



Provincial Health Services Authority

For the Patient: GUNAJPG

Other Names: Neo-Adjuvant Therapy for Urothelial Carcinoma Using Cisplatin and Gemcitabine

GU = **GenitoUrinary** (tumor group)

NA = **Neo-Adjuvant** (curative therapy)

P = **Platinum** (cisplatin)

G = **Gemcitabine**

ABOUT THIS MEDICATION

What are these drugs used for?

- Cisplatin and Gemcitabine are intravenous drug treatments given as therapy to treat some types of genitourinary cancer.

How do these drugs work?

- Cisplatin and Gemcitabine work by interfering with the genetic material of replicating cells and preventing an increase in the number of cancer cells.

INTENDED BENEFITS

- This therapy is being given to destroy and/or limit the growth of cancer cells in your body. This treatment may improve your current symptoms, and delay or prevent the onset of new symptoms.
- It may take several treatments before your doctor can judge whether or not this treatment is helping.

TREATMENT SUMMARY

How are these drugs given?

- Cisplatin will be given intravenously (via the vein) on day 1 of treatment. Prior to cisplatin being given, you will receive additional hydration over an hour, in order to prevent any kidney problems.
- Gemcitabine will be given intravenously (via the vein) on days 1 and 8 of treatment over 30 minutes.
- Both drugs will be given every 21 days for 2 to 4 cycles prior to surgery. The days when you are receiving these medications, together with the days-off after them, may be referred to as a “cycle”.
- Sometimes your doctor may give you Carboplatin instead of Cisplatin, if your kidneys are not functioning well, intravenously (via the vein) on day 1 of treatment.

What will happen when I get my drugs?

- A blood test is done each cycle, on or about the day before each treatment day. The dose and timing of your treatment may be changed based on your blood counts and/or other side effects.
- You will be given a prescription for anti-nausea drugs to take 30 minutes before the treatment and may be on anti-nausea drugs the following 2 days also, each of the treatment weeks.
- Bring your anti-nausea pills with you to take before each treatment. You will also need to take your anti-nausea drugs at home after therapy. It is easier to prevent nausea than treat it once it has occurred, so follow directions closely.
- It is important that you increase your fluid intake throughout the treatment period. Drink lots of fluids for a few days before, the day of and a couple of days after each chemotherapy day (at least 6-8 cups a day).
- Avoid taking any medications such as ibuprofen (e.g. ADVIL®), ASA (e.g. ASPIRIN®) on the day that you will be receiving Cisplatin, as it may impact the rate that Cisplatin is eliminated from the body and increase risk of kidney problems.

MEDICATION INTERACTIONS

- Other drugs such as some antibiotics given by vein (e.g., tobramycin, vancomycin), and furosemide (LASIX®), phenytoin (DILANTIN®) and pyridoxine may ***interact*** with Cisplatin. Tell your doctor if you are taking the above or any other drugs, as you may need extra blood tests or your dose may need to be changed. Check with your doctor or pharmacist before you start taking any new drugs.

Serious Side Effects of Chemotherapy:

Unexpected and unlikely side effects can occur with any drug treatment. The ones listed below are particularly relevant to your treatment plan:

During treatment:

- **Infection:** The number of white blood cells that help fight infection may be lowered by the chemotherapy drugs, usually starting after about day 7 of each cycle. Your blood count is expected to return to normal by day 1 of the next cycle, and will be normal after the 4-5 months of chemotherapy drugs. If your white blood cell count becomes very low you could get a serious infection. **If you have a fever over 38°C or 100°F, call your cancer doctor immediately (24 hours a day) or go immediately to your nearest Hospital Emergency and tell the doctor you are on chemotherapy.**
- **Increased risk of bleeding:** The number of platelets (special blood cells that help your blood to clot normally after injury) may be lowered by the treatment. They are expected to return to normal by day 1 of next cycle. When the platelet count is low you may be more likely to bruise or bleed. Notify your cancer doctor promptly if you

develop large or numerous bruises, or unusual bleeding (e.g. nosebleed that won't stop, blood in stool, urine, or sputum). Try to avoid using ASA or ibuprofen, if other pain medications could be used, as they may increase the risk of bleeding or kidney problems, but if you need to use one of these medications, let your doctor know. For patients receiving Warfarin, a modification of the dose may be required based on blood test results (increased INR due to possible interaction with chemotherapy).

