| Protocol title | **5 Fluorouracil Bolus** |
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| Schedule | 2 Weekly |
| Antiemetic risk+  Antiallergic medications +  Premedications + Post chemotherapy medications | Intravenous-Low emetic risk |
| Chemotherapy dose and method of administration | Injection 5-FU 400 mg/m2 IV bolus D1. Do not inject the entire contents of the vial directly into patients.  Bolus monthly schedule: 425–450 mg/m2 IV on days 1–5 every 28 days.  Bolus weekly schedule: 500–600 mg/m2 IV every week for 6 weeks every 8 weeks.  **Dose levels of 5-FU**  Dose level 0: 400 mg/m2  Dose level -1: 300 mg/m2  Dose level -2: 200 mg/m2 |
| Number of days of chemotherapy in each cycle | 1 |
| Number of cycles | Until disease progression or development of intolerable side effects |
| FN risk | >20% |
| Antithrombotic prophylaxis | Nil |
| Special instruction to Nurse | 1. Orders related checks    1. To check whether the orders for chemotherapy are signed manually or by using electronic approval by licensed independent practitioners who are determined to be qualified by the health care setting.    2. Verbal orders are not allowed from medical practitioners except to hold or stop chemotherapy administration.    3. **Check Consent**    4. To check new orders or changes to orders, including changes to regimens, for example, dose adjustments communicated directly to patients, are documented in the medical record.    5. Check patient’s name and a second patient identifier like a phone number    6. The date the order is written (Orders are valid for only 3 working days)    7. Regimen or protocol name and number, Cycle number and day, when applicable    8. All medications within the order set are listed by using full generic names    9. Drug dose is written following standards for abbreviations, trailing zeros, and leading zeros.    10. Route of administration 2. Before preparation, a second person—a practitioner or other personnel approved by the health care setting to prepare or administer chemotherapy— independently verifies    1. Two patient identifiers.    2. Drug name.    3. Drug dose.    4. Route of administration.    5. Rate of administration    6. The calculation for dosing, including the variables used in this calculation.    7. Treatment cycle and day of the cycle 3. Upon preparation, a second person approved by the health care setting to prepare parenteral chemotherapy verifies:    1. The drug vial(s).    2. Concentration.    3. Drug volume or weight.    4. Diluent type and volume    5. Administration fluid type, volume, and tubing. 4. Chemotherapy drugs are labelled immediately upon preparation, and labels include the following 10 elements at a minimum:    1. Patient’s name.    2. A second patient identifier.    3. Full generic drug name.    4. Drug dose.    5. Drug administration route.    6. The total volume required to administer the drug.    7. Date the medication is to be administered.    8. Expiration dates and/or times.    9. Sequencing of drug administration, when applicable, and the total number of products to be given when medication is provided in divided doses—each product should be labelled with the total number of products to be administered and the sequence of the individual product within that total grouping, for example, one of five, two of two, etc.    10. A warning or precautionary label or sticker, as applicable, to storage and handling; may be included within the label or on an auxiliary label.     5. Administration   * 1. Before initiation of each chemotherapy administration cycle, the practitioner who is administering the chemotherapy confirms the treatment with the patient, including, at a minimum, the name of the drug, infusion time, route of administration, and infusion-related symptoms to report—for example, but not limited to, hypersensitivity symptoms or pain during infusion.   2. At least two individuals, in the presence of the patient, verify the patient identification by using at least two identifiers.   3. Check vitals before starting. They need to be within the institutes/centres approved normal limits   4. Use a new IV cannula or Chemo port and needs to be inserted at a sight with limited movements and not over a joint   5. Check for backflow prior to giving chemotherapy   6. In case of extravasation→ Follow the institutes/centres approved extravasation algorithm   7. In case of hypersensitivity→ Follow the institutes/centres approved extravasation algorithm   8. In case of breathlessness or chest pain or syncope or bradycardia → Follow an emergency cardiac algorithm |
| Special instructions to nurse - protocol specific | 1. Do not administer in the same intravenous line concomitantly with other medicinal products. 2. For bolus administration, store undiluted fluorouracil in the syringe for up to 4 hours at room temperature (25°C). Administer fluorouracil as an intravenous bolus through an established intravenous line. |
