Use of Patient Preference Measures to Support HTA Submissions in Oncology

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Background

- Patient preference information can be defined as qualitative or quantitative assessments of the relative desirability or acceptability of specified alternatives or choices among outcomes or other attributes that differ among different health interventions[1]
- Patient preference information can be used to assess Quality-Adjusted Life Years (QALY), which incorporate preferences or values of individual health states as a single index. QALYs are usually submitted to Health Technology Assessments (HTAs) bodies to demonstrate the value added of a drug to patients and society in general[1]
- Growing interest in patient preference data has arisen from payers and HTA bodies, but the requirements for the type of data used to generate utilities or estimate QALYs varies across HTA bodies[2]
- The primary goal of this study was to determine the extent to which preference data has been used to support value messages in HTA value dossiers. A secondary objective was to determine the type of preference method used to support patient value messages in HTA value dossiers

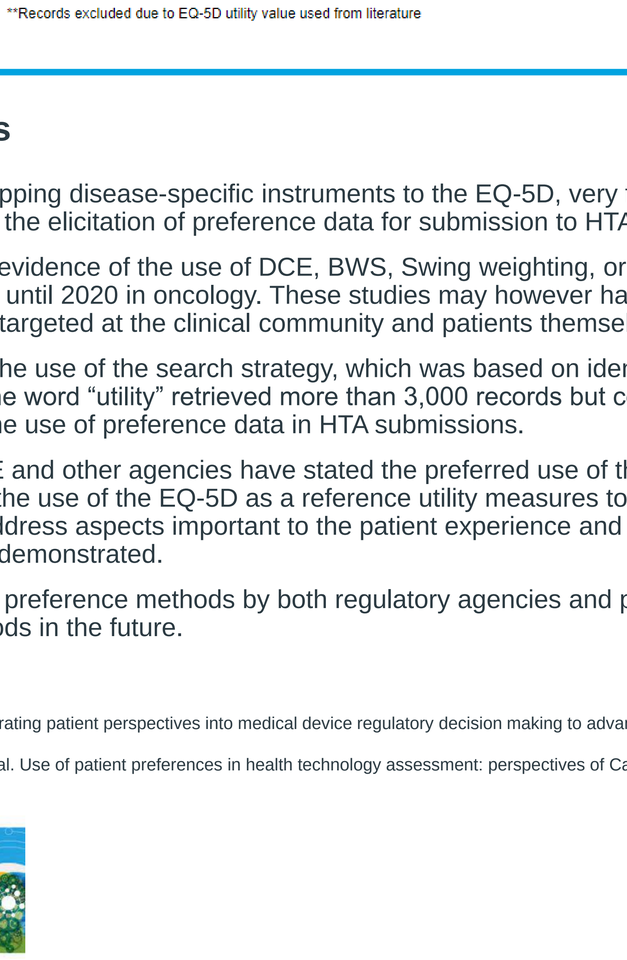
Methods

- A systematic literature review (SLR) was conducted using the HTA Accelerator™ (HTAA) platform, a proprietary IQVIA product that summarizes product submissions information submitted to HTA bodies
- HTA value dossiers were searched using the Linguamatics software on HTA Accelerator™ to gather the relevant studies based on search strategy. Linguamatics is a natural language processing (NLP) software which can extract information from large document collections in response to normal search phrases and queries
- The search strategy involved terms related to:
  - ✓ preference use (“clinician preference”, “Health preference”, “caregiver preference”, “clinician preference”, “physician preference”, “HCP preference”, “Preference data”, “Health preference information”, “Patient preference”, “Patient preference data”, “Preference information”)
  - ✓ preference method (“benefit-risk”, “trade-off”, “disease-specific utilities”, “vignette”, “MCDA”, “DCE”, “Swing weighting”, “Time trade-off”, “Standard gamble”, “Best-worse scaling”)
  - ✓ The terms “Utility”, “EuroQOL”, “EQ-5D”, “HUI”, “SF-6D”, were excluded from the search for feasibility reasons.
  - ✓ The search was restricted to dossiers submitted for oncology drugs from 2011 to 2020 and to the following HTA bodies: National Institute for Health and Care Excellence (NICE), the Scottish Medicines Consortium (SMC), the Pharmaceutical Benefits Advisory Committee (PBAC), or the Canadian Agency for Drugs and Technologies in Health (CADTH)

