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### Title

Development and validation of the Basal and Squamous cell carcinoma Quality of Life (BaSQoL) questionnaire

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**Abstract**

**Development and validation of the Basal and Squamous cell carcinoma Quality of Life (BaSQoL) questionnaire**

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Health-related quality of life is increasingly important in the management of patients with basal cell carcinoma (BCC) and squamous cell carcinoma (SCC). A few disease-specific questionnaires exist, but all with substantial flaws. We developed and validated a quality of life questionnaire suitable for use in all BCC and SCC patients. In an extensive four-phase trajectory, as recommended by the European Organisation for Research and Treatment of Cancer (EORTC), 33 items were selected and rephrased into a preliminary questionnaire. A population-based sample of 1173 patients from the Dutch Cancer Registry were invited to complete the questionnaire. The questionnaire was reduced using exploratory factor analysis and item response theory (IRT). Subsequently, individual item performance was assessed using 8 features of the classical test theory (CTT).

The 33-item preliminary questionnaire was completed by 721 patients, of whom 15% had SCC. The number of items in the questionnaire was reduced to 16, covering five subscales: “Worries”, “Appearance”, “Behaviour”, “Diagnosis & Treatment” and “Other People”. Confirmatory factor analysis showed a good fit. Cronbach’s  $\alpha$  (range 0.67 – 0.82) were reasonable to high and demonstrated good internal consistency. Of the 8 CTT item performance features, only 1 item was suboptimal for 6 out of 16 items and only 2 for 2 items, suggesting a valid Basal and Squamous cell carcinoma Quality of Life (BaSQoL) questionnaire.