

Health care costs of ipilimumab in patients with advanced cutaneous melanoma in Dutch clinical practice

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Objective

There is limited evidence on costs associated with ipilimumab. We investigated healthcare costs of all Dutch patients with advanced cutaneous melanoma who received ipilimumab in real-world clinical practice and compared costs across subgroups of patients.

Figure 1. Total healthcare costs by subgroup

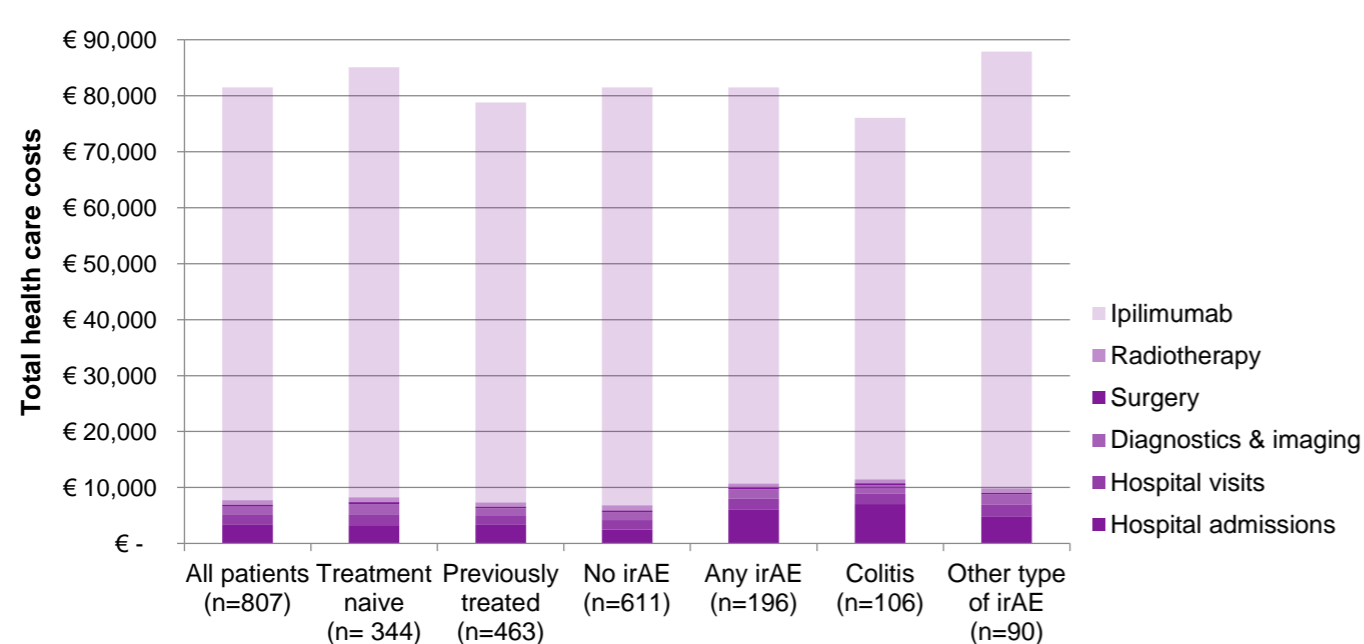


Figure 2. Monthly costs (excluding ipilimumab) by subgroup

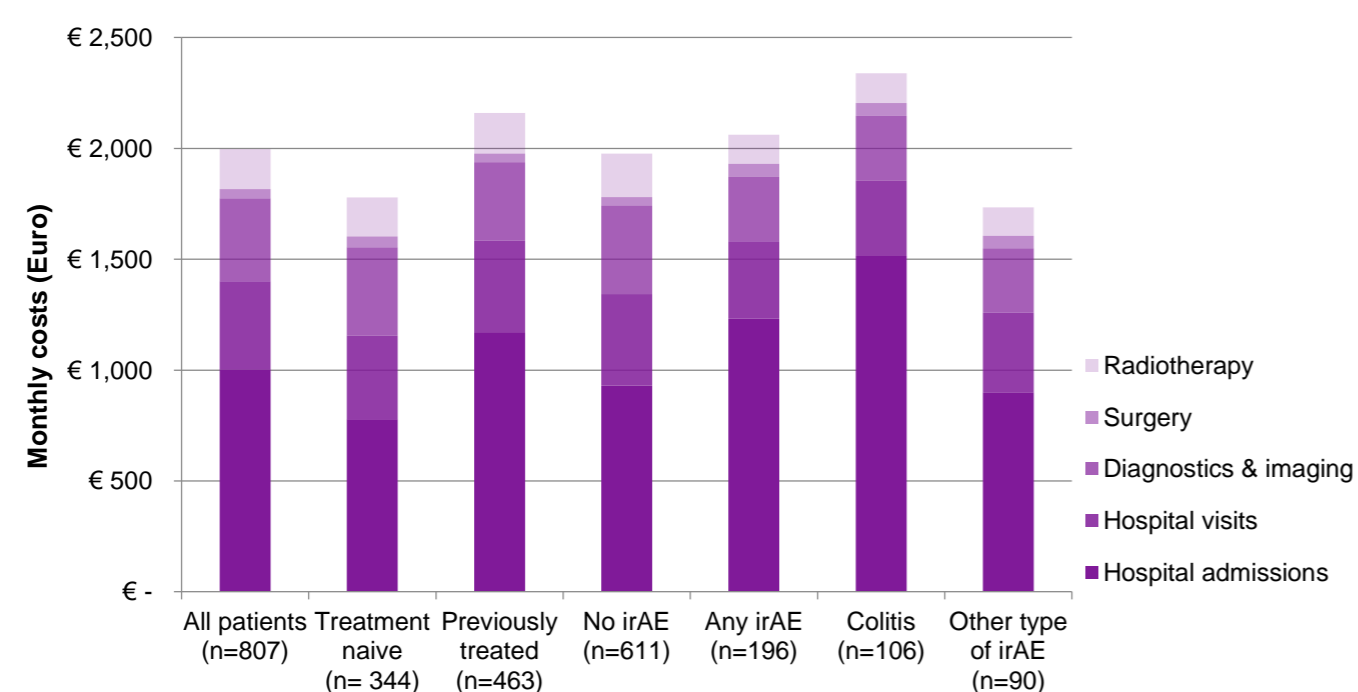
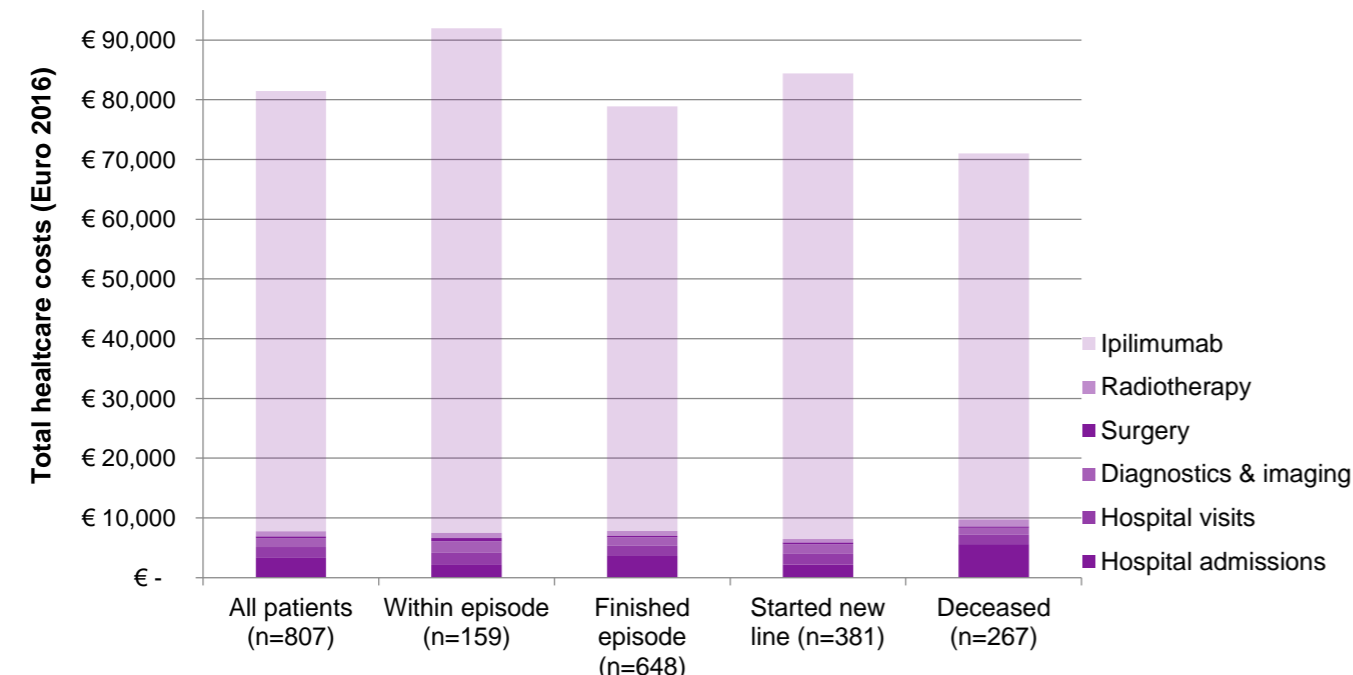


