Having a radical trachelectomy
A fertility sparing operation to remove early-stage cervical cancer

The aim of this booklet is to help you prepare for your radical trachelectomy and your recovery afterwards. It will give you general information about your operation as well as a list of useful contacts. If you still have questions, please speak to a nurse or doctor caring for you.

It is common for people to feel anxious about having an operation.

What is a radical trachelectomy?
A radical trachelectomy is an operation to remove cancer from the cervix (neck of the womb). It involves removing the cervix and the upper third of the vagina. The parametrial tissue (the tissue surrounding the lower end of the uterus) and the pelvic lymph nodes are also removed.

A general anaesthetic is used, which means that you will be asleep for the entire operation. For more information, please ask us for a copy of the leaflet, Having an anaesthetic.

Where is my uterus (womb)?
Your womb is normally about the size of a pear, but varies in size from woman to woman. It sits between the bladder and the rectum (back passage) at the top of the vagina – please see figures 1 and 2.
Why should I have a radical trachelectomy?
This surgery is only performed on women with early-stage cervical cancer, who wish to preserve their ability to become pregnant in the future.

For you to be considered for this operation, the surgeons will need to perform some investigations to check that you are suitable for this procedure.

They will examine your cervix and inside your bladder while you are asleep under a general anaesthetic. This is called an examination under anaesthetic (EUA) and cystoscopy. They will also arrange for you to have an MRI (magnetic resonance imaging) scan.

These investigations will be reviewed by a team of senior doctors to decide whether or not you can have a radical trachelectomy.

This treatment has been developed in recent years by gynaecological oncologists in a few specialist centres worldwide. Although the long-term results of this type of surgery are not yet known, the initial results in terms of fertility and cure rates appear to be reassuring. However, a full hysterectomy is still considered to be the best chance of cure.

Are there alternatives to having a radical trachelectomy?
Radiotherapy (the use of x-rays to destroy cancer cells) can be given to treat cervical cancer, but would prevent you from carrying future pregnancies. Chemotherapy is sometimes given with the radiotherapy to make it work more effectively.
The only surgical alternative to a radical trachelectomy that we would offer is a radical hysterectomy, which will remove your cervix, womb and lymph nodes. This surgery would prevent you carrying a future pregnancy, however, if your ovaries are retained it may be possible to use your eggs towards a future pregnancy, which a surrogate mother could carry for you.

If you wish to have children in the future and do not wish to have a radical trachelectomy, we would recommend discussing your options with the assisted conception unit (specialist fertility doctors and nurses) before you decide on which surgery to have – your surgeon or clinical nurse specialist can arrange this for you.

Surgery is usually offered as a preferred treatment for early-stage cervical cancer, as it has fewer long-term side effects.

What risks are involved with a radical trachelectomy?
There are risks associated with any surgical procedure. Your surgeon will explain these risks to you before asking you to sign a consent form. This form confirms that you agree to have the operation and understand what it involves. Please ask questions if you are uncertain.

Possible risks and complications from this surgery are:
- bleeding during or after your operation – this may need to be treated with a blood transfusion
- infections – you will be given antibiotics during and after surgery to help prevent this
- blood clots (deep vein thrombosis or DVT) – we will ask you to wear special stockings and to have daily anticoagulant (blood thinning) injections after your operation to prevent this
- a cut in your bowel or bladder – this would be repaired during the operation
- Problems caused by having a general anaesthetic.

