

## Hormonal Therapy

NEHA N. PATIHAL, B.A. AGLAVE AND M.O.LOKHANDE

See end of the article for authors' affiliation

**B.A.AGLAVE**

Department of  
Biotechnology,  
Institute of Life  
Sciences, H.P.T. Arts  
and R.Y.K. Science  
College,  
NASHIK (M.S.)  
INDIA

### *What is hormonal therapy?:*

Hormonal therapy is a type of whole-body (systemic) medicine used to lower the risk of a hormone-receptor-positive breast cancer from coming back or a new hormone-receptor-positive breast cancer from developing. A systemic treatment goes through the whole body (or system) rather than just targeting one organ.

The goal of hormonal therapy is to get rid of cancer cells anywhere in the body that might be left behind after initial treatment with surgery, chemotherapy, or radiation.

Hormonal therapy is like an insurance policy—a way to lower your risk of recurrence beyond what you can do with surgery, chemotherapy, or radiation. If you have had breast cancer, you hope that your treatments have killed all the cancer cells, but you can't always be sure.

For many women with hormone-receptor-positive disease, hormonal therapy can be just as important as the other forms of treatment. In fact, hormonal therapy can be even more effective than chemotherapy. You and your doctor may consider hormonal therapy alone or in sequence with chemotherapy, depending on your situation.

The different hormonal therapies work to reduce the effect of estrogen on the body so that it can no longer turn on the growth of hormone-receptor-positive breast cancer cells. The idea is to starve breast cancer cells of the estrogen that they need to grow.

The different treatments either block hormone receptors, eliminate hormone receptors, or lower estrogen levels in the body.

### *Hormonal therapy can be used:*

To lower your risk of breast cancer if you are at high risk but have not had breast cancer for non-invasive breast cancer (DCIS) to lower your risk of cancer coming back after first treatments for breast cancer, such as surgery, chemotherapy, and radiation, to lower your risk of cancer coming back or a new cancer

developing for invasive breast cancer, before any other treatment, to shrink a large tumor for metastatic (advanced) disease

There are hormonal therapies for both pre- and post-menopausal women. However, hormonal therapy is only effective in women with cancers that have hormone receptors (hormone-receptor-positive breast cancers). Cells can have estrogen receptors, progesterone receptors, both, or neither.

If your doctor has told you that you will need multiple types of treatment, such as surgery, chemotherapy, and radiation, usually you will take hormonal therapy last, after completing your other treatments. Any treatments you have after your first type of treatment are called “adjuvant.”

But you can also have hormonal therapy first, before surgery, to shrink a large tumor (larger than two centimeters, which is about one inch). When you have hormonal therapy before anything else, it is called “neoadjuvant” treatment.

### *How do the hormones work?:*

Estrogen and progesterone travel through the bloodstream and find their matching receptor sites on both healthy cells and cancer cells. Receptors are very specialized protein molecules that sit on the outside or inside of the cells in your body. They act like an on-off switch for a particular activity in the cell. If the right substance comes along that fits into the receptor—like a key fitting into a lock—the switch is turned on and a particular activity in the cell begins.

Many breast cancers are hormone-dependent—which means that estrogen and progesterone stimulate their growth by “turning on” hormone receptors in the cancer cells. Without these hormones, the cancer cells are not stimulated to grow. They wither, and eventually they may die.

Estrogen and progesterone play roles in the development of certain breast cancers:

### **Key words :**

Harmonal  
therapy,  
Chemotherapy

Accepted :  
July, 2009