# WEST MIDDLESEX BREAST FIRM

1/1/2017

## A guide to the breast department

*Georgina Hicks, CT2*

*georginahicks@doctors.org.uk*

*Rajesh Balasubramanian, SpR*

*rajeshkumardr@gmail.com*

# Contents

# West Middlesex Breast Firm

**A GUIDE TO THE BREAST DEPARTMENT**

## WELCOME

The breast team at West Middlesex Hospital specialises in benign and malignant breast surgery as well as looking after acute and elective general surgery patients. It is a fantastic team to be part of and we hope you enjoy your time with us and take an interest in breast surgery.

## THE BREAST TEAM

### Consultants

Mr Musa Barkeji – musa.barkeji@chelwest.nhs.uk

Mr Siv Salakinathan – siv.salaki@chelwest.nhs.uk

Mr Rajiv Vashisht – rajiv.vashisht@chelwest.nhs.uk

Mr Razick Sait – mohamed.sait@chelwest.nhs.uk

Consultants carry out a ward round each day, run clinics and operating lists. Some of them may be allocated to be your educational or clinical supervisor.

### Registrars

There are usually several registrars as senior clinical fellows or ST3-8 who are part of the breast firm and cover the general surgery on call rota.

Registrars run clinics and operating lists.

### SHO'S

There are usually several SHO grade doctors including FY2, junior clinical fellows and core surgical trainees.

SHO's are expected to attend clinic and theatres.

### FY1's

There are usually two FY1 doctors who rotate throughout the general surgery departments and spend 1 month with the breast team.

FY1's are primarily ward based but are encouraged to attend clinic and theatre for learning opportunities.

**Bleep numbers = 089 to be carried by F1's**

How to bleep - using a landline, dial 8, then the 3 digit bleep number, followed by the 4 digit phone extension that you're using. Wait to hear the automated confirmation message before hanging up.

## Specialist nurses

Hazel Ricard – MacMillan Breast Care Nurse Ext 5885

Sandy Miller – MacMillan Breast Care Nurse Ext 6786

Their offices are located along the corridor from OPD 2 through the double doors next to breast USS room. The breast specialist nurses are very knowledgeable and helpful. Please discuss questions you have with them.

## Breast Radiographers

Alison Wilson – Superintendent radiographer Ext 5771

Alison Thurlow – Breast advanced practitioner Ext 5771

Shauna – HCA radiology Ext 5145

The breast radiographers are very knowledgeable and helpful. Please discuss any questions about imaging you have with them. They are located in Outpatients 2 on the ground floor.

## Breast patient coordinator

Jo Humphreys – jo.humphreys@nhs.net Tel 0208 321 5771

+ add other secretaries. Located in OPD 2.

Please discuss with Jo queries about : appointments, clinic letters and dictating letters

## Radiology

Dr Farhad Aref – consultant breast radiologist

Dr Lucy Wilding – consultant breast radiologist

## Pathology

Dr Anne Thorpe – consultant histopathologist

Dr Sharkir Karim – consultant histopathologist

Dr Shaila Desai – consultant histopathologist

## Oncology

Dr Pippa Riddle – consultant oncologist pippa.riddle@nhs.net

Dr Rizwana Ahmad – consultant oncologist riz.ahmad@nhs.net

## MDT Coordinator

Queenie Antalika – queenie.antalika@nhs.net

Please email Queenie if you would like to add a patient to be discussed at MDT.

# TIMETABLES

## General Firm Timetable

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| AM | 8am handover (all to attend)<br>9am Mr Barkeji Breast Clinic OPD 2 | 8am breast MDT (all to attend) Education Centre<br>10.30am Mr Sait Breast Clinic OPD 2 / alternate general surgery | 8am handover (all to attend)<br>9am Mr Sait / Vashisht Breast Clinic OPD 2<br>Mr Salaki / Mr Barkeji Theatre (Alternate weeks) | 8am handover (all to attend)<br>Mr Barkeji / Mr Vashisht / Mr Sait Theatre<br>(Alternate weeks) | 8am handover (all to attend)<br>9am Mr Vashisht Breast Clinic OPD 2<br>Mr Barkeji Theatre |
| PM | 1.30pm Mr Barkei General Clinic OPD 2 | 1pm rota meeting in OPD 2 clinic room (all to attend)<br>1.30pm Mr Barkei / Mr Salaki Clinic OPD 2 | Mr Salaki / Mr Barkeji Theatre<br>(Alternate weeks) | Mr Barkeji / Mr Vashisht / Mr Sait Theatre<br>Theatre list | 1.30pm handover (all to attend) Education Centre<br>Academic afternoon |

The weekly rota timetable is an electronic rota via :

**www.medicalota.org**

You will be sent a link to the rota which enables you to add on calls / nights / study leave / annual leave.

This enables us to see how many people are available - the clinics and theatre lists are then booked with remaining available people.

You are expected to add all your on calls / nights / study leave / annual leave 6 weeks in advance. The weekly rota is generated based on what you add.

## LEAVE

Annual leave and study leave forms are available from the education centre or from the Breast secretaries.

Please check the electronic rota to see who else has taken leave at a particular time. When you have identified a suitable time for leave please confirm this with a registrar and consultant. Mr Salaki is then responsible for signing the leave form.

SHO's need to ensure that there are at least two other SHOs present in order to cover clinic and theatres fully. Please always give Jo leave dates to book yourself out of clinic.

F1s need to ensure that the other F1 on the firm is available to cover and is not on leave or on-call or on zero days post on-call. An F1 must be on the firm at all times.

Please try to request leave 6 weeks in advance.

## WARDS

We may have patients located around the hospital that are being reviewed but the main surgical wards are:

Syon1/2 wards

Richmond ward and the SAU (surgical assessment unit)

Day surgery theatres (for patients undergoing day case surgery)

## THEATRES

The breast surgery lists are located in theatres 3 and 4. The emergency theatre CEPOD is theatre 5.

Some patients may be admitted after theatre. Please ensure that all post-op patients are on the main patient list so that they are not missed on the ward round.

F1s are encouraged to come to theatre when they are free.

**How to look up a theatre list on eCAMIS**
- **Login to eCAMIS**
- **Click 'Session Management' on the left hand side**
- **Select the date (use 'From' and 'To' section and put the same date)**
- **Select specialty 'General Surgery'**
- **Click 'OK'**
- **The lists will be shown, click '+' sign to expand for list contents**
- **Click printer icon to generate Word document of list and to print**

**How to book a case on CEPOD (emergency list)**
- **Get an emergency surgery booking form (outside theatre 5)**
- **Fill this form in THOROUGHLY**
- **Give the form to the theatre coordinator (Bleep 143)**
- **Bleep the CEPOD anaesthetist (xxx)**

## HANDOVER

Daily handover takes place at 8am in the Syon Gym Second Floor.

Please attend handover every morning unless you are consenting patients for theatre that day.

Handover is given by the previous day and night SHO.

Decisions on which team each patient goes back to is made by the senior members of the team.

### Weekend handover

This takes place on a Friday at 1.30pm in the conference room, education centre.

Once a month there will be the **morbidity and mortality** (M&M) meeting after handover. See relevant section on M&M meetings for more information.

Weekend handover will otherwise be followed by surgical teaching. Please check when your firm is supposed to be giving a teaching session – there should be a timetable sent out.

## WARD ROUNDS

F1s should attend the ward round with the registrar or consultant leading. If SHOs are free they also attend the round.

There will be a timetable of who is leading the ward round.