Risks specific to this type of surgery include:
- **lymphoedema** – may occur when the lymphatic drainage system becomes blocked and surrounding tissues may swell, causing swelling in the lower body and legs. This can lead to skin problems, pain and discomfort. This can become permanent and can happen months or even years after surgery. Some early research suggests that this will affect fewer than 5 in 100 of patients having this procedure.
- **Lymphocysts or lymphoceles** – these are swellings filled with fluid that develop in your abdomen after your operation. They are often naturally re-absorbed by your body, but if they are larger or causing you discomfort, your surgeon may drain them by using local anaesthetic and a needle.
- **Bladder problems** – a small number of women will have difficulty emptying their bladder after this surgery and may need to go home with a catheter in their bladder for several weeks. A very small number of women may have long-term difficulties with emptying their bladder, but this is rare.
- **Problems with menstruation (your periods)** – some women may find that the blood from their menstrual cycle (monthly period) becomes trapped inside the womb as the entrance is too small for it to drain away fully. If this happens, you will need to have a minor surgical procedure to open the entrance to the womb. A Smitt sleeve (small tube) or a coil can be inserted into the opening to the womb to keep the entrance open.
• **Late miscarriage/pre-term delivery** – There is a risk of late miscarriage or preterm delivery when you have had a trachelectomy. Please discuss this with your gynae-oncology team.

• **Delivery by caesarean section** – if you are pregnant following your radical trachelectomy, we recommend you register with a high-risk obstetrician as your baby will need to be delivered by caesarean section. Please speak to your surgeon or clinical nurse specialist if you have further queries.

These complications are usually rare but you must be aware of them. As with any operation, there is some risk of death, although this is also rare. Please talk to your doctor about any concerns you have before your operation.

**Further Treatment**
Your doctor sends the tissue that they remove, including the lymph nodes, to the laboratory for histology (detailed examination). This is to check that they have removed all of the cancer in the cervix, and to see if there are any cancer cells in the lymph nodes.

Your doctor will offer you more treatment if there is a risk that cancer cells have been left behind, or if there is any sign that the cancer has spread. This might include a hysterectomy (surgery to remove your womb) or chemotherapy with radiotherapy. Having further treatment means that you will no longer be able to become pregnant in the future. This can be very upsetting if you were hoping to have a family. Your doctors and nurses will do all they can to support you.

Luckily, the need for further treatment after radical trachelectomy is rare because in most cases the tumour is completely removed in the cervix with no spread of cancer to the lymph nodes.

**Preparing for your operation**
Towards the end of this leaflet, there is a checklist with details of what to bring with you.

**Smoking**
If you smoke, it is important that you stop smoking for at least 24 hours before your operation to reduce the risk of chest problems and to help your body cope with the general anaesthetic. Smoking can also delay wound healing because it reduces the amount of oxygen that is supplied to the healing tissues.

For help giving up smoking, please speak to your nurse, or call the NHS stop smoking service (details at the end of this leaflet).

**What happens before my operation?**
Prior to your surgery, you will be asked to attend a pre-assessment clinic at Guy’s Hospital. During this appointment you will see your surgeon and a nurse. They will check that you are medically fit to have surgery. They will also take some blood tests, and check your weight and blood pressure.

Please let us know if you are taking any regular medicines (including anything you buy yourself over the counter or any herbal or homeopathic medicines) and if you have any allergies to any medicines. If you are taking antiplatelet medicines (such as aspirin or clopidogrel) or any anticoagulant medicines (such as warfarin or rivaroxaban), then you may need to stop them temporarily before your surgery. We will review your medicines when you come in for your pre-assessment appointment, and will let you know whether you need to make any changes before coming into hospital. Please ask us if you have any questions.
You will also be able to use this time to discuss any question or issues that you may have. It is always advisable to write these questions down beforehand, or as you think of them so that you don’t forget anything.

If you have any pre-existing medical conditions, you may be asked to come to the ward the day before your surgery. If not, you will be asked to attend the Surgical Admissions Lounge (SAL) on the day of your planned surgery. This is an area where you are admitted and prepared for your surgery before you go to the operating theatre for your operation. When you are fully recovered after the anaesthetic, you will be taken to the ward where you will stay until you are ready to be discharged home. You can expect to remain in hospital for up to five days.

You will be on the Enhanced Recovery Programme (ERP) – this aims to help you recover from your surgery and regain your independence as quickly as possible. There is researched evidence that eating, drinking, and moving around soon after your operation and having good control of your pain helps, and speeds up, your recovery. Therefore, the programme emphasises these aspects of your recovery and focuses on how you can help yourself after your surgery. Please ask staff for more details.

