



Position Paper

## Cancer Core Europe: A consortium to address the cancer care – Cancer research continuum challenge



Alexander M.M. Eggermont<sup>a,\*</sup>, Carlos Caldas<sup>b</sup>, Ulrik Ringborg<sup>c</sup>, René Medema<sup>d</sup>, Josep Tabernero<sup>e</sup>, Otmar Wiestler<sup>f</sup>

<sup>a</sup> *Gustave Roussy Cancer Campus Grand Paris, Villejuif, France*

<sup>b</sup> *Cambridge Cancer Centre, Cambridge, United Kingdom*

<sup>c</sup> *Karolinska Institutet, Stockholm, Sweden*

<sup>d</sup> *Netherlands Cancer Institute (NKI), Amsterdam, The Netherlands*

<sup>e</sup> *Vall d'Hebron Institute of Oncology (VHIO), Barcelona, Spain*

<sup>f</sup> *National Center for Tumour Diseases (DKFZ-NCT), Heidelberg, Germany*

Received 31 July 2014; accepted 31 July 2014

Available online 25 September 2014

### KEYWORDS

Cancer care  
Research  
Continuum  
Consortium  
Europe

**Abstract** European cancer research for a transformative initiative by creating a consortium of six leading excellent comprehensive cancer centres that will work together to address the cancer care-cancer research continuum.

Prerequisites for joint translational and clinical research programs are very demanding. These require the creation of a virtual single ‘e-hospital’ and a powerful translational platform, inter-compatible clinical molecular profiling laboratories with a robust underlying computational biology pipeline, standardised functional and molecular imaging, commonly agreed Standard Operating Procedures (SOPs) for liquid and tissue biopsy procurement, storage and processing, for molecular diagnostics, ‘omics’, functional genetics, immune-monitoring and other assessments. Importantly also it requires a culture of data collection and data storage that provides complete longitudinal data sets to allow for: effective data sharing and common database building, and to achieve a level of completeness of data that is required for conducting outcome research, taking into account our current understanding of cancers as communities of evolving clones. Cutting edge basic research and technology development serve as an important driving force for innovative translational and clinical studies. Given the excellent track records of the six participants in these areas, Cancer Core Europe will be able to support the full spectrum of research required to address the cancer research- cancer care continuum. Cancer Core Europe also constitutes a unique environment to train the next generation of talents in innovative translational and clinical oncology. © 2014 Published by Elsevier Ltd.

\* *Corresponding author:* Address: Gustave Roussy Cancer Campus Grand Paris, 114 Rue Edouard Vaillant, 94805 Villejuif, France. Tel.: +33 1 42 11 40 16; fax: +33 1 42 11 52 52.

*E-mail address:* [alexander.eggermont@gustaveroussy.fr](mailto:alexander.eggermont@gustaveroussy.fr) (A.M.M. Eggermont).

Effective treatment of cancer remains one of the biggest medical challenges in the world, due to the large diversity in the spectrum of mutations in individual cancer patients. To tackle this problem, cancer research will need to be performed at a larger scale than is currently possible within single cancer institutes.

Therefore, European cancer research needs a transformative initiative by creating a consortium of excellent comprehensive cancer centres that will work together to address the cancer care-cancer research continuum. If this can be successfully accomplished between a few of the leading European cancer centres, then the road is paved to expand it eventually in a stepwise fashion and create a ‘virtual joint European comprehensive cancer center’. With this grand aim in mind Gustave Roussy Cancer Campus Grand Paris, the Cambridge Cancer Center, Karolinska Institutet, the Netherlands Cancer Institute (NKI) – Netherlands Cancer Institute, Vall d’Hebron Institute of Oncology and the German Cancer Research Center with its comprehensive cancer centre the National Center for Tumour Diseases (DKFZ-NCT) Heidelberg have jointly decided to create Cancer Core Europe as a working consortium.

The prerequisites for joint translational and clinical research programs are very demanding. These require the creation of a virtual single ‘e-hospital’ and a powerful translational platform that integrates all patient files using a common software platform that federates the databases from each of the centres. It requires inter-compatible clinical molecular profiling laboratories with a robust underlying computational biology pipeline. It requires standardised functional and molecular imaging. It requires commonly agreed SOPs for liquid and tissue biopsy procurement, storage and processing, for molecular diagnostics, ‘omics’, functional genetics, immune-monitoring etc. It requires a culture of data collection and data storage that provides complete longitudinal data sets to allow for: effective data sharing and common database building, and to achieve a level of completeness of data that is required for conducting outcome research, taking into account our current understanding of cancers as communities of evolving clones.

Cutting edge basic research and technology development serve as an important driving force for innovative translational and clinical studies. Given the excellent track records of the six participants in these areas, Cancer Core Europe will be able to support the full spectrum of research required to address the cancer research- cancer care continuum. Cancer Core Europe also constitutes a unique environment to train the next generation of talents in innovative translational and clinical oncology.

It must be clear that cancer care and cancer research are within one and the same continuum. If we fail to integrate all the cancer care information, clinical research and outcome research will fail as well.

Above all it requires the will and trust to work together and share. This is not a small thing, and so it stands to reason that one can only start by putting a limited number of centres together who know each other very well and run multiple programs together and share the vision to create a consortium with the ambitious goals as outlined above.

To build the infrastructure of the consortium the position of a coordinating scientific officer of high calibre is being jointly financed by the centres to work with the respective scientific officers of each centre to set up the necessary work stream task forces in the domains of ‘e-hospital’, translational research platforms, harmonisation of diagnostics, imaging, omics, biobanking, shared databases and a virtual joint clinical trial infrastructure (i.e. joint sponsoring of clinical trials).

The six centres comprising the Cancer Core Europe are members of the Eurocan Platform, an FP7 funded Network of Excellence involving 23 cancer centres and institutes in Europe with the task of structuring translational cancer research in Europe. A long-term goal of the Eurocan Platform consortium has been the creation of a virtual cancer institute in Europe, and the network has supported the creation of Cancer Core Europe as a first step towards achieving this goal.

Yearly within the Cancer Core Europe consortium around 60,000 newly diagnosed cancer patients are seen, 300,000 cancer treatments are delivered and about 1,000,000 outpatient visits are performed. More than 1500 clinical trials are being conducted at these six cancer centres annually. Together with the strengths in basic and translational cancer research, this represents a unique critical mass of activity that when successfully harmonised in one operational clinical research structure will represent and harness a major force in European cancer research. Moreover if Cancer Core Europe succeeds it will allow for relatively simple expansion with additional centres joining the core structure in future. So the consortium project wants to be inclusive, but has to be pragmatic at the start to tackle the enormous challenges the project represents.

On July 4 2014 the consortium agreement of Cancer Core Europe was signed in Paris by all members representing their Institutions.

---

Alexander Eggermont	(Gustave Roussy)
Carlos Caldas	(Cambridge)
Ulrik Ringborg	(Karolinska)
René Medema	(NKI)
Josep Tabernero	(VHIO)
Otmar Wiestler	(DKFZ-NCT)

---

#### Conflict of interest statement

None declare.