Patient Preferences for Stages II/III and Stage IV Melanoma Treatments in the UK

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Introduction

Melanoma is a type of cancer characterised by malignant transformation of melanocytes[1]. In the UK, 16,744 new cases were diagnosed each year between 2016 and 2018, the majority of which were early-stage diagnoses[2].

Immune checkpoint inhibitors (ICI) and combined BRAF- and MEK-targeted therapies (TT) are predominantly used as systemic therapies in clinical practice in both adjuvant and metastatic setting and have demonstrated significant improvements in survival outcomes[3,4].

Patient preference for treatment is crucial for developing a personalised treatment plan. Different factors (such as efficacy, tolerability, route of administration and dosing schedule) may play a role in a patient's preference for a therapy.

The right treatment sequence and combination strategy can be a complex decision that depends on several factors, including the stage of the disease, genetic mutations, patient and disease characteristics, eligibility, potential side effects and route of administration[5].

To our knowledge, this is the first UK study to assess the treatment preference of patients with melanoma, both in the adjuvant and metastatic setting

Objective

To understand patient preferences for treatment attributes in stage II/III and stage IV melanoma in the UK and determine predictive factors for treatment preferences in different subpopulations.

Methods

Adult (18+) patients with self-reported stage II–IV melanoma, or in remission of a stage II–IV melanoma as of September 2020, at the time of the study, were recruited **via a multi-channel direct-to-patient approach to complete a 30-minute online survey** between November 17th, 2022, and March 3rd, 2023, comprising two discrete choice experiments (DCE) for adjuvant (Adj-DCE) and metastatic (Met-DCE) treatments.

Each DCE was presented to all patients regardless of their disease stage and included a series of choice tasks between two hypothetical treatments comprising seven attributes for clinical endpoints of efficacy, safety, and dosing regimen from randomized clinical trials. The attribute levels were based on clinical data from key pivotal studies of BRAF/MEK inhibitors or immune checkpoint inhibitors.

Hierarchical Bayesian modeling was used to estimate preference weights for each attribute level from which the relative importance (RI) for each attribute was derived. RI demonstrates the contribution each attribute makes to the total utility of a treatment profile and are shown as percentages, reflecting the importance of each attribute, relative to the others included in the study. RIs are ratio-scaled; hence, an attribute with a RI of 20% is twice as important as an attribute with a RI of 10%.

Results

Patient characteristics

104 patients were recruited for this study.

Adj-DCE and Met-DCE were completed by 100 and 102 patients, respectively.

Women represented 49% of the sample.

Mean patient age was 51.9 years.

From the overall population, two thirds (67.3%) had resectable melanoma (stage II/III) whereas a third (32.7%) had reached a metastatic stage.

51% of the patients were suspected to have BRAF mutation.

Table 1: *Patients characteristics*

	Total (n=104)
Sex, n (%)	
Male	53 (51.0)
Female	51 (49.0)
Age (years)	
Mean (SD)	51.9 (11.2)
Most advanced stage of melanoma, n (%)	
Stage 2	19 (18.3)
Stage 3	51 (49.0)
Stage 4	34 (32.7)
Cancer free	-
Unknown	-
Stage of melanoma at the time of the survey, n (%)	
Stage 2	4 (3.8)
Stage 3	28 (26.9)
Stage 4	28 (26.9)
Cancer free	39 (37.5)
Unknown	5 (4.8)
Suspected BRAF status*, n (%)	
Mutated BRAF	53 (51.0)
Wild-Type BRAF	51 (49.0)

*Patients were qualified as BRAF mutated if they were able to self-report their biomarker status or were being treated with targeted therapies

DCE Findings

Adjuvant DCE

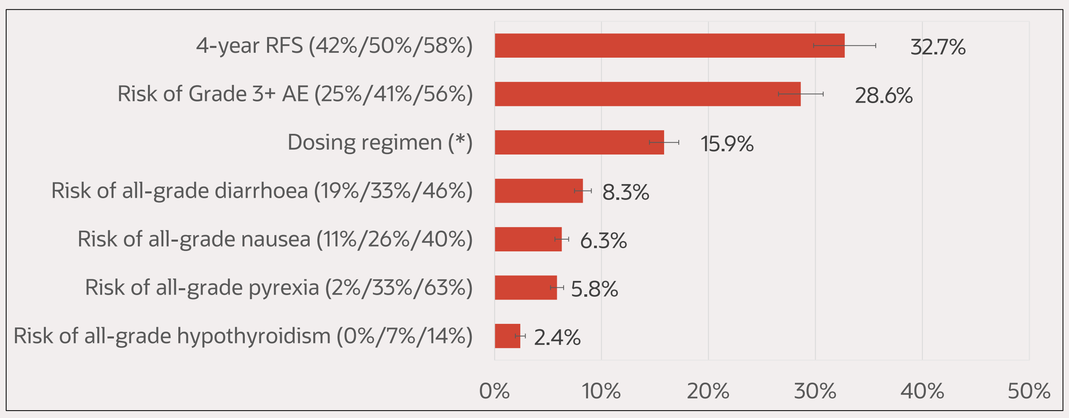
From the total sample (n=104), 100 patients completed the Adjuvant DCE and 102 completed the metastatic DCE.

