

Chemotherapy

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What is chemotherapy?

Chemotherapy is a type of treatment that uses chemicals (drugs) to destroy cancer cells. The goal of chemotherapy is to stop or slow the growth of cancer cells. As the chemotherapy drugs are powerful, they also damage some healthy cells, which leads to side effects.

Why is chemotherapy given?

Chemotherapy is given for a variety of purposes:

- To cure a specific cancer
- To relieve symptoms
- To control tumor growth when cure is not possible
- To kill remaining cancer cells after surgery or radiation therapy – adjuvant chemotherapy
- To shrink tumors before surgery or radiation – neoadjuvant chemotherapy
- For cancer that comes back (recurrent cancer)
- For cancer that spreads to other parts of body (metastatic cancer)

Which factors determine the chemotherapy drugs given?

The chemotherapy drugs are chosen based on the following factors:

- Type of cancer
- Stage of cancer
- Patient's age
- Overall health
- Previous cancer treatments
- Your goals and preferences

Where is chemotherapy given?

Where chemotherapy is given depends on the drugs and their doses. Chemotherapy may be given:

- At home (oral drugs)
- In a hospital
- In day care chemotherapy unit

How often and how long is chemotherapy given?

Treatment schedules for chemotherapy vary widely. How often and how long one gets chemotherapy depends on:

- The type of cancer and how advanced it is
- Whether chemotherapy is used to:
 - Cure cancer
 - Control its growth
 - Ease symptoms
- The type of chemotherapy
- How the body responds to the chemotherapy

Chemotherapy is administered in cycles. A cycle is a period of chemotherapy treatment followed by a period of rest. The duration of the chemotherapy along with the rest period makes up a cycle. The rest period is designed to allow the body to recover and build new healthy cells.

Chemotherapy may be given for a fixed time such as six months or a year, or may be given as long as it works.

How is chemotherapy given?

There are various ways of giving chemotherapy depending on the drug:

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- Intravenous infusion – directly into a vein through
 - IV line
 - Central line
 - Port
 - Pump
- Oral – in the form of tablets
- Injection – in a muscle
- Intrathecal – into the space between the layers of tissue that cover the brain and spinal cord

What are the side effects of chemotherapy?

Each drug has different side effects, and not everyone gets every side effect. Most side effects can be managed effectively and go away once chemotherapy gets over. The common possible side effects that occur during chemotherapy include:

- Nausea and vomiting
- Hair loss
- Fatigue
- Hearing loss
- Neutropenia (low white blood cells) – susceptibility to infections
- Thrombocytopenia (low platelets) – blood clotting problems
 - Easy bruising
 - Nosebleeds
 - Bleeding gums
 - Difficult to stop bleeding from cuts
- Anemia (low red cell count) – tiredness, breathlessness, palpitations
- Mucositis (inflammation of the mucous membrane) – generally in mouth causing burning and pain, ulcers
- Loss of appetite

- Dry skin and brittle nails
- Cognitive problems – attention, thinking, memory
- Diarrhea or constipation
- Depression

Chemotherapy drugs can also cause side effects that don't become evident until months or years after treatment. Late side effects vary depending on the chemotherapy drug but can include:

- Damage to lung tissue
- Heart problems
- Infertility
- Kidney problems
- Nerve damage (peripheral neuropathy)
- Risk of a second cancer