Before your surgery you will see a doctor from your gynaecology team and an anaesthetist. The anaesthetist will ask about your health and explain the different ways in which pain can be prevented and controlled after your surgery.

**During the operation**

**What happens during the operation?**
Your doctor will explain to you what will happen during your operation and give you an estimated time of how long it will take. The length of the operation depends on the type of radical trachelectomy you are having (see figures 3a and 3b) and your general health.

Figures 3a and 3b show surgical incision sites for (a) abdominal and (b) keyhole surgery

Figure 4a shows where the tissues are removed and where the stitch is placed to hold the opening together. Figure 4b shows the position of the lymph nodes that are also removed.

Figure 4a

Figure 4b
How is a radical trachelectomy carried out?

The surgery is carried out either through an opening made in the abdomen (abdominal radical trachelectomy) or through three, four or five small key-hole incisions (laparoscopic or robotic radical trachelectomy). Depending on the assessment by your surgeon, part of the key-hole surgery might be completed vaginally (laparoscopic or robotic assisted vaginal radical trachelectomy). When the surgery is done through key-holes, the cervix and the parametrial tissue (the supporting tissue around the cervix) will be removed through the vagina. The wounds will look like Figures 3a or 3b above. Your doctor can tell you which type of opening and technique they plan to use.

Recovery is faster following keyhole surgery with less blood loss at surgery and a shorter hospital stay. Traditionally, keyhole surgery is done with assistance vaginally. Recently surgeons carry out the operation entirely or mostly through keyholes using a robot or a laparoscope. This allows them to do keyhole surgery even when vaginal access to the cervix is difficult or when the tumour is large. In robotic surgery your surgeon is in the same room, but sits away from you and controls the robotic arms to help him perform the operation. It is important to understand that the robot is not performing the surgery. The surgeon still carries out the procedure, but the robotic console allows more controlled and precise movements during the operation.

A large, permanent stitch, which is strong enough to hold a pregnancy, is inserted around the opening of the uterus. This holds the opening of the uterus together, but still allows you to have your monthly period and to conceive.

Has the procedure been performed already?

Both the robotic and laparoscopic trachelectomy is new to Guy’s and St Thomas’ Hospitals, but these procedures are being carried out routinely in different parts of the world, including centres across Europe and America. The robot has been successfully used here since 2004 for operations in different specialties.

If you require a laparoscopic or robotic surgery, then your procedure will be carried out by trained laparoscopic and robotic surgeons.

What happens after my operation?

The following information is a guide as to what may happen after your operation. Everyone recovers at a different pace. If you have any concerns, please talk to your doctors or nurses.

When you wake up from your operation you will have:
- an oxygen mask on your face to help you breathe after the general anaesthetic
- a drip in your arm to give you fluids
- a small clip on your finger to check your oxygen levels
- a temporary bladder catheter – you will feel sleepy and not be able to get out of bed to pass urine. The catheter also gives an accurate measurement of your urine.
- a temporary drain in your abdomen to drain any excess lymph fluid or blood present after the operation
- some temporary padding (a vaginal pack) may be placed inside the vagina. This might be removed the day after surgery.
You might have a pain relieving pump. There are two types:

- An epidural pump, which delivers painkillers into your back to desensitise the pain nerves (this may make your legs feel heavy and numb while it is in place); or
- A PCA (patient controlled analgesia) pump, which delivers a dose of painkiller into your vein whenever you press a button, allowing you to control when you receive a dose. Your nurse will explain how to use this pump, and it is impossible to overdose.

The anaesthetist will discuss these options with you in more detail before you have your surgery.

You will feel very tired and it is important that you don’t have too many visitors in the first few days after your operation. The nursing staff will help you if you need anything.

