



ONCONET-SUDOE

Workshop on Innovative IT for healthcare

“The patient journey: Information Technologies focused on the cancer patient”

3-4 April 2019

CNIO Auditorium. C/ Melchor Fernández Almagro 3, Madrid, Spain

Summary: *IT for healthcare - Information technologies across the cancer patient journey.*

The cancer care continuum defines the evolution of cancer patients, describing the different stages from cancer prevention, early detection, diagnosis, treatment, monitoring, and palliative care. It is a useful framework to identify progress and priorities, where we can detect and define objectives, achievements, risks and gaps. In this context, Information Technologies (IT) for healthcare has the potential to improve cancer management and care. The aim of this workshop is to analyze the impact of IT in the cancer care continuum as well as to discuss the present challenges and achievements in the different stages of the patient journey.

Potential Topics:

- Technical standards for information regarding cancer care throughout the disease course.
- Ensuring patient confidentiality and privacy.
- Patient virtual communities and social media: value in connecting with each other and in mining the online environment for information to help them cope with their disease.
- *In silico* drug prescription and clinical trials design.
- Analyzing potential side effects of cancer therapies.
- Improving continuity of care across disease stages.
- Electronic Health Records (EHRs).
- Development of new programmes for digital training of clinical and medical staff.
- Challenges: data interoperability, systems interoperability, usability, adaptation to physicians' workflows.
- Overcoming resistance to digital change in patients and clinical personnel.
- Financial incentives for digital transformation.
- Transversal topics: Ethics, GDPR, Patient rights, Access to sensitive clinico-genomics data.

Target Audience: Researchers (cancer researchers, informatics researchers, health services researchers), physicians (oncology, internal medicine), healthcare professionals (nurses, laboratory services, radiologists, hospital administrators, hospital practice designers), IT for Health developers.



Programme

Day 1: Wednesday, April 3rd

8:30 Registration

Opening:

9:30 Organisation Welcome:

Fátima Al-Shahrour, Head of the Bioinformatics Unit, Centro Nacional de Investigaciones Oncológicas (CNIO), Workshop organizer

Roland Bugat, ONCONET SUDOE Coordinator, Université Paul Sabatier Toulouse III

9:35 Instituto de Salud Carlos III Welcome:

Raquel Yotti, ISCIII Director

9:45 CNIO Welcome:

Maria Blasco, CNIO Director

Session I – Prevention.

Moderator: **Enrique Carrillo de Santa Pau**, Head of Computational Biology Unit, IMDEA Research Institute on Food and Health Sciences

Topics: Mobile health apps about nutrition and healthy habits Information on cancer plans and screening programmes. Reducing costs of patient management



10:00 **“Predictive modeling for precision oncology”**

Víctor Moreno, Director, Oncology Data Analytics Program, Instituto Catalán de Oncología (ICO) – Universidad de Barcelona

10:20 **“Reaching out Personalized Prevention of Pancreatic Cancer”**

Nuria Malats, Head of Genetic & Molecular Epidemiology Group, Centro Nacional de Investigaciones Oncológicas (CNIO)

10:40 **Deep Learning for detecting and classifying colorectal polyps (POLYDEEP project)”**

Daniel González Peña, Head Researcher, SING Group, University of Vigo

11:00 **Coffee Break**

Session II - Diagnosis & Treatment

Moderator: **Emilia Roxana Ventel**, European Project Manager, Université Paul Sabatier Toulouse III

Topics: Early diagnostics. Imaging. IT support in decision-making and cognitive support to patients and caregivers through synchronous (real-time) and asynchronous channels. EHRs. Clinical decision support. Design of new treatments, pharmacy and clinical laboratory support and reporting, scheduling and billing.

11:40 **ROUND TABLE: Future perspectives for genomics data in the clinic**

Chair: **Ramón Colomer Bosch**, Head of the Division of Medical Oncology, Hospital Universitario de La Princesa, Director of the Masters Program in Medical Oncology of the Spanish Society of Medical Oncology (SEOM)

Participants:

- **Atocha Romero**, Hereditary Cancer Unit, Liquid Biopsy Group, Hospital Universitario Puerta de Hierro
“Usefulness of Liquid Biopsies in daily Oncology”
- **Joaquín Dopazo**, Head of Clinical Bioinformatics Research Area, Fundación Pública Andaluza Progreso y Salud (FPS)



“Management of patient genomic data within the Andalusian public health system”

- **Carmen Ayuso**, Chief of the *Fundación Jiménez Díaz Genetics Service*, Scientific Director IIS-FJD

“Overview from a Genetic Department in a University Hospital”

- **Paolo Maietta**, Head of the Bioinformatics and Development Unit, NIMGenetics

“Contributions to clinical cancer diagnostics from a PYME perspective”

13:00 Lunch Break (CNIO Cafeteria)

FLASH TALKS: 5-min talks in which companies and organisations have the opportunity to present their products and solutions

Moderator: **Roi Villar**, Head of Internalization, BioCat

Participant companies:

- **Savana** (Big data for clinical texts): “Savana: Accelerate Health Science”. Presented by Yolanda González, Site Engagement Manager
- **Kaneron Systems** (Computational Bioinformatics for Precision Medicine): “Plataforma de Medicina de Precisión: integrando radiología, patología, genómica y farmacogenómica”. Presented by Pablo Marín-García, Director of Bioinformatics, and Juan Tatay, COO
- **Naru Intelligence**: “Clinical decision support for adverse event management”. Presented by Maider Alberich, Co-founder & CTO.
- **IOMED** (Text mining of medical texts). Presented by Gabriel de Maeztu.
- **HealthQuay**: “HealthQuay. Connecting cancer patients to the best treatment”. Presented by Marc Rafat, CEO
- **Atrys Health**: “Multiomics approach for precision oncology: big data and integrative platforms”. Presented by Víctor González-Rumayor, R&D Director
- **MG Nutrición 3g**: “Platform of personalized nutritional advice to improve the quality of life of breast cancer patients”. Presented by Lorena Sánchez Martín, Project Manager



15:00 **“Biomedical and clinical text mining efforts in the context of the Plan TL”**

Martin Krallinger, Head of Biological Text Mining Unit, Centro Nacional de Investigaciones Oncológicas (CNIO)

15:20 **“Clinical implications of DNA repair defects for the management of prostate cancer”**

Elena Castro, Prostate Cancer and Genitourinary Tumours group, Centro Nacional de Investigaciones Oncológicas (CNIO)

15:40 **“Precision Nutrition as a tool for the integrative management of cancer patients”**

Ana Ramírez de Molina, Deputy Director, Research program Director at IMDEA food - Research Institute on Food & Health Sciences

16:00 **“Onko3D: Simulation of cancer cell proliferation”:**

Sylvain Cussat-Blanc, Assistant Professor, Institute of Advanced Technologies in Life Sciences (ITAV – CNRS –UMS3505)

16:20 Coffee Break

16:50 **“ResMarkerDB: a database of biomarkers of response to antibody therapy in breast and colorectal cancer”**

Janet Piñero, Postdoctoral Researcher, Hospital del Mar Medical Research Institute (IMIM)

17:10 **“Building a translational infrastructure for cancer research ”**

Jordi Barretina, Director, Institut d'Investigació Biomèdica de Girona - IDIBGI

17:30 **“Machine learning applied to multidimensional risks in complex diseases facilitates personalized interventions”**

Coral del Val Muñoz, Professor at Department of Computer Science and Artificial Intelligence, Universidad de Granada



17:50 **“Multi-omics profiling as an approach to precision oncology in a rare CRC tumor: a case report”**

Xavier Solé, Head of the Unit of Bioinformatics for Precision Oncology, Instituto Catalán de Oncología (ICO)-Bellvitge Biomedical Research Institute (IDIBELL)

18:30 **NETWORKING EVENT (Cocktail)**

Day 2: Thursday, April 4th

8:30 Registration

Session III – Monitoring

Moderator: *Antonio López*, Clinical Research Programme General Manager, Centro Nacional de Investigaciones Oncológicas (CNIO)

Topics: Treatment adherence monitoring. Symptom management. Post-hospital management. EHRs

09:15 **“Incorporating wearables in clinical care and trials: current needs in remote monitoring and synergies with technology companies”**

Miguel A. Quintela, Head of the Breast Cancer Clinical Unit, Clinical Research Programme, Centro Nacional de Investigaciones Oncológicas (CNIO)

09:35 **“Collection of PROMS and PREMS through mHealth, a flexible formula to accompany the patient from the center to the periphery (post-hospital management)? ”**

