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# Personalized and Precision Medicine (PPM) as a Unique Healthcare Model to Secure the Human Healthcare and Wellness in Diabetic Patients and Pre-Diabetic Persons-at-Risk

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A new systems approach to diseased states and wellness result in a new branch in the healthcare services, namely, personalized and precision medicine (PPM). To achieve the implementation of PPM concept, it is necessary to create a fundamentally new strategy based upon the subclinical recognition of biomarkers of hidden abnormalities long before the disease clinically manifests itself.

Each decision-maker values the impact of their decision to use PPM on their own budget and well-being, which may not necessarily be optimal for society as a whole. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment to thus provide more tailored measures for the patients resulting in improved patient outcomes, reduced adverse events, and more cost effective use of the latest health care resources including diagnostic (companion ones), preventive and therapeutic (targeted molecular and cellular) etc. A lack of medical guidelines has been identified by responders as the predominant barrier for adoption, indicating a need for the development of best practices and guidelines to support the implementation of PPM!

Along with other chronic conditions, diabetes management following a uniform treatment algorithm is often associated with progressive treatment failure and development of diabetic complications. Meanwhile, recent advances in our understanding of the genomic architecture of diabetes and its complications have provided the framework for development of PPM-based tools to get diabetes managed for achieving the optimal outcome. With increasing understanding of the molecular mechanisms of diabetes, there is a case to include this new knowledge to improve the precision of diagnosis and classification in order to optimize personalized care, maximize tailored treatment efficacy and reduce undesirable side-effects!

Given this, genetic data will likely be deployed in diverse ways in the diabetes clinic of the future. The roles other 'Omics technologies, digital imaging devices, and wearable's will play in PPM-related diabetes medicine are harder to forecast, as research in these areas is less advanced and the cost of obtaining some of these data will likely remain high relative to genetics.

In diabetes, the application of PPM resources has been demonstrated in monogenic disease. However, diabetes is highly heterogeneous, both between and within polygenic and monogenic subtypes. Making the correct predictive diagnosis and using the correct treatment from diagnosis can be challenging for clinicians, but it is crucial to prevent long-term morbidity and mortality. To facilitate PPM-based approach in diabetes, research is needed to develop a better understanding of disease heterogeneity and its impact on potential treatments for specific subtypes. A combined approach that uses advanced techniques, pathway-focused research in islets, computational methods in large population cohorts and adaptive trial data, qualitative research, and other techniques yet to be developed may help to unpick the differences between diabetes subtypes to facilitate PPM and improved clinical care.

Implementation of PPM requires a lot before the current model "physician-patient" could be gradually displaced by a new model "medical advisor-healthy person-at-risk". This is the reason for developing global scientific, clinical, social, and educational projects in the area of PPM to elicit the content of the new branch.

**Biography:**

Sergey Suchkov was born in the City of Astrakhan, Russia, in a family of dynasty medical doctors. In 1980, graduated from Astrakhan State Medical University and was awarded with MD. In 1985, Suchkov maintained his PhD as a PhD student of the I.M. Sechenov Moscow Medical Academy and Institute of Medical Enzymology. In 2001, Suchkov maintained his Doctor Degree at the National Institute of Immunology, Russia.

From 1989 through 1995, Dr. Suchkov was being a Head of the Lab of Clinical Immunology, Helmholtz Eye Research Institute in Moscow. From 1995 through 2004 - a Chair of the Dept for Clinical Immunology, Moscow Clinical Research Institute (MONIKI). In 1993-1996, Dr Suchkov was a Secretary-in-Chief of the Editorial Board, Biomedical Science, an international journal published jointly by the USSR Academy of Sciences and the Royal Society of Chemistry, UK.

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