Antitumor and Apoptosis Induction Effects of Lupeol on U14 Cervical Carcinoma Bearing Mice

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SUMMARY. **Lupeol is a naturally occurring pentacyclic triterpene that is present in a variety of plants throughout the world. Previous studies have demonstrated that it is a biologically active compound that exhibits various pharmacological properties. In this study, the antitumor activity and potential mechanisms of lupeol were evaluated by investigating the effects of various dosages of lupeol on the growth of U14 tumors transplanted in mice. After lupeol was administered to cervical carcinoma bearing mice, the results demonstrated that lupeol (100 mg/kg and 200 mg/kg) effectively inhibited growth of cervical carcinoma. Compared with the control group (treated with cyclophosphamide CTX), lupeol markedly increase the number of tumor cells in G0/G1 phase. The number of apoptotic cells in the tumor also exhibited an increase in the lupeol groups and the CTX group. Meanwhile, expression of bcl-2 and c-erbB-2 was downregulated, and expression of p21, bax, caspase-8 and caspase-3 was upregulated in tumor cells. These results suggest that lupeol exhibits antitumor activity and inhibits the growth of U14 cervical carcinoma via induction of apoptosis and cell cycle arrest in mice.**

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