

Post Op Phase

Objectives:

- Designed to facilitate recovery from **any** cancer surgery including:
 - Mastectomy/ Lumpectomy
 - Breast reconstruction surgery
 - Colorectal surgery
 - Gnaecological cancer surgery
 - Head and neck cancer surgery
- Restore ROM and strength
- Prevention of soft tissue fibrosis, myofascial pain, and frozen shoulder
- Education for lymphoedema prevention
- Provide reassurance and help women in maximising their recovery

Cancer Surgery treatment goals

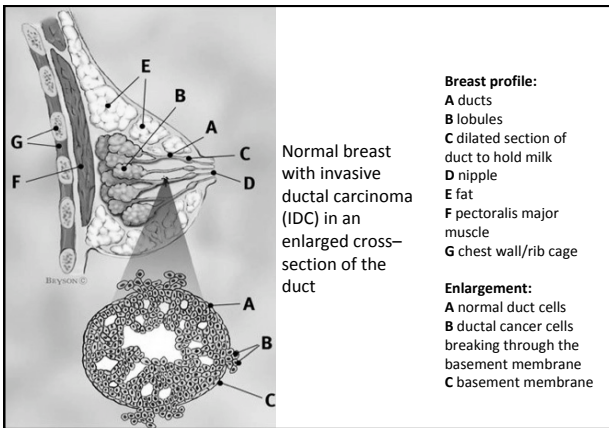
- The therapeutic goal of cancer surgery:
 - Is to completely excise the cancer tumor
 - To assess axillary lymph node status
- Morbidity after surgery in the form of functional compromise and pain remains a significant clinical problem

PINC Post Op Phase services

- Manual physiotherapy
- Scar management
- Joint mobilisations
- Breathing techniques
- Lymphoedema Education
- Exercise prescription

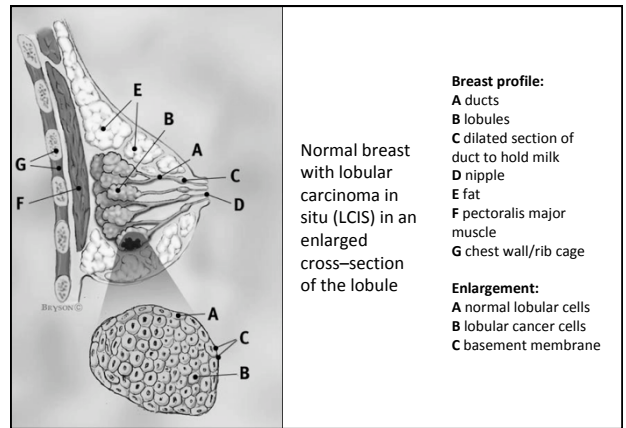
Types of breast cancer

- Ductal carcinoma in situ (DCIS)
- Lobular carcinoma in situ (LCIS)
- HER2 positive
- Triple negative
- Paget's disease of the nipple
- Inflammatory breast cancer
- Locally advanced breast cancer
- Secondary breast cancer



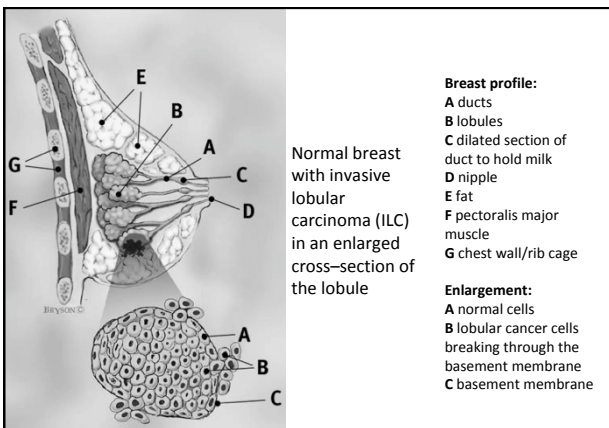
Normal breast with invasive ductal carcinoma (IDC) in an enlarged cross-section of the duct

- Breast profile:**
A ducts
B lobules
C dilated section of duct to hold milk
D nipple
E fat
F pectoralis major muscle
G chest wall/rib cage
- Enlargement:**
A normal duct cells
B ductal cancer cells breaking through the basement membrane
C basement membrane



