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Sommario/riassunto	Systems Biomedicine is a field in perpetual development. By definition a translational discipline, it emphasizes the role of quantitative systems approaches in biomedicine and aims to offer solutions to many emerging problems characterized by levels and types of complexity and uncertainty unmet before. Many factors, including technological and societal ones, need to be considered. In particular, new technologies are providing researchers with the data deluge whose management and exploitation requires a reinvention of cross-disciplinary team efforts. The advent of “omics” and high-content imaging are examples of advances de facto establishing the necessity of systems approaches. Hypothesis-driven models and in silico validation tools in support to all the varieties of experimental applications call for a profound revision. The focus on phases like mining and assimilating the data has substantially increased so to allow for interpretable knowledge to be inferred. Notably, to be able to tackle the newly generated data dimensionality, heterogeneity and complexity, model-free and data-driven intensive applications are increasingly shaping the

computational pipelines and architectures that quant specialists set aside of the high-throughput genomics, transcriptomics, proteomics platforms. As for the societal aspects, in many advanced societies health care needs now more than in the past to address the problem of managing ageing populations and their complex morbidity patterns. In parallel, there is a growing research interest on the impact that cross-disciplinary clinical, epidemiological and quantitative modelling studies can have in relation to outcomes potentially affecting the quality of life of many people. Complex systems, including those characterizing biomedicine, are assessed in both their functionality and stability, and also relatively to the capacity of generating information from diversity, variation, and complexity. Due to the combined interactions and effects, such systems embed prediction power available for instance in both target identification or marker discovery, or more generally for conducting inference about patients' pathological states, i.e. normal versus disease, diagnostic or prognostic analysis, and preventive assessment (e.g., risk evaluation). The ultimate goal, personalized medicine, will be achieved based on the confluence of the system's predictive power to patient-specific profiling.