**Documentation should look similar to this (write in BLACK pen)**

Date & Time (name & grade of person leading WR) WR Breast / General Surgery

1. Reason for admission / Number of days post-op

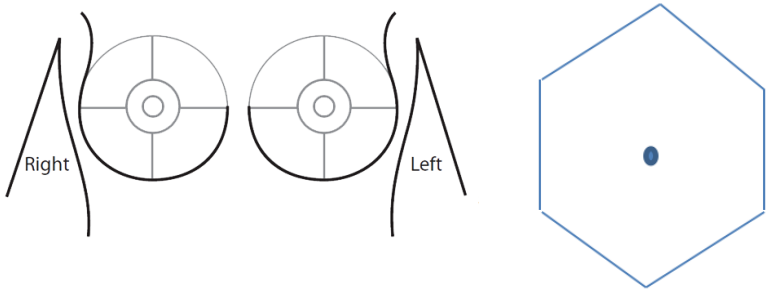
2. Current issues / Any new patient complaints

- Observations - NEWS (Temp, HR, BP, SpO2, RR), urine/stoma/drain output

- Recent bloods / new results (not previously documented)

3. Examination findings:

- How the patient looks from the bedside
Abdo - ?soft/tender/distended
?signs of peritonism
Bowel sounds – present
?scars/wound infection
?drains/catheters




4. Impression

5. Plan – always ask the WR lead to clarify what the plan is if you're unsure e.g. ?follow-up in clinic ?scans

If a scan is needed, ask the WR lead what to put on the radiology request to make sure it is not refused

On Friday we like to use a specific 'Friday Ward Round Proforma' which helps to give a clearly documented summary for each patient as well as a weekend plan for the on-call team.

Please ensure discharge summaries and TTAs are not left for the weekend teams to do, prepare them in advance.

## THE PATIENT LIST

How to find the main patient list :

**Log in as "surgicalho", password: 'theatre123' to any computer**

**Within "surgicalho" main folder locate Mr Barkeji Firm -> daily lists—> relevant year—> relevant month -> relevant day**

Information that should be on the list for each patient includes:

Admission date
Which consultant the patient is under (i.e. who performed the operation/which take the patient was under)
Presentation details, why they came to hospital
Diagnosis
Operation and operation date
PMHx
Investigation results (bloods/cultures/urine/x-rays/scans/etc)

Some patients may be admitted after theatre. Please ensure that all post-op patients are on the main patient list so that they are not missed on the ward round.

Please also keep a list of patients who have died / relevant morbidity cases for the next morbidity and mortality meeting so that it is easy to find them.

## DISCHARGE SUMMARIES

Please ensure discharge summaries (completed on Realtime) are accurately written. Do not just copy and paste scan results without thinking about the meaning.

Please ensure any follow up that is required is stated on the discharge summary and that the ward clerks know to book any appointments.

The pharmacy closes at 5pm, so all TTAs should be completed before this.

## MDT

Breast MDT takes place on Tuesdays at 8.30 am in the seminar room, education centre.

To add a patient to MDT please email Queenie with a few clinical details and the reason for discussion.

Patients who have had biopsies in clinic will automatically be added to the breast MDT by the breast radiographers.

MDT will include:

Histopathologists
Breast radiologists and radiographers
Breast surgical consultants
Breast care nurses
Breast oncology doctors

MDT patients are grouped into:

- Histology
    - Mainly new patients who have had imaging and core biopsies.
- Imaging
    - Patients with new imaging to discuss
- Post operative
    - Post operative histology results

It is the job of SHOs to present patients at MDT. On the Tuesday morning take the trolley of notes to the education centre.

Read out the following details

- Name and age of patient
- Any relevant family history of breast cancer (if high risk)
- Why we are discussing the patient
- Clinic examination findings
- What scans and biopsies they have had
- The radiologist and histopathologist will read out radiology results and pathology results respectively

Distribute the notes in order between yourselves and make a quick summary in the designated MDT space on the grey breast proforma. When it is your turn to present just summarise briefly but do not read out radiology / histology results as this will be done by the radiologist and pathologist. Just say something like "Imaging was done and a core biopsy was also performed"

**It is important that SHOs write down the MDT outcome in the notes and BOOK ANY RELEVANT IMAGING e.g. staging CT scans, MRI scans, PET scans, repeat USS, biopsies**

## MORBIDITY AND MORTALITY / CLINICAL GOVERNANCE

Each month there is a clinical governance / M&M meeting held in the PGMC seminar room
The timetable of this will be published and every team should attend
F1s will prepare mortalities from the months and relevant morbidities, SHOs and registrars present

- Registrars and consultants will help you identify patients
- Prepare a short powerpoint presentation with 1-2 slides per patient and some learning points
- F1s if you are moving to another firm please make sure you make the next F1 aware of any mortalities / morbidities

**Please also keep a list of patients who have died / relevant morbidity cases for the next morbidity and mortality meeting so that it is easy to find them.**

## OPERATIONS

The following is a brief summary of the most common elective operations performed

**Hernias**

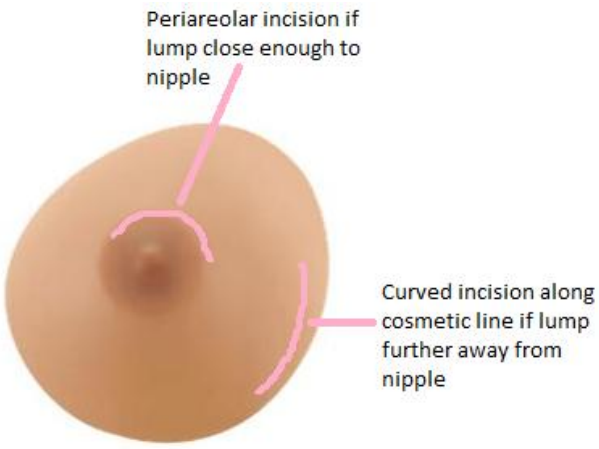
We routinely operate on inguinal, paraumbilical, femoral, incisional and epigastric hernia
Surgery involves the use of a mesh (made of Prolene)
May be open or laparoscopic
Patients usually go home on the same day

**Benign breast lump excision**

Periareolar incision or curved incision on breast
May be WIRE GUIDED if lump not palpable
Excision of e.g. fibroadenoma , papilloma
All tissue sent for histology
Patients usually go home the same day

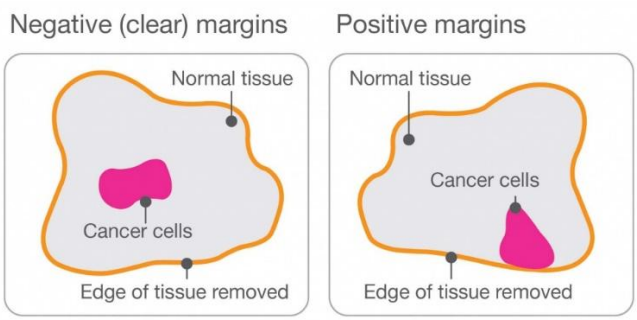
**Hadfields / Major duct excision**

Excision of ducts behind nipple for nipple discharge via periareolar incision
All tissue sent for histology
Patients usually go home the same day




**Wide Local Excision**

Removal of cancerous breast tissue plus margin of normal tissue
Plus either sentinel lymph node biopsy or axillary node clearance level I / II / III
May be WIRE GUIDED if lump not palpable
Patients usually go home the same day

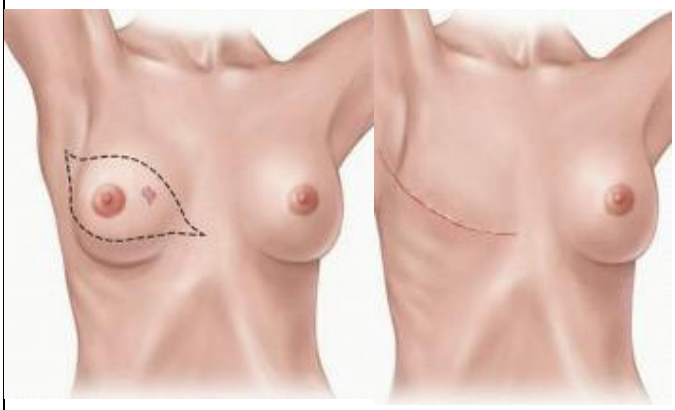



**MASTECTOMY PATIENTS**

Check if they have a Group and Save if needed
May be admitted overnight or go home
May go home with drains (See section on drains)

**Simple (Total) Mastectomy**

Removal of the breast only (with skin + nipple)



Simple (Total) Mastectomy

**Skin sparing**

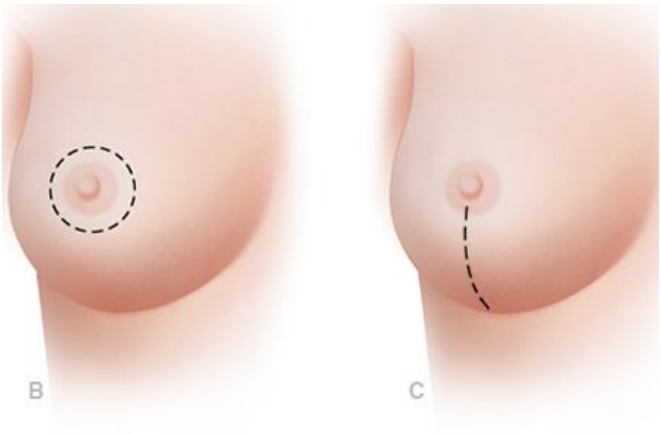
Mastectomy where significant part of the skin is kept and breast underneath removed

**Nipple sparing**

Mastectomy where nipple areola complex is kept and breast underneath removed

**Risk reduction mastectomy**

Both breasts may be removed prophylactically in BRCA1/2 mutation patients



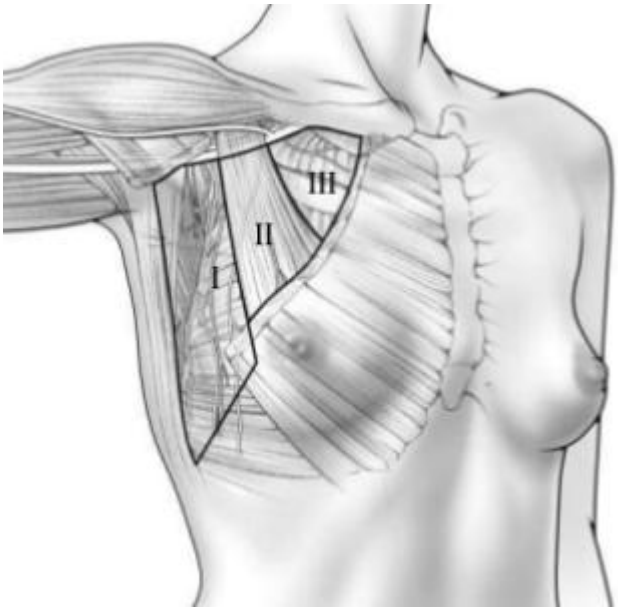

Skin sparing Nipple sparing

**Sentinel Lymph Node Biopsy (SLNBx)**

A sentinel LN is the first LN which cancer cells are most likely to spread from a tumour
SLNBx is used to assess lymph node spread.
Only used in patients with clinically negative axilla (no palpable LN or large LN on USS)
A solution containing the radioactive isotope technithium AND/OR a blue dye is injected around the nipple/areolar
Nodes that are blue are removed or using the Geiger counter nodes that have the highest radioactive count are removed.

**Axillary node clearance**

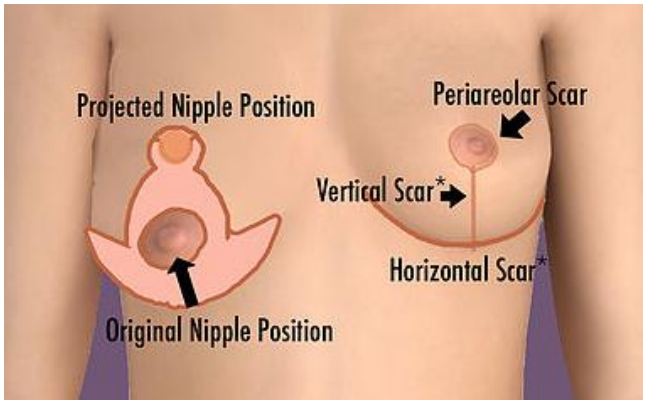
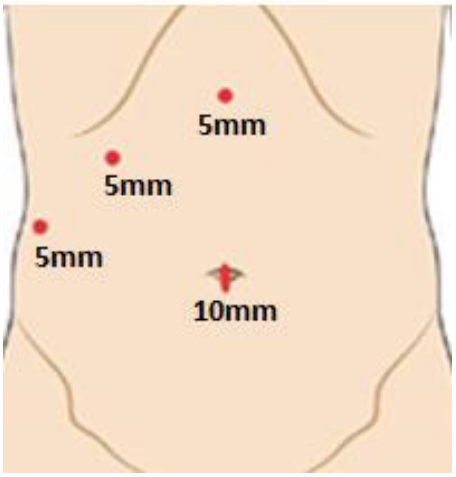
3 levels according to how many LN are taken
Level 1 – below pecotralis minor
Level 2 – behind pecotralis minor
Level 3 – above pecotralis minor




Axillary lymph node levels

## Marking of breast specimens for consultants:

- Mr Barkeji- 1 suture anteriorly, 2 sutures superiorly, 3 sutures medially
- Mr Vashshist- long lateral, short superior and loop anterior

| | |
|---|---|
| **Mastopexy (breast lift)**<br>Used to correct breast 'drooping' known as PTOSIS<br>Can be used as symmetrisation on the non cancer side after breast cancer lump exicision<br>Can be done at the time of cancer exicision surgery or delayed<br>Patients are left with a Wise Pattern Scar |  <br>Masteopexy incision |
| **Laparoscopic Cholecystectomy**<br>Removal of gallbladder<br>Check indication for surgery e.g. biliary colic / cholecystitis<br>Check patients LFTs before surgery<br>Review USS before surgery |  |

## CLINIC

The breast and general surgery clinics are located in Outpatients 2 on the ground floor

Consultants, registrars and SHO's will run the clinic. F1s are encouraged to attend when free.

Clinic is a great opportunity for learning, seeing clinical signs, gaining mini-cex's/CBD's, performing procedures such as seroma drainage, punch biopsy.

Shadow your seniors for 1-2 clinics to get a feel for the process.

There is a GREY BREAST PROFORMA to be used for every patient which will guide you through the history and examination. Please fill this in accurately and thoroughly.

**We try our best to make clinic a ONE STOP SERVICE**

Please read up about the following conditions you will see regularly in breast clinic:

- Benign: Gynaecomastia, fibroadenoma, papilloma, cysts, mastitis, abscess, fat necrosis, duct ectasia
- Malignant : Ductal carcinoma (~70% cancers), lobular carcinoma (~20% cancers), Phyllodes tumour, Pagets disease
- Symptoms: Breast pain, nipple discharge, nipple itching/rash

## Triple assessment for every breast lump

1) History and Clinical Examination
2) Radiology
    - <40yrs: US
    - >40ys: US + mammography
3) Pathology
    - Solid lump: core biopsy (gives HISTOLOGY)
    - Cystic lump: fine needle aspiration FNA (gives CYTOLOGY)

## Breast History

The grey proforma contains questions which ascertain risk factors for breast cancer, ask all of these

Take a history of the breast symptoms:

- Which breast? Length of symptoms?
- Pain / lumps / discharge from nipple / skin changes

## Breast Examination

**Set Up**

- Request a chaperone
- Expose pt. from waist up, use a gown, start with her sitting up

**Inspection**

Breast

- Positions
    - Hands relaxed by sides, hands behind head, hands pressing hips
- Shape: asymmetry, masses
- Skin
    - Scars: periareolar, submammary
    - Radiotherapy tattoos
    - Eczema, erythema, ulceration
    - Peau d'orange, dimpling
    - Accessory nipples: look along the milk line
- Nipple: inversion, discharge, discolouration, destruction

Peripheral

- Axillae scars from LN dissection
- Arm: lymphoedema
- Abdomen / Suprapubic: DIEP or TRAM flap harvest
- Back: lat-dorsi flap harvest

**Palpation**

Breast

- Pt. at 45° with hand behind head, start with normal breast
- Palpate each breast quadrant, subareolar area and the axillary tail
- Ask pt. to push inwards on her hip to assess tethering

