Cell Cycle Suppression in Breast Ductal Carcinoma by Anti-Cyclin E Antibody

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Targeting cyclin E: The application of an antibody that targets cyclin E seems like a viable option in this approach. To utilize anti-cyclin E antibodies to target the cyclin E expressed in cancerous cells during their cell cycle is the main purpose of this experiment. Perhaps this will cause a suppression of the cell cycle and in turn reduce the cancer cell-count. Cyclin E is over-expressed in breast cancers, neuroblastomas, and non-small cell lung cancers. Given many facts that seem to relate to each other in some way or other, such as how cyclin E is expressed in breast cancers and there are antibodies that target cyclin E, it seems very likely that this approach will produce desirable results. By utilizing natural acquisition of antibodies by cells, treatment of cancer cells is conducted by placing 13 microliters of antibody with cells ranging from initial counts of 50,000 to 100,000 cells. Then, by testing against a control cell count (untreated cells). There are three trials for each initial cell count: 50000, 75000, and 100000. The proliferation of breast cancer cells decreased under treatment, thus the results point towards a potential treatment for cancers that over-express cyclin E. The addition of antibody to cancer cells creates a significant disparity which proves successful progress. In this way, future plans to develop antibody carriers not unlike drug carriers such as liposomes or aptamers can now be developed. This project has less effects than chemo or radiation and provides subjects or patients a longer prognosis.

Awards Won: