

The PROPr and QLU-C10D are more responsive to change than the EQ-5D-5L in cancer patients

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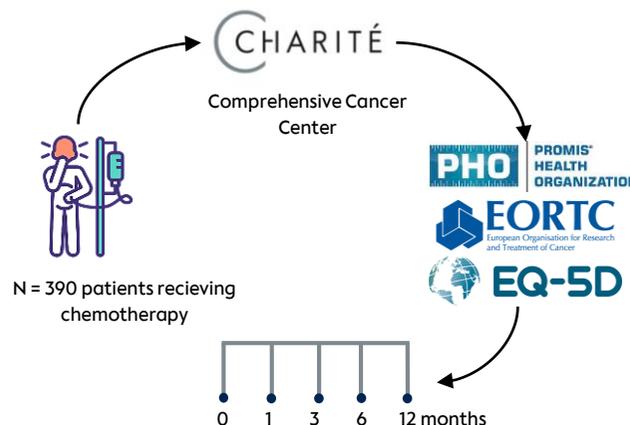
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Background

- Health state utility (HSU) scores value health states from <0 (worse than death) to 1 (full health)
- Application in health economics for calculation of quality-adjusted life years (QALY)
- In oncology:
 - Impairment of health-related quality of life (HRQoL)
 - Rising costs of newly developed drugs
- Established HSU scores:
 - Narrow ranges of measurement -> Negative impact on the responsiveness to change
- New HSU scores designed to address this: PROMIS Preference Score (PROPr), EORTC QLU-C10D



Study design



We compared responsiveness, discriminatory power and test-retest reliability of the PROPr and the QLU-C10D to the EQ-5D-5L.

Methods

- Standardized response mean (SRM) and standardized effect size (SES)
- Test-retest reliability using the intraclass correlation coefficient (ICC)
- Area under the receiver operating curve (AUROC) for detection of positive/negative change
- Anchors:
 - Retrospective: "How has your health changed compared to the last survey?"
 - Prospective: "How would you rate you overall health during the last week?" – difference to last survey

Results

- Effects in positive and negative change subgroups in SRM and SES were small for all scores (0.20-0.49)
- PROPr and QLU-C10D showed significantly higher SRM than EQ-5D-5L in prospective positive change
- Test-retest reliability was good (PROPr, QLU-C10D) and moderate to good, respectively (EQ-5D-5L)
- AUROC was poor for detection of positive and negative change

Conclusion

The PROPr and QLU-C10D performed better in terms of responsiveness to improvement and test-retest reliability than the EQ-5D-5L. This evidence supports their use in cost-effectiveness analyses.

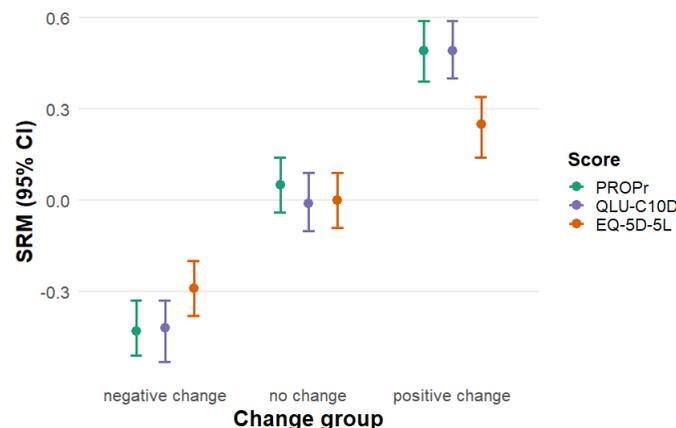


Figure 1: SRM and 95%-CI in subgroups of change - prospective

AUROC (95%-CI)		
	Positive change	Negative change
PROPr	0.68 (0.65-0.71)	0.68 (0.65-0.71)
QLU-C10D	0.69 (0.66-0.73)	0.68 (0.65-0.71)
EQ-5D-5L	0.62 (0.59-0.65)	0.62 (0.59-0.66)

Test-retest reliability (ICC) (95%-CI)	
PROPr	0.86 (0.83-0.88)
QLU-C10D	0.81 (0.77-0.84)
EQ-5D-5L	0.78 (0.74-0.81)

Table 1 and 2: AUROC and Test-retest reliability - prospective