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COMPREHENSIVE CARE FOR WOMEN WITH GYNECOLOGIC CANCER

## **Hormonal Chemotherapy**

### **What names may be used for these medications?**

*Anti-estrogens:* tamoxifen (nolvadex)

*Progestins:* megestrol (megace), medroxyprogesterone (provera, depot provera)

*Gonadotropins:* leuprolide (lupron, depot lupron, eligard)

### **How and why are these medicines given?**

Hormonal chemotherapy is given orally or by intramuscular injection and is used to treat many different types of cancers. High doses of progestins are sometimes used as temporary appetite stimulants as well. We use hormones most commonly in our office for the treatment of uterine cancers and occasionally recurrent ovarian cancer. These are typically given individually or in combination but may rarely be combined with other chemotherapy drugs as well. An injection can be received in the office or sometimes given at home by family or friends. For tablets, a prescription is filled at your local pharmacy, and the pills should then be taken as directed by your doctor.

### **How do these medicines work?**

Hormones bind to receptors on the surface of cells or inside the cells and activate or inhibit various pathways responsible for cellular activity and reproduction. Some hormones can also serve to “trick”

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the body into thinking that other hormone levels are at appropriate levels and thus cause the body to decrease its own production of related hormones; this decreased hormone production may allow certain types of tumors to shrink. All of these steps can alter the growth of cancer cells. Both tamoxifen and megestrol act as anti-estrogens. Leuprolide most often acts by the “tricking” mechanism described above, but ultimately acts to lower natural estrogen and testosterone levels.

Hormones are inactivated by the liver and later cleared from your body through the biliary system (tamoxifen) or kidneys (megestrol, medroxyprogesterone, leuprolide). It is therefore important that you keep yourself well hydrated (8-10 glasses of water per day) in efforts to keep the kidneys working at their best. It is also very important for you to be sure the 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 as these can sometimes alter the liver’s ability to inactivate these drugs. We will review your medication list at each visit, and we will monitor your liver and kidney function through blood tests prior to each treatment cycle.

## **How often are these medicines given?**

There are numerous ways to prescribe these medications. The best way for you and the total number of treatments recommended will vary based on your clinical circumstances, but an initial plan will be outlined for you by your doctor. 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 refill your prescription. It is, of course, very important to keep all of your appointments for chemotherapy and lab testing.

## **What side effects do these medicines cause?**

There are many possible side effects of all chemotherapy drugs including hormones. The following is only inclusive of the most common or serious possibilities from hormonal chemotherapy.

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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 minimal (may experience thinning) with hormonal chemotherapy. This can be minimized by treating your hair gently and avoiding chemical treatments or color applications. Hair growth should return upon completion of treatment.
  - ❖ Nausea and vomiting are rare and only minimal if experienced. If needed, you will be given prescriptions for medications to control nausea.
  - ❖ Hormones can increase your risk of blood clots. If you note any swelling of your legs, pain in the calves, or trouble breathing, you should call the doctor immediately.
  - ❖ Menopausal symptoms such as hot flashes occur in as many as 30% of women taking tamoxifen. Leuprolide may cause hot flashes as well, especially if you still have normally functioning ovaries. Megestrol and medroxyprogesterone do not cause hot flashes and in fact are used to treat hot flashes in some circumstances.
  - ❖ Vaginal bleeding or discharge can be experienced with hormonal chemotherapy. Discharge is relatively minimal and not typically problematic but may require a panty liner. Bleeding is uncommon if you have had a hysterectomy. If you still have a uterus however, bleeding may be seen and should be reported to your doctor if it occurs. Tamoxifen is associated with an increased risk of uterine cancer in women who have not undergone hysterectomy, but interestingly is used to treat uterine cancer in some circumstances.
  - ❖ Joint pains may be experienced while receiving hormonal chemotherapy. Over the counter anti-inflammatory agents (ibuprofen, acetaminophen) should be adequate to control any discomfort.
  - ❖ Mild depression can be encountered with megestrol or medroxyprogesterone.
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- ❖ Mild swelling of your feet and ankles may occur while receiving hormonal therapy.
  - ❖ Hormonal therapy may increase serum cholesterol levels, but these typically return to normal once treatment is stopped. It is not usually necessary to monitor cholesterol any more often than normal while taking hormones.
  - ❖ Loss of bone mineral density (osteopenia, osteoporosis) may occur if you take certain hormonal chemotherapies for a prolonged period of time. Your doctor will discuss this with you if appropriate and bone mineral density monitoring may be required (DEXA scanning).
  - ❖ Allergic reactions to hormones are rare but can occur.
  - ❖ Other less common side effects may include headaches, breast discharge, tumor pain, and visual disturbances. If you think you may be experiencing any of these side effects, be sure and bring it to your doctor's attention at your next office visit.
  - ❖ Hormones can cause problems with fertility. Abnormal periods may be encountered, 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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