

**Making the EORTC QLQ-C30
interactive:
development of CAT for EORTC
QLQ-C30 dimensions
- project update**

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Aim of the project

- Develop CAT for the QLQ-C30 dimensions (scales)
- CAT: interactive, individually adapted questionnaire (use responses to previous items to select most informative next item, stop when desired precision obtained)
- Advantages include: increased measurement precision, questionnaire can be adapted to each study or person, immediate calculation and presentation of results

Status of the project

Dim	Lit. search, construct items	Expert interviews	Patient interviews	Data collection	Final analyses
PF	Completed	Completed	Completed	Completed	Ongoing
RF	Being reviewed				
EF	Being reviewed				
CF	Ongoing				
SF	Completed	Ongoing			
FA	Completed	Completed	Completed	Start Oct	
PA	Completed	Completed	Completed	Ongoing	
NV	Being revised				
DY	Completed	Completed	Start Nov		
SL	Completed	Completed	Start Nov		
AP	Completed	Completed	Start Oct		
CO,FI,DI	Ongoing				

PF analyses

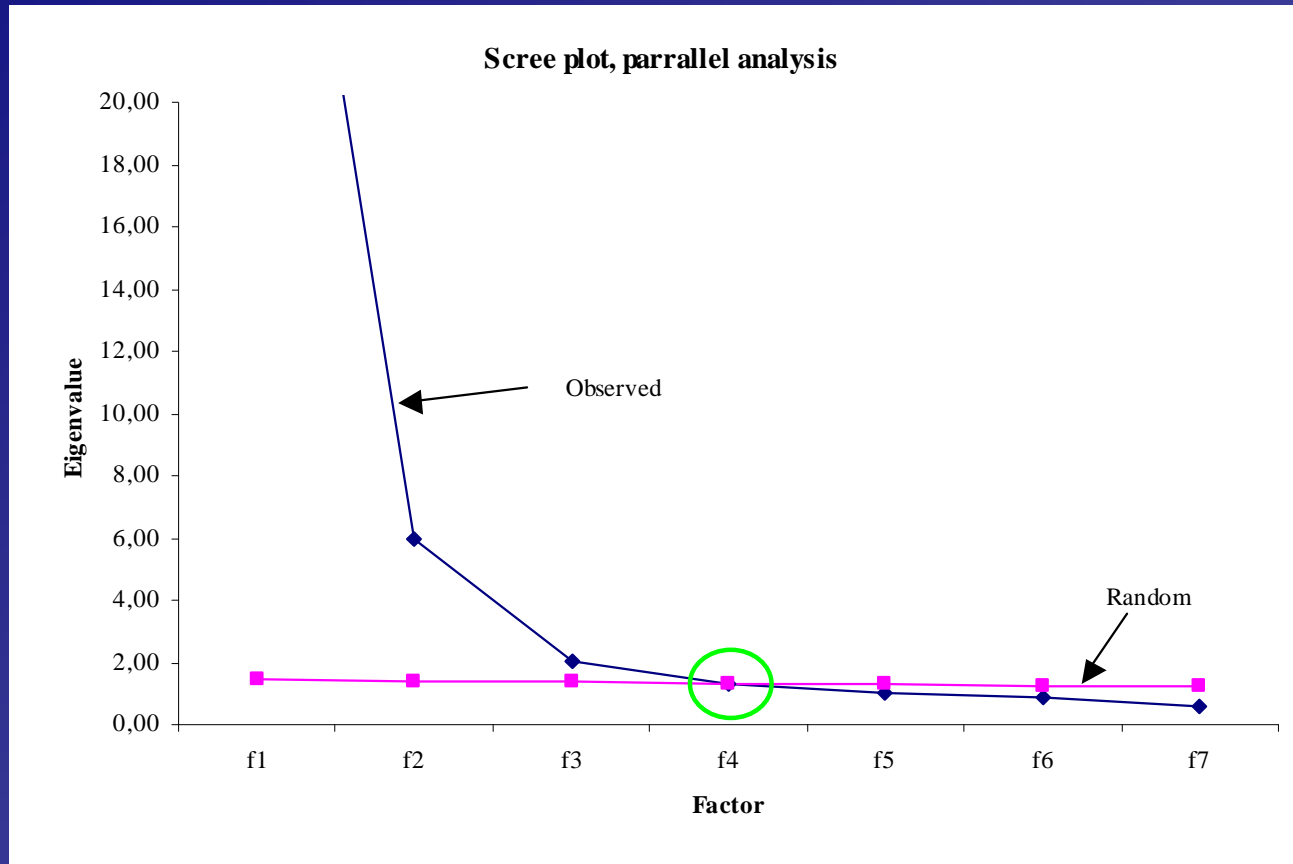
- Evaluated 51 new candidate items + 5 original items = **56 PF items**
- Collected 1180 responses from DK, FR, GE, IT, TW & UK

