The EORTC CAT project is completed

Petersen, Morten Aagaard; Grønvold, Mogens

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The future of cancer therapy

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EORTC QoL Group Meeting, Krakow, autumn 2015

The future of quality of life is in our hands

Jaap C. Reijneveld – Newsletter Editor

Neurologist, Department of Neurology, VU University Medical Center and Academic Medical Center, Amsterdam, The Netherlands

With pride I present the 2016 issue of the annual Newsletter of the Quality of Life Group of the European Organisation for Research and Treatment of Cancer (EORTC)!

This Newsletter serves as a way to inform the members of the Group as well as people at further distance – varying from members of the other EORTC groups and the EORTC headquarters who are interested, but not actually involved, in the Group's activities, to people who are just fascinated by the Group's name. If you are a member, you don't necessarily realise that we do in fact have a rather odd name. Several times I've had difficulties back home explaining to my family and friends that I would be abroad for a few days for the "Quality of Life Group": a typical reply is "….must be hard-working, ha-ha…"

But in fact most Quality of Life Group (QLG) members do work hard, as is once again illustrated by the content of this Newsletter. The reader will be updated on the strategic projects of the QLG, such as the Computerized Adaptive Testing (CAT) and Computer-based Health Evaluation Software (CHES) projects, with impressive numbers of subjects being included and an equally impressive amount of work being done. Combining the strengths of the now-completed CAT and CHES systems will hopefully bring Quality of Life (QoL) assessment within and outside of clinical trials to an even higher level. We also have reports of new research projects that are being funded by the QLG, involving the disease-oriented EORTC groups (DOGs) more and more, and leading to even more work to be done. Also in this issue is a very motivating contribution by a patient advocate, further emphasizing why we need to work hard.

Quality of Life Group members do enjoy relaxing after their hard work, though, and relaxing has happened and will happen throughout Europe, including Krakow and Manchester, as can be seen in the reports – and many pictures – on the most recent and upcoming QLG meetings.

I would like to thank Cheryl Whittaker for her indispensable help in creating this Newsletter, and very much hope that you will enjoy reading it, and looking to the future with QoL in mind.

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For more information on the Quality of Life Group and its activities:

http://groups.eortc.be/qol

Address:
Avenue E. Mounier, 83
1200 Brussels
Tel. +32 (0)2 774 16 11
Fax: +32 (0)2 772 35 45
E-mail: eortc@eortc.be
Web: **www.eortc.be**

Quality of Life Group Executive Committee

Travel new roads

Lonneke van de Poll, Netherlands Cancer Institute, The Netherlands

The times they are a-changin' (1). As new chair of the Quality of Life Group (QLG) – although already halfway through my term – I sometimes find myself thinking that I became chair in a period with more changes in the EORTC landscape than ever. But talking with past chairs suggests that this has always been the same: nothing's new. Flexibility to change is obviously needed to move with the times. Or, preferably, remain ahead of our time.

In past years the QLG has anticipated that some of our old (paper) roads are rapidly ageing (1) and we have started to explore new ones. Important examples are the evolution of a Computerized Adaptive Testing (CAT) version of the EORTC QLQ-C30 and development of the Computer-based Health Evaluation Software (CHES). The latter facilitates the use of CAT measures, but also the integration of our core questionnaire in daily clinical practice. Another new road off the beaten module track is the development of a utility measure for the QLQ-C30 (the QLU-C10D; see p.16), a collaboration led by QLG member and Prof. Madeleine King from the University of Sydney, Australia.

Also, following our ambition to really encourage collaboration between the QLG and Disease-Oriented Groups (DOGs), we have specifically invited DOG members to apply for funding for QoL projects as joint principal investigators with QLG members. Although 2015 was the first grant round to have this new focus, we had interesting clinical projects submitted and were able to fund several projects that are joint with various DOGs. In this newsletter you can read more about these new joint clinical research projects. For 2016 we expect more collaborative clinical research projects, and this will support the recently held EORTC strategy meeting outcome: to act as an integrated organization.

Speaking of new roads, in a very recent paper in Clinical Cancer Research (2), the FDA states that there is a need to re-examine the measurement tools available to assess key health-related contributors to patients' quality of life (QoL) in oncology clinical trials. Current use of static multi-item health-related quality of life (HRQoL) instruments is discussed in the paper and the FDA proposes a patient-reported outcome assessment strategy that focuses on three separate measures of symptomatic adverse events, physical function and disease-related symptoms for use in clinical trials (2). The FDA also acknowledges that while they think these three core concepts may provide data more applicable to US regulatory requirements, collaboration among international stakeholders is needed to balance the needs of all parties. This new proposal for PRO assessment in oncology clinical trials will probably evoke a lot of discussion, but also requires research to evaluate whether this new approach may indeed be better than current use of multi-item HRQoL instruments. This year, the EORTC Quality of Life Group and Department will be well represented in this discussion by Mogens Grønvold and Andrew Bottomley at an annual Patient-Reported Outcomes Workshop with the FDA and international stakeholders from different backgrounds.

The times they are a-changin' (1) – with new measures, new ways of assessment, and new strategies. But with our new collaborations and new friends it will be exciting to travel these new roads together.

References

1. The Times They Are a-Changin', Bob Dylan 1964

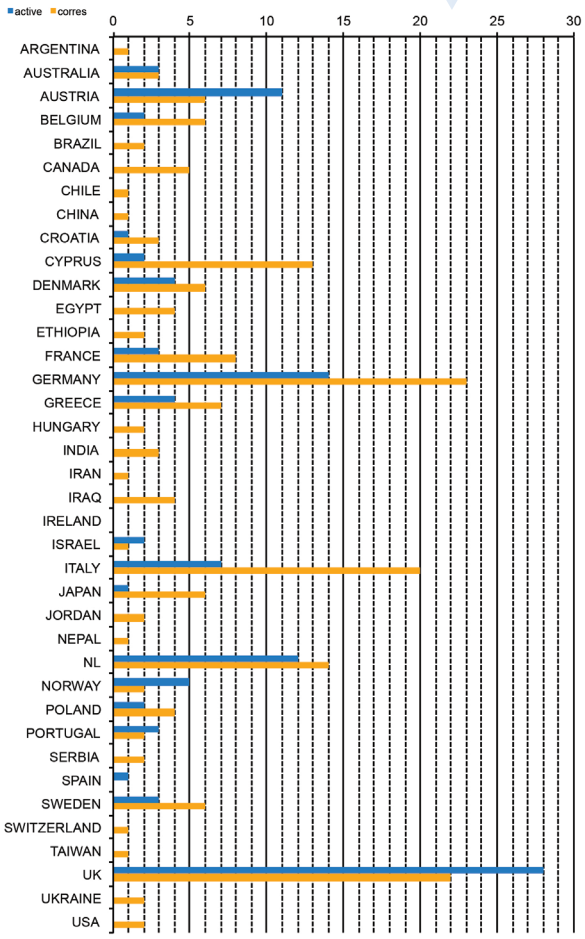
2. Kluetz PG, Slagle A, Papadopoulos E, et al. Focusing on Core Patient-Reported Outcomes in Cancer Clinical Trials: Symptomatic Adverse Events, Physical Function, and Disease-Related Symptoms. Clin Cancer Res. 2016; Published OnlineFirst January 12, 2016; doi:10.1158/1078-0432.CCR-15-2035

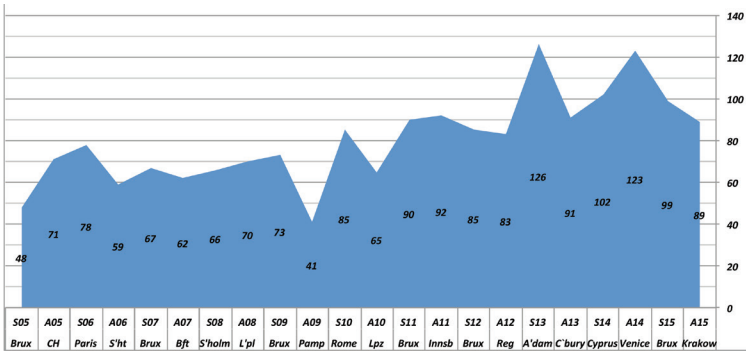
EORTC Quality of Life Group – facts & figures

Irma Verdonck de Leeuw, VUMC Amsterdam, The Netherlands

At this moment we have 316 members (204 corresponding, 112 active and 10 from the department) all over the world, as you can see below.

A total of 99 members of the EORTC QLG were present at the spring meeting at the EORTC EGAM 2015 in Brussels, Belgium and 88 at the autumn meeting in Krakow, Poland.





HOW CAN I BECOME A FULL ACTIVE MEMBER ?

To become a full active member of the EORTC Quality of Life Group, you must attend two meetings (within two years) and be actively involved in research in the Group.

On the third meeting you become an active member.

To maintain active membership you have to continue with research activities and attend two meetings every two years.

If you are not able to attend meetings regularly, you can become a corresponding member.

Welcome to the intranet: the members' area of the QLG website

Anne-Sophie Darlington, QLG Executive Committee Web Representative, University of Southampton, UK

Mélodie Cherton, Executive Assistant & Web Administrator, Quality of Life Department, EORTC Headquarters, Brussels, Belgium

We would like to report on progress that is being made in relation to the processes within the Quality of Life Group (QLG), as well as our aim to make our outputs and achievements more visible.

Firstly though, we would like to highlight that the secure active members' area on the website (http://groups.eortc.be/qol/welcome) is successfully being used to register members for the upcoming meetings.

