
Chemotherapy or Hormonal Therapy: Why Do I Need It?

“Why do I need to have chemotherapy after I have had surgery and there is no sign of cancer in my body?”

Most patients ask or wonder why they need treatment after surgery when the doctors can find no other cancer present in the body. The purpose of chemotherapy is to rid the body of any microscopic remains of cancer after surgery. Tiny cells from the cancer may have invaded your blood or lymphatic system. This invasion means that the blood may have carried cancer cells to other parts of your body and they are too small to be seen by any type of test, X-rays or scans available. These cells can travel throughout your blood and/or lymph system, enter distant organs and begin to grow. It may take years before this new growth of cancer cells is large enough to be seen by any X-ray or scan. Chemotherapy is recommended to prevent this growth. Chemotherapy enters into the blood system and travels to all of these potential sites.

Chemotherapy after surgery, called **adjuvant chemotherapy** (in addition to surgery), can be likened to using a water hose to put out the remaining ashes on a smoldering campfire. You use the water on the fire because there are some wisps of smoke rising from the ashes. You don't know if the fire will rekindle or not. To eliminate the lingering doubt, you spray the ashes with a water hose. The ashes may have never rekindled, but for safety's sake, you take every precaution to prevent future problems. This precaution can prevent a future disaster.

When your doctor recommends chemotherapy after surgery, even though there is no evidence that cancer cells are still growing, your physician is taking precautions to assure that no future problems arise. Your healthcare provider is dousing the ash pile (giving chemotherapy) for safety's sake (to prevent any recurrence).

Hormonal therapy after surgery or chemotherapy can be compared to throwing a wet blanket over the ashes. Just as a wet blanket would keep the smoldering ashes from coming to life, hormonal therapy prevents cancer cells from dividing and growing but it does it in a different way than chemotherapy.

Hormonal therapy works by fooling or tricking the cancer cells while chemotherapy works by killing the cells. Certain hormones in the body cause breast cancer cells to grow. Hormonal therapy drugs, most often tamoxifen, resemble the hormones the cancer cells need in order to grow. The cancer cells, believing the drug is a true growth hormone, allow the hormonal therapy drug to enter its cell sites. The hormonal therapy tricks the cancer into thinking it is the real growth factor when, in reality, it is a fake. Because it is a drug, it stops the growth process from taking place as usual. The hormonal therapy drug prevents the growth of the cancer cell.

This trickery works much like a lock and key. The hormonal therapy may be compared to a key and the cancer cell to a lock. This process is similar to having a key that will fit into a car door lock but the same key, even though it fits into the ignition starter, cannot start the engine. Thus, the car cannot be started even though there is a key in the lock. Tamoxifen and other anti-hormonal therapies fit into the hormonal receptors on cells but do not start or promote cell growth.

Hormonal therapy (like the wet blanket) must be used for a longer period of time than chemotherapy (the water hose) to prevent the rekindling of the ashes. Hormonal therapy is usually given for 5 - 10 years, whereas chemotherapy is usually given over a period of several months.

When your oncologist suggests chemotherapy or hormonal therapy, he/she is taking every effort to prevent recurrence of your cancer.

Additional Information:
