Chemotherapy and Side Effects

What this leaflet is about: how chemotherapy is given, why it is chosen, and how to manage the common side effects at home.

> Quick emergency advice
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> Chemotherapy medicines kill fast-growing cells, including cancer cells, but also the healthy fast-growing cells in your bone marrow, mouth and gut. That is why most of the side effects happen.
> Tell us about your side effects early and often. Most of them can be managed, and some can be prevented entirely with the right medicine. Telephone the clinic on Tel: +60 3 4289 5000 or Tel: +60 3 4270 2500.

How chemotherapy is given

Chemotherapy is a group of medicines that kill cancer cells or stop them from dividing. It may be given as oral tablets you take at home, as an injection into a vein, or as a mixture of both. Some regimens are given as tablets over a few days at home; others are given as an infusion - a drip into a vein over 30 minutes to several hours - usually in the day case unit.
Chemotherapy is often combined with radiotherapy. Sometimes other kinds of medicine are added too: immunotherapy medicines that help the immune system attack the cancer, targeted medicines that act on a specific genetic change in the tumour, and steroids to reduce swelling and control nausea.

Why this treatment was chosen for you

The plan is decided for each person, based on three main things.

1. The type of cancer

Leukaemia, lymphoma, myeloma and solid tumours behave in quite different ways, and the disease itself decides which drugs can work at all. Even within one type, the exact subtype matters, which is why so much is done with the genetic tests on your cells.

2. The histological grade, or how aggressive the cancer is

Pathologists describe how abnormal the cells look and how quickly they appear to be dividing. A slow-growing, well-differentiated tumour usually behaves gently and needs gentler treatment. An aggressive, poorly differentiated tumour grows and spreads quickly and needs stronger treatment, often without delay.

3. The stage

The stage describes how far the disease has spread: whether it is confined to one organ, has spread to nearby lymph nodes, or has spread elsewhere in the body. Stage strongly influences whether treatment is aimed at a cure or at controlling the disease for as long as possible, and how intensive that treatment needs to be.

Nausea and vomiting

Nausea and vomiting were once the most feared effects of chemotherapy. They are now much less common, because this clinic routinely uses anti-emetic medicines - the anti-sickness tablets given before and after each treatment. Some people still feel queasy, and managing it early is much easier than managing it once it has started.

- Relax before and after treatment. Anxiety makes nausea worse, so practice the breathing or relaxation techniques you have been shown.
- Avoid fried and fatty food, which sits heavily in the stomach and slows the emptying of the stomach.
- Take small, easily digested meals more often rather than three big meals a day.
- Chew well and eat slowly. Small bites are much easier to keep down.
- Avoid troublesome smells, including smoke, perfume, air fresheners and cooking smells. Ask someone else to cook if you can, and keep the room well ventilated.
- Keep your fluids up. Sipping all day is better than drinking a large amount at once, and soft drinks, ice and chilled water are often more appealing than warm drinks.
- Take the anti-sickness medicine exactly as prescribed, even if you feel well. Taking it on schedule works much better than taking it once you are already sick.
- Let us know straight away if the tablets are not working. There are several different medicines and we can usually do better.

Tiredness

Fatigue is the most common and most persistent side effect of chemotherapy. It is not ordinary tiredness, and rest alone does not always fix it, because chemotherapy also affects the muscle, the bone marrow and the thyroid.

- Rest when you need to, and build your day around your energy rather than against it. Most people have more energy in the morning.
- Keep light exercise within your own tolerance - a short walk, or some gentle stretching, often helps more than sitting still all day.
- Ask for help with daily activities such as shopping, cooking, housework, childcare and getting to appointments. Accept the help that is offered.
- Eat a balanced diet, with enough protein. Muscle that is lost during treatment makes tiredness worse.
- Drink at least 2 litres of fluid a day, unless you have been told otherwise.
- Work out what helps you most, and do those things. For many people it is a short nap, a cool room, and company.

Mouth ulcers

Mouth ulcers, or mucositis, are common when the lining of the mouth and throat is affected. They usually start about a week after treatment begins and heal after treatment ends. They are painful, and they can also stop you eating and drinking properly.

- Keep excellent oral hygiene. This is the single most effective thing you can do. Rinse your mouth after every meal, and brush the teeth after every meal using a soft toothbrush.
- Aim for more than 3 litres of fluid a day - that is more than 8 glasses. Keep drinking, even if swallowing is painful; dehydration makes everything worse.
- Avoid very hot and very cold food and drink, as this makes the sore mouth hurt more.
- Choose soft, soothing food such as porridge, cooked cereals, mashed potato, yoghurt, scrambled eggs, custard and ice cream.
- Avoid spicy, rough, dry or very salty food, and any food with sharp edges, such as crusty bread or crisps.
- Rinse with a bland mouthwash, or with a solution of half a teaspoon of salt in a glass of warm water, several times a day. Do not use alcohol-containing mouthwashes, which sting and dry the mouth.
- Use a lip balm to keep the lips moist, and avoid alcohol-based lipsticks.
- Tell us if the pain is stopping you eating or drinking, or if you cannot keep fluids down. There are effective mouth-ulcer medicines and pain relief, and we should not let you suffer through this.

Loss of appetite and taste changes

- Offer yourself a wide variety of foods, and keep changing what you try. The problem is usually temporary, and what suits you now may not suit you in a month.
- Drink your liquids an hour before or an hour after meals rather than with them. Filling up on fluid at mealtimes puts you off eating.
- Eat more on your good days. Most people have a better appetite in the days before a treatment, so plan small high-calorie snacks and milky drinks around those days.
- If your sense of taste is changed, tart or sharp flavours often taste better than bland ones, and plastic cutlery and cups may help if metal tastes unpleasant.
- Small, frequent snacks are easier than three large meals.