Results

- A total of 1012 HTA submission dossiers were identified with the search strategy, 130 dossiers were screened, and 110 reports were fully reviewed to identify preference data use in supporting value messages in HTA dossier submissions (See Figure 1)

Figure 1. PRISMA Flow Diagram



* Records excluded due to evidence review, systematic review, response report, guideline, guidance documents, protocols, and scope of submission

**Records excluded due to EQ-5D utility value used from literature

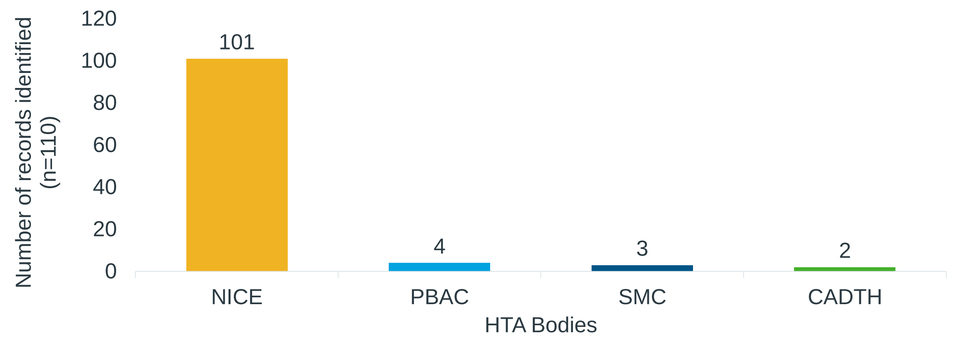
Conclusions

- Other than mapping disease-specific instruments to the EQ-5D, very few additional methods are considered for the elicitation of preference data for submission to HTA bodies.
- There was no evidence of the use of DCE, BWS, Swing weighting, or other similar methods submitted to value dossiers until 2020 in oncology. These studies may however have been used for scientific dissemination targeted at the clinical community and patients themselves.
- A limitation is the use of the search strategy, which was based on identifying a manageable compilation of dossiers. The word “utility” retrieved more than 3,000 records but could have identified additional evidence for the use of preference data in HTA submissions.
- Although NICE and other agencies have stated the preferred use of the EQ-5D, there is consistent evidence that the use of the EQ-5D as a reference utility measures to lack sensitivity and conceptual coverage to address aspects important to the patient experience and for which the added value of a new drug could be demonstrated.
- The interest in preference methods by both regulatory agencies and payers are likely to increase the use of these methods in the future.

Results continued

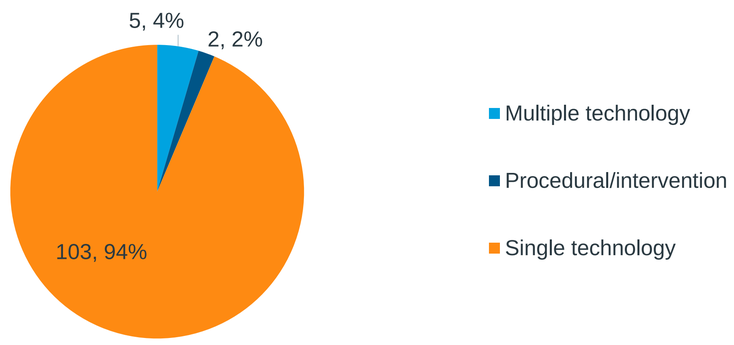
- The HTA submissions containing patient preference data were submitted in the UK (NICE), followed by PBAC (Australia), SMC (Scotland) and CADTH (Canada) (See Figure 2)

