AEGLE Project Results
The Biolytica Platform

Anna Palaiologk
Project Coordinator
Senior Research Consultant at EXODUS SA
Greece
Table of Contents

• Project aim and challenges
• Project solution and Users
• Benefits of the approach
• Use cases
• A detailed example
• Where to find more info
PROJECT AIM
• Improve the performance of Healthcare
• Enable healthcare professionals offer precision medicine services

HOW?
• Insights from BIG medical data after processing with INTELLIGENCE

CHALLENGES?
• Heterogeneity of database formats
• Hindered procedures for consent – ethics & legal
• Keep price reasonable to reduce healthcare costs
PROJECT SOLUTION

AEGLE offers a platform for Big medical Data with libraries of stand-alone analytics – the Biolytica Platform

Value Proposition

Minimal Viable Product
FOR WHOM?

• RESEARCHERS – hypothesis generation, testing
• CLINICAL PRACTITIONERS – clinical decision making support
• HEALTHCARE PLANNERS – improve public health

WHAT?

• Descriptive analytics
• Predictive analytics
• 2 User Interfaces: R&D + Clinical Decision Support
Benefits of the approach

**Clinical trial**
- Minimize heterogeneity
- Test one hypothesis
- Artificial environment

**Data driven research**
- Embrace heterogeneity
- Exploratory analysis
- Everyday practice data
3 Use Cases

- Intensive Care Unit
- Mechanical ventilation & patient-ventilator interactions
- Personalization of patient care & early identification of deterioration
- Non-malignant chronic diseases, in particular Diabetes Mellitus Type 2
- Prediction of response to third-line agents
- Pharmacovigilance
- Clustering
- Prediction of complication rates
- Chronic Hematologic malignancies, in particular Chronic Lymphocytic Leukemia
- Identification of prognostic factors that lead to CLL onset (immunogenetic, whole exome and RNAseq analyses)
An example from the ICU use case

- Clinical Decision Support user interface (CDS UI)
- Research & Development user interface (R&D UI)
Personalization of Patient Care & Early Identification of Deterioration – Clinical problems

• Complexity of care
• Minor but significant changes may go undetected
• Important but not life-threatening problems may be neglected
• Reliance on human factor
• Review of an ‘event’ not easy
Biolytica enables:

1. Calculation of needs
2. Estimation of deficits
3. Visualization of delivery
4. Alerts for delivery below physician-set target (CDS-UI)
5. Predictive analytics based on nutrition and EHR data – alerts for patients at high risk of death
6. Tool to analyze nutrition in association with all EHR data
Biolytica CDS user interface
Biolytica R&D user interface
More info at:

http://aegle-uhealth.eu

http://biolytica.eu
28 Legal Reports – AEGLE in your country campaign

AEGLE
Published by André Gomes da Cruz · 2 July at 12:31 · 📚

GREECE report is now up! 🇬🇷 Check how the greek process health data in their country. #GDPR #healthdata #dataprotection

AEGLE in your country
How does your country process Health data after GDPR?

AEGLE-UHEALTH.EU
Greece Report
We are looking for key partners!
Co-funded by the Horizon 2020 Framework Programme of the European Union under Grant Agreement nº 644906.

Partners
EXODUS AE (Coordinator), ICCS, KINGSTON, CERTH, Maxeler Tecnologies Limited, UPPSALA UNIVERSITET, UNISR, Time.Lex, EUR, CHS, LOBA, PAGNI, GNUBILA FRANCE, NTU
Precision medicine in Chronic Lymphocytic Leukemia

matching patient profiles with treatments

1. Molecular Profiling
2. Prognostic Markers
   - Markers predictive of drug sensitivity/resistance
   - Markers predictive of adverse events