

Precision Oncology: Fact or Fiction?

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Over the last few years, there have been significant developments in the diagnosis and treatment of cancer. Much of the developments, especially in the last two decades were based on the ability to diagnose cancers more accurately. Ever since the availability of Next Generation Sequencing (NGS), and the ability to handle big data using bioinformatic tools, it has become increasingly possible to treat cancer with much greater precision, first by molecular profiling of tumors for identification of targetable alterations, and then by using drugs engineered to take advantage of the molecular alterations. This could help to treat cancers with a greater degree of depth, and without producing side-effects associated with conventional cytotoxic treatment. However, challenges remain, and despite the vast body of enthusiasm and rapidly expanding knowledge, the outcomes of cancer treatment continue to pose challenge. With the evolution of techniques, knowledge, and increasing awareness, the use of Precision Oncology is likely to expand, even in resource- strapped settings. In this talk, the basis of Precision Oncology will be discussed. Examples of its current clinical use across the continuum of cancer management will be highlighted, together with the limitations and potential areas for research.