- **Tissue or vein injury:** Cisplatin can cause tissue injury if they leak out of the vein while being given. Report any sensation of burning or pain to your nurse immediately. Chemotherapy may cause some inflammation and/or scarring in the veins, which may make it difficult to start an IV. Your nurse will help your doctor assess whether a special intravenous device (PICC line or portacath) needs to be considered for your therapy. Pain or tenderness may occur where the needle was placed in your vein. If so, apply cool compresses or soak in cool water for 15-20 minutes several times a day.

During or after treatment:

- **Neuropathy:** Cisplatin can cause you to develop damage to the peripheral nerve endings (the nerves to the hands and feet, and rarely, the face). This can result in feelings of numbness and tingling, or sometimes painful burning sensations. You will need to be careful when handling things that are sharp, hot, or very cold. The majority of the times, these feelings develop after a number of treatments, are not severe, and will resolve fully over a period of months once treatment stops. Infrequently (<5%), these feelings might occur early, might be severe, or might not entirely resolve. There is more chance of problems being severe or lasting if treatment is very prolonged.
- **Hearing Problems:** One of the nerves which can be damaged by Cisplatin is the nerve which allows you to hear. This could result in you experiencing “tinnitus”, or ringing in the ears, or loss of hearing. Report to your doctor and/or nurse if you are experiencing these types of difficulties, and make sure they are aware of hearing problems, if these exist prior to any treatment.
- **Kidney Dysfunction:** Cisplatin can cause changes in kidney function, but this is not frequent with the doses used in this regimen. It is important that you are well-hydrated before and after treatment, to help avoid kidney damage from Cisplatin. Call your treatment centre if you having major difficulties with nausea, vomiting, or diarrhea after treatment, as you may need intravenous fluids and medications to help you through. Your doctor will check your blood prior to each treatment cycle, to make sure no significant damage is occurring to your kidneys from this drug.

Common chemotherapy side effects and management:

SIDE EFFECT	MANAGEMENT
Nausea and vomiting can occur with Cisplatin. You will need anti-nausea drugs for Cisplatin each week of treatment.	<ul style="list-style-type: none"> You will be given a prescription for anti-nausea drugs to take before your chemotherapy treatment and/or at home. It is easier to prevent nausea than treat it once it has occurred, so follow directions closely. Drink plenty of fluids. Eat and drink often and in small amounts. If you have a lot of nausea despite your medications, contact your clinic for advice.
Mouth sores may occur a few days after chemotherapy treatment and may last days or weeks. Mouth sores can occur on the tongue, gums, and the sides of the mouth or in the throat.	<ul style="list-style-type: none"> Brush your teeth gently after eating and at bedtime with a very soft toothbrush. If your gums bleed, use gauze instead of a brush. Use baking soda instead of toothpaste. Try baking soda mouth rinses (using 1/4 tsp baking soda in 1 cup warm water) and rinse several times a day. Try ideas in <i>Easy to chew, easy to swallow food ideas*</i>. Tell your doctor about a sore mouth, as your chemotherapy doses may need to be decreased if mouth sores are severe. Call your doctor if you are having difficulty eating or drinking due to pain.
Fatigue, unusual tiredness or weakness may occur commonly. As the number of treatment cycles increase, fatigue may get worse.	<ul style="list-style-type: none"> Do not drive a car or operate machinery if you are feeling tired. Try the ideas in <i>Your Bank of Energy Savings: How People with Cancer Can Handle Fatigue</i>. Let your doctor or nurse know if you continue to feel more tired than usual. Your energy level will improve with time after treatment is completed.
Hair loss sometimes occurs with Gemcitabine. Your hair will grow back once you stop treatment. Colour and texture may change.	<ul style="list-style-type: none"> Use a gentle shampoo and soft brush. Care should be taken with use of hair spray, bleaches, dyes and perms.
Skin rashes may occur.	<p>To help itching:</p> <ul style="list-style-type: none"> You can use calamine lotion. If very irritating, call your doctor during office hours. Otherwise make sure to mention it at your next visit.

If you experience symptoms or changes in your body that have not been described above but worry you, or if any symptoms are severe, contact _____ at telephone number _____