| Special instruction to patients | 1. Encourage oral hydration 2. In case of any emergency - Please visit the outpatient/ causality of …. hospital 3. Please respond to daily SMS sent for enquiring about your health 4. In case of fever or more than 2 loose motions/vomiting or giddiness or weakness or any other troublesome symptom. Please visit the outpatient/ causality of …. hospital 5. Any change in appointment or rescheduling can be discussed on this ……………………..number 6. Please avoid any social visits or public places without discussing with your oncologists 7. Prefer homemade food and or food prepared in hygienic conditions 8. In addition please check the patient information booklet available with the medicines for detailed instructions on do and donts |
| Special instruction to patients-Protocol specific | 1. Patients to notify their healthcare provider if they have a known DPD deficiency. Advise patients if they have complete or near complete absence of DPD activity, they are at an increased risk of severe and life-threatening mucositis, diarrhea, neutropenia and neurotoxicity 2. Patients of the risk of cardiotoxicity. Advise patients to immediately contact their healthcare provider or to go to an emergency room for new onset of chest pain, shortness of breath, dizziness, or lightheadedness 3. Patients to immediately contact their healthcare provider or go to an emergency room for new onset of confusion, disorientation, or otherwise altered mental status; difficulty with balance or coordination; or visual disturbances 4. Patients to contact their healthcare provider for severe diarrhea or for painful mouth sores with decreased oral intake of food or fluids 5. Patients to contact their healthcare provider for tingling or burning, redness, flaking, swelling, blisters, or sores on the palms of their hands or soles of their feet 6. Patients of the importance of keeping appointments for blood tests. Instruct patients to monitor their temperature on a daily basis and to immediately contact their healthcare provider for fever or other signs of infection 7. Patients to notify their healthcare provider of all drugs they are taking, including warfarin or other coumarin-derivative anticoagulants. Advise patients of the importance of keeping appointments for blood tests 8. Females of reproductive potential and males with female partners of reproductive potential to use effective contraception during treatment with fluorouracil and for up to 3 months after the last dose of fluorouracil. Instruct female patients to contact their healthcare provider if they become pregnant, if pregnancy occurs during fluorouracil treatment or during the 3 months following the last dose 9. Females and males of reproductive potential may have impaired fertility while receiving fluorouracil, based on animal data 10. Nursing mothers to discontinue nursing |
| Stockist instructions | Inj Fluorouracil 2.5 g in a 50 mL vial |
| Next visit instructions | To Do CBC LFT RFT NA K Mg Ca before each visit |
| Drug interactions | 1. Leucovorin—Leucovorin enhances the antitumor activity and toxicity of 5-FU. Stabilizes the TS-FdUMP-reduced folate ternary complex resulting in maximal inhibition of TS. 2. Methotrexate, trimetrexate—Antifolate analogs increase the formation of 5-FU nucleotide metabolites when given 24 hours before 5-FU. 3. Thymidine—Rescues against the TS- and DNA-mediated toxic effects of 5-FU. 4. Vistonuridine (uridine triacetate)—Rescues against the toxic effects of 5-FU. |
| New cycle planning minimal requirements | Hemoglobin level >= 8 g/dl  Absolute Neutrophil Count>=1000/mm3  Platelet count >=75,000/ mm3  GFR >= 40 ml/min  No adverse event to baseline or grade 1 (except fatigue or alopecia) |
| Dose modifications for adverse events | 1. Myocardial infarction 2. Any Grade -> Discontinue 5-FU   2. Ventricular arrhythmia   1. Any Grade -> Discontinue 5-FU   3. Heart failure   1. Any Grade -> Discontinue 5-FU   4. Encephalopathy   1. Any Grade -> Discontinue 5-FU   5. Confusion   1. Any Grade -> Discontinue 5-FU   6. Ataxia   1. Any Grade -> Discontinue 5-FU   7. Diarrhea   1. Grade 3/4 -> Reduce dose by 1 level   8. Palmar-plantar erythrodysesthesia (hand-foot syndrome)   1. Grade 2/3 -> Reduce dose by 1 level   9. Mucositis   1. Grade 3/4 -> Reduce dose by 1 level |
| Special tests after a few cycles if any | DPD Testing to be done before Start of Treatment  Cardiac Functions at baseline and whenever clinically indicated. |
| Adverse events | Increased Risk of Serious or Fatal Adverse Reactions in Patients with Low or Absent Dipyrimidine Dehydrogenase Activity  Cardiotoxicity  Hyperammonemic Encephalopathy  Neurologic Toxicity  Diarrhea  Palmar-Plantar Erythrodysesthesia (Hand-Foot Syndrome)  Myelosuppression  Mucositis  Increased Risk of Elevated INR with Warfarin  Embryofetal Toxicity |
| Risk of death | <1% |
| Comment | - |
| Reference | FDA label |