Anti Proliferative and Apoptotic Effects of Acidified Sodium Chlorite on Osteosarcoma SJSA-1 and MDA-MB-231 in vitro

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Osteosarcomas prove to be as dangerous as any other cancer and even with multi model poly-chemotherapies, it is extremely difficult to only target the carcinogens without it harming the healthy cells too. One of the causes of cancer induction and the result of osteosarcoma is the oncogenic DNA virus, polyomavirus simian virus 40 (SV40). Testing the accomplishment of pathogen death, SJSA-1 and MDA-MB-231 cell lines were prepared. A compound with a very low oxidation reduction potential was used for the testing. This compound, $NaClO_2$, is being used for over a 100 years as a disinfectant under the name of “stabilized oxygen”: a water purifier. Currently, very limited research has been done around it, therefore most of its properties remain undiscovered. It is hypothesized that by activating this reagent, a solution: chlorine dioxide would be accomplished and prove to be more effective in which its ORP is 950 millivolts. This property allows it to penetrate the body and be attracted towards the malignancies and not oxidize any healthy cells. Since pathogens possess a cell wall that is less than 1/10000 of an inch thick, it can easily be oxidized and destroyed. Whereas, generally, normal body cells possess a cell membrane of about 1/32 of an inch thick and cannot be oxidized by the weak oxidizer. Ultimately, proliferation of cells will reduce and apoptosis is going to be induced accomplishing a successful reducer of carnicogens.