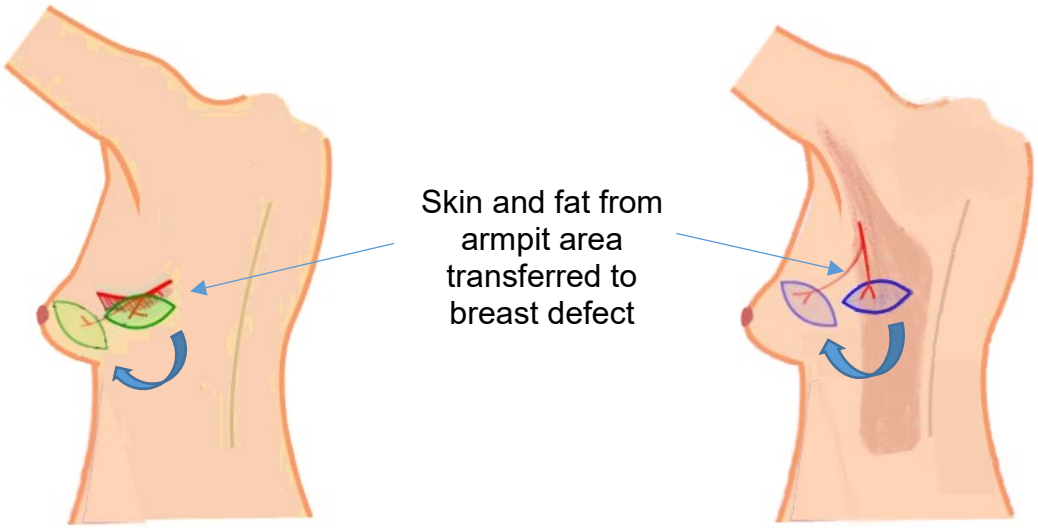
Partial breast reconstruction using LICAP and LTAP flap techniques

This information is for women undergoing wide local excision (lumpectomy) that will cause a significant deformity of their breast. In suitable patients. We try to minimise this using partial breast reconstruction techniques and this leaflet explains what happens during the operation, outlining the benefits, alternatives and risks of surgery. If there is anything you do not understand, or you have further questions or concerns, please speak to one of the breast care nurses. Their numbers are listed at the end of this leaflet.

What is a chest wall perforator flap partial breast reconstruction (LICAP and LTAP) and what are the benefits?



LICAP *Lateral InterCostal Artery Perforator* ***LTAP*** *= Lateral Thoracic Artery Perforator*

Any breast conservation procedure (such as LICAP or LTAP), **when this is possible**, is always better than total mastectomy and reconstruction. The benefits being longevity, retaining sensation and reduced risk of complications.

The operation aims to replace the lost breast tissue following removal of a breast cancer. Removing the cancerous tissue from the breast leaves a space within the breast tissue. This space initially fills with fluid but this eventually disappears. As a result, removal of breast tissue combined with other treatment such as radiotherapy can lead to a permanent change in the shape of the breast, sometimes causing significant distortion. The size of your breast and the relative size of the tumour and its position, will determine the appearance following the lumpectomy (medically termed 'wide local excision'). When we know a lumpectomy will cause significant deformity, we always try to discuss with patients the surgical options that may be available to try to lessen the cosmetic impact of a lumpectomy. Unfortunately, filling the space

(defect) in the breast tissue is not always possible, depending on the factors mentioned above.
This type of operation is suitable for some patients who have a breast cancer in the outer part of their breast tissue. The aim of the operation is to replace the lost tissue from tumour removal with your own skin and fat. It is called a partial breast reconstruction.
The benefit of the operation is removal of the tumour and replacement of your lost breast tissue with your own other tissue to try to maintain its size and shape. However, radiotherapy (if you have it) may cause shrinkage of your breast and the flap altering its appearance.
The scars are largely hidden and the results may maintain your current breast symmetry.

What does the operation involve?

The operation involves removing fat and skin from the side of the chest wall, below the armpit, where there is usually some tissue and using it to fill the space in the breast resulting from the lumpectomy. The aim is to try to maintain your natural breast shape. No muscle is removed and the tissue used is still supplied with blood to keep it healthy. Depending on which blood vessels we use determines the name we give to the flap (LICAP – lateral intercostal artery perforator flap or LTAP – lateral thoracic artery perforator flap).
The removal of this tissue results in quite a long scar on the side of the chest, which starts at the side of the breast and runs along the side of the chest wall and possibly onto the back. The scar is largely hidden when your arm is in its usual position, but will be visible when raising your arm. There will be no scar on your breast but there may be an additional scar with any lymph node surgery.

Are there any alternatives to partial breast reconstruction?