**The first day after your operation**

To help you recover from your operation and reduce the chance of problems, the ward team will encourage you to:

- sit upright, especially out of bed. You will be on the ERP to help you return to your pre-surgery state. Sitting upright lets your lungs open up fully, makes it easier to cough, and helps to prevent you getting a chest infection.
- eat and drink. The ERP will also be concerned with returning you to eating and drinking after surgery. You will be allowed sips of water the day of the surgery and you will be encouraged to eat a light diet the day after the operation if you are passing wind or your bowels are opening.
- start moving around as soon as possible. This is good for your blood circulation and, along with your anti-embolic stockings, can help prevent blood clots. Please do not get out of bed until your nurse has told you it is safe to do so.
- as well as the stockings to help prevent DVT, you will be started on a 28-day course of daily anticoagulant injections. These work by thinning the blood and helping to prevent the formation of blood clots. The injections will be given to you by the nurses for the first few days, then they will give you an information pack and will teach you how to give yourself the injections. If you are unable to do this they will suggest teaching a family member or arranging a district nurse to do it for you after your discharge.

**During the rest of your time on the ward**

Each day you will be encouraged to move around more and to become more independent. Your physiotherapist will show you the easiest way to start moving again and will explain about doing pelvic floor exercises.

Once you are able to drink normally, your drip will be taken away. Drinking plenty of fluids and walking around will also help your bowels to start working again.

You will be given tablets or suppositories to control any pain and your pump will be stopped. Your catheter will also be removed after five days, so that the nerves around the bladder can heal and you can empty your bladder fully.

In the days after your operation it is quite normal to feel a little down and perhaps tearful. This can be caused by the general anaesthetic you were given and/or your feelings about your cancer and the operation in general. How long these feelings will last varies from woman to woman. Please talk to the ward staff about how you are feeling, and you can also ask to speak to your clinical nurse specialist.
**Going home**

*When can I go home?*
You will usually stay in hospital for three to five days after your operation.

*What happens after I go home?*
It is important that you follow all the advice you are given when you leave the ward. Continue to do the pelvic floor exercises you were shown, as this helps prevent problems with urinary incontinence.

About 10 to 14 days after your operation, you may notice that the amount of pinkish/brown fluid (discharge) coming from your vagina increases. This will last for a few days and is a normal part of healing.

*What can and can’t I do when I am at home?*
The following guidelines will give you an idea as to how much you can do at home.

**During weeks one and two:**
- don’t lift anything heavier than a full kettle
- don’t do any strenuous physical activity (anything that makes you feel out of breath)
- don’t have sexual intercourse
- don’t put anything inside your vagina
- don’t use vaginal lubricants, creams or gels
- don’t drive
- do use sanitary towels or panty liners (instead of tampons) for any vaginal bleeding
- do have a bath or shower, but avoid using perfumed/scented gels or soap on your wound area, as these can irritate the area and delay healing. Gently pat your wound dry. You can then put on an unperfumed/unscented moisturising cream, such as E45™ or aqueous cream. You can buy these from the chemist or supermarket.

**During weeks three to five:**
- don’t have sexual intercourse
- don’t put anything inside your vagina
- you may be able to start driving again after week four, as long as you do not have pain when moving, and you feel comfortable performing an emergency stop quickly and safely. You should check with your insurance company to make sure you are covered to start driving again. If you are taking painkillers please check with a pharmacist whether it is safe for you to drive. If you are not sure about when to start driving again please visit your GP to check your progress
- continue to gently increase the amount of physical activity you are doing – walking is good
- allow rest time in your daily routine
- some women wish to consider returning to work at week four. You may wish to start back on a part-time basis for the first few weeks. This will depend on the nature of your work and how well you are recovering from surgery. You can discuss what is right for you with your GP.
At week six:
- you can start back with your normal activities
- you can start driving again if you follow the advice given above
- if you no longer have pain or vaginal bleeding you can start to have sexual intercourse and use tampons. If you have pain or bleeding after starting sex again, please contact the ward or your GP for advice. Please do not start using any hormone-based contraceptives without discussing with your surgeon or clinical nurse specialist first. It is important to use contraception when you resume sexual activity as your body may not be able to cope with a pregnancy too soon after this surgery. It is advised not to become pregnant until at least six months after the procedure. It should be possible to conceive naturally but the birth of your baby will have to be by elective (planned) caesarean section as you no longer have a cervix, which means you will be unable to have a natural birth.
- continue to increase your physical activity and rest when you feel tired.

