



OCCAMS/ICGC Newsletter

Newsletter Date: Jun 2013 (4)

OCCAMS

Oesophageal Cancer Clinical and Molecular Stratification

Welcome

OCCAMS - Oesophageal Cancer Clinical and Molecular Stratification is an umbrella study. The OCCAMS consortium aims to bring together clinicians and scientists from around the UK who share the common goal of collecting patient samples and information to improve outcomes for patients with oesophageal adenocarcinoma. The OCCAMS study includes the oesophageal ICGC.

Welcome to the fourth edition of our OCCAMS Collaboration Newsletter. Now at the end of June with the Summer Solstice behind us, we have officially hit the halfway mark for this year. Our OCCAMS study has gradually been building momentum with increased recruitment, greater sample numbers and new sites including Belfast and Bournemouth looking to come on board shortly. As the workload increases and participating centres, patient numbers and team members increase, we have taken this opportunity to introduce some of the team members to everyone. We encourage everyone to continue to send your project proposals through, to enable this to be a truly collaborative project.

Speaking of the half way mark, the group from Southampton who are active participants in the OCCAMS project, are currently undergoing training for the New York Marathon to raise funds towards cancer research. Please join us in wishing Tim Underwood and gang the very best of luck.



The Cancer Marathon

About ICGC

The International Cancer Genome Consortium (ICGC) has been organized to launch and coordinate a large number of research projects that have the common aim of elucidating comprehensively the genomic changes present in many forms of cancers that contribute to the burden of disease in people throughout the world.



Tim Underwood, (OCCAMS Study Principal Investigator in Southampton) Drew, Donna, Jamie, Mike and Jim are taking part this year in one of the most prestigious marathons across the globe.

Planning to spend up to 9 months training for the New York Marathon they will keep us updated regarding their progress via Tims' regular blogs. The idea for the marathon came as Tim, Senior Lecturer and Honorary Consultant Surgeon explains that he often uses the comparison, telling his patients that "having an oesophagectomy is like asking them to run a marathon without any training". The team aims to raise £100,000 for [the Catalyst Club](#), Cancer Research UK's personalised medicine initiative.

From the OCCAMS team, we wish Tim, Drew, Donna, Jamie Mike and Jim all the very best of luck throughout their training and on race day.

