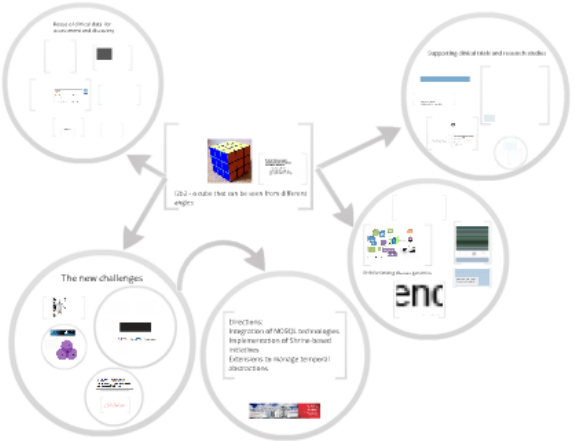
Thank you ...

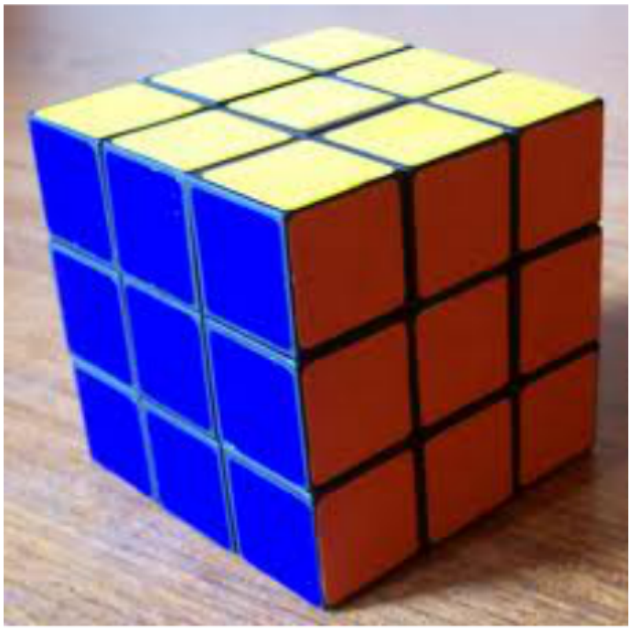
Lelio Menozzi - Pavia from Porta Calcinara



The I2b2 Pavia projects: experiences, lessons learned and future directions

Riccardo Bellazzi

Department of Electrical, Computer and Biomedical Engineering, University of Pavia
LISRC, Maugeri Foundation Research Hospital, Pavia



The I2b2 Pavia projects: experiences, lessons learned and future directions

Riccardo Bellazzi

Department of Electrical, Computer and Biomedical Engineering, University of Pavia
LISRC, Maugeri Foundation Research Hospital, Pavia

I2b2 - a cube that can be seen from different angles

Using electronic health records to drive discovery in disease genomics

Isaac S. Kohane

NATURE REVIEWS | GENETICS VOLUME 12 | JUNE 2011 | 417

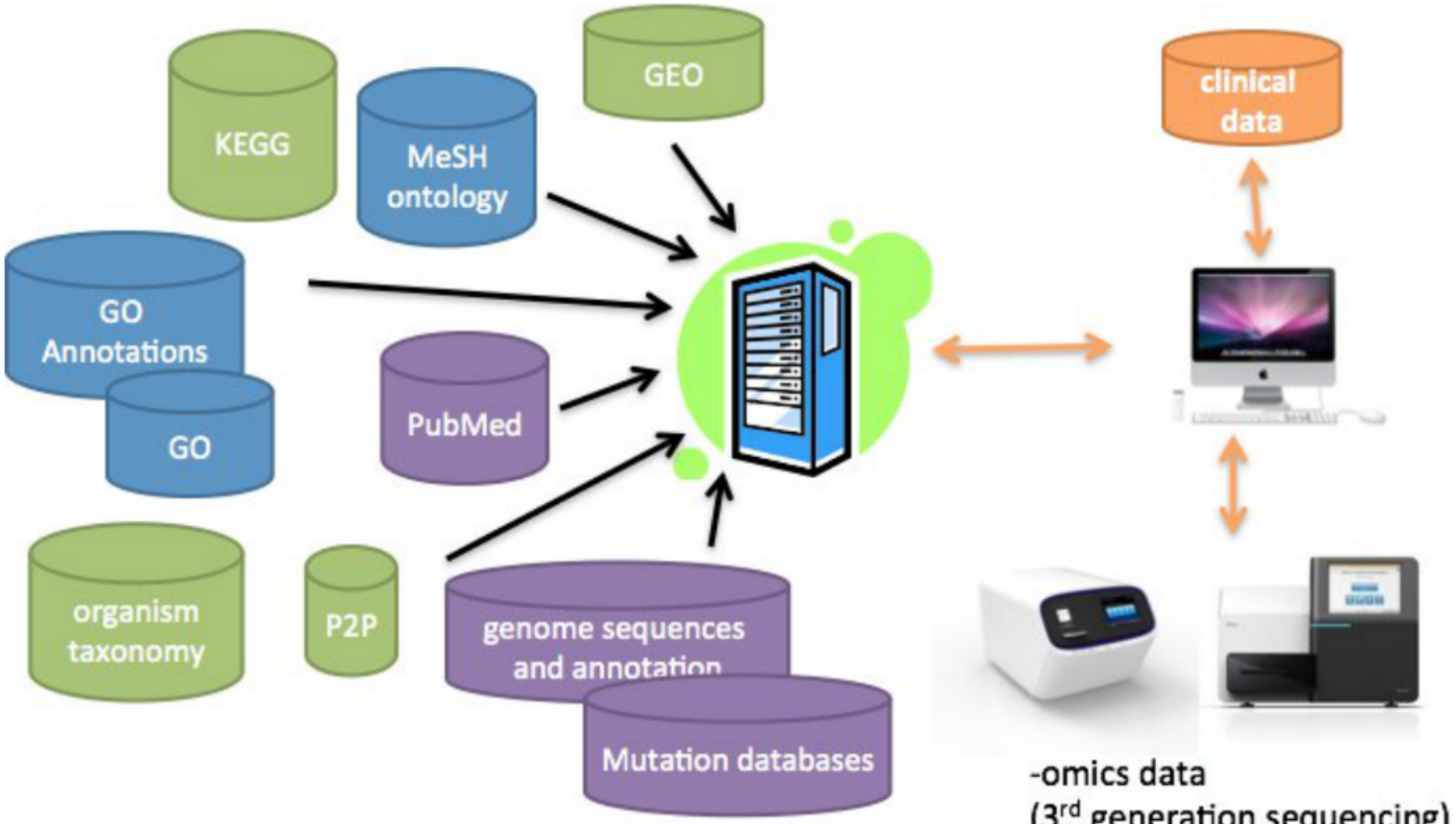
Dermatology Online Journal
Volume 18 Number 5
May 2012

Novel approach to utilizing electronic health records for dermatologic research: Developing a multi-institutional federated data network for clinical and translational research in psoriasis and psoriatic arthritis

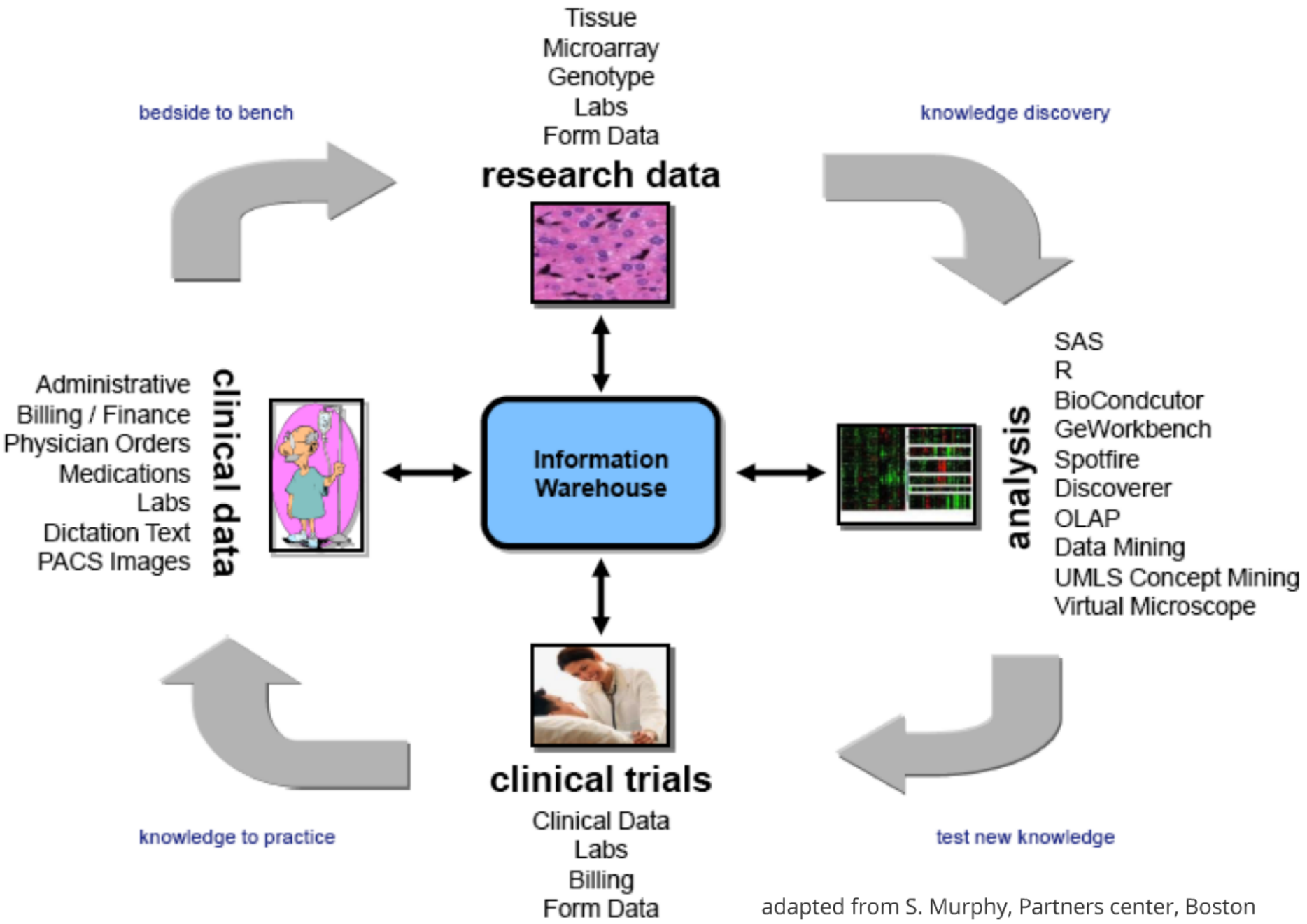
April W Armstrong[1] MD MPH, Shalini B Reddy[2] BA, Amit Garg[3] MD

