We are excited to welcome you to January-February-March eSMART Newsletter, prepared by the UCD team. In this issue you can read about important study news and eSMART partners research activities. You will also be updated about eSMART events and the recruitment among our clinical sites in the United Kingdom, Ireland, Greece, Austria and Norway. We hope you enjoy our Newsletter!

**eSMART Patient Recruitment Update**

The eSMART study has now recruited 269 patients across the United Kingdom, Ireland, Norway, Greece and Austria. Further information of recruitment rates within all clinical sites can be seen on Figure 1.

**Figure 1. Recruitment status of patients involved in the RCT and follow-up period at eSMART clinical sites (10/03/2017)**

**PREVIOUS ISSUES**

If you wish to receive the eSMART Newsletter automatically please provide us your email address.

You can also find previous issues of eSMART Newsletter [here](#).

This project has received funding from the European Union’s Seventh Framework Programme for research, technological development and demonstration under grant agreement number 602289
Transfer of eSMART from University of Surrey to University of Strathclyde

Chief Investigator and Co-ordinator of eSMART, Professor Roma Maguire, has accepted a new position as Professor of Digital Health and Care at the University of Strathclyde.

“Change on Patient Recruitment Criteria”

Based on feedback from clinical sites, some new additions have been made to the eSMART trial. As the recruitment of people with colorectal cancer has been challenging so far, the eSMART trial has broadened its criteria to include individuals who have previously had chemoradiation. Chemoradiation has become an increasingly standard approach within colorectal cancer treatment, this has been acknowledged and included to reflect current clinical practice. People who received pre-surgery chemoradiation are now eligible to participate in eSMART.

As a result of several collaborative meetings and feedback from researchers, clinicians and patients, the eSMART trial will now include patient experience interviews. Up until now clinicians and researchers involved with patients have reported rich descriptions of their patients’ experiences during the study which is important to formally capture, as it will provide a valuable addition to the study’s findings and conclusion. Interviews will be conducted with 5-10 patients from each area to document how the intervention impacted on their care experience and access to services.

In order to preserve the primary outcome of the eSMART trial, recruitment to the study has been extended to ensure that target numbers are reached. As a result, the follow-up period (initially intended to take place over a full year), may vary across sites depending on the rates of recruitment.

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3rd eSMART Consortium Meeting at the Medical University of Vienna

This year the 3rd eSMART Consortium Meeting took place in Medical University Vienna, Austria. Acknowledging the international scale of eSMART, this annual meeting is an exciting opportunity for involved partners to meet in person since communication is typically done via teleconferencing and email. The purpose of the annual meeting is to make decisions and receive feedback from the teams working on the study, particularly study progress at a local level in each country. It is also a way of eSMART partners to network and engage with fellow team members and learn about other projects and research at their sites.

The three-day event brought together attendees from University of Strathclyde, University College Dublin, University of Athens, King's College London, University of Dundee, Medical University Vienna Comprehensive Cancer Centre, University of California, San Francisco, European Cancer Patient Coalition (ECPC), Docobo and the clinical sites involved in the eSMART trial. Discussions included work package deliverables and milestones, key issues regarding the progress of the study, aims for the coming year, patient recruitment, end of feasibility testing, researcher database and study dissemination. The consortium meeting also featured a special public seminar session and 1st meeting of the International Society for Cancer Rehabilitation and Chronic Cancer Care. This was an exciting opportunity to learn about the Rehabilitation scheme that patients in Austria receive post-treatment.

eSMART welcomes Research Nurse, Deirdre Cahill, to the team!

Deirdre Cahill has joined the eSMART team in Ireland. Deirdre writes on her role as a Research Nurse on the project, previous experience and what she hopes to bring to the trial.

“My name is Deirdre Cahill and I am the new Research Nurse working with the University College Dublin (UCD) team on the eSMART trial. I joined the team in November 2016 and I am based at both St Vincent’s University Hospital and St Vincent’s Private Hospital.

Prior to joining the UCD team I was employed as a Research Nurse by the Discipline of Radiation Therapy at Trinity College Dublin on a study entitled ‘Prognosis potential of miRNAs in high-risk radiotherapy prostate cancer patients’. This project sought to identify markers to predict which men will relapse after radiation treatment for prostate cancer; 150 high-risk prostate cancer radiotherapy patients participated in the study which was funded by the Irish Cancer Society.

I have also worked as research assistant on a nurse-led study to assess the effectiveness of a structured educational intervention on the length of pre-hospital delay in patients at risk of experiencing Acute Coronary Syndrome.

It is very exciting working with this passionate eSMART team in UCD. I hope my previous involvement and experience in health research will benefit the study and its aims. It’s very exciting to be a part of this study because the eSMART technology is pioneering and it is a great honour to be involved in it.”

