INVESTIGATIONS OF RADIATION INDUCED APOPTOSIS IN HCV-29 CELLS AND THEIR V-RAS AND V-RAF TRANSFECTANTS

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In the present work it was found, that transfection of cultivated urothelial cells HCV-29 with v-raf and v-ras oncogenes increased their sensivity to ionizing radiation, as documented by clonogenic studies. We haven't detected increased frequency of apoptosis using comet assay and flow cytometry. Flow cytometry study showed, that HCV-29 and their v-ras transfectants were arrested around middle S phase, whereas v-raf transfectants randomly at each point of S phase. This unusual reaction of HCV-29 v-raf cells may partially explain studies of P21WAF1/CIP1 and GADD45 genes, whose transcripts were found only in these cells. Increased radiosensitivity of v-ras transfectants is probably associated with c-JUN protein overexpression. Altogether the obtained results suggested different mechanism of reaction on irradiation of v-raf and v-ras transfected cells.