Figure 3. Total healthcare costs by follow-up status



Episode duration

Episode duration was computed from start of ipilimumab until start of a next line of systemic treatment, death, or last date of follow-up. Mean (median) episode duration was 6.27 (4.61) months. Treatment naïve patients had a slightly longer episode duration compared to previously treated patients (mean: 6.62 vs. 6.02 months). Patients with an irAE had a longer episode duration compared to patients with no irAE (mean: 7.39 vs. 5.92 months). Patients with colitis had a shorter episode duration compared to patients with other types of irAEs (mean: 6.91 vs. 7.96).

Methods

All data were retrieved from the nation-wide Dutch Melanoma Treatment Registry. Total costs were determined from start of ipilimumab until start of a next line of systemic treatment, death, or last date of follow-up (ipilimumab episode). Healthcare costs were determined by applying unit costs (Euro 2016) to individual patient resource use. Costs were compared for subgroups stratified according to treatment status (treatment naïve versus previously treated), immune related adverse event (irAE; no irAE versus any irAE, colitis, and irAE other than colitis), and follow-up status (alive within episode [i.e. censored] versus finished episode [i.e. complete follow-up: either started a new line of treatment or deceased]).

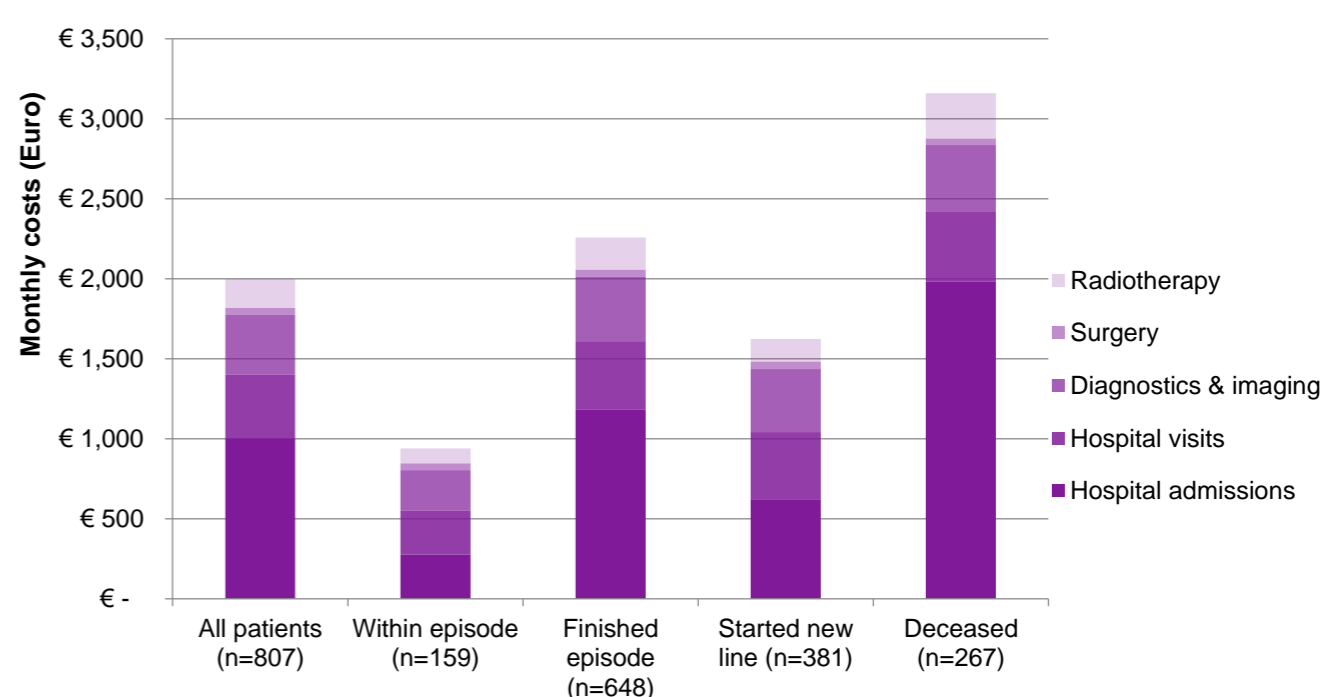
Conclusions

- Healthcare costs associated with ipilimumab treatment are considerable in advanced cutaneous melanoma.
- Costs are mainly related to drug costs of ipilimumab.
- Total costs and the distribution of the costs varies significantly across subgroups.

Results