- **Simple lumpectomy** is a shorter procedure with a smaller scar but is likely to cause a significant distortion /indentation in breast shape, which is why this alternative is being discussed with you.
- In patients with very large or droopy (ptotic) breasts, sometimes the cancer can be taken out and the space in the breast filled with the patient's own breast tissue, called **therapeutic mammoplasty**, but this is not suitable for all patients.
- **Mastectomy** (removal of all breast tissue) **with or without total breast reconstruction** is sometimes recommended, but preserving most of your breast tissue and using a perforator flap is a better form of reconstruction than total breast reconstruction.

Before the operation

If necessary, blood tests and swabs may be arranged, together with a chest X-ray and/or heart ECG. The operating surgeon and anaesthetist will see you on the day of your operation. The surgeon will make some markings on your breasts and chest wall and we will arrange for you to have photographs taken prior to the operation.
Smoking or being overweight significantly add to any risks of surgery. Losing weight and stopping smoking will reduce your risk of complications. Speak to your GP for advice on giving up smoking and losing weight before your surgery.

The operation

Our most common procedure is performed in two stages:

The first stage: Unless you have a non-invasive DCIS, this involves removal of the cancer and an operation on the lymph nodes. This involves a cut at the side of your breast and a separate cut under your arm. The cancer is removed from your breast together with some lymph from under your arm. The wounds are closed with dissolvable sutures and saline (salt water) is injected into the space in your breast where the tumour has been removed. A waterproof dressing is then applied to the surgery sites.

This may be done as day case surgery, if so you will be able to go home on the same day.

Once the results from the first operation are available, we will know if the removal of the cancer and surrounding margins was successful. Approximately 20% of patients (1 patient in 5) will not get a clear result from the first operation (this is a national figure). If you do not get a clear result, your surgeon will discuss further surgical choices available to you.

If the site and surrounding margins of the tumour have been successfully removed and are clear, then you will proceed to the second stage of the operation to replace the missing breast tissue. This is usually done approximately 2-4 weeks after the first operation.

The second stage: The pre-operative procedures are similar and your surgeon will once again see you the morning of your operation and make some markings at the side of your breast and chest wall and photography may be requested.

The scar at the side of your breast is opened and any remaining fluid drained. A small amount of additional breast tissue may need to be removed. An area of skin and underlying tissue and their small blood vessels are freed from the side of your chest. Once the tissue has enough movement we rotate it on a safe blood supply into your breast and replace the tissue removed in the first operation. We then check for and stop any bleeding before closing the skin at the side of your chest wall causing the long scar. A suction tube drain is sometimes used to drain fluid from the wound after surgery. Occasionally this may need to stay in for a week or two after surgery, if required.

Dissolvable sutures are once again used and a waterproof dressing applied.

Depending on your circumstances, the removal and reconstruction could be done in a single stage operation. However, if we fail to gain clear margins around the cancer we may then need to proceed to a mastectomy at a second operation. You would also have an additional long scar on your chest wall and back, which would have been avoided if the operation is performed in two stages.

Risks and complications

All surgery carries some element of risk. Common side-effects can include nausea and vomiting following general anaesthesia. Your breast will be painful, swollen and bruised for a few weeks following your operation.

Specific complications

1. **Haematoma:** This is bleeding into the tissues following surgery and can occasionally lead to patients returning to theatre to stop the bleeding and remove the blood (2-3%).
2. **Wound infection:** This can occur after any type of surgery and may need treatment with antibiotics. The usual cause is bacteria from your own skin contaminating the wound at the operation (2-3%). The risks are greater if you are a smoker, diabetic or overweight.
3. **Deep venous thrombosis:** This can happen after any operation and general anaesthetic. Risks are reduced by wearing preventative compression boots and sometimes giving an anti-clotting injection.
4. **Delayed wound healing:** The skin may fail to heal and separates, leaving a raw area. Occasionally, this can be extensive and if so, we may need to re-operate to clean the wound and stitch the skin closed again possibly with a drain. If this occurs, it is usually associated with an infection at the same time (2-3%). The risks are greater if you are a smoker, diabetic or overweight.
5. **Flap loss / failure:** There is a small risk of the blood supply to the tissue being damaged or disrupted by the surgery (1%). If this happens the tissue my die (flap necrosis). If this occurs, you would need further surgery to remove the tissue.
6. **Fat necrosis:** The flap is made of fat and skin. Fat naturally has a poor blood supply and sometimes some of the fat cells may not survive. If some fat cells die, this can sometimes lead to firmer lumpy areas developing in the tissue. It is unlikely that they will need to be biopsied (sampled) and they usually do not need to be removed.
7. **Distortion / asymmetry:** The aim of this operation is to recreate your natural breast shape as much as possible, but we cannot guarantee the cosmetic outcome. Generally, the results from the operation are good or excellent, but sometimes there can still be some resulting change in the shape of the breast or indentation. The breast may also shrink after radiotherapy. Unfortunately, we are unable to predict how your body will react.
8. **Numbness:** There may be some numbness surrounding the scar and on the breast, which may be temporary or permanent.
9. **Shoulder stiffness:** You may experience some tightness after the surgery due to the scar tissue and depending on how much tissue we need to take to reconstruct your breast. It may affect your shoulder movement temporarily. To help with stiffness, you can try raising your arm to 90 degrees for the first 3-4 weeks, or higher if done slowly
10. **Scarring:** Initially, the scars will be fine, bright red lines; in most cases the scars will usually heal satisfactorily and soften, becoming much paler and less obvious after 12 months or so. Some patients have a tendency to form red and lumpy scars (hypertrophy) or keloid scars, which are broad raised scars. The scarring will be permanent.
11. **Seroma:** This is fluid build-up that occurs under the scar at the site of surgery. It is a natural occurrence following any such surgery and does not usually cause any problems. Occasionally, some patients can form larger volumes of seroma, which may cause discomfort or pressure on the wound. If it is problematic, it is easy for us to drain the fluid. This fluid drainage is painless.

