Health state utilities of advanced melanoma patients treated in clinical practice in the era of novel immuno- and targeted therapies

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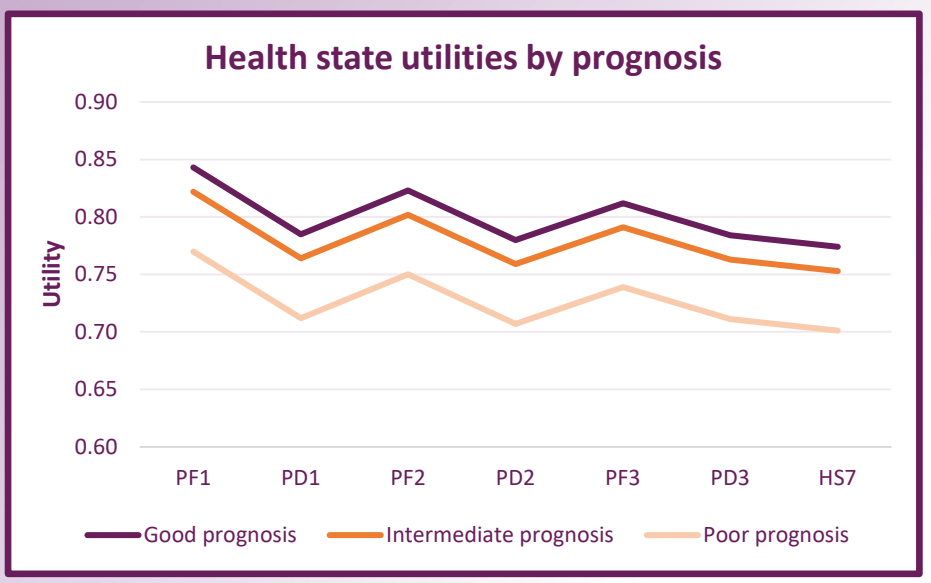
Objective

To account for the impact of treatment on health-related quality of life (HRQoL), health economic models require insights into changes in HRQoL during the disease course. We estimated health state utilities of advanced (unresectable stage IIIc/IV) melanoma patients treated with systemic treatment in clinical practice in the era of novel immuno- and targeted therapies.

Patients

Out of 3,665 cutaneous and mucosal melanoma patients in the DMTR who were never treated in a trial, 538 patients completed EQ-5D questionnaires: 182 and 356 patients completed 528 and 1263 EQ-5D-3L and EQ-5D-5L questionnaires, respectively. Patients were on average 61 years and 59% was male; 54% had a good prognosis, 20% an intermediate prognosis and 27% a poor prognosis.



Conclusions

Health state utilities of patients with advanced melanoma treated with systemic treatment in clinical practice are better in patients with a good prognosis. Irrespective of prognosis, quality of life is higher during progression-free periods compared to progressive disease periods.

Methods

Data were retrieved from the nation-wide Dutch Melanoma Treatment Registry of patients who received systemic treatment in clinical practice (data cut-off May 2020). Patients either completed the EQ-5D-3L (included 2014 to mid-2016) or the EQ-5D-5L (included from mid-2016). EQ-5D-5L utilities were estimated using the Dutch value set. EQ-5D-3L scores were first mapped to EQ-5D-5L utilities using the eq5dmap command in STATA and then transformed to Dutch utilities. Using a random-effects model to account for panel data, we estimated (pooled 3L and 5L) utilities for seven health states including three progression-free (PF1-PF3) and three progressive disease (PD1-PD3) health states and one health state after the third progression (HS7) to assess HRQoL in subsequent treatment lines. A good prognosis was defined as a normal serum lactate dehydrogenase (LDH) level, an Eastern Cooperative Oncology Group (ECOG) performance status of 0 or 1 and no or asymptomatic brain metastases. An intermediate prognosis was defined as LDH elevation less than or equal to twice the upper limit of normal, an ECOG performance status of 0 or 1 and no or asymptomatic brain metastases. Lastly, a poor prognosis was defined as either an LDH elevation larger than twice the upper limit of normal, or an ECOG performance status of 2, 3 or 4, or symptomatic brain metastases.

Results

Quality of life was better in progression-free periods compared to progressive disease periods. Compared to patients with a good prognosis, patients with an intermediate (-0.021 [95%CI:-0.057-0.016]) and poor (-0.073 [95%CI:-0.106- -0.039]) prognosis had lower health state utilities.

	Utility good prognosis	95% CI
Progression free 1 (PF1)	0.843	0.823 - 0.863
Progressive disease 1 (PD1)	0.785	0.753 - 0.818
Progression free 2 (PF2)	0.823	0.799 - 0.846
Progressive disease 2 (PD2)	0.780	0.737 - 0.823
Progression free 3	0.812	0.778 - 0.845
Progressive disease 3 (PD3)	0.784	0.718 - 0.851
After third progression (HS7)	0.774	0.720 - 0.828

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