One aspect within the active members' area that we are currently focusing on in terms of development is the different life cycles. While we have clear guidelines for all the work that needs to be undertaken to develop modules and undertake projects on behalf of the QLG, some of the processes before and after the research work could benefit from being made more explicit. To this end, we have been working with the Module Development Committee (MDC) on developing visual representations of the different steps that researchers, the Executive Committee (EC), and other committees involved undertake from the inception of a good research question, through carrying out the research, to publishing the final papers. This is especially important as the Group is making great strides to work together with the EORTC clinical groups to answer clinically relevant and important questions, in addition to the prolific work on measurement development. This has diversified our research portfolio as well as increased the processes in complexity.

Another important aspect, in addition to developing improvements regarding the QLG's members' area, is to closely monitor research outputs from members of the QLG, as well as publicizing them. Publicizing the outputs will enable them to reach the widest possible audience and, through use of the questionnaires in trials and clinical practice, improve outcomes for cancer patients. The QLG not only publishes on the development of the outcome measures but also on our understanding of what is important in terms of quality of life (QoL) in a broader sense and on overviews of what we already know about cancer in relation to QoL and measurement for subgroups of patients. The development of a comprehensive publication strategy of the QLG will make sure that we collate all papers and abstracts published and disseminate this work as widely as we can through our website.

Finally, we are always working on improvements and any feedback is always very much welcomed.

Members' news

- In September 2015 **Kim Cocks** moved to Adelphi Values as a Director and Principal Statistician in their Patient-Centered Outcomes team. The team provides expert consultancy and analysis in the field of patient-reported outcomes. Kim also retains a visiting contract with the University of York, UK.

- **Jaap Reijneveld** was appointed Secretary of the Brain Tumor Group as of autumn 2015.

- In 2015 Prof. **Mogens Grønvold** was appointed as an EORTC Board member – the first QLG Board member in 18 years to make the switch, so we congratulate Mogens and wish him the best of luck.

IF, AS A QLG MEMBER, YOU HAVE SOME NEWS TO SHARE WITH THE QLG, WE WANT TO HEAR FROM YOU! SEND AN EMAIL TO CHERYL:

cheryl.whittaker@eortc.be

News from the EORTC Quality of Life Department

Andrew Bottomley, Assistant Director, EORTC, and Head of Quality of Life Departments, Brussels, Belgium

It's been another busy year at the Quality of Life Department (QLD). We have worked hard to keep on integrating the Department into the ever-changing organization, which, in turn, is having to adapt to the constantly moving and fast-paced clinical trials area. Now that there are more regulations and oversight for the clinical trials that we carry out, it takes all hands to keep up. So, what are we doing? Well, we have lots to report.

We are preparing the ground for the **2017 Quality of Life and Cancer Clinical Trials Conference**, which will take place one year from now, in spring 2017. Once again, we are lucky that the European Parliament in Brussels has agreed to host us, with Member of the European Parliament (MEP) Marisa Matias once again helping us. This MEP from Portugal is proving to be a huge supporter of Quality of Life (QoL) and Cancer Clinical Trials in the EORTC. So with that support, as well as financial support from the EORTC Quality of Life Group (QLG) and other sponsors, we are well on track to having an exciting programme with many worldwide and QLG speakers. Please check the QLG website for the final date and programme, which will be announced soon. Besides conference planning, we have been active with lots of clinical trials. The EORTC has performed over 150 clinical trials with QoL since the Department was set up, and in 2015 some 17 were activated and 10 involved QoL.

The QLD is also **working with the QLG on research projects**, and in December 2015 started a 3-year project on Minimal Important Differences (MID) to look at the clinical significance of QoL tools. In January this year, we started a project called **SISAQOL (Standardizing International Statistical Analysis of QoL)** which aims to make international guidelines for analysis of QoL data in randomized controlled trials (RCTs). We are pleased to say we now have over 30 organizations on board, including FDA, EMA, HTA agencies, MASCC, ISPOR, ISOQOL, and CONSORT PRO. Our kick-off meeting at the end of January was the gathering of the great and the good, with presidents and past presidents of many cancer and international organizations present. But why do we need such key movers and shakers? Well, we have a challenge to face, as standardization of QoL is something that has not been achieved in the lifetime of RCTs – so if we are to do this, it's the leaders who will help us. With a nice unrestricted educational grant from Boehringer Ingelheim, support from the EORTC HQ, and input from the QLG, we hope by 2019 to be able to recommend these guidelines.

Since September 2015, we have been working hard on the **new Item Bank** (see p.8), with Dagmara Kuliś leading this project. It was important to first define the structure of the previous Item Bank and then work closely with the IT company on the development of the new one. Now the Translation Unit (TU) is busy populating the Item Bank, first with English items and then with all the translations, which – taking into account the large number of translated questionnaires – will take some time. The Item Bank can be accessed online (www.eortc.be/itembank/).

In general, it has been a busy year for the TU, with a higher-than-ever number of **academic and commercial translations**, and also translations used in Phase III and IV studies. Besides the Item Bank, the TU is also involved in other projects, such as the creation of ePRO guidelines, the update of the Translation Manual, and methodological work presented at the ISOQOL Annual Meeting and in publications.

The QLD is **working closely with the EORTC Accounting and Contracting Departments**, as contracting becomes more complex and the number of companies requiring license agreements increases year on year. Cheryl Whittaker, who is managing this liaison, also set up and launched an online user survey in September to see if we are meeting the needs of our clients. We are happy to report that the overwhelming response was that pharmaceutical companies are very happy with our provision of QoL tools for their clinical trials, as well as the information we provide, the speed of our support, and the license fees. The number of agreements signed with pharmaceutical companies certainly seems to reflect this: signed agreements increased from 144 in 2014 to 168 in 2015, and the numbers look set to rise again this year. High numbers can also be seen in the academic download requests, handled by Mélodie Cherton: from March 2015 to the time of writing, there have been over 4,500 such requests.

Francesca Martinelli is actively **coordinating the updating of the modules**, and this work becomes more complex as more modules are developed and more grants are funded.

We've had a lot of **new staff and fellows** join the QLD in the last year: we now number 13. Back in July 2015 Edīte Fiskoviča was replaced by Tamara Sanchez as new Junior Translation Officer. In October 2015, Dr Jammbe Musoro joined the QLD as a biostatistician, and will be working on the MID project for the next three years. We have been lucky to

welcome a visiting researcher from France, Dr Jean-François Hamel, who is a rare breed: a medical doctor turned statistician. Initially he joined us to gain a little experience for a year, working on a simple analysis project, and has ended up doing brilliant work on no less than six projects… never come to the EORTC expecting life to be quiet! Finally, at the beginning of 2016, Dr Madeleine Pe joined the QLD to work on SISAQOL, which is already exploding, and other grant applications: again, it's going to be a busy year ahead! Sadly, you can't have gain without some loss – there is a rumour that Sheila Sanderson will retire this year after almost 20 years with us.

Many of the **QLD staff travelled to conferences** last year; we worked with the European Commission's Joint Research Centre, looking at collaborating on Breast Cancer, and staff were invited to present at Head and Neck Conferences and other international meetings such as ASCO and ISOQOL. We also published a nice bunch of papers last year, many of which were in good impact factor journals addressing problems of methodology and statistical issues. You can keep updated on the website.

Over the past year the QLD has carried out a lot of work **preparing and supporting QLG initiatives**. One of these was the Clinical Project Development Committee (CDC), which met in Krakow and then in London, and whose aim is to better integrate our activities with the 21 EORTC disease-oriented groups (DOGs). Another large part of the Department's work has been the change in the grant review process, where the EORTC HQ and Board are now more active in reviewing and selecting grants, thereby supporting the QLG more, with the hope that we integrate more and enable the EORTC Board to be more in tune with QLG activities. Of course, coordinating this process means more work, but we worked well with the QLG Executive Committee (EC), the Grant Review Committee (GRC), and Board, and I think overall the process went well. Although it took a lot of effort, and a lot of the Department's and HQ staff's time, I think the end result was worth it. Success rates for grant applications are high, with over 70% of the submitted grants being funded. That's impressive. Most of these grants get a lot of input and peer-review recommendations along the way, but final results are excellent. I am sure throughout 2016 we will continue to evolve and refine this process.

In addition, the new EORTC Quality Assurance policy required time as we standardized documents and procedures. As a consequence of the HQ changes we have had to attend several training sessions throughout the year, including the training of new QLD staff.

Further time and effort is anticipated for the **increasing number of very specific incoming queries**, especially from pharmaceutical companies using our questionnaires who expect a higher degree of service than academic users. As the original developers of the older modules retire and PIs move on, the QLD is losing that line of support and so must step up to the challenge of responding adequately to these queries. Additionally, a review of some of these older modules will be needed soon to systematically assess their impact and relevance. We also foresee an increase in queries related to ongoing developments in the EORTC QLQ projects: CAT is likely to generate questions of a technical, scientific, and administrative nature, while the QLU-C10D will open the field of health economics and health technology evaluations to the QLG, an area for which the QLG can only currently boast a few experts and the HQ only limited expertise. Finally, an increase in ePRO adaptations of the QLQ questionnaires by external vendors is also leading to an additional workload as advice and approval is sought by users for validation of their migrated versions.

So as you can see, it has been a **busy year**… and it's going to get even busier!

LEFT TO RIGHT: *Jean-François Hamel, Jammbe Musoro, Tamara Sanchez, Irina Ghislain, Sheila Scott Sanderson, Corneel Coens, Andrew Bottomley, Madeline Pe, Mélodie Cherton, Francesca Martinelli, Dagmara Kuliś, Cheryl Whittaker, Efstathios Zikos*

New item bank

Dagmara Kuliś, Quality of Life Department Translation Team Leader, EORTC Headquarters, Brussels, Belgium

On behalf of the QLG Translation Committee (Eva Greimel, Graz, Austria & Michael Köller, Regensburg, Germany)

The Item Bank is one of the flagship projects of the Quality of Life Group (QLG), providing an invaluable reference tool to both members of the QLG and external users. Naturally, to optimize searching for re-usable items, the platform has to be well searchable, but unfortunately in the previous version the search engine was not optimal. This and other problems (input and display of translations, linking identical and similar wordings, bugs) together with the fact that the previous version dates from 2009 – which is another era when it comes to IT technologies – convinced the Executive Committee to approve the plan to develop a new version of the Item Bank.

