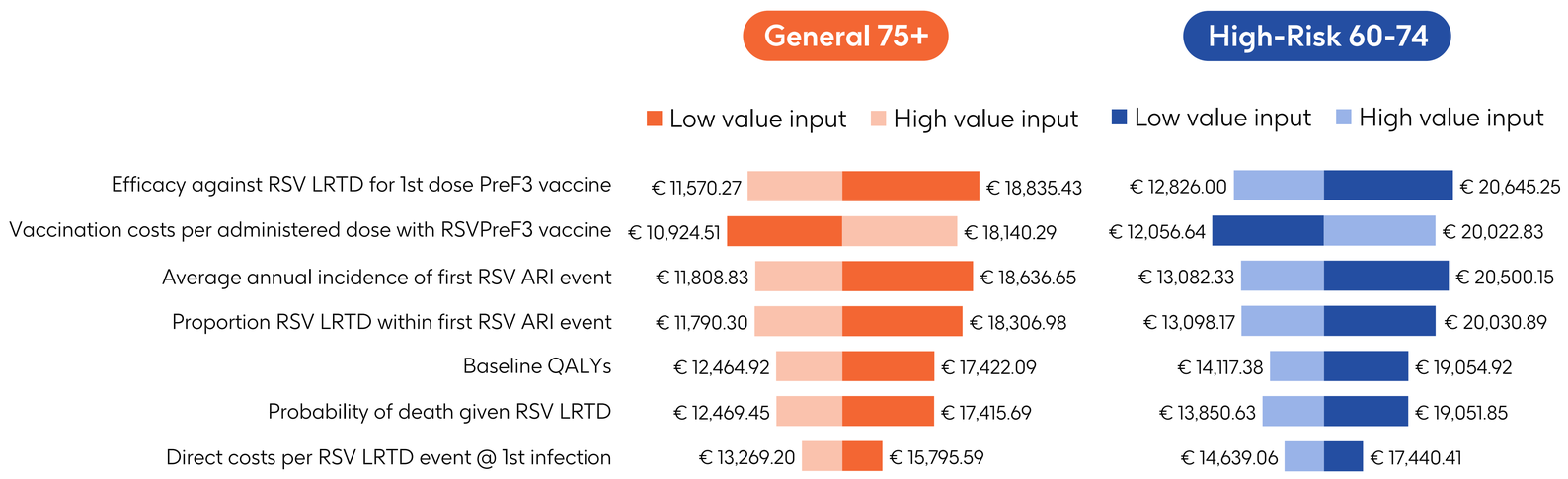
	Vaccination costs (€)	Averted direct costs (€)	QALYs gained	ICER (€/QALY)
General 75+*	78 M	19 M	4,019	14,532
High-Risk 60-74**	51 M	13 M	2,397	16,039

Number needed to vaccinate (NNV) to prevent one case of: ARI, LRTD, hospitalization, ICU, and death for both age groups

	OP	LRTD cases	Hosp.	ICU	Death
General 75+*	26	15	87	539	706
High-Risk 60-74**	24	15	87	538	1,765

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

Vaccine efficacy (VE) 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 in Austria.[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 in Europe[4].

Conclusions

When comparing RSVPreF3 ICER in Austria to the WHO's cost-effectiveness threshold of €49,500 per QALY (Austrian GDP per capita), vaccinating adults aged 75+ or those aged 60-74 with underlying medical conditions with adjuvanted RSVPreF3 is a cost-effective strategies to reduce the RSV burden in Austria.

Abbreviations

RSV: Respiratory syncytial virus, **PHI**: Public health impact, **LRTD**: Lower respiratory tract disease, **URTD**: Upper respiratory tract disease, **ARI**: Acute respiratory illness, **NNV**: Number needed to vaccinate, **QALY**: Quality adjusted life year, **ICER**: Incremental cost effectiveness ratio, **Hosp**: Hospitalizations, **VE**: Vaccine efficacy, **ICU**: Intensive care unit, **WHO**: World health organization.

References

1. Schubert L, et al. Sci Rep. 2021;11(1):8939.
2. Falsey AR, et al. N Engl J Med. 2005;352(17): 1749-59
3. McLaughlin JM, et al. Open Forum Infect Dis. 2022;9:ofac300.
4. GSK. https://www.gsk.com/media/11523/arexvy-ema-50-59-press-release-final-3.pdf. Accessed October 10, 2024.

Acknowledgements

The authors thank the Institute for Pharmaeconomic Research Austria (IPF) for their research on data. They also thank Business & Decision Life Sciences Medical Communication Service Center for editorial assistance and publication coordination, on behalf of GSK (Writer: Malack Abbas).

Disclosures

Conflict of interest: EZ, GU and HR are employed by GSK. EZ also holds financial equities in GSK. These authors declare no other financial and non-financial relationships and activities.
Funding: GSK (study identifier: VEO-000930).

Presenting author: Eleftherios Zarkadoulas - eleftherios.x.zarkadoulas@gsk.com