A method for stimulation of proliferative activity of stem cancer cells (SCC) of aged population relates to experimental medicine, in particular to oncology, and can be used for creating of models of tumor growth with different proliferative properties for the purpose of investigation of regularities of theirs behavior and reactions on administered methods of healing, according to the method, SCC are cultivated under in vivo conditions, after that cell suspension is isolated and cryotherapy is conducted according to one of the programs: I – cells are cooled with the speed of 1 °C/min. to -80 °C with subsequent direct dipping into liquid nitrogen; II - cells are cooled with the speed of 3 °C/min. to -28 °C, stabilized during 20 min and after that cooled with the speed of 10 °C/min. to -100 °C with subsequent direct dipping into liquid nitrogen; III - cells are cooled with the speed of 4 °C/min. to -28 °C, after that stabilized during 15 minutes with subsequent direct dipping into liquid nitrogen. The method allows to increase the proliferative activity of SCC in 1.89-3.66 times comparing with the native cells.