HOW CHEMOTHERAPY WORKS AGAINST CANCER

By
Dr. Murali Subramanian
Medical Oncologist
How Chemotherapy Works against Cancer?

Normally, cells live, grow and die predictably. Cancer occurs when certain cells of the body continue to divide and form more cells without the ability to stop this process. Chemotherapy protocols lead to the destruction of cancer cells by preventing the cells from multiplying. Unfortunately, during the treatment process with chemotherapy protocols, healthy cells can also be affected, especially those that by their nature should be divided rapidly.

Chemotherapy is used to:

a. Treat cancer

Chemotherapy can be used to cure cancer, lessen the chance it will return, or stop or slow its growth.

b. Ease cancer symptoms

Chemotherapy can be used to shrink tumors that are causing pain and other problems

Who Receives Chemotherapy?

Your treatment plan will depend on the type of cancer, the drugs used in chemotherapy, the goals of treatment and the response of your body. Chemotherapy can be used on its own or with other treatments. You can receive treatment every day, every week or every month. There may be some pauses between treatments so that your body has the opportunity to produce new healthy cells. You can take medicines orally, injections, cream or intravenously.
HOW CHEMOTHERAPY WORKS AGAINST CANCER
How Chemotherapy Is Used with Other Cancer Treatments?

There are several ways to use chemotherapy:

- As a treatment in advanced or metastatic disease, where there is no local treatment alternative.
- As a complementary therapy (adjuvant) to local treatments (surgery or radiotherapy).
- As an induction or neoadjuvant treatment in patients with localized tumors. It is used as a treatment prior to surgery and radiotherapy, with the intention of decreasing the likelihood of distant metastasis, using more conservative techniques in surgery, by decreasing the tumor size, and promoting knowledge of the sensitivity of the tumor to the drugs used.
- As a direct instillation in specific regions: in the cerebrospinal fluid, in the pleural, pericardial and peritoneal cavities.
HOW CHEMOTHERAPY IS USED WITH OTHER CANCER TREATMENTS
Chemotherapy Can Cause Side Effects

Of course, anti-tumor chemotherapy has a number of side effects. The drugs used in this case are much more powerful than the antibiotics that we can get in the pharmacy with a normal prescription.

The most common side effect is fatigue, which is feeling exhausted and worn out. You can prepare for fatigue by:

1. Asking someone to drive you to and from chemotherapy
2. Planning time to rest on the day of and day after chemotherapy
3. Asking for help with meals and childcare on the day of and at least one day after chemotherapy
HOW YOUR DOCTOR DECIDES WHICH CHEMOTHERAPY DRUGS TO GIVE YOU
How Your Doctor Decides Which Chemotherapy Drugs to Give You?

There are many different chemotherapy drugs. Which ones are included in your treatment plan depends mostly on:

1. The **type of cancer** you have and how advanced it is
2. Whether you have had chemotherapy before
3. Whether you have other health problems, such as diabetes or heart disease

Where You Go for Chemotherapy

You may receive chemotherapy during a hospital stay, at home, or as an outpatient at a doctor’s office, clinic, or hospital. Outpatient means you do not stay overnight. No matter where you go for chemotherapy, your doctor and nurse will watch for side effects and help you manage them.
WHERE YOU GO FOR CHEMOTHERAPY
How Often You Receive Chemotherapy

Treatment schedules for chemotherapy vary widely. How often and how long you get chemotherapy depends on:

1. Your type of cancer and how advanced it is
2. Whether chemotherapy is used to:
   a. Cure your cancer
   b. Control its growth
   c. Ease symptoms
3. The type of chemotherapy you are getting
4. How your body responds to the chemotherapy

You may receive chemotherapy in cycles. A cycle is a period of chemotherapy treatment followed by a period of rest. For instance, you might receive chemotherapy every day for 1 week followed by 3 weeks with no chemotherapy. These 4 weeks make up one cycle. The rest period gives your body a chance to recover and build new healthy cells.
HOW OFTEN YOU RECEIVE CHEMOTHERAPY
**Missing a Chemotherapy Treatment**

It is best not to skip a chemotherapy treatment. But, sometimes your doctor may change your chemotherapy schedule if you are having certain side effects. If this happens, your doctor or nurse will explain what to do and when to start treatment again.

**How Chemotherapy May Affect You**

Chemotherapy affects people in different ways. How you feel depends on:

1. The type of chemotherapy you are getting
2. The dose of chemotherapy you are getting
3. Your type of cancer
4. How advanced your cancer is
5. How healthy you are before treatment

Since everyone is different and people respond to chemotherapy in different ways, your doctor and nurses cannot know for sure how you will feel during chemotherapy.