Figure 2. HTA agencies that received preference estimates in their submission



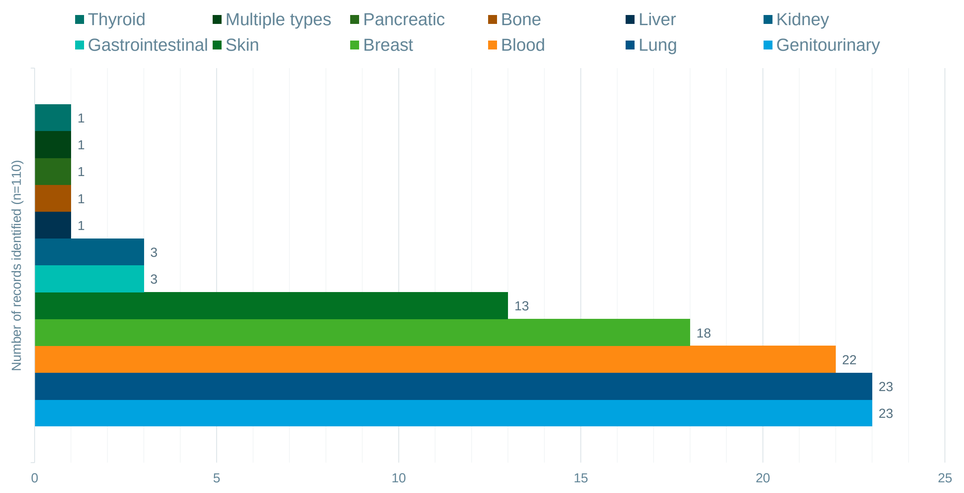
- Single technology assessments were the most frequently identified HTA assessment containing patient preference data, with small numbers of multiple technology assessments and procedural/interventional assessments (See Figure 3)

Figure 3. Technological assessments types where preference included in HTA submissions



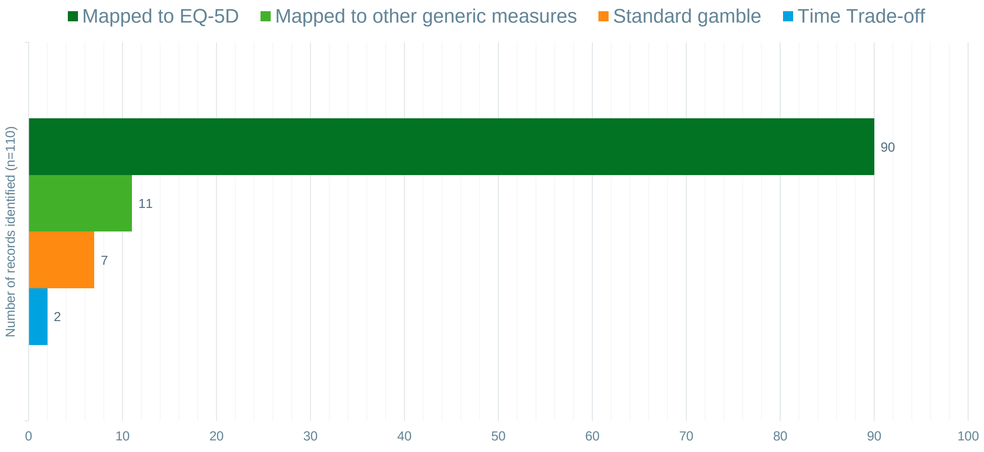
- The most common therapeutic areas on which the identified HTA submissions focused were genitourinary, lung and blood malignancies (See Figure 4)

Figure 4. Types of cancer where preference included in HTA submissions



- The most frequently identified method for estimating health state utilities was mapping to EQ-5D. Standard Gamble and Time-Trade Off were used in 7 and 2 of the reviewed submissions. (See Figure 5)

Figure 5. Preference-based methods used in HTA submissions



1. Tarver ME et al. Integrating patient perspectives into medical device regulatory decision making to advance innovation in kidney disease. Clinical Journal of the American Society of Nephrology. 2021 Apr 7;16(4):636-8.
2. van Overbeeke E, et al. Use of patient preferences in health technology assessment: perspectives of Canadian, Belgian and German HTA representatives. The Patient-Patient-Centered Outcomes Research. 2021 Jan;14(1):119-28.