Breast Cancer – Adjuvant Therapy
Low White Blood Cell Count Precautions

Adjuvant therapy is any treatment given after breast surgery. This may include chemotherapy, hormonal therapy, targeted drug therapy, radiation therapy, or a combination of treatments.

White blood cells play an important part in fighting infection. When your white blood cells (WBCs) fall to below normal, you are more at risk for infection. Treatments, such as radiation or chemotherapy, may cause your WBCs to go below normal.

A neutrophil is a type of white blood cell. Neutrophils make up half or more of your white cells. Neutrophils are measured by an Absolute Neutrophil Count, also called ANC. Your risk of infection goes up as your WBCs and neutrophils fall below normal.

If your WBC falls below 2,000 or your ANC is 1,000 or lower, you are at increased risk for infection. Here is a table to help you understand how the risk of infection changes with your cell counts:

<table>
<thead>
<tr>
<th>WBC Count</th>
<th>Absolute Neutrophil Count</th>
<th>Risk of Infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000</td>
<td>5,000</td>
<td>Normal</td>
</tr>
<tr>
<td>5,000</td>
<td>2,500</td>
<td>Low</td>
</tr>
<tr>
<td>2,000</td>
<td>1,000</td>
<td>Moderate or Increased</td>
</tr>
<tr>
<td>1,000</td>
<td>500</td>
<td>High</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>Very High or Extreme</td>
</tr>
</tbody>
</table>

When your WBCs and neutrophils are low, you are at a higher risk for developing an infection. The germs that are always present in your body are the common cause of these infections. Infection cannot always be prevented, but you can reduce your chance of getting an infection by using the guidelines in this handout.

This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.

© May 21, 2013. The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute.
Ways to Help Prevent Infection When Your Risk is Higher

You have an increased risk for infection when your WBCs fall below 2,000 or your ANC is 1,000 or lower.

- Clean your hands often, especially before and after meals and after using the toilet. Use an antibacterial soap or Chlorhexidine Gluconate.

- Alcohol hand sanitizer can also be used. You may need to limit your use of hand sanitizer if you are being treated with Taxane. It may cause your skin to become irritated.

- Inspect your skin closely for cuts, rashes, redness, swelling, tenderness, itching, drainage or odors. Call your doctor or nurse if you have any of these signs or if you cut yourself and the cut does not heal in three days.

- Brush your teeth after eating and before bedtime with a soft toothbrush. Swish and spit with a mouthwash that does not have alcohol in it. Report any redness, white patches, cuts, or bumps on the inside of your mouth, gums, or lips. Also report any sore throat or a cough, especially if you are coughing up anything.

- Keep your fingernails and toenails clean and cut short.

- After urinating or having a bowel movement always wipe front to back and wash hands thoroughly afterwards. A very soft toilet tissue is recommended. Wet wipes may be helpful for cleaning the area and to prevent skin irritation.

- Call your doctor or nurse if you have any change in your urine color or odor, burning when you urinate, a need to urinate more often, or if you feel like you have to go right away.

- Call your doctor if you have watery diarrhea. Your doctor may tell you to take medicine (Imodium) to control this problem. If you have watery diarrhea more than three times after taking the medicine you should call your doctor again.

- Wear gloves when gardening.

- If you are not feeling well check your temperature. **Call your doctor if you have a fever of 100.4 degrees Fahrenheit (38 degrees Celsius) or higher.**

A fever can be life threatening if not treated. **Call your doctor right away if you have a fever.**
Call your doctor if you have any of the following:

- Chills
- Sweating a lot
- Bloody diarrhea or fever with diarrhea
- Feel more tired than usual
- Warm or flushed skin
- Feel cool and your skin is clammy
- Restless, irritable or confused

- Get plenty of rest and exercise. Try to get 6 to 8 hours of sleep a night. Walk, or at least sit up in the chair, 3 to 4 times a day.

- If you have any type of vascular device, learn how to take care of it properly. Closely follow the instructions to care for it. Be sure anyone who touches your catheter or provides care for your vascular access device (central line or implanted port) has cleaned his or her hands first. Tell your doctor or nurse if the skin around it looks infected (red swollen, drainage that looks like pus) or changes in any way.

Avoid These Things

Prevent infection by avoiding the following:

- People with contagious diseases including colds, sore throats, cold sores, diarrhea, or flu, “pink eye”, chicken pox, measles or mumps.

- People who have recently received a Sabin oral polio, rubella, measles, mumps, yellow fever, smallpox, chicken pox or nasal-spray flu vaccine.

- Dentures that do not fit well may cause mouth sores that can get infected.

- Dust and chemical irritants such as cleaning supplies.

- Rectal thermometers, enemas or suppositories unless your doctor has told you it is okay to use these.

- Use stool softeners or laxatives to avoid being constipated. Try to have a bowel movement at least every other day.

- Do not allow your rectal areas to become sore, for example, from
diarrhea. Use a sitz bath for comfort and keep the area clean after each diarrhea stool. Use lotions to decrease skin irritation and reduce the risk of infection.

- Ask your doctor before getting vaccinations.

**Diet and Food Guidelines for When Your WBCs are Low**

Clean handling of food can help avoid infections caused by food germs. Below are some tips on how to handle and prepare food when your WBCs are low:

- Refrigerate food to prevent spoiling. If the food becomes spoiled, do not eat it. It should be thrown out.
- Replace dishcloths and dishtowels daily. If you use a sponge, sanitize it daily in a bleach solution, or heat in a microwave oven for one minute or run it through the dishwasher and dry.
- Use paper towels and a disinfecting cleaning spray to wipe counters down after cutting/handling raw meat.
- Do not use canned foods if the end or lid of the can is bulging or if the can is dented or the seam is rusted.
- Never eat anything with mold on it.
- Do not eat unwashed or spoiled fruits and vegetables. If the fruit or vegetable has a mushy spot, a brown spot, or any signs of insects, do not use any part of it.
- Pre-cut fresh fruits and vegetables in a deli and grocery store may not be fresh or washed well. Look at the food and check the expiration date on the package before buying the item.
- Always cook ground meat until it is well done. Wash your utensils and disinfect the cutting board with bleach between meats and other foods.
- Wash your hands with an antibacterial soap before handling any food. Also wash your hands between handling raw meats and other foods.
- If you are unsure about the safety of any food, do not take a chance. Be safe and throw it out.
- Foods stay fresher if you buy them in smaller containers.
Leftovers should not be refrigerated for more than three days. If you have leftovers that you can’t eat in that time, freeze them. Frozen foods can be kept for 6 months to 1 year.

You play an important part in protecting yourself from infections when your WBCs are low. Follow these guidelines and remind others to do the same. If you have questions about these guidelines, talk to your doctor, nurse or dietitian. Some of the guidelines may be adapted to better meet your needs.