



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



<http://project-iasis.eu>



@Project\_IASIS

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

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**7 September 2017**  
**Open Science FAIR, Athens**



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

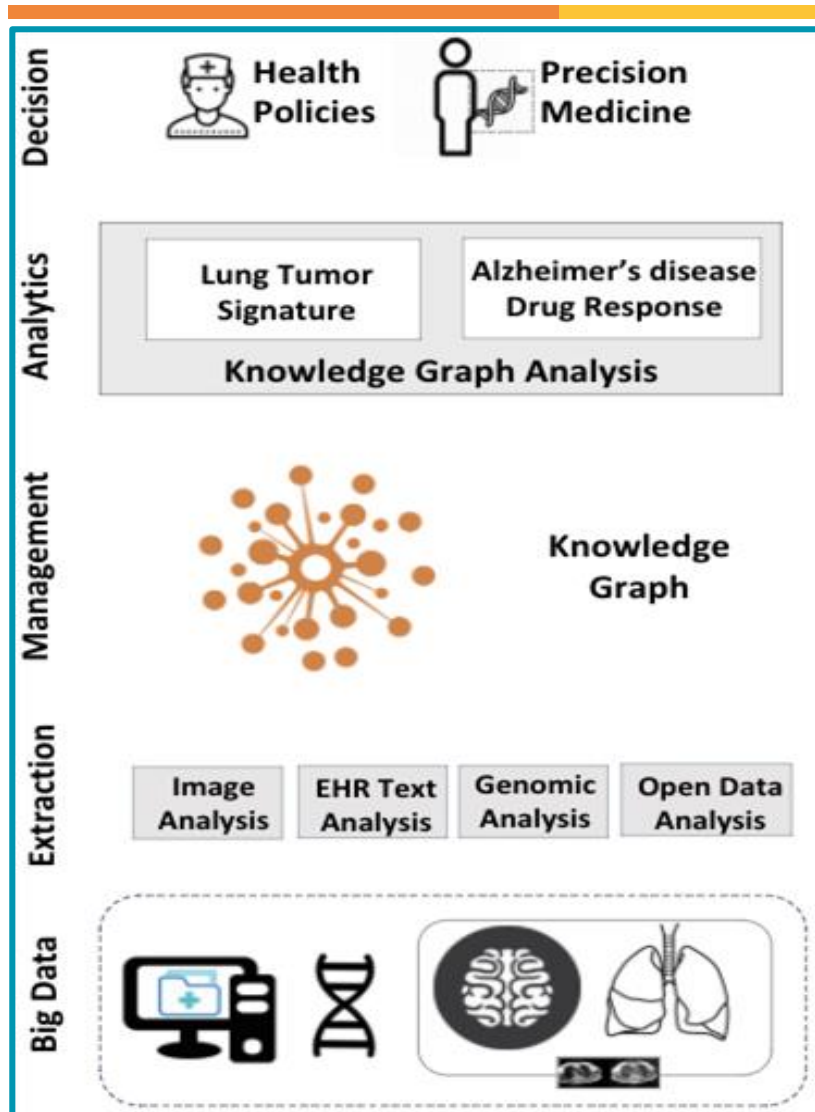
## iASiS Vision:

