

Chemotherapy and Biological Therapies

This leaflet explains more about chemotherapy and biological therapies, including the benefits, risks, any alternatives and what you can expect when you come to hospital.

If you have any further questions, please speak to a doctor or nurse caring for you.

What is chemotherapy and what are biological therapies?

Chemotherapy is treatment with anti-cancer drugs to destroy cancer cells. There are over 50 different drugs. You may have one drug alone or a combination of two or more drugs.

The drugs are carried around the body in the blood stream and destroy the cancer cells by damaging their ability to reproduce. Chemotherapy may be used alone to treat cancer or together with other treatments such as surgery and/or radiotherapy.

Biological therapies use substances that are already in your body to destroy cancer cells. These include monoclonal antibodies, which can destroy cancer cells while causing little harm to normal cells, cancer growth inhibitors and targeted therapies.

Trevor Howell, Ruth Myles and Gordon Smith wards are specialist units where patients receive these anti-cancer treatments. Treatments are usually given as an outpatient in one of the day units. Extra treatments, e.g. bone strengthening drugs and blood transfusions, are also given on the day units.

What are the risks?

Some side effects of these treatments need to be treated quickly. You will be given an 'Acute Oncology Alert Card' (as below) telling you what symptoms to look out for and if you develop any of these while you are having chemotherapy or within six weeks of finishing treatment, you must contact our acute oncology service (AOS) immediately.



Acute Oncology Alert Card

St George's University Hospitals 
NHS Foundation Trust

This Patient is on Systemic Anti-Cancer Treatment

Information for patients

You **MUST** seek medical advice **URGENTLY** if you:

- FEEL GENERALLY UNWELL

OR if you develop:

- shortness of breath or breathing difficulties
- temperature over 37.5°C or under 36°C
- shivering episodes
- gum / nose bleeds or unusual bruising
- mouth ulcers that stop you eating or drinking
- persistent nausea or vomiting
- come into contact with either shingles or chicken pox
- four or more bowel movements in 24hrs or diarrhoea
- rash

Contact the AOS on 07831 147 653 at all times (this includes evenings and weekends). One of the senior nurses will advise you on the phone regarding your symptom/s (you might be advised to go to A&E, Ambulatory Oncology Care Unit (AOCU), see your GP or to monitor your symptom/s). For patients with leukaemia or myeloma or other haematological conditions please call St George's switchboard on 020 8672 1255 and ask for the on call haematology Specialist Registrar.

Some drugs can cause damage if they leak out of your vein during your chemotherapy treatment. If you feel any burning feeling or pain around your cannula site, please tell your chemotherapy nurse straightaway.

Please also contact us on the numbers above if you have any soreness, pain or swelling in your arm or hand at any time following your treatment.

Are there any alternatives?

Your consultant will discuss with you the treatment options for your specific cancer. Not all treatments are suitable for everyone.

How can I prepare for chemotherapy and biological therapies?

You may need to have one or more of the following tests before starting chemotherapy. When an appointment for a test is made, you will be given a letter with details of the date and time of the appointment and any special instructions.

Blood tests to check your blood, kidney and liver before and during treatment. Your results will always be checked before your chemotherapy is prescribed.

Height and weight are checked before starting treatment to make sure you are given the right dose of chemotherapy.

EDTA test to check how well your kidneys are working. A small amount of fluid containing a radioisotope is injected into a vein in your arm and blood samples taken two hours and four hours later. The test is carried out in the nuclear medicine department in Lanesborough wing and is not harmful.

Echocardiogram (ECG) to see how well your heart is working. Small electrodes are stuck to your chest, arms and legs and you will be asked to lie still for a couple of minutes whilst a trace of your heartbeat is obtained. This test is painless and takes place on the ground floor of Atkinson Morley wing.

Lung function tests to see how well your lungs are working, as some drugs may affect this. This test takes place on the ground floor of Atkinson Morley wing.

Dental treatment may not be a good idea during chemotherapy and could delay treatment, because you are vulnerable to infection and bleeding and healing may be slower. Try to see your dentist for a check-up before you start chemotherapy and don't have any dental work during treatment without discussing it with your nurse specialist, key worker or doctor. Tell your dentist that you are on chemotherapy if you do start any dental treatment.

