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Patients' perceived health status following primary surgery for oral and oropharyngeal cancer

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Abstract. How oral and oropharyngeal cancer patients view their 'quality of life' is of fundamental importance. Any differences seen in their health state compared with normative data and with other disease conditions allows a wider perspective on their outcome after surgery.

A cross-sectional postal survey was undertaken of patients treated for oral/oropharyngeal squamous cell carcinoma by primary surgery using the University of Washington Quality of Life Questionnaire Version 4 (UW-QOL v4) and the EuroQol EQ-5D.

Of 348 patients surveyed, 224 returned analysable forms, (response rate 64%). In the EQ-5D items, 40% of the group reported a problem in walking, 23% with self-care, 44% in performing usual activities, 50% with pain or discomfort and 33% with anxiety or depression. The mean overall health visual analogue scale (VAS) score was 74 (SE 1) minimum 30 and maximum 100. The mean utility (health index) score was 0.75 (SE 0.02) minimum −0.18 and maximum 1.0.

Compared to national reference data, patients in our cohort of under 60 years of age fared significantly worse than expected for their age but this was not so for older patients. There were strong correlations between appropriate domains of the EQ-5D and UW-QOLv4 and between UW-QOL global measures and EQ-5D VAS.

Key words: EQ-5D; questionnaires; health-related quality of life; UW-QOL; oral cancer; head and neck cancer; validation.

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There is increasing emphasis for the inclusion of health-related quality of life (HRQOL) in the evaluation of outcome in patients with oral and oropharyngeal cancer[3,14,19]. The main predictors of outcome include tumour stage and method of treatment: primary surgery, primary radiotherapy or combination therapy[21]. HRQOL assessment focuses on the emotional, social and physical aspects of diseases and their treatments. There is no single ideal questionnaire that measures HRQOL and several different questionnaires or modules are often used[18,19].

The University of Washington Quality of Life Scale is a brief head and neck cancer-specific questionnaire[9]. Although each item has only a simple hierarchy of response, the items do seem to serve as useful indicators of outcome judging from comparisons made with other more

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detailed questionnaires[12,16,25]. One item that has not yet been adequately addressed is the general 'quality of life' question. The view of patients with oral and oropharyngeal cancer of their overall 'quality of life' is very important and, hence, an indication of how this item correlates to a well recognized and widely used generic measure of health state such as the EQ-5D (EuroQol)[2] would be extremely valuable.

The EQ-5D (or EuroQoL) is currently one of the most popular measures of health status designed for use in evaluating health and healthcare[15]. It was developed by the EuroQoL group, an international research group, set up in 1987 to develop a standardized, non-specific instrument for describing and evaluating health-related quality of life[2]. The EQ-5D is now used in most countries around the world and has been translated into all major languages. It is intended to complement other forms of quality of life measures and should facilitate the collection of a common data set for reference purposes. This gives researchers the opportunity to generate cross-national comparisons as well as comparing different disease states both with normative data and with each other. The EQ-5D is being used increasingly in a variety of ways including monitoring the health status of patient groups at different moments in time, assessing the seriousness of conditions at different moments in time, providing evidence about medical effectiveness of drugs or processes, in economic studies and establishing levels of population health status both locally and nationally[15]. The EQ-5D has been used in many different areas of medicine[6,15] including cardiovascular, gastrointestinal, neurology, oncology, orthopaedics, respiratory, urology and oral health-related quality of life[1]. Although reported in palliative treatment for oesophageal cancer[10], to date, the EQ-5D has not been reported specifically in head and neck or oral and oropharyngeal cancer.

The three aims of this study were the following: first, to report the findings from the EQ-5D in patients who have undergone primary surgery for oral/oropharyngeal cancer; second, to compare this group of patients to already published UK reference data for the EQ-5D; third, to compare the global UW-QOL quality of life items to the visual analogue scale used in the EQ-5D

Patients and method

Oral and oropharyngeal squamous cell carcinoma patients treated by primary surgery at the Maxillofacial Unit of the University Hospital Aintree, Liverpool between 1992 and 2003 were considered for participation in this study. In February 2004 a postal questionnaire was sent to patients known to be disease free. The questionnaire package contained a covering letter about the survey, instructions on how to complete the questionnaires, a consent form, the University of Washington Quality of Life Questionnaire Version 4 (UW-QOL v4)[20] and the EuroQol EQ-5D[2,6].

The EuroQol EQ-5D provides both a compact descriptive profile and a single index value that can be used in the clinical and economic evaluation of health care (REF- the EuroQol EQ-5D user guide) and is in two parts. Part 1 is a self-reported description using a five-dimensional classification of mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Each dimension has three statements organized hierarchically according to severity and the patient is asked to tick the statement that best describes how they feel 'today'. A total of 243 possible health states (3^5) are defined in this way and each health state may be converted to a 'utility health index' score using tables of values in the EQ-5D user guide and for which the maximum score of 1 indicates the best health state. Part 2 is a self-rated valuation using a visual analogue scale thermometer in which patients rate how good or bad their own health is 'today'. The best state they could imagine would score 100 and the worst state would score 0. The questionnaire also includes questions about smoking status, educational achievement and employment.

The one significant reference source of EQ-5D normative values for the UK comes from a 1993 household survey of the population, conducted as part of a wider study of practical ways of measuring health-related quality of life. The final sample of 3395 subjects was considered representative of the general population with respect to age, sex and social class[11].

The University of Washington Quality of life questionnaire is well established (version 4 was used[20]) and covers 12 domains – pain, appearance, activity, recreation, swallowing, chewing, speech, shoulder function, taste, saliva, mood and anxiety. Each question is scaled from 0 (worst) to 100 (best) according to the hierarchy of response. There are also two global questions, each a six-point Likert scale, one asking about health-related and the other about overall quality of life during 'the past 7 days'. Both were scaled evenly from 0 to 100 for the analyses.

Statistical method

The Spearman coefficient was used to measure correlation of age with the EQ-5D VAS score, and with the EQ-5D health states score. It was also used to measure correlation between UWQOL domains and EQ-5D dimensions and of UWQOL global measures with the EQ-5D VAS score. Association between clinical demographic factors and problems on the EQ-5D dimensions was tested using Fisher's

Table 1. Response to the 2004 survey

		Responders ($n = 224$)	Non-responders ($n = 124$)	Response rate (%)
Year of operation	1992–1995	38	29	57
	1996–1999	71	43	62
	2000–2003	115	52	69
Age at survey	<55	41	30	58
	55–64	65	38	63
	65–74	60	36	63
	75+	58	20	74
Gender	Male	129	80	62
	Female	95	44	68
Site of tumour	Oral	200	113	64
	Oro-pharyngeal	22	10	69
	Maxilliary sinus	2	1	67
t stage	Tis/T1/T2	156	88	64
	T3/T4	67	35	66
tN stage	0	177	91	66
	1	34	23	60
	2 or 3	12	10	55
Surgery	No Flap	67	42	61
	Soft flap	115	64	64
	Composite flap	42	18	70
Radiotherapy	No	144	86	63
	Yes	80	38	68