



Dactinomycin-D

What names may be used for this medication?

Dactinomycin-D, Actinomycin-D, Act-D, Cosmegen

How and why is this medicine given?

Dactinomycin-D is given by an intravenous (IV) infusion (a quick drip through a needle into your port or through a vein in your arm or hand). We use it most commonly in our office for the treatment of gestational trophoblastic tumors and certain types of ovarian cancer. It may be used by itself or combined with other chemotherapy drugs.

How does the medicine work?

Dactinomycin-D binds to your body's DNA (the machinery or "brain" that runs each cell) causing damage that prevents the DNA from replicating, which prevents the cell itself from reproducing. Dactinomycin-D also forms toxic substances called oxygen free radicals that cause direct damage to the DNA. Dactinomycin-D is not able to discriminate between good cells and cancer cells, so it can affect many parts of your body besides the cancer. Since non-cancer cells are better than the cancer cells at detecting and repairing the damage caused by dactinomycin-D, the cancer cells die and your normal cells repair the damage so they can resume their normal function. The side effects you experience from dactinomycin-D are a result of this damage to your healthy cells before they have a chance to repair themselves.

Dactinomycin-D does not require activation and is eliminated from the body by both the liver and the kidneys. Since liver function can be affected by other medications, it is very important for you to be sure your list of medications that you take for other health problems (such as blood pressure, diabetes, etc.) stays accurate and up to date in our office. Likewise, it is important that you keep yourself well hydrated (8-10 glasses of water per day) in efforts to keep the kidneys working at their best. We will monitor your liver and kidney function through blood tests performed prior to each infusion, and we will review your medication list at each visit.

How often is this medicine given?

Dactinomycin-D may be given weekly, bi-weekly, or monthly. The total number of treatment cycles needed and the most appropriate dosing schedule will be outlined by your doctor prior to beginning therapy. The infusions are given at the infusion center at the Cancer & Research Center (white building located across the parking lot from our office). Prior to each treatment, you will be seen in the office for an exam, and blood tests will be reviewed to be sure it is safe to administer your treatment. It is, of course, very important to keep all of your appointments for chemotherapy and lab testing.

What side effects does this medicine cause?

There are many possible side effects of all chemotherapy drugs, so the following is only inclusive of the most common or serious possibilities from dactinomycin-D. You will be asked to complete a symptom form at each visit in order for us to accurately assess the side effects that you may be experiencing. This form helps your doctor be sure that no adverse effects of treatment are overlooked, and it serves to help you recall which symptoms you may have experienced since your last treatment.

- ❖ Hair loss is common but typically milde with dactinomycin-D. Hair growth should return upon completion of treatment.
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- ❖ Nausea and vomiting may be experienced with dactinomycin-D. These symptoms are less common today than in the past because of much improved anti-nausea medications. You will be given prescriptions for medications for nausea, and it is important that you take them as directed in order for them to be most effective. If you have questions, do not hesitate to call the office.
 - ❖ Bone marrow suppression is when the bone marrow cannot make enough red cells, white cells, or platelets to keep up with demand, and this is a side effect of most chemotherapy medications, including dactinomycin-D. All of your blood counts will be monitored regularly throughout treatment.
 - ◆ *Anemia* is the result of not enough red blood cells and may cause fatigue, chest pain, shortness of breath, or dizziness.
 - ◆ *Neutropenia* results when your white blood cell count goes too low, and this will put you at an increased risk for infection. It is very important that you avoid sick friends and family; be diligent about hand-washing as well. This does not mean that you cannot be out in public, and in fact you can continue to participate in normal activities such as going to church or a movie, etc. If you think you may have an infection or have a fever of 100.5°F or more, call the office immediately.
 - ◆ *Thrombocytopenia* is the term for too low of a platelet count. This can lead to excessive bruising or bleeding with only minor injury such as brushing your teeth or blowing your nose.
 - ❖ Skin toxicity with redness, darkening of the skin or nails, and sensitivity to the sun can occur with doxorubicin. Direct sun exposure and tanning beds should be avoided, and sun protection (SPF 15 or higher) should be used liberally while receiving doxorubicin. The pigment changes may or may not regress after completing treatment.
 - ❖ Generalized fatigue and weakness is often experienced while taking dactinomycin-D. Do your best to remain socially involved and as active as possible.
 - ❖ *Mucositis* is sores/ulcers in the mouth that can cause pain and difficulty eating or swallowing. This is not common but can occur with dactinomycin-D. This can be minimized with good oral hygiene and a warm salt-water solution gargled after each meal.
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Prescription medication is also available if these steps are ineffective at resolving your symptoms.

- ❖ Diarrhea may develop while taking dactinomycin-D and usually occurs 5-7 days after treatment. A bland diet and limiting dairy intake may help. Over the counter agents such as Immodium are safe to use, and should be started with the first watery stool—do not allow yourself to become dehydrated. If you are unable to control your diarrhea with these measures or feel you may be getting dehydrated, please call the office for further instructions.
- ❖ Radiation recall can occur with dactinomycin-D leading to a skin reaction in areas of prior radiation exposure.
- ❖ Dactinomycin-D can cause problems with fertility. It is not uncommon to stop having periods while receiving dactinomycin-D, but these typically return to normal after stopping treatment. Your doctor will discuss this in more detail if applicable to you.
- ❖ If you are pregnant or become pregnant during therapy, you should notify your doctor immediately.

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