

## An Overview on Chemoprevention in Cancer Disease

Pouya Sar\*

Research Center of Physiology, University of Medical Sciences, Iran

### Editorial

There are various sorts of cancer treatment. The sorts of treatment that you just have will depend on the sort of cancer you've got and how progressed it is. A few individuals with cancer will have only one treatment. But most individuals have a combination of medications, such as surgery with chemotherapy and/ or radiation treatment. You'll also have immunotherapy, targeted treatment, or hormone treatment.

### Chemoprevention

Cancer begins when solid cells alter and develop wildly. This forms a mass called a tumour. The process of a solid cell getting a cancerous one generally takes times. And various inheritable, healthy, and life variables, comparative as smoking, may impact this process [1]. Cancer chemoprevention employments substances to stop cancer from creating. These substances may be common or made in a laboratory. A specialist employments chemoprevention to lower a person's hazard of creating cancer, particularly for. People who are at a high risk of developing cancer [2]. This incorporates those with an acquired cancer design or a family history of cancer.

Individuals who have as of now had cancer. Chemoprevention can lower the hazard of a cancer repeat or a modern cancer. A surge is when the cancer comes back after treatment [3]. The drugs utilized for chemoprevention are generally not utilized to treat cancer. And taking them doesn't totally cover a person from creating cancer in the future.

Cancer chemoprevention involves the chronic administration of a synthetic, natural or biological agent to reduce or delay the occurrence of malignancy [4]. The potential value of this approach has been demonstrated with trials in breast, prostate and colon cancer [5]. The paradigm for developing new chemo preventive agents has changed markedly in the last decade and now involves extensive preclinical mechanistic evaluation of agents before clinical trials are instituted and a focus on defining biomarkers of activity that can be used as early predictors of efficacy.

Chemoprevention is the use of a medication, vitamin, or supplement to stop cancer from happening [6]. This is most often used for people who have a high risk of developing cancer. They may have a strong family history, carry an abnormal gene [7], or have a personal health history that makes their risk higher.

**Primary prevention:** Using a medication, vitamin, or supplement to prevent cancer in a healthy person.

**Secondary prevention:** Using a medication, vitamin, or supplement to prevent a pre-cancerous area from becoming cancer.

**Tertiary prevention:** Using a medication, vitamin, or supplement in a person who has already had cancer, to prevent them from developing another cancer.

### Bone marrow transplant

A bone marrow transplant allows your doctor to use higher doses of chemotherapy to treat your cancer [8]. It may also be used to replace diseased bone marrow.

### Radiation therapy

Radiation remedy uses high-powered energy beams, such as X-rays and protons, to kill cancer cells. Radiation treatment can come from a machine outside your body (external beam radiation), or it can be placed inside your body (brachytherapy).

### Examples of chemoprevention drugs

The following are exemplifications of drugs used for chemoprevention

Tamoxifen (Soltamox) and raloxifene (Evista). Researchers have considered these drugs as a way to lower risk of bone cancer [9]. They're most effective in bringing down the risk of estrogen receptor-positive bone cancer. This sort of bone cancer depends on the hormone estrogen to grow. Tamoxifen squares the effects of estrogen on tumour development. It has too been appeared to lower the danger of a bone cancer repeat. Raloxifene has been appeared to lower the risk of breast cancer in ladies who have gone through menopause.

Aspirin and other non-steroidal anti-inflammatory solutions (NSAIDs). NSAIDs may lower the risk of numerous sorts of cancer in individuals with a normal hazard of cancer.

### Risks and benefits of chemoprevention

The dangers and benefits of chemoprevention are diverse for each individual. For example Medicines that may lower the chance of cancer can too cause side impacts. Individuals with a progressed hazard of creating cancer may be willing to accept particular side impacts. But others may not need to utilize a medication that gives them horizontal products when they aren't sick [10]. The effect of chemoprevention seen in investigation thinks about may be distinctive from what you witness. Bone marrow transplant. Bone marrow transplant is additionally known as a stem cell transplant. Your bone marrow is the fabric interior your bones that produce blood cells. A bone marrow transplant can utilize your possess cells or cells from a benefactor.

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### Conflict of Interest

The authors declare that they are no conflict of interest.

\*Corresponding author: Pouya Sar, Research Center of Physiology, University of Medical Sciences, Iran, E-mail: sarpouy76@gmail.com

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## References

1. Calderon-Margalit R, Paltiel O (2004) Prevention of breast cancer in women who carry BRCA1 or BRCA2 mutations: a critical review of the literature. *Int J Cancer* 112:357-364.
2. Plevritis SK, Kurian AW, Sigal BM, Daniel BL, Ikeda DM (2006) Cost-effectiveness of screening BRCA1/2 mutation carriers with breast magnetic resonance imaging. *JAMA* 295:2374-2384.
3. Keshavarz-Fathi M, Rezaei N (2021) Cancer Immunoprevention: Current Status and Future Directions. *Arch Immunol Ther Exp* 69:3.
4. Decensi A, Costa A (2000) Recent advances in cancer chemoprevention, with emphasis on breast and colorectal cancer. *Eur J Cancer* 36:694-709.
5. Young GP, Le Leu RK (2002) Preventing cancer: dietary lifestyle or clinical intervention. *Asia Pac J Clin Nutr* 3:S618-631.
6. Lollini PL, Nicoletti G, Landuzzi L, Cavallo F, Forni G, et al. (2011) Vaccines and other immunological approaches for cancer immunoprevention. *Curr Drug Targets* 12:1957-19.
7. Tambunlertchai S, Geary SM, Salem AK (2021) Skin Penetration Enhancement Strategies Used in the Development of Melanoma Topical Treatments. *AAPS J* 23:19.
8. Eckert RW, Wiemann S, Keck CM (2021) Improved Dermal and Transdermal Delivery of Curcumin with SmartFilms and Nanocrystals. *Molecules* 26:1633.
9. Goyal N, Thatai P, Sapra B (2017) Skin cancer: symptoms, mechanistic pathways and treatment rationale for therapeutic delivery. *Ther Deliv* 8:265-287.
10. Shakeel F, Haq N, Al-Dhfyhan A, Alanazi FK, Alsarra IA (2015) Chemoprevention of skin cancer using low HLB surfactant nanoemulsion of 5-fluorouracil: a preliminary study. *Drug Deliv* 22:573-580.