In the adjuvant DCE group, the 4-year relapse-free survival (RFS) and risk of grade ≥3 adverse events (AE) had a RI of 32.7% and 28.6% respectively, followed by dosing regimen at 15.9% (Figure 1).

In subgroup analyses of melanoma setting, the efficacy attribute (4-year RFS) had a higher RI for stage IV versus stage II/III patients (41.8% vs 28.5%). While the risk of AE grade ≥3 had a higher RI in the patients in the adjuvant setting versus those with metastatic melanoma (Figure 2).

In the subgroup analysis of the BRAF status groups, only the 4-year RFS attribute had a significantly higher RI, when comparing patients with BRAF mutation versus those with BRAF wild-type (35.5% vs 29.7%, $p < 0.05$) (Figure 3).

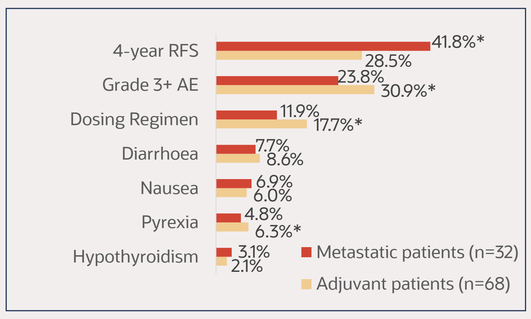
Figure 1: *Mean Attribute Relative Importance in Adjuvant DCE (n=100)*



Error bars show the 95% confidence interval **Pills twice a day/SC q3w/IV q4w/IV q6w/IV q3w for 4 doses then q12w*

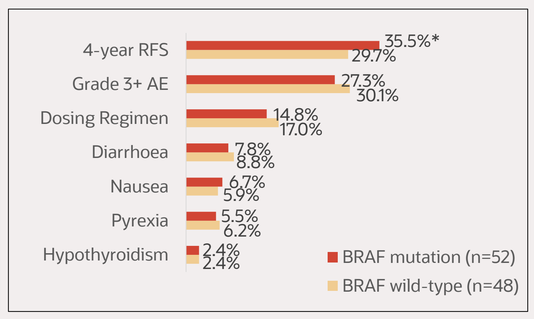
Information within parentheses denote the levels of each attribute presented to the patients in the treatment option of the DCE

Figure 2: *Mean Attribute Relative Importance in the Adjuvant DCE by Most Advanced Stage (n=100)*



*Significantly higher ($p < 0.05$) than the comparing group

Figure 3: *Mean Attribute Relative Importance in the Adjuvant DCE by BRAF Mutation and BRAF Wild-Type (n=100)*



*Significantly higher ($p < 0.05$) than the comparing group

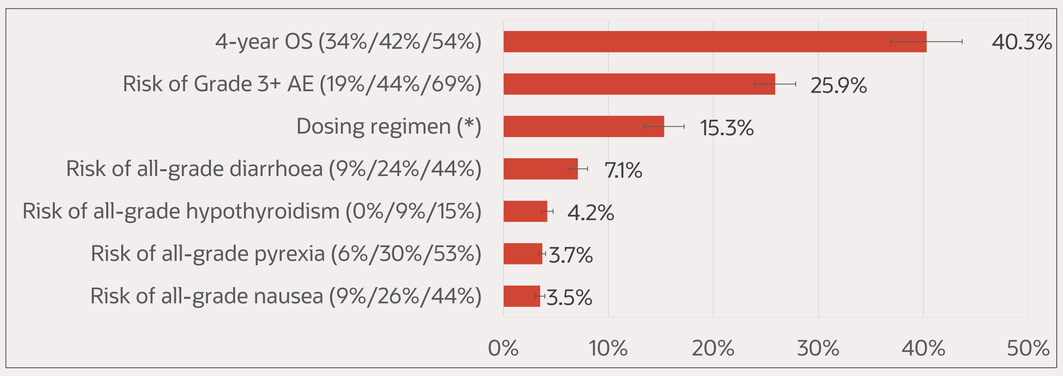
Metastatic DCE

In the metastatic DCE group, the RI for the 4-year overall survival (OS) and risk of grade ≥3 AEs was 40.3% and 25.9%, respectively, followed by dosing regimen (15.3%) (Figure 4).