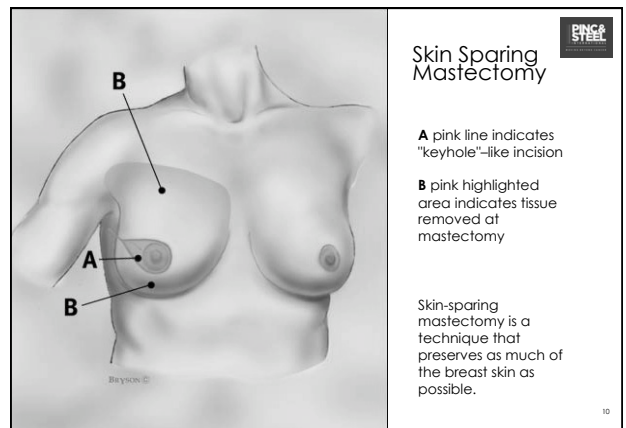
Normal breast with lobular carcinoma in situ (LCIS) in an enlarged cross-section of the lobule

- Breast profile:**
A ducts
B lobules
C dilated section of duct to hold milk
D nipple
E fat
F pectoralis major muscle
G chest wall/rib cage
- Enlargement:**
A normal lobular cells
B lobular cancer cells
C basement membrane



Normal breast with invasive lobular carcinoma (ILC) in an enlarged cross-section of the lobule

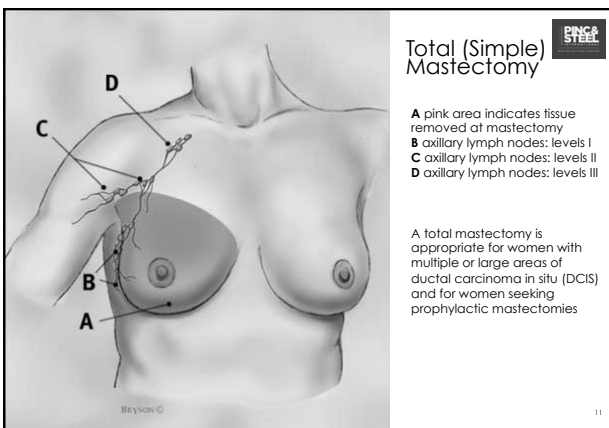
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Skin Sparing Mastectomy

- A** pink line indicates "keyhole"-like incision
B pink highlighted area indicates tissue removed at mastectomy

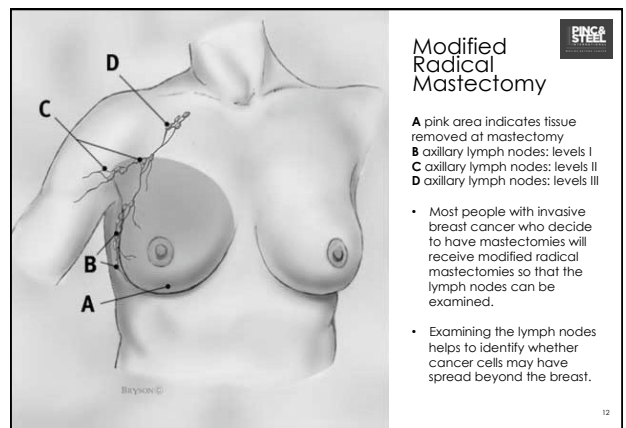
Skin-sparing mastectomy is a technique that preserves as much of the breast skin as possible.



