

# Quality of Life and Its Drivers for Patients Living With Uveal Melanoma: A Systematic Review

Authors: Rishabh Verma, Vyshnavi Telukuntla, Inderpreet Khurana, Sumi Pillai, Amit Ahuja

Affiliations: Lumarity, Gurugram, India

## INTRODUCTION

- Uveal melanoma, the most common primary intraocular malignancy in adults, affects about five per 1 million people annually worldwide<sup>1</sup>
- Uveal melanoma is a serious ophthalmic disease that threatens vision, quality of life (QoL), and overall health. It originates either from the ciliary body, iris, or choroid. It has significant consequences, including vision loss and a 15-year disease-specific mortality rate of 45%<sup>2</sup>
- After initial diagnosis, most localized uveal melanomas are treated with surgery or radiotherapy, with treatment decisions often influenced by their impact on QoL<sup>2</sup>

## OBJECTIVES

The objective of this systematic literature review (SLR) was to identify the health-related QoL (HRQL) and its key drivers for patients living with uveal melanoma

## METHODS

- A systemic literature search to identify English-language articles published after 2010 was performed using the MEDLINE® and Embase® databases, with a pre-defined inclusion criterion (Table 1)
- Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines were followed for reporting the SLR
- All the records retrieved from the literature search were screened per the pre-defined inclusion criteria, first based on the title and abstract, and then on the full-text citations
- The eligibility of publications was assessed by two independent reviewers, with any discrepancy resolved by a third

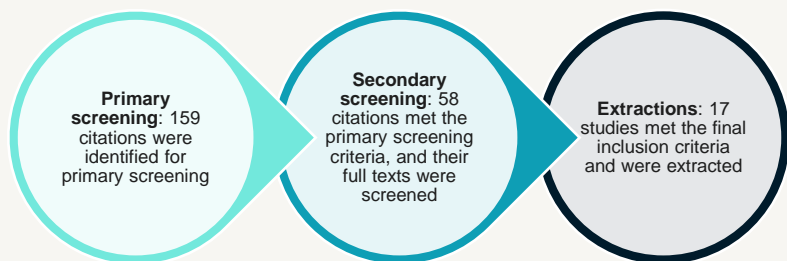
Table 1. Study eligibility criteria

Population	Adult patients with uveal melanoma (including metastatic disease)
Language	English
Time frame	2010–2024
Outcomes	HRQL/PROM data
Intervention and comparator	No restrictions
Key: HRQL, health-related quality of life; PROM, patient-reported outcomes measure. Note: * We did not include utility studies in the searches.	

## RESULTS

- A total of 159 records were screened using predefined Population, Intervention, Comparison, Outcomes, and Study-based criteria; 17 studies<sup>3-19</sup> were identified and included that evaluated the HRQL of uveal melanoma (Figure 1)

Figure 1. Flow of studies



### Study and patient characteristics

- Most of the studies were observational, with only one single-arm trial and one randomized trial. The studies were conducted across several countries, including Canada, the USA, the UK, Germany, Israel, France and the Netherlands (Figure 2)
- The most analyzed QoL scales across the studies were the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire (QLQ-C30), the Ophthalmology module (EORTC QLQ-OP30), and Functional Assessment of Cancer Therapy – General (FACT G). Figure 3 presents the frequency of QoL of scales used across the included studies
- Of the 17 included studies, 11 studies focused on patients with non-metastatic uveal melanoma, while the remaining six studies examined patients with metastatic uveal melanoma

