Integration and analysis of heterogeneous big data for precision medicine and suggested treatments for different types of patients.

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iASiS: Big Data to Support Precision Medicine and Public Health Policy

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SC1-PM-18-2016: Big Data supporting Public Health policies
iASiS Basic Facts

• Title: Integration and analysis of heterogeneous big data for precision medicine and suggested treatments for different types of patients

• Topic: H2020-SC1-PM-18-2016 - Big Data supporting Public Health policies

• Contract No.: 727658

• Budget: € 4.3M

• Project Officer: Gisele Roesems
Vision and Objectives

iASiS Vision:

Turn clinical, pharmacogenomics, and other Big Data into actionable knowledge for personalized medicine and health policy-making.

iASiS Objectives:

• Integrate automated unstructured and structured data analysis, image analysis, and sequence analysis into a Big Data framework.

• Use the iASiS framework to support personalized diagnosis and treatment.
The iASiS Framework

- General-purpose drugs are often ineffective

- iASiS will enable clinicians, medical researchers and health policy makers to deliver personalized treatments to patients
Lung Cancer Pilot Data

- EHRs in Spanish
- PET/CT Images
- Genomic Data/Liquid Biopsy Samples

• Pharmacological knowledge extracted from publicly available open datasets
• Biomedical ontologies and taxonomies
  • terminology standardization
  • semantically describe the EHRs
Alzheimer's Disease Pilot Data

- EHRs in English
- MRI Brain Images
- Genomic Data

- Pharmacological knowledge extracted from publicly available open datasets
- Biomedical ontologies and taxonomies
  - terminology standardization
  - semantically describe the EHRs
How the Community can contribute?

- **Datasets** about Lung Cancer or Alzheimer’s patients
  - Clinical record data, images related to clinical records, and genomic data

- **Vocabularies/Terminologies** to annotate the data

- **Data analytics tools** to semantify the data and uncover patterns related to Lung Cancer and Alzheimer’s disease

- Related efforts
iASiS Partners

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