Time and Cost Savings from Adopting an Alternative Dosing Schedule with Pembrolizumab for Patients with Advanced Melanoma in Greece

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BACKGROUND

- Melanoma is one of the most aggressive malignancies with an **increasing trend in incidence and mortality rates** in Greece[1].
- Both pembrolizumab and nivolumab are immunotherapies that are currently approved for the treatment of multiple indications in Greece, including **advanced melanoma**.
- **Efficiency** in infusion centers and **reducing** patients' **waiting times** are key challenges faced by oncology programs and institutions. Studies have highlighted the importance of **addressing** these challenges to **enhance patient care[2]**.
- Furthermore, a study conducted by Kaitelidou et al.[3] has shown that **waiting times** represent a significant portion of the time spent in the hospital before **starting treatment** in Greece
- In March 2019, the European Medicines Agency (EMA) gave a positive recommendation for an alternative dosing scheme of 400 mg every 6 weeks (Q6W) for pembrolizumab monotherapy across all approved adult indications, which effectively **reduces the number of in-hospital admissions by 50% compared to what was** required by the previous dosing schedule.
- Implementing the Q6W dosing regimen is expected to **reduce the number of infusions** required throughout the treatment course, which in turn will potentially have a decreasing effect **on costs and time** for both patients and healthcare providers.

AIM

The objective of this study is to evaluate the impact of the Q6W, pembrolizumab dosing schedule - for the treatment of advanced melanoma in Greece - on costs and time from both the patients' and hospitals' perspective.

METHODOLOGY

Description of the tool

A cost-minimization model was developed to determine the expected number of infusions and the associated **time and monetary costs** per patient with advanced melanoma treated with **pembrolizumab Q6W** or nivolumab and ipilimumab (nivo/ipi) combination (4 cycles of nivo/ipi every three weeks followed by nivolumab monotherapy every 4 weeks).

Data sources

Healthcare resource utilization costs, indirect costs, travel time and hospital time per infusion were derived from the literature, whereas treatment duration for nivo/ipi and pembrolizumab was obtained from CHECKMATE-067 and KEYNOTE-006 clinical trials, respectively.

RESULTS

Hospital's perspective

The results indicated that from a hospital's perspective switching to pembrolizumab Q6W will generate cost savings of **€16,864.47** (incorporating drug acquisition and healthcare resource utilization costs) (**Figure 1**) and time savings of **7.7 hours per patient** compared with nivo/ipi combination (**Figure 2**).

Patient's perspective

From a patient's perspective, savings are estimated at **€149.94** (**Figure 3**) and **22 hours** (**Figure 4**) per patient receiving pembrolizumab Q6W compared with a patient receiving nivo/ipi combination.