Axillae

- Right axilla: hold pts. right arm with your right hand (and vice versa)
- Gently palpate axillary node:
  - Apical, anterior, posterior, medial, lateral

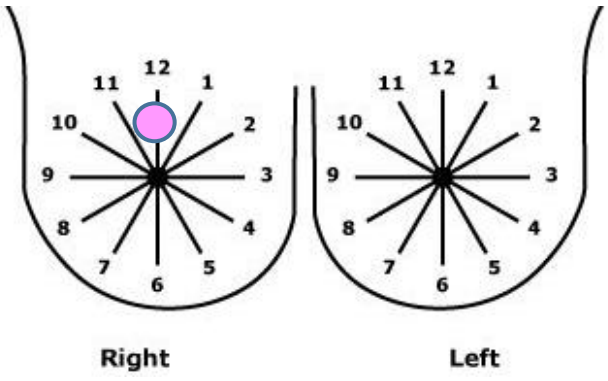
Supraclavicular and cervical nodes

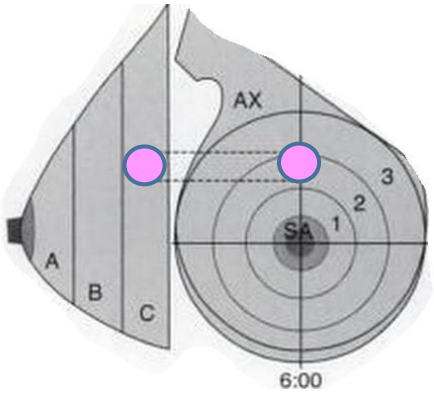
**Completion**

- Palpate / percuss spine for tenderness, masses
- Examine abdomen for hepatomegaly
- Percuss and auscultate lungs for signs of mets: e.g. effusion

**Examination reporting of the breast / lump :**
***E1 – Normal (no lump)***
***E2 – Benign lump***
***E3 – A lump / indeterminate***
***E4 – A suspicious lump***
***E5 – Probable cancer***

If a lump is found, mark on the proforma where it is located – use the numbers of the clock as well as A/B/C locations to describe where the lump is.



## Imaging in clinic

Most new patients will be sent for either USS (<40 years) or mammogram +/- USS (>40 years) on the day you see them in clinic.

The radiographers will write in a **red folder** outside USS how many slots there are available for that clinic.

- Request the scan you need on ICE
- Write the name of the patient in the red folder outside USS
- Put the patients grey proforma outside USS
- The patient will have their scan then you must see them again afterwards to discuss the results

There are usually enough slots for most new patients to have the imaging they need.

Check to see if there are slots left before you promise the patient any imaging.

Very non-urgent imaging (e.g. young female patient with no family history and normal examination) can be done as an outpatient if the clinic imaging slots are full. Request the scans needed and tick on the **pink outcome form** '4. appointment to be made later'. The breast radiographers will arrange a suitable date for imaging the patient and a follow up appointment will be booked after this. Do not tick '3. another appointment' as the patient may then end up getting an appointment before they have had their imaging.

**Radiological reporting of the breast / lump (U = USS, M = Mammogram)**
**U/M1: Normal**
**U/M2: Benign**
**U/M3: Indeterminate**
**U/M4: Suspicious**
**U/M5: Malignant**

If imaging results come back with suspicious findings, discuss with your seniors before you tell the results to the patient

## Ultrasound

Ultrasound is the imaging modality of choice for women under the age of 40.

Ultrasound should also be performed in patients over 40 years when mammography is discordant with clinical findings and if there is a palpable lump / nodularity / localized tenderness

Ultrasound is not necessary for young patients with bilateral breast pain

## Mammogram

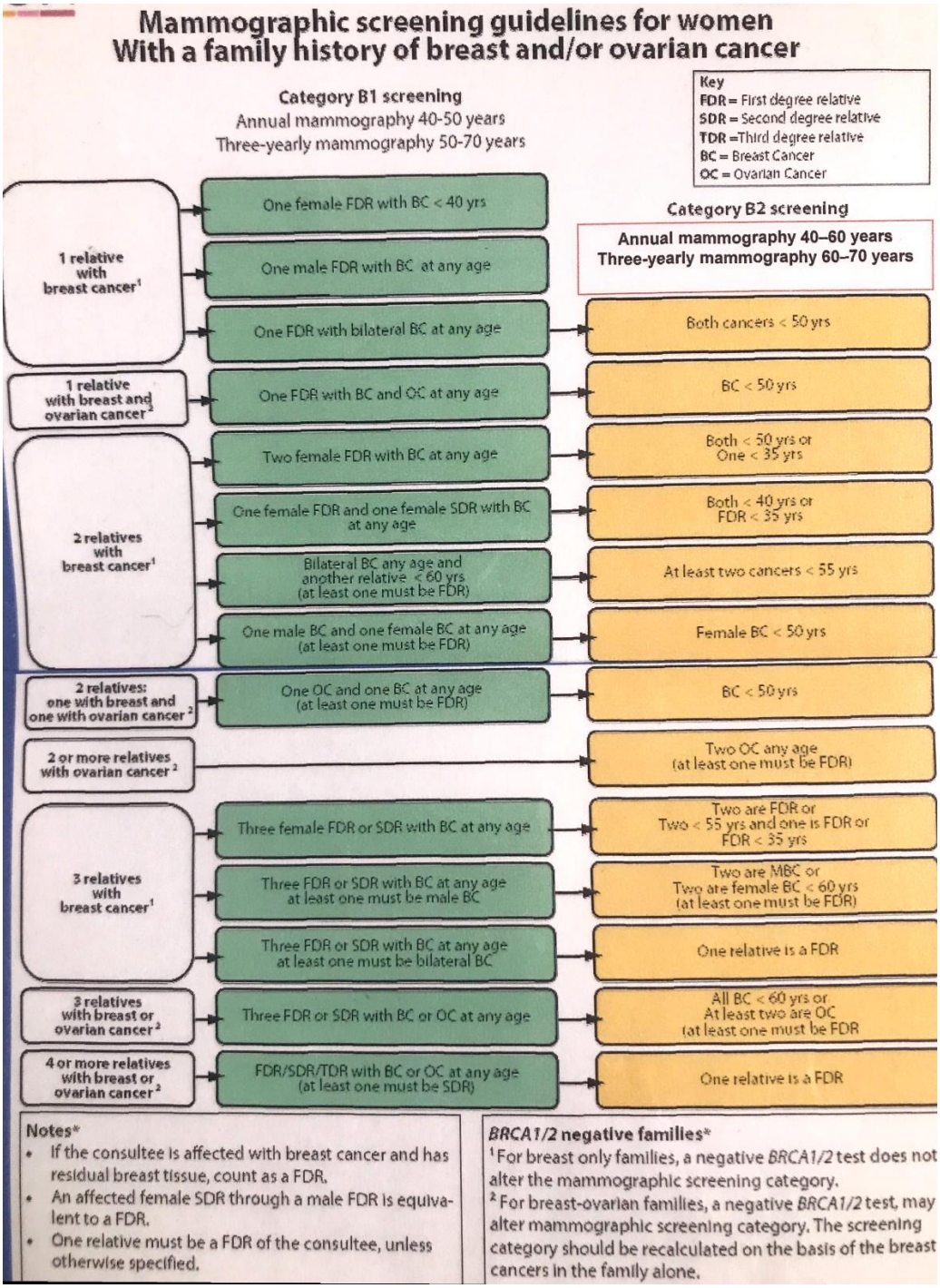
The breast screening program mammograms take place between the ages of 47-73. Mammogram is a low dose x-ray image.

Head-to-foot (craniocaudal, CC) view and angled side-view (mediolateral oblique, MLO) images of the breast are taken.

Images from screening are reported by 2 independent radiologist.

**<40 years – ultrasound**
**>40 years – ultrasound + mammogram**

**Mammogram screening for high risk patients:**



## Breast MRI

A highly accurate way to image the breast.