In the subgroup analyses within the metastatic DCE, efficacy attributes had a higher RI for stage IV versus stage II/III patients (50.4% vs 35.5%) (Figure 5); similarly, patients with a BRAF mutation had a higher RI for efficacy attributes versus BRAF wild-type patients (44.2% vs 36.2%) (Figure 6).

The risk of AE grade ≥3 had a lower RI in patients with metastatic melanoma compared to patients in the adjuvant setting (19.5% vs 28.9%) (Figure 5). The risk of AE grade ≥3 had more importance in patients with BRAF wild-type compared with those with a BRAF mutation (28.5% vs 23.3%) (Figure 6).

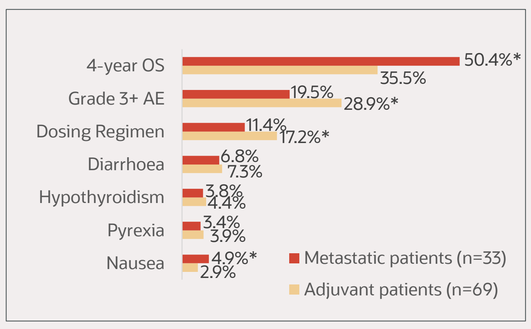
Figure 4: *Mean Attribute Relative Importance in Metastatic DCE (n=102)*



Error bars show the 95% confidence interval **Pills twice a day/SC q3w/IV q4w/IV q6w/IV q3w for 4 doses then q4w/IV q4w/IV q6w*

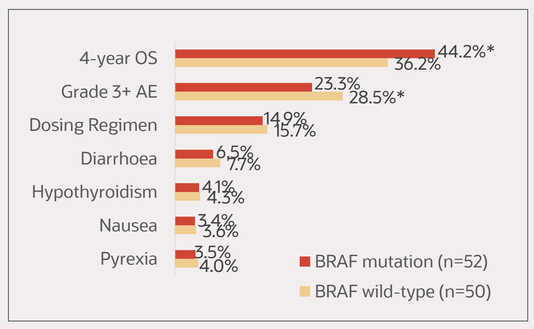
Information within parentheses denote the levels of each attribute presented to the patients in the treatment option of the DCE

Figure 5: *Mean Attribute Relative Importance in Metastatic DCE by Most Advanced Stage (n=102)*



*Significantly higher ($p < 0.05$) than the comparing group

Figure 6: *Mean Attribute Relative Importance in the Metastatic DCE by BRAF Mutation and BRAF Wild-Type (n=102)*



Conclusion

For patients treated for melanoma in the adjuvant setting, treatment preferences are correlated with the 4-year RFS , implying that therapies with better outcomes for efficacy (RFS) and AE profiles have a higher impact on the choice of a treatment from a patient's perspective. In both adjuvant and metastatic DCEs, patients in the metastatic setting placed higher importance on efficacy than patients in the adjuvant setting, whereas patients with resected disease placed a higher importance on safety compared to patients with metastatic disease.

When it comes to both adjuvant and metastatic DCEs, patients with a BRAF mutation placed higher importance on efficacy than patients with a BRAF wild-type .

These findings suggest that a patient's perception of treatment efficacy and safety may be influenced by the disease stage. This study helps to better understand how patients perceive different attributes associated with approved melanoma treatments in the UK.

References

1. What Is Melanoma Skin Cancer? | What Is Melanoma? Accessed September 6, 2023. *https://www.cancer.org/cancer/types/melanoma-skin-cancer/about/what-is-melanoma.html*
2. Melanoma skin cancer incidence statistics. Cancer Research UK. Published May 15, 2015. Accessed September 6, 2023. *https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/melanoma-skin-cancer/incidence*
3. Wolchok JD, Chiarion-Sileni V, Gonzalez R, et al. CheckMate 067: 6.5-year outcomes in patients (pts) with advanced melanoma. *JCO*. 2021;39(15_suppl):9506-9506. doi:10.1200/JCO.2021.39.15_suppl.9506
4. Pasquali S, Chiarion-Sileni V, Rossi CR, Mocellin S. Immune checkpoint inhibitors and targeted therapies for metastatic melanoma: A network meta-analysis. *Cancer Treatment Reviews*. 2017;54:34-42. doi:10.1016/j.ctrv.2017.01.006
5. Ascierto PA, Mandalà M, Ferrucci PF, et al. Sequencing of Ipilimumab Plus Nivolumab and Encorafenib Plus Binimetinib for Untreated BRAF-Mutated Metastatic Melanoma (SECOMBIT): A Randomized, Three-Arm, Open-Label Phase II Trial. *J Clin Oncol*. 2023;41(2):212-221. doi:10.1200/JCO.21.02961

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