PF factor analyses

- EFA:
 - Used several criteria to evaluate dimensionality
 - One dominating factor (explained 2/3 of variation)
 - Maybe 2-3 other important factors

PF factor analyses

- EFA:



Dimensionality
3 of

PF factor analyses

- EFA:
 - Used several criteria to evaluate dimensionality
 - One dominating factor (explained 2/3 of variation)
 - Maybe 2-3 other important factors
 - Additional factors did not seem meaningful
 - **Focused on 1-dimensional solution**

PF factor analyses

- CFA:
 - Searched for 1-dim model with acceptable fit including all five C30 PF items and as many other items as possible
 - Could include C30 PF items + 24 new items (RMSEA<0.08, TLI/CFI>0.95)
 - May add a few more items for better contents coverage

PF IRT analyses

- Estimated 1-dim IRT model (GPCM)
- Categories (very much/quite a bit) had to be combined for some items because of very few responses
- Three items deleted because of estimation problems
- Practical fit of model seems acceptable (needs further evaluations)

PF DIF analyses

- Investigated for DIF for the 26 items using logistic regression with regard to:
 - Gender, age, language, cancer site, stage, treatment, being married, education, work
- Several items showed language DIF and some showed gender DIF
- Practical consequences of DIF will be investigated. If DIF affects CAT measurement then item may be deleted

CAT program

- Fully functional version ready
- Been tested by the CAT-group members, revised based on comments
- Includes *preliminary* version of PF CAT including 26 items
- Example of CAT measurement of PF



Option window

This is a European Organisation for Research and Treatment of Cancer (EORTC) Quality of Life Group questionnaire environment.

Start
questionnaire

Change
settings

Show
results

Exit
program

Questionnaire Setting

Questionnaire:

Save results: ...

Patient ID text:

Closing comment:

Show scores:

Use forward for next question:

Enable backwards button:

Require an answer:

Method for estimating the IRT score:

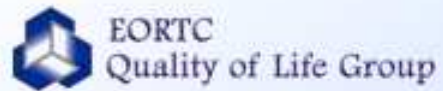
Item selection criterion:

Stop criterion:

Show reference values:

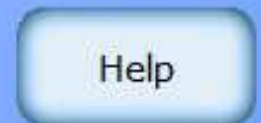
Show confidence interval: % Confidence interval

HRQL domains included in the questionnaire:	Start item:	Minimum information	Min. number of items	Max. number of items	Reference value
<input checked="" type="checkbox"/> Physical functioning	<input type="text" value="walk 100 m"/>	<input type="text" value="20"/>	<input type="text" value="2"/>	<input type="text" value="5"/>	<input type="text" value="90"/>



Welcome

Please type your name:





Do you have any trouble walking 100 m?

Not at All

A Little

Quite a Bit

Very Much



Stop

Help



Do you have any trouble taking a long walk carrying a heavy pack on your back (e.g. a filled rucksack)?

Not at All

A Little

Quite a Bit

Very Much



Stop

Help



Do you have any trouble carrying a heavy bag upstairs?

Not at All

A Little

Quite a Bit

Very Much



Stop

Help



Do you have any trouble hiking 3 km on uneven surfaces?

Not at All

A Little

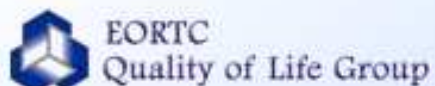
Quite a Bit

Very Much

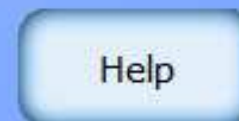
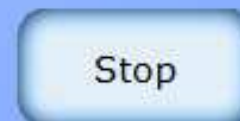


Stop

Help

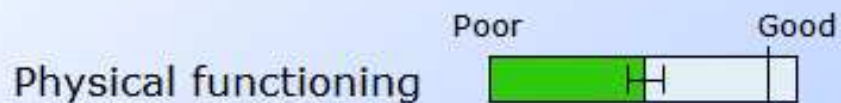


You may go back, using the back button (left-arrow), and check your answers and if relevant change them. Note, however, that if you change some of your answers you may be asked a few more questions. If you have any comments please use the space below. When done, please press the forward button (right-arrow).





Summary of your answers:



Note: The vertical lines | indicate the average level of the general population.

Print



Publications

- Written draft for paper describing CAT-project in general and PF results up to data collection
- Draft circulated to CAT-group for comments
- Will be revised after meeting and submitted shortly after (probably to EJC)
- Next: paper describing psychometric/IRT analyses and the final item selection for PF

**Anybody interested in
participating in the project,
please contact us**

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