Asking for your consent

It is important that you feel involved in decisions about your care. For some treatments, you will be asked to sign a consent form to say that you agree to have the treatment and understand what it involves. You can withdraw your consent at any time, even if you have said 'yes' previously. If you would like more details about our consent process, please ask a nurse/doctor in charge of your care.

You will have a discussion about your treatment with the doctor at your outpatient appointment. We will give you information about your drugs, how you will be given them, over what period of time, the benefits and the possible side effects. **Please ask questions if you don't understand the information you have been given.** You will then be asked to sign a consent form as a written record that you have agreed to the planned treatment.

Where do I need to go?

Treatment may be given as an inpatient on Trevor Howell ward, Ruth Myles ward or Gordon Smith ward. It may also be given as an outpatient on the Trevor Howell day unit or Ruth Myles day unit. These units work closely together to deliver your treatment.

Lack of space in the day units can sometimes mean we have to limit the number of visitors.

If your visitor or anyone with whom they have been in close contact has been ill or has an infection, please ask them not to visit.

Ambulatory Oncology Care Unit (AOCU), third floor, Lanesborough wing.

If patients have symptoms and are well enough (mobile), they may be reviewed in AOCU instead of A&E (this will be assessed when patients call the AOS mobile number).

- Open 09:00 to 17:00 Monday to Friday (except bank holidays).
- Located on Gordon Smith
- Eligible patients will be those suffering exacerbations such as sore mouth, minor-moderate nausea and/or vomiting, cough, treatment related rash, constipation/change in bowel habit but no diarrhoea or neurology/pain symptom, indwelling line problems, suspected DVTs (but no breathlessness), worsening of pre-existing breathlessness but non acute onset.
- If patients have symptoms of chest pain, severe breathlessness, bleeding, uncontrolled nausea/vomiting, diarrhoea, suspected neutropenic sepsis (feeling unwell with high/low temperature) – patients are advised to call 999 for urgent medical assessment.

Trevor Howell ward, third floor Lanesborough wing, gives inpatient treatment for various types of cancer with 19 inpatient beds.

Ruth Myles ward, second floor St James wing, is the haematology ward, providing inpatient treatment for cancers of the blood and lymphatic system. The ward has 13

inpatient beds, 11 single rooms and one two-bed bay. Five of the rooms have special air filters for patients receiving stem cell transplants.

Gordon Smith ward, third floor Lanesborough wing, has 19 beds providing inpatient care to both haematology and oncology patients.

Trevor Howell day unit, third floor Lanesborough wing within the main ward, gives outpatient chemotherapy treatment between 9am and 6pm Monday to Friday.

Ruth Myles day unit, second floor St James' wing, gives outpatient chemotherapy and other supportive treatments for patients with cancers of the blood and lymphatic system and other non-cancerous blood disorders. It is open 8.30am to 6pm, Monday to Friday.

The apheresis service is also within this day unit.

The haematology and oncology outpatient department, ground floor St James wing, is open 9am to 5pm Monday to Friday (except bank holidays). Outpatient nurses provide support and help to patients at this clinic, who may be unwell during their course of chemotherapy or who require admission from clinic appointments. Chemotherapy treatment may be discussed with some patients in other outpatient clinics.

What facilities are available?