Dermatology Online Journal 18 (5): 2

1. University of California Davis, Department of Dermatology, Sacramento, California
2. Boston University School of Medicine, Boston, Massachusetts
3. Boston University School of Medicine, Department of Dermatology, Boston, Massachusetts



Adapted from Zupan (2009)



adapted from S. Murphy, Partners center, Boston

FONDAZIONE ISTITUTO NEUROLOGICO NAZIONALE C. MONDINO

Istituto di Ricovero e Cura a Carattere Scientifico

Sistema Sanitario Regione Lombardia

Foundation | How to reach us | Contact

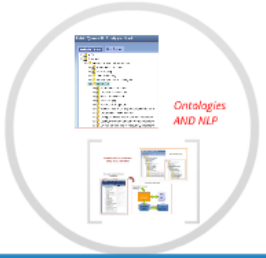
For the patient | Hospitalization and Treatment | Research | Training

English Italiano

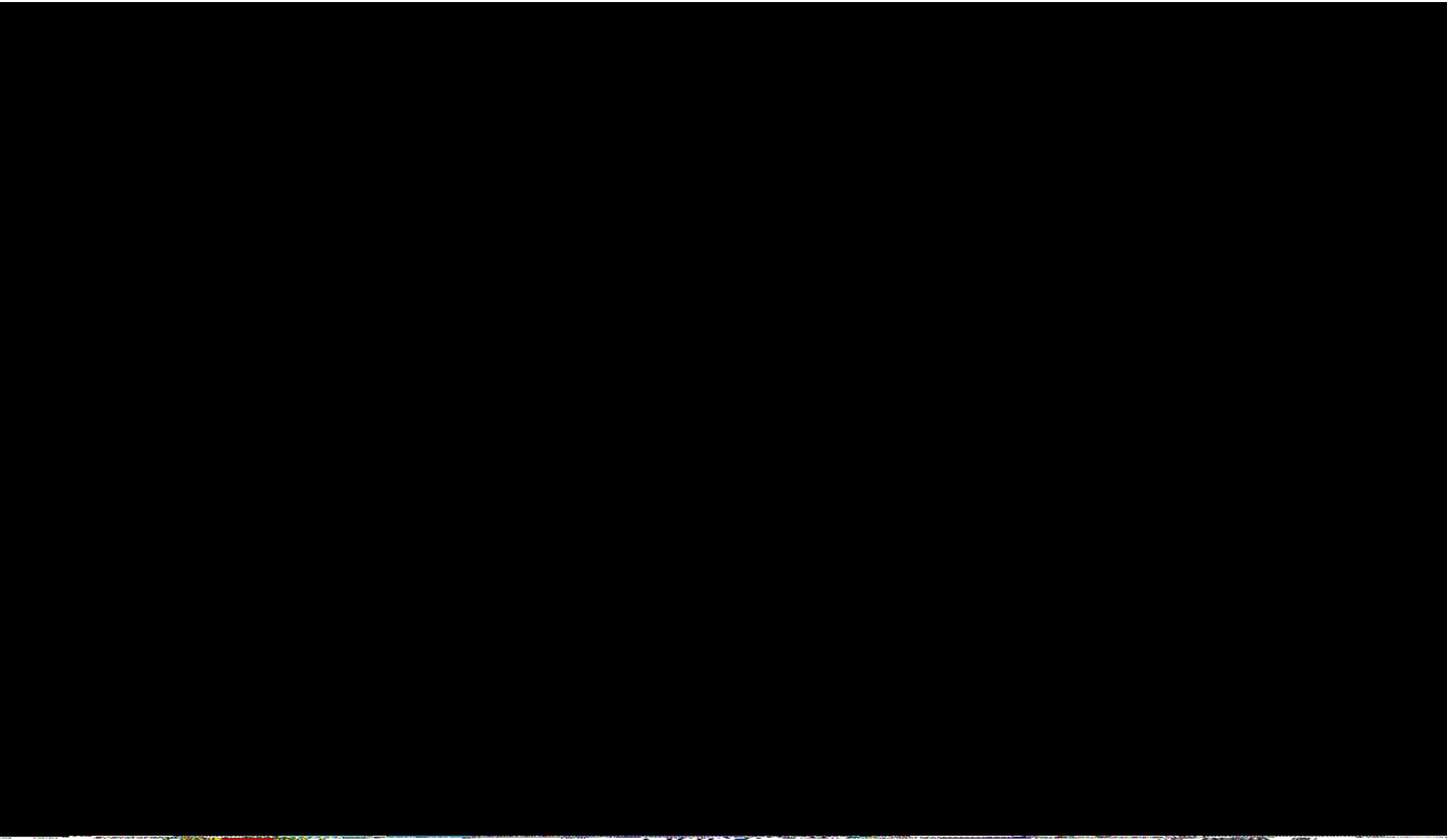
NGS Projects - SVELA - epilepsy (36 genes over 200 patients)

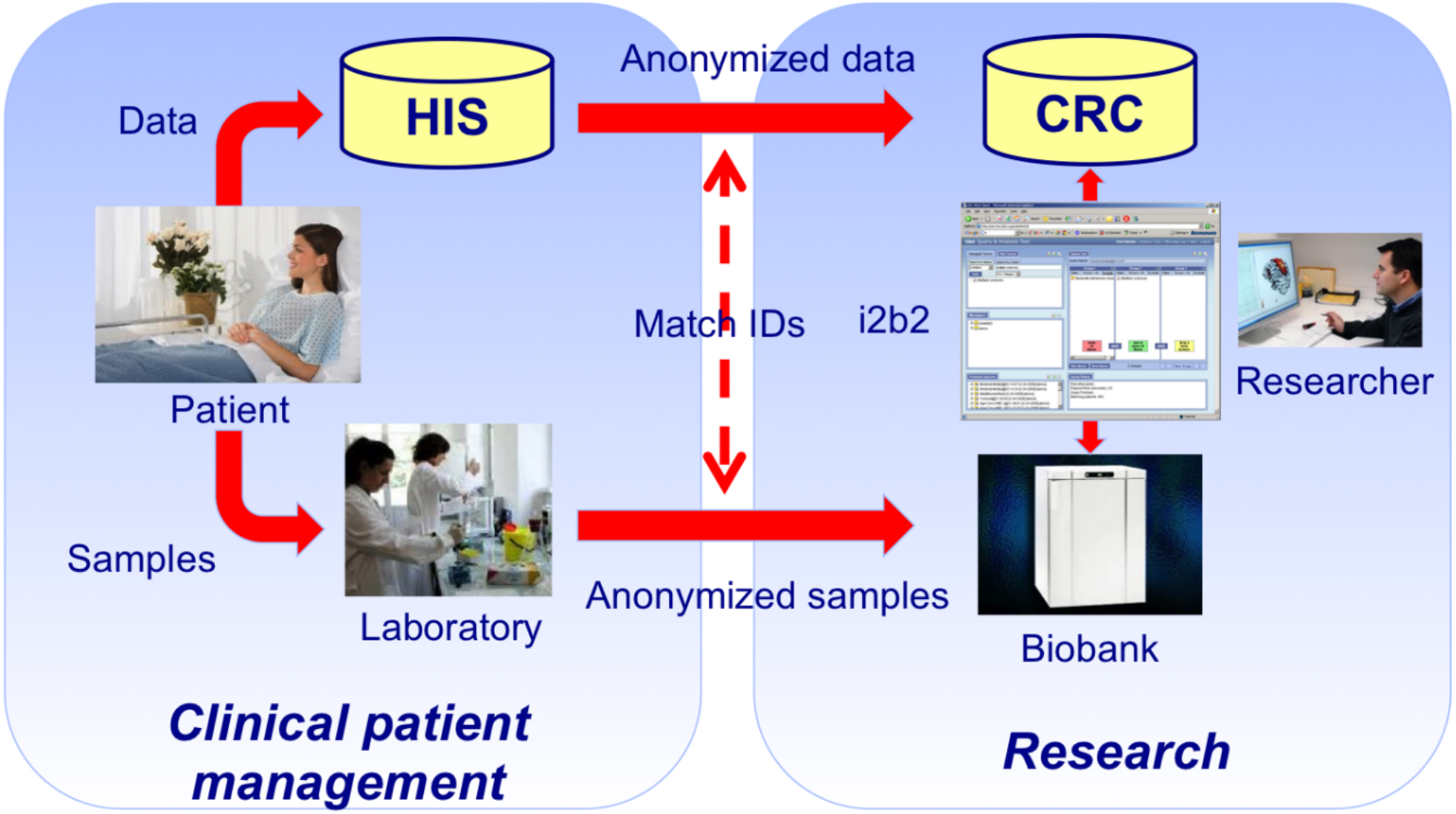
BIOINFORMATICS METHODOLOGY AND TECHNOLOGY
TO INTEGRATE
CLINICAL AND BIOLOGICAL KNOWLEDGE
SUPPORTING
ONCOLOGY TRANSLATIONAL RESEARCH

Tumoral Tissue Type	#
Breast	1548
Colon	460
Stomach	65
Thyroid	58
Liver Metastasis	58
Metastatic Lymph nodes	55
Kidney	38
Other	149
TOT	2331

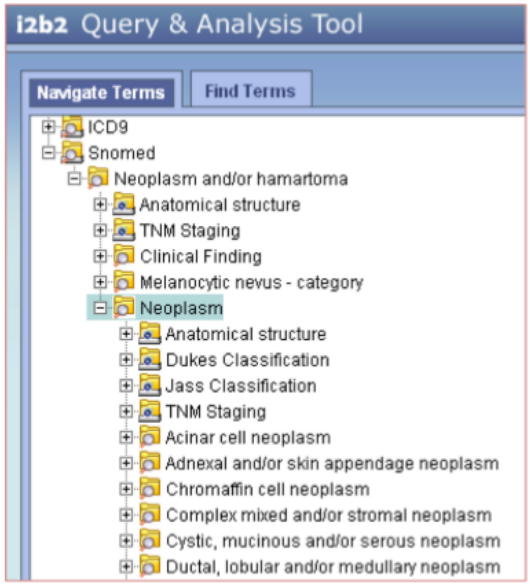


FONDAZIONE SALVATORE MAUGERI
CLINICA DEL LAVORO E DELLA RIABILITAZIONE
I.R.C.C.S.
ISTITUTO DI RICOVERO E CURA A CARATTERE SCIENTIFICO

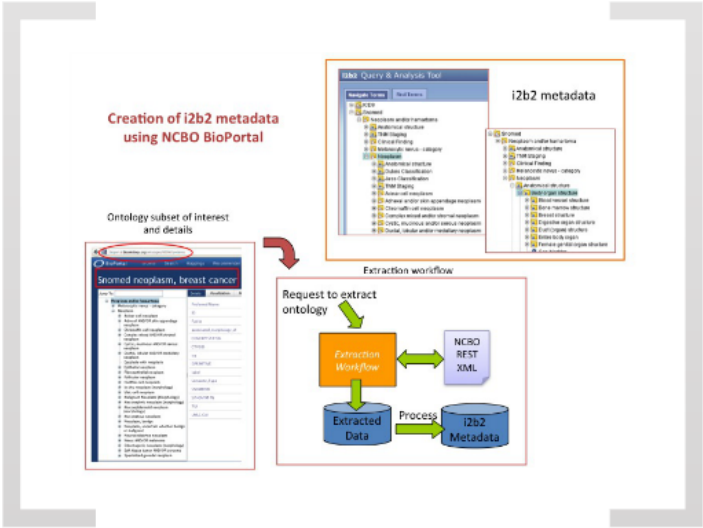


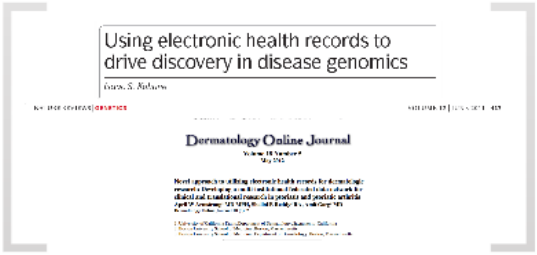

Data
HIS
Anonymized data
CRC
Patient
Match IDs
i2b2
Researcher
Samples
Laboratory
Anonymized samples
Biobank
Clinical patient management
Research

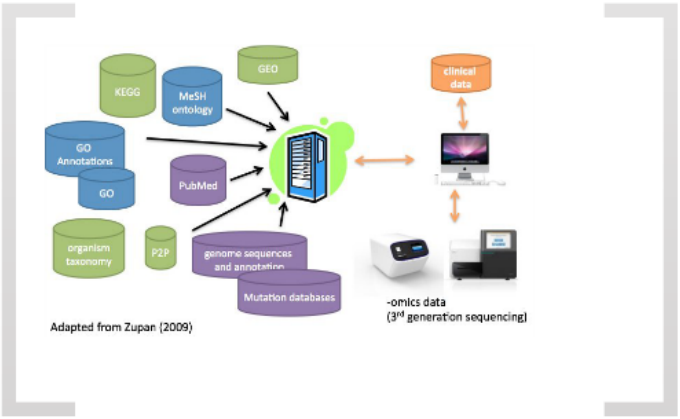
Tumoral Tissue Type	#
Breast	1548
Colon	410
Stomach	62
Thyroid	58
Liver Metastasis	58
Metastatic Lymph nodes	35
Kidney	18
Other	149
TOT	2338



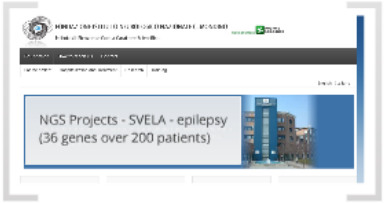
Ontologies AND NLP

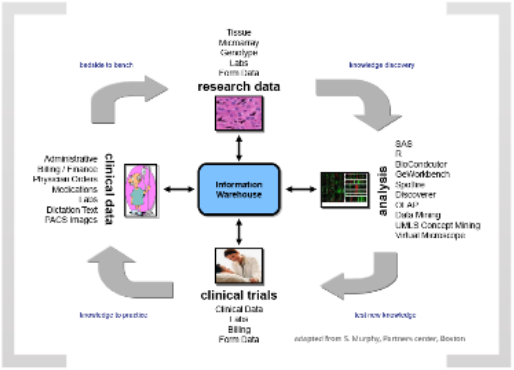






EHR for Driving disease genomics





Supporting clinical trials and research studies

EHR4CR Electronic Health Records for Clinical Research

SUMMIT SUrrogate markers for Micro- and Macro-vascular hard endpoints for Innovative diabetes Tools

