Cytoreductive surgery for gynaecological cancer

We have given you this factsheet because your doctor has referred you for cytoreductive surgery. This factsheet explains what cytoreductive surgery is, what the procedure involves and what the possible risks are. We hope it helps to answer some of the questions you may have. If you have any further questions or concerns, please contact us using the details at the end of this factsheet.

What is cytoreductive surgery?

Cytoreductive surgery is a surgical procedure to treat advanced ovarian, peritoneal, fallopian tube or endometrial cancer that has spread to different parts of the abdomen (tummy). The aim of cytoreductive surgery is to remove all visible cancer within the abdomen.

Depending on your condition and needs, your doctor may recommend you have cytoreductive surgery:

- before you have chemotherapy (this is known as primary cytoreductive surgery)
- after you have had some chemotherapy (this is known as interval cytoreductive surgery)

Occasionally, some people may need to have cytoreductive surgery if their cancer has returned. This is known as secondary cytoreductive surgery.

What are the benefits of cytoreductive surgery?

Benefits of having cytoreductive surgery include:

- improved survival rates
- increased time without cancer
- symptom relief

How should I prepare for the procedure?

Pre-assessment appointment

We will arrange a pre-assessment appointment for you in the weeks leading up to your procedure.

At this appointment, we will ask you questions about:

- your general health and any medical conditions you have
- previous surgeries you have had
- current medications you take

It is important that you bring a list of your current medications with you as we may advise you to stop taking some of these before your procedure. Please see your appointment letter for more information.

Cardiopulmonary exercise test (CPET)

We will arrange for you to have a cardiopulmonary exercise test (CPET) before your procedure. A CPET is a non-invasive test used to assess how your heart, lungs and muscles respond to exercise. As part of the test, we will ask you to cycle on a stationary exercise bike.

The information from your CPET will help us predict how your body will respond to the stress of surgery. Please see your appointment letter for more information.

Eating and drinking

Between now and your procedure, you should aim to eat a well-balanced diet that includes plenty of protein (for example, meat, fish, eggs, yoghurt, cheese, lentils and seeds). If your appetite is reduced, we may also give you some high calorie drinks. Optimising your nutrition before surgery can help to improve and speed up your recovery.

We will usually ask you to fast (stop eating) from the evening before your procedure. We will discuss this with you in more detail at your pre-assessment appointment.

Admission to hospital

You will be admitted to hospital the day before your procedure. We will usually ask you to come to either the surgical day unit (SDU) on F level at Southampton General Hospital or to Bramshaw ward on E level at Princess Anne Hospital (please see your appointment letter for more details).

When you arrive, a doctor will review you. We will then place a cannula (a thin plastic tube) into a vein (usually in your hand or arm). This is in preparation of giving you intravenous fluids (fluids directly into a vein) once you start your bowel preparation (see 'Bowel preparation' section below). We will also give you a nutritional preload drink and advise you on what you can eat and drink before your procedure.

On the evening before your procedure, we will give you a blood-thinning injection. We will explain this in more detail on the day.

Bowel preparation

We may give you strong laxatives (medication that helps to empty your bowels) after you are admitted into hospital for your procedure. This is to make sure your bowels are clear of all bowel contents. The laxatives will cause you to have diarrhoea, so it is important that you drink plenty of water to avoid becoming dehydrated. We will discuss this with you in more detail at your pre-assessment appointment.

What will happen during the procedure?

The procedure will be performed by a consultant gynaecology-oncology surgeon and their team in an operating theatre at Southampton General Hospital or Princess Anne Hospital. You will meet with your consultant, or one of their registrars (specialist doctors), in clinic in the weeks leading up to your procedure.

The procedure will be performed under general anaesthetic (a medicine that sends you to sleep so that you do not feel any pain). A specialist doctor called an anaesthetist will give you the general anaesthetic. It can be given as:

- an injection through a small tube (cannula) into a vein in your arm
- a gas that you breathe in through a mask

You will meet with the anaesthetist before your procedure to discuss what having a general anaesthetic involves, including the benefits and risks.

