

# Hormonal Endocrine Therapy

## What Is Hormonal Therapy?

Hormonal therapy medicines are systemic treatment for hormone-receptor-positive (HR+) breast cancers. Hormone receptors on breast cells receive signals from hormones, and "turn on" cell growth and proliferation. Hormonal therapy medicines treat HR+ breast cancers by either: 1) lowering the amount of the hormone estrogen in the body, or 2) blocking the action of estrogen in the body. Because it targets estrogen, hormonal therapy is also known as anti-estrogen therapy.

## Most breast cancers are Hormone Receptor Positive.

- About 80% of breast cancers are estrogen-receptor (ER) positive.
- About 65% of ER positive breast cancers are also progesterone-receptor (PR) positive.
- About 13% of breast cancers are ER positive and PR negative.
- About 2% of breast cancers are ER negative and PR positive.

If a cancer is either ER and/or PR positive, it is considered HR positive.

## What are the different types of hormonal therapy?

There are three different types of hormonal therapy medicines:

- SERMs** (selective estrogen receptor modulators): Tamoxifen
- AIs** (Aromatase Inhibitors):
  - Arimidex (anastrozole)
  - Aromasin (exemestane)
  - Femara (letrozole)
- ERDs** (estrogen receptor downregulators): Faslodex(fulvestrant)
  - Currently only used in the metastatic setting

Both Tamoxifen and AI are pills taken orally once a day. The ASCO guidelines were updated in July 2014 and now recommend at least 5 years, and up to 10 years of hormonal therapy.

## Who needs hormonal therapy?

Hormonal therapy medicines are used:

- In "high risk" patients who have not been diagnosed with breast cancer to lower their risk of developing HR positive breast cancer
- In HR positive DCIS breast cancer patients to lower the risk of a local recurrence or new HR positive breast cancer
- In stage I-III HR positive breast cancer patients to lower the risk of local or systemic recurrence
- In metastatic HR positive breast cancers to slow the growth and spread of the cancer

### **When is hormonal therapy given?**

In most cases, hormonal therapy is given after surgery – at the completion of all surgery, chemotherapy, and radiation. Sometimes, if it is unclear whether you need chemotherapy or not, but pre-operative therapy is needed to shrink the tumor, hormonal therapy is prescribed before surgery. Your doctors will help you decide which timing is best for you.

### **What are the side effects of hormonal therapy?**

In general, hormonal therapy is well tolerated and does not have the toxicity associated with chemotherapy. The most common side effects of both Tamoxifen and AI are menopausal symptoms like [hot flashes](#) and mood changes. In addition,

- Tamoxifen is associated with a 1% risk of forming blood clots in your legs that can travel to your lungs as well as cause a stroke, and a 0.2% risk of endometrial cancer (cancer of the lining of the uterus).
- Aromatase Inhibitors can decrease bone density leading to osteoporosis, and can cause [body aches or stiffness in the joints](#).

Often, the side effects become less severe over time. Talk to your doctor about any side effects you may be experiencing to see what treatment options are available.