Attitudes of Patients with Cutaneous Melanoma Towards Prognostic Testing Using Gene Expression Profiling

Lorrie-Beth Miley[1], Kelli Ahmed PhD[2], Jennifer J. Siegel PhD[2], Sonia K. Morgan-Linnell PhD[2], Kyleigh LiPira[1]

1.Melanoma Research Foundation; Washington, DC, USA; 2. Castle Biosciences, Inc. Friendswood, Texas

Background

› The 31-gene expression profile (31-GEP) test for cutaneous melanoma (CM) assesses gene expression measurements from formalin-fixed paraffin-embedded primary tumor tissue to predict risk of tumor recurrence or metastasis.
› The 31-GEP stratifies risk into one of three risk categories: low risk (Class 1A), intermediate risk (Class 1B/2A), and high risk (Class 2B) and has been validated in multiple prospective and retrospective studies[1-7].

Objective

› Understand patients' perspectives on prognostic and 31-GEP testing and whether patients experience decision regret after having 31-GEP testing performed.

Methods

› A 43-question online survey was distributed by the Melanoma Research Foundation from June 14, 2021, through August 2, 2021.
› Patients were asked a series of five validated questions that gauge patients' level of regret regarding the decision to undergo 31-GEP testing and the extent to which they experienced decision regret[8-9], which was scored on a scale of 1–5, 1 being no regret, 5 being high regret, and 3 neutral. Responses were limited to those self-reporting a melanoma diagnosis in or after 2014 (n=120), at which time 31-GEP prognostic testing became available.

Results

Table 1. Participant Demographics

| Demographics (n=120)	Total, n (%)	Tested, n	Not Tested, n	Unknown, n
Gender				
Male	19 (24.2%)	6	23	--
Female	90 (75%)	22	68	--
Prefer not to share	1 (0.8%)	0	1	--
Did you have DecisionDx testing?				
Yes	28 (23.3%)			
No	75 (62.5%)			
Unsure	17 (14.2%)			
Insurance coverage				
Commercial	84 (73.7%)	22	55	7
Commercial with MedAdvantage	6 (5.3%)	2	4	0
Medicare	21 (18.4%)	3	12	6
None	1 (0.9%)	0	1	0
I don't know	2 (1.8%)	0	1	1