After internal discussion at the meeting in Cyprus, we found an IT developer and in September last year we held two workshops with them to explain our needs and expectations. After a thorough functionality and usability analysis, the actual development began in January 2016 with nine weekly stages, each including a new release of the application, discussion on what was done and what should still be done, and testing. The EORTC HQ IT Department provided oversight of the integration process to ensure compatibility.

We are happy to report that the new Item Bank is now online and freely available to all QLG members and external users. It offers more searching options, better display of translations and wordings, more information on questionnaires and items, and a more modern and user-friendly design (see Figures 1 & 2).

We hope that the new Item Bank will serve you well and help in the process of developing new questionnaires.

Fig.1

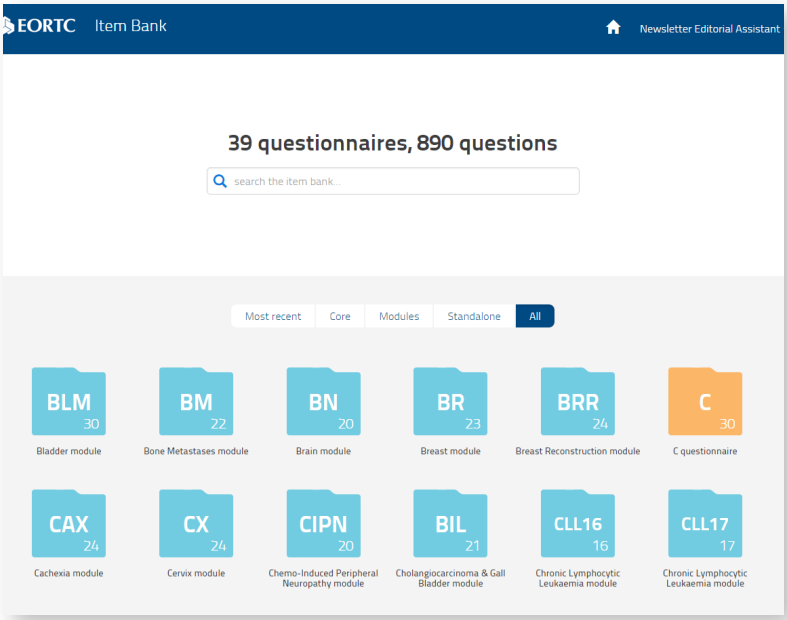
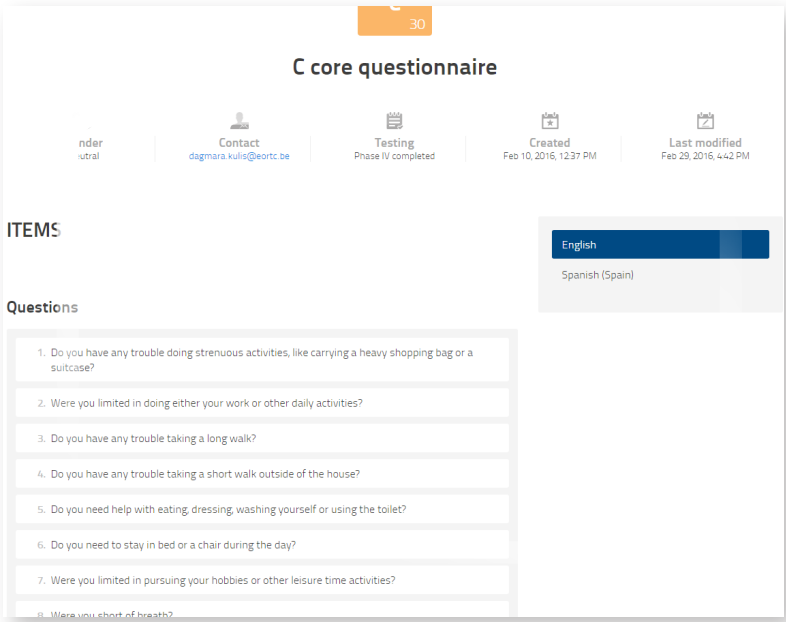


Fig.2



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www.theitba.org

Predicting the future by creating it

Kathy Oliver, International Brain Tumour Alliance (IBTA)

Many people, from US president Abraham Lincoln to educator and author Peter Drucker, have been credited with the words: "The best way to predict the future is to create it".

Regardless of this dictum's origins, it should bring comfort and hope to those whose lives have been touched by cancer. It highlights the fact that we have some degree of control over what the future holds – if we get things right in the present.

Cancer research, treatment and support today bear witness to many promising advances, for example: innovative trial designs; unprecedented technological improvements; greater understanding of malignant disease mechanisms; and, importantly, a much stronger focus on quality of life (QoL) and how to measure it.

One of the biggest revolutions and important advances in healthcare today is the increasing involvement of patients and caregivers. They are participating in defining priorities for cancer research; in helping shape clinical trials; in setting the agenda for their own care; and, at government level, in turning up the heat on medical issues relevant to their disease. No longer passengers but co-pilots, no longer subjects of research but partners in it, no longer passive recipients of care but active team members, patients and caregivers are front and centre.

Patient participation has become a vigorous movement. Writer and one-time neuroscience researcher Leonard Kish said: "If patient engagement were a drug, it would be the blockbuster drug of the century and malpractice not to use it".

All very hopeful for a better future.

In the world of brain tumours (the community in which I am involved as a patient advocate), QoL is enormously important. Highly complex and multi-dimensional, QoL encompasses things like happiness, achievement, aspiration and many other aspects of a psychological, physical and sociological state of being.

A malignant brain tumour – one of the most rapidly lethal of all cancers – attacks the very core of who a person is, resulting in devastating neurological and cognitive deficits. Quality of life for a brain tumour patient can be very badly affected across the whole spectrum of an individual's physical and mental abilities.

In such a setting, meaningful prolongation of life, with as good a quality of life as possible, is paramount.

What is meaningful – what constitutes quality of life for a brain tumour patient – is today assessed by various QoL tools. Numerous measures are available for use in clinical trials as well as in daily clinical work, although in practice QoL measures are not widely used in the latter context.

There are, however, criticisms of current QoL tools: that they are too ambiguous, not really indicative of the values and emotions of patients, often contradictory and inconclusive in their results, and lack consistency.

Do current QoL tools adequately capture the state of a patient's quality of life? And, crucially, does assessing QoL by using these tools result in any meaningful difference for patients?

These questions need urgent review so that in the future we can provide medical professionals with correct assessments of what is truly perceived by patients and caregivers as a good – or at least, acceptable – quality of life.

In mapping the future of QoL research over the next decade or so, I believe we should achieve the following:

1. Create guidelines on the most appropriate use of and format for QoL assessment tools (taking into account key cultural and societal differences) – and meaningfully involve patients and caregivers.
2. Establish international QoL expert networks so that data and knowledge-sharing can occur – and meaningfully involve patients and caregivers.
3. Implement training opportunities on QoL issues/assessment tools for healthcare professionals, industry representatives, academia, regulatory bodies – and meaningfully involve patients and caregivers.
4. Raise awareness in the general public (we are all potential patients) about what quality of life is and the importance of measuring it – and meaningfully involve patients and caregivers.
5. Develop new tools for QoL assessments which are based on evolving digital technology – and involve patients and caregivers.

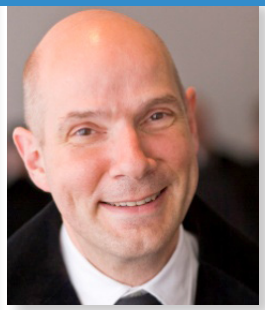
Above all, we need to keep listening and talking to each other – now and in the coming decades – about quality of life for cancer patients and those who are important to them.

As cosmologist Stephen Hawking said: "Mankind's greatest achievements have come about by talking, and its greatest failures by not talking…Our greatest hopes could become reality in the future… All we need to do is make sure we keep talking."

And, I would add once more, keep patients and caregivers at the heart of all aspects of quality of life assessment.

Combining clinical trial datasets in glioma patients: The added value of health-related quality of life assessment (CODAGLIO)





Linda Dirven, Leiden University Medical Center, Department of Neurology, Leiden, The Netherlands
Jaap C. Reijneveld, VU University Medical Center, Department of Neurology, Amsterdam, The Netherlands
Martin J.B. Taphoorn, Academic Medical Center, Department of Neurology, Amsterdam, The Netherlands; Medical Center Haaglanden, Department of Neurology, The Hague, The Netherlands

On behalf of the co-investigators : Neil Aaronson, Brigitta Baumert, Martin J. van den Bent, Andrew Bottomley, Corneel Coens, Francesca Martinelli, Roger Stupp, Andrea Talacchi, Wolfgang Wick and Efstathios Zikos

BACKGROUND

The incidence of primary brain tumours is low compared with other cancers such as lung and breast cancer, with primary brain tumours constituting only 2% of all adult cancers. Although the yearly incidence of gliomas is low, they do result in a disproportionate share of cancer morbidity and mortality. Patients with a glioma differ from the general cancer population in that they not only have cancer, but also suffer from a progressive brain disease. Glioma patients demonstrate a high symptom burden, and disease-specific symptoms such as cognitive dysfunction, seizures and progressive neurological deficits prevail. Although patients receive multi-modal treatment with surgery, radiotherapy and chemotherapy, current treatment options are not curative. Therefore, the quality of survival, typically assessed with measures of health-related quality of life (HRQoL), is for these patients at least as important as the duration of survival.