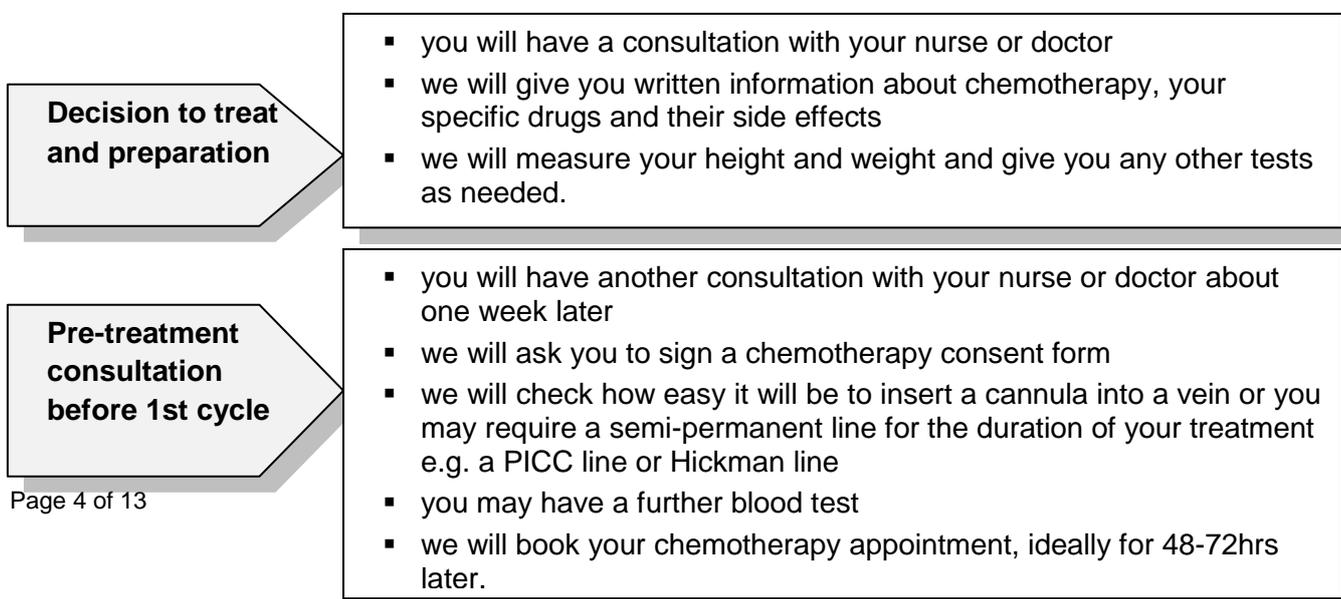
Patients will be given sandwiches and snacks at lunch time. Hot and cold drinks are there for you and your relative or friend at any time.

You can also buy snacks and drinks inside the hospital from:

- Ingredients restaurant, first floor Lanesborough wing.
- Marks & Spencer café, Grosvenor wing foyer
- Peabody's cafes, Hunter wing and Atkinson Morley wing
- Outpatient cafés in Lanesborough wing, St James wing and the Rose Centre.

What happens during chemotherapy?

This flowchart shows you what happens when a decision is made to treat you with chemotherapy.



Chemotherapy day unit

- we will give you your chemotherapy (see 'The journey of your chemotherapy' posters displayed in outpatient and day unit waiting areas)
- we will tell you about possible side effects and how to manage them
- we will go through again what you should do if you have certain side effects at home and give you an *Acute Oncology Alert Card*
- we will give you drugs to take home (if appropriate)
- we will make your next appointment.

Review consultation before 2nd and consecutive cycles

- chemotherapy cycles are usually every three to four weeks
- you will have a review consultation two days before your chemotherapy is due
- you will have a blood test two hours before your clinic appointment or the day before if you prefer
- we will prescribe your chemotherapy if your blood results are satisfactory
- we will confirm your chemotherapy day unit appointment
- you may have further tests or scans halfway through your course of chemotherapy to check on your response to treatment
- your doctor will tell you how many cycles there are in your course of treatment.

Will I feel any pain?

You should not routinely feel pain while your chemotherapy is being administered, however some specific drugs can cause pain at the place where the injection is given or along the vein. If you feel pain, tell your nurse or doctor straight away so that they can check the site. They may give the drug more slowly or flush it through with more fluid to try to reduce your pain.

Are there any side effects?

Chemotherapy damages fast growing cells, which include cancer cells and some normal cells. While cancer cells don't recover, normal cells do repair themselves, but side effects can happen when normal cells are damaged.

Different drugs cause different side effects. Some side effects can happen during and straight after treatment, some develop when treatment has finished. If your arm hurts or feels uncomfortable during intravenous (IV) treatment, it is important that you tell the nurse or doctor.

Your doctor or nurse will discuss possible side effects of your chemotherapy drugs with you.

You will also be given an **Acute Oncology Alert Card** telling you what symptoms to look out for.

Some common side effects are:

Infection

White blood cells help fight infection so if your white blood count is low, you are more at risk of infections. Make sure you have a thermometer at home to check your temperature if you are ill. Normal temperature is between 36°C and 37.2°C. If you have an infection, you may need antibiotics, either through a drip in hospital or oral antibiotics at home.

Do not delay contacting the hospital at any time if you think you have an infection or have a raised temperature. If you cannot make contact with the acute oncology service, please go the nearest emergency department (A&E). Take your alert card with you and show it to the receptionist and A&E nurse.

