

Guest Editorial

Academic Clinical Oncology and Radiobiology Research Network (ACORRN): revitalising radiotherapy and radiobiology research in the UK

G. Heap, N. Walsh

*Academic Clinical Oncology and Radiobiology Research Network (ACORRN),
c/o Christie Hospital NHS Foundation Trust, Wilmslow Road, Withington, Manchester M20 4BX, UK*

INTRODUCTION

The Academic Clinical Oncology and Radiobiology Research Network (ACORRN) was launched in 2005 by the National Cancer Research Institute (NCRI) to revitalise Radiotherapy (RTX) and Translational Radiobiology (RB) research in the UK by networking and supporting individuals and groups, developing infrastructure and an integrated strategy.

The ACORRN National Office is based in the Christie Hospital NHS Trust, Manchester and is funded by a 3-year £350k grant from the NCRI (Department of Health, Medical Research Council and Cancer Research UK). This grant funds two full-time staff, the ACORRN Research Manager and the Scientific Administrator, as well as travel/phone expenses for network meetings. ACORRN reports directly to an NCRI Oversight Committee.

ACORRN is made up of a UK wide multi-disciplinary group of researchers (clinical and laboratory based) with representation from various professional organisations. It aims to increase RTX/RB research outputs and outcomes by facilitating national networking. This networking is delivered by an interactive website (www.acorn.org), Research Topic Specific Networks

(RTSNs), Working Parties (WPs) and National Surveys and Audits. ACORRN has over 950 active members (as of 31st April 2007) including internationals: the original target was expected to be 400 members. ACORRN has helped facilitate six new grant applications with others pending; they have published various consultation exercises and responded to the Department of Health's request to develop a UK wide image-guided radiotherapy (IGRT) research programme. ACORRN is currently assisting in the development of an integrated UK research strategy.

ACORRN's size and activity level has exceeded expectations. Its popularity is thought to be due to addressing the recognised difficulties facing this research community in an appropriate way to develop a receptive research community.

ACHIEVEMENTS DURING YEAR 1

During year 1 (April–December 2005), ACORRN governance structures were established. Four committees were formed including an Oversight Committee, a Steering Committee, a Planning Committee and an International Scientific Advisory Committee (ISAC), see Figure 1 for details of the ACORRN governance structure. The Oversight Committee is made up of the funders and is responsible for advising the Steering Committee. They meet with the chairman of the Steering Committee and the Research Manager every 6 months. The

Correspondence to: Gillian Heap, ACORRN, c/o Christie Hospital NHS Foundation Trust, Wilmslow Road, Withington, Manchester M20 4BX, UK. Email: acornn@manchester.ac.uk

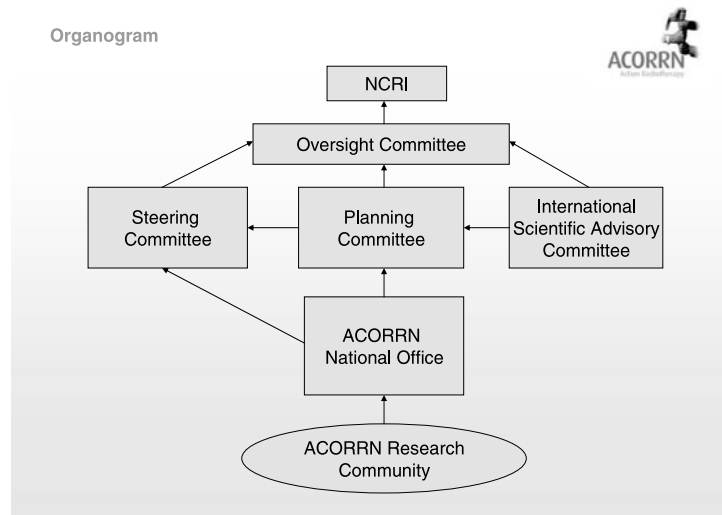


Figure 1. ACORRN governance structure.