Some women tell us that it can take four to six months before they feel fully ‘back to themselves’ after their radical trachelectomy.

**When to contact your doctor**

It is fairly unusual to have problems once you are back at home. If you have any of the following symptoms, you should contact your GP immediately. If your surgery is closed, call the bleep desk, t: 020 7188 3026 and ask to speak to the doctor on call for your consultant.

Symptoms:
- A temperature of 38°C (100.4°F) or above
- Severe pain or increasing pain
- Nausea (feeling sick) and vomiting (being sick)
- Increased bleeding from your vagina (bright red blood or clots)
- Offensive smelling, itchy, yellow/green discharge from your vagina
- Burning pain or discomfort when passing urine
- Inability to pass urine
- Constipation which lasts longer than three or four days and does not get better after taking a laxative
- Wound pain, or swelling/redness of your wound area
- Discharge (pus) from your wound or your wound opening
- Pain, swelling or redness in your calf
- A sudden feeling of shortness of breath and/or chest pain
- Any lumps or swelling in your groin or abdomen.

**Common questions**

These are some general questions and answers about having a radical trachelectomy. If you need any more details or have other questions or concerns, your nurse or doctor will be happy to help.

**Do I still need to have cervical screening tests (smear tests)?**

Yes, you will still have screening tests as part of your routine follow-up, even though your cervix has been removed. The screening test is carried out on the remaining area where the uterus meets the vagina – you will hear this referred to as a ‘vault smear’ or ‘vault screen’. These will be carried out by your surgical team at the hospital, rather than your GP doing them.
**What are the emotional effects of this treatment?**
Each woman is affected differently by having a diagnosis of cervical cancer, undergoing investigations and then having a radical trachelectomy. It is not uncommon to feel a wide range of emotions, which may include: fear, anger, low mood, anxiety and difficulty accepting the diagnosis. Some women may also experience physical problems such as loss of appetite, change of bowel habit, panic attacks and difficulty sleeping.

Your clinical nurse specialist will be able to discuss your concerns with you and explain a range of support that is available as part of your care at Guy’s and St Thomas’, from the Dimbleby Cancer Care Centre (details at the end of this leaflet).

**Will I still be able to enjoy sexual intercourse?**
You can start to have sexual intercourse six weeks after your operation, if you no longer have pain, vaginal bleeding or an unusual vaginal discharge.

Many women are concerned that they will no longer be able to gain the same pleasure or have an orgasm after a radical trachelectomy. If you were able to have orgasms before your surgery, it is unlikely that there will be a physical reason why you should not be able to have orgasms again.

Some women are also concerned about vaginal shortening after the operation. The vagina can stretch during intercourse and most women do not report problems with managing penetrative sexual intercourse.

When you start to have sexual intercourse, if you are anxious it may be helpful to use extra vaginal lubrication, such as Aqua Gel™ or KY Jelly™ – you can buy this at a chemist or supermarket. Start off gently, and if you find penetrative sex uncomfortable, wait a week and then try again. It is not unusual to feel some discomfort and this should get better over time. If it does not, please contact your clinical nurse specialist, surgeon or GP.

Some women find after having cervical cancer and surgery that they do not have the same desire for sexual intimacy and have difficulty enjoying sex. If you continue to have difficulties after you have recovered from your operation, you might want to contact your clinical nurse specialist who is used to talking to women about sex and relationships and is happy to help with any further questions, or you can contact the British Association for Sexual and Relationship Therapy (contact details at the end of this leaflet).

**If some of my lymph nodes were removed, can this cause long-term problems?**
Lymph nodes (or glands) are found throughout your body and are part of your immune system (which helps your body to fight infection – please see figure 1).

As part of this operation, some of the lymph nodes in your pelvis will be removed. This is because there is a risk that the cancer cells in the cervix may have started to spread, becoming trapped inside lymph nodes. If you are found to have cancer cells in your lymph nodes, we may need to offer you more treatment to be sure that we have reduced the chance of your cancer returning as much as possible.

