



FLUOROURACIL

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5-Fluorouracil (5-FU) is a medication commonly prescribed for the treatment of cancer. It is classified as a pyrimidine analog and used in a systemic form for treating internal malignancies. In dermatology, the topical form of 5-FU is mainly utilized for **actinic keratosis** and **superficial basal cell carcinoma**.

Mechanism: Best known as an antineoplastic agent, 5-FU works by inhibiting thymidylate synthase, a key enzyme responsible for making one of the four DNA building blocks, thymidine. In doing so, the cancerous cells making DNA are deprived of thymidine and therefore undergo cell death. 5-FU works exclusively during the synthesis of DNA and can therefore also cause the destruction of rapidly dividing non-cancerous cells like those found in skin and hair.

Uses: The topical form of 5-FU comes in two different preparations, a solution (2-5%) or cream (0.5-5%). For dermatologic conditions, the cream is most commonly prescribed. A number of brands are available including Carac, Efudex and Fluoroplex. Typical dosage regimes involve application of the cream once or twice daily for 3-4 weeks depending on the lesion and its location. Besides treatment for **actinic keratosis** and **basal cell carcinoma**, 5-FU finds utility in treating other conditions such as **extra-mammary Paget's disease** confined to the epidermis, **Bowen's disease**, **porokeratosis**, and **genital warts**.

Side Effects: Since 5-FU inhibits DNA synthesis, all cells are potentially influenced by its use. Common side effects of the topical form include inflammation, erythema (redness), edema, application-site pain and burning. Pregnancy and lactation are contraindicated since 5-FU has shown potential teratogenic effects and should therefore be avoided.

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