

Shadow cost of systemic corticosteroids-related adverse events in ulcerative colitis: a pharmacoeconomic evaluation

Poster no. EE211



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Background

- Long-term corticosteroid (CS) exposure is associated with significant safety concerns, mainly insomnia, mood disorder, hypertension, weight increase, diabetes and osteoporosis, and a negative impact on healthcare costs and quality of life.¹⁻⁶

Objective

- The objective of this analysis was to assess the pharmacoeconomic consequences of adverse events due to treatment with systemic CS in patients with ulcerative colitis and to evaluate the potential economic impact of reducing CS use.

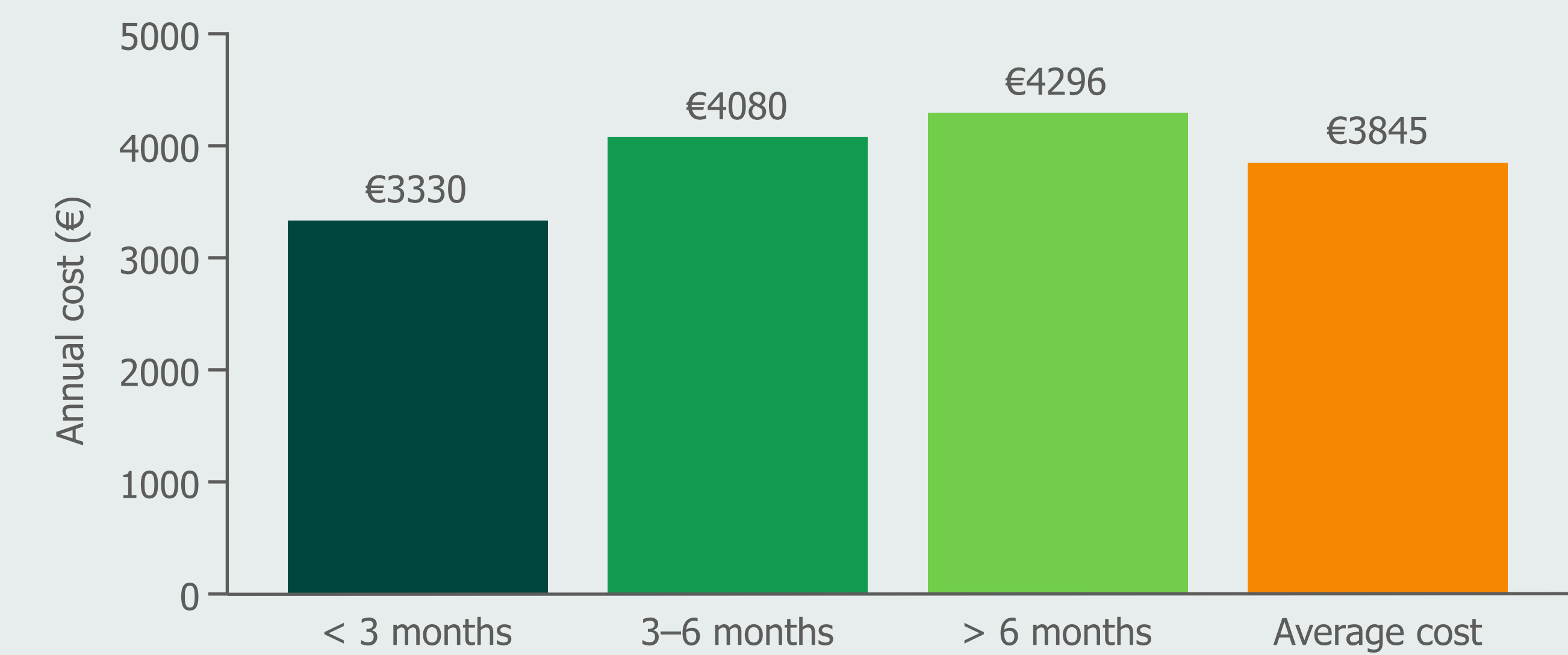
Methods

- A budget impact model was developed and analyses were carried out from the perspective of the Italian National Health Service, with a 10-year time horizon.
- A literature review was carried out to find the input data for the model.
 - The review searched for epidemiologic data, duration and exposure to systemic CS treatment, type and frequency of CS-related adverse events and healthcare costs associated with the development and management of adverse events.
- Three distinct treatment groups were defined by duration of CS use: < 3 months, 3–6 months and > 6 months.
- The annual cost per patient related to adverse event management was calculated for each group.
 - This enabled the impact of adverse events over a 10-year time horizon to be obtained.
- Results were expressed at 3, 5 and 10 years.
- To test the robustness of the results, a sensitivity analysis was carried out by changing the main input data by \pm 20%.
- Finally, simulation scenarios were used to assess the economic impact of 20%, 35% and 50% reductions in CS use.

