Personalized Medicine: A New Era in Therapeutic Science

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ABSTRACT: Personalized medicine includes an individual’s genetic profile to guide decisions made in regard to the prevention, diagnosis, and treatment of disease. Tailored drugs are designed based on genomic and biomarker analysis to prevent side effects. The concept of personalized medicine became popular after the success of the human genome project and the discovery of molecular biomarkers that drive individual variability to drug responses. With increase in population suffering from chronic diseases like cancer and diabetes there is a need of medicine which is beneficial to a large population, easily available, cost effective, and having no or fewer side effects. Cancer and diabetes can be caused due to variations in the genome and these variations may be different for different individuals. A targeted therapy can be advantageous in such cases where the common drug is not able to work effectively or is showing side effects. This article covers the recent research conducted in prognosis and treatment of different types of cancers and diabetes and how despite certain barriers personalized medicine can be a promising tool for disease management in the future. © 2016 iGlobal Research and Publishing Foundation. All rights reserved.