



Recommendation for Follow-up After Completion of Therapy

By: Anne Warwick, MD, and Yevgeny Grigoriev, MD

Treatment of childhood cancer has made great progress. However, your family doctor may not have experience with survivors of childhood cancer. She or he may not be aware of what follow-up exams are suggested given your medical history. If you have been off treatment for five or more years and you are not returning to your treating institution, the following guidelines should be of interest to your physician.

RECOMMENDED ANNUAL FOLLOW-UP

Complete Physical Examination
Blood pressure measurement
&
Laboratory tests:
CBC
WBC Differential
Liver function tests
Renal function tests
Urinalysis

Why are these tests suggested?

Some of the treatment(s) you may have received can affect the body many years after your therapy is finished. It is important to see if any of these effects are present so that your doctor can treat them, if necessary.

CBC and WBC differential. These tests measure the number and type of cells present in the blood: these are white blood cells, red blood cells, and platelets.

Some chemotherapy drugs can affect how well the bone marrow works to make normal blood cells.

Sometimes kidney dysfunction can affect the production of red blood cells or hemoglobin (Hb).

Radiation therapy, if it is to a large area such as the whole abdomen, can make the bone marrow work less well and produce fewer blood cells than normal.

Liver function blood tests (usually AST, ALT, AlkPhos, Bilirubin). These tests measure how “irritated” the liver is as well as how well it is making bile to help with digestion of food.

Some chemotherapy drugs can irritate the liver. Most of these effects occur during or shortly after therapy, but some can last for a long time and affect how well your liver works.

Renal function blood tests (Usually BUN and plasma Creatinine and GFR). These tests measure how well your kidneys are working. If you have had one or

part of your kidneys removed, the one (or parts) that are left behind have to work harder to filter the blood.

Urinalysis + 24-hour urine collection. This test measures the amount of protein and sugar that pass through the kidneys and are excreted in the urine. Normally there will be very little of either.

Blood pressure measurement. Sometimes high blood pressure can happen when the kidneys are not working well and as early signs of renal failure. High blood pressure is associated with a higher risk for developing atherosclerotic heart disease and strokes.

If you received Ifosfamide (or Cisplatin):

Laboratory tests such as pH of the blood and urine, electrolyte plasma and urine level (K, P, bicarbonate and uric acid) help with early detection of Fanconi Syndrome (generalized dysfunction of proximal tubule).

If you received Adriamycin, also called Doxorubicin: Adriamycin can make the heart muscle weak. This is a cumulative effect, that is, the more medicine you received, the greater your chances of having a problem.

The echocardiogram or MUGA scan will look to see how well your heart muscle is working.

Pregnancy and sudden vigorous exercise can place strain on the heart. It is important to know, before entering into these activities, how well your heart is working. It will be important for your doctors to be aware and continue to monitor for this potential problem. A heart specialist (cardiologist) should be consulted and tests done such as MUGA scan or echocardiogram prior to engaging in any vigorous sports, planning pregnancy and during the last trimester of pregnancy.

If you had chest irradiation as a girl:

You may be at an increased risk for developing breast cancer. Mammography is one way to screen for early tumors. Mammograms should be done annually in mature women beginning ten years after chest irradiation. (Boys are not at increased risk of breast cancer if they received lung irradiation.)

If you were irradiated or treated for CCSK:

Yearly skeletal survey and/or bone scan (x-ray) until you are fully grown, then every 5 years indefinitely. The bone scan and skeletal survey are done to diagnose bone irregularities. The NWTs recommends that both be done as each picks up conditions the other doesn't.