WHICH CLINICALLY RELEVANT QUESTIONS DO WE WANT TO ANSWER ?

1. Is HRQoL a prognostic indicator of (progression-free) survival ?

To improve survival prediction for individual glioma patients, data on baseline HRQoL may be used in conjunction with established prognostic factors such as age, performance status and tumour grade. Although there are indications that HRQoL is prognostic of overall survival, these results are based on small sample sizes. We therefore aim to assess in a large dataset which baseline HRQoL items/scales of the QLQ-C30 and QLQ-BN20 questionnaires are independently associated with progression-free and overall survival.

2. Can HRQoL be a stratification factor in future (EORTC) brain trials?

If HRQoL appears to be an important prognostic factor for survival, it may be considered as a stratification factor for future clinical trials. In that case, proper HRQoL scales need to be selected and cut-offs need to be determined. This stratification would ensure that treatment groups are comparable on those specific HRQoL factors, enhancing conclusions drawn on treatment efficacy.

3. Are specific symptom clusters associated with a deterioration in HRQoL?

A symptom cluster is a group of two or more symptoms that occur simultaneously, are interrelated and may or may not have a common aetiology. Compared to a single symptom, simultaneously occurring symptoms may have a more detrimental effect on HRQoL. Identification of symptom clusters that are associated with a deterioration in HRQoL (overall HRQoL and functioning scales) is essential for direct management of the disease, which may subsequently result in improved HRQoL.

4. Is HRQoL maintained/improved during progression-free survival time?

Many studies performed in glioma patients found that new treatments did not improve overall survival, but did prolong progression-free survival. For patients it is important that HRQoL during their progression-free time will be maintained or improved. By evaluating HRQoL during progression-free survival time, we will be able to determine the impact of a specific treatment regimen on HRQoL.

5. Will a combined analysis of survival and HRQoL data facilitate interpretation on the net clinical benefit of a treatment strategy ? Currently, data on survival and HRQoL are independently analyzed. Nevertheless, interpretation of the net clinical benefit of a treatment strategy, which may subsequently impact clinical decision-making, may be facilitated by combining survival and HRQoL data into one outcome. Two statistical methods combining measures of quantity and quality of survival will be applied to determine the net clinical benefit of different trials. This will allow comparability across glioma trials and may guide towards the best treatment for these patients.

HOW ARE WE GOING TO ANSWER THESE QUESTIONS ?

We will combine clinical and HRQoL data of all available closed RCTs including glioma patients. We will have access to RCTs conducted by (members of) the EORTC Brain Tumour Group, with at least 3,917 glioma patients with baseline HRQoL. This number may increase to almost 6,000 patients if we are able to include RCTs which were conducted by other research groups.



Development of the EORTC questionnaire for individuals at risk of Hereditary Cancer Predisposition Syndrome: the EORTC QLQ-HCPS

Anne Oberguggenberger & Monika Sztankay, Department of Psychiatry, Psychotherapy and Psychosomatics, Medical University of Innsbruck, Austria
Vassilios Vassiliou, Bank of Cyprus Oncology Centre, Nicosia, Cyprus

The identification of hereditary genetic variations associated with increased cancer risk – so-called Hereditary Cancer Predisposition Syndromes (HCPS) – has become an integral part of routine oncology practice (1).

Familial or hereditary cancer, such as Lynch Syndrome or hereditary breast and ovarian cancer (BRCA1/BRCA2), can affect individuals in a number of ways, impacting on their quality of life (QoL). Individuals at risk of inheriting predisposing genetic variants may be offered genetic testing, which can provide prognostic information on individual cancer life-time risk and risk for cancer recurrence (2, 3). This entails anxiety, cancer worry or feelings of guilt and concern for other family members also eligible for testing. Additionally, individuals with a known HCPS (e.g. inheritors of autosomal dominant or sex-linked mutations) are advised to have regular screening examinations or definitive prophylactic treatments (e.g. prophylactic removal of susceptible organs) aimed at the reduction of the risk of developing cancer or diagnosing a new cancer at an early stage. Associated QoL issues relate to potential physical impairments, worries or cosmetic problems.

Genetic testing is employed in comprehensive genetic counselling (GC) programmes, including psychosocial consultation. Even though available scientific evidence has not illustrated that GC is associated with overall serious psychological morbidity in the long term, a quarter of counsellees experience clinically relevant psychological adverse effects as well as QoL impairments regardless of the test result (4). In addition, about 25% of counsellees report unmet psychological care needs (5).

Moreover, the group of mutation carriers not affected by cancer but advised to undergo prophylactic procedures is still underrepresented in clinical research. The long-term effect on QoL in this group needs to be systematically studied in future trials (e.g. long-term impact of preventive strategies such as surveillance or cancer worry). Based on the above, future research activities need to engage in systematically studying the long-term effects on QoL in these "new" patient groups. QoL research should focus not only on QoL demands of cancer patients confronted with HCPS but also on their relatives who might, although healthy, be at an increased life-time risk of developing cancer (in the case of a diagnosed HCPS).

The EORTC Quality of Life Group (QLG) has kindly decided to fund the development of an HCPS core questionnaire. This questionnaire will be used to systematically determine short- and long-term QoL issues and concerns in cancer patients and healthy individuals with or at risk of HCPS in order to provide the best medical care. Moreover, the EORTC QLQ-HCPS can be applied for the systematic evaluation of HCPS counselling programmes and related impairments of QoL with the intention of improving the effectiveness and efficacy of genetic counselling. Our working group has already done preliminary work on the structural concept and we are ready to start the project. After Phase I and analysis of results it will be decided if additional modules on specific HCPS will need to be developed in addition to the core HCPS questionnaire.

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Study on European norm data for the EORTC CAT is about to start

Sandra Nolte, Department of Psychosomatic Medicine, Center for Internal Medicine and Dermatology, Charité - Universitätsmedizin Berlin, Germany

On behalf of the co-investigators : Neil Aaronson, Anna Costantini, Peter Fayers, Mogens Grønvold, Bernhard Holzner, Colin Johnson, Georg Kemmler, Morten Aagaard Petersen, Matthias Rose, Krzysztof Tomaszewski, Annika Waldmann & Teresa Young

The EORTC Quality of Life Group (QLG) is in its final stages of developing and launching a computerized adaptive testing (CAT) version of the QLQ-C30. The main idea behind CAT is that it administers more relevant and informative items by tailoring the instrument to the individual respondent. The development of the EORTC CAT includes several members of the QLG and is headed by Mogens Grønvold and Morten Aagaard Petersen (see p.14)**.**

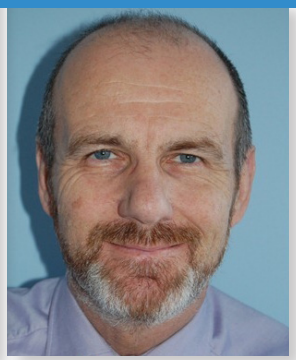
The EORTC CAT project is an enormous effort of developing and validating 14 item banks representing the 14 symptoms and functions of the QLQ-C30. To date, all item banks have been finalized, including translations into Chinese, Danish, Dutch, German, Italian, Polish and Turkish, and partial translations into French, Spanish and Swedish. Further, the feasibility study of the EORTC CAT has just been completed, with preliminary results suggesting great acceptance and feasibility of the instrument. Following on from these results, as Mogens and Morten mention in their article in this newsletter, the field study including n=1,000 cancer patients from several countries is about to start.

To make a CAT fully functional, however, it is not quite sufficient to undertake a thorough validation of the instrument and calculate individual item parameters as part of Item-Response Theory (IRT). This circumstance is due to the nature of the scores (theta) that a CAT produces. That is, theta scores on their own do not have a direct meaning as they are placed on an "arbitrary" metric, hampering score interpretation. A meaningful and sensible interpretation can only be achieved by linking the CAT to a reference population, which may be obtained from clinical or general population samples.

We are pleased to announce that this final crucial step of the EORTC CAT project has just been launched. We received two years of funding to undertake a large European study to obtain such norm data. The reference population will include about 12 European countries that will be carefully selected based on size of the country (the number of people speaking the respective language), geographical location (an even spread between north, east, south, and west), and the respective country's EORTC QLQ-C30 research activity. Each sample will include n=1,000 people, leading to a total sample size of about n=12,000, which will give us a unique resource for statistical analyses. The European norm sample will include Russia, Germany, France, the United Kingdom, Italy, Spain, Poland, The Netherlands, Sweden and Denmark, and the inclusion of additional countries is still being negotiated. To ensure that we obtain high-quality data from representative samples, we will subcontract a panel research company for data collection, with most data obtained via online research panels.

This exciting project is a fantastic outcome of the latest funding round of the EORTC QLG. A carefully selected reference population is one more important step towards making the new EORTC CAT a highly competitive instrument among what modern, state-of-the-art quality of life assessment currently has to offer.

"We are pleased to announce that this final crucial step of the EORTC CAT project has just been launched."



A project to develop a new pancreatic Neuroendocrine Tumour Module, by adapting the existing QLQ-GI.NET21

Katy O'Donnell & John Ramage, Hampshire Hospitals NHS Foundation Trust, Basingstoke, UK
Liz Friend, Hampshire Hospitals NHS Foundation Trust, Basingstoke, UK
Debra Gray, University of Winchester, Winchester, UK
Maia Sissons, NET Patient Foundation, UK
Vassilios Vassiliou, Bank of Cyprus Oncology Centre, Nicosia, Cyprus

WHAT ARE NETs ?