Figure 1. HCP perspective: Total Infusion-related Costs per patient

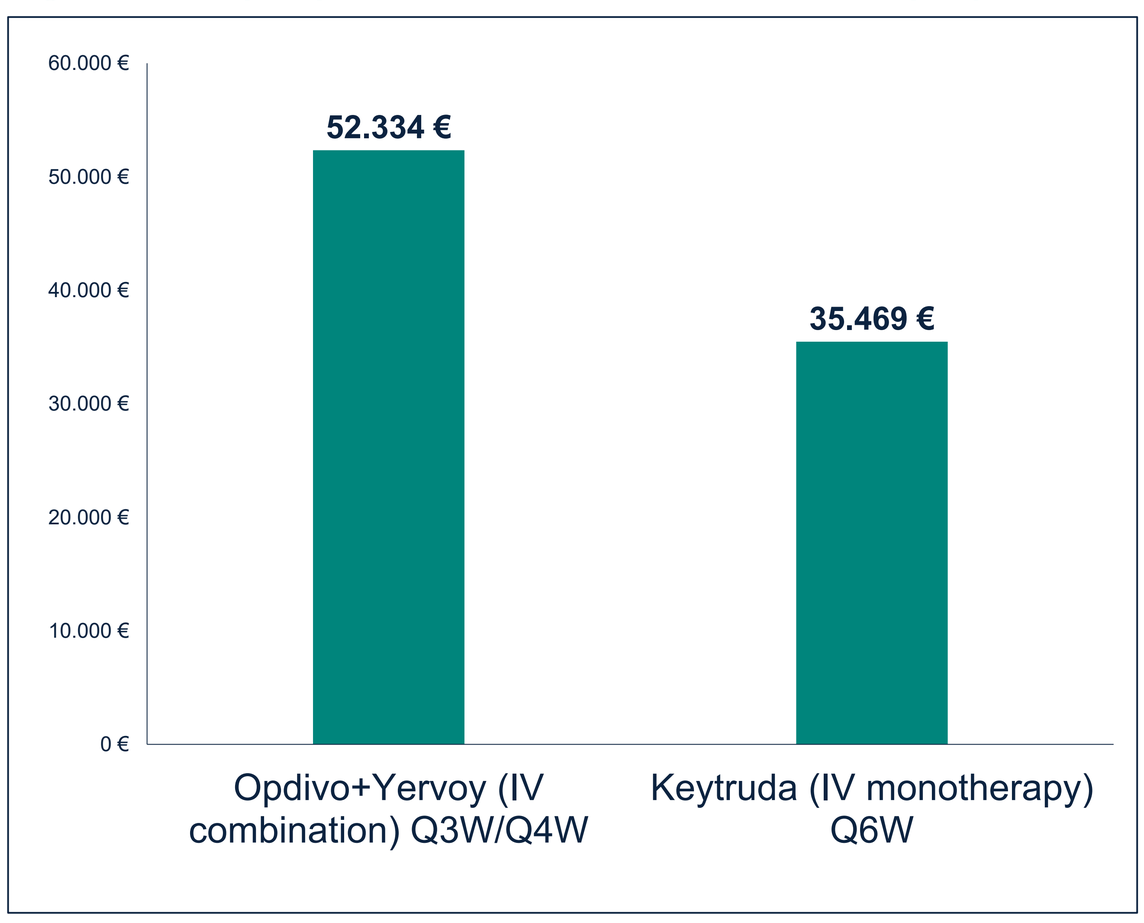


Figure 2. HCP perspective: Total Infusion-related time per patient

Figure 3. Patient perspective: Total Costs by cost component per patient

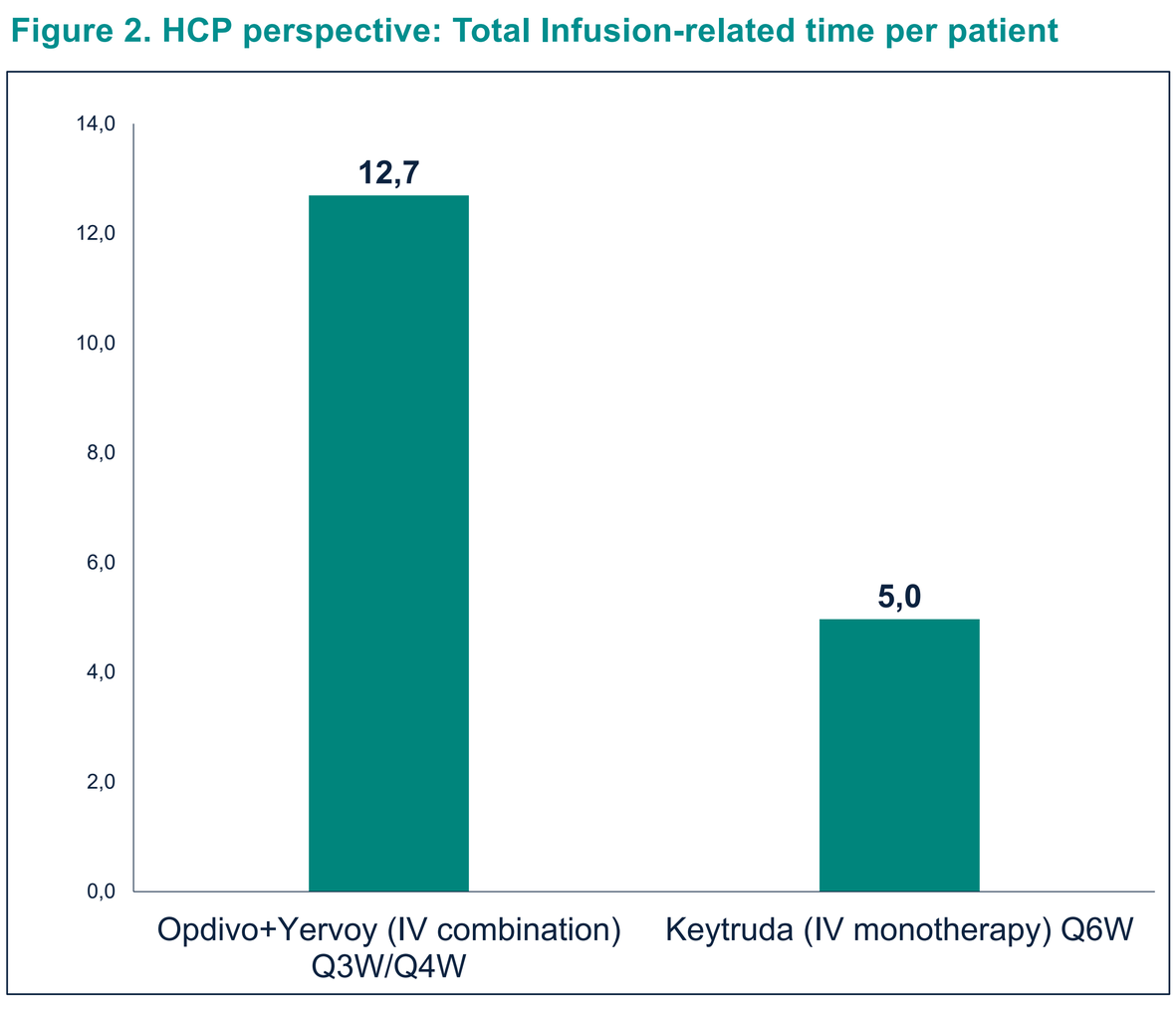
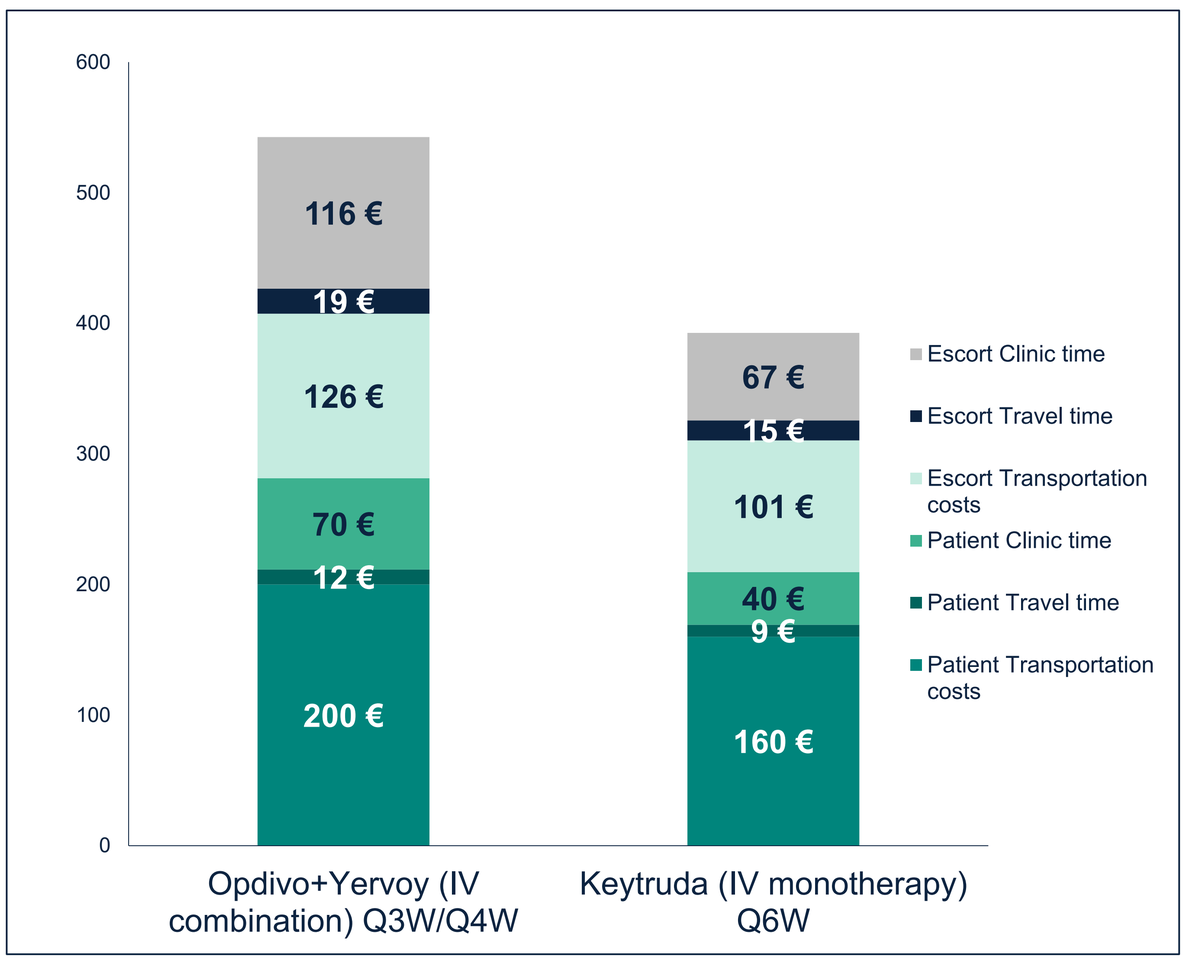


Figure 4. Patient perspective: Total Costs by cost component per patient



CONCLUSIONS

Adopting the new **six-weekly** dosing schedule for pembrolizumab offers **multiple benefits**, including **reduced hospital visits** for drug administration. This not only saves **time** and **resources** for patients and hospitals but also increases hospitals' **capacity**, **operational efficiency**, and **productivity**. This aspect holds particular importance **for Greek patients**, especially those residing in **remote areas** or **islands**, as transportation to the nearest hospital can be **challenging** due to Greece's unique **geography.**

REFERENCES

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