Diabetes complications
Multicenter study > 1000 patients

Fondazione IRCCS
Policlinico San Matteo

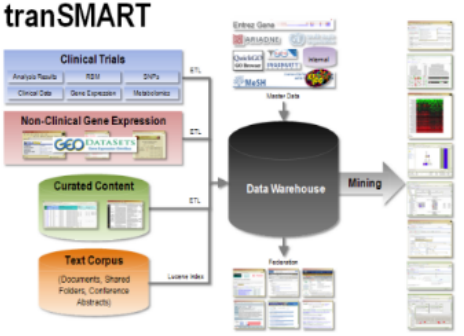
INNOVATIVE PROJECT

Dilated cardiomiopathy
multicenter study - 300 patients

An i2b2 repository for Immuno-transplant services

tranSMART (J&J) High Level Architecture

tranSMART



imi Innovative Medicines Initiative

METHODOLOGY

Effective knowledge management in translational medicine

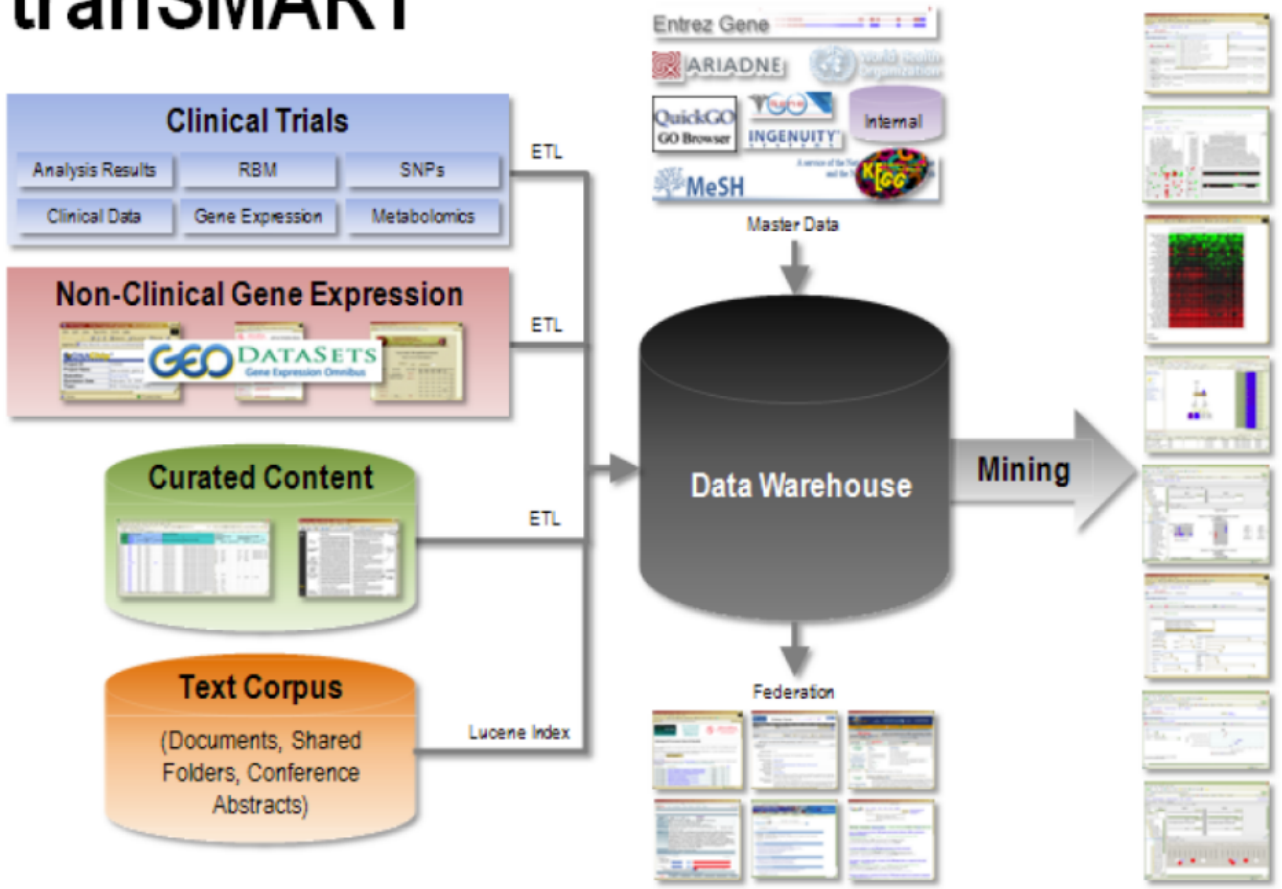
EHR4CR

Electronic Health Records
for Clinical Research

SURROGATE markers for Micro- and Macro-vascular hard endpoints

tranSMART (J&J) High Level Architecture

tranSMART



Innovative Medicines Initiative

Szalma et al. Journal of Translational Medicine 2010, 8:68
http://www.translational-medicine.com/content/8/1/68

JOURNAL OF TRANSLATIONAL MEDICINE

METHODOLOGY Open Access

Effective knowledge management in translational medicine

Sándor Szalma[1*], Venkata Koka[1], Tatiana Khasanova[2], Eric D Perakslis[3]

SUMMIT

SUrrogate markers for Micro- and Macro-vascular hard endpoints for Innovative diabetes Tools

Diabetes complications

Multicenter study > 1000 patients

Fondazione IRCCS
Policlinico San Matteo

Dilated cardiomiopathy multicenter study - 300 patients

An i2b2 repository for Immuno-transplant services

Genetics
- Antigens, Citokines, Bw4Bw6, Blood groups, HLA, HLA G, serum HLA, Hsp70-1, Kir, Rage, TLR4

Demographics
- Age, gender, Race, Weight

Administrative
- Hospital department, billing

Total number of concepts: 17501
HLA: 16014
Observations: 192363
Patients: 7396

Dilated cardiomiopathy multicenter study - 300 patients

An i2b2 repository for Immuno-transplant services

Genetics

- Antigens, Citokines, Bw4Bw6, Blood groups, HLA, HLA G, serum HLA, Hsp70-1, Kir, Rage, TLR4

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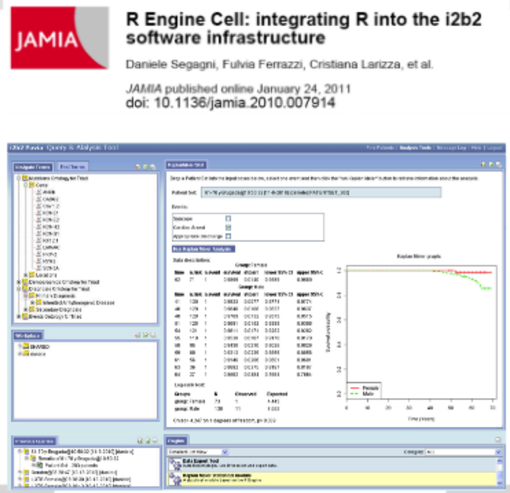
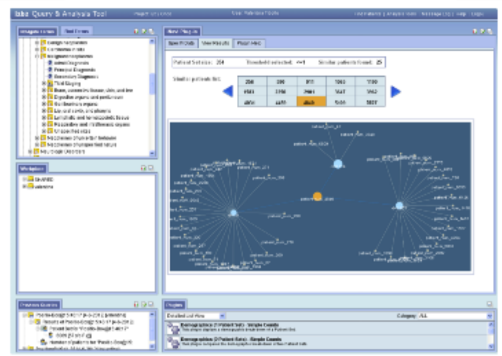
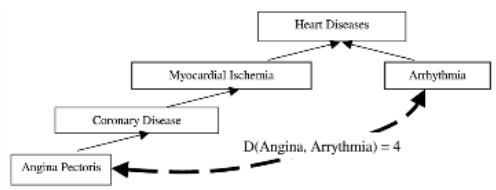

JAMIA
R Engine Cell: integrating R into the i2b2 software infrastructure
Daniele Segagni, Fulvia Ferrazzi, Cristiana Larizza, et al.
JAMIA published online January 24, 2011
doi: 10.1136/jamia.2010.007914


i2b2 WIKI ExportXLS Home
About the ExportXLS Web Client Plugin
ExportXLS
Introduction
1. Tabulates any selected Concepts (Ontology terms) relevant (observed on) to a set of selected Patients.
2. Optionally displays relevant unidentified Patient data.
3. Exports aforementioned tabulated data into an Excel spreadsheet file conveniently
Instructions
1. Navigate to the "Specify Data" tab. Then, drag and drop a Patient Set and one or more Concepts (Ontology Term) onto the input boxes.
2. Check or uncheck the Include Patient Data box if you want to include the relevant non-identifying information for each patient.
3. Finally, click the "View Results" tab to view the table of the observations.

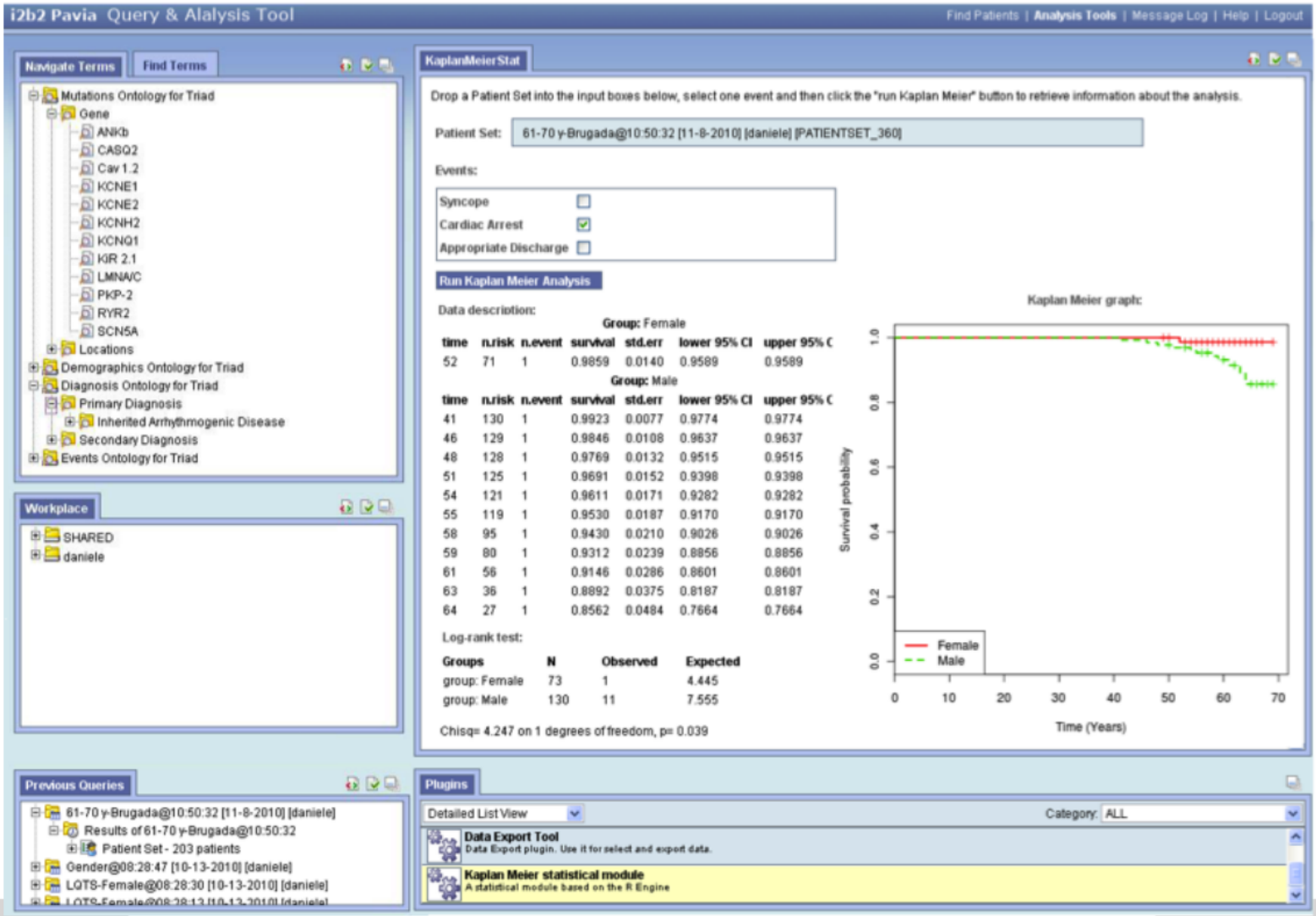



Heart Diseases
Myocardial Ischemia
Arrhythmia
Coronary Disease
D(Angina, Arrythmia) = 4
Angina Pectoris

R Engine Cell: integrating R into the i2b2 software infrastructure

Daniele Segagni, Fulvia Ferrazzi, Cristiana Larizza, et al.