Neuroendocrine Tumours (NETs) are a group of tumours that can arise from most parts of the body. The commonest are lung, pancreas and gut.

They account for 0.5% of all malignancies by incidence (between 3 and 5 per 100,000 population per year) but with a high prevalence of 35 per 100,000 population because of their slow tumour growth. This prevalence is greater than that of pancreatic and stomach cancer combined and incidences have increased steadily since the 1970s; this is possibly related to better recognition.

Some pancreatic NET tumours (pNET) secrete hormones which give characteristic systemic symptoms (e.g. hypoglycaemia – low blood sugar – from Insulinoma NET), unlike those from most cancers which are related to the tumour mass effect itself.

WHAT HAS BEEN DONE SO FAR ?

The EORTC QLQ-GI.NET21 module for patients with gastrointestinal neuroendocrine tumours was fully validated and published in 2013 on behalf of the EORTC Quality of Life Group (QLG) (1). Academic requests sent to the EORTC to use the GI.NET21 module have been received from researchers and clinicians in 83 countries and total almost 1,100 requests since 2012. Commercial trial contracts to use the module total 24 from 12 different international companies since 2008 (EORTC Quality of Life Department (QLD), March 2016).

Patients with pNET were included in the GI.NET group but it has become clear that their tumours have differences to other GI.NET ones. Since there are new drugs being developed specifically for pNET there is interest in a specific module to be used for pNET patients in clinical trials of new compounds.

WHAT ARE WE PLANNING ?

We already have a lot of GI.NET21 data collected from pNET patients over 10 years. Some of this is from the GI.NET validation, some from global clinical trials which we have been involved in, and some from online, anonymous data collection from pNET patient support groups in various countries (coordinated by the UK NET Patient Foundation). We can therefore look at the performance of the various questions of the GI.NET21 in pNET already. However, the recently received grant from the QLG, together with funding from the NET Patient Foundation, will now allow us to develop a specific module for pancreatic NET patients. We will use the current EORTC QLG guidelines for adapting the existing GI.NET21 module and proceed from Phases I–III using major NET centres in Europe: UK, Berlin, Barcelona, Poland and Milan. The study will be managed from Hampshire Hospitals NHS Foundation Trust, Basingstoke and The University of Winchester, UK.

This is a challenging module to develop, since the tumours are heterogeneous, but we have accepted the challenge and thank all our collaborators, past, present and future.

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"(...) There is interest in a specific module to be used for pNET patients in clinical trials of new compounds."

The EORTC CAT project is completed!

Morten Aa. Petersen & Mogens Grønvold , The Research Unit, Department of Palliative Medicine, Bispebjerg Hospital, Copenhagen, Denmark

In computerized adaptive testing (CAT) measurement, the questionnaire is adapted to the individual patient, thereby optimizing precision, efficiency, and relevance. This is achieved by using the responses to the previously asked items to select from an item bank the most informative next item.

A decade ago the EORTC Quality of Life Group (QLG) initiated a project to develop a CAT version of the EORTC QLQ-C30. The aim was to develop an item bank for each of the fourteen QLQ-C30 symptom and functional domains. The development of these fourteen item banks has now been completed!

A total of 230 new items have been developed. Together with the QLQ-C30 items, this results in a total of 260 items across the item banks, i.e. about nine times as many items as in the QLQ-C30. Each item bank includes between 7 and 34 items (see Figure 1). Across all the domains, the development of all item banks has involved researchers and cancer patients from 13 countries and included more than 300 patient interviews and eight data collections comprising almost 10,000 patients.

Preliminary validations of the CAT measures based on the data used for the item bank developments have indicated average savings in sample size requirements of typically 20–30% compared to using the QLQ-C30 without reducing the power. Or, equivalently, they increase the power by 10–15% without increasing the sample size.

A fully functional version of the EORTC CAT instrument covering all domains of the QLQ-C30 is now ready for use. The item banks may also be used to form so-called (paper) short-forms. That is, items may be selected from the item banks and can be added to (selected dimensions of) the QLQ-C30 to improve measurement precision. For example, one may wish to add a few items to the pain scale to increase precision of pain measurement in a study where pain is an important outcome. Scores based on such short-forms are directly comparable with scores based on the EORTC CAT.

The EORTC QLG has decided that, before releasing the CAT instrument as a validated EORTC tool, the measurement properties need to be validated in independent data. Therefore, a clinical validation study has been initiated. It consists of two parts: a feasibility study investigating the acceptability, optimal design and logistics of web-based administration of the CAT, and a field study testing the "real-life" validity and measurement precision of the EORTC CAT. At the time of writing the feasibility study has just been closed. When the approximately 90 interviews from cancer patients coming from seven countries have been analyzed we will initiate the field study, in spring 2016. The field study will include 1,000 patients, who will be assessed twice: before and after chemotherapy/radiotherapy.

For more information on the EORTC CAT please visit : http://groups.eortc.be/qol/eortc-cat

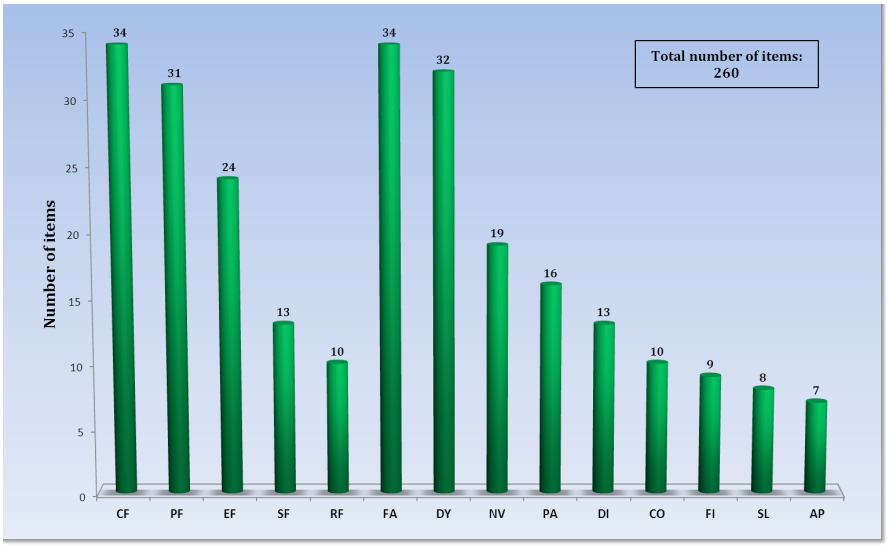
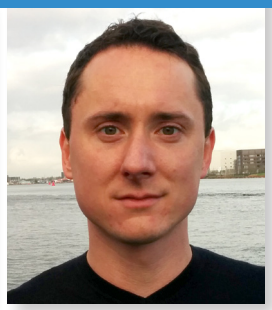


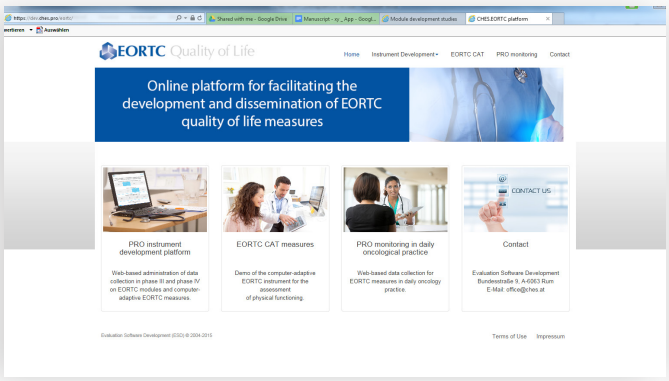
Fig: Number of items in each of the 14 item banks.

LEGEND :
CF= cognitive functioning
PF= physical functioning
EF= emotional functioning
SF= social functioning
RF= role functioning
FA= fatigue
DY= dyspnea
NV= nausea/vomiting
DI= diarrhea
CO= constipation
FI= financial impact
SL= sleep
AP= appetite loss


CHES.EORTC platform: development of an online platform to support module development and dissemination of the EORTC CAT measures

Bernhard Holzner, University of Innsbruck, Austria
Johannes M. Giesinger, Netherlands Cancer Institute, Amsterdam, The Netherlands
Gerhard Rumpold, Evaluation Software Development, Rum, Austria



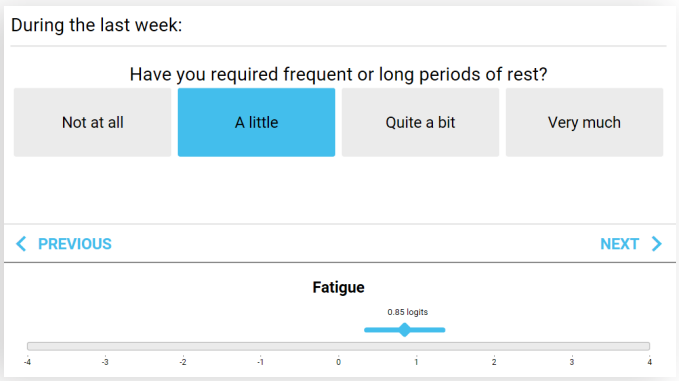


Fig: Start screen of the CHES.EORTC platform (left) and demonstration of the computer-adaptive EORTC fatigue measure (right)

The current CHES.EORTC version, accessible online via the EORTC Quality of Life Group (QLG) website, provides essential features for quality of life (QoL) data collection in routine cancer care including graphical presentation of the results of individual patients. This system is currently supplemented with further software features to support EORTC instrument development as well as the dissemination and the use of the EORTC CAT measures.

