

Patient Information Leaflet for Fever (Febrile Neutropenia)

Fever

If you are feeling unwell in any way after receiving chemotherapy, it's important to take your temperature. Temperatures from 99°F (37.2°C) to 100°F (37.8°C) are fairly common. But if your temperature rises to 100.5°F or above, you shall seek medical attention at your nearest clinic or contact your doctor/nurse or hospital. Fever may be your only sign of an infection.

Neutropenia

Neutropenia is a decrease in circulating neutrophils and thus body strength to fight against bacterial or other infections. Neutropenia is defined in terms of the absolute neutrophil count (ANC). The ANC is calculated by multiplying the total white blood cell (WBC) count by the percentage of neutrophils in the complete blood count (CBC) differential. Fever with ANC < 1000/ μL (mm^3) can be worrisome. Lower the ANC higher is the risk of serious infection. Chances of having low ANC are highest during 7- 12 days after chemotherapy.

Warning Signs

- Fever (temperature above 102.0° F or higher with chills and rigors)
- Shortness of breath or difficulty breathing or chest pain or tightness
- Extreme weakness, fatigue, or dizziness or blackouts.
- Soreness, ulcers, or white patches in your mouth
- Loose stools with pain in your tummy/ anal area while passing motions.
- Vaginal tenderness or discharge
- Red, swollen, or tender areas of skin (pus may not form if your white blood cell count is low)

Patients more than 60 years of age OR with any history of bronchitis/recurrent respiratory complaints and or any cardiac illness are at a higher risk of complications than others during fever.

Precautions

- Wash your hands often with soap and water, especially after using the toilet and before eating.
- Carry alcohol-based sanitizers, with you in case you don't have access to soap and water.
- Avoid exposure to people with cough, cold or any infectious disease /skin disorder.
- Avoid overcrowded places.

- Be extra careful not to nick or cut yourself when using a razor, knife, or scissors. Use an electric Razor when necessary.
- Avoid contact with cat litter boxes, pets, flowers, stuff toys and dust.
- Get plenty of rest and eat a well-balanced diet with plenty of liquids (water, juices, milk).
- Clean your teeth and gums with a soft toothbrush and, use a mouthwash to prevent infections.
- Eat well cooked soft, less spicy and oily food prepared at home with clean hand and utensils.

Things to do (for Patients) when having fever

- Notify your health care professional if you have a fever greater than 38.5°C or 100.5°F.
- Know what chemotherapy drugs you are receiving (write them down). This will help if you develop a fever on an evening or weekend and need to talk to your nurse/doctor/hospital who is not familiar with your case.
- When you have a fever, you lose water and can become dehydrated. Therefore, it is important to drink lots of (non-alcoholic and non-caffeinated) fluid during these times.
- After recording your fever you can take Tablet **Paracetamol (500 – 750 mg)** to control fever if uncomfortable.
- If you have fever and neutropenia ($ANC < 1000 \text{ mm}^3$) and visit to hospital/clinic is not possible or else your doctor is unreachable then

Start oral antibiotics within one hour of onset of fever as follows

- **TAB. AUGMENTIN/ CLAVUM 625 MG TWICE PER DAY and**
- **TAB. LEVOFLOXACIN 500 MG ONCE PER DAY.**

Things to do (for nurse/primary care physicians) when having Febrile Neutropenia

Start i.v. antibiotics within one hour of onset of fever after collecting blood cultures (if possible) as follows

- **Inj. Piperacillin plus Tazobactam (ZOSYN/PIPTAZ/TAZACT) 4.5 GRAM EVERY 6 HOURLY**

OR

- **Inj. Cefoperazone plus sulbactam (MAGNEX) 2.0 GRAM EVERY 12 HOURLY.**

- Monitor temperature, BP, pulse, respiratory rate, O2 saturation and do a preliminary general physical and systemic evaluation to find the source of infection if any.
- Maintain a strict input/output chart.
- Use intravenous fluids as and when necessary.
- Antibiotics should usually continue until the ANC is more than 1000 mm³ and patient is afebrile for 2 days.
- Patients should be reviewed by a medical oncologist ASAP.

Where and whom to contact.