Nausea and vomiting

Some chemotherapy drugs can make you feel or be sick. We will give you anti-sickness drugs if we think your chemotherapy may cause sickness. You will also have some anti-sickness drugs to take at home for a few days following treatment. Take these regularly to prevent the problem and if you feel they are not working, tell us so we can give you a different drug to try.

Diarrhoea

If you have diarrhoea it can be managed by tablets, medicines or a change of diet. Please tell your doctor or nurse if you have four or more bowel movements or diarrhoea in 24 hours.

Sore mouth and taste changes

You may have a sore mouth a few days after treatment. If an ulcer develops, it could become infected. Tell your doctor or nurse if your mouth gets sore. They may recommend a mouth rinse.

Some people experience taste changes during chemotherapy and notice that some food tastes salty, bitter or metallic. Try different foods if this happens to you and is unpleasant. It is usually temporary and your taste should return to normal after treatment.

You may also find that your appetite changes during chemotherapy. It is important to drink plenty of fluids.

Anaemia

Red blood cells carry oxygen round the body. If your red blood count is low, you may feel tired and breathless. You may need a blood transfusion if your red cell count drops too low.

Bruising or bleeding

Platelets help the blood to clot and you may find you bruise or bleed more easily if your platelet count is low. Tell your doctor or nurse if you develop any bruising or unexpected

bleeding. If you have bleeding that doesn't stop, please go straight to the emergency department (A&E).

Hair loss

Some chemotherapy drugs cause hair loss or hair thinning. Hair loss can include the hair on your head, face, arms and legs, underarms and pubic area. Your nurse will tell you if your chemotherapy drugs will affect your hair and advise you on hair care. Hair usually grows back after chemotherapy stops.

If you are likely to lose your hair, we can refer you to have a wig fitted. Some patients wear scarves and hats until their hair grows back. You will need to pay for your wig unless you're entitled to a free one or help towards the cost. The Department of Health leaflet called 'Are you entitled to help with health costs?' (HC11) gives more information about who can get help with the cost of an NHS wig or you may be able to apply for a Macmillan grant for this.

Your nurse may offer 'scalp cooling' to try to minimise hair loss. This means wearing a very cold pack on your head before, during and after chemotherapy, but only works with certain types of chemotherapy for some cancers.

Fatigue

Feeling tired is a common side effect of all cancer treatments. You may need to think about what activities are the most important to you and prioritise these. You should ask family and friends for help with household tasks and take rest when you need to. Some people can continue working throughout chemotherapy; others may need to reassess their working hours. Ask your nurse for advice on how to cope if you have less energy than usual.

Blood clots

Some types of cancer and some chemotherapy drugs can increase the risk of blood clots. A blood clot in one of the leg veins can cause swelling of the leg and can travel to the lungs. This is called a pulmonary embolus (PE) and causes shortness of breath or chest pain. Blood clots can be life threatening, so tell your doctor straight away if you think you may have one.

Peripheral Neuropathy

Some types of chemotherapy could cause damage to your peripheral nerves causing tingling or altered sensation in your fingers and toes or hands and feet (peripheral neuropathy). You may also feel a burning sensation or numbness in the same places. This side-effect is often temporary and only lasts for a few days each cycle, but it is important to tell your doctor or nurse at your next visit if you have it.

Loss of memory and concentration

Mild loss of memory and poorer concentration may be side effects of chemotherapy. You may hear this called 'chemo brain'. For most people this gets better after treatment has finished.

Sexuality and fertility

It is perfectly normal to continue a sex life during treatment, but you may feel tired and have less interest in sex.

Some chemotherapy drugs can affect fertility. Your doctor or nurse should discuss this with you **before** treatment starts. If infertility is likely, men may be able to store sperm and women may be able to have embryos stored. It is still important to use a barrier form of contraception during treatment to avoid pregnancy in women who are having chemotherapy and the female partners of men having chemotherapy. More information is available from Macmillan Cancer Support or please speak to a doctor or nurse for further advice.

How can I keep well during chemotherapy treatment?