Indications:

- Patients with breast implants
  - Can assess for leak / rupture / malignancy
- Discordant imaging
  - If mammogram and USS do not correlate with clinical findings
- Occult tumours
  - Some tumours are occult on conventional USS / mammogram imaging
- Pre-operative
  - In selected patients MRI affected breast and contralateral breast for occult disease
- Recurrence vs scar
  - Scars can resemble malignancy, use MRI to assess enhancement
- Screening in high risk groups

## Biopsies

If patient had a biopsy the results are available in about 1 week. All biopsy patients are automatically added to the MDT (Tuesday morning). So it is preferable to arrange appointment for follow up in a week's time AFTER the Tuesday MDT had happened.

For example Mr Barkeji patients - seen in clinic and biopsied on Monday or Tuesday- clinic appointment the following Tuesday afternoon for results (write the day needed on the **pink outcome form**)

For example Mr Vashisht patients - seen in clinic and biopsied on Wednesday – clinic appointment the following Wednesday. Seen in clinic and biopsied on Friday – clinic appointment a week on Wednesday for results (as the following Tuesday it is too early to be discussed in MDT)

## Follow up information

Cancer patients

- They are followed up for 5 years and discharged after this unless they are less than 50 in which case they will be followed up until the age of screening
- They will need a mammogram every year until discharge (you can book for the following year in the same clinic appointment, just write 'mammogram 2019 please on ICE request')
- Patients on Aromatase inhibitors need a DEXA scan as a base line and then every 2 years

Primary endocrine treatment

- Some elderly patients with cancer who decline or are not suitable for surgery receive only endocrine treatment
- These patients get imaging every 6 months to assess response
- When you see these patients, make sure you compare the cancer measurement sizes with earlier scans
- Book a follow up scan depending on the results and discuss with your seniors.
- Tick "5. appointment to be made later" on the **pink outcome form** and then request the follow up scan so that patients will have their next scan and then come to clinic the same day. This saves elderly patients coming to clinic for no reason before they have had their scan.

## Breast abscess

Sometimes urgent cases e.g. abscesses will be referred to the breast team

Investigations: observations, bloods if patient unwell, send pus aspirations for microbiology / cytology

Management: antibiotics + USS to see if there is a collection of pus to aspirate

When to admit: diabetic patient, immunosuppressed, failure of oral antibiotics and systemically unwell, temperature, skin necrosis, septic patient

Wait for abscess to resolve before doing mammograms

Failure to respond to USS guided aspirations / antibiotics – may require INCISION AND DRAINAGE

## Procedures in clinic

### Punch biopsy

- Indicated for suspected Paget's disease / suspicious appearance of nipple
- Use 1% lidocaine without adrenaline (as this causes nipple necrosis) infiltrate below the nipple to cause nipple block
- Use 3/4mm punch biopsy
- Use suture to close if needed / bleeding
- Send for histology

### Seroma drainage

- Indicated for post-operative patients with large seroma
- Can be done under USS guidance if clinically not obvious where seroma is
- Patient with implants need USS guided drainage
- Use green needle and 50ml syringe

## Dictating Letters

Letters are to be dictated on the day of the clinic. Please ask Jo for a Dictaphone and she will set up an account for checking your letters.

How to dictate:

- Say who you are "Dr Susan Smith SHO"
- Say who's clinic it is and the date "Mr Barkeji breast clinic 01/06/18"
- Say the name of the patient + hospital number + DOB
- Say "letter to be sent to patient and GP" and any other recipients
- Dictate the letter with relevant findings and summary and then SIGN OFF with your name

Letters are checked using DScribe Cube. Please check letters thoroughly for mistakes. Make sure you press 'VERIFY' to confirm letter is finished. You will see a green tick against letter once this is done.

Always use the 'EXIT' button not the 'X' button to escape from a letter otherwise changes will not be saved.

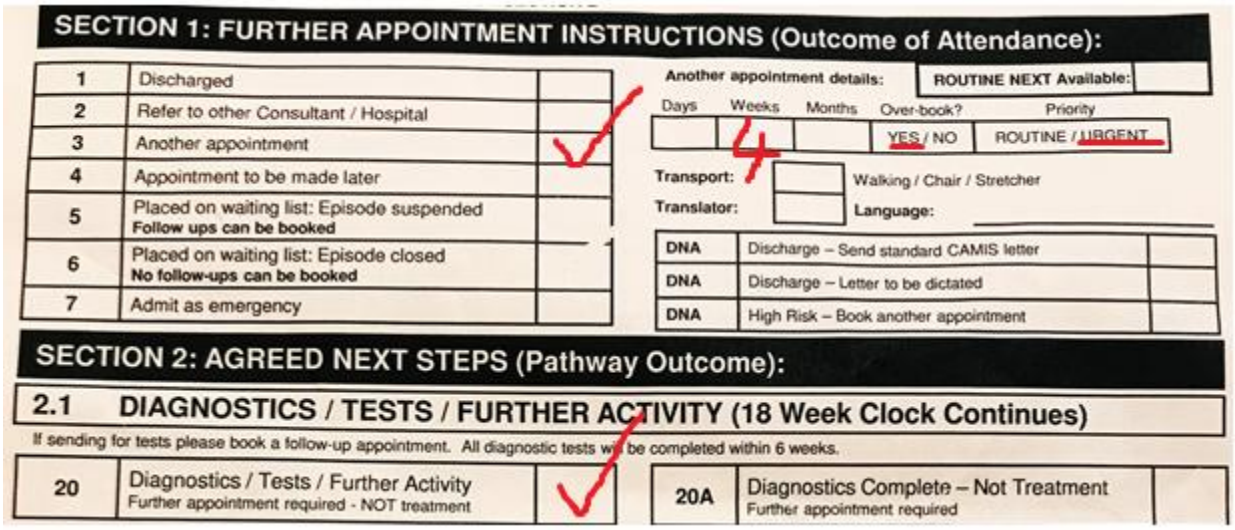
**Access DScribe Cube – go to the internet**
**Go to the favourites star icon – click on West Mid**
**Go to describe cube and log in (get login details from Jo)**
**Check your letters – click on the letter and VERIFY to confirm corrections**

## Pink outcome forms (BREAST CLINIC ONLY)

It is important to fill in the pink forms accurately as this relates to department funding. Fill in BOTH SIDES of the form please.

Patients should then take the form to the main reception to book their follow up appointment.

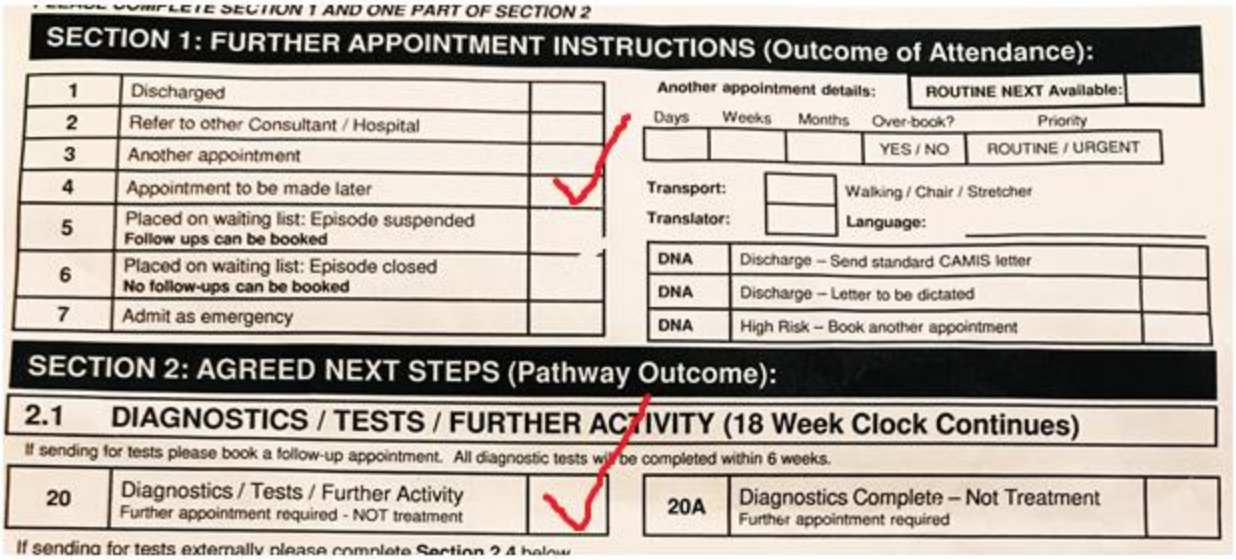
1. Patients for routine review in clinic
    I. Tick 3 and 20, then appointment in e.g. 4 weeks




2. Patients for a scan then review in clinic (e.g. if slots were full from clinic)
    I. Tick 4 and 20
    II. This will ensure the patient gets an appointment made AFTER they have had the scan.
    III. Do NOT write in the box another appointment in days/weeks/momths

Never promise a patient a scan date, just say they will get a date in the post, unless you have discussed it with the radiographers and booked the patient a specific date.

