

# HEALTH, PRODUCTIVITY AND BUDGET IMPACT OF VACCINATING 50-64 YEAR-OLD EMPLOYEES IN AUSTRIA AGAINST HERPES ZOSTER WITH RECOMBINANT ZOSTER VACCINE



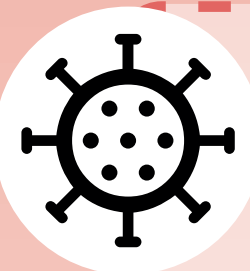
SCAN ME

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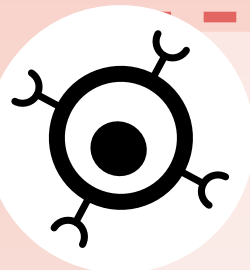
## BACKGROUND



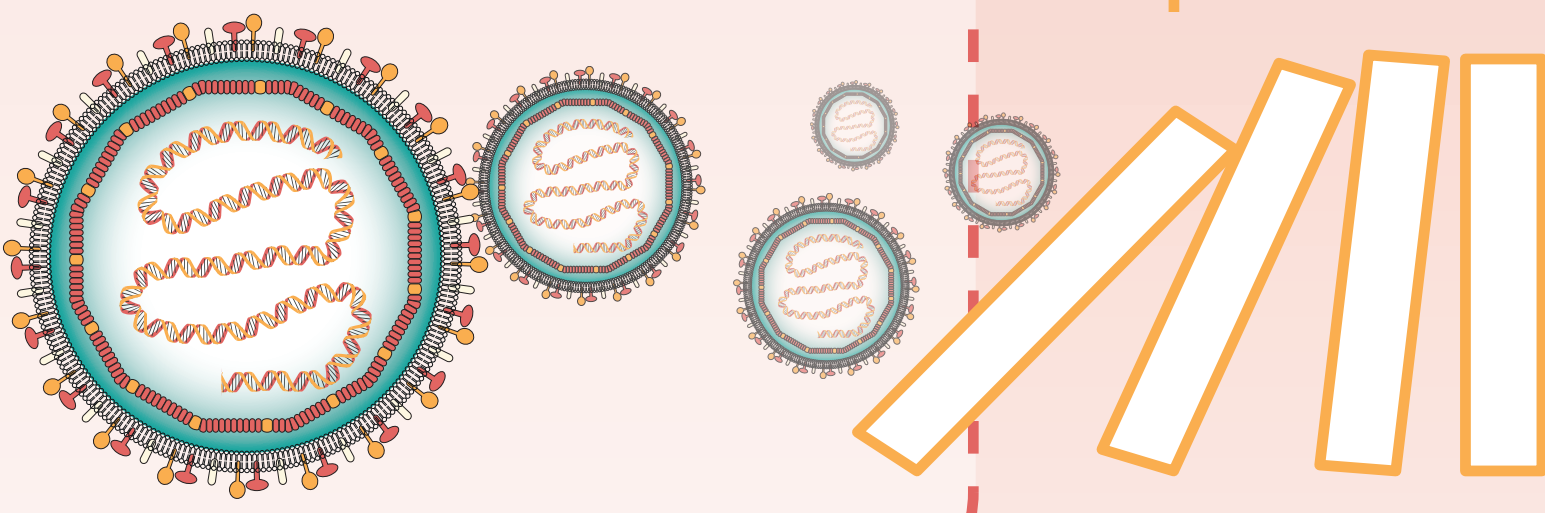
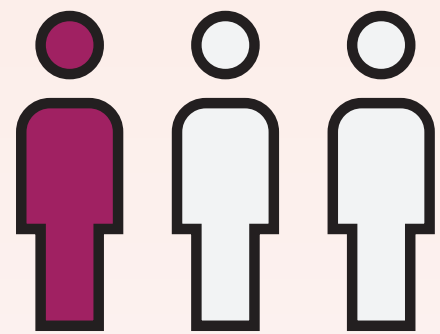
**Herpes zoster (HZ)** is caused by reactivation of latent varicella zoster virus<sup>1</sup> and results in a painful unilateral vesicular rash that can have serious and long-lasting complications<sup>2</sup>.



HZ can lead to **chronic pain** known as postherpetic neuralgia (PHN) and other severe complications including neurological, ocular, and cutaneous.



Ageing and immune system decline due to immunocompromising/chronic conditions **increases the risk of HZ**. Consequently, 1 in 3 people will develop HZ in their lifetime<sup>3</sup>.



