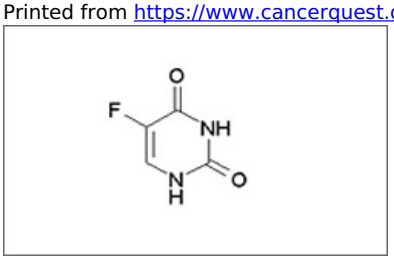
Fluorouracil (5-fluorouracil or 5-FU)

Printed from https://www.cancerquest.org/patients/drug-reference/fluorouracil-5-fluorouracil-or-5-fu on 11/28/2026



Brand name: Carac® cream
Brand name: Efudex®
Brand name: Fluoroplex®
Brand name: Adrucil®
IUPAC: 5-fluoro-1H-pyrimidine-2,4-dione
FDA approval: Yes
Manufacturer Link
Usage:

5-FU may be applied to the skin as a cream to treat actinic keratoses and basal cell carcinomas (a type of skin cancer) that arise on a the skin due to chronic (long-term) sun exposure and sun damage. These keratoses often provide a warning flag for possible development of melanoma. For this reason, 5-FU may be used as a preventative measure in these cases. In addition to its role in cancer treatment, 5-FU may be used to prevent scarring in patients undergoing surgery for glaucoma. As with most chemotherapy agents, there are a variety of ways to receive 5-FU treatment. It may be given through injection (IV), taken orally, or applied via a cream. Dosages vary and depend upon many factors including the type and location of the cancer and the health and age of the patient. 5-FU is most commonly used in colorectal cancer, advanced breast cancer and other GI cancers.1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Mechanism:

5-FU functions by inhibiting DNA and RNA metabolism in dividing cells, as this helps to cause apoptosis in cancerous cells. Since normal cells are also dividing, they may be killed by the treatment, which produces many of the side effects experienced by patients receiving 5-FU.1

Below is the structure of Fluorouracil (5-fluorouracil or 5-FU)

Sphere Stick Rotate

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Side effects:

Severe side effects include: myelosuppression, mucositis, seizures and hand-foot syndrome. Others include: confusion, cardiac symptoms, conjunctivitis and skin issues.1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.