Measuring and reporting health-related quality of life in locally advanced or metastatic urothelial cancer research: capturing outcomes that really matter to patients

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CONCLUSIONS

- **This systematic literature review (SLR) identified 49 studies (37 clinical trials and 12 real-world evidence [RWE] studies) that reported health-related quality of life (HRQOL) in patients with locally advanced or metastatic urothelial cancer (la/mUC)**
- **Our findings suggest that HRQOL instruments currently used in la/mUC clinical trials and RWE studies do not adequately capture patient concerns or symptoms and that findings are not consistently reported in a transparent and comprehensive manner**
- **As novel therapies enter the la/mUC treatment paradigm, future studies should focus on establishing a consensus regarding which HRQOL instruments should be used to capture the potential impact of la/mUC treatment on quality of life**
  - **Recommendations for future studies include using the Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE) items to supplement existing HRQOL instruments and ensuring better adherence to reporting guidelines**

PLAIN LANGUAGE SUMMARY

- **In this analysis, researchers reviewed available information from studies that reported the effects of treatments for advanced urothelial cancer on a person's quality of life**
  - **Quality of life is a measure of well-being, which includes how a person feels about their physical health, emotional well-being, ability to be active, and other factors affecting everyday life**
- **Researchers wanted to see what aspects of quality of life were measured, what instruments were used to measure quality of life, and if the appropriate questions were used to capture a person's opinion of the symptoms of advanced urothelial cancer**
- **Researchers looked at results from 49 studies: 37 clinical trials and 12 studies reporting real-world data (outside of clinical trials)**
- **They found that quality of life instruments currently used in advanced urothelial cancer do not adequately capture people's concerns or symptoms and that findings are not consistently reported in a comprehensive manner across studies**
- **Future studies should focus on establishing a consensus regarding which instruments should be used to capture the potential impact of advanced urothelial cancer treatment on quality of life**

BACKGROUND

- la/mUC is an aggressive and incurable disease with a profound effect on the patient's overall HRQOL and functioning[1,2]
- Despite growing emphasis on maintaining HRQOL in patients with la/mUC, it remains unclear if current HRQOL instruments address the specific dimensions most important to patients or if these data are adequately reported
- The treatment landscape for la/mUC has evolved in recent years, with new approved therapies with various efficacy and toxicity profiles incorporated into clinical care; thus, investigators should consider the optimal selection of HRQOL instruments to capture patients' experiences in clinical trials and RWE studies
- This SLR aimed to conduct a critical evaluation of currently used HRQOL instruments in la/mUC, to assess how comprehensively they measure symptoms reported by patients with la/mUC and the quality of the results reported

METHODS

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- The SLR was conducted to identify clinical trials and RWE reporting HRQOL outcomes in la/mUC published before May 29, 2024
- Qualitative research was identified via a targeted literature review (TLR) in August 2024
- The most frequently used HRQOL instruments were evaluated in terms of symptom coverage
- The Consolidated Standards of Reporting Trials Patient-Reported Outcome (CONSORT-PRO) checklist was used to evaluate HRQOL reporting[3]

RESULTS

- The SLR identified 49 studies including 13,116 patients (11,962 patients in 37 clinical trials and 1,154 patients in 12 RWE studies). The TLR identified 5 qualitative studies including 81 patients
- Since 2000, the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) was the most frequently used HRQOL instrument; newer disease-specific instruments were used in more recent years (**Table 1**)[4]
- Other key instruments used to assess HRQOL included the 36-Item Short Form Survey Instrument (SF-36), Functional Assessment of Cancer Therapy – General (FACT-G), Functional Assessment of Cancer Therapy – Bladder (FACT-BI), and National Comprehensive Cancer Network-FACT Bladder Symptom Index-18 (NFBISI-18)
- Based on qualitative evidence, patients' concerns comprised pain, fatigue, hematuria, other urinary symptoms, sleep disturbance, sexual dysfunction, depression/anxiety/mental well-being, nausea/vomiting, hair loss, weight loss, and appetite loss[5-9]

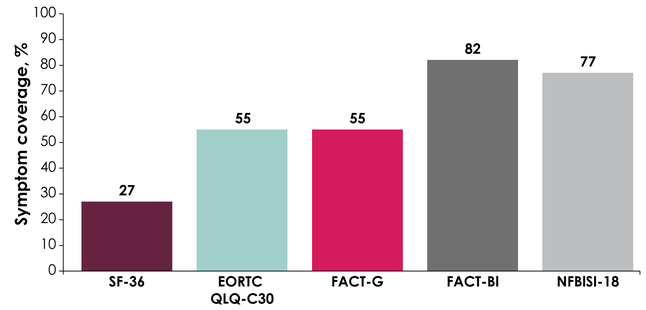
Table 1. HRQOL instruments used in included studies

Instruments, n	Clinical trials (n=37)	RWE studies (n=12)
Generic		
EORTC QLQ-C30	28	8
SF-36	2	2
FACT-G	–	1
GQOLI-74	1	–
HADS	–	1
Disease specific		
FACT-BI	3	–
NFBISI-18	3	–
EORTC QLQ-BLM30	–	1
Utility		
EQ-5D (utility index and/or VAS)	12	1
EQ-5D-3L	3	–
EQ-5D-5L	7	1
EQ-5D-5L mapped to EQ-5D-3L	1	–
EORTC-8D	1	–
Pain instruments		
BPI-SF	2	2
Pain VAS	1	–
7-point pain scale	1	–
Other instruments		
PRO-CTCAE	–	2
EORTC C15-PAL	1	–
FACT-ICM	–	1
FACT-Taxane	1	–
Telephone interviews	–	1