JAMIA published online January 24, 2011
doi: 10.1136/jamia.2010.007914



i2b2 WIKI ExportXLS Home

1 Last modified on Mar 21, 2012 (view change)

This is the home of the Related Project - ExportXLS space.

About the ExportXLS Web Client Plugin

Introduction

This plugin provides the following functions:

1. Tabulates any selected Concepts (Ontology terms) relevant (observed on) to a set of selected Patients.
2. Optionally displays relevant unidentified Patient data.
3. Exports aforementioned tabulated data into an Excel spreadsheet file conveniently.

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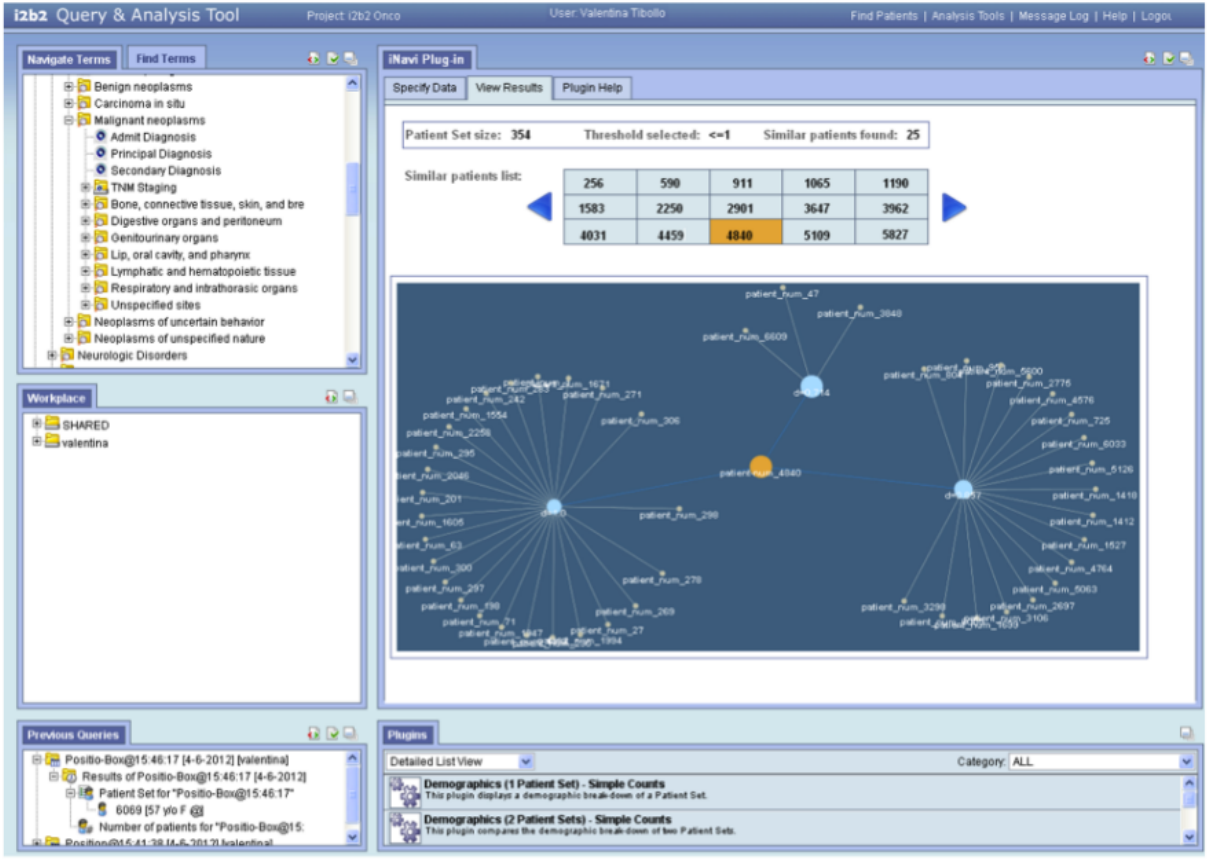
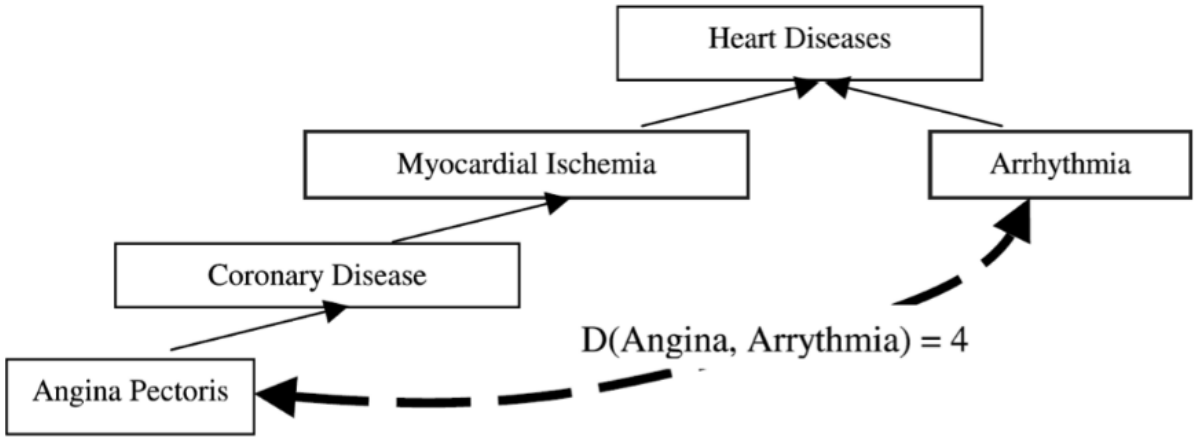
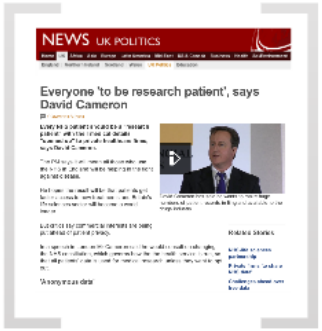
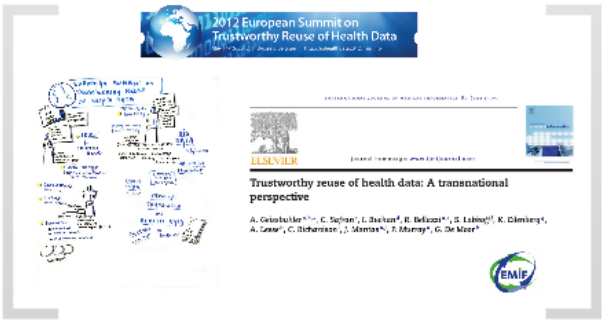
gy Term) onto the input boxes.
tion for each patient.

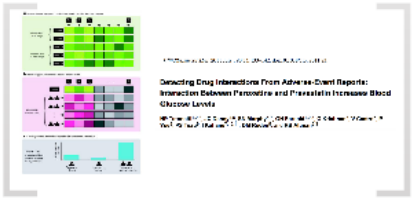




Reuse of clinical data for assessment and discovery







Everyone 'to be research patient', says David Cameron

COMMENTS (654)

Every NHS patient should be a "research patient" with their medical details "opened up" to private healthcare firms, says David Cameron.

The PM says it will mean all those who use the NHS in England will be helping in the fight against disease.

He hopes the result will be that patients get faster access to new treatments and Britain's life sciences sector will become a world leader.

David Cameron has said he wants to make huge numbers of patient records in England available to the drugs industry

But critics say commercial interests are being put ahead of patient privacy.

In a speech in London Mr Cameron said he would consult on changing the NHS constitution, which governs how the the health service is run, so that all patients' data is used for medical research unless they want to opt out.

'Anonymous data'

Related Stories

- NHS-life sciences partnership
- Private firms 'to share NHS data'
- Challenges ahead over free data

Lever for change #2:
Liberate the data

Data can be compared to oil: In the ground it is unusable and worthless. Extracted and refined, it has huge value. Large amounts of data currently sit in different silos within health and social care systems. If this data is released in an appropriate manner and used effectively it could transform the way that care is provided.

