Granulocyte Colony-Stimulating Factor (GCSF) Support

What are GCSF medications?
GCSF medications stimulate bone marrow to produce white blood cells.

What are these medications used for?
Our bodies need white blood cells to fight infection. Chemotherapy can affect the bone marrow and reduce the number of these white cells. This increases the risk for infections. GCSF medications increase production of white blood cells which helps to reduce infection risk.

What are the common names for these medications?
- Neupogen (filgrastim)
- Granix (tbo-filgrastim)
- Zarxio (filgrastim-sndz)
- Neulasta (pegfilgrastim)
- Neulasta Onpro (pegfilgrastim)

How are these medications typically given?

<table>
<thead>
<tr>
<th>Drug</th>
<th>How often given:</th>
<th>Method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neupogen</td>
<td>Daily</td>
<td>Injection</td>
</tr>
<tr>
<td>Granix</td>
<td>Daily</td>
<td>Injection</td>
</tr>
<tr>
<td>Zarxio</td>
<td>Daily</td>
<td>Injection</td>
</tr>
<tr>
<td>Neulasta</td>
<td>Weekly</td>
<td>Injection</td>
</tr>
<tr>
<td>Neulasta Onpro</td>
<td>Weekly</td>
<td>On-body injector</td>
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</tbody>
</table>
What medical conditions do I need to tell my doctor about before starting these medications?

- Sickle cell disease
- Pregnancy
- Breast feeding
- Allergies

What are the most common side effects of these medications?

- Bone pain and muscle pain
- Discomfort at injection site
- Bruising at injection site

What should I do if I have any of the common side effects?

- For bone pain, take NSAIDs such as ibuprofen, or naproxen sodium. NSAIDs are often successful in relieving this symptom, and can be used along with acetaminophen. An antihistamine (loratidine or cetirizine) may also be useful.
- Discuss any new medications with your doctor.
- To prevent injection site discomfort, use a different injection site each time.
- If your pain is not controlled, discuss this with your doctor.
- Let your doctor know if you have any of the common side effects.

When do I need to call my doctor for immediate medical attention?

Call your doctor right away if you have any of the following rare side effects.

- Darkening of your urine, reduced urination, or swelling- can all be signs of a serious kidney injury.
- Increased stomach pain or finding a mass in your stomach- could be signs of enlarged or ruptured spleen.
- Shortness of breath, wheezing, or coughing- could be signs of lung injury
These side effects are rare, but if you have any of them call your doctor immediately.

**What is an on-body injector?**
An on-body injector is a device that is placed by a medical professional for the medicine Neulasta Onpro. Your will receive specific instructions on its use if you get one. While the device is in place, it is important to let all clinicians involved in your care know it is there. This especially applies to those performing X-rays, CT scans, or MRIs.

**How will I care for my on-body injector?**
- Avoid getting this device wet.
- Do not sleep on this device or rest in a position that applies pressure to the device, as either of these can shift the device or cause injury.
- Call your doctor if the device falls off, or if you have any concern that the device is failing to deliver medicine.