Constipation and diarrhoea

Constipation

Constipation is common, and it is also made worse by not drinking enough, by reduced activity and by some of the anti-sickness medicines. It matters more than usual if your platelets are low, because straining can cause bleeding.

- Keep your fluid intake up.
- Try warm drinks early in the morning, and try prune juice.
- Keep gently active - short walks help the bowel move.
- Ask us for a laxative. We would much rather prescribe one than have you struggle in silence, and we will choose one that suits you, particularly if your platelets are low.

Diarrhoea

Some chemotherapy drugs, and also antibiotics and radiotherapy to the bowel, can cause diarrhoea. It is important not to become dehydrated.

- Keep fluids up. Take small sips of water all day rather than large amounts, and use oral rehydration solution if you have it.
- Use a low-residue, lactose-free diet. Low residue means less roughage and fewer whole grains, nuts, seeds and skins; lactose-free means avoiding milk and milk products while the gut settles.
- Avoid spicy and fatty food, alcohol and tobacco.
- Wash with water after every time you use the toilet, and use a gentle, fragrance-free wipe. Frequent wiping causes soreness, so a barrier cream is helpful.
- Tell us if the diarrhoea is severe, if there is blood in the stool, or if you are passing very little urine - these need a doctor.

Hair loss

Not every chemotherapy causes hair loss, and the amount depends on the drug and the dose. Hair loss usually begins 1 to 3 weeks after treatment starts, and it is almost always temporary. Most hair grows back over the following months.

- Use a mild, unperfumed shampoo, and wash your hair less often than usual.
- Dab the hair dry rather than rubbing it, and pat it rather than brushing it.
- Use a gentle, wide-toothed comb, and avoid brushing wet hair.
- Avoid hair dyes, perms, tight styles, hair ties with elastic bands, and anything that pulls on the hair.
- Protect the scalp from strong sunlight with a hat or a scarf, and use a high factor sunscreen on the scalp if it is exposed.
- Consider a wig, scarf, turban or cap. Many people buy a wig before they need it, so that they can choose it calmly rather than in a rush.
- Avoid perming or colouring your hair for at least 6 months after your treatment has finished, until the hair has fully recovered.

Changes in your blood counts

Chemotherapy attacks the fast-dividing cells in the bone marrow as well as the cancer cells. The blood count therefore falls about 7 to 14 days after a treatment, and recovers before the next course. All three of the problems below are caused by the marrow being slowed down, not by the cancer itself.

Anaemia - a low red cell count

Symptoms are tiredness, breathlessness on stairs, palpitations, pale skin, dizziness and headaches.

- Rest as much as you need to, and ask for help rather than pushing on.
- Save your energy for the things that matter to you.
- Keep gently active, within your own tolerance.
- If an anaemia builds up, a blood transfusion or an injection of an iron-like medicine may be needed. There is no need to simply put up with severe anaemia - let us know.

Low platelets - bruising and bleeding

You may bruise easily, get small red spots called petechiae, bleed from the gums, or have periods that are heavier than usual.

- Use a soft toothbrush and an electric shaver.
- Avoid contact sport, strenuous activity and anything with a risk of a bump or a cut while the count is low.
- Avoid aspirin, ibuprofen, and any over-the-counter medicine or herbal remedy that we have not approved.
- Call us if you have bleeding that will not stop, blood in the urine, black stools, or a severe headache with drowsiness or weakness on one side. Those need to be seen straight away.

A low neutrophil count - risk of infection

Fever with a low white cell count is an emergency, as explained in the separate neutropenia leaflet in this series.

- Check your temperature if you feel unwell, and keep a thermometer at home.
- Telephone the clinic on Tel: +60 3 4289 5000 or Tel: +60 3 4270 2500 straight away if your temperature is 38.5 degrees C or above, or if you feel shivering, shivery or suddenly very unwell with a low count. Do not wait, and do not take paracetamol to bring the temperature down before you call.
- Follow the food, hygiene and infection-avoidance advice in the neutropenia and neutropenic diet leaflets.

Other effects worth mentioning

Not everyone gets all of these, and we will tell you which to expect from your particular drugs. Numb or tingling fingers and toes, hair thinning, changes in the skin or nails, numbness around the mouth, changes in taste, early menopause, and effects on fertility are all possible depending on the regimen. Tell us if anything is troubling you, even if you are not sure whether it is related to the treatment - it usually is, and it can often be helped.

When to contact us

If you are worried about yourself, or about the person you are caring for, please get in touch. We would always much rather hear from you early than late. If you have read something in this leaflet that worries you, that is a good reason to telephone us, even if you feel well.

Visit us
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If you cannot reach us, or you are very unwell

Please go to the emergency department of KPJ Ampang Puteri Specialist Hospital, or call the emergency ambulance service. Do not wait for a routine appointment, and do not wait for a reply to an email.

Important medical disclaimer

This leaflet is written for patients and their families and carers. It is general patient education only. It is not a substitute for medical advice, and it is not a substitute for the diagnosis and treatment that your own haematologist, nurse, pharmacist or doctor will give you.

Nothing in this leaflet should be used to change, stop or start a medicine, a test or a treatment. If anything you read here is different from what your healthcare team has told you, follow your healthcare team and ask us about the difference.

Information about medicines names, strengths, test turnaround times and supportive care is current at the time this leaflet was prepared. It may be updated from time to time, and the version printed here may therefore not be the newest one. Please ask reception for the current copy.

If you think that you or someone you care for is seriously unwell, do not wait for an appointment and do not wait for this leaflet to be read. Contact the clinic, or go to the emergency department of KPJ Ampang Puteri Specialist Hospital, straight away.

We Listen. We Care. Evidence-based Medicine.