

Parenteral 5-fluorouracil (5-FU) is part of the standard treatment for various malignant tumors (such as colorectal cancer, pancreatic cancer, gastric cancer, breast cancer, and head and neck cancers) and is most often used in combination with other chemotherapy agents. If uracil levels are used to determine DPD phenotype, the phenotype results should be interpreted cautiously in patients with moderate or severe renal impairment. If severe toxicity does not occur, subsequent doses may be increased, as the efficacy of conventionally lower doses has not been established. Patients with impaired DPD enzyme activity have an increased risk of severe or life-threatening toxicity when treated with 5-FU or any of its prodrugs. Dihydropyrimidine dehydrogenase (DPD) is an enzyme that affects the degradation rate of 5-FU.