CHES.EORTC FOR INSTRUMENT DEVELOPMENT

The supplemented version will help to enhance scientific standards of the development of EORTC QoL measures (including modules and CAT) and facilitate data collection in EORTC QLG module and CAT development studies. It will allow electronic questionnaire administration, completion of electronic case report forms and data storage on a central server. The system will support the strategy of the Module Development Committee to extend the Data Repository Project in a way that facilitates and harmonizes further module development.

The new platform will build on the existing CHES.EORTC version and specific implementations that have been used for data collection within two module development Phase IV studies (QLQ-TC26 and QLQ-BRR24).

In addition, it will help to standardize the collection of medical and sociodemographic data by use of templates for case report forms.

CHES.EORTC FOR CAT DEVELOPMENT AND DISSEMINATION

The ongoing EORTC CAT validation studies (see p.14) are using CHES.EORTC for CAT administration and electronic capture of medical and sociodemographic data. For this purpose an interface has been programmed to link the so-called CAT engine containing the CAT algorithm and settings with CHES.EORTC.

CHES.EORTC adds an elaborated graphical user interface for item display on a wide range of electronic devices, for data storage, management of study participants (including user accounts for patients allowing assessments outside the hospital), electronic case report forms, and other features outlined above.

Although these features are sufficient to meet the requirements of the EORTC CAT validation project, further software development will probably be needed to allow unrestricted dissemination of the EORTC CAT measures within the QLG.

BENEFITS OF THE NEW CHES.EORTC PLATFORM

We think that CHES.EORTC is essential for the use of the EORTC CAT measures by allowing CAT administration without any local software installation. Being able to rely on CAT software provided by the EORTC QLG minimizes costs that are introduced by having to buy and implement an appropriate software package for individual studies or centres.

The CHES.EORTC platform outlined above will support the development and dissemination of the EORTC QoL measures. It will facilitate module development studies, enhance harmonization of research protocols and support and complement the Data Repository Project. In addition CHES.EORTC will enable the dissemination of the newly developed EORTC CAT measures within the QLG.

Please visit us on the EORTC QLG website (http://groups.eortc.be/qol/electronic-version-cheseortc), try our newly developed features, and do not hesitate to provide suggestions or comments! Email : bernhard.holzner@ches.pro

MULTI-ATTRIBUTE UTILITY IN CANCER (MAUCa) CONSORTIUM MEMBERS:

Madeleine King; Dan Costa; Peter Grimison; Rosalie Viney: Sydney, Australia | Richard Norman: Perth & Sydney, Australia | Neil Aaronson: Amsterdam, The Netherlands | John Brazier, Donna Rowen, Tracey Young: Sheffield, UK | David Cella; Simon Pickard: Chicago, USA | Peter Fayers: Aberdeen, UK & Trondheim, Norway | Monika Janda: Brisbane, Australia | Georg Kemmler: Innsbruck, Austria | Julie Pallant: Melbourne, Australia | Stuart Peacock; Helen McTaggart-Cowan: Vancouver, Canada | Galina Velikova: Leeds, UK |

The QLU-C10D: a utility measure derived from the QLQ-C30

Madeleine King, MAUCa Consortium Chair, University of Sydney, Australia

I have had the privilege of working with an outstanding international team including several members of the EORTC Quality of Life Group (QLG) over the last six years to develop the QLU-C10D as a means to include quality of life (QoL), as assessed by the QLQ-C30, into economic evaluation of cancer therapies. This remarkable brains-trust – collectively called the MAUCa Consortium – included health economists, oncologists, behavioural scientists, statisticians and psychometricians. I am greatly indebted to their commitment and contribution to our shared goal over these many years.

WHY WAS THE QLU-C10D NEEDED ?

The EORTC's QLQ-C30 is the heart of the EORTC's modular approach to QoL assessment, and is the most commonly used QoL questionnaire in cancer clinical trials internationally. Its scoring algorithm produces 15 scales, providing a comprehensive profile of patient-reported outcomes (PROs) that are important to patients and their health care providers. However, as originally designed, the QLQ-C30 cannot be used in health economic analysis because it is not a preference-based measure (or utility measure).

Utility measures integrate people's preferences for different aspects of quality of life and survival, and the trade-offs that often arise with cancer treatments, into a single number: a utility score. Utility has a maximum of 1 (full health), is anchored at 0 (death) and can have negative values (health states worse than death). This can be used in economic evaluations to weight survival by QoL, yielding quality-adjusted life years (QALYs).

Common utility measures include the EQ-5D, HUI3 and SF-6D. Although these measures are widely used, they are generic, and therefore may not be particularly sensitive when used in cancer populations. Further, the use of several questionnaires (e.g. QLQ-C30 for QoL endpoints and EQ-5D for health economics) adds to PRO completion time and patient burden.

THE NEWEST MEMBER OF THE EORTC QoL FAMILY

The QLU-C10D was endorsed by the EORTC QLG Executive Committee (EC) in April 2014, and in September 2015 the EC agreed that the EORTC QLG would be responsible for all aspects of the ongoing management of the QLU-C10D, including developing and maintaining information about administration, scoring and interpretation, housing relevant materials on the EORTC QLG website, maintaining control of the standard versions, and granting permission for use.

The EORTC QLG Health Technology Assessment (HTA) working group, led by Georg Kemmler and Eva Gamper, will take on the important task of developing a user manual and reference values, as well as the other important and interesting research they described in the QLG's spring 2015 Newsletter.

WHY IS IT CALLED "QLU-C10D" ?

As Georg and Eva explained in their newsletter article last year, this name was decided in consultation with the EORTC QLG EC:

- "QLU" indicates it is a utility measure;
- "C" indicates its origin in the EORTC's core questionnaire;
- "10D" indicates 10 domains (mobility, role functioning, social functioning, emotional functioning, pain, fatigue, sleep, appetite, nausea, bowel problems).

IS THE "QLU-C10D" READY TO USE ?

So far, work has focussed on development of the QLU-C10D, including the descriptive system (or "health state classification system") and a robust method for developing utility weights (1,2). That valuation method is now being rolled out, using standardized methodology, in a number of countries to develop a range of country-specific utility scoring algorithms and utility value sets.

Georg and Eva are leading valuations in five European countries. I am leading the Australian valuation, funded by the NHMRC grant noted below – this work is almost complete, and a paper is in preparation. I am currently preparing to undertake valuations for UK and USA, funded by AbbVie through Evidera – this work will take about a year to complete.

While the QLU-C10D is not quite ready for prime time yet, it can be included in clinical trials in development now, safe in the knowledge that scoring algorithms are in the pipeline. As soon as each QLU-C10D utility scoring algorithm has been finalized and published, it can be used to derive utility scores from QLQ-C30 data, which can then be incorporated into health economic modelling.

For full details of the first two steps in the development of the QLU-C10D:

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CONTRIBUTORS TO THE SBQ PROJECT

Charlotte Benson, London, UK | Franck Bonnetain, Besançon, France | Anne Brédart, Paris, France | Angela Evans, Bangor, UK | Claire Fuller, Bangor, UK | Eleni Kakouri, Nicosia, Cyprus | Joanna Kozaka, Gdańsk, Poland | Yiola Marcou, Nicosia, Cyprus | Ourania Nicolatou-Galitis, Athens, Greece | Leopold Hentschel, Dresden, Germany | Juan Iarraras, Navarra, Spain | Georgios Ioannidis, Nicosia, Cyprus | Iwona Lugowska, Warsaw, Poland | Gudrun Rohde, Kristiansand, Norway | Heike Schmidt, Halle, Germany | Vassilios Vassiliou, Nicosia, Cyprus | **Statistician:** Peter Fayers, Aberdeen, UK |

Symptom-based questionnaires in the QLG

Colin Johnson (PI) [1] on behalf of the SBQ investigators:

Mirjam Sprangers [2], Fabio Efficace [3], Sam Sodergren [1], Sally Wheelwright [1], Deborah Fitzsimmons [4], Andrew Bottomley [5]

1 University of Southampton, Southampton, UK
2 The Academic Medical Center (MAGS), Amsterdam, the Netherlands
3 GIMEMA Data Center, Rome, Italy
4 Swansea University, Swansea, UK
5 Head of Quality of Life Department, EORTC Headquarters, Brussels, Belgium

The last 10 years have seen huge interest in Patient-Reported Outcome Measures (PROM) stimulated by the requirement to use them to acquire data for product registration applications in Europe and North America. However, it has become clear that the FDA in America, in particular, is concerned primarily with PROMs of symptoms, rather than quality of life (QoL), which encompasses functional and psychological components as well as symptoms of the disease and toxicities of the treatment.

The EORTC Quality of Life Group (QLG) is a leading developer of PROMs, with an item bank containing over 600 validated questions relating to all aspects of health-related QoL. Many of these ask about symptoms and toxicities. The QLG has set high standards for the development of QoL questionnaires, with detailed guidelines for questionnaire (module) development. These work well for creating new modules to cover QoL aspects of living with, and receiving treatment for, a particular cancer. What is increasingly required, however, is a means to assess the effects of a newly developed treatment, so that PRO data for registration can be acquired efficiently.

We set out to answer the following questions:

- Can we use or adapt existing items from the EORTC QLG Item Bank to create a symptom-based questionnaire (SBQ)?
- Can we use or adapt existing QLG methods to develop an SBQ?
- What are the essential steps in doing the above?

The SBQ project set out to create symptom checklists related to biological treatments (targeted therapies) in three tumour types. We chose breast cancer (common tumour, with an existing module), chronic myeloid leukaemia (CML; haematological, with a module in development), and gastrointestinal stromal tumour (GIST; rare, no existing module). We have recorded the time spent on each step of the procedure, using the full EORTC QLG Guidelines, and we will assess the contribution made at each step, so we can determine the most time-efficient means of SBQ development.

