

## AIDIT and IMPACT: building research collaborations in targeted prostate cancer screening

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### Summary

AIDIT (Advancing International Co-operation and Developing Infrastructure for Targeted Screening of Prostate Cancer in Men with Genetic Predisposition) is a project funded by the Sixth Framework Programme of the European Community which is endeavouring to facilitate co-operation between European countries in the field of cancer research. The project also aims to raise awareness of familial prostate cancer among health professionals and the public within the associated candidate countries (ACCs) and new member states of the European Union (EU).

AIDIT will focus on linking clinical and research teams in the ACCs and new member states with the IMPACT Consortium (Identification of Men with a genetic predispo-

sition to Prostate Cancer: Targeted screening in BRCA1/2 mutation carriers and controls), an international team investigating screening and diagnosis for men with a genetic risk of prostate cancer (those who carry a mutation in the cancer predisposition genes BRCA1 or BRCA2). Cancer research has been targeted as a high priority for the European Community; however, research is most successful when centralised and well coordinated, avoiding the duplication and fragmentation associated with smaller, isolated studies. AIDIT will consolidate the current IMPACT consortium and allow research partners from across the world to benefit from shared knowledge and experience.

To date, the AIDIT team has established a website to facilitate communication between project collaborators ([www.impact-study.co.uk](http://www.impact-study.co.uk)), has been represented at several international meetings and has facilitated a conference for the IMPACT study to bring together international research teams, clinicians and policy makers.

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### Background

Cancer is a major health problem across the world: in Europe, the International Agency for Research on Cancer estimated that there were almost 2.9

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million incident cases in 2004 [1]. In that same time period, approximately 1.7 million died of the disease. Research into cancer diagnosis and treatment is therefore a high priority for countries across Europe.

At the Lisbon summit in March 2000, the European Commission (EC) Member State governments called for the creation of a European Research Area which would allow European research efforts to be coordinated and integrated to create an effective internal market for science and technology, bringing additional economic and social benefits [2]. It was decided that Framework Programme 6 (FP6) would be the tool used to implement this strategy.

In September 2002, Research Commissioner Mr Philippe Busquin emphasised that the considerable resources being devoted to cancer research in particular were not producing the results expected by both health practitioners and citizens [3]. Fragmentation and duplication of research were suggested as possible causes.

### The IMPACT study

IMPACT is an international collaboration researching the utility of targeted prostate-specific antigen (PSA) screening for men at increased risk of prostate cancer risk due to inherited predisposition. It is coordinated in the UK but involves clinicians and researchers from across Europe and the world.

Although the majority of prostate cancer occurs sporadically, it is recognised that family history plays a role in a significant number of cases [4]: a family history either of prostate cancer alone, or of cancers including breast and ovarian cancer [5]. Evidence of the link between single genes and prostate cancer risk is strongest for the *BRCA1* and *BRCA2* genes [6,7], with *BRCA2* in particular thought to lead to a relative risk of 4.65 (95% CI 3.48-6.22). This relative risk may be as high as 7.33 in men under the age of 65 years.

Population prostate screening remains controversial because of the detection of clinically insignificant disease in young men and the risk of over treatment. There is increasing interest and concern in European countries about whether prostate cancer screening should be offered to the general population and whether this translates into a reduction in mortality from prostate cancer. The European Randomised Study of Screening for Prostate Cancer (ERSPC) is being conducted by Professor Schröder and colleagues in 8 European countries to address the issue [8,9]. IMPACT raises the hypothesis that targeting screening at

the men in the population who are known to have an increased risk of prostate cancer might improve the effectiveness of prostate cancer screening.

Mutations in *BRCA1* and *BRCA2* are uncommon, occurring in approximately 0.051% and 0.068% of the population, respectively [10]. For reasons of statistical power, a study of screening in this population requires an international collaboration in order to recruit a sufficient number of mutation carriers and controls. The IMPACT consortium currently includes research teams in more than 20 countries (Figure 1) and aims to recruit 850 carriers of *BRCA1* and *BRCA2* mutations and 850 controls.

### Strengthening research ties: the AIDIT project

In 2005, a project known as AIDIT was awarded funding through the EC Framework 6 Programme as part of an endeavour to reduce research fragmentation and duplication and to facilitate research collaboration across Europe. AIDIT will focus on expanding the IMPACT consortium within the associated candidate countries (at the time of application for funding, these were Turkey, Romania and Bulgaria) and new member states of the EU.

The AIDIT management team includes partners from the UK (an EU member state prior to 2004), Poland (a new member state) and Turkey (an ACC). These partners form a broad base from which to form new connections with research teams across Europe. Each country is part of a different research infrastructure, and therefore brings valuable insights for both existing and potential new members of the consortium.

The expansion of IMPACT is likely to benefit both the research itself, as well as the research teams themselves. A higher number of collaborating centres will allow access to a larger number of men at risk, making it possible to recruit as many carriers as are needed for the study. For all collaborators - both new and existing - it is hoped that participation in AIDIT and IMPACT will foster an environment of ongoing interaction and learning. Although genetic testing and prostate cancer screening services may differ across countries, it is only with contribution from a large number of research and clinical teams across the world that the project will be successful.

AIDIT will help to eliminate duplication of research within the field of prostate cancer genetics and align the strategies and clinical management procedures of European centres to a considerable degree. National and European Commission funding will therefore be employed more efficiently, and a durable



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