Turning P4-medicine into reality goes way beyond medicine

Preventive, predictive, personalized, and participatory medicine (P4-medicine) requires science, medicine, judicial, ethics, and the general public, including politics to cooperate. Only broad consent and support will allow making the necessary changes to our existing health care system. This will not only ensure better medical treatment for many of us, but also offers unique opportunities to combine improved health care with economic saving, mostly coming from the first part - preventive medicine. Challenges are the acquisition of large amounts of molecular data (genome sequences, tumor genomes, transcriptomes, and an ever growing amount of biomarkers) from patients and also from the healthy population. Once sufficient data are available, suitable consent forms must accompany them in order to allow comparative analysis on a sufficiently large scale. Especially the interpretation of omics data still presents formidable problems we need to overcome, as will be illustrated in just one example. Results need to be stored and safeguarded properly in order to fulfill legal and ethical requirements of data protection. However, current limitations are often decades old and entirely oblivious of the requirements and possibilities of P4-medicine. Here we need sufficient general education to ensure that politician can remove some obstacles in tune with their electorate. This includes health care providers who often see P4-medicine just as another huge attack on their budgets. They need to realize the saving potential especially in prevention and early treatment of chronic diseases. We need viable economic models to demonstrate these effects as real. I will summarize what our association is doing in detail to help facilitate to required change of mind sets in order to make P4-medicine a reality for all of us.

Biography

Thomas Werner is the Chairman of the Executive Board of m4 Personalisierte Medizin e.V., a charitable organization to further personalized medicine. He is also an Adjunct Professor at the Internal Medicine, Nephrology, University of Michigan in Ann Arbor, MI, USA. He received his PhD in 1986 and has authored more than 150 peer reviewed scientific articles and book chapters. He founded Genomatix Software GmbH in Munich in 1997 and was the CEO and CSO of the company for more than 10 years. His research focus is on new approaches in translational and P4-medicine.

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