

Welcome

We are at the forefront of a new era, where data science and artificial intelligence are paving the way towards precision medicine. The use of real-world-data combined with machine learning allows for the discovery of different patterns of disease progression and drug response. Early identification of these patterns in patients, will lead to more optimal diagnosis and treatment strategy, adapted to the patient's needs and aiming at

maximization of survival rates. "ATHENA represents a unique proof-ofconcept for federated real world data



Bart Vannieuwenhuyse ATHENA project lead

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Senior Director Health Information Sciences at Janssen





About ATHENA Project ATHENA ('Augmenting Therapeutic Effectiveness through Novel Analytics')

is setting the scene for the future of precision medicine. ATHENA is a collaborative network which brings together a unique, multidisciplinary and

complementary partnership of academia, hospitals and industry who explore and use the concept of machine learning for the realization of predictive analytics in oncology. By creating a federated and standardized analytics platform, it will be possible to combine different data types in one predictive model. It will allow access for partner hospitals and industries to discover different patterns of disease progression and drug response, while fully preserving the privacy of patients.

medicine (ref. HBC.2019.2528). ICON (Interdisciplinary Cooperative Research) is a formula for demand-driven, cooperative research, such as presented in project ATHENA. We hope this newsletter will provide you with valuable project information and progress

The consortium is proud to have received funding from VLAIO (Flanders Innovation & Entrepreneurship), as one of the four supported projects in the ICON call on personalized

updates. FLANDERS
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Why do you need ATHENA?

Data-driven disease insights



Data-driven precision medicine will be accelerated through data (records, images, omics) mobilisation, to generate new disease insights that will support care, improve survival and inform research. Multiple myeloma and bladder cancer may serve as a





decision making by distinguishing in advance those patients most likely to benefit from a given treatment from those who will incur cost without gaining sufficient benefit (responder or nonresponder).



Better treatment options, delivered to patients faster Better treatment of patients through advanced diagnostics and personalized medicine will ultimately lead to benefits for all

involved: first of all, for the patients but also for care providers and the biomedical industry and this at all levels: clinical, operational,

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and financial.

PERSONALIZED MEDICINE

When diagnosis, care and therapy are all optimized for the particular situation of a patient,

one can use the term personalized medicine. The opposite is true when a generalized care procedure is used for all patients, regardless of their characteristics. "The success of a therapy does not only depend on the treatment itself, but also on the patient. Some people don't respond well to certain medication. ATHENA will help us to

discover which patients are most likely to benefit from certain treatments."



DATA SCIENCE Data science is an interdisciplinary field that aims to integrate, process and analyze large

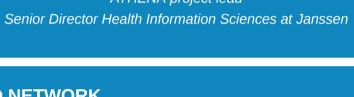
"Data science is becoming an essential part of research. We are generating data at an unforeseen rate. Applying the necessary tools and know-how, these data can be used to

create novel insights into diseases, as we will do with ATHENA."

amounts of data in order to uncover patterns and create insights.

FEDERATED NETWORK

Bart Vannieuwenhuyse ATHENA project lead



A network is called federated when different partners in the interconnected ecosystem agree upon a uniform strategy, in this context, for use, processing and analysis of data. "The specific advantage of ATHENA being a federated network is that it allows the

combined use of data while preserving data privacy and security."





and exploring the gaps in knowledge in ATHENA, can a novel federated privacy preserving platform be created for oncology research.

Janssen **KU LEUVEN** Johnson Johnson











Ziekenhuis Oost-Limburg



Tech

Technical

implementation finished

Data Key research questions finalized Data catalogue finalized Protocol development and approval ongoing Data harmonization ongoing (EHR/genomics/imaging)

Scientific

Where are we now?



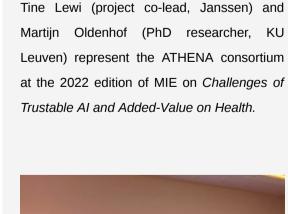


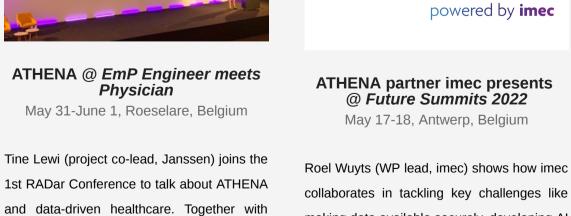
ATHENA project presented @ international *MIE conference* May 27-30, Nice, France

Bart Vannieuwenhuyse (project co-lead, Janssen) and Ingrid Maes (WP lead, Inovigate) talk about the relevance of real world data and privacy preservation in precision medicine.

Knowledge for Growth features ATHENA!

May 18, Gent, Belgium





FUTURESUMMITS

making data available securely, developing AI

Engineer meets Physicia ATHENA @ EmP Engineer meets Physician May 31-June 1, Roeselare, Belgium

> that respects the privacy of data, or designing sustainable and scalable systems.

represents the ATHENA team at the EmP conference. **Interesting for ATHENA followers** Coming up

Valerie Vandeweerd, MD (Janssen), she

September 7-8, 2022 London, UK --- Conformational and probabilistic predictions --- Series of events on intelligent health

IHUK2022 Forum

Paris, France --- Clinical oncology

COPA2022 Symposium

August 24-26, 2022

ESMO2022 Congress September 9-13, 2022

EMUC2022 Congress November 10-12, 2022 Budapest, Hungary --- Clinical urology

Brighton, UK

Abstract deadlines approaching MAP2022 Congress BLADDR2022 Congress October 14-16, 2022 October 20-21, 2022 Amsterdam, The Netherlands Athens, Greece

--- Molecular precision oncology --- Bladder cancer ABSTRACT deadline: July 26, 2022

ABSTRACT deadline: August 21, 2022



ABSTRACT deadline: Agust 1, 2022

info@athenafederation.org

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