We have published two systematic reviews of symptoms reported by patients receiving targeted therapies (1, 2). Preliminary analysis of Phase I interviews with patients and professionals suggests that patients report additional symptoms to those identified by literature review. Phase I data indicated that similar symptoms were reported by patients with different tumour types who were receiving similar targeted therapies. This led us to develop a single SBQ for targeted therapies for testing in Phase III in breast, CML and GIST patients. Data collection for Phase III will be finished in spring 2016.

When Phase III data are fully analyzed we anticipate the QLG will conduct an open debate on how to meet the challenge of regulatory requirements for PROMs and PROM development. Should we focus only on QoL? Or should we use our expertise and our large item bank of validated questions to construct SBQs to document and grade symptoms and toxicities if this is required by academic researchers or pharma? If we consider providing SBQs, what minimum justification should be applied for inclusion of items, and how do we construct new items if these are required?

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The international psychometric validation (Phase IV) of the EORTC fatigue module (EORTC QLQ-FA12)

Joachim Weis, University Clinic Centre Freiburg, Germany

On behalf of the co-investigators : Krzysztof Tomaszewski, Eva Hammerlid, Juan Ignacio Arraras, Thierry Conroy, Anne Lanceley, Heike Schmidt, Susanne Singer, Monica Pinto, Mohamed Alm El-Din, Inge Compter, Bernhard Holzner, Dirk Hofmeister, Wei-Chu Chie, Marek Czeladzki, Amelie Harle, Louise Jones, Sabrina Ritter, Markus Wirtz, Henning Flechtner, Andrew Bottomley

INTRODUCTION

Fatigue is one of the most distressing symptoms for cancer patients, affecting their quality of life in all phases of the treatment or stages of the disease. During the last decade, interest and research output in cancer-related fatigue (CrF) has increased considerably and, therefore, more detailed uni- or multi-dimensional instruments have been developed to assess CrF (1, 2). The Phase III module EORTC QLQ-FA13 (3) is based on a multidimensional concept of fatigue including physical, emotional and cognitive domains. The module may be used in all treatment options (chemotherapy, radiation, surgery, targeted therapies) and all settings of health care (acute care, rehabilitation, hospice care). As a symptom-targeted module, QLQ-FA13 measures fatigue in all tumour diagnoses as well as in all phases and stages of cancer.

DESIGN AND METHODS

The psychometric validation includes the evaluation of the scale structure of the QLQ-FA13 using confirmatory analyses, the analysis of test-retest reliability and internal consistency, and the analysis of the responsiveness to change. The design for the psychometric evaluation of the QLQ-FA13 followed the EORTC Quality of Life Group (QLG)'s module development guidelines (4). Patients were enrolled in four parallel groups addressing patients under treatment treated with curative intention (group A) and palliative intention (group B) as well patients off treatment (group C) and long-term survivors (group D).

The study was carried out in an international multi-centre fashion from February 2011 to November 2014 at 17 centres in 11 European and non-European countries (Europe: England, France, Germany, Austria, Poland, The Netherlands, Sweden, Spain, Italy; non-Europe: Egypt and Taiwan). For Phase IV the QLQ-FA13 was translated into the languages of the cooperating countries according to the EORTC QLG's Translation Procedure (5).

The module includes 13 items (11 items in three subdimensions – "physical fatigue", "emotional fatigue" and "cognitive fatigue"; and 2 global items (item FA12: "Did tiredness interfere with your daily activities" and item FA13: "Did you feel that your tiredness is not understood by the people who are close to you?")). We used a confirmatory factor analysis to validate the a priori defined three-dimensional structure of the QLQ-FA13 in conjunction with the two global items as criteria.

The total sample of patients recruited in all groups was n=946. The average age was 58.7 (sd 13.1 years) (range from 22–97 years). Patients were recruited in Germany (16.1%) and Poland (15.6%), followed by UK (11.1%), Sweden (10.0%), Egypt (9.9%), Spain (8.4%), The Netherlands (7.2%), Italy (5.0%), Austria (4.5%) and Taiwan (3.8%). Gender distribution was balanced (female 54.1%, male 45.9%). As planned, the sample comprised a wide spectrum of tumour diagnoses with the highest percentages in breast cancer (24.0%), head and neck cancer (22.6%), lung cancer (11.1%) and colorectal cancer (9.5%).

RESULTS

As a result of our study, we present a slightly revised Phase IV module, the EORTC QLQ-FA12. The international cross-cultural validation of this module, including a large and representative sample of cancer patients, enables generalization of the results and guarantees the cross-cultural applicability of this module. The results of the confirmatory factor analysis show that the Phase III QLQ-FA13 did not reach a sufficient model fit for all items and therefore had to be modified. The changes include the elimination of a single item (FA11) and the allocation of one item (FA05) to the physical dimension instead of the cognitive dimension. The inter-correlation of FA11 within the factorial structure showed that this item may be not sufficiently understood as part of the cognitive dimension; in addition, it did not allow a clear allocation to the three dimensions and showed low factor loading in all three factors ≤.35. As there is only a minor

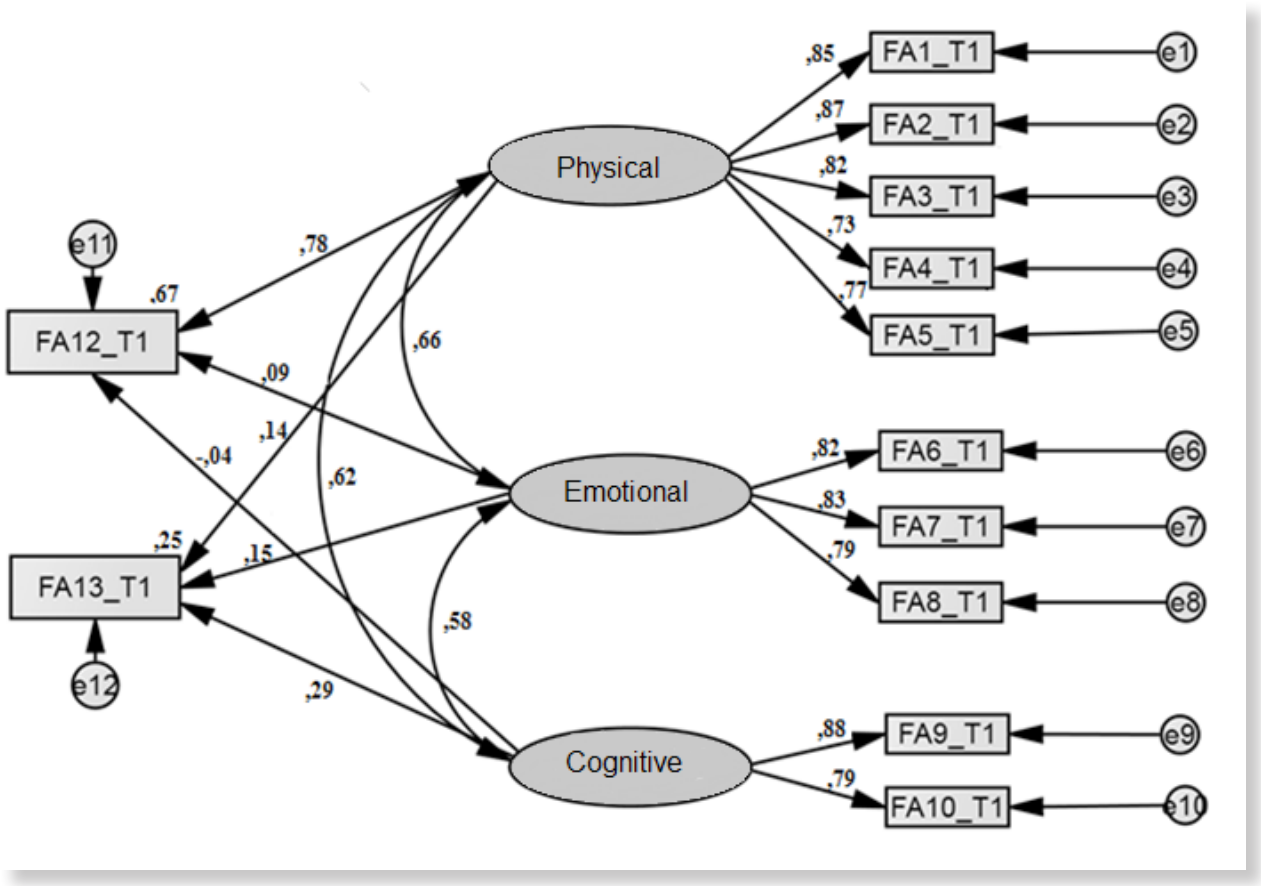

Fig. 1: Graphical presentation of the confirmatory analysis (revised model): Legend: FA12/FA13 = criteria variables; physical fatigue, emotional fatigue, cognitive fatigue = latent constructs; FA1–FA13 = single items of the questionnaires; e1 to e13 = error variables.

loss of information we decided to eliminate this item. In contrast, the allocation of item FA05 to the physical dimension improved the model fit substantially. In total, by these slight changes the model was able to be improved and we attained very good scores for the model fit (see Figure 1). A cross-validation of the data confirmed the results of the changed model. In terms of convergent and divergent validity, all coefficients for the model fit showed very good to excellent fit. In addition, acceptable to very good scores for the internal reliability (Cronbachs α from .79 to .90) were found.

Analysis of test-retest reliability was conducted in two groups of patients, both off treatment. The results show a high correlation for all fatigue scores between t1 and t2 with an average time difference of nine days which indicates a stable measurement of fatigue by the QLQ-FA12 over a time where no changes of fatigue are expected. The analyses of the sensitivity to change detected different results for the patients in curative treatment compared with patients under palliative treatment.

