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THE DEVELOPMENT OF AN INTERNATIONALLY-VALID CANCER-SPECIFIC MULTI-ATTRIBUTE UTILITY INSTRUMENT (MAUI) FROM THE EORTC CORE HEALTH-RELATED QUALITY OF LIFE (HRQOL) QUESTIONNAIRE, QLQ-C30

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Objectives: Preference-based measures have been derived from various descriptive HRQOL measures. A general 2-stage method has evolved: 1) an item from each domain of the HRQOL measure is selected to form a health state classification system (HSCS); 2) a sample of health states is valued and an algorithm derived for estimating the utility of all possible health states. The outputs of these two stages represent a MAUI. Our aim was to adapt the first stage for the widely-used cancer-specific QLQ-C30, and apply it to a large, heterogeneous, international dataset as the first step in developing an internationally-valid cancer-specific MAUI.

Methods: Secondary analyses were conducted on a pooled dataset comprising QLQ-C30 responses plus demographic and clinical data from 2616 patients from eight countries, over 14 cancer sites, all stages, and all common cancer treatments. The established domain structure of the QLQ-C30 (physical, role, emotional, social and cognitive functioning, plus several symptoms) formed the underlying conceptual model for the MAUI. Generalisability of the conceptual model across cancer sites was tested with multi-group CFA. Items within each domain were then subjected to statistical scrutiny, including Rasch analysis for domains with sufficient items.

Results: CFA results supported the proposed conceptual model and its generalisability across cancer sites. Two items exhibited floor effects (>75% observations at lowest score), none exhibited misfit to the Rasch model, one exhibited disordered item response thresholds, and two exhibited differential item function by cancer site. These results, along with results for responsiveness and qualitative patient input (analyses underway) will be presented.

Conclusions: The next stage of this research will obtain valuations for a range of health states defined by the HSCS from general population samples in various countries. The ability to determine a preference-based utility score from QLQ-C30 responses will facilitate cost-utility analysis in cancer trials which use the QLQ-C30.

Keywords: cancer, EORTC QLQ-C30, multi-dimensional health state classification system, QALYs.