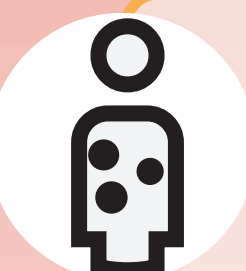
The **incidence** of HZ has been increasing over time and with age in European countries<sup>4</sup>.

In **Germany**, the annual HZ incidence is about

**9.97** for 60-64 years of age (YoA)

**7.72** for 50-59 YoA

per 1,000 persons<sup>5</sup>.



### Burden of HZ

HZ and its complications impact the patient's quality of life and inflict a humanistic as well as an economic burden due to disease treatment costs<sup>6,7</sup>.



### Impact of HZ on work

HZ has a negative impact on the quality of life and on work productivity<sup>8</sup>. A HZ episode leads to 3.95 days of absence from work and a 10.55-day loss due to a decrease in productivity following the HZ episode<sup>8</sup>.

Absenteeism  
**3.95**

Presenteeism  
**10.55**



### Recombinant zoster vaccine

Recombinant Zoster Vaccine (RZV) is indicated in adults of  $\geq 50$  YoA and those  $\geq 18$  YoA at an increased risk of HZ.

**WE ASSESSED THE PUBLIC HEALTH AND BUDGET IMPACTS OF VACCINATION WITH RZV TO AUSTRIAN HEALTHCARE PAYERS AND TO EMPLOYERS, RESPECTIVELY, OVER A 10-YEAR PERIOD.**

## METHODS



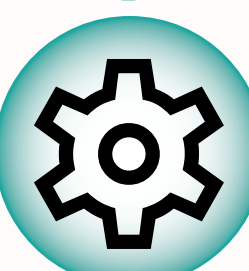
### Model structure and inputs

- ◆ **Model:** multi-cohort Markov
- ◆ **Population:** 1,000 employees aged 50-64
- ◆ **Strategies:** RZV vs no vaccination
- ◆ **Horizon:** 10 years
- ◆ **Vaccine coverage:** 80% (1st and 2nd dose)
- ◆ **Costs:** not discounted, in €2021