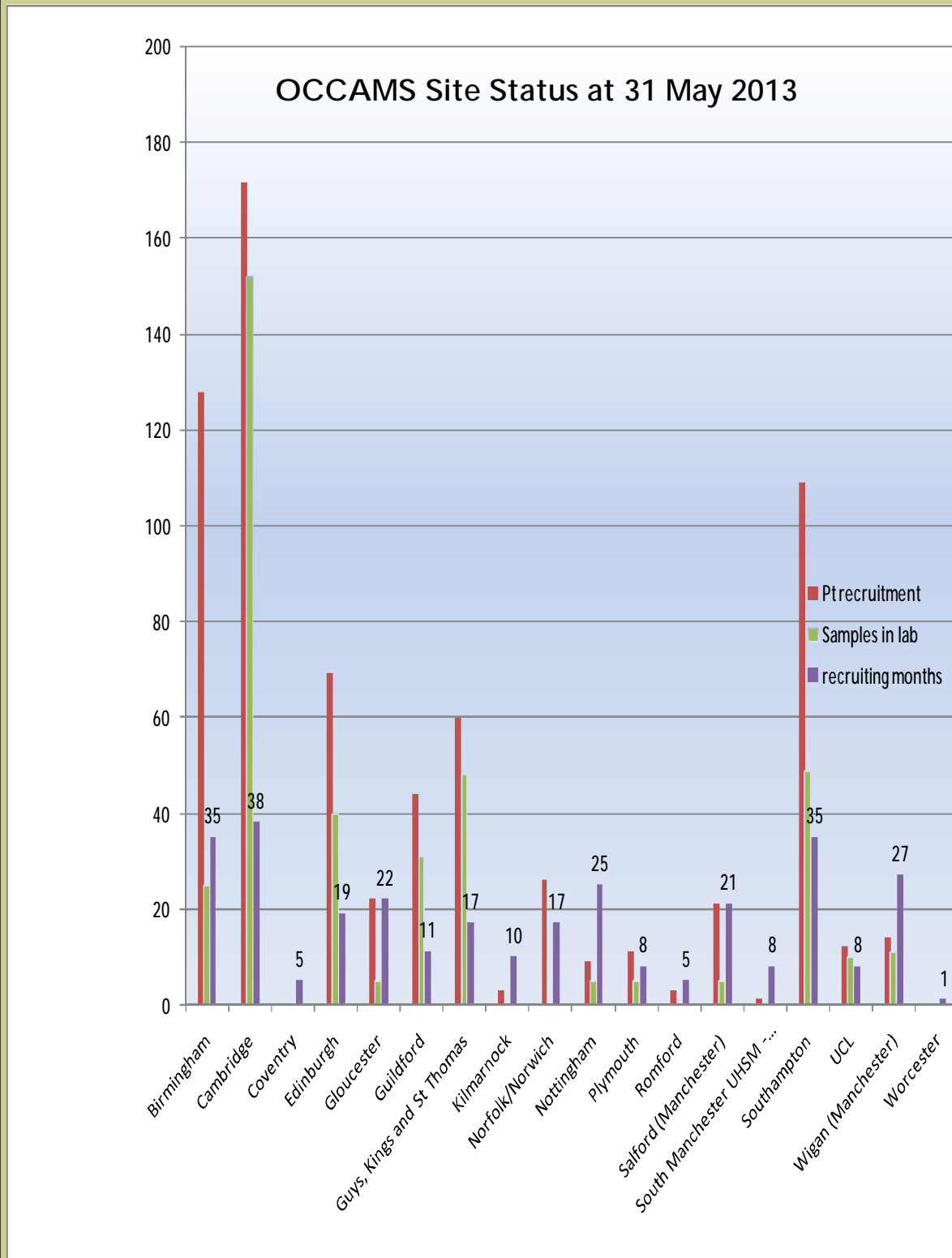
To donate, please visit:

<http://www.justgiving.com/TheCancerMarathon>



OCCAMS Progress

By the end of May this year, OCCAMS patient recruitment had reached 693, with 386 samples received in house. Our current success rate is running at 52% (cases that successfully passed Pathology/DNA QC). 146 of these cases have already been sequenced or submitted with the remainder to be submitted in the next few weeks. The graph below indicates the number of sites currently recruiting, with corresponding samples collected and number of months since R & D approval / recruiting months.



We would like to aim for recruitment (orange bars) to match as far as possible the number of samples sent to the lab (green bars).

Meet the Bioinformatics Department

The Bioinformatics Team provide a huge input to the project and we have asked some of the team to provide an insight into their roles:

Andy Lynch is a Statistician/Computational Biologist working in the CRUK Cancer Institute. He has been working around the Addenbrooke's site for a little over a decade and is generally interested in the design and internal logic of experiments, developing analysis methods for new technologies, and applied studies in cancer research.



Andy's work in this project focuses on developing methods to estimate quantities that we can't measure directly (e.g. characteristics of the tumour that are lost in the snapshot we take, and measures of how well we are doing in our sequencing study). He has also been heavily involved in the development of the pipelines that have been put in place to deal with all the data. Andy explains that this is an exciting time as previously we have been largely trying just to keep up with the data that are arriving, but now we are in a position to really start putting them to use.

+++++

Lawrence Bowyer is a Data Manager working in the Cancer Research Institute. He is responsible for running the analysis and keeping track of all the sequencing data that is produced by the Oesophageal ICGC project.

DNA samples are sent to Illumina, California, for sequencing. Lawrence then receives the sequenced genomes back from Illumina on portable hard disks. Next-generation sequencing produces extremely large files. A single genome, when compressed, is around 200 Gigabytes in size. When uncompressed, these genome files are close to a Terabyte (1000G) in size. The team will be analysing over 1000 genomes - a petabyte of uncompressed data!



Lawrence runs the analysis developed by people such as Andy Lynch on all the data that are received. The main challenges he faces are managing disk space and not overloading the resources in our computing-cluster. He will also be developing software to allow the scientists in Rebecca's group access to the analysis when it is completed.

+++++

Recent Events

Jamie Weaver PhD Student, recently gave an update on the current status of the OCCAMS Project at the British Society of Gastroenterology Meeting in Glasgow on 26 June 2013.

His presentation was titled: The Cancer Research UK funded ICGC Oesophageal Adenocarcinoma Project: MRC Research Centre and CRUK Cambridge Research Institution



Forthcoming Events - DATE FOR YOUR DIARY

OCCAMS Meeting 20 Sept 2013

We are planning to hold a lunch time update meeting at the AUGIS Conference on Friday 20 Sep 2013 in Gateshead. If you would like to attend and have not already done so, please confirm your attendance to olga.knight@addenbrookes.nhs.uk
 Association of Upper Gastrointestinal Surgeons of Great Britain and Ireland (AUGIS)
[\(http://www.augis.org.uk/newcastle2013/\)](http://www.augis.org.uk/newcastle2013/)

OCCAMS Team at Cambridge



Front row L to R: Nick Shannon, Post –doc, Bioinformatician team; Nicola Grehan, Research Nurse; Lawrence Bowyer, Data Manager; Rebecca Fitzgerald, Chief Investigator; Rachel Fells-Elliott, PhD Student; Shona MacRae, Sample co-ordinator; Karen Ross-Inness, Post doc
back row: L to R : Jamie Weaver, PhD student; Andy Lynch, Computational Biologist; Paul Edwards, Group Leader; Laura Smith, Data co-ordinator; Mark Dunning, Post Doc, Bioinformatic Core CRUK CI; Olga Knight, Research Assistant; Babs Nutzinger, Data manager; Jason Crawte, Research Assistant
Missing: Mari Barbera, Laboratory Project Manager; Zarah Abdullahi, Research Nurse; Matt Eldridge, Head of Bioinformatic Core CRUK CI; Simon Tavares; Director CRUK CI

The Cambridge Team will be saying goodbye to Mari Barbera in August this year as she will be leaving for pastures new. Finally, please join us in congratulating Rebecca Fitzgerald who has been elected a Fellow to the Academy of Medical Sciences this year .

Openclinica - minimum data requirements

Please note, it is essential that once a patient is consented, a patient ID is must be created in Openclinica and the following details added to the database:

ICGC Personal Data Section P1

Patient ID and date consented - this ensures that these patients data will be uploaded to the UKCRN monthly recruitment figures.

Once sites have collected samples and are ready to send, the following can be used as a guide for completion of information. Please note, samples cannot undergo the QC process without specific information being supplied for each case.

ICGC Personal Data Section P1

DI Form (Demographics): DOB, date of consent, gender

ICGC Anonymous Data Section N1

BC Form (Blood Collection Form)

TC Form (Tissue Collection Form)

RD Form (Initial Referral Diagnosis Form) - Diagnostic Endoscopy Info and Histology

TR (Therapy Record)

RP (Resection Pathology) - to be completed if / when patient proceeds to surgery regardless of sample type.

Chief Investigator:	Prof Rebecca Fitzgerald	rcf29@hutchison-mrc.cam.ac.uk
Study set up:	Nicola Grehan	Nicola.grehan@addenbrookes.nhs.uk
OCCAMS Study admin:	Olga Knight	Olga.Knight@addenbrookes.nhs.uk
OCCAMS Data man:	Babs Nutzinger	Barbara.nutzinger@addenbrookes.nhs.uk
Laboratory Project Man:	Mariagnese Barbera	MB584@hutchison-mrc.cam.ac.uk
Sample Processing Co-ord:	Shona MacRae	SM978@hutchison-mrc.cam.ac.uk
Data Co-ordinator:	Laura Smith	LS554@hutchison-mrc.cam.ac.uk

Links:

ICGC website: <http://www.icgc.org/>
Cancer Research UK website: <http://www.cancerresearchuk.org/>