Figure 1. Did you want prognostic testing at the time of your diagnosis?
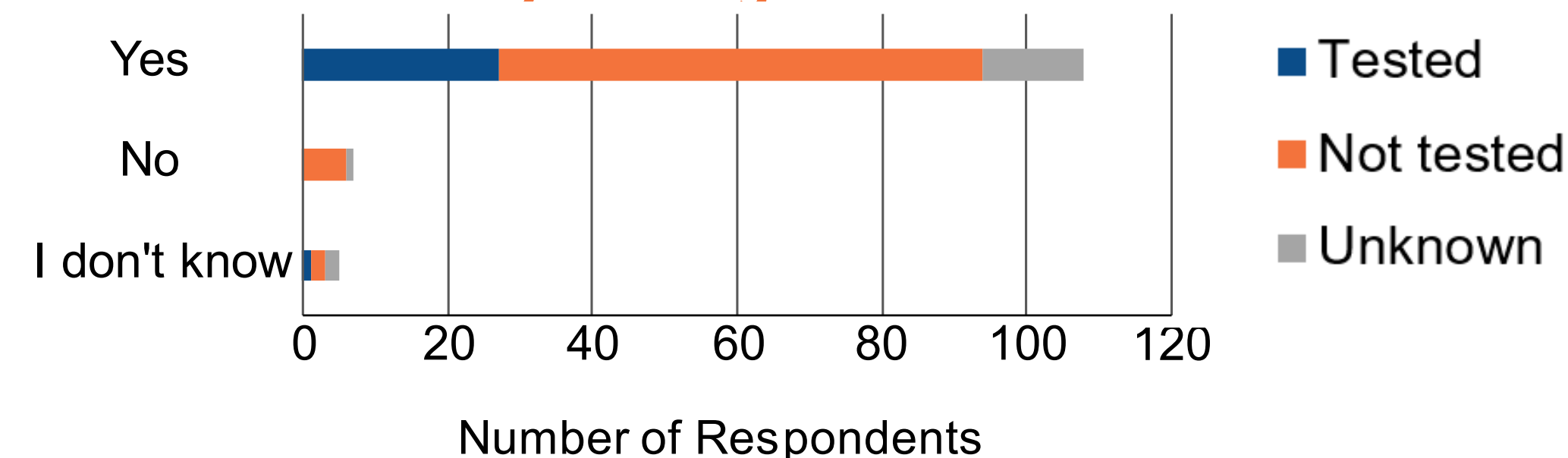
Respondents were asked if they wanted prognostic information about their tumor at the time of diagnosis. Most respondents, whether they received 31-GEP or not, desired prognostic testing about their tumor.
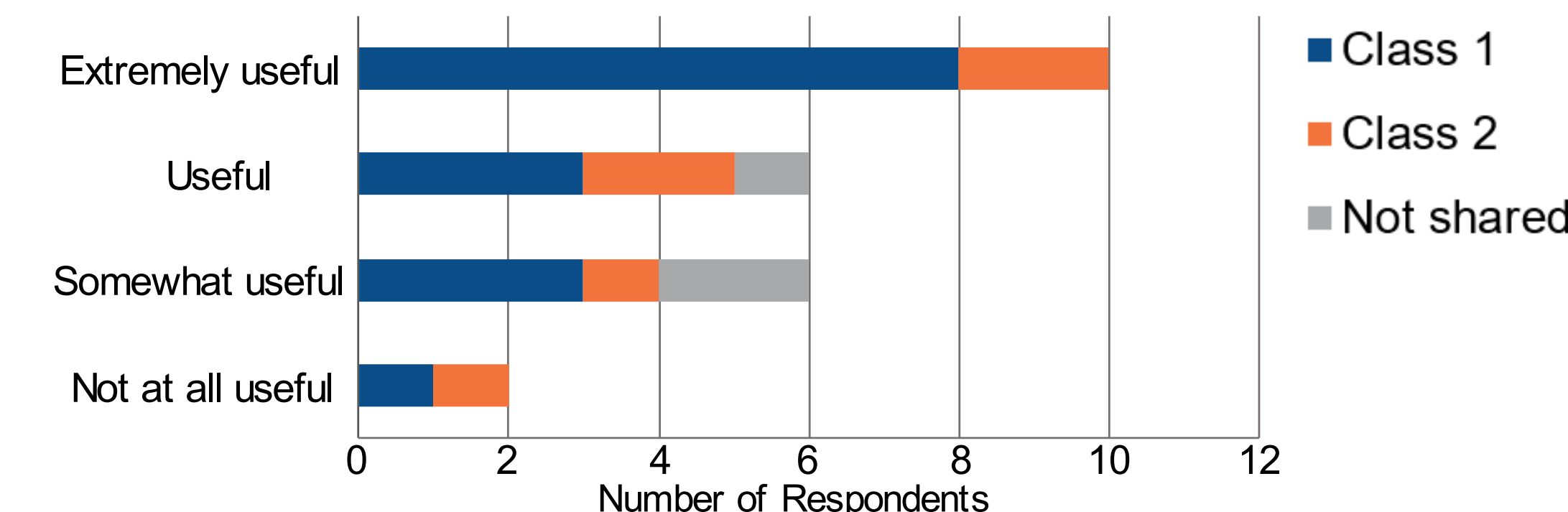
Results

