

Neutropenic sepsis in people having anticancer treatment

Information for the public

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About this information

NICE clinical guidelines advise the NHS on caring for people with specific conditions or diseases and the treatments they should receive. The information applies to people using the NHS in England and Wales.

This information explains the advice about preventing and treating neutropenic sepsis in children, young people and adults having anticancer treatment that is set out in NICE clinical guideline 151.

Does this information apply to me?

Yes, if you are having anticancer treatment, or are a parent or carer of someone who is having anticancer treatment. This includes children, young people or adults.

No, if you have, or are a parent or carer of someone who has, neutropenic sepsis that is not caused by anticancer treatment.

Your care

If you think that your care does not match what is described in this information, please talk to a member of your healthcare team in the first instance.

In the NHS, patients and healthcare professionals have rights and responsibilities as set out in the NHS Constitution (<https://www.gov.uk/government/publications/the-nhs-constitution-for-england>). All NICE guidance is written to reflect these. You have the right to be involved in discussions and make informed decisions about your treatment and care with your healthcare team. Your choices are important and healthcare professionals should support these wherever possible. You should be treated with dignity and respect.

To help you make decisions, healthcare professionals should explain neutropenic sepsis and the possible treatments for it. They should cover possible benefits and risks related to your personal circumstances. You should be given relevant information that is suitable for you and reflects any religious, ethnic, or cultural needs you have. It should also take into account whether you have any physical or learning disability, sight or hearing problem or language difficulties. You should have access to an interpreter or advocate (someone who helps you put your views across) if needed.

Your family and carers should be given their own information and support. If you agree, they should also have the chance to be involved in decisions about your care.

You should be able to discuss or review your care as your treatment progresses, or your circumstances change. This may include changing your mind about your treatment or care. If you have made an 'advance decision' (known as a 'living will' in the past) in which you have already given instructions about any treatments that you do not wish to have, your healthcare professionals have a legal obligation to take this into account.

All treatment and care should be given with your informed consent. If, during the course of your illness, you are not able to make decisions about your care, your healthcare professionals have a duty to talk to your family or carers unless you have specifically asked them not to. Healthcare professionals should follow the Department of Health's advice on consent (<https://www.gov.uk/government/publications/reference-guide-to-consent-for-examination-or-treatment-second-edition>) and the code of practice for the Mental Capacity Act. Information about the Act and consent issues is available from www.nhs.uk/CarersDirect/moneyandlegal/legal. In Wales healthcare professionals should follow advice

on consent from the Welsh Government (www.wales.nhs.uk/consent).

If you are under 16, your parents or carers will need to agree to your treatment, unless it is clear that you fully understand the treatment and can give your own consent.

Neutropenic sepsis

Neutropenic sepsis is caused by a condition known as neutropenia, in which the number of white blood cells (called neutrophils) in the blood is low. Neutrophils help the body to fight infection. People having anticancer treatment, particularly chemotherapy and more rarely radiotherapy, can be at risk of neutropenic sepsis. This is because these treatments can temporarily lower the number of neutrophils in the blood. Some anticancer treatments are more likely than others to cause a temporary period of neutropenia.

Neutropenic sepsis can be a life-threatening illness that requires urgent, emergency treatment. The medical staff may not have time to fully discuss what is involved in that treatment beforehand. In these circumstances, detailed discussions and explanations may have to wait. In an emergency, healthcare professionals may give treatment immediately, without obtaining your or your parents' or carers' informed consent, when it is in your best interests.

Before starting your anticancer treatment

Before you start your anticancer treatment a member of your healthcare team should explain to you and your family or carers what neutropenic sepsis is, and give you written information about it. They should also tell you how and when to telephone for 24-hour specialist cancer advice or go to an emergency care unit.

For some adults a type of antibiotic called a fluoroquinolone can help to reduce the risk of developing neutropenic sepsis during anticancer treatment. If you are aged over 18 and are having treatment for acute leukaemia or a solid tumour, or are having stem cell transplantation, and your doctor thinks you might have a period of neutropenia, you should be offered a fluoroquinolone.

Fluoroquinolone antibiotics commonly used include ciprofloxacin and levofloxacin.

You should not usually be offered an injection of a hormone-like substance called G-CSF

(short for granulocyte-colony stimulating factor) to reduce your risk of developing neutropenic sepsis, unless G-CSF is part of your anticancer treatment.

Questions you might like to ask before starting your anticancer treatment

- Could you tell me and my family/carers more about neutropenic sepsis?
- How likely am I to get neutropenic sepsis, and how dangerous is it for me?
- When should I seek advice if I think I might have neutropenic sepsis, and who should I contact?
- Is a fluoroquinolone antibiotic suitable for me?

If you become unwell during your anticancer treatment

Some treatments may not be suitable for you, depending on your exact circumstances. If you have questions about specific treatments and options covered in this information, please talk to a member of your healthcare team.

If you become unwell during your anticancer treatment, you should follow your healthcare professional's advice about how and when to telephone for 24-hour specialist cancer advice or go to an emergency care unit. If you see a GP or other healthcare professional and they suspect you might have neutropenic sepsis, they should refer you immediately to hospital.

At the hospital the doctor should treat you as an emergency. They should offer you an antibiotic immediately, and give you a physical examination. They should take a sample of your blood to find out the number of neutrophils it contains (known as a neutrophil count), how well your liver and kidneys are working and whether there is an infection in your blood. For children aged under 5 years, the doctor should also take a sample of urine to check for a urinary tract infection. You may need additional tests, depending on the signs

and symptoms you have.

The doctor should diagnose neutropenic sepsis if your neutrophil count is low **and** you have **either**:

- a temperature higher than 38°C **or**
- signs and symptoms of sepsis (an infection of the blood).

If you are diagnosed with neutropenic sepsis

If you are diagnosed with neutropenic sepsis you should stay in hospital and have treatment with an antibiotic until your risk of developing complications has been assessed.

A member of the cancer team with experience in managing complications of anticancer treatment should assess your risk of developing complications, such as chest or kidney problems, from your neutropenic sepsis. They should do this within 24 hours after your admission to hospital. If your risk of complications is high, it should be assessed again every day and you should continue to have treatment with an antibiotic.

Questions you might like to ask if you are diagnosed with neutropenic sepsis

- How serious is my illness?
- How long will I need to stay in hospital?
- How long will it take the antibiotic to work?
- Can you tell me whether this illness will affect my anticancer treatment?

If your risk of complications is low, or if it changes from high to low, your doctor may offer to discharge you from hospital and give you an antibiotic to take at home. This will depend on your circumstances, and your doctor should explain that you will need to return to hospital promptly if a problem develops.

Questions you might like to ask if you are offered antibiotics to take at home

- How long should I take the antibiotic for?
- When should I start to feel better and what should I do if I don't start to feel better by then?
- When should I come back to hospital?
- What should I do if I get any side effects? (For example, should I call my GP, or go to an emergency care unit?)
- Are there any risks associated with this antibiotic?
- Is there some written material (like a leaflet) about this antibiotic that I can have?

More information

The organisations below can provide more information about neutropenic sepsis for people having anticancer treatment. NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

- CancerHelp UK, 0808 800 4040
www.cancerhelp.org.uk
- Children's Cancer and Leukaemia Group
www.cclg.org.uk
- Macmillan Cancer Support, 0808 808 0000
www.macmillan.org.uk
- Teenage Cancer Trust
www.teenagecancertrust.org

You can also go to NHS Choices (www.nhs.uk) for more information.

Accreditation