Steering Committee is responsible for the management of the network and has representation from the multidisciplinary research community, relevant professional bodies and associated research groups and has a wide geographical spread. They meet every 4 months alternating with two monthly telephone conferences. The Planning Committee is responsible for the strategic direction of the network and receives advice from the ISAC.

The launch of the interactive website and discussion forum took place in year 1. This serves as a hub of information and networking. The remit and membership for the RTSNs was established. They were formed to progress specific research areas which required UK networking to a grant application stage. Two groups met in the first year to progress grant application submissions. WPs were also established as a centralised point of contact for professions and provide them with a unified voice. One WP was formed in year 1, the Research Radiographer WP. During year 1 ACORRN membership accrual was 143.

The work carried out in the first year established solid foundations which have allowed ACORRN to expand beyond expectations during year 2. ACORRN highlighted that the community had the willingness to succeed and that RTX/RB research has the potential to develop when appropriately empowered.

ACHIEVEMENTS DURING YEAR 2

This section covers activities facilitated by ACORRN over the period January–December 2006. There have been developments in all areas including on-line presence, research meetings, surveys and executive reports, and promotions/publicity.

On-line presence

- The interactive website serves as a hub of information and networking for professionals who have an interest in, or work in, RTX and/or RB research. To enhance the website, a research database was added and this was launched on 27th March 2006 to mark the birthday of Nobel Prize winner, Wilhelm Röntgen. The website enables users to identify and contact National and International researchers quickly and easily, search for information on projects, groups and institutions, develop projects on-line using the secure document storage facility and it will alert users to information of interest by email.
- During year 2, the registration total accrued was 826 (as of 31st December 2006). These are members who actively use the information available on the site to network and collaborate. This is an increase of 683 members over a 12-month period which equates to a 578% increase in membership. During 2006

there were 305,497 hits on the website and 9,340 individual logins.

- In August 2006, the ACORRN website gained accreditation for the 'HONCode Standard for Health'. This means that the website displays credible, accurate and relevant information for the healthcare industry.
- New features on the website include 15% off on all books purchased at Elsevier, interactive tutorials (showing how to perform popular tasks on the website e.g. adding a project), an Events Calendar (detailing up-and-coming conferences/meetings) and an eGroup facility (allowing all members of a group to send email messages quickly and easily to all the

members of the eGroup). ACORRN is also in the process of building up the Patient Section and now has numerous links from other sites to increase the visibility of the site on the internet. A breakdown on the demographics, job title and research interests of the users of the website can be found in Figures 2–5.

Research meetings

- ACORRN has developed RTSNs, research collaborations, and WPs to fuel research expansion in the community. A list of RTSNs and WPs is shown in Tables 1 and 2, respectively.

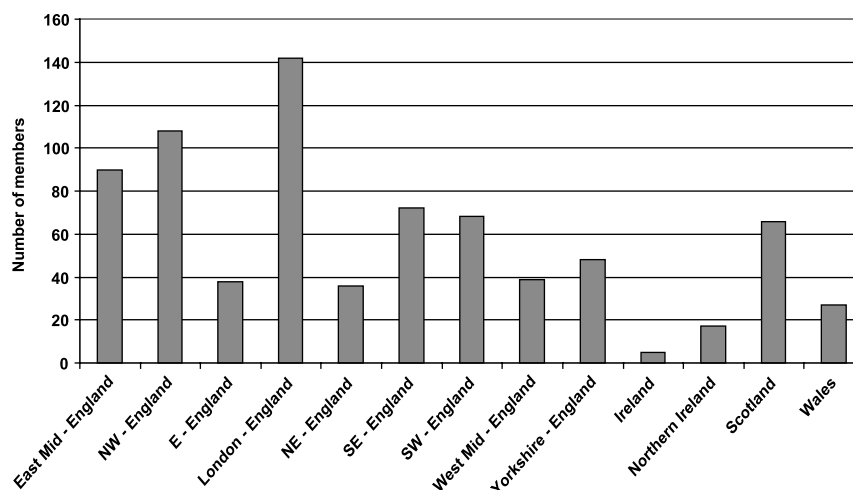


Figure 2. Location of ACORRN members nationally. ACORRN now have members from all continents in the world.