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

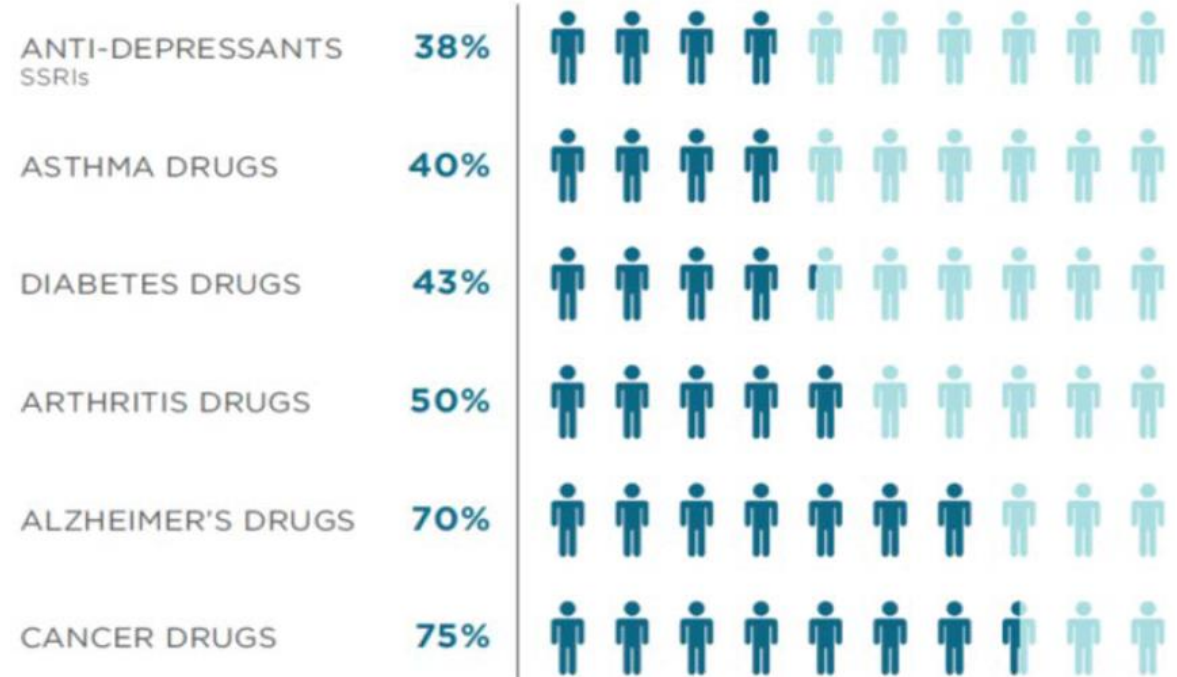
## iASiS Objectives:

- 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



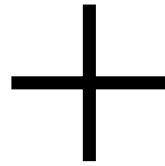
- General-purpose drugs are often ineffective



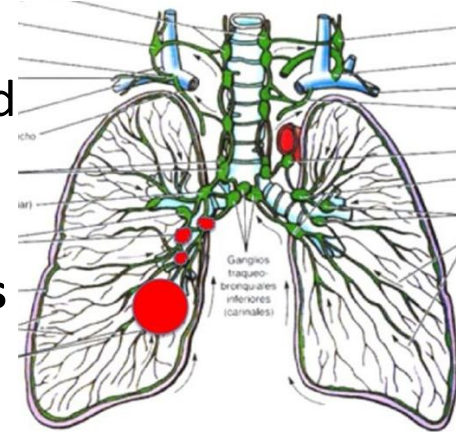
- iASiS will enable clinicians, medical researchers and health policy makers to deliver **personalized treatments** to patients

# Lung Cancer Pilot Data

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

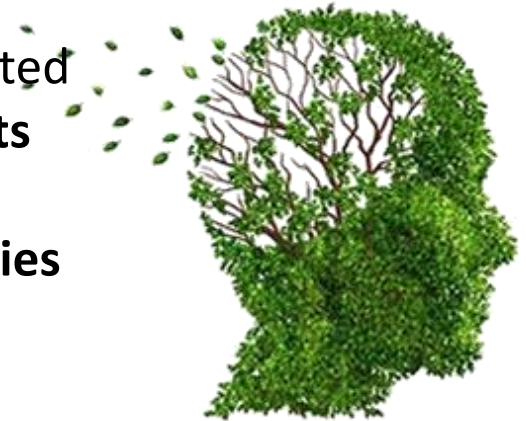


- Pharmacological knowledge extracted from **publicly available open datasets**
- **Biomedical ontologies and taxonomies**
  - terminology standardization
  - semantically describe the EHRs



# 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



CRIS  
NETWORK



# How the Community can contribute?

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- **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