Results

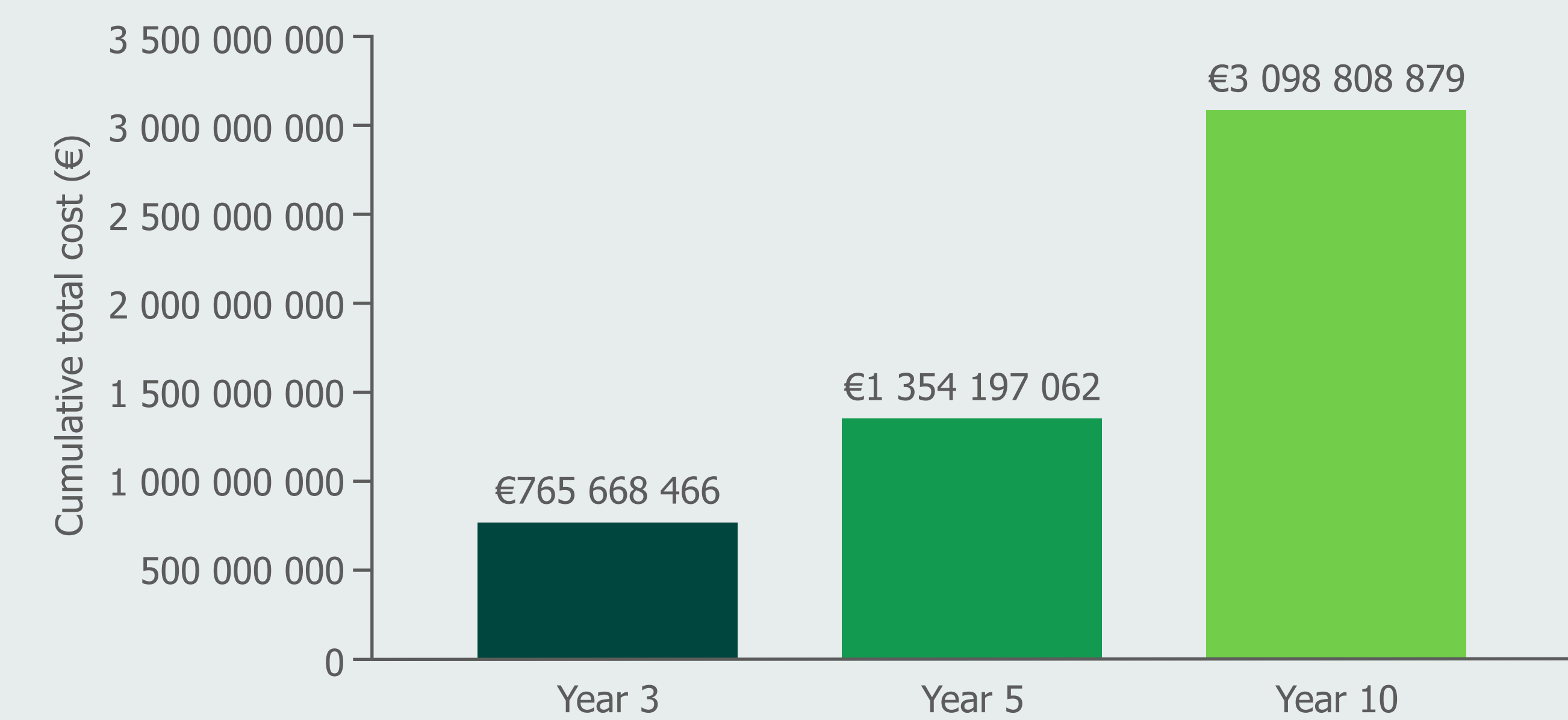
- It is estimated that the Italian population treated with systemic CS will increase from 62 320 to 98 875 patients in 10 years if there is no change in the current treatment trend.
- The average annual cost per patient due to systemic CS-related adverse event management totalled to €3845 (**Figure 1**).
- The cumulative total cost of systemic CS treatment was estimated to be €765.7 million after 3 years, €1.354 billion after 5 years and €3.099 billion after 10 years (**Figure 2**).

Figure 1. Annual cost per patient due to CS-related adverse event management based on treatment duration.



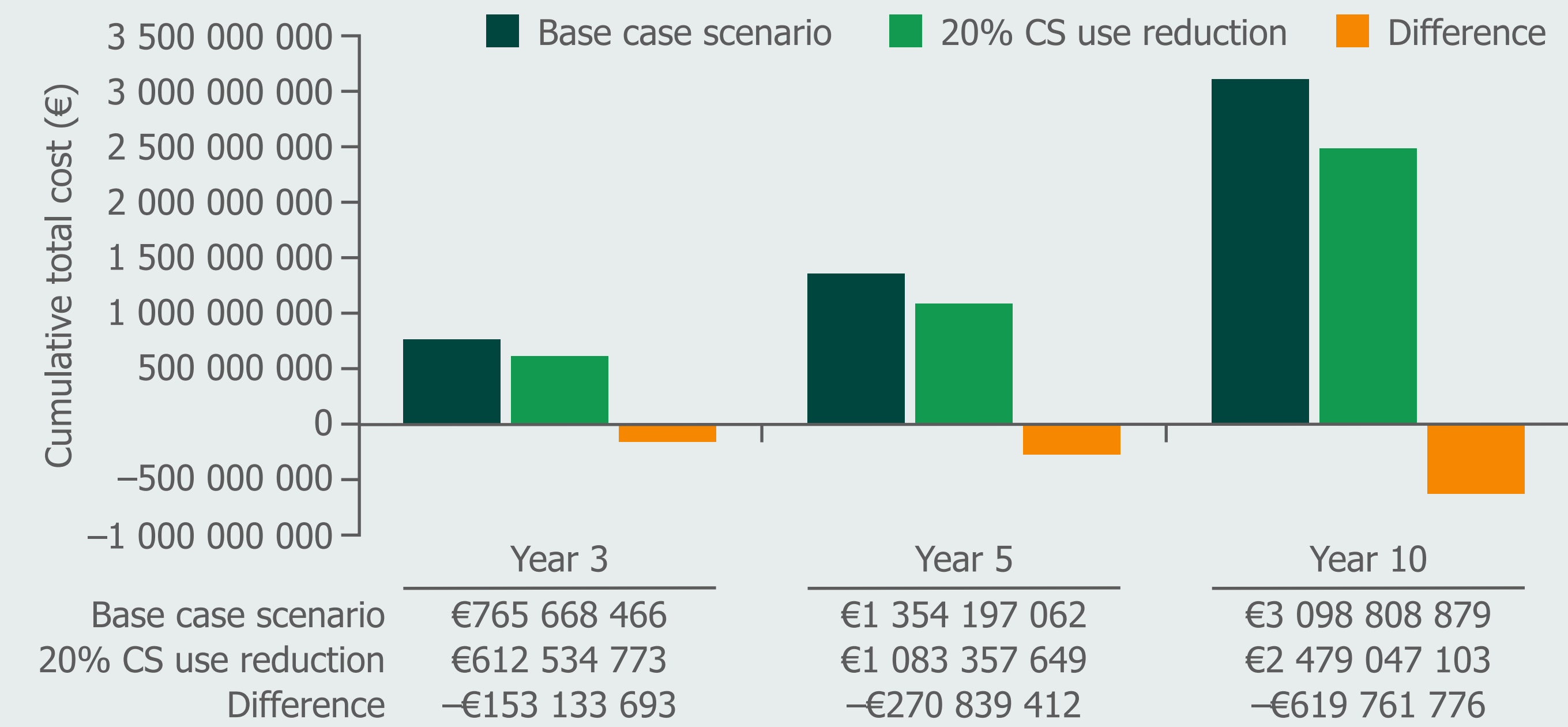
CS, corticosteroid.

Figure 2. Cumulative total cost: base case scenario.



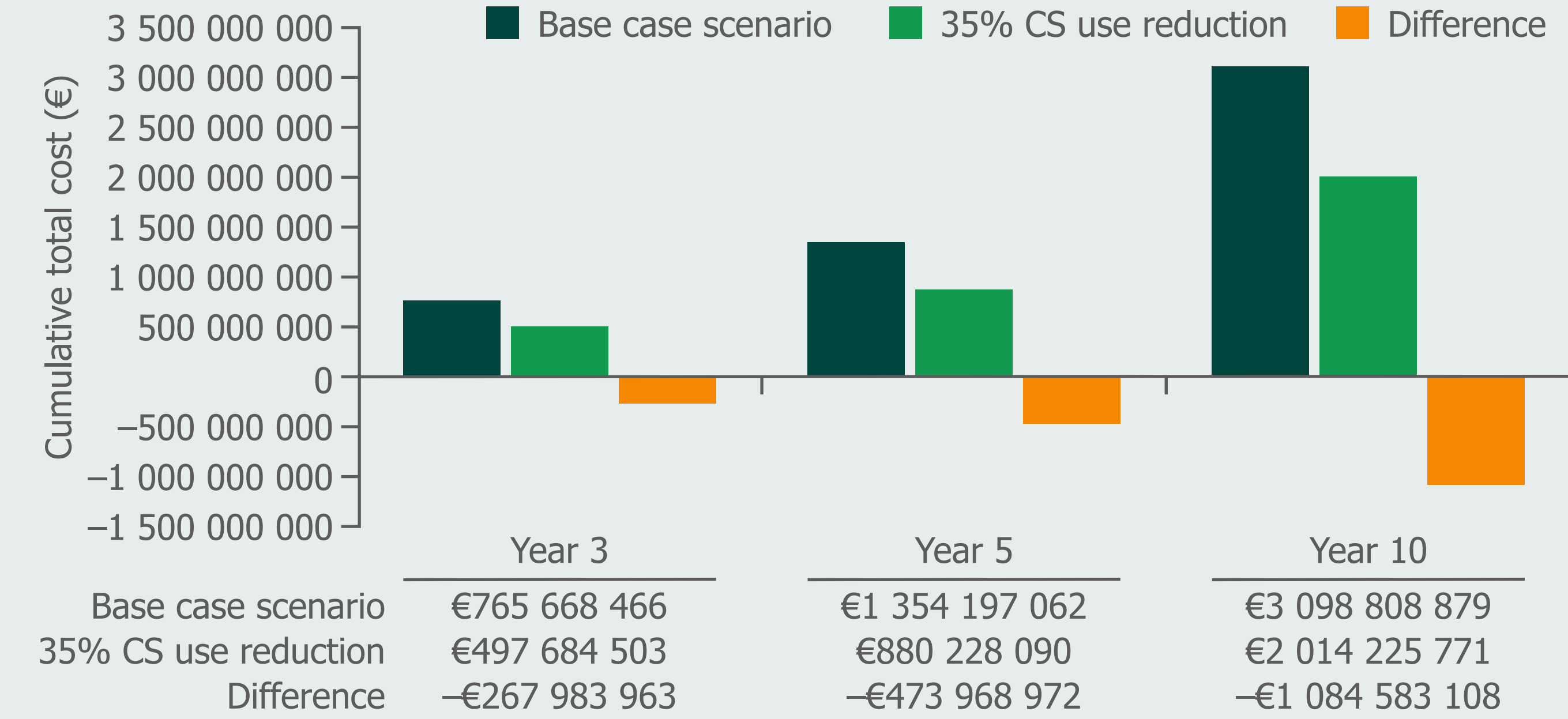
- A 20% reduction in systemic CS use could generate savings of approximately €153.1 million, €270.8 million and €619.8 million after 3, 5 and 10 years, respectively (**Figure 3**).
- Reductions in systemic CS use of 35% could result in savings of approximately €268.0 million, €474.0 million and €1.085 billion at 3, 5 and 10 years, respectively (**Figure 4**).
- In the case of a 50% reduction in systemic CS use, savings were estimated to be approximately €382.8 million, €677.1 million and €1.549 billion at 3, 5 and 10 years, respectively (**Figure 5**).

Figure 3. Cumulative total cost: simulation scenario of 20% CS use reduction versus base case scenario.