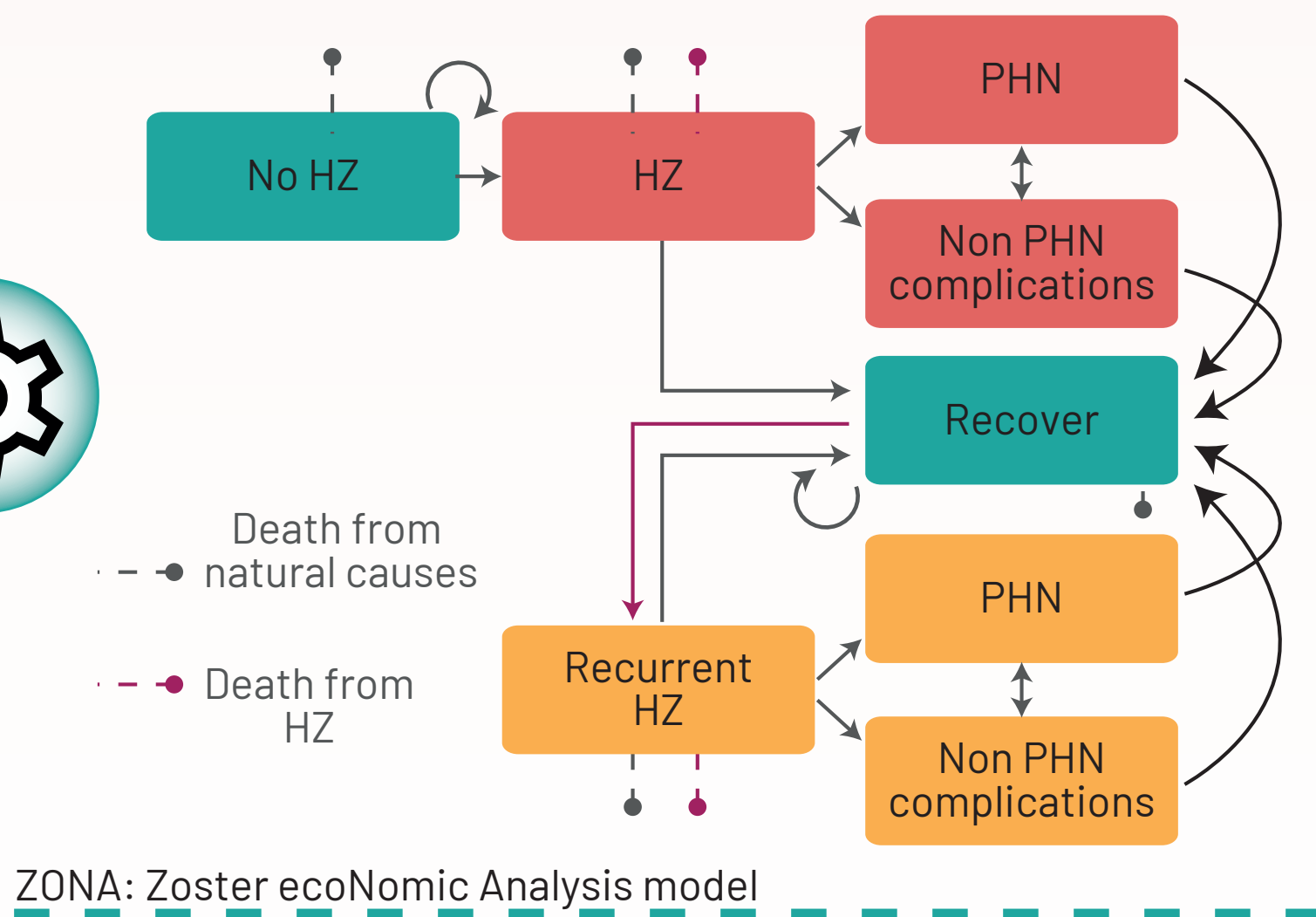


### Outcomes

- ◆ Cases of HZ, PHN, non-PHN complications
- ◆ Healthcare resource Use
- ◆ Direct medical costs
- ◆ Number of days of absenteeism and presenteeism
- ◆ Indirect costs
- ◆ Not discounted

