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Antitumor effect of bis(ethyl)polyamine analogs on mammary tumor development in FVB /NTgN (MMTV*neu*) transgenic mice

Neha Shah, Thomas Antony, Salim Haddad, Peter Amenta, Akira Shirahata (白幡 晶), T.J. Thomas , Thresia Thomas

We studied the therapeutic potential of two polyamine analogs on breast cancer using FVB/NTgN (MMTV*neu*), a transgenic mouse model with *neu/erb-B2* oncogene overexpression. Treatment was initiated at 31 weeks of age with bis(ethyl)norspermine (BE333) and its higher homolog, BE333 as i.p. injections once weekly. There was a 40% reduction in the average number of tumors per mouse in both treatment groups, by 10 weeks of treatment. BE333-treated mice had 70-75% lower tumor volume than controls. Spermidine/spermine acetyltransferase activity was significantly higher in tumor tissues and kidneys of treated animals, whereas polyamine levels were lower than controls. Beneficial effects were also evident from the mortality rates in control and treatment groups. Our results suggest a potential use of selected bis(ethyl) polyamine analogs as antitumor agents in breast cancer.