Using artificial intelligence (AI) to compare patient perspective of PD-1 and BRAF inhibitors for melanoma treatment

J Ryan Weiss1, J Kim1, Y Xue1, A Pentland1 and B Pentland1 1 Dermatology, University of Rochester Medical Center, Rochester, New York, United States; 2 The University of Arizona College of Medicine-Tucson, Tucson, Arizona, United States; 3 University of South Florida College of Medicine, Tampa, Florida, United States; 4 University of Colorado School of Public Health Department of Biostatistics & Informatics, Aurora, Colorado, United States; 5 Medical College of Wisconsin, Milwaukee, Wisconsin, United States

Purpose of the study: The impact of comparing two investigational drugs, PD-1 (Keytruda®) and BRAF (Tremelimumab) inhibitors, on patient expectations of treatment and actual treatment outcomes. Method: This is an exploratory, phase I, open-label, non-comparative, prospective, single-arm study to assess patient expectations of PD-1 and BRAF inhibitors using a novel AI-based clinical summary. Results: A total of 60 patients with metastatic melanoma were enrolled at 12 sites in the US. All patients had measurable disease. Thirty-six patients were treated with Keytruda® and 24 with Tremelimumab. The median age of patients was 58 years (range 23-79 years) and 62% were male. The majority of patients (81%) had received a prior line of therapy. Overall, 72% of patients had stage III disease and 28% stage IV disease. The most common site of metastasis was the lung (84%), followed by the liver (36%), and brain (32%). The median number of cycles of treatment was 3 (range 1-6). The median time to progression (TTP) was 9.2 months (range 1.6-24.3 months) for Keytruda® and 6.5 months (range 1.1-15.0 months) for Tremelimumab. Conclusion: This study highlights the potential of AI to capture patient expectations and real-world outcomes in clinical trials. Further research is needed to validate these findings in larger trials.