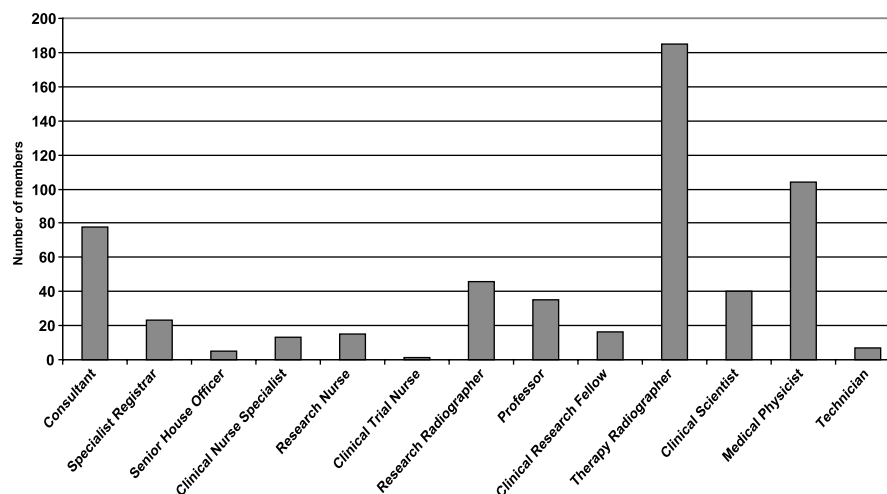


Figure 3. Clinical roles of ACORRN users.

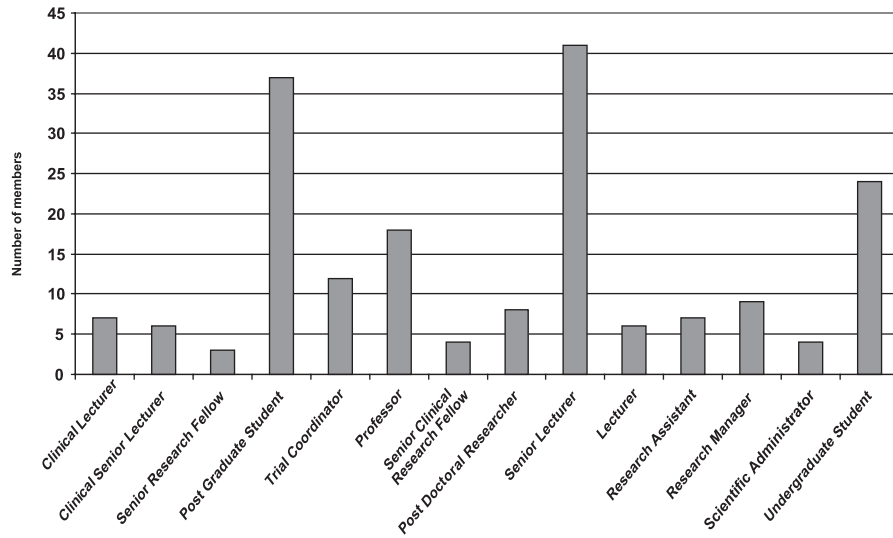


Figure 4. Academic roles of ACORRN users.