When lymph nodes are removed during surgery, there is a small risk that your body will find it harder to drain fluid from your legs and lower body in the future. This swelling is called lymphoedema – your doctor and nurse specialist can give you more information on how to prevent this. There is also a separate Macmillan booklet that can give you more information about lymphoedema – please ask your clinical nurse specialist if you would like a copy.
If you find after your surgery that your legs are feeling heavy or swollen, it is important to contact your clinical nurse specialist for advice as early as possible.

**Checklist**
Below is checklist of things to remember before, during and after your hospital appointment.

**Before your operation**
- Stop taking your oral contraceptive pill six weeks before your operation. You must use another method of contraception instead, such as condoms.
- You will be advised at your preoperative assessment if you need to stop any other medications.
- Stop smoking or at least cut down. Try using nicotine patches, gum, or call the NHS stop smoking service (details at the end of this leaflet).
- Write down any questions you have (for example: What type of radical trachelectomy am I having?) and bring them to the hospital with you.
- Make arrangements for time off work and support for when you go home.
- Try to take regular exercise and eat a varied and balanced diet.

**Coming into hospital**
You should have received the leaflet, *Welcome – information about your stay*. If you have not, please contact us to ask for a copy. The leaflet includes a checklist – please look at the checklist to make sure you have packed everything you need. Here is a list of items you can possibly take with you:

- Baby-wipes
- Lip balm
- Comfortable sanitary pads or panty liners
- Larger fitting pants
- Nicotine patches if you smoke and are trying to stop. Please give them to your nurse when you arrive
- Loose fitting nightdresses – the waist-line of pyjamas can be uncomfortable over your tummy
- Dressing gown
- Supportive shoes or slippers.

**Going home**
- Do you have a clinic appointment?
- Date __________ Time _________ Clinic _____________________________
- Do you know when you can return to work?
- Have you been given your medicines to take home?
- Do you know what your tablets are for and how and when to take them?

Are there any other questions you need to ask before going home?

**Sources of useful information**

**Benefits Enquiry Line**  
*t*: 0800 882200 (freephone)  
*w*: www.dwp.gov.uk

**Cancer Research UK**  
*t*: 020 7009 8820  
*w*: www.cancerresearchuk.org
Contact us

Gynaecology ward, t: 020 7188 2697 or 020 7188 2703

Your consultant gynaecological oncology surgeon is …………………………………………………. t: 020 7188 2695

You can contact your clinical nurse specialists during office hours, t: 020 7188 2707

For general appointment enquiries, t: 020 7188 2695

Outside of these hours, please contact your GP surgery or the gynaecology ward. If you have any questions about your hospital stay, such as the date of your operation or when you should come into hospital, please call the admissions department, t: 020 7188 3676.

NHS stop smoking service, t: 020 7188 0995, or call the NHS Smoking Helpline, t: 0800 169 0 169.

Guy’s and St Thomas’ hospitals offer a range of cancer-related information leaflets for patients and carers, available at www.guysandstthomas.nhs.uk/cancer-leaflets. For information leaflets on other conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Dimbleby Cancer Care provides cancer support services for Guy’s and St Thomas’. We have a drop-in information area staffed by specialist nurses and offer complementary therapies, psychological support and benefits advice for patients and carers.

Dimbleby Cancer Care is located in the Welcome Village of the Cancer Centre at Guy’s. t: 020 7188 5918 e: DimblebyCancerCare@gstt.nhs.uk

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the clinical nurse specialist or other member of staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) e: pals@gstt.nhs.uk
Language and Accessible Support Services
If you need an interpreter or information about your care in a different language or format, please get in touch.
t: 020 7188 8815   e: languagesupport@gstt.nhs.uk

NHS Choices
Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.
w: www.nhs.uk

Get involved and have your say: become a member of the Trust
Members of Guy’s and St Thomas’ NHS Foundation Trust contribute to the organisation on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it is up to you how much you get involved. To find out more, and to become a member:
t: 0800 731 0319   e: members@gstt.nhs.uk   w: www.guysandstthomas.nhs.uk/membership