Average total healthcare costs amounted to €81,484, but varied widely (range: €18,131 - €160,002). Drug costs of ipilimumab were by far the most important cost-driver accounting for 85% to 92% of total costs across all subgroups (Figure 1). Most patients (65%) received all 4 cycles of ipilimumab. The average monthly costs for resources other than ipilimumab were €1,997 (Figure 2). More than half of the patients (56%) was admitted to a hospital (mean: 11.7 days of admission). Treatment naïve patients had higher total costs compared to previously treated patients (€85,081 vs. €78,811). Although patients with colitis had higher costs for resource use other than ipilimumab (€11,426) compared to patients with other types of irAEs (€9,850) and patients with no irAE (€6,796), they had lower total costs due to lower costs for ipilimumab (€76,075 vs. €87,882 and €81,480, respectively). Most patients (80%) finished the ipilimumab episode. Total costs were lower for patients who deceased compared to patients who progressed to a next line of treatment (€71,030 vs. €84,426; Figure 3). The 20% of patients still alive within the ipilimumab episode had higher total costs compared to patients who finished the episode (€91,989 versus €78,906), but lower monthly costs for resources other than ipilimumab (€939 vs. €2,257; Figure 4) mainly due to a longer episode duration (11.21 vs. 5.06 months).

Figure 4. Monthly costs (excluding ipilimumab) by follow-up status



Patients

A total of 807 patients were diagnosed with advanced cutaneous melanoma between July 2012 and July 2015 and received ipilimumab in Dutch practice. Median age was 61 years, most patients were male (59%), diagnosed with stage M1c (75%), had an ECOG performance status of 0-1 (85%), and had a normal LDH level (74%). Patients were more often previously treated (57%) than treatment naïve (43%). Most patients had no irAE (76%). Out of the patients had an irAE, 54% had colitis (n=106). Other irAEs (n=90) were hypophysitis (19%), skin related (8%), adrenal insufficiency (8%), thyroiditis (8%), elevated liver enzymes (6%), neurological (3%), bone marrow suppression (3%), and other (17%). Baseline characteristics were comparable across subgroups.