Figure 2. Geographic location of included studies

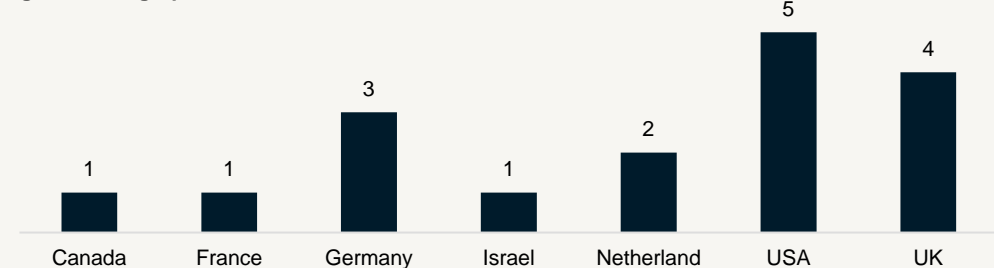
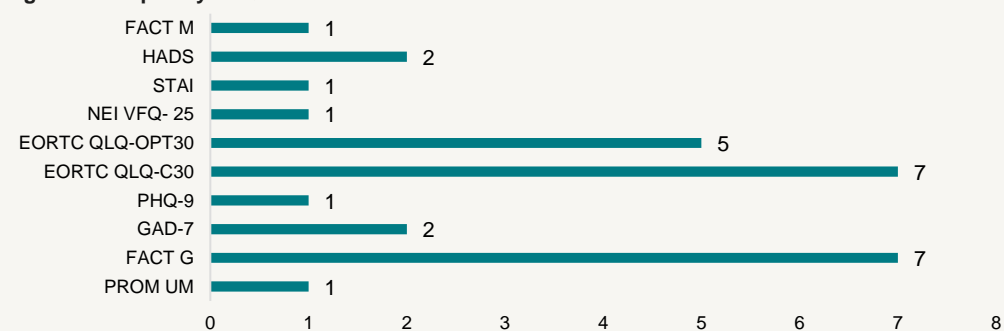


Figure 3. Frequency of QoL of scales used



Key: FACT-G, Functional Assessment of Cancer Therapy - General; FACT-M, Functional Assessment of Cancer Therapy - Melanoma; GAD-7, Generalized Anxiety Disorder-7; HADS, Hospital Anxiety and Depression Scale; MFI, Multidimensional Fatigue Inventory; NEI VFQ-25, National Eye Institute Visual Functioning Questionnaire; PHQ-9, Patient Health Questionnaire-9; PROM-UM, Patient-Reported Outcome Measure – Uveal Melanoma; STAI, State-Trait Anxiety Inventory; EORTC QLQ-C30, European Organization for Research and Treatment of Cancer Quality of Life Questionnaire; EORTC QLQ-OP30, European Organization for Research and Treatment of Cancer Ophthalmology module

### Factors associated with QoL in patients with uveal melanoma

- Mouriaux et al.<sup>5</sup> studied sorafenib in metastatic uveal melanoma, finding no QoL improvement. FACT-G scores declined at 4 weeks (75 vs 81) and remained stable at 24 weeks. Physical well-being was most affected, as presented in Figure 4
- Frenkel et al.<sup>7</sup> analyzed long-term survival and QoL in patients with uveal melanoma receiving primary treatments. Eye-related QoL was lower in enucleated patients, but no significant difference was found in general QoL, as presented in Figure 5

Figure 4. FACT-G subscales after treatment<sup>5</sup>

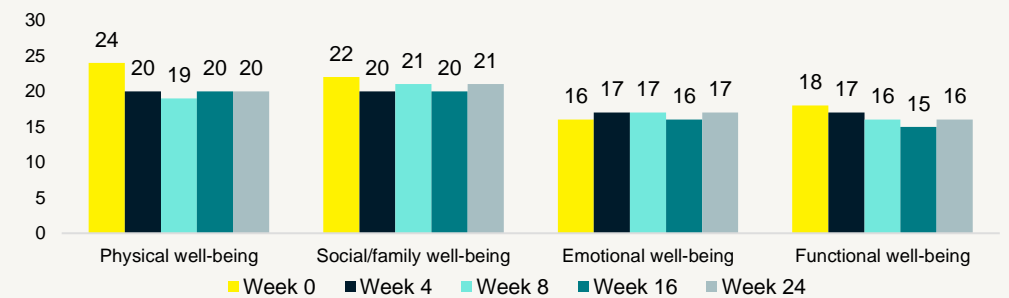
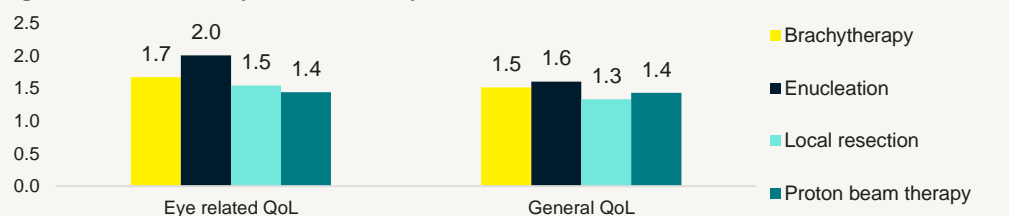


