Hydroxyurea (Hydrea®, Droxia®)

Pronounced: hye-DROX-ee-ure-EE-a

Classification: Antimetabolite

About Hydroxyurea (Hydrea®, Droxia®)

Hydroxyurea exerts its anti-cancer effect by preventing synthesis of DNA in the cell by significantly decreasing thymine (a nucleotide that is one of the building blocks of DNA). Lack of functional DNA prevents the cancer cell from reproducing, which results in death of the cell. In this way, hydroxyurea slows or stops the growth of cancer cells in your body.

How to Take Hydroxyurea

Hydroxyurea is taken by mouth in the form of a capsule. The dosage and schedule is determined by the person's size and type of cancer. It can be given alone or with other drugs. If you are having trouble swallowing this medication, contact your provider or pharmacist for recommendations.

You may be given folic acid supplements to prevent a side effect called macrocytosis which is an enlarging of red blood cells. Certain medications can interfere with this medication, so make sure your provider is aware of all the medications, vitamins and supplements you are taking.

It is important to make sure you are taking the correct amount of medication every time. Before every dose, check that what you are taking matches what you have been prescribed.

Storage and Handling

Store this medication at room temperature in the original container. If a caregiver prepares your dose for you, they should wear gloves or pour the pills directly from their container into the cap, a small cup, or directly into your hand. They should avoid touching the pills. They should always wash their hands before and after giving you the medication. Pregnant or nursing women should not prepare the dose for you. Ask your oncology team where to return any unused medication for disposal. Do not flush down the toilet or throw in the trash.

Where do I get this medication?

Hydroxyurea is available through select specialty pharmacies and at some retail pharmacies, depending on your insurance coverage. Your oncology team will work with your prescription drug plan to identify an in-network specialty or retail pharmacy for distribution of this medication and possible shipment directly to your home.

Insurance Information

This medication may be covered under your prescription drug plan. Patient assistance may be available to qualifying individuals depending upon prescription drug coverage. Co-pay cards, which reduce the patient co-pay responsibility for eligible commercially (non-government sponsored) insured patients, may also be available. Your care team can help you find these resources, if they are available.

Possible Side Effects of Hydroxyurea

There are a number of things you can do to manage the side effects of hydroxyurea. Talk to your care team about these
recommendations. They can help you decide what will work best for you. These are some of the most common or important side effects:

**Low White Blood Cell Count (Leukopenia or Neutropenia)**
White blood cells (WBC) are important for fighting infection. While receiving treatment, your WBC count can drop, putting you at a higher risk of getting an infection. You should let your doctor or nurse know right away if you have a fever (temperature greater than 100.4°F/38°C), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn’t heal.

**Tips to preventing infection:**
- **Washing hands**, both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever or cough or live with someone with these symptoms).
- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bath daily and perform frequent **mouth care**.
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your oncology care team before scheduling dental appointments or procedures.
- Ask your oncology care team before you, or someone you live with, has any vaccinations.

**Low Red Blood Cell Count (Anemia)**
Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the red cell count is low, you may feel tired or weak. You should let your oncology care team know if you experience any shortness of breath, difficulty breathing or pain in your chest. If the count gets too low, you may receive a blood transfusion.

**Low Platelet Count (Thrombocytopenia)**
Platelets help your blood clot, so when the count is low you are at a higher risk of bleeding. Let your oncology care team know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums or blood in your urine or stool. If the platelet count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal, anti-inflammatory medications (NSAIDs) such as Motrin/Advil (ibuprofen), Aleve (naproxen), Celebrex (celecoxib) etc. as these can all increase the risk of bleeding. Please consult with your healthcare team regarding use of these agents and all over the counter medications/supplements while on therapy.
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

**Rash**
Some patients may develop a rash or very dry skin. Be sure to notify your healthcare provider of any rash or ulcers that develop, as this can be a serious reaction that can lead to gangrene.

**Fatigue**
Fatigue is very common during cancer treatment and is an overwhelming feeling of exhaustion that is not usually relieved by rest. While on cancer treatment, and for a period after, you may need to adjust your schedule to manage fatigue. Plan times to rest during the day and conserve energy for more important activities. Exercise can help combat fatigue; a simple daily walk with a friend can help. Talk to your healthcare team for helpful tips on dealing with this side effect.

**Sun Safety**
Because this medication has been associated with the development of skin cancers, it is important to practice sun safety. Avoid the sun between 10-2pm, when it is strongest. Wear sunscreen (at least SPF 15) everyday; wear sunglasses, a hat and long sleeves/pants to protect your skin and seek out shade whenever possible.
Live Vaccines
You, or anyone you live with, should avoid having live or live-attenuated vaccines while receiving this medication. These include herpes zoster (Zostavax) for shingles prevention, oral polio, measles, nasal flu vaccine (FluMist®), rotovirus and yellow fever vaccines.

Less common, but important side effects can include:

- **Hemolytic Anemia**: This medication can cause the breakdown of red blood cells (hemolytic anemia). You may not even be aware that you have this problem, so you should report the following symptoms of red blood cell breakdown to your care team: jaundice (yellowing of the skin or whites of the eyes), weakness, dizziness, or shortness of breath.

- **Secondary Malignancies**: There is a very low risk of developing leukemia or skin cancer due to treatment with this medication, which can occur many years after treatment. This is most often associated with long-term treatment.

- **Radiation Recall**: Radiation recall is when the administration of a medication causes a skin reaction that looks like a sunburn (redness, swelling, soreness, peeling skin) in areas where radiation was previously given. Notify your oncology team if you notice this side effect. Treatment can include topical steroid ointments and a delay in your next chemotherapy dose.

- **Tumor Lysis Syndrome**: If there are a large amount of tumor cells in your body prior to treatment, you are at risk for tumor lysis syndrome. This happens when the tumor cells die too quickly and their waste overwhelms the body. You may be given a medication (allopurinol) and IV fluids to help prevent this. If you experience nausea, vomiting, diarrhea or become lethargic (drowsy, sluggish), notify your oncology team right away. TLS can affect your kidney function. Your provider will monitor your kidney function with blood work. Notify your provider if you have little or no urine output.

- **Mucositis**: Certain cancer treatments can cause sores or soreness in your mouth and/or throat. Notify your oncology care team if your mouth, tongue, inside of your cheek or throat becomes white, ulcerated or painful. Performing regular mouth care can help prevent or manage mouth sores. If mouth sores become painful, your doctor or nurse can recommend a pain reliever.

- **Liver Toxicity**: This medication can cause liver toxicity, which your oncology care team may monitor for using blood tests called liver function tests. Notify your healthcare provider if you notice yellowing of the skin or eyes, your urine appears dark or brown, or you have pain in your abdomen, as these can be signs of liver toxicity.

- **Lung Changes**: This medication may cause pulmonary fibrosis (a scarring and stiffening of the lung tissue) or pneumonitis, an inflammation of the lungs. These problems can develop months to years after treatment is completed and may be more common in people with pre-existing lung conditions. Call your oncology care team right away if you have shortness of breath, cough, wheezing or difficulty breathing.

Reproductive Concerns

Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. Effective birth control is necessary during treatment and for 6 months after treatment for women and for 1 year for men. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should not breastfeed while receiving this medication.

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