Can mesenchymal stem cells be used as a future weapon against breast cancer?

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Background: Mesenchymal stem cells (MSCs) are recruited to the stroma of cancers. They interact with cancer cells to promote invasion and metastasis or to suppress tumor growth. The unique tumor-homing capacity of MSCs makes them a promising vehicle to deliver various anticancer agents.

Aim: The aim of this study was to detect the possibility of using mesenchymal stem cells as a future weapon against breast cancer.

Methods: PubMed, PubMed central, Springer and Cochrane databases were searched using specified terms.

Results: Literature search yielded 17 manuscripts; seven of which suggested the use of MSCs in breast cancer therapy, while six studies raised the possibility that MSCs may promote tumor growth and four other studies assumed a dual role for MSCs.

Conclusions: The role of MSCs in breast cancer therapy is still debatable. We recommend future research in the field of MSCs in Alexandria University as it is our hope in the fight against breast cancer.

Biography
Hend Abdel Gawad Shakshouk is currently an Intern at the Faculty of Medicine, Alexandria University, Egypt. She has earned her MBCh degree and realized her passion for stem cells and regenerative medicine. She wrote her first article review about stem cells and breast cancer which has been accepted for publication. She has joined the Stem Cell Research Team at the Faculty of Medicine, Alexandria University, Egypt.

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