Total (Simple) Mastectomy

- A** pink area indicates tissue removed at mastectomy
B axillary lymph nodes: levels I
C axillary lymph nodes: levels II
D axillary lymph nodes: levels III

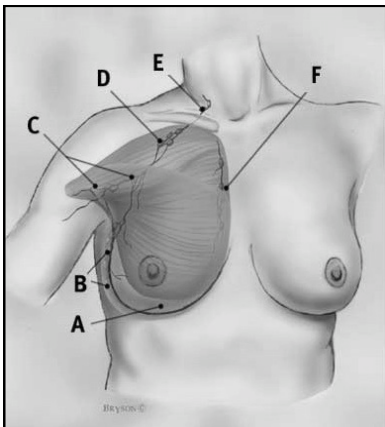
A total mastectomy is appropriate for women with multiple or large areas of ductal carcinoma in situ (DCIS) and for women seeking prophylactic mastectomies



Modified Radical Mastectomy

- A** pink area indicates tissue removed at mastectomy
B axillary lymph nodes: levels I
C axillary lymph nodes: levels II
D axillary lymph nodes: levels III

- Most people with invasive breast cancer who decide to have mastectomies will receive modified radical mastectomies so that the lymph nodes can be examined.
- Examining the lymph nodes helps to identify whether cancer cells may have spread beyond the breast.



Radical Mastectomy

- Today, radical mastectomy is recommended only when the breast cancer has spread to the chest muscles under the breast.
- Although common in the past, radical mastectomy is now rarely performed because in most cases, modified radical mastectomy has proven to be just as effective and less disfiguring.

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Possible side effects of mastectomy include:


- Wound infection
- Hematoma
- Seroma
- Arm and breast lymphedema
- Sensory changes in the arm
- Nerve palsy or problems with muscle firing
- Anterior protective posture
- Pain syndromes
- Limited arm ROM
- Shoulder impingement
- Frozen shoulder
- Neck and back pain

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LYMPH NODES

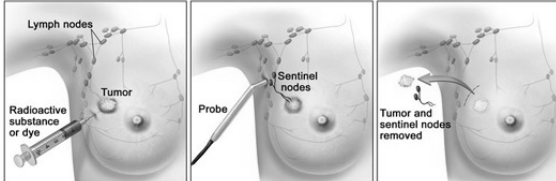
The breast lymphatic's drain into three major lymph node regions.

These are the axillary, internal mammary, and supraclavicular lymph nodes.



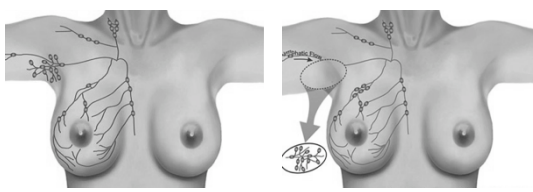
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SENTINIAL LYMPH NODE DISSECTION (SLND)

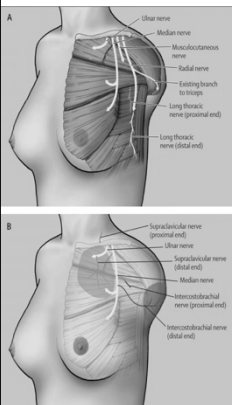


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AXILLARY LYMPH NODE DISSECTION



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Possible side effects of axillary surgery include:

- Arm and breast lymphedema,
- sensory changes in the arm,
- pain syndromes, limited arm range of motion,
- Nerve palsy or problems with muscle firing
- Scapular dyskinesia and frozen shoulder among others.

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CAUSES OF POST MASTECTOMY PAIN


Causes of post mastectomy pain remain unclear, but are probably due to several factors

Clinical Presentation:

- Neuralgic quality pain (burning, shooting) associated with hypersensitivity.
- Numbness, tingling, and muscle weakness depending on whether the nerve involved is purely sensory, purely motor, or mixed sensory, motor.
- Allodynia may be present. This is pain from a stimulus that does not normally cause pain, i.e., clothing or sheets touching the skin where the skin may become easily irritated.

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Post Op Phase guidelines after MASTECTOMY AND/OR ALND

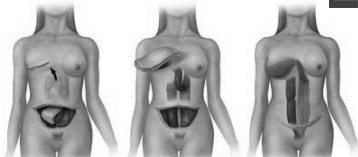


- Check surgeons protocol
- Be aware of tightness in the axilla, either skin, scar or muscle
- Education and reassurance
- ROM exercises performed with good scapular-humeral rhythm

Balance between 'promotion of movement' and 'protection of the surgical site' to ensure optimal healing

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Pedicle TRAM flap Reconstruction