Jo and Alison will book the appointment once the imaging has been done



PLEASE COMPLETE SECTION 1 AND ONE PART OF SECTION 2

**SECTION 1: FURTHER APPOINTMENT INSTRUCTIONS (Outcome of Attendance):**

| | | |
|---|---|---|
| 1 | Discharged | |
| 2 | Refer to other Consultant / Hospital | |
| 3 | Another appointment | |
| 4 | Appointment to be made later | ✓ |
| 5 | Placed on waiting list: Episode suspended **Follow ups can be booked** | |
| 6 | Placed on waiting list: Episode closed **No follow-ups can be booked** | |
| 7 | Admit as emergency | |

Another appointment details: ROUTINE NEXT Available:

| Days | Weeks | Months | Over-book? | Priority |
|---|---|---|---|---|
| | | | YES / NO | ROUTINE / URGENT |

Transport: Walking / Chair / Stretcher

Translator: Language:

| | | |
|---|---|---|
| DNA | Discharge – Send standard CAMIS letter | |
| DNA | Discharge – Letter to be dictated | |
| DNA | High Risk – Book another appointment | |

**SECTION 2: AGREED NEXT STEPS (Pathway Outcome):**

**2.1 DIAGNOSTICS / TESTS / FURTHER ACTIVITY (18 Week Clock Continues)**

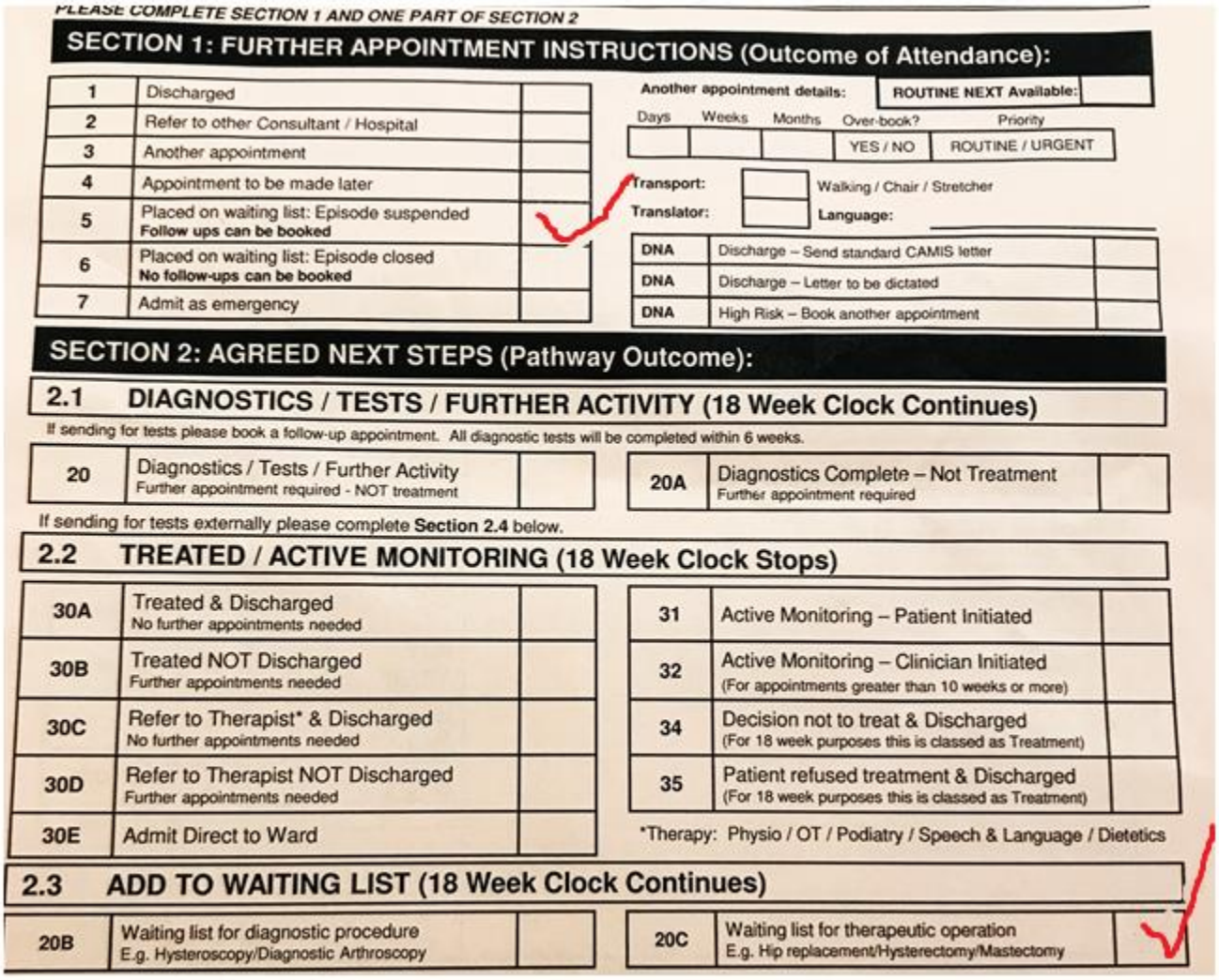
If sending for tests please book a follow-up appointment. All diagnostic tests will be completed within 6 weeks.

| | | |
|---|---|---|
| 20 | Diagnostics / Tests / Further Activity<br>Further appointment required - NOT treatment | ✓ |

| | | |
|---|---|---|
| 20A | Diagnostics Complete – Not Treatment<br>Further appointment required | |

If sending for tests externally please complete Section 2.4 below

3. Tick 5 and 20 C for patients added to a waiting list for surgery



PLEASE COMPLETE SECTION 1 AND ONE PART OF SECTION 2

**SECTION 1: FURTHER APPOINTMENT INSTRUCTIONS (Outcome of Attendance):**

| | | |
|---|---|---|
| 1 | Discharged | |
| 2 | Refer to other Consultant / Hospital | |
| 3 | Another appointment | |
| 4 | Appointment to be made later | |
| 5 | Placed on waiting list: Episode suspended **Follow ups can be booked** | ✓ |
| 6 | Placed on waiting list: Episode closed **No follow-ups can be booked** | |
| 7 | Admit as emergency | |

Another appointment details: ROUTINE NEXT Available:

| Days | Weeks | Months | Over-book? | Priority |
|---|---|---|---|---|
| | | | YES / NO | ROUTINE / URGENT |

Transport: Walking / Chair / Stretcher

Translator: Language:

| | | |
|---|---|---|
| DNA | Discharge – Send standard CAMIS letter | |
| DNA | Discharge – Letter to be dictated | |
| DNA | High Risk – Book another appointment | |

**SECTION 2: AGREED NEXT STEPS (Pathway Outcome):**

**2.1 DIAGNOSTICS / TESTS / FURTHER ACTIVITY (18 Week Clock Continues)**

If sending for tests please book a follow-up appointment. All diagnostic tests will be completed within 6 weeks.

| | | |
|---|---|---|
| 20 | Diagnostics / Tests / Further Activity<br>Further appointment required - NOT treatment | |

| | | |
|---|---|---|
| 20A | Diagnostics Complete – Not Treatment<br>Further appointment required | |

If sending for tests externally please complete **Section 2.4** below.