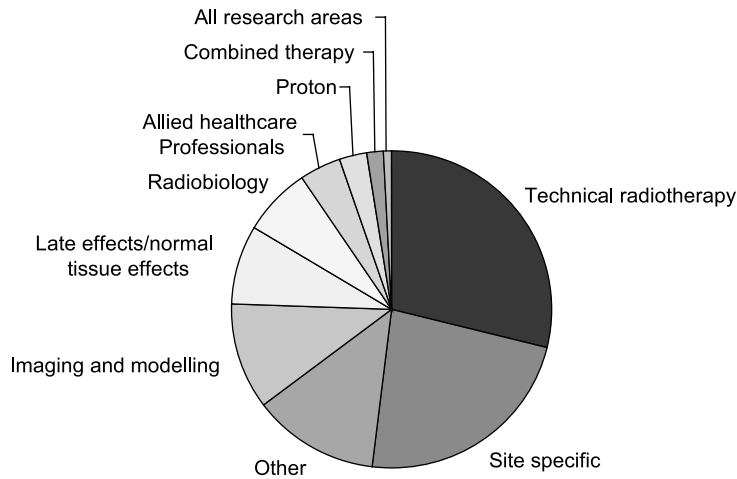


Figure 5. Research areas of interest to ACORRN members.

- ACORRN has had some involvement with six successful grant applications. The involvement ranged from providing a Letter of Support, to facilitating a meeting, to groups using the website as a network tool.

Groups that have met this year to progress towards grant applications are:

- *The Verification RTSN*. This group held a national conference on 11th September 2006 entitled ‘Implementing Image-Guided Radiotherapy in the UK: Plans for a UK Research Strategy’. Over 130 people attended representing 61 institutions including radiographers,

physicists and clinicians from RTX departments in the UK. The conference content was worked up interactively via the ACORRN website. ACORRN has formed an IGRT Expert Evaluation Group to network the UK for IGRT. Funding for this group was sought through the Department of Health. ACORRN is linking in with Centre for Evidence Based Purchasing to ensure an efficient, cost-effective role out of this equipment throughout the UK. As a result of the conference, a Lung group and Prostate group have been formed and will be looking to establish clinical trials using IGRT for these site specific areas.

Table 1. ACORRN research topic specific networks

RTSN name	Lead name	Number of members
ACORRN IGRT verification meeting	Prof. Pat Price	139
Altered fractionation	Prof. Michele Saunders	4
Bystander effects/delayed effects	Prof. Eric Wright	2
Combined radiotherapy with chemotherapy	Dr Stewart Martin	6
Functional imaging	Prof. Michele Saunders	3
Immune augmentation	Prof. Tim Illidge	2
Late effects/normal tissue effects	Dr Susan Davidson	10
Particle therapy and radiobiological modelling	Prof. Bleddyn Jones	17
Radiobiology of intraoperative radiotherapy	Dr Indranil Mallick	2
Radiogenomics/predictive assays/DNA repair	Dr Catharine West	5
Sarcoma	Dr Martin Robinson	2
Technical radiotherapy advances	Dr John Graham	14
Verification	Dr Ann Henry	11
UK pancreatic radiotherapy research group	Dr Azeem Saleem	16

Table 2. ACORRN Working Parties

Name	Lead name	Number of members
Nurses in Radiotherapy Working Party	Dr Sara Faithfull	11
Radiation Biology Working Party	Prof Eric Wright	6
Research Radiographer Working Party	Mrs Kim Ball	19
Physics Working Party	Dr Edwin Aird	9
Surgical Oncologist Working Party	Prof Alan Thompson	In planning
Clinical Research Fellow Working Party	Dr Jo Cresswell	In planning

- *The Particle Therapy/Radiobiological Modelling RTSN.* This group has developed a research project proposal to establish a reliable infrastructure for communication of RTX treatment plans between collaborating centres. Their original submission for the NEAT 8th Call was in September 2006 with a Letter of Support from ACORRN. The next step is to apply to Particle Physics and Astronomy Research Council which runs a technology transfer scheme and this will be progressed further through 2007.
- *The Late Effects RTSN.* Their interest lies in defining a consensus on how best to quantify late normal tissue effects and the possible amelioration of late effects. This group is working on a number of projects. They are shortly about to start a study to compare an electronic version of Common Terminology Criteria for Adverse Events (CTCAE) with a paper version in patients undergoing pelvic radiotherapy. They will use the CTCAE questionnaires in

an international cervix cancer trial in six countries organised by the International Atomic Energy Agency. This started in March 2007 and translations into Portuguese and Korean have already taken place and they are awaiting Spanish, Hindi and Urdu translations. They are also submitting a study for ethics approval to undertake contrast-enhanced magnetic resonance (MR) scans in patients who have had pelvic radiotherapy to see whether MR scans can be used as an objective measure of normal tissue effects.