During your chemotherapy you are at a greater risk of infection. The following steps may help you to reduce your risk:

- Wash your hands often with soap and water especially after using the toilet, sneezing, handling raw food, touching pets or handling rubbish or dirty washing and before eating.
- When preparing food, dry your hands on kitchen paper after washing them.
- Wash clothes and bed linen regularly and change bathroom and kitchen hand towels often.
- Take a daily bath or shower if possible and don't share towels or flannels with other people.
- Avoid people who have sore throats, colds, flu, diarrhoea and vomiting or other contagious illnesses e.g. chicken pox.
- Avoid handling animal waste e.g. cat litter.
- Wipe shared office equipment with anti-bacterial wipes, especially if colleagues have a cold.
- Try not to graze or cut your skin, e.g. when gardening or doing DIY. If you do get a cut, clean the area with warm water and soap, dry with kitchen paper towel and apply a sterile plaster. Any break in the skin e.g. cuts, boils or haemorrhoids that bleed may lead to infection. Please ring your nurse specialist for advice if you have any of these.
- Keep your mouth clean and drink plenty of fluids. Clean your teeth using a fluoride toothpaste and a soft toothbrush that will be gentle on your gums. A hard brush may cause trauma to the gums and allow bacteria to enter the blood stream. Regular brushing after meals will help to prevent infection. We also advise rinsing twice a day with a saline mouthwash, followed by a cold water rinse.
- Have an annual flu jab, check with your nurse specialist or key worker on the best time to have this.
- Women are advised to use sanitary towels during their periods and not tampons.

You don't have to stay at home or avoid family and friends. If you feel well enough, you can continue working or carry out normal activities. Talk to your nurse specialist or key worker if you have any concerns about your job. Regular activity is important for your quality of life and to help with cancer-related fatigue. It is not always possible or necessary to avoid crowded public places, but travelling on buses and trains during peak times may increase your risk of infection.

If you are planning a trip abroad, discuss this with your nurse specialist or key worker first.

Food safety

To try and prevent any risk of food-poisoning:

- Always clean hands, utensils, chopping boards and surfaces with hot soapy water.
- Cook ready meals for the recommended time and to the recommended temperature on the packaging.
- Separate raw, cooked and ready-to-eat foods when shopping, preparing or storing foods in the fridge.
- Refrigerate perishable food promptly and defrost frozen foods properly.
- Wash all fruit, vegetables and salad ingredients.
- Don't buy food with damaged or broken packaging.
- Follow the storage instructions on the label and use food before the use-by-date.

Everyone should try to maintain a varied, healthy, balanced diet including five portions of fruit or vegetables a day.

Some patients may need to avoid certain foods or follow a special diet. Your nurse or doctor will tell you if this is needed and give you written information.

What support is there for me?

During your treatment, the following services and people are there for you.

If you are worried about your appetite or are losing weight, ask your nurse to refer you to the **dietitian**.

If you have any concerns or would like further information about your medicines, please ask to speak to a **pharmacist or pharmacy technician**.

Social workers can give you information and advice about practical help and support services.

If you are an inpatient, ask a member of your clinical team how to contact a social worker.

If you are an outpatient, you can contact a social worker through your GP.

A diagnosis of cancer is worrying and difficult for you, your family and friends.

Counselling can help you cope with shock, uncertainty and other feelings around having

cancer. If you would like the help and support counselling can offer, please speak to your clinical nurse specialist, consultant or enquire at the Macmillan Information Support Centre.

A limited **complementary therapy** service is provided by qualified practitioners, free of charge, for patients within the oncology and haematology departments. Please ask if you would like to know more about what therapies are available.

Car parking at St George's Hospital is limited. The hospital has a pay-on-exit car park or you can park in the pay and display bays in the surrounding streets.

You can buy an £8 daily or £10 weekly parking permit if you are:

- having chemotherapy
- having other cancer treatment
- the next of kin (one per patient) of any inpatient.

You will need to get an application form from the ward, fill it out and get it signed by a member of the ward staff. You then need to take the form to security, Grosvenor wing, ground floor.

Non-emergency patient transport

Please ask if you need hospital transport, which may be possible if you can't travel on public transport for specific medical reasons.

Help with travel costs

You may be able to claim help with travel costs. Ask your nurse or the Macmillan Information and Support Centre for more information.

Financial help

You and your family may find that cancer has an effect on your financial situation. You can talk to your key worker or specialist nurse about what help is available. We also have a specialist Macmillan Citizens Advice Bureau (CAB) adviser, who gives free, confidential welfare benefits and money advice. You can contact them via the Macmillan Information and Support Centre.