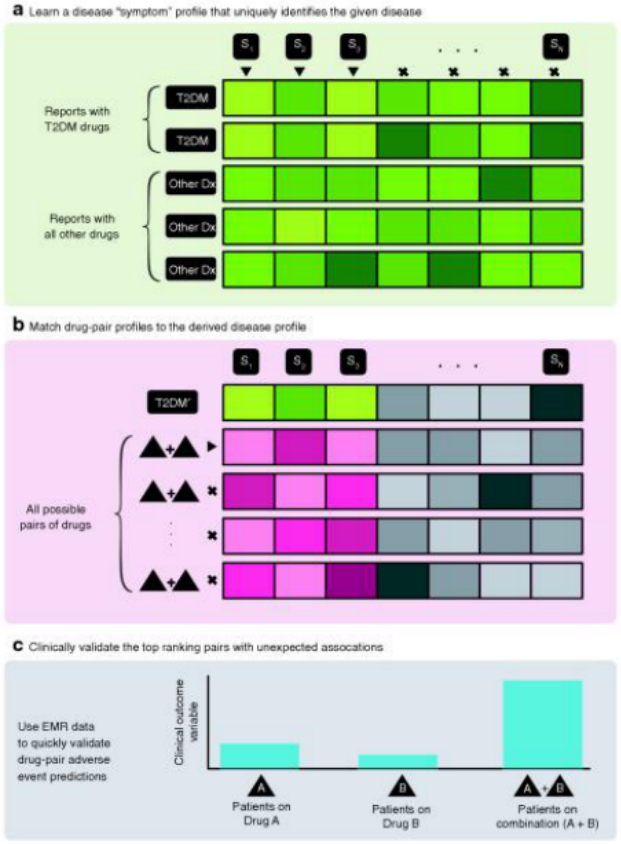
INTERNATIONAL JOURNAL OF MEDICAL INFORMATICS 82 (2013) 1–9

ELSEVIER

journal homepage: www.ijmijournal.com

Trustworthy reuse of health data: A transnational perspective

A. Geissbuhler[a,b,*], C. Safran[c], I. Buchan[d], R. Bellazzi[a,e], S. Labkoff[f], K. Eilenberg[g], A. Leese[h], C. Richardson[i], J. Mantas[a,j], P. Murray[a], G. De Moor[k]



Clin Pharmacol Ther. 2011 July ; 90(1): 133–142. doi:10.1038/clpt.2011.83.

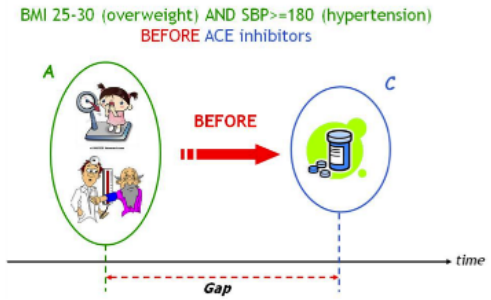
Detecting Drug Interactions From Adverse-Event Reports: Interaction Between Paroxetine and Pravastatin Increases Blood Glucose Levels

NP Tatonetti[1,2,3], **JC Denny**[4,5], **SN Murphy**[6,7], **GH Fernald**[1,2,3], **G Krishnan**[8], **V Castro**[6], **P Yue**[9], **PS Tsau**[9], **I Kohane**[7,10,11], **DM Roden**[5], and **RB Altman**[2,3]

I2b2	Patients	Visits	Observations
Onco-i2b2	28838	171302	623214
Cardio-i2b2	6334	15094	272310

Biobank	Blood	Plasma	Tumoral Tissue	Normal Tissue
Samples	1710	855	2338	1618
Patients	847	847	556	428

Temporal data mining on 8969 breast cancer patients



11 careflow patterns

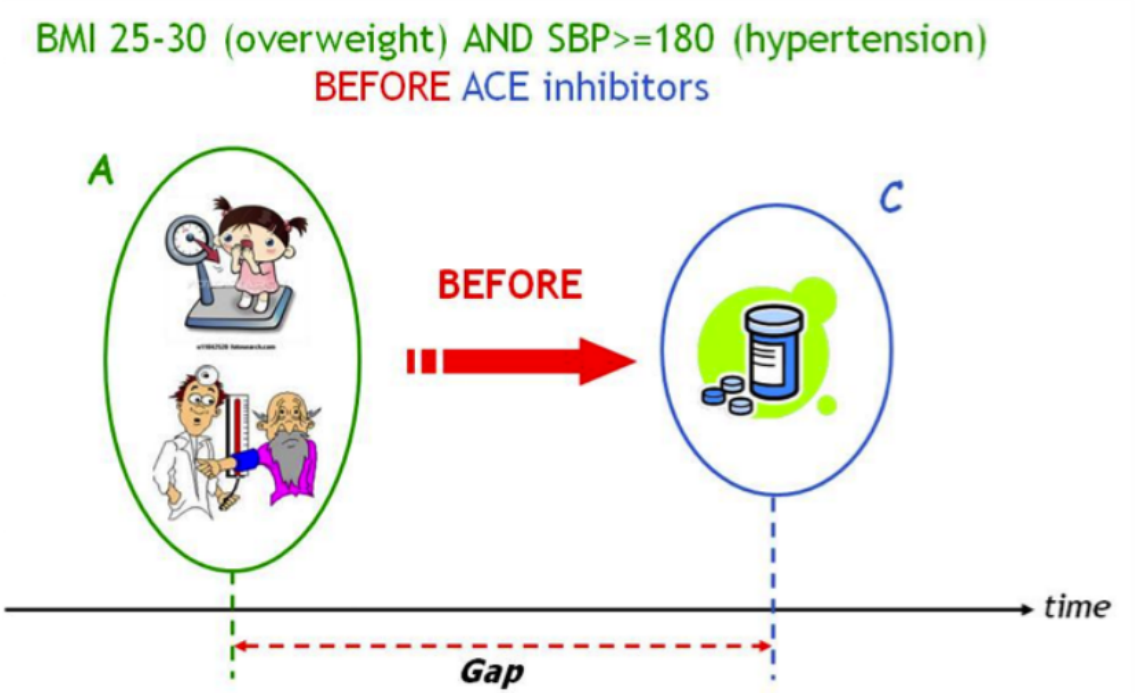
Highlight a high level of guidelines implementation

43% of hospitalized patients - surgery only

65% of non hospitalized patients had regular chemotherapy cycles

71% of them underwent an ECG before performing a chemotherapy in the same hospitalization

Temporal data mining on 8969 breast cancer patients



11 careflow patterns

Highlight a high level of guidelines implementation

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65% of non hospitalized patients had regular chemotherapy cycles

71% of them underwent an ECG before performing a chemotherapy in the same hospitalization

Eureka! Clinical Analytics

About | Register | Contact | Help

About Version 1.6.1

Eureka! Clinical Analytics is a project of the Center for Comprehensive Informatics and Department of Biomedical Informatics at Emory University. It was conceived as part of the vision of the CardioVascular Research Grid (CVRG) to create tools that enable researchers to analyze and manipulate their biomedical research data in the cloud.

What does it do?

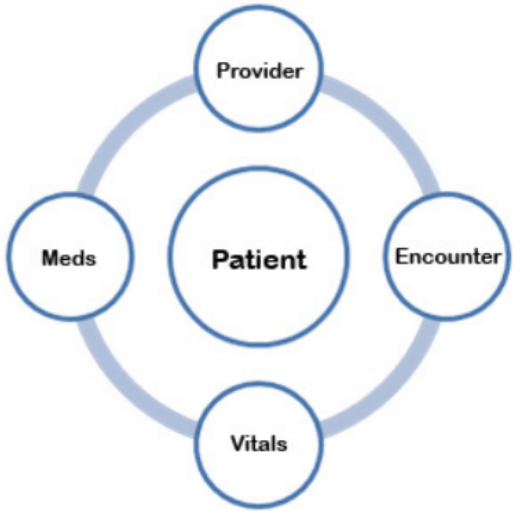
Eureka! Clinical Analytics provides you with an easy way to phenotype a patient population based on their clinical and administrative data, and load those phenotypes and data into your own instance of i2b2. Once in i2b2, you and your colleagues can ask questions about the data, summarize data and download subsets of your data for your research. You provide your data in an Excel spreadsheet meeting certain criteria, and the software takes care of the rest. While its functionality is targeted to clinical datasets in cardiovascular disease research, it supports loading a wide variety of clinical data types into i2b2.

Can I load data with identifiers in it?

No, this is a demonstration website only. Please see the End-user agreement when you register for an account on the website for details.

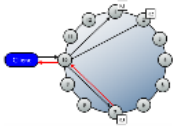
What do you mean I can't load data with identifiers on it?

If you need to load real patient data into Eureka!, you must deploy your own instance of the software in a HIPAA-compliant environment. See the Get the Software page on the Eureka! website for details. We provide a distribution of Eureka! for local installation and an Amazon Machine Instance for you to clone on the Amazon Elastic Compute (EC2) Cloud.

