

What Effect Will Chemotherapy Have On My Heart?

The answer depends on which chemotherapy regimen is prescribed. Just as there are specific antibiotics used for different types of infections, there are specialized chemotherapy regimens used to treat different cancers. Like antibiotics, chemotherapy drugs can cause side effects. Most chemotherapy side effects happen when the patient is receiving the chemotherapy. Generally, when therapy stops, the symptoms end.

Unfortunately, there are exceptions. A few chemotherapy drugs increase a patient's risk for problems after treatment stops. These include the drugs used to treat leukemia, lymphoma and breast cancer, among others. Radiation treatments, when given in large doses to parts of the body near the heart, can cause heart problems. This article will discuss the problem of cardiotoxicity, or heart damage, from cancer treatment, what cardiotoxicity is, what oncologists do to avoid this problem, recommended follow-up for patients who have received cardiotoxic drugs or radiation therapy to the chest, and, what the patient can do to protect the heart.

Chemo or radiation therapy can cause weakening of the heart muscle, which can cause pumping and circulation problems. There is no question that radiation therapy to the chest saves lives in patients with breast cancer, lung cancer, and lymphomas such as Hodgkin Disease. However, radiation can damage the heart if the part of the body receiving the radiation includes the heart. Large doses of radiation to the heart can irritate the sac surrounding the heart, causing symptoms such as chest discomfort, shortness of breath and difficulty swallowing. Radiation could damage the heart valves, the muscle itself, the 'electrical wiring' called the conduction system,

which tells the heart to beat, and the coronary arteries, causing narrowing of these arteries.

Today, radiation oncologists often use IMRT, which is a very precise radiation technique that directs treatment to the tumor areas. Very little radiation is delivered to healthy tissue.

A number of chemotherapy drugs can increase the risk of heart disease. These drugs can cause damage to the heart muscle, irregular heartbeat, and narrowing of the blood vessels in the heart. To avoid these problems, oncologists carefully calculate the doses of chemotherapy using height and weight, and tailor therapy to each patient. Heart function is checked before starting treatment, and then rechecked if there is any sign of trouble. If there are problems, the drug is stopped and other medical treatments are given to support the heart.

Patients who have received radiation to the chest or chemotherapy should talk with their oncologists about recommended surveillance. The oncologist can make an informed decision once she/he is aware of previous treatment.

Patients should make every effort to eliminate other risk factors for heart disease. This includes not smoking, avoiding alcohol, and getting plenty of exercise. Cholesterol levels should be carefully monitored and blood pressure controlled. If symptoms such as chest pain, lightheadedness, severe fatigue, leg swelling, shortness of breath—especially when lying flat, occur, they should promptly report it to their oncologist or primary care doctor.

The risks to the patient from cancer are far greater than the risks caused by therapy. Cancer is and can be deadly. We ask patients to accept the risk of side effects, so we can aggressively treat the cancer which can take their life.



Robert A. Dichmann, M.D.
Hematology/Oncology



Todd M. Erickson, M.D.
Hematology/Oncology
Internal Medicine



April Kennedy, M.D.
Hematology/Oncology



Stephen J. Vara, M.D.
Hematology/Oncology
Internal Medicine

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