BPI-SF, Brief Pain Inventory - Short Form; **C15-PAL**, Quality of Life in Palliative Cancer Care Patients; **EORTC**, European Organisation for Research and Treatment of Cancer; **FACT-BI**, Functional Assessment of Cancer Therapy – Bladder; **FACT-G**, Functional Assessment of Cancer Therapy – General; **FACT-ICM**, Functional Assessment of Cancer Therapy – Immune Checkpoint Modulator; **GQOLI-74**, Generic Quality of Life Inventory-74; **HADS**, Hospital Anxiety and Depression Scale; **HRQOL**, health-related quality of life; **NFBISI-18**, National Comprehensive Cancer Network FACT Bladder Symptom Index; **PRO-CTCAE**, Patient-Reported Outcomes – Common Terminology Criteria for Adverse Events; **QLQ-BLM30**, Muscle Invasive Bladder Cancer Questionnaire; **QLQ-C30**, Core Quality of Life Questionnaire; **RWE**, real-world evidence; **SF-36**, Short Form 36; **VAS**, visual analog scale.

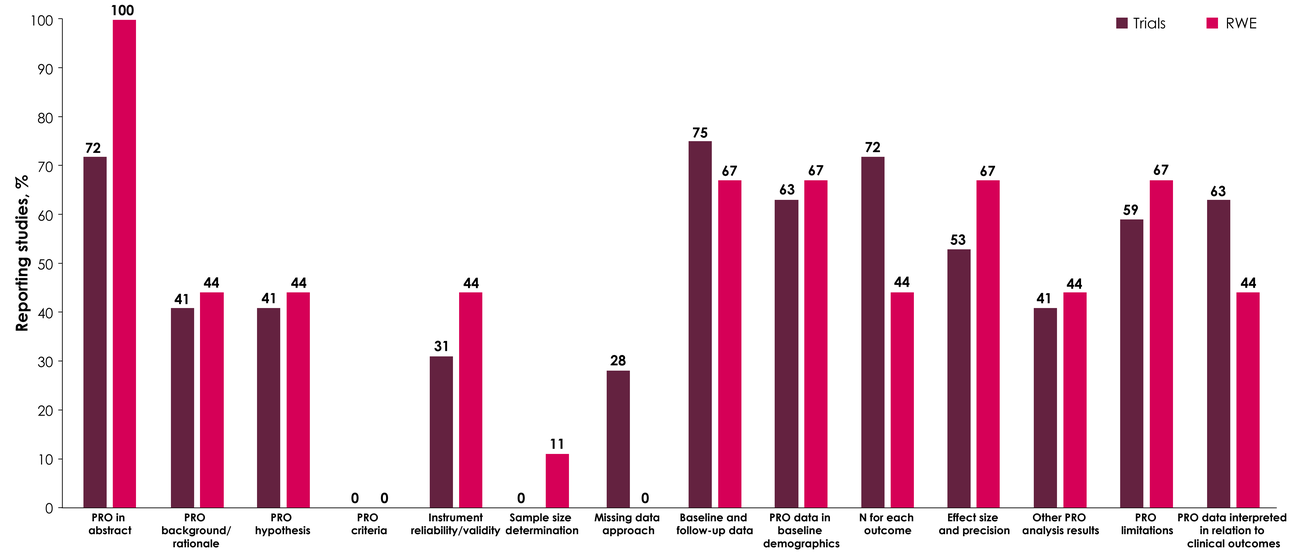
- As shown in **Figure 1**, coverage of patient concerns is better with the newer disease-specific instruments, such as the FACT-BI (82%) and the NFBISI-18 (77%), than with generic instruments like the SF-36 (27%)
  - Coverage is moderate for oncology-specific measures (EORTC QLQ-C30, 55%; FACT-G, 55%)
- Hematuria and hair loss were not addressed by any instrument, and the NFBISI 18-item instrument assessing sexual dysfunction applies to men only
- Using the CONSORT-PRO checklist, 32 trials and 9 RWE studies were assessed (**Figure 2**)
  - In general, HRQOL outcomes reporting was poor
  - Not all studies reported baseline and follow-up data, and <50% provided background, rationale, or hypotheses for analyses

Figure 1. HRQOL instrument symptom coverage



EORTC, European Organisation for Research and Treatment of Cancer; **FACT-BI**, Functional Assessment of Cancer Therapy – Bladder; **FACT-G**, Functional Assessment of Cancer Therapy – General; **HRQOL**, health-related quality of life; **NFBISI-18**, National Comprehensive Cancer Network FACT Bladder Symptom Index; **QLQ-C30**, Core Quality of Life Questionnaire; **SF-36**, Short Form 36.

Figure 2. Quality of HRQOL data reporting as evaluated by the CONSORT-PRO checklist



CONSORT, Consolidated Standards of Reporting Trials; **HRQOL**, health-related quality of life; **PRO**, patient-reported outcome.

LIMITATIONS

- Due to the heterogeneity of study designs, patient characteristics, follow-up durations, and other variables, it was difficult to compare outcomes among different HRQOL instruments
- Inherent limitations are expected in studies published as conference abstracts only, most of which provided limited information
- Only a small number of RWE studies were identified, meaning that comparisons against clinical trial settings were limited in scope (eg, assessing the real-world generalizability of baseline HRQOL data in different lines of treatment)

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