

# Review of: "The tumour microenvironment in BRCA1/BRCA2 hereditary breast cancer and the role of epigenetics in its regulation"

Nisha Gautam<sup>1</sup>

<sup>1</sup> Rutgers University

Potential competing interests: No potential competing interests to declare.

The authors in the present manuscript entitled “ The tumor microenvironment in BRCA1/BRCA2 hereditary breast cancer and the role of epigenetics in its regulation”, focuses on detailed and comprehensive role of BRCA1/2 and epigenetic role in breast cancer tumorigenesis. The suggestions and improvisation are as follows:

## Minor revision

1. Please check the spelling such as tumour instead of tumor in the title of the manuscript. it is also suggested to spell checking and grammar throughout the manuscript.
2. Pictorial representation of the BRCA1/2 and its epigenetic perspective would be a great way of improvising the article.

## Major revision:

1. Since the present manuscript focuses epigenetic perspective of the BRCA1/2 in breast tumorigenesis. EZH2 has very important role in BRCA1/2 accumulation causing chromosomal aberration and pay significant role in breast cancer progression. High EZH2 protein levels are associated with increased expression of phospho-Akt1 (Ser473) and decreased nuclear localization of phospho-BRCA1 (Ser1423). EZH2-mediated nuclear shuttling of BRCA-1 protein in ER-negative basal-like breast cancer cells is one of its PRC2-independent functions. Nuclear retention of BRCA-1 protein leads to aneuploidy, aberrant mitosis, and genomic instability, which ultimately promotes tumorigenesis. Hence this important to discuss the EZH2 relation with BRCA1/2 and should also cite the study (comprehend review by **Gautam, Nisha<sup>1</sup>; Kaur, Mandeep<sup>1,2</sup>; Kaur, Satbir<sup>1</sup>. Structural assembly of Polycomb group protein and Insight of EZH2 in cancer progression: A review. Journal of Cancer Research and Therapeutics 17(2):p 311-326, Apr–Jun 2021. | DOI: 10.4103/jcrt.JCRT\_1090\_19.**