Precision Health Day 2025

Giornata della Salute di Precisione

Lugano, 28 March 2025

PROCEEDINGS

Oral presentations:

- Weakly-supervised diagnosis identification from Italian discharge letters (Vittorio Torri, Elisa Barbieri, Anna Cantarutti, Carlo Giaquinto, Francesca Ieva) [abstract] [presentation]
- SLEEPYLAND: an open-source and easy-to-use toolbox to fairly evaluate automatic sleep staging algorithms on NSRR data (Luigi Fiorillo, Alvise Dei Rossi, Matteo Metaldi, Michal Bechny, Giuliana Monachino, Athina Tzovara, Shaun Purcell, Francesca Dalia Faraci) [abstract] [presentation]
- NLP in support of Pharmacovigilance: QUality Adverse Drug Reaction AcTIve Control (QUADRATIC) (Roberta Noseda, Oscar Lithgow Serrano, Andrea Franchini, Joseph Cornelius, Amos Colombo, Sandra Mitrovic, Lorenzo Ruinelli, Alessandro Ceschi, Fabio Rinaldi) [abstract] [presentation]
- Evaluation of dose and image quality in Inner ear imaging: comparison between computed tomography and 3D rotational angiographic acquisitions (Luca Bellesi, Francesco Magoga, Gaetano Cancellato, Elisa Ventura, Alessandro Cianfoni, Filippo Del Grande, Stefano Presilla) [abstract] [presentation]
- Advancing Digital Mental Health: Graph Convolutional Networks for Depression Screening in Clinical Conversations (Esau Villatoro-Tello and Sergio Burdisso) [abstract] [presentation]

- Persistence diagrams for exploring the shape variability of abdominal aortic aneurysms (Matteo Pegoraro, Dario Arnaldo Domanin, Santi Trimarchi, Maurizio Domanin, Piercesare Secchi) [abstract] [presentation]
- A multimodal combined treatment-assessment approach to reduce stroke symptoms: toward precision medicine (Riccardo Gironi, Edoardo Ricci, Alessandro Lecchi, Pamela Agazzi, Alain Kaelin-Lang, Claudio Gobbi, Gianna Carla Riccitelli) [abstract] [presentation]
- Can Physics-Informed Neural Networks infer Hidden Insulin Dynamics? (Lea Multerer, Manuel Acquistapace, Marco Forgione, Laura Azzimonti) [abstract] [presentation]
- Early Identification of Ventilator-Associated Pneumonia Using Machine Learning Techniques: A Prospective Cohort Study (Sandra Mitrović, Amos Colombo, Stefano Toniolo, Enrico Bulleri, Marco Scutari, Daniele Malpetti, Lorenzo Ruinelli, Laura Azzimonti, Alberto Pagnamenta) [abstract] [presentation]
- Electronic Health Records to recognize and predict Acute Kidney Injury and Disease (Lorenzo Ruinelli, Antonio Bellasi, Paolo Ferrari, Pietro Cippà, Clelia Di Serio) [abstract] [presentation]

Posters with short presentations:

- A Participatory Approach to Support Glucose Tolerance Tracking in Real-Life of Patients with Type 2 Diabetes (Alberto Nascimbene, Edoardo Faggionato, Michele Schiavon, Enea Parimbelli) [abstract] [presentation] [poster]
- Test bench for in vitro simulation of an Abdominal Aortic Aneurysm (Giulio Saroglia, Stefano Marocco, Lorenzo Bazzolo, Shasa Nicoloso, Lorenzo Cavallini, Matteo Metaldi, Salvatore Diana, Igor Stefanini) [abstract] [presentation] [poster]
- A wireless implantable pressure sensor for monitoring an Abdominal Aortic Aneurysm growth (Giulio Saroglia, Salvatore Diana, Matteo Metaldi, Stefano Marocco, Shasa Nicoloso, Igor Stefanini) [abstract] [presentation] [poster]
- Machine Learning Framework for Fall Detection and Time-of-Impact Estimation (Nicholas Cartocci, Antonios E. Gkikakis, Darwin Caldwell, Jesus Ortiz) [abstract] [presentation] [poster]
- Early Monitoring Reveals Novel Toxicities and Prognostic Factors in Patients with De Novo Metastatic Hormone-Sensitive Prostate Cancer Undergoing Hormonal Treatment (Giuseppe Salfi, Martino Pedrani, Amos Colombo, Lorenzo Ruinelli, Giovanna Pecoraro, Chiara Maria Agrippina Clerici, Ricardo Pereira Mestre) [abstract] [presentation] [poster]
- Alpha oscillations as a personalized listening effort indicator during a speech-in-noise test (Davide Simeone, Edoardo Maria Polo, Fabrizio Dabbene, Riccardo Barbieri, Alessia Paglialonga) [abstract] [presentation] [poster]