Inma Grau, Observatory mHealth Coordinator, Hospital Clinic de Barcelona ; President iSYS Foundation, Volunteer (Grup Agata)

09:55 **“Application of FAIR principles in the secondary use of EHR for cancer research”**

Carlos Luis Parra-Calderón, Head of Research and Innovation in Biomedical Informatics, Biomedical Engineering & Health Economy, Institute of Biomedicine of Seville



10:15 **ROUND TABLE: Data management and protection. Ethical and Legal issues**

Chair: **Antonio López**, Clinical Research Programme General Manager, Centro Nacional de Investigaciones Oncológicas (CNIO)

Participants:

- **Anne-Marie Duguet**, Université Toulouse Jean Paul Sabatier, Toulouse
“Data management and protection: Access to sensitive clinico-genetic data”
- **Michael Hackenberg**, Professor at Universidad de Granada
“European Liquid Biopsies Academy project - Towards widespread clinical application of blood- based diagnostic tools”
- **Jordi Rambla**, EGA Team Leader, Centre de Regulació Genòmica (CRG)
“Data Management and protection: International Initiatives and dimensions”
- **David Gómez-Cabrero**, Head of Translational Bioinformatics Unit, Navarrabiomed
“Translating RNA sequencing into clinical diagnostics”
- **Ana Delgado Roy**, National & international Projects Advisor
“Legal basis and limits for data processing”

11:30 **Coffee Break**

Session IV – Symptom Control

Moderator: **Alberto Labarga**, Senior Bioinformatician, Navarrabiomed

Topics: Early palliative care. Humanization. Capturing the Patient Experience Across the Continuum of Care. How to overcome the digital breach.

12:00 **“Palliative Care – a proposal in oncology”**

Marília Dourado, Professor at the Faculty of Medicine, University of Coimbra



12:20 **“Patient experience in oncology: empowerment strategies for cancer patients”**
Carlos Bezos Daleske, Managing Director, Institute for the Patient Experience (IEXP)

12:40 **“Accelerating projects in digital health : from patient’s need to the solution”**
Raquel Riera, Director of Moebio, Biocat

13:00 Lunch break: CNIO cafeteria

Session V - TransBioNet – Translational Bioinformatics: SUDOE Interreg (French, Portuguese and Spanish) perspective

Moderator: **Pedro Carmona**, Head of Bioinformatics Unit, Centro Pfizer - Universidad de Granada - Junta de Andalucía de Genómica e Investigación Oncológica (GENYO)

14:30 **“TransBioNet: A distributed bottom-up effort to organize bioinformatics activities around the Spanish National Health System”**
Salvador Capella-Gutiérrez, Barcelona Supercomputing Center; Spanish National Bioinformatics Institute (INB), Coordination Node

15:00 **ROUND TABLE: Precision Medicine vs. Genomics Medicine. What is the focus of TransBioNet?**
Chair: **Alfonso Valencia**, Barcelona Supercomputing Center, Life Sciences Department Director; Spanish National Bioinformatics Institute (INB), Director

Participants:

- **Ángela del Pozo**, Head of Bioinformatics Section. Institute of Medical and Molecular Genetics (INGEMM). Hospital Universitario La Paz
- **Sheila Zúñiga**, Coordinator of the Precision Medicine Unit – Bioinformatics Unit, Instituto de Investigación Sanitaria INCLIVA
- **Ángel Carracedo**, Universidad de Santiago de Compostela



- **Isabel Cuesta**, Scientist and Coordinator Bioinformatics Unit, Instituto de Salud Carlos III (ISCIII)
- **Sebastián Ventura**, Professor, Instituto Maimónides de Investigación Biomédica de Córdoba (IMIBIC)

16:30 Coffee Break

17:00 “GDPR and Spanish Data Protection Law in scientific research”

Amelia Martín-Uranga, Responsible of the Spanish Technological Platform for Innovative Medicines, Farmaindustria

17:20 “On the sustainability of bioinformatics core facilities in clinical environments”

Alex Sanchez, Head of the Statistics and Bioinformatics Unit at Vall d’Hebron Institut de Recerca & Professor at University of Barcelona

Closing:

17:40 FINAL REMARKS

- *Fátima Al-Shahrour*, Head of the Bioinformatics Unit, Centro Nacional de Investigaciones Oncológicas (CNIO), Workshop organizer