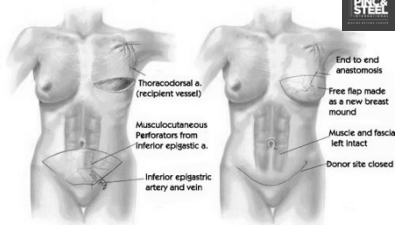


Uses more of the rectus muscles – blood supply remains intact. Harder recovery due to loss of abdominal strength – back pain is common

- Abdominal wall weakness with/without herniation
- Loss of trunk extensor strength
- Abdominal wall compromise = Back pain/ pelvic floor/ breathing
- Reduced muscle co-ordination

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DIEP Reconstruction

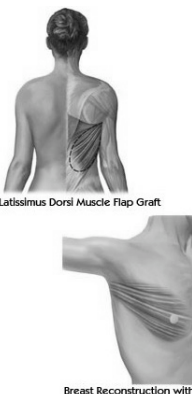


Preserves the anterior rectus sheath and integrity of abdominal muscle.

- Removes only the lower abdominal skin and fat along with deep inferior epigastric vessels, an artery, and a vein at the bottom of the rectus abdominis muscle
- 6-8 hrs of surgery. More technically difficult as blood vessels reattached under microsurgery
- Clinically better outcomes with these clients

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Latissimus Dorsi reconstruction

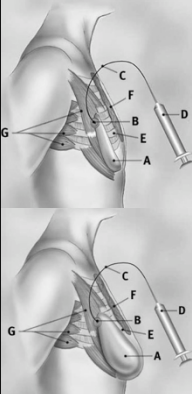


The latissimus muscle flap, with or without attached skin, is elevated off of the back and brought around to the front of the chest wall;

- Shoulder pain.
- Impairment in shoulder flexion, strength & function,
- Difficulty with functional tasks (eg. reaching overhead) and athletic activities (eg. tennis, golf)

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Implant reconstruction

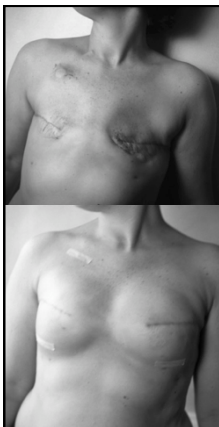


Temporary expander to stretch tissue and create pocket form permanent implant

When expander is injected with fluid

- Pect muscles may react and tighten
- Cause Pain
- Limit arm mobility


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Rehabilitation considerations for breast reconstruction surgeries include:

- Decreased shoulder ROM
- Abdominal / trunk weakness
- Pain related to denervation
- Low back pain
- Abdominal wall compromise
- Delayed wound healing
- Core muscles forget how to work in synergy
- Decrease ability to perform ADL's
- Decreased ability to exercise


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Essential steps after BREAST RECONSTRUCTION SURGERY:

- Listening, reassuring & education is paramount.
- Check scar
- Ensure adequate pain management
- Ask about sleep
- Give functional advice – dressing / lifting strategies
- Evaluate standing & seated postures
- Ensure pain free positioning for exercises
- Check surgeons protocol
- Early emphasis should be on posture, breathing & functional movements

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EXERCISE PRESCRIPTION ESSENTIALS:


Initial post op phase exercises should help:

- prevent swelling and tightness,
- assist lymphatic drainage,
- relieve tension and pain,
- help promote healing.

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    graph TD
      A[Breathing techniques] --> B[Pain control and biomechanical counseling]
      B --> C[Assist lymphatic drainage]
      C --> D[Improve Shoulder ROM]
      D --> E[Assist stability and strength of the shoulder girdle]
      E --> F[Core awareness and setting]
    
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Key messages – Phase One Rehabilitation

- Every person is affected by cancer surgery in different ways and needs a rehabilitation program to suit their individual needs
- Early and accurate assessment is critical.
- There are a large number of potential side effects that could be prevented if assessed and treated early.
- Collaboration with other health care providers ensures alignment of recovery goals, efficiency of process & improved outcomes.

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Summary

- TAKE the time to really listen to your patients
- BE KIND – this is an extremely stressful and uncertain time
- Your knowledge, encouragement and reassurance will provide so much support for women during this phase

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