Supplementary Online Content

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eAppendix. Instrument description
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This supplementary material has been provided by the authors to give readers additional information about their work.

eAppendix: Instrument description

The FACT-M is a validated, melanoma-specific measure, adapted from the broader, Functional Assessment of Chronic Illness Therapy (FACIT) catalogue of HRQOL measures. The FACT-G (General) is composed of four subscales: the 7-item physical, functional and social wellbeing subscales, and the 6-item, emotional wellbeing subscale.[1] The FACT-M (melanoma) contains the 27 core items of the FACT–G, plus 24 melanoma-specific items.[2] Both the FACT-M and Melanoma Surgery scale have been independently validated for use with people with Stage I–IV melanoma.[3] Numerical values from 0 ('Not at all') to 4 ('Very much') are assigned to Likert scale responses, each representing degrees of frequency or difficulty in relation to specific aspects of functioning or wellbeing. The FACT-M yields both a total 'quality of life' score (range: 0-204), as well as domain scores. An algorithm is available to transform FACT-M scores to utilities for QALY estimation, facilitating a comparison of health economic outcomes.[4]

The AQoL-8D is a multi-attribute utility measure, developed for use in studies with a specific focus on mental health, and with published norms for the Australian population by age and sex.[5] The 35-item AQoL-8D assesses eight dimensions of quality of life and was derived using psychometric methods for achieving content validity. The physical super dimension contains three of the dimensions (independent living, pain, senses); the other five dimensions (mental health, happiness, coping, relationships, self-worth) constitute the mental super dimension.

FCR was assessed using the Fear of Cancer Recurrence Inventory (FCRI).[6] The FCRI is a 42-item instrument comprising seven subscales: triggers, severity, psychological distress, coping strategies, functional impairment, insight, and reassurance. The 9-item Severity subscale is widely recognised as a measure of the severity of fear of cancer recurrence, while the other subscales represent specific behavioral components of FCR, often used in clinical practice to guide and tailor care. As suggested by existing evidence , in this analysis, the FCRI Severity subscale was considered separately from the related constructs.[7] The wording of the FCRI was modified to read "fear of new or recurrent melanoma". The FCRI is suitable for use with cancer patients irrespective of disease type or stage. Higher scores are indicative of greater FCR. FCRI Severity scores are categorised as "Normal FCR" or "High FCR" based on the clinical cut-off of 13.[8]

The FACT-M was originally validated in 273 melanoma patients and shown to be reliable, responsive, and to have good construct and convergent validity.[1,2]

The AQoL-8D has been shown to be a reliable and valid instrument, with high internal and test-retest reliability coefficients.[5]

The FCRI was originally validated in a French-speaking sample comprising 600 patients with mixed cancers[6] and was found to be internally consistent across all subscales and to have moderate to high one-month test–retest reliability across subscales. Convergent and concurrent validity were also demonstrated.[6] In addition the English version of the FCRI has been shown to have high internal consistency (α =0.96 for the total scale) and test-retest reliability (r =0.88 for the total scale).[9]

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eTable 1: Floor and ceiling effect analysis for the sub domains of the two instruments

Instrument	Domain	Min score	Max score	% at very low state (0 to 0.2)	% at full health
AQoL-8D	*Total*	0.10	1	3.7	0.61
	Mental Super Dimension	0.03	1	10.4	0.61
	Physical Super Dimension	0.10	1	3.7	7.32
	Physical Wellbeing	0.73	0.93	0	0
FACT-M	*Social Wellbeing*	0.57	0.91	0	0
	Emotional Wellbeing	0.71	0.93	0	0
	Functional Wellbeing	0.55	0.94	0	0
	Total	0.51	0.86	0	0

eTable 2: Stepwise multivariate linear regressions with backward selection of AQoL-8D and FACT-M upon FCR levels

Variables	AQoL-8D				FACT-M			
	Univariate		Multivariable		Univariate		Multivariable	
	Coeff	t-value	Coeff	t-value	Coeff	t-value	Coeff	t-value
FCRI Severity (>13 vs ≤13)	-0.10	-3.12***	-0.12	-3.54***	-0.035	-3.16***	-0.03	-2.87***
Area (living in metropolitan vs rural/regional)			0.09	2.62***				
Melanoma stage (0/I vs II)			-0.08	-2.46**				
Marital status (married vs not)							-0.03	-3.08***
Constant	0.84		0.91		0.78		0.84	
R^2	0.06		0.15		0.06		0.11	
F^	9.74		6.27		9.98		10	

Variables included in the multivariate model: *** Significant at 1 percent level
** Significant at 5 percent level
^ Statistical significance of the strength of relationship between model predictors and the response variable at 5 percent level.