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A number of students have begun exciting PhD research within the eSMART study. Each study is unique and hopes to offer further insight into the use of mobile technology during chemotherapy. Three students introduce their research ideas and aims:

Nikolaos Papachristou, PhD Candidate (University of Surrey, United Kingdom)

Research Focus: Evaluating the use of Machine Learning for Clustering and Predicting Cancer Symptoms Data

A cancer patient experiences various symptoms across their treatment. The variation of these symptoms can be significantly large as they can count up to 50 different ones. On average, cancer patients may report 10 different unrelieved symptoms that can impose a great burden on their daily quality of life. In general, these symptoms are characterised by their presence, severity, frequency and the level of distress that can cause to a cancer patient. Being able to categorise patients in relation to such symptoms and make a prognosis of how these symptoms may appear to them is of great importance. It will support clinicians to provide more timely instructions and customised treatment for the self-management of cancer patients.

Machine learning is a group of advanced analytical techniques that can provide insights into the complex nature and mechanisms of such clinical and patient problems. Are there different patterns of how symptoms occur? Are these patterns dependent on the patients’ demographic and clinical profiles, the type and stage of their disease or the type of their treatment? Even more, is there a pattern in the sequence of these symptoms?

Through the eSMART trial and cancer patients’ input, our research aim is to build our knowledge and understanding on the aforementioned questions. Being able to provide answers to them will provide us the opportunity to adjust the Advanced Symptom Management System (ASyMS) even more for the clinicians’ and patients’ needs. Having a tool to profile cancer patients based on the risk of their symptoms will support patients and clinicians to collaborate more effectively, relieving as much as possible the burden of these symptoms from the cancer patients’ daily quality of life.

For more information, please contact Nikolaos Papachristou via email: n.papachristou@surrey.ac.uk

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Jenny Harris, eSMART Research Assistant (King’s College London, United Kingdom)

Research Focus: Development and testing of predictive risk stratification model for anxiety in women with early stage breast cancer after completion of treatment

My PhD seeks to develop and test a predictive risk stratification model (PRSMs) for anxiety after treatment for early stage breast cancer. For the unfamiliar, PRSM are designed to predict an individual’s risk of having - or developing - a specific condition or outcome based on multiple variables. Most research has focused on the development of PRSM related to primary disease outcomes such as death or the recurrence of a specific condition, with only a few studies have considering outcomes relevant to on-going quality of life or adjustment.

While talking to my clinical colleagues it became clear to me that although there were established routes for psychological referrals and numerous supportive care interventions available (including individual, group and online), it was sometimes unclear to clinicians how best to identify those who might benefit long-term from supportive interventions. Against a backdrop of current inadequacies in meeting the psychological needs of patients, the possibility of developing a PRSM to heighten clinical awareness and help identify those at greatest risk seemed like a potentially useful approach.

Developing a PRSM for use in psychosocial oncology won’t ever tell us what exactly will happen to a patients’ anxiety after completion of treatment but it would hopefully be able to give us a useful estimate of individual risk, which could be used to complement clinical judgement and patient-choice. I think that being able to risk stratify may have the potential to help primary care and cancer services plan more effectively and efficiently meet the psychological needs of individual women and thereby improve and tailor patient support.

My PhD aims to identify important predictors of anxiety in the survivorship phase in women treated for early stage breast cancer; develop a PRSM to determine the probability of anxiety in the presence of predictors in women with non-metastatic breast cancer and estimate the model’s predictive performance.

Any questions, comments or if you are interested in potential collaboration and data sharing, please contact Jenny Harris by email: jenny.harris@kcl.ac.uk

PREVIOUS EVENTS

March 2017: RCSI 36th Annual International Nursing & Midwifery Research and Education Conference 2017
Presentation by UCD team: “Integration of ASyMS into cancer care in Europe”
Poster by UCD team:
“Scoping review of the assessment and management of chemotherapy-related toxicity to ensure that the eSMART intervention is evidence based and reflects current and local practice “

28-30 March 2017:
3rd eSMART Consortium Meeting & Public seminar, Hosted by Medical University of Vienna
1st meeting of the International Society for Cancer Rehabilitation and Chronic Cancer Care
Research Focus: Exploring the use of an eHealth intervention: the psychosocial impact on people with Colorectal Cancer

Psychological distress has been found to have negative consequences for cancer patients’ quality of life and health outcomes. Empirical research indicates that it may decrease treatment compliance and chemotherapy effectiveness and shorten survival time. It may also increase symptom burden and functional impairment. To achieve the best health outcomes for cancer patients, it is important to consider patients’ psychosocial needs. eHealth has been regarded as a medium of providing psychosocial oncology care.

My PhD research seeks to explore psychosocial experience of using an eHealth device for symptom management during active chemotherapy for colorectal cancer in Ireland.

Issues to be discussed in the interviews will include: emotional impact of using eHealth during chemotherapy, its role on distress and the relationship patients have with the device over the course of their treatment.

For more information, please contact Andrew Darley by email: andrew.darley@ucd.ie