Cancer obesity (2). nowadays, there is no definite

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Cancer is a complex disease that is not curable in most cases and remains as a major leading cause of mortality around the world. (Dalkic et al., 2010). Colorectal cancer is the second leading reason for cancer death in the United States. It is also the third leading cause of death from cancer in men after lung and prostate cancers and in women after lung and breast cancer respectively (1).

Potential risk factors for the growth of colorectal cancer include lack of physical activity, alcohol and tobacco use, a low-? ber and high-fat food, insufficient fruit and vegetable eating, and obesity (2). Nowadays, there is no definite treatment for colorectal cancer, hence an effective and safe therapy for colorectal cancer is urgently needed. The use of medicinal herbs is always regarded as an effective strategy for treatment of various cancers.

Currently, many studies are concentrated on natural compounds obtained from plants for inhibition of growth or progression tumor. The genus Stachys (Lamiaceae) contains about 300 species and extensively distributed in tropical and subtropical countries (16). This genus in Iran is represented by 34 species that 13 of them are endemic (17, 18).

Phytochemical evaluation of Stachys species has been confirmed the presence of flavonoids, phenylethanoid glycosides, diterpenes, saponins, terpenoids, and steroids in them (19, 20). The main classes of secondary metabolites such as Flavonoids, iridoids, fatty acids and phenolic acids have been reported in species from this genus (Duru et al., 1999). Some studies have been found considerable anti-inflammatory, antioxidant, antibacterial, and hepatoprotective properties of this genus (21-24). It has been identified

that essential oils and extracts of different Stachys species have anticancer activities and free radical-scavenging (onforti F, Menichini F, Formisano C, et al.

(2009). Comparative chemical composition, free radical-scavenging and cytotoxic properties of essential oils of six Stachys species from different regions of the Mediterranean , Serbetci T, Demirci B, Guzel CB, et al. (2010). Essential oil composition, antimicrobial and cytotoxic activities of two endemic Stachys).

Stachys pilifera Benth is one of the endemic species in Iran and aerial parts of this plant are used in Iranian folk medicine, as herbal tea, for the treatment of various disorders such as asthma, rheumatoid arthritis, and infections (8). A biological study reported the potent antioxidant, antimicrobial, and antitumor activities of the n-butanolic extract of Stachys pilifera in vitro conditions (25). It was also reported to be an effective natural product to treat inflammation in various animal models (). Sadeghi et al.

have been identified hepatoprotective effect of Stachys pilifera Benth in the CCL4-induced hepatotoxicity in rats (). To our knowledge, there is not any research about the possible effect of Stachys pilifera Benth on the colorectal cancer cell lines. Therefore, the aim of the present of study was to determine the cytotoxic and apoptogenic effectsOf crud, alkaloid and terpenoid extracts from the aerial parts of Stachys pilifera against human colorectal cancer cell line Application of chemotherapy agents have many side effect on healthy cells, therefore currently many studies are concentrated on natural compounds obtained from plants with less toxicity and side effects. In many

studies these compounds have been very effective, thus scientists are conducting further studies on these compounds.