### Figure 2. Factors that influenced patients' decisions to get 31-GEP testing
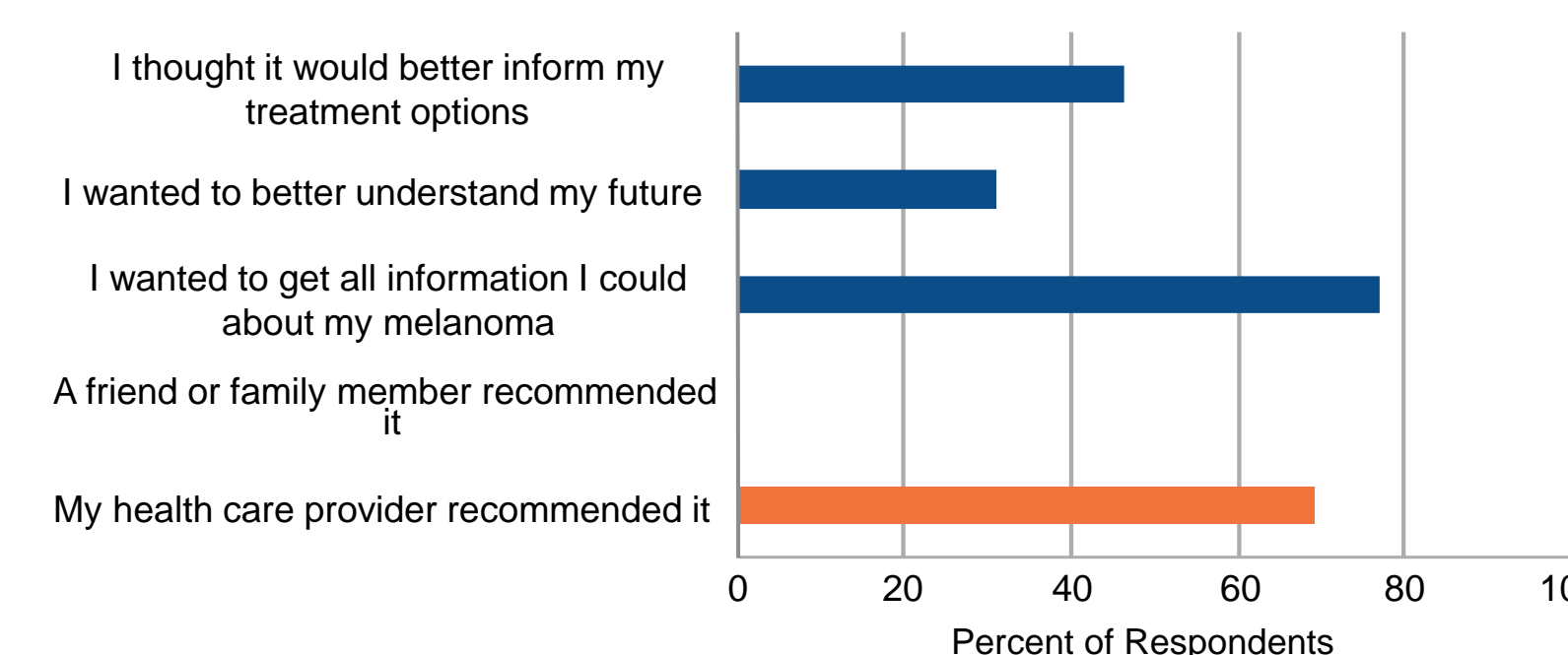
Respondents who received 31-GEP testing were asked what factors impacted their decision to get 31-GEP testing. Respondents were allowed to select **all** choices that applied. The percent of respondents who selected a particular reason are shown. Internally driven choices are indicated in blue; externally driven choices are indicated in orange.

Figure 3. Utility of 31-GEP test information

Respondents who received 31-GEP testing (n=24 responses) answered whether they felt that the results were useful. The graph indicates the number of respondents who chose a particular choice and their reported 31-GEP class call. Most patients thought the 31-GEP was at least somewhat useful.

Figure 4. Benefits of 31-GEP testing for patients
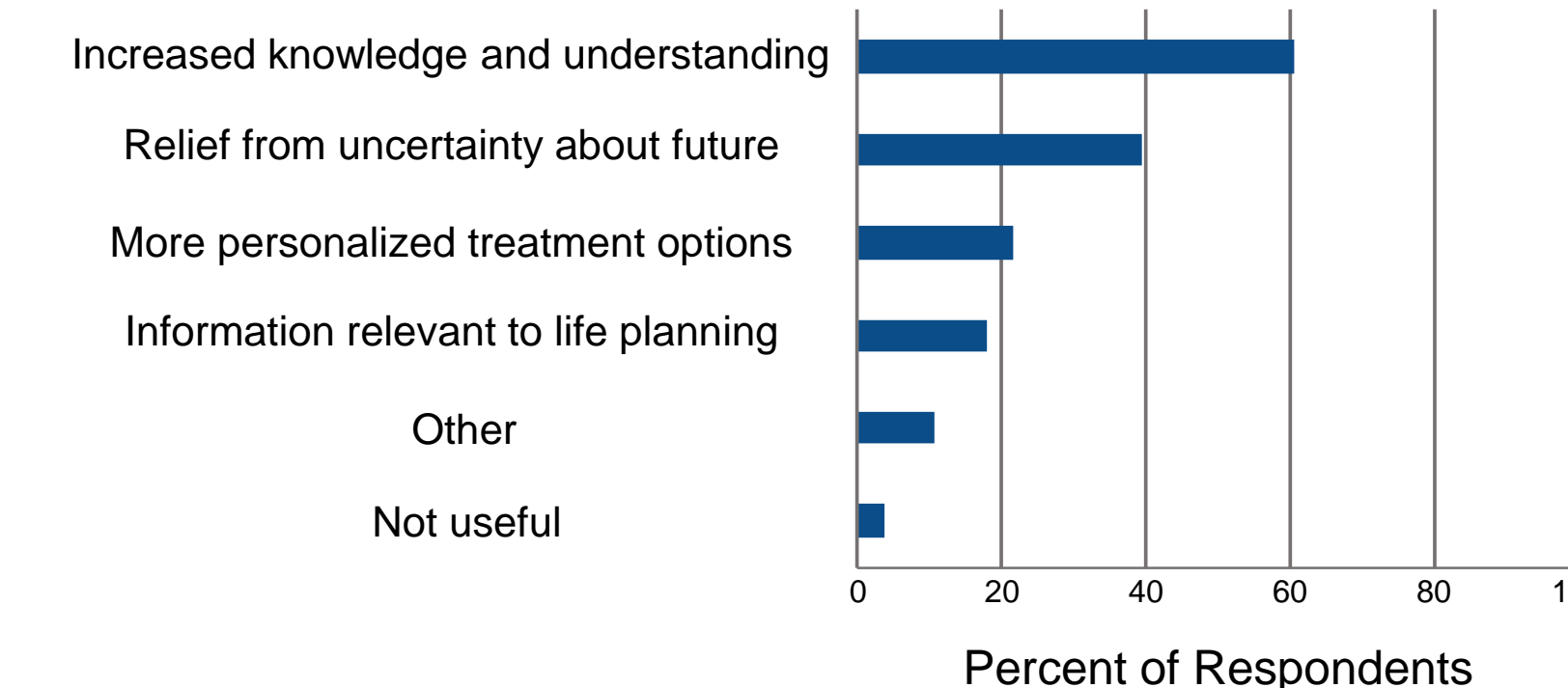
Respondents who received 31-GEP testing were asked how they benefitted from their 31-GEP test results. Respondents were first asked to select **all** the benefits they felt they gained (select as many responses as applied), and the percent of respondents that selected a given choice are shown.

› Participants who received 31-GEP testing felt that the results were useful to them. Testing game them increased knowledge, relief from uncertainty, personalized treatment options, and information for life planning.