**2.2 TREATED / ACTIVE MONITORING (18 Week Clock Stops)**

| | | |
|---|---|---|
| 30A | Treated & Discharged<br>No further appointments needed | |
| 30B | Treated NOT Discharged<br>Further appointments needed | |
| 30C | Refer to Therapist* & Discharged<br>No further appointments needed | |
| 30D | Refer to Therapist NOT Discharged<br>Further appointments needed | |
| 30E | Admit Direct to Ward | |

| | | |
|---|---|---|
| 31 | Active Monitoring – Patient Initiated | |
| 32 | Active Monitoring – Clinician Initiated<br>(For appointments greater than 10 weeks or more) | |
| 34 | Decision not to treat & Discharged<br>(For 18 week purposes this is classed as Treatment) | |
| 35 | Patient refused treatment & Discharged<br>(For 18 week purposes this is classed as Treatment) | |

*Therapy: Physio / OT / Podiatry / Speech & Language / Dietetics

**2.3 ADD TO WAITING LIST (18 Week Clock Continues)**

| | | |
|---|---|---|
| 20B | Waiting list for diagnostic procedure<br>E.g. Hysteroscopy/Diagnostic Arthroscopy | |

| | | |
|---|---|---|
| 20C | Waiting list for therapeutic operation<br>E.g. Hip replacement/Hysterectomy/Mastectomy | ✓ |

# PPWT forms

Planned Procedure with a Threshold (PPwT) is part of the North West London CCG's commissioning portfolio where a clinician makes a decision whether a patient meets the evidence-based thresholds for treatment

**HERNIAS**

NHS NWL CCG will fund surgery for hernia in patients who meet any of the following criteria:

- Any femoral hernia (i.e. any female patient with groin hernia should be referred to rule out a femoral hernia)
- Pain or discomfort significantly interfering with activities of daily living
- Progressive increase in size of hernia (month-on-month)
- Inguino-scrotal hernia
- Presence of Work related issues e.g. missed work/unable to work/on light duties due to hernia
- History of incarceration of, or difficulty in reducing the hernia

NHS NWL CCG will not fund surgery for the following:

- Small, asymptomatic hernias
- Minimally symptomatic hernias
- Large, wide necked hernias unless there is demonstrable evidence that it is causing significant symptoms

**Benign lesions and lumps (DOES NOT INCLUDE FIBROADENOMA)**

NHS NWL CCGs will fund the appropriate investigation and removal of any lesion or lump if any of the following criteria are met:

**Benign Lesions**

- The lesion is unavoidably AND significantly traumatised on a regular basis.
- The lesion obstructs an orifice or movement or vision1,2.
- The lesion is significantly infected AND the patient required repeated treatment with oral or intravenous antibiotics.

**Mucoid cyst**

- causing disturbance of nail growth
- tendency to discharge

**Removal of warts (non-genital)**

- Viral warts will only be eligible for removal if the following criteria are met: where painful, persistent or extensive warts (particularly in immuno-suppressed patients)3

**Lipomata**

- lipoma(-ta) of any size causing symptoms or demonstrable functional impairment
- larger than 5 cm
- deep-seated
- the lump is rapidly growing or abnormally located (e.g. sub-fascial, submuscular, thigh)
- patients with multiple subcutaneous lipomata may need a biopsy to exclude neurofibromatosis.

# BREAST CANCER

## Staging

Clinical Staging

Stage 1: confined to breast, mobile, no LNs
Stage 2: Stage 1 + nodes in ipsilateral axilla
Stage 3: Stage 2 + fixation to muscle (not chest wall) LNs matted and fixed, large skin involvement
Stage 4: Complete fixation to chest wall + mets

TNM Staging

| | | | | | |
|---|---|---|---|---|---|
| **Tis** | Carcinoma in Situ<br>(Tumour will not be palpable) | **N0** | No Nodal involvement | **M0** | No distant metastasis |
| **T1** | Tumour <20mm, no tethering or nipple retraction | **N1** | Axillary nodes involved but mobile | **M1** | Distant Metastasis |
| **T2** | Tumour either: <20mm with tethering, or, 20-50mm | **N2** | Axillary nodes fixed | | |
| **T3** | Tumour either <50mm with infiltration, ulceration or fixation, or, 50-100mm | **N3** | Supraclavicular nodal involvement with/without oedema of the arm | | |
| **T4** | Tumour >100mm, or with ulceration and infiltration wide of the border of the primary tumour | | | | |

- The most common sites of metastatic disease are bone followed by lung and liver.
- The least common site is in the brain.
- In patients with advanced stage primary breast cancer, e.g. T3 and T4 (greater than 5cm), the incidence of metastatic disease is approximately 15–20%.
- Overall 4–10% of breast cancers are metastatic at presentation.

# COMMON INVESTIGATIONS

## Bloods

Bloods are requested on ICE. In clinic, for non-urgent bloods, you can request bloods and send patients to the outpatients phlebotomy department near the main entrance

Bloods can be hand delivered to the pathology department (first floor main building), sent via the POD system or given to a porter

Label bloods with full patient details. **Handwritten** labels for group and save/cross match samples.

## Imaging

All scans can be requested and approved online but urgent scans should be discussed directly with the radiologists. You must check to see if your scans have been approved before 12 noon (call CT/MRI/USS to find out or check ICE)

**Radiologist of the Day (ROD)**

A radiologist is available daily Mon – Friday from 11am to 1pm to

- Discuss imaging requests
- Report plain films
- Provide radiological input into more complex cases
- Expedite inpatient imaging – CT, MRI and ultrasound
- Book urgent outpatient tests to facilitate early discharge.

You can find them in the radiology department (usually in their office). Outside 11 to 1pm please direct requests to the radiologist in charge of the appropriate CT/MRI/ultrasound session – timetable available at radiology reception and on whiteboard in corridor.

Special investigations e.g. arteriography, venography, percutaneous drainage and angioplasty **CAN ONLY** be requested by discussing the case with a radiologist.

Radiographs required out of working hours should be done in the Accident and Emergency Department.

## Plain radiographs – CXR, AXR

Routine Requests are all done via ICE, forms get sent automatically down to department

For out of hours / urgent / mobile requests please request on ice as per usual, then bleep 148. If requesting a mobile film, make sure you can justify it – it's not just that it is time consuming for radiographers, but that the film quality is often poor it wasn't worth getting in the first place. No mobile abdominal films are done.

## CT chest, abdomen and pelvis

Request electronically using ICE, and then bring the form down to the radiology department.

When requesting CT scans, you will need to know if patient's creatinine results, pregnancy status, and how they are going down to the department (chair/bed/etc.)

All CT Scan request require a sticker to be placed in patient notes before the patient can go down for their CT. CT stickers can be found on the wards (it may be advisable to carry a set with you).

## Ultrasound scans

Electronic requests are done using ICE – print the form off and bring it down to the radiology main reception before 11am. Most in-patient requests are done the same day but will be prioritised by clinical urgency by the ROD. Bring your requests down early to ensure same day scanning. After 11am all requests should be discussed with the ROD or, after1pm, with the radiologist in charge of the ultrasound list that pm.

## MRI

Electronically request using ICE. Bring form down to radiology. Telephone or visit MRI if urgent.

## Endoscopy

Located on ground floor next OPD 4 (opposite the restaurant).

**Green** request forms for Upper GI endoscopy request and **yellow** forms for Lower GI are available on the wards and in A&E. Request for PEG tube placement – guidelines are detailed on the back of the **white** form. Please go to unit to discuss any urgent inpatient requests with one of the consultants as early as possible in the day.

ERCP forms are **purple** – please go to Department to discuss all requests

For OGD's patients need to be NBM for six hours prior to procedure. For colonoscopy bowel prep guidelines can be found on the intranet. Any queries phone the nursing station or pop down to the department – they are friendly and knowledgeable.