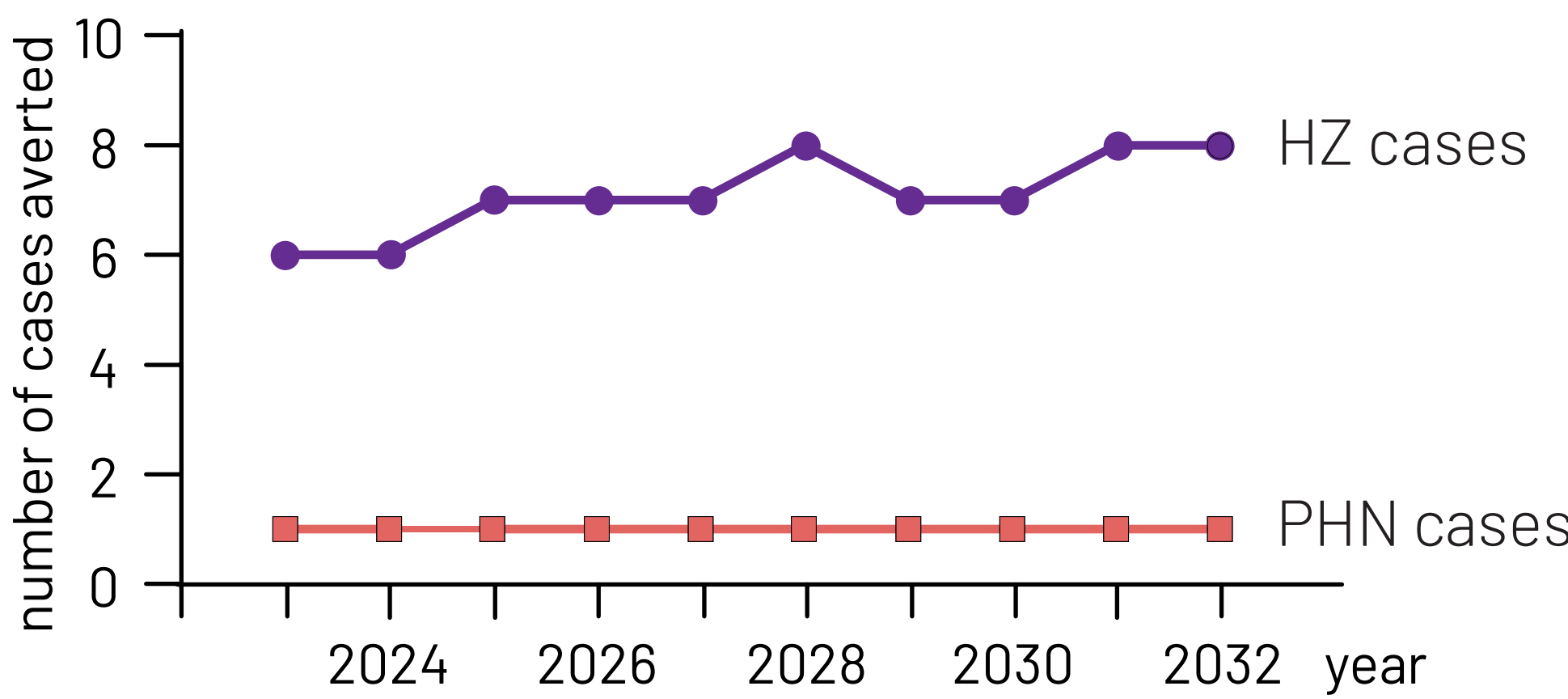


### Schematic overview of ZONA model

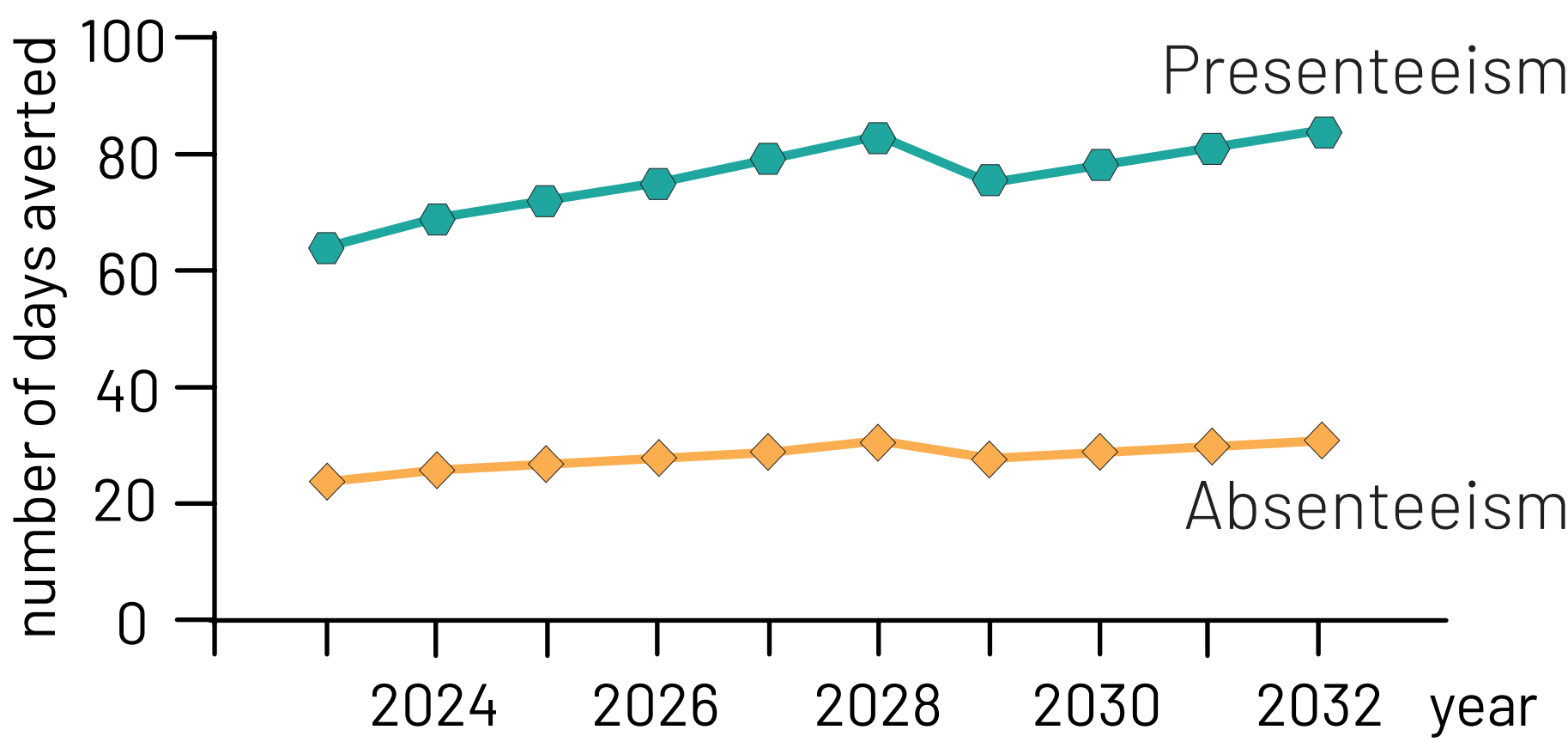


## RESULTS

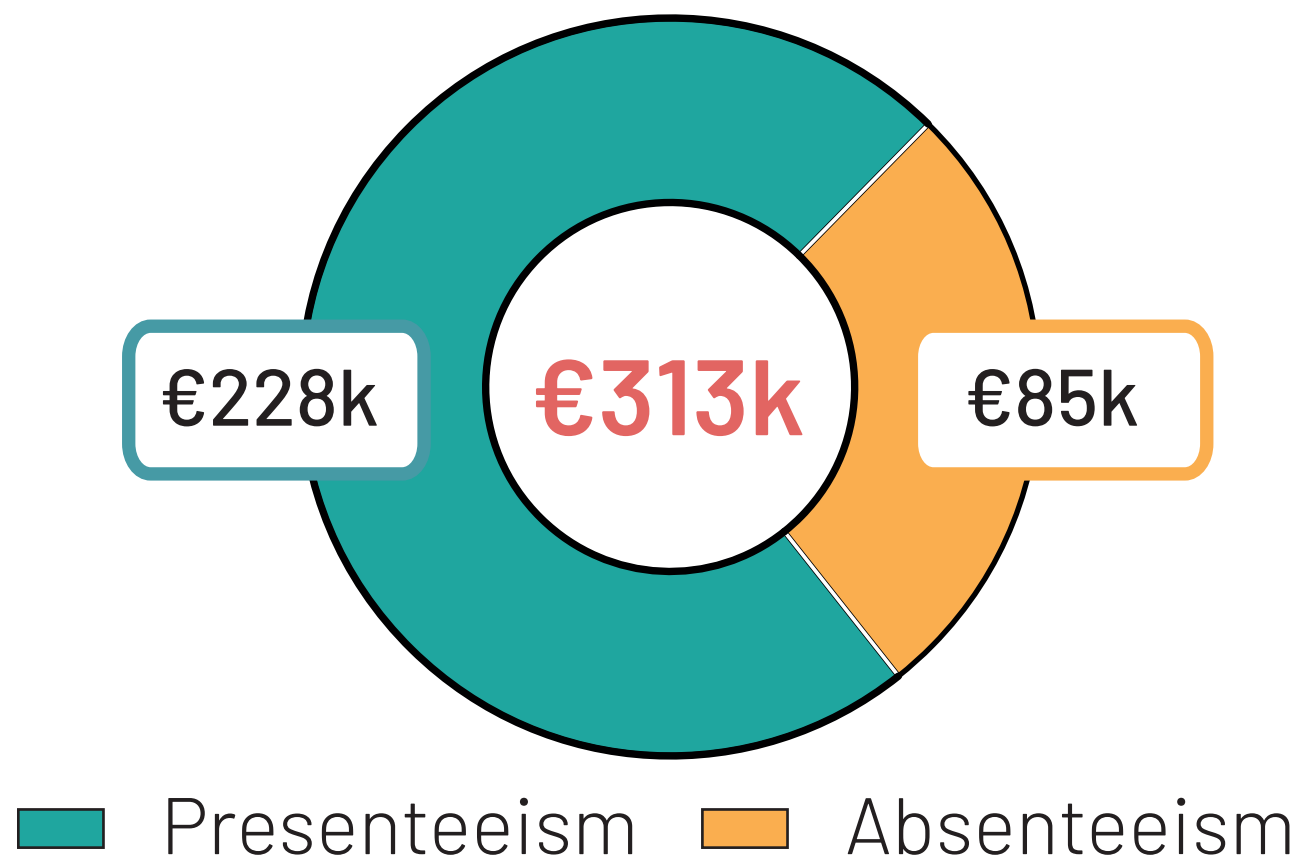
Vaccinating 1,000 persons aged 50-64 YoA with a vaccine coverage of 80% would **prevent 72 HZ cases, 10 PHN and 9 other non-PHN complications**



Vaccinating 1,000 persons aged 50-64 YoA with a vaccine coverage of 80% would reduce productivity loss by **averting 1,044 days of absenteeism and presenteeism**



Without vaccination the **total costs** related to productivity loss would be €313k



## CONCLUSIONS



The introduction of a RZV program by companies in Austria could enable employees to stay healthy and productive for longer. While this analysis focused on benefits over 10 years, studies predict lifetime RZV vaccine efficacy<sup>9</sup>.



More research is needed on Austrian absenteeism and presenteeism following HZ as this can vary across countries. A limitation of this study is the lack of presenteeism data following HZ in Europe, to our knowledge. Our analysis did not also take into account indirect costs related to vaccine adverse events.



With a rapidly growing older adult working population, vaccines can play an increasingly important role in maintaining good health, quality of life and productivity.