Figure 5. Decision Regret Scores
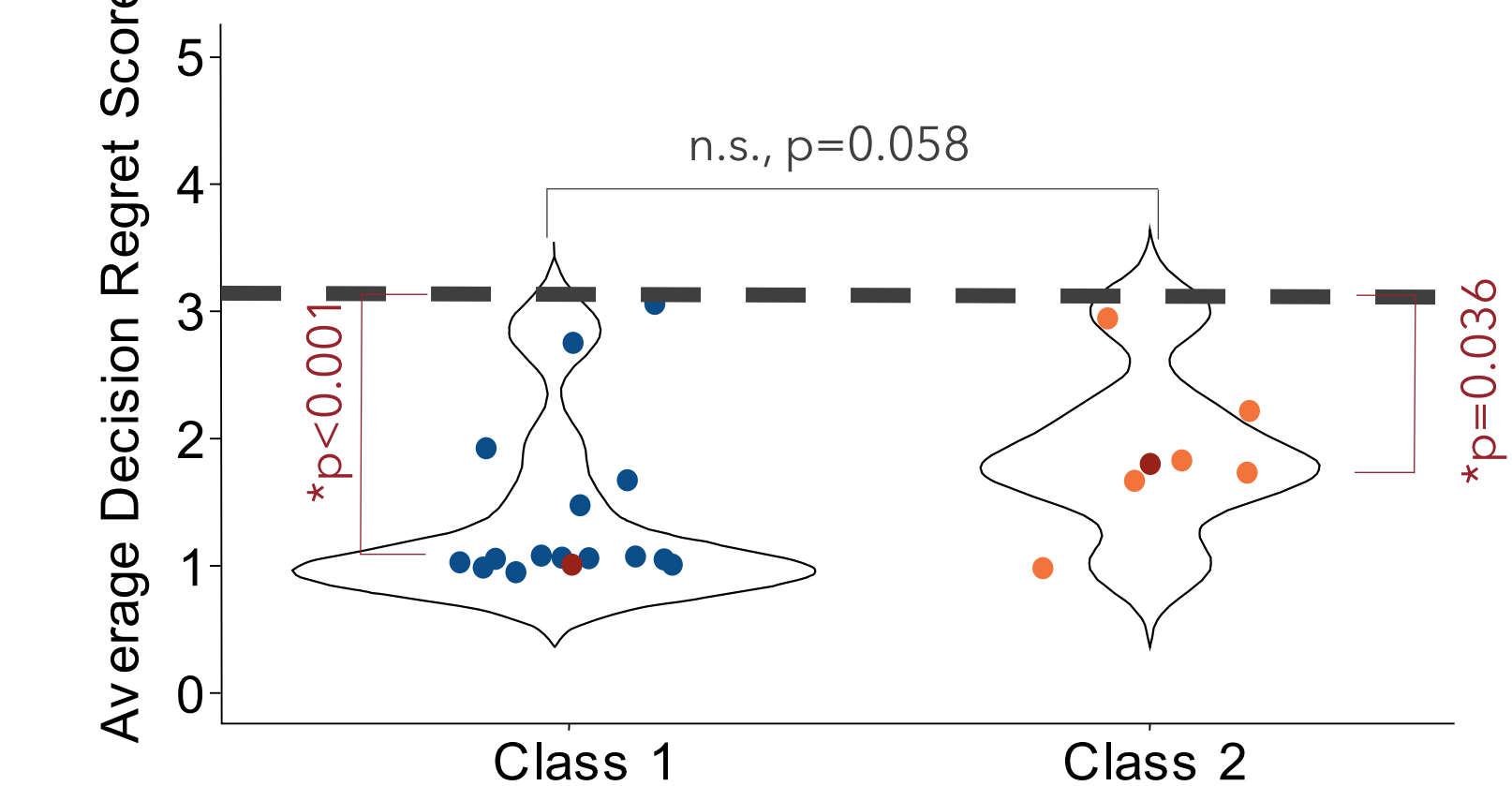
Respondents were asked a validated series questions regarding the level of regret they experienced with their decision to undergo 31-GEP testing. Blue (Class 1) and orange (Class 2) circles represent the mean decision regret score for each respondent. The dashed line indicates decision regret (3.05). Median decision regret scores for all Class 1 or Class 2 respondents (red circles) were not significantly different (p=0.058). Both Class 1 (p<0.001) and Class 2 (p=0.036) median decision regret scores were significantly below the decision regret line, indicating no or little regret regardless of high or low risk results. *, statistically significant; n.s., not significant

Conclusions

› 90% of patients wanted prognostic information about their tumors at the time of diagnosis.
› Patients wanted 31-GEP testing to increase their knowledge about their disease (76.9%) and inform treatment decisions (46.2%).
› Patients (>90%) felt 31-GEP testing was useful and felt they gained understanding (60.7%) and relief from uncertainty (39.3%).
› Patients receiving 31-GEP results did not experience decision regret, even among patients who had Class 2, high-risk tumors

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Acknowledgments & Disclosures