

Neutropenia and Nadir

WHAT IS NEUTROPENIA?

Neutropenia, pronounced noo-troh-PEE-nee-uh, is an abnormally low number of white blood cells (neutrophils). These cells are the body's main defense against infection. Neutropenia is a common side effect of chemotherapy treatment and increases your risk for infections. If you have neutropenia, doctors will sometimes refer to this as having a "low ANC," or absolute neutrophil count.

WHAT IS NADIR?

Nadir is a term that basically means low point. When a person with cancer reaches their "nadir" following each chemotherapy cycle, it means that the person's blood cell counts are the lowest they will be during that treatment cycle. Each chemotherapy treatment comes with a nadir period.

While the term nadir is used in reference to all blood cell counts, the concern during nadir is the drop in white blood cells, since they help your body fight infection.

After the nadir, your blood cell count will start to rise, decreasing the risk of danger and recovering to a safe level before your next treatment. Your next dose of chemotherapy will only be given after your blood counts have left the nadir and recovered to a safe level.

WHAT HAPPENS DURING MY NADIR?

If you're in your nadir period, the good news is that you just completed another round of chemotherapy and are one step closer to having this behind you. However, you may be more likely to develop an infection during your nadir because your body's first line of defense (white blood cells) will be at its lowest point. You should carefully watch for signs and symptoms of infection during this time.

You can also take extra precautions to prevent infections, like washing your hands regularly and staying away from sick people.

To help strengthen your immune system during chemotherapy, your doctor may prescribe medicine that will help your body make more white blood cells. The medicine may shorten the duration of your nadir.

HOW DO I KNOW WHEN MY NADIR IS?

Your doctor or nurse will tell you. Chemotherapy treatment will usually involve a number of doses (sometimes called cycles). In general, starting approximately 7-12 days after each chemotherapy dose, and lasting for 5-7 days, the number of white blood cells in your body will be at its lowest.

For example, if you have a dose of chemotherapy on August 7, you are at highest risk of getting an infection between August 14 and August 19. This period varies slightly depending upon the chemotherapy drug, or combination of chemotherapy drugs, given.

WHAT CAN I DO?

- Find out from your doctor and/or nurse exactly when your white blood cell count is likely to be at its lowest and ask for their advice on the steps

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you can take to avoid picking up an infection.

- Wash your hands regularly and try to avoid situations where you may come into contact with people who are sick.
- Take your temperature any time you feel warm, flushed, chilled, or not well, and call your doctor or nurse immediately if you have a temperature of 100.4°F (38°C) or higher.
- Call your doctor immediately if you develop a fever or are not feeling well.
- To find out your risk for developing a low white (neutropenia), take our short Risk Assessment Quiz.