

The Cross-Cultural Analysis (CCA) Project



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**on behalf of the EORTC and the Quality of Life
Cross-Cultural Meta-Analysis Group**

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Aims of the CCA project

- 1. Assessment of the cross-cultural validity of the EORTC QLQ-C30**
- 2. Update of Reference Values Manual**
- 3. Investigation of the factor structure of the EORTC QLQ-C30**



Datasets received

Type of study	No. of studies	No. of patients
EORTC studies	54	13,144
Other studies	71	26,268
Total	125	39,412



Differential Item Functioning (DIF) Analyses

- **Used to identify whether an item in a scale of the QLQ-C30 functions differently with respect to:**
 - 1. Translation used**
 - 2. Cultural/geographical grouping**
- **relative to other items in the same scale**
- **Parallel interviews with bilingual people used to distinguish linguistic/cultural response patterns**



1) Differential item functioning (DIF) analyses by translation

- Examined 13 translations of the EORTC QLQ-C30
- Most item translations perform similarly to original English version
- Small number of translation problems identified
- Status: Published [Quality of Life Research 2006;15:1103-1115]



2) Differential item functioning (DIF) analyses by cultural group

- **Evaluated whether EORTC QLQ-C30 items functioned differently by cultural/geographic region**
- **Most items perform similarly**
- **Suggestion of some differences between Europe/East Asia**
- **Status: Published [Quality of Life Research 2007;16:115-129]**



3) Scale-level cultural analyses

- **Examined whether respondents from different cultures place different emphasis on different aspects of overall QoL**
- **Status: Published [Journal of Clinical Epidemiology 2008;618:788-795]**



4) Performance of DIF analyses in short scales

- **Simulation study to evaluate performance of DIF methodology when scale has small number of items**
- **Method still appropriate for short scales but has lower statistical power**
- **Status: In press [Journal of Clinical Epidemiology]**



5) Literature review of DIF analyses in HRQoL instruments

- **Methodological literature review on DIF analyses of HRQoL instruments**
- **Status: Submitted [Quality of Life Research]**



6) DIF analyses of on/off treatment assessments

- Do DIF analyses give similar results at three assessments: pre-treatment, on-treatment, off-treatment?
- For most scales similar results are obtained
- **Status: Completed**



7) Practical impact of DIF analyses

- **Guidelines for assessing practical impact of DIF analyses on a clinical trial**
- **Status: Completed**



8) Translation of EORTC QLQ-C30 response categories

- **Examination of the four translated response choices for each language:**
 - Not at all
 - A little
 - Quite a bit
 - Very much
 - **Status: Ongoing**
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9) EORTC QLQ-C30 Reference Values

- **Update of Reference Values manual providing typical scores for the EORTC QLQ-C30 by cancer site, age group, gender**
- **Status: Published on QLG website [<http://groups.eortc.be/qol>]**



10) Paper based on Reference Values

- **Journal article based on Reference Values (Peter Fayers)**
- **Status: Drafted [Target: European Journal of Cancer]**



11) Factor structure of EORTC QLQ-C30

- Examination of the factor structure of the EORTC QLQ-C30 using CCA database
- Permission received from collaborators to use data for this new project
- Work will be conducted by Chad Gundy (Amsterdam)
- **Status: Ongoing**



Contributors (1)

- We acknowledge the support of EORTC groups (contributed 54 studies)
 - Members of the Quality of Life Cross-Cultural Meta-Analysis Group:
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