CONCLUSION

In conclusion, the QLQ-FA12 is now available as an internationally fully validated Phase IV module to be used for measuring cancer-related fatigue in clinical trials in conjunction with the QLQ-C30. The QLQ-FA12 may be also used to assess fatigue symptoms in clinical practice or quality assurance to assess care needs. The module is currently available in the following languages: English, Dutch, German, Polish, Italian, French, Spanish, Swedish, Norwegian, Arabic and Mandarin, and is soon to be available via the EORTC QLG website.

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EORTC QoL Group autumn 2016 meeting in England

Kim Cocks, Adelphi Values, Cheshire, UK

I would like to extend a warm invite to you all to Manchester, England for the 2016 EORTC Quality of Life Group (QLG) autumn meeting. The meeting will be held on the 22nd and 23rd September 2016 in the Manchester Town Hall.

Located in the north-west of England, the city of Manchester is surrounded by the Cheshire Plain, the Pennines and an arc of towns. A boom in textile manufacturing during the Industrial Revolution led to Manchester becoming the world's first industrialized city and it was awarded city status in 1853.

With a rich history and culture, Manchester is notable for many things including world-famous music acts and sports teams along with its architecture, culture, nightlife and scientific/engineering outputs. The Town Hall is located in the city centre and is an iconic landmark in Manchester (in fact it is in TripAdvisor's top 10 things to see in Manchester!). Built in 1877, the building is regarded as one of the finest examples of Neo-Gothic architecture in the UK and one of the most important Grade I listed buildings in England. Our meeting will take place in a variety of grand ceremonial rooms within its walls. More information can be found at: www.manchester.gov.uk/townhall

Our Thursday night dinner and disco will be in a somewhat different setting: in stark contrast to the Town Hall, we will be dining at Old Trafford, the world-famous stadium and home of Manchester United Football Club. Now, I realize you might not all share our nation's love of football but I think you will agree that the panoramic view of the pitch from the glass-fronted Trafford Suite with a glass of bubbly in hand is still an exciting opportunity for a selfie! For those wishing to explore the "Theatre of Dreams" further, the stadium also offers daily tours and a museum with a vast array of trophies. Please see www.manutd.com/en/Visit-Old-Trafford.aspx for further details.

A relaxed dinner on the Friday night will be held just across the square from the Town Hall. The Albert Square Chophouse is housed within the Memorial Hall, an iconic listed building dating from 1866 which was once a Victorian warehouse. The food will be "classic British cooking with a modern twist".

For your spare time there are plenty of other places to visit in and around Manchester (www.visitmanchester.com). A key part of Manchester's culture revolves around music: the city has a large number of performance venues including the renowned Manchester Opera House, the Palace Theatre and the largest concert arena of its type in Europe. There are also many smaller theatres, music venues and a thriving nightlife scene – the variety of entertainment on offer promises to have something to suit every taste. In addition, the shopping area is large and diverse, ranging from quirky independent shops to large designer brands and all within walking distance of each other in the city centre. For those extending their stay, the surrounding Cheshire countryside is also worth a visit with plenty of walking routes and historic houses to explore. By train you can also visit the Lake District National Park or explore the Pennine Way.

Manchester is easily accessible by train, air or road. The airport is only 20 minutes by train from the city centre (www.manchesterairport.co.uk/to-and-from-the-airport). There are many hotels to choose from to suit all budgets (recommendations will be provided via email to attendees).

I look forward to welcoming you all to Manchester!

Image courtesy of www.manchester.gov.uk

Image courtesy of www.manutd.com

Manchester Town Hall (left)
Manchester United's Old Trafford: The "Theatre of Dreams" (right)

EORTC QoL Group autumn 2015 meeting in Krakow

Quirien Oort, Departments of Neurology, VU University Medical Center, Amsterdam, and Leiden University Medical Center, Leiden, The Netherlands

The EORTC Quality of Life Group (QLG)'s autumn meeting of 2015, hosted by Dr Iwona Tomaszewska and Dr Krzysztof Tomaszewski of the Jagiellonian University Medical College, was held in the culturally rich city of Krakow, Poland. Krakow's historic city centre is listed on UNESCO's World Heritage Site and was the cultural capital of Europe in the year 2000. Not only is the city rich with culture, with its many churches and museums, it is also a major centre of education with a population of over 200,000 students. Krakow has 24 institutions of higher education, including Poland's oldest university, Jagiellonian University.

The meeting took place in the Grand Hotel. Originally a palace from 1887, it is now a 5-star hotel right in the heart of the city, just 100m from the Main Market Square (Rynek Główny). Rynek Główny is one of the oldest and biggest market squares in Europe. It has numerous wonderful cafés, bars and restaurants, and the renaissance Cloth Hall (Sukiennice) right in the middle of the square. At the edge of the market square is St. Mary's Basilica (Kościół Mariacki) with its famous trumpet player. Every hour the trumpeter plays a tune from the highest tower of St. Mary's Basilica and then suddenly stops. The tune, called "Hejnal", was the signal to open or close the gates. Legend has it that in the Middle Ages a tower guard saw the Tatars coming from the northern tower of the church and wanted to warn his fellow citizens, so he played his trumpet. Unfortunately, his trumpet-playing was suddenly cut short because he was hit by an arrow. However, the city gates were closed just in time and the Tatar attack was averted. Since the 19th century, the Hejnal is played in commemoration of this event. Fun fact: since 1927, Polish Radio has played this melody every day at 12 noon.

Since this was the first time that I attended an EORTC QLG meeting, and especially since I was there to present my own research project for the first time, I was excited and nervous to see what these meetings entailed. The QLG chair, Lonneke van de Poll, opened the meeting with a warm welcome and introduction. After a word from the Head of the EORTC Quality of Life Department (QLD), Andrew Bottomley, the parallel sessions started. What I quickly discovered during the sessions is that the members of the QLG are very invested in each other's work. I was impressed by the relaxed and informal but sincerely passionate way they debated the discussion points presented to them and their willingness to assist in and contribute their expertise to one another's research projects.

The parallel sessions were mainly held on Thursday 10th September. There were many sessions dedicated to the latest progress of the numerous questionnaires and modules being developed. I also had the privilege of presenting my research project, the development of an I-ADL questionnaire for brain tumour patients. Furthermore, I attended sessions on the Cancer Survivorship Questionnaire and the Computer Adaptive Testing Project (CAT), where recent developments and progress were reported. We were also introduced to a new aspect of the QLG: the Clinical Project Development Committee (CDC).

In addition to the inspiring sessions during the day, there was plenty of time for sightseeing and fine dining. After Thursday's sessions, we all boarded electric power cars (we called them tuk-tuks) for a tour around Krakow's Old Town and the Wawel Castle, where we learned the legend of the dragon (Smok Wawelski). In the evening we dined at the oldest and most famous restaurant in Krakow, the Wierzynek.

On Friday 11th September, there was the Module Development Committee (MDC) and CDC session and business meeting in the morning. In the afternoon plenary session, Madeleine King and Georg Kemmler presented their Australia–Austria collaborative project on Health Technology Assessment (HTA) and Susanne Singer updated us on the H&N35 module. By then, the sunlight was so bright that the glass roof of the hotel's conference room needed to be covered in order to allow us to continue to read to the slides on the screen. The meeting was concluded with the introduction of the 2016 spring meeting in Oslo. Later that evening, the second sightseeing tour commenced. We were shown the impressive and slightly chilling history of the Old Jewish Quarters (Kazimierz) and Oscar Schindler's Factory. Afterwards, we dined at a typical Polish restaurant on many Polish specialities – and of course some raspberry and lime vodka.

All in all, it was a spectacular meeting with an abundance of knowledge being shared in a lively and inspiring way, in a beautiful city with delicious food and with a great group of people. I am already looking forward to the spring meeting in Oslo. Many thanks to Drs Iwona Tomaszewska and Krzysztof Tomaszewski for organizing this event!

Krakow 2015

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HQ Quality of Life Department

Assistant Director, EORTC and Head of Quality of Life Department
Dr Andrew Bottomley
e-mail: andrew.bottomley@eortc.be

Quality of Life Specialist
Francesca Martinelli
Tel: + 32 (0)2 774 1619
e-mail: francesca.martinelli@eortc.be

Translation Team Leader
Dagmara Kuliś
Tel: +32 (0)2 774 1680
e-mail: dagmara.kulis@eortc.be

Quality of Life Officer
Cheryl Whittaker
Tel: +32 (0)2 774 1098
e-mail: cheryl.whittaker@eortc.be

Junior Translation Officer
Tamara Sanchez Panos
Tel: +32 (0)2 774 1084
e-mail: tamara.sanchez@eortc.be

Quality of Life Department Executive Assistant & Web Administrator
Mélodie Cherton
Tel: + 32 (0)2 774 1678
e-mail: melodie.cherton@eortc.be

Research Administrator
Irina Ghislain
Tel: +32 (0)2 774 1057
e-mail: irina.ghislain@eortc.be

Quality of Life Research Manager/ Scientific Coordinator
Efstathios Zikos
Tel: +32 (0)2 774 1631
e-mail: efstathios.zikos@eortc.be

Clinical Trials Assistant
Sheila Scott Sanderson
Tel: +32 (0)2 774 1557
e-mail: sheila.scottsanderson@eortc.be

Biostatistician
Corneel Coens
Tel: +32 (0)2 774 1632
e-mail: corneel.coens@eortc.be

Biostatistician
Dr Jammbe Musoro
Tel: +32 (0)2 774 1539
e-mail: jammbe.musoro@eortc.be

Visiting Researcher
Dr Jean-François Hamel
Tel: +32 (0)2 774 1667
e-mail: jean-francois.hamel@eortc.be

Research Fellow
Dr Madeline Pe
Tel: +32 (0)2 774 1544
e-mail: madeline.pe@eortc.be