If you are working and need a sick certificate you can get this from your GP.

People having cancer treatment and the effects of cancer treatment can get **free prescriptions**. You can apply for an exemption certificate by collecting **form FP92A** from your GP surgery.

Clinical trials

Research is an important part of developing new and better cancer treatments. You may be asked if you would like to take part in the clinical trial of a new treatment. This is voluntary and if you do agree to take part you will be asked to sign a consent form. You don't have to give a reason if you don't want to take part and you can change your mind at any time and withdraw from the trial. If you withdraw, it will not affect your current or future care in any way and you'll be offered the standard treatment for your type of cancer.

Your doctor and research nurse will explain what the clinical trial involves and give you printed information to take home. More information is available in the booklet called **Understanding Cancer Research Trials** from Macmillan Cancer Support.

If you have not been asked to take part in a clinical trial but would like to participate, please speak to your doctor who will be happy to discuss options open to you and possible benefits.

Useful sources of information

Macmillan Information and Support Centre, St George's Hospital, ground floor Grosvenor wing

The centre offers a wide range of information and support to people with cancer, their families and friends. Information is available about:

- cancer
- cancer treatments and their effects
- cancer services
- complementary therapies
- benefits and grants
- support services within St George's and local self-help and support groups.

You are welcome to drop in to the centre or get in touch by phone. Staff can guide you through the information and give advice and support.

Macmillan Cancer Support

89 Albert Embankment, London SE1 7UQ

Tel: 020 7840 7840

Tel: free Macmillan helpline on **0808 808 00 00** (Mon-Fri 9am-8pm)

Website: www.macmillan.org.uk

Macmillan provides free information and emotional support for people living with cancer and can tell you about local cancer support groups and organisations.

You may find their booklet '**Chemotherapy**' helpful.

Cancer Research UK

PO Box 123, London WC2A 3PX

Tel: Cancer Information Service on **0800 226237** (free) or 020 7061 8355

Websites: www.cancerresearchuk.org www.cancerhelp.org.uk (patient information website, with information on specific cancers).

Trained cancer nurses can give information and support relating to cancer and its treatments. Publications are also available.

The Teenage Cancer Trust

Third floor, 93 Newman Street, London W1T 3EZ

Tel: 020 7612 0370

Website: www.teenagecancertrust.org

The Teenage Cancer Trust provides information and an on-line support network for contacting people who may share and understand the same experiences.

Paul's Cancer Support Centre

20-22 York Road, London SW11 3QA (near Clapham Junction)

Tel: 020 7924 3924

Website: www.paulscancersupport.org.uk

Provides support, information, complementary therapies and groups and classes to people with cancer, their families and friends. There is also a home visiting service that can provide trained volunteers for befriending, counseling and complementary therapies.

South East Cancer Help Centre

2 Purley Road, (Tesco Development), Purley CR8 2HA

Tel: 020 8668 0974

Website: www.sechc.org.uk

Provides support, information and complementary therapies to people with cancer, their families and friends.

Contact us

If you have any questions or concerns about your therapy, please use the contact numbers below.

Acute Oncology Service (AOS) call 07831147653.

For emergency problems such as chest pain, sudden shortness of breath or feeling very unwell (with a high or low temperature) please call 999.

Gordon Smith Ward **020 8725 5640 or 5897**

Trevor Howell Day Unit **020 8725 0519**

Monday-Friday, 8.30am to 6pm

Trevor Howell Ward **020 8725 1081 or 1082**

Ruth Myles Day Unit **020 8725 1680**

Monday-Friday, 8.30am to 6.30pm

Ruth Myles Ward **020 8725 2442**

Clinic appointment enquiries **020 8725 4370**

Monday-Friday, 8.30am to 4pm

Research nurses office **020 8725 0542**

Monday-Friday, 9am to 5pm

Oncology secretaries 020 8725 2955 (answerphone)
Monday-Friday, 8am to 6pm

Pharmacy patient information line 020 8725 1033
Monday-Friday, 9am to 5.30pm

Macmillan CAB (Citizens Advice Bureaux) 020 7042 0332

Advice Service for South West London
Macmillan Information and Support Centre 020 8725 2677

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.