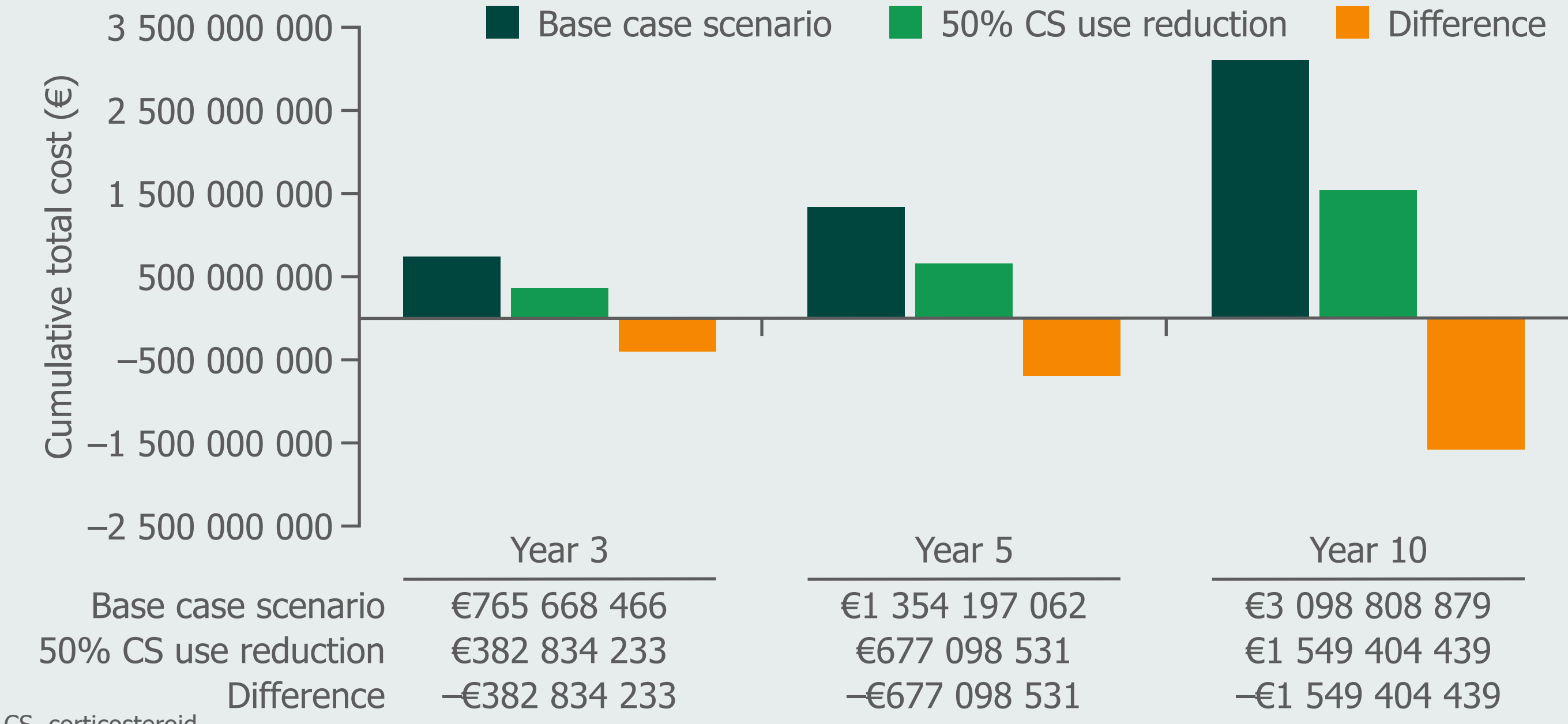
CS, corticosteroid.

Figure 4. Cumulative total cost: simulation scenario of 35% CS use reduction versus base case scenario.



CS, corticosteroid.

Figure 5. Cumulative total cost: simulation scenario of 50% CS use reduction versus base case scenario.



CS, corticosteroid.

Discussion

- The results highlight the significant impact on healthcare costs caused by systemic CS-related adverse events and the potential benefits of reducing CS treatment over time in favour of more innovative treatments with a steroid-sparing effect, which would be of interest to evaluate in real-world studies.

Disclosures

GLC and GMB are employees of Pavia University and employees of S.A.V.E. Studi Analisi Valutazioni Economiche Srl. SDM, CM and MCV are employees of S.A.V.E. Studi Analisi Valutazioni Economiche Srl. EV is an employee of Galapagos Biopharma Italy Srl.

Acknowledgements

- This study was funded by Galapagos Biopharma Italy Srl (Milan, Italy) and conducted by S.A.V.E. Studi Analisi Valutazioni Economiche Srl (Milan, Italy).
- Editorial support for the development of this poster was provided by PharmaGenesis London, London, UK, and funded by Galapagos NV (Mechelen, Belgium).

References

- Morin C, Fardet L. *Clin Rheumatol* 2015;34:2119–26.
- Troncone E, Monteleone G. *Expert Opin Drug Saf* 2017;16:779–89.
- Salice M et al. *Expert Rev Gastroenterol Hepatol* 2019;13:557–61.
- Cross RK. *Inflamm Bowel Dis* 2017;23:1689–701.
- Wilke T et al. *Clin Ther* 2020;42:130–43.e3.
- Raine T et al. *J Crohns Colitis* 2022;16:2–17.