BROKERAGE FOR HEALTH
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Artificial Intelligence and Big Data Infrastructures for Clinical Research

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HEALTH-NCP-NET 2.0 project is funded by the European Commission

CINECA Interuniversity Consortium supporting Research

CINECA is a Consortium of Universities, founded in 1969 by Ministry of Public Education University and Research (MIUR) to support scientific research.
It is a non-profit organization.

Members:

- Ministry of University and Education
- 67 Italian Universities
- 3 Institutions (CREA, INDIRE, INVALSI)
- 6 National Research Institutions (CNR, OGS, SZN, INAF, INFN, INRIM)

In house provider:

- Supervised by MIUR
- No private capitals
- 80% of activities towards Consortium members

- Annual Budget : 90M€
- Employees: 800

With the new Supercomputer MARCONI, Cineca ranks number 3 in Europe and 18 in the world in the TOP500.org list of the most powerful computing facilities.

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Company expertise

- Nearly 50 years of experience in High Performance Computing. Artificial Intelligence is the natural continuation of this branch of skills
- Expertise and application in Healthcare Research since 30 years

We are seeking use cases and application environments where to apply our experiences, platforms and research tools. Specifically we may enrich project Consortiums with the following capabilities:

1) World-class High Performance Computing Infrastructures

2) Clinical Research IT Frameworks & Applications aimed to Outcome Research and Big Data

3) Advanced Multi-language Platforms for Personalized Follow-up after Cancer Treatment

4) Blockchain Lab

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Project Idea:

SC1-DTH-01-2019: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment:

Artificial Intelligence and Big Data Infrastructures for Healthcare Research

To engage healthcare systems, clinical professionals and patients communities in the understanding, sharing and use of Big data and Artificial Intelligence in order to improve health status and quality of life after cancer treatment.

The project aims to foster the data acquisition, sharing, and modeling and processing, also with the use of High Performance Computing capabilities, in order to exploit key cognitive and predictive elements capable of giving clear indications to the clinical decision makers.

Considering the growing importance of Value-based Healthcare policies, the linking of Healthcare system data with complementary open or unstructured data sources (e.g. environment, IoT, …) will be crucial to define personalized healthcare pathways that would help improve peoples' lifestyles and eventually reduce incidences of chronic disease, medication and hospitalization.

Through the project implementation, the most advanced Big Data and Artificial Intelligence methodologies and technologies available today will be used e.g. by using machine learning, predictive modeling and advanced analytics, together with "standard" descriptive statistics and data visualization.

Project partners will also analyze, assess the ethical and privacy framework in order to set-up European-scale appropriate shared IT Infrastructures to improve quality of life after treatment, setting-up ways of optimizing patient empowerment and long-term care for patients cured of cancer.

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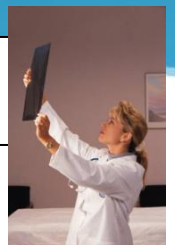
Big Data

Hospital discharges

Social determinants

Electronic Health Record

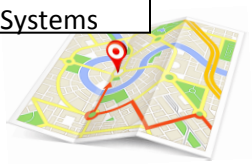
Specialized visits



Vaccinations/ Screening

Labs /diagnostic images/ genome data NGS

Geographic Informative Systems



Patient centric approach

Chronic diseases / Precision Medicine / Continuity of care require integrated information data sources

Treatment plans

Home care / Telemonitoring

Pharmaceutical prescriptions

Clinical trials

Topics of interest

- **SC1-DTH-01-2019: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment**
- **SC1-DTH-11-2019: Large Scale pilots of personalised & outcome based integrated care**

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Contact details

Thank you!

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