After surgery

We will give you antibiotics and painkillers after surgery. We will encourage you to get up and move around the following day. If you have a drain, it will be removed when the fluid from the wound lessens.

Most patients will need to stay in hospital for one night after the second stage operation.

Going home

You will go home with some dressings in place and wearing a supportive soft vest only for the first week, and then only a soft non-wired bra for a further three weeks (**no under-wiring**). **Your surgeon may advise variations on the above.**

You will have some relatively mild discomfort for a number of weeks after surgery but this is usually controlled with regular simple painkillers such as paracetamol or Ibuprofen (do not take ibuprofen in the first 48 hours after surgery). You will need to try and sleep on your back for the first two weeks.

You are advised to avoid strenuous exercise for a minimum of six weeks. The length of time you need to take off work will depend on the nature of your job but you should plan for at least four weeks. The breast will be swollen and your nipple sensation may be altered. The swelling and bruising subside in a few weeks but it can take 6-12 months for the scars and shape of the breasts to settle.

You are advised not to have sex for at least four weeks following the surgery as sexual arousal can cause further swelling of the breasts. Allow only gentle contact with your breasts in the first six weeks.

If you feel unwell with a temperature, vomiting or notice significant redness of the skin on or around the chest wall or breast you should either contact your GP or emergency on-call service, if out of normal working hours, as you may have an infection and will need antibiotics.

Follow-up

You will be given an appointment to return to the hospital 7-10 days following your surgery. During this appointment, the dressings will be removed and your wounds inspected. You can shower normally with the dressings on but try not to get them soaked (so avoid baths).

Long-term outlook

Partial breast reconstruction surgery is usually successful. Maintaining your natural breast shape and volume with well-placed ‘hidden’ scars. Most women are pleased with the results of their surgery. However, the shape of your breasts will change with time, particularly with pregnancy, changes in body weight and ageing, and the results of surgery are likely to alter as you get older. These flap reconstructions are relatively new and we do not yet know the cosmetic outcomes over a 10-20-year period.

Contact us

If you have any problems regarding your care or treatment at this hospital, please talk to us. Your feedback will help us to improve and develop our service. Please speak to a member of staff in the clinic or on the ward, or if you would rather talk to a senior member of staff, ask to speak to the ward/departmental manager or matron.

Our Patient Advice and Liaison Team (PALS) can offer you 'on the spot' support and advice as well as practical information at a time when you are feeling confused and anxious. PALS can be contacted on 0118 322 8338, email PALS@royalberkshire.nhs.uk, or ask a member of staff, the receptionists or the switchboard to contact them.

Consultant surgeons

Mr B Smith	Consultant Oncoplastic and Reconstructive Breast Surgeon
Miss N Dunne	Consultant Oncoplastic and Reconstructive Breast Surgeon
Mr G Cuffolo	Consultant Oncoplastic and Reconstructive Breast Surgeon

Our clinical teams can be contacted via Clinical Administration Team 3 (CAT 3) on 0118 322 1883, then press the option for 'breast' or email rbb-tr.cat3@nhs.net.

The breast care nurses can be contacted on telephone number 0118 322 7420, and please leave a message if you get the answerphone. Or you can email on breastcarenurses@royalberkshire.nhs.uk.

More information

If you have any questions about the procedure or this information, please speak to your surgeon or breast care nurse.

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Breast Unit, July 2023
Next review due: July 2025