

Title of Project: CancerGRID

Principle Investigator: Carlos Caldas

Aim(s) of Project:

The **Goal** of CancerGRID (A consortium to develop open standards for clinical cancer informatics) is to use a modular approach to provide solutions for “simple” problems using gridbased informatics:

1. Develop a template for e-clinical trials using, as a exemplar, a new translational breast study (neoTANGO);
2. Link existing clinical trial data and cancer genetic epidemiology data with molecular profiling information obtained in paraffin-embedded tumour samples;
3. Use GRID-enabled collaborative tools to manage clinical trials.

Please provide a summary of the project proposal (max 1 page):

CancerGRID will directly address some of the key purposes of the NCRI Informatics Strategy: 1. it will develop a grid-based network for cancer clinical trial patient entry, randomisation and follow up, 2. it will develop methods to store and mine complex datasets, including histology, imaging, molecular and genetic markers, prognostic and predictive markers, chemotherapy and radiotherapy, treatment responses and recurrence of disease, 3. it will facilitate interfaces between UK trials (see NCRN connection) and related work conducted overseas (see caBIG collaboration), and 4. it is constituted by a group of investigators across several leading cancer research institutions and across disciplinary boundaries (medical oncologists, translational researchers, genomics groups, software engineers, computational biologists). For details of the project and updates on progress the project has its website (<http://www.cancergrid.org/>).

Please list 3 deliverables that the project will contribute to the UK and/or international cancer informatics community

1. Template forms, vocabularies, common data elements and biomedical objects for prospective running of multicentric translational clinical trials using the grid (neoTANGO as a “quick win” project)
2. Vocabularies, common data elements and biomedical objects for retrospective analysis of phase III clinical trials with integrated molecular analysis of paraffin-embedded samples and integration with cancer registry
3. GRID-based collaborative tools and infrastructure for running and managing clinical trials

Please describe how the project will incorporate and/or reuse existing informatics infrastructure and/or resources. If the project will not use any existing

infrastructure or resources (e.g. data standards or ontologies) please explain why this is the case.

CancerGRID will collaborate extensively with caBIG, which is run by the NCICB, and is also developing core technologies (Enterprise vocabulary, Common data elements, and Biomedical objects).

Please describe the plans for the sharing of data and dissemination of knowledge that arise from the project:

Since CancerGRID is totally committed to open source, open access, open development and federation of solutions whatever is developed by CancerGRID will be usable by other disease sites and will be an important module for other initiatives, like the NCTR and the NCRN clinical trials activity.