Figure 5. General and Eye-related QoL by initial treatment<sup>7</sup>



- Rabsahl et al.<sup>15</sup> analyzed anxiety (GAD-7) and depression (PHQ-9) in patients with uveal melanoma receiving curative proton therapy. The study reported a decrease in mean anxiety scores from 5.86 before treatment to 3.74 after 2 years. Similarly, depression scores showed an improvement, declining from 4.36 before treatment to 3.67 after two years
- Van Beek et al.<sup>8</sup> compared stereotactic radiotherapy with enucleation, finding no significant overall QoL difference. They reported that enucleated patients had more difficulty working and had reduced peripheral vision up to 3 years post-treatment (Figure 6)
- Barker et al.<sup>10</sup> analyzed factors affecting QoL using multiple regression. Performance status influenced global health; age impacted physical function; comorbidities reduced function; male sex improved function; and visual acuity affected global health and daily activities
- Hope-Stone et al.<sup>4</sup> assessed anxiety, depression, and QoL in patients with uveal melanoma. Younger and female patients had higher anxiety, with no QoL differences across groups. Figure 7 shows HADS-Anxiety scores

Figure 6. QoL scores post treatment<sup>8</sup>

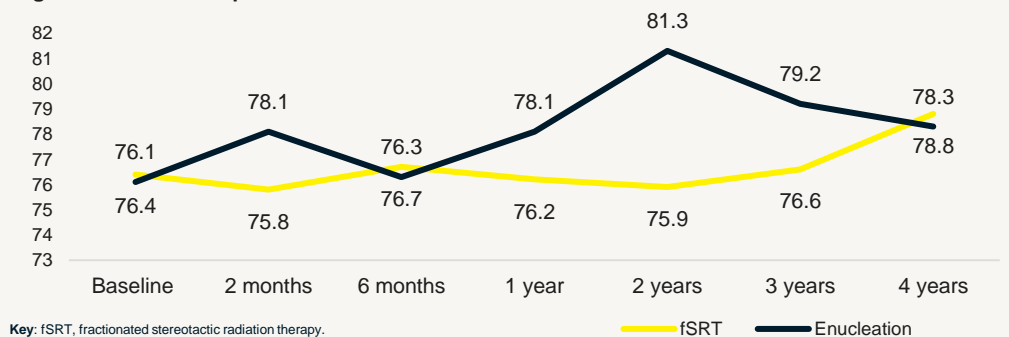
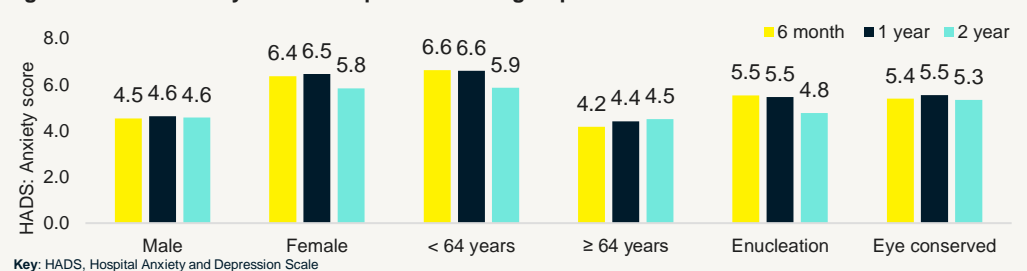


Figure 7. HADS-Anxiety score as reported across groups<sup>4</sup>



## CONCLUSIONS

- This study highlights the substantial impact of uveal melanoma on patients' QoL, driven by vision loss and psychological distress
- Several factors, including treatment modalities (such as enucleation and radiotherapy), performance status, age, gender, and comorbidities, have been shown to influence various aspects of QoL
- Physical function tends to decline with advanced age, and patients undergoing enucleation may experience greater difficulties with visual-related tasks
- Tailored interventions to preserve visual function and provide psychological support are crucial. Further research is essential to develop comprehensive care models that effectively address these critical aspects

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