Once the anaesthetic has taken effect, the surgeon will make a vertical incision (cut) on your abdomen. This may be from your pubic bone to your breastbone. The surgeon will then inspect your abdomen and pelvis to look at the extent of the cancer.

Depending on the extent of cancer in your abdomen, your procedure may involve:

- **Total abdominal hysterectomy** – Removal of the womb and cervix.
- **Salpingo-oophorectomy** – Removal of fallopian tubes and ovaries.
- **Omentectomy** – Removal of the omentum (a fatty sheet of tissue which lies within the abdomen).
- **Peritonectomy** – Removal of the skin-like lining (peritoneum) of the abdomen, pelvis, diaphragm, and organs, such as the bladder and bowel.
- **Lymphadenectomy** – Removal of lymph nodes (small glands found along major blood vessels).
- **Resection of bowel** – Removal of parts of the small and/or large bowel. The remaining bowel may be joined (anastomosis) or one end of the bowel will be passed through an opening in the abdomen to create a stoma (a small opening in the tummy that is used to remove bowel contents into a collection bag attached to the skin).
- **Appendicectomy** – Removal of the appendix.
- **Cholecystectomy** – Removal of the gallbladder.
- **Splenectomy** – Removal of the spleen (an organ which filters blood and fights infection).
- **Liver resection** – Removal of the surface of the liver (capsule) or a piece of liver.
- **Removal of other structures** - We will not know the true extent of how far the cancer has spread until we start the procedure. There may be other organs or structures that we need to remove to ensure no cancer is left behind. We will only remove organs and structures that you can live without, and only if we believe they are affected by cancer.

How long will it take?

It is difficult to predict how long your procedure will take as this will depend on what we find once we start the procedure. Most procedures take between two and ten hours.

What will happen after the procedure?

After your procedure, you will go to either the surgical high dependency unit (SHDU) or the general intensive care unit (GICU) where you may stay for a couple of days. Once you are stable enough to be moved to a ward, you will be moved to Bramshaw ward at Princess Anne Hospital where you will continue your recovery. Most people will need to stay in hospital for around seven days.

Urinary catheter

During the procedure, we will place a urinary catheter (flexible tube) into your bladder. This will allow the urine to drain from your bladder into a bag outside of your body while you recover from the procedure. We will usually remove the catheter after a few days, but it can stay in place for longer if needed.

Pain relief

After your procedure, we will give you a patient controlled analgesia (PCA) pump. This pump allows you to give yourself a dose of pain relief medication directly into your vein as and when you need it. We will explain how to use the PCA pump after your procedure.

We may also give you another type of pain relief medication, which we will explain in more detail if applicable.

Abdominal drain
At the end of the procedure, we may place a drain into your abdomen. This drain is attached to a bag outside of your body to collect fluid from inside. We will usually remove this before you go home.

If you have had a bowel resection
If you have had a bowel resection, we will place you on a strict diet plan. This will usually involve drinking clear fluids in the first few days after your procedure, and then slowly re-introducing solid foods.

You should continue a low-fibre diet for a few months after your procedure. We will discuss this with you in more detail before you go home.

Continuing your recovery at home

You will need to take at least six weeks off work to recover. We can provide you with a sick note if necessary.

Once you get home, you will be able to do light activities such as:
- making yourself lunch
- showering
- going for a short walk
- climbing the stairs

You may find that you get tired easily and need to rest more often than before. You should avoid any strenuous activity that involves heavy lifting.

You must not drive for at least six weeks (or until you can do an emergency stop safely). Please consult your insurance company for more information about driving after cytoreductive surgery.

For more information about recovering at home, please read the separate aftercare advice factsheet we have given you.

Are there any risks or complications?

Cytoreductive surgery is a major procedure. There are several potential risks and side effects, as outlined below.

- **Bleeding** - A blood transfusion may be necessary.
- **Damage to surrounding structures** - This includes damage to the bowel, bladder, stomach, diaphragm, blood vessels, ureters (tubes from the kidneys to the bladder), nerves, and any other structure within the abdomen and pelvis.
- **Infection** - We will give you antibiotics to reduce this risk. If your spleen has been removed, you will have an increased risk of infection. You will need to take lifelong antibiotics and receive vaccinations against certain diseases, including pneumococcus, meningococcus (ACWY and B) and influenza (flu).
- **Treatment-induced menopause** (a sudden onset of menopause symptoms as a result of the procedure, which may include hot flushes, night sweats or anxiety), **or an increase in menopause symptoms.**

- **Blood clots** - We will give you blood-thinning injections for 28 days after your procedure to reduce this risk.
- **Organ dysfunction** - Occasionally, your kidneys, bladder, bowel, lungs and liver may need some additional support after the procedure, but this is usually temporary.
- **Bowel leak or perforation** (hole) - If we have joined your bowel, these joins have the potential to leak bowel contents (poo) into your abdomen or pelvis. This would be a major complication and may involve a return to theatre.
- **Stoma failure** - If we have created a stoma, you may need additional treatment. For example, if your stoma:
  - loses its blood supply
  - comes away from the skin
  - becomes infected
- **Lymphocyst** (a collection of fluid that can form when lymph nodes are removed or lymph vessels are cut) - If you develop a lymphocyst after the procedure, we may need to drain the fluid.
- **Lymphoedema** (swelling in the body's tissues) - When lymph vessels are cut, the natural drainage of fluid from the limbs can be affected, resulting in swollen legs and ankles.
- **Collection of fluid or pus in the abdomen or pelvis** - If fluid or pus collects in your abdomen or pelvis, we may need to drain this.
- **Pleural effusion** (collection of fluid in the lungs) - Sometimes fluid can collect in the lungs. If this happens, we may need to drain the fluid.
- **Prolonged stay in hospital** - If you experience any complications, you may need to stay longer than the expected seven days in hospital.
- **Further treatment** (including surgery) - If you experience any serious complications after your procedure, you may need to have additional treatment. If this is the case, we will discuss this with you.

For more information about risks, potential complications and side effects of cytoreductive surgery, speak to your healthcare team.

When should I seek urgent medical help after the procedure?

Contact the ward you were being cared for on or your clinical nurse specialist (CNS) if you experience any of the following:

- a high temperature (above 37.5°C)
- you feel generally unwell
- your wound becomes hot, red, inflamed, or it discharges pus or begins to open
- increasing abdominal (tummy) pain
- loss of appetite and vomiting (being sick)
- any difficulty passing urine, a burning or stinging sensation when passing urine or passing urine more often than usual
- a painful, red, swollen, hot leg or difficulty bearing weight on your legs (this may be a sign of deep vein thrombosis - DVT)

In an emergency, call **999**.

When will I receive my results?

We will send all the tissue we have removed to the laboratory to be analysed. It may take two to three weeks for the results to come back. We will arrange a follow-up appointment to see you in clinic once all your results are back and we have discussed your case in our multi-disciplinary team meeting.

Contact us

If you have any questions or concerns about the procedure or your recovery, please contact us.

Macmillan gynae-oncology nurse specialist team
Telephone: **023 8120 8765** (Monday to Friday, 8am to 4pm)
Email: **gynaeoncologysupport@uhs.nhs.uk**

After your procedure

You can contact Bramshaw ward on **023 8120 6035** (24-hour line) after your procedure if you have any questions or concerns about your procedure.

Useful links

www.cancerresearchuk.org/about-cancer/ovarian-cancer/treatment/surgery

www.ovacome.org.uk/surgery-for-ovarian-cancer-booklet

www.ovarian.org.uk/ovarian-cancer/living-with-ovarian-cancer/ovarian-cancer-treatment/ovarian-cancer-surgery

www.macmillan.org.uk/cancer-information-and-support/treatments-and-drugs/ovarian-cancer-surgery

www.uhs.nhs.uk/Media/UHS-website-2019/Patientinformation/Womenshealth/Recovering-well-after-an-abdominal-hysterectomy-3565-PIL.pdf

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