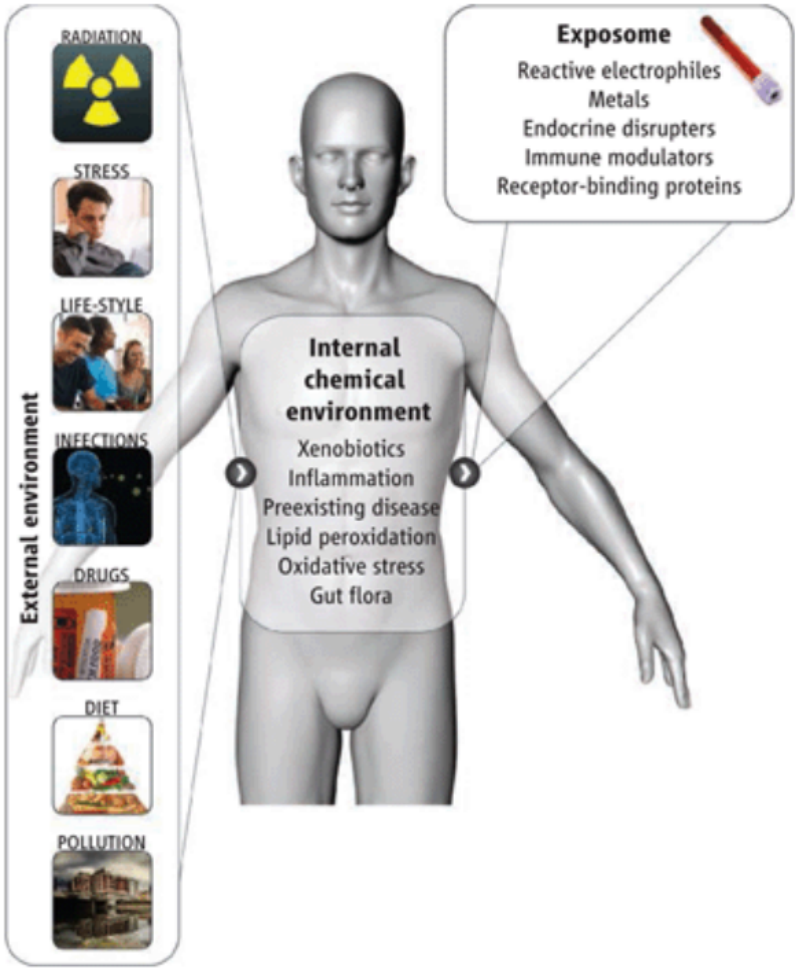


The new challenges

Environment and Disease Risks



Big Data Analytics Stories: Genomic Sequencing



Science 22 October 2010:
Vol. 330 no. 6003 pp. 460–461
DOI: 10.1126/science.1192603

PERSPECTIVE

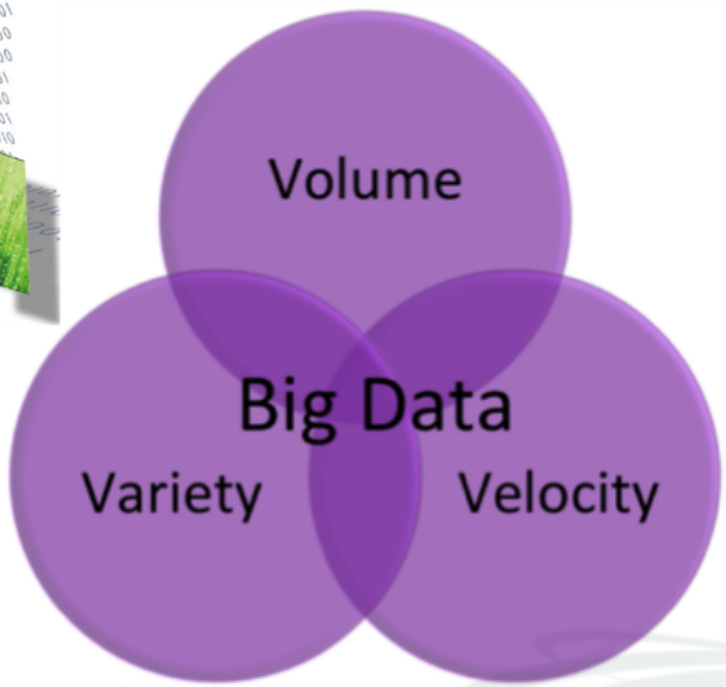
EPIDEMIOLOGY

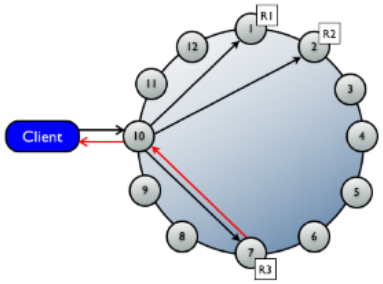
Environment and Disease Risks

Stephen M. Rappaport, Martyn T. Smith


BIOMEDICAL INFORMATICS
PERSONALISED MEDICINE
HEALTH 2.0 / PARTICIPATORY HEALTH
DATA GOVERNANCE
DATA ANALYTICS
HEALTHIER OUTCOMES
18 - 19 APRIL MELBOURNE
BIGDATA.
in health and biomedicine

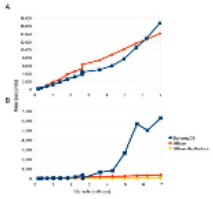

BIG
DATA


Volume
Big Data
Variety
Velocity



Big Data Analytics Stories: Genomic Sequencing

The University of North Carolina at Chapel Hill is using big data to find better treatments for patients through genomic sequencing technologies



Contents lists available at SciVerse ScienceDirect

Genomics

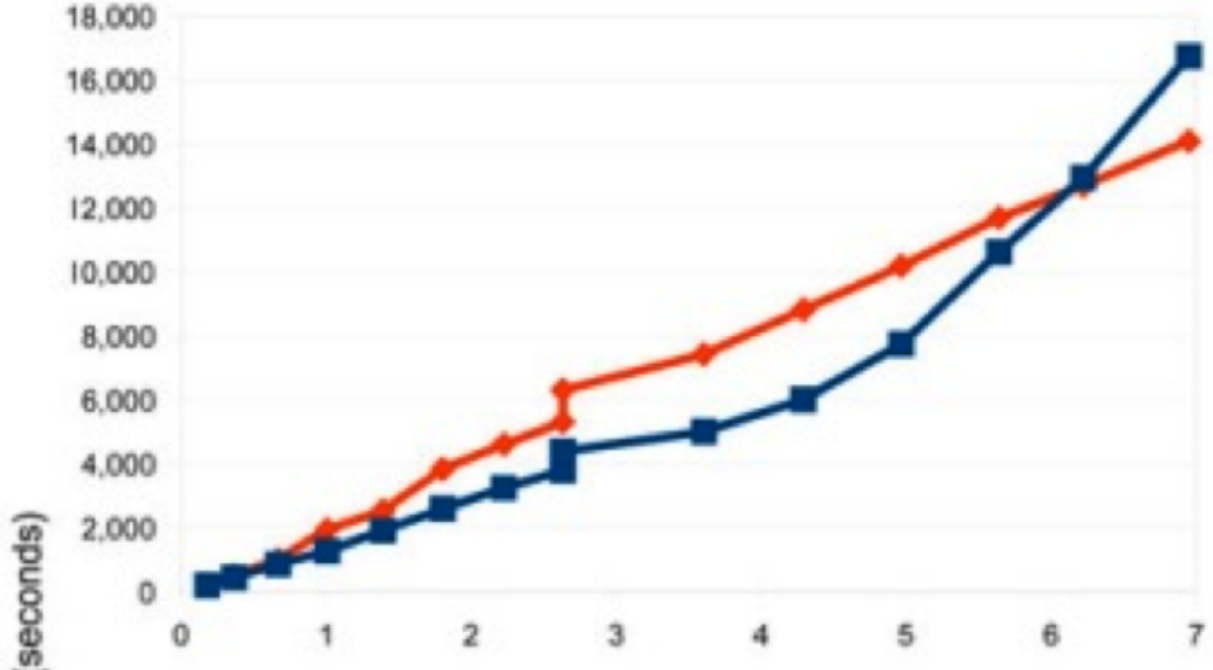
journal homepage: www.elsevier.com/locate/ygeno

Relax with CouchDB — Into the non-relational DBMS era of bioinformatics

Ganiraju Manyam [a,1], Michelle A. Payton [a,b,1], Jack A. Roth [c], Lynne V. Abruzzo [b], Kevin R. Coombes [a,*]

[a] Department of Bioinformatics and Computational Biology, The University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA
[b] Department of Hematopathology, The University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA
[c] Department of Thoracic and Cardiovascular Surgery, The University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA

A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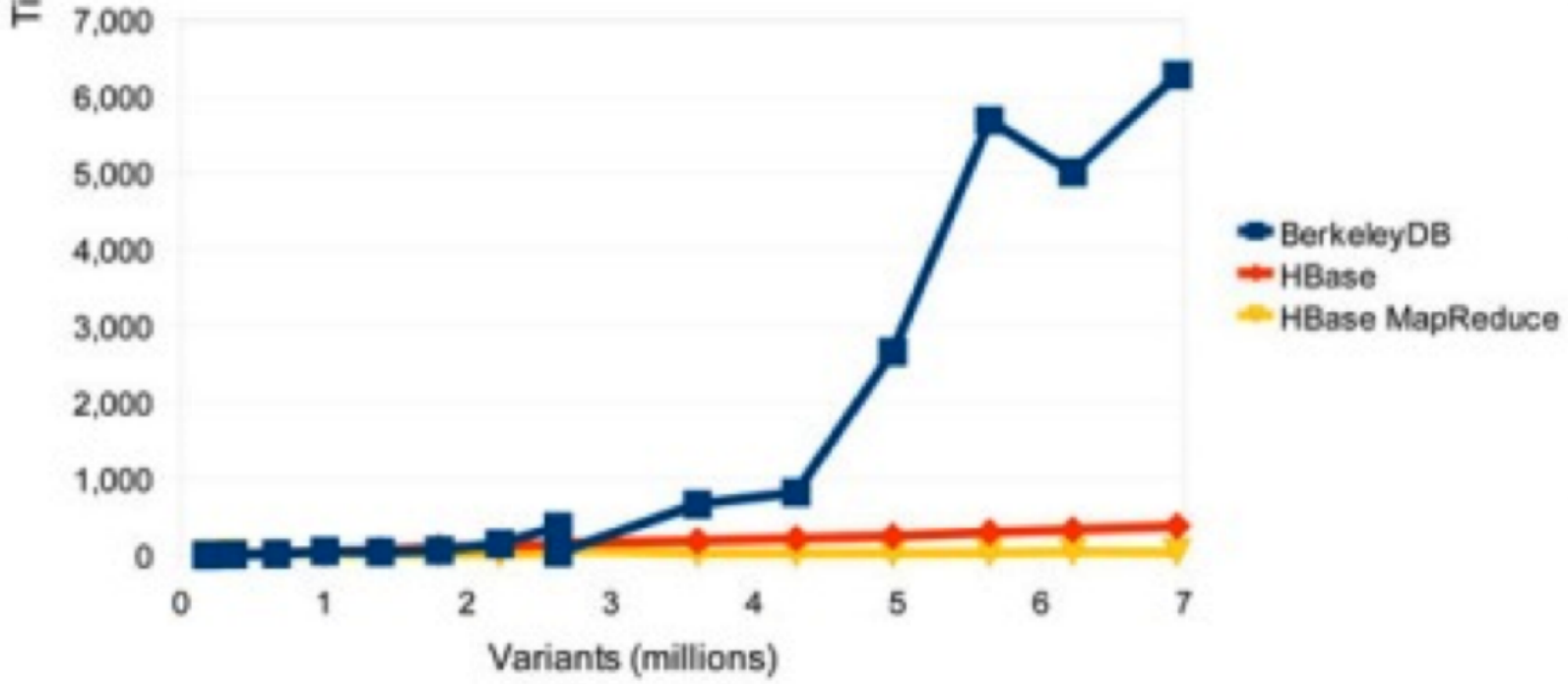
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Variants (millions)
BerkeleyDB
HBase
HBase MapReduce

Omar Tawakol
CEO, BlueKai

The Death of the Data Warehouse and the Age of Activation

Posted: 07/12/2012 4:41 pm

An open-source community begins to

An open-source community begins to gel at the eTRIKS/transMART Developer's Workshop

March 6th: Liu's vision of future code improvements encompasses data storage redesign, including move large part of the experiment data to a NoSQL DB for high performance and scalable management.

NoSQL vs SQL, Why Not Both?

By Alaric Snell-Pym

Directions:

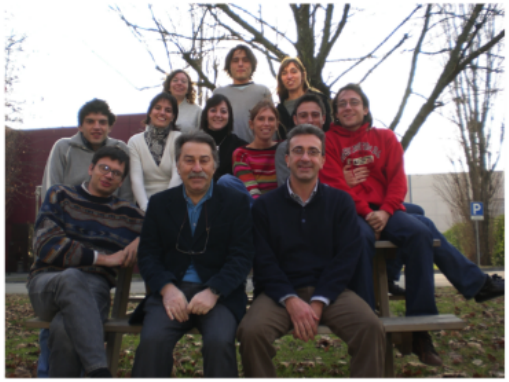
Integration of NOSQL technologies

Implementation of Shrine-based initiatives

Extensions to manage temporal abstractions

WE HOPE TO
SEE YOU AT
medinfo2013

20-23 AUGUST 2013
IN WONDERFUL
COPENHAGEN



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Palermo
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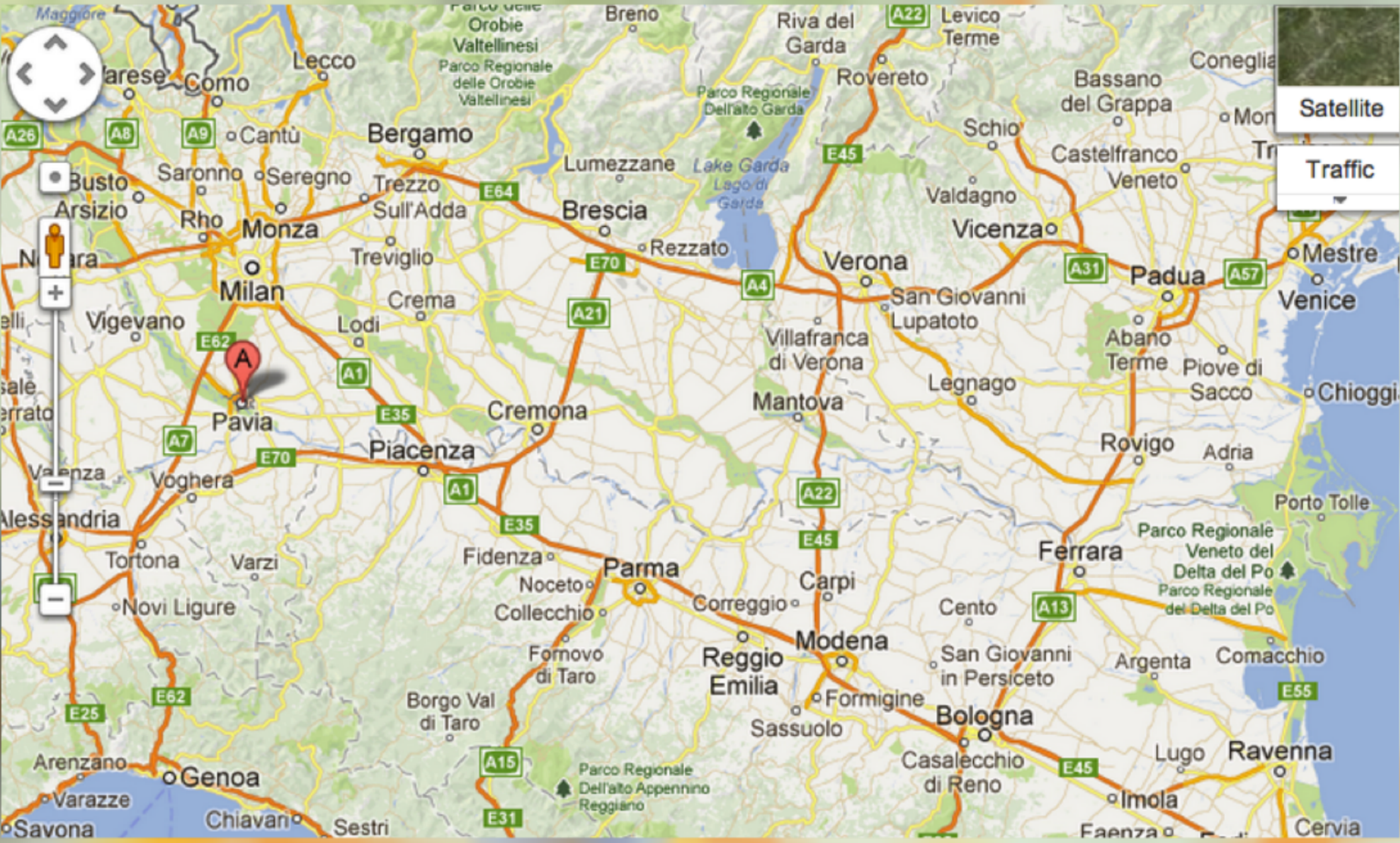
Tunis


Satellite
Traffic
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Carpi
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Lake Garda
Lago di Garda
Parco Regionale Dell'alto Garda
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Levico Terme
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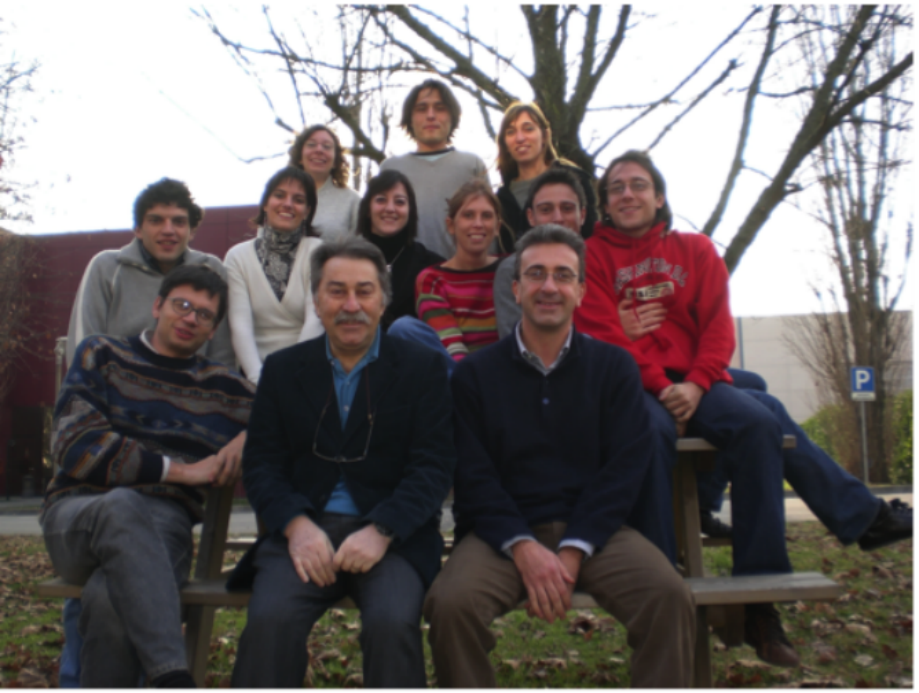

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Thank you ...

Lelio Menozzi - Pavia from Porta Calcinara