- Differential equations-driven counterfactuals for personalized diabetes risk management (Marta Lenatti, Marco Zaffalon, Alessandro Antonucci, Pierluigi Francesco De Paola, Lea Multerer, Maurizio Mongelli, Alessia Paglialonga, Laura Azzimonti) [abstract] [presentation] [poster]
- Combined tumor-associated microbiome and immune gene expression profiling predict response to neoadjuvant chemo-radiotherapy in locally advanced rectal cancer (Raffaello Roesel, Francesco Strati, Camilla Basso, Samantha Epistolio, Elisa Sorrenti, Martina Villa, Pietro Edoardo Majno-Hurst, Alessandra Franzetti-Pellanda, Sara De Dosso, Milo Frattini, Dimitrios Christoforidis, Giandomenica Iezzi) [abstract] [presentation] [poster]
- Towards Highly Specific Theranostics via Engineered Nanoparticles Mimicking Extracellular Vesicles: Focus on Envelope Dynamics (Charly Empereur-Mot, Claudio Perego, Giada Rosso, Stijn Van Veen, María Sancho-Albero, Giulia Tamboia, Marije Kuipers, Joaquin Seras-Franzoso, Ibane Abasolo, Esther Nolte-'T Hoen, Giovanni M. Pavan, Luisa De Cola, Lorenzo Albertazzi, Valentina Cauda) [abstract] [presentation] [poster]
- Switching from standard to personalized dosimetry for HCC patients treated with Y-90 SIRT. A real-life experience (Marco Cuzzocrea, Federico Pedersoli, Cesare Michele Iacovitti, Stefano Cappio, Gaetano Paone) [abstract] [presentation] [poster]
- Towards a Musculo-Skeletal Digital Twin for Posture and Movement Disorder Analysis (Giuseppe Patane, Martina Paccini, Simone Cammarasana) [abstract] [presentation] [poster]

Posters:

- A comparison between topiomics pipelines for cancer subtyping: a Recurrent Prostate Cancer case study (Lara Cavinato, Matteo Pegoraro, Paola Anna Erba and Francesca Ieva) [abstract] [poster]
- Body CT examinations in oncologic patients: the impact of subspecialty radiology on radiation exposure in the clinical practice. A quality care study (Luca Bellesi, Stefania Rizzo, Andrea D'Ermo, Luca Bonomo, Oriana D'Ecclesiis, Francesco Magoga, Stefano Presilla, Arturo Spano', Veronica Minzolini, Francesca Lo Piccolo, Jurgen Heinkel, Ermidio Rezzonico, Maria Del Grande, Matteo Merli and Filippo Del Grande) [abstract] [poster]
- AI-driven phenotyping of forefoot morphology in hereditary thoracic aortic diseases (Diego Ulisse Pizzagalli, Susanna Grego and Stefanos Demertzis) [abstract] [poster]
- A High-Throughput Bone Marrow 3D Co-Culture System to Develop Resistance to B Cell Receptor Signaling Targeted Agents in B Cell Non-Hodgkin Lymphoma (Alex Zadro, Alberto Arribas, Maria Vittoria Colombo, Eleonora Cannas, Filippo Spriano, Luciano Cascione, Afua Mensah, Federico Simonetta, Dalila Petta, Christian Candrian, Chiara Arrigoni, Francesco Bertoni and Matteo Moretti) [abstract] [poster]
- Integration of Health Data Through Scalable and Reproducible Analysis Pipelines (Antoine Buetti-Dinh, Klaus Steigmiller, Matteo Tanadini) [abstract] [poster]
- MAP-CARE: Advancing International Healthcare through Enhanced Multilingual Medical Terminology Analysis (Hugo Guillen-Ramirez, Karen Triep, Guido Beldi and Olga Endrich) [abstract] [poster]
- RoboRadNet - Automated pipeline for segmentation, classification and report generation in elbow x-ray (Fabio Mattiussi and Ermidio Rezzonico) [abstract] [poster]
- The Role of Midday Meals in Enhancing Child Health and Educational Achievement: A Comprehensive Review (Amanpreet Kaur and Manisha Pandit) [abstract] [poster]
- Healthspot: a Real-Time Hospital Capacity, Specialized Doctor Availability, and Accredited Health Card Verification Application in the Philippines (John David Nonan, Kimberly Dela Cruz and Lord Edgardian Tavu) [abstract] [poster]
- A strange kind of ring shaped artifact on a low dose pediatric chest CT exam: case study and replication of the artifact with a phantom (Luca Bellesi, Lorenzo Polli, Ermidio Rezzonico, Rolf Wyttenbach, Francesco Pupillo, Marirosa Cristallo, Stefania Maria Rita Rizzo, Filippo Del Grande and Stefano Presilla) [abstract] [poster]
- Design of a Soft Wrist Exoskeleton for Occupational Use: A Feature Selection and Analysis Approach (Roberto Francesco Pitzalis, Nicholas Cartocci, Christian di Natali, Darwin Caldwell, Giovanni Berselli and Jesus Ortiz) [abstract] [poster]

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