- A pancreatic RTX RTSN is developing national guidelines for pancreatic RTX to enable national trials to be performed to an appropriate and agreed standard.

Collaborative meetings

- A collaborative meeting has taken place to develop a translational study to compliment the existing EaStER trial (NCRI registered;

RTX versus Surgery in Early Laryngeal Cancer). The EaStER feasibility study is currently ongoing with five centres participating. The Trial Management Group met on 29th November 2006. At this meeting, it was determined that EaStER choice will not proceed to submission of a full proposal for funding, until the EaStER feasibility study has demonstrated that it will be possible to recruit patients into a large phase III randomised trial.

- ACORRN has founded three additional WPs this year: the Nurses in Radiotherapy WP, the Radiation Biology WP and the Physics WP. The Nurses in radiotherapy WP has surveyed the Nursing community to determine their role definition and training needs and is now compiling the report. The Radiation Biology WP and Physicists WP have had initial meetings and both groups are currently defining their aim and deliverables. The Research Radiographer Working Party, formed during 2005, has continued to meet throughout 2006. They too have surveyed their community and their report as discussed in the 'Surveys and Executive Reports' section was submitted for publication in the *British Journal of Radiologists* in January 2007 and was accepted in April 2007. This group is now trying to develop a national research project led by radiographers; this is being carried out in collaboration with the Society of Radiographers. The Research Radiographers and Nurses have also compiled a contact list of research-active individuals within their profession and this can be found on the website. An initial meeting has been organised to develop a Surgeons WP and preliminary discussions have taken place to progress a Clinical Research Fellows WP and a Research Radiographer Trainee WP.

Surveys and executive reports

- ACORRN, in collaboration with the UK and International research community, has been putting together a 5-year strategy for RTX and RB Research in the UK. This has involved canvassing opinion from the ACORRN

Committees and the RTX/RB community through a UK-wide survey. The first ISAC meeting was held on 11th/12th May 2006 from which the first draft was produced. Various iterations of the report were submitted to the UK Funders for comment with the final version submitted to the NCRI Board on 9th February 2007. The strategy was presented to the NCRI Board on 1st March 2007. Following this review, a 2nd International Meeting has been scheduled for 13th/14th June 2007 hosted by Professor Norman Coleman, National Cancer Institute, US.

- The National Office has surveyed the opinions of the UK Research Radiographers and Nurses in Radiotherapy, with regards to their role definition and training needs. The Radiographer survey has been reviewed and has been compiled into an Executive Report awaiting publication. The Nurses survey is in the data collection phase. The next steps are to survey the UK Academic Community, physicists and then the clinical research fellows.
- ACORRN initiated a 'Feedback—One Year on' survey to identify areas where they could improve their support to the community. Overall, ACORRN had 80% positive feedback with the remaining 20% being constructive and has allowed necessary changes to be implemented. A report is currently on the website for review.
- The ACORRN website has facilitated a national audit of RTX planning against Royal College of Radiologists (RCR) guidelines. This proved a fast and accurate method of contacting RTX departments and collecting information.

Promotion/publicity

- ACORRN continues to offer a consultation service to members of the community. This service provides help and advice with respect to getting grant applications written and approved, strategy definition and relevant contacts. ACORRN has had five consultations this year and publicises this service on the website for the wider community.

THE FUTURE OF ACORRN

ACORRN has exceeded expectations. It has clearly addressed some of the recognised difficulties facing this research community. It is anticipated that the need will increase over year 3 and beyond.

ACKNOWLEDGEMENT

Sources of support in the form of grants: Grant provided by Cancer Research UK, the Department of Health and the Medical Research Council.