Review of: "Targeting Cancer Cell Signaling Using Precision Oncology Towards a Holistic Approach to Cancer Therapeutics"

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Potential competing interests: No potential competing interests to declare.

I read with interest the manuscript entitled “Targeting Cancer Cell Signaling Using Precision Oncology Towards a Holistic Approach to Cancer Therapeutics”. Using a precision approach for targeting molecular signaling pathways is one of the hot topics nowadays. The manuscript provides the reader with a detailed description of cancer pathophysiology, molecular signaling pathways, and targeting the aberrant genes using precision Oncology. The manuscript is of good quality; however, I suggest these recommendations to improve it:

1. I recommend the author focus his attention on the effectiveness of precision oncology in the treatment of cancer patients by targeting the different signaling pathways. Different types of cancers with deregulated molecular pathways and the effectiveness of FDA or experimental therapeutics that target these pathways either alone or in combination with the current chemotherapeutics should be addressed. The potential impact (mortality, cancer cell progression, survival rate, etc) of targeting the mentioned pathways using a personalized approach should be described.
2. Sections 6 and 7 in the manuscript are not related to the title and may cause confusion for the reader, I think it’s more reasonable to omit them
3. The citation strategy should be revised. Some paragraphs were included with no references, e.g. (Rigorous cancer research in the past few decades supported by advances in cell and molecular biology has led scientists to clearly understand there are genetic changes associated with cancer incidences that cause the disease to grow and spread to other parts of the body. Cancer is initiated as the result of uncontrolled cell division and proliferation leading to tumor formation which culminates in metastasis that involves the dissemination of tumor cells to new sites in the body forming secondary tumors, and is responsible for about 90% of cancer-related deaths in reality. Cell proliferation requires a balanced rate of cell growth and division to maintain the increase in cell numbers for growth and development, maintenance of tissue homeostasis, and wound healing. The fundamental abnormality leading to cancer development is unwanted cell proliferation due to an absence of balance between cell divisions and cell loss through cell death and differentiation. The division relies on cell cycle regulation that generally involves extracellular growth-regulatory signals as well as internal signaling proteins monitoring the genetic integrity of the cell to ascertain that cellular developments go well in time. It depends on progression through distinct phases of the cell cycle-regulated by several cyclin-dependent kinases (CDKs) that act in association with their cyclin partners. Alterations in the overall expression pattern of cyclins lead the cellular process to go awry resulting in tumor formation) and many others.

4. English language should be revised by a native speaker or by any English proficiency tool.