## Nuclear Medicine

Breast cancer patients may need BONE SCANS or PET SCANS (often as an outcome from MDT). These are requested on ICE under 'Nuclear Medicine' section, then please write in request if bone scan or pet scan required and why.

# LINES, TUBES, DRAINS

## Central line

A central line is a line inserted into either the internal jugular or subclavian (or femoral) **vein**

- Uses in surgery
    - Total parenteral nutrition (this cannot be given through peripheral cannula)
    - CVP monitoring – fluid balance

Central lines are inserted by anaesthetics / ITU staff

## PICC line

Peripherally inserted central catheter. This is a line inserted into a peripheral vein e.g. basilic or cephalic which is then advanced into a larger central vein

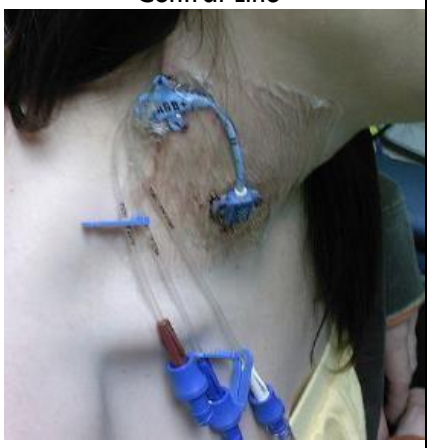
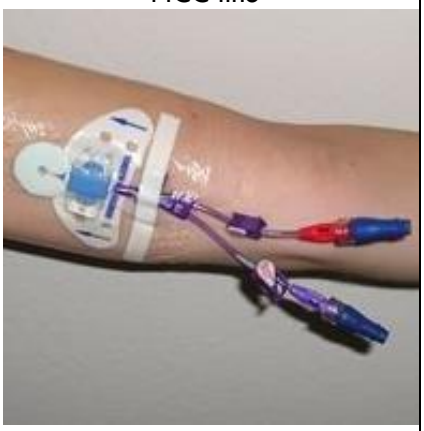
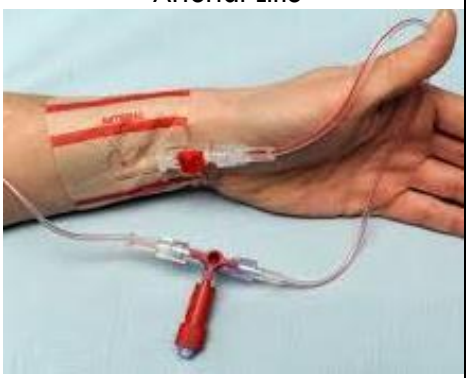
- Uses
    - Fluids / antibiotics in patients who are difficult to cannulate
    - Long term TPN
    - Long term antibiotics

Patients can be discharge with a PICC line if needed. PICC lines are inserted by interventional radiology

**Zee the radiographer is a useful person for help with interventional radiology.**
**ZEE = BLEEP 111**

Dr Curry and Dr Aref are usually the radiologists that perform the interventional procedures. Make sure your patients have had a INR and platelet results. Heparin needs to be held the night before a procedure.

## Arterial line

| Central Line | PICC line | Arterial Line |
|---|---|---|
|  |  |  |

Patients on ITU / HDU postoperatively may have an arterial line. This is a line inserted into the radial or brachial (or femora) **artery**

Uses

- Invasive BP monitoring
- Arterial blood gas sampling

Arterial lines are inserted by anaesthetics / ITU staf

## Nasogastric tubes

**Ryles nasogastric tube**

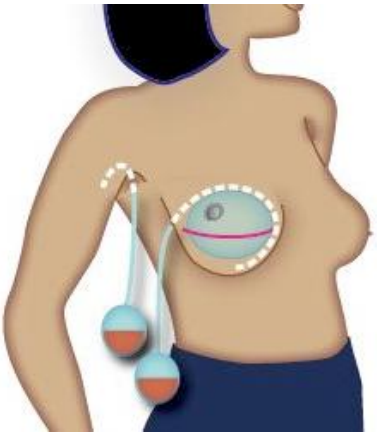
- Used in bowel obstruction to drain the stomach
- This tube is clear
- It is wider bore, stiffer, has a radio-opaque line and a metal tip
- You do not need to confirm this tube position on X-ray

**Nasogastric feeding tube**

- Used for feeding
- This tube is usually opaque yellow
- It is fine-bore, made of soft silicone, contains a radio-opaque guide wire to stiffen the tube and to visualise on X-ray
- This tube position must be confirmed on X-ray

## Drains

- Many surgical patients have drains post operatively to prevent fluid accumulation or drain an established collection
- Breast patients often have 2 drains – one in the axilla and one at the breast site of surgery
- Some patients are discharged home with drains and can be brought back to clinic for review of drain output and drain removal.
- Patients with implants can have drains for 7-10 days
- Suction drains most commonly used in breast surgery to prevent seroma / haematoma
- Removal
  - Only remove a drain if specifically told to by a senior (usually if output <25-20ml/day)
  - The nurses can remove drains if you ask them

| Non Suction (passive) e.g. Robinson | Suction (active) e.g. Redivac | Breast patient drains |
|---|---|---|
|  |  |  |

## Catheters

- 12/14F is fine for females, 14/16F is fine for males
- 3 way catheters are used for patients with frank haematuria who need irrigation
- Our surgical consultants and registrars do not cover urology. Please speak to the urology team for specific advice

| **Latex short term catheter** | **Silicone long term catheter** |
|---|---|
| • Opaque yellow<br>• Main type used on the wards<br>• Last approx 1 month<br>• Come inside catheter pack | • Clear (opaque blue at other trusts)<br>• Used for long term catheterisation as silicone is less irritative to the urothelium<br>• (or difficult catheterisation as slightly stiffer which aids insertion)<br>• Last approx 3 months<br>• Are in separate packing to catheter pack |
|  |  |

# HEPARIN / WARFARIN

IMPORTANT = Make sure all patients have a VTE assessment (within 24h of admission, done on RealTime)
Units not achieving >90% compliance will lose income

All patients (unless contraindicated) should be prescribed prophylactic heparin and ted stockings

This is usually given at 6pm by the nursing staff (therefore does not need to be held pre-operatively unless you are told otherwise)

IMPORTANT = check the patients weight (as <50kg gets reduced dose) and renal function (as patients with poor renal function get unfractionated heparin)

**≤ 45 kg** **3500 units once daily *subcut***
**46 – 100 kg** **4500 units oncedaily *subcut***
**> 100 kg** **4500 units TWICE daily *subcut***

***Renal Impairment: If CrCl <20mL/min use Unfractionated Heparin 5000 units TWICE daily subcut***

## CONTRAINDICATIONS / BLEEDING RISK FACTORS

- Creatinine clearance <20 mL/min *(consider UFH 5000units BD via subcutaneous injection)*
- Active major bleeding
- Cerebral haemorrhage
- Acute stroke
- Acquired bleeding disorder such as acute liver failure
- Concurrent use of anticoagulants known to increase bleeding risk (e.g. warfarin with INR >2, direct oral anticoagulants)
- Lumbar puncture/epidural/spinal anaesthesia within the previous 4 hours or expected within the next 12 hours
- Thrombocytopenia (platelets <75 x $10^9$/L)
- Heparin induced thrombocytopenia
- Uncontrolled systolic hypertension (≥230/120mmHg)
- Untreated inherited bleeding disorders (e.g. haemophilia, von Willebrand's disease)
- Septic endocarditis
- Neurosurgery, spinal surgery or eye surgery *(discuss with Consultant)*
- Other procedure with high bleeding risk
- Hypersensitivity to tinzaparin and/or excipients

## MONITORING REQUIREMENTS *(at initiation and periodically thereafter)*

- Renal and liver function
- Platelet count - *due to risk of heparin induced thrombocytopenia*
- Potassium - *due to risk of hyperkalaemia*
- Changes in body weight – *dose adjