

## عنوان مقاله:

The Role Of Curcumin In Cancer Treatment: The Call Of Nature

## محل انتشار:

دومین سمپوزیوم بین المللی سرطان نسترن (سال: 1395)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

Cancer is one of the leading causes of morbidity and mortality worldwide, with nearly 14 million new cases and 8.2 million cancer related deaths in 2012. Available anti – cancer drugs have severe side effects and are also expensive. So, the more researches for identifying new pharmacological agents, without these disadvantages, are needed. Curcumin, a polyphenolic compound which derived from Turmeric, is one of such agents. Turmeric is a rhizome from the herb Curcuma Longa. Its powder has 5% Curcumin that has been shown to be pharmacologically safe compound with a very low or no toxicity. We searched the PubMed and Google Scholar databases using the search terms: Curcumin, Cancer and Clinical Trial. 15 studies were identified and reviewed. The articles were published from 2002 up to 2016. Among studies, There was an emphasis on apoptotic, anti – proliferative and anti – angiogenic properties of Curcumin. It can suppress cell growth and tumor formation by inhibiting several cell signaling pathways such as transcription factors (NF- $\kappa$ B and AP-1), enzymes (COX-2, MMPs), cell cycle arrest (cyclin D1), proliferation (EGFR and Akt), survival pathways (bcl-2 and adhesion molecules), and TNF. Curcumin up-regulates caspase family proteins and down-regulates anti-apoptotic genes (Bcl-2 and Bcl-XL). Pre – clinical studies in a variety of cancer cell lines including breast, cervical, colon, lung, gastric, hepatic, leukemia, melanoma, lymphoma, oral epithelial, ovarian, pancreatic, and prostate have demonstrated that Curcumin has anti – cancer activity in vitro and in pre – clinical animal models. It is important that cancerous cells arrested in mitosis due to Curcumin treatment, acquire double – strand DNA damage. Curcumin also induce apoptosis in cells selectively. Thus using Curcumin as an anti – cancer drug is safe and without side effects. A study showed Curcumin induces cell apoptosis in Non – Small cell lung cancer by increasing the level of intracellular free calcium. NSCLC is responsible for nearly 85% of the total lung cancer cases that is not sensitive to the majority of conventional cytotoxic treatments, such as chemotherapy and radiotherapy. In another studies, showed that Curcumin can suppress the proliferation of both the androgen-dependent prostate cancer cell line, LNCaP, and the androgen-independent DU145 line. And also in a clinical trial on intravaginal application of curcumin based capsule or vaginal cream at bed time for 4 weeks has shown remarkable (~80%) clearance of the virus. HPV is a small DNA tumor virus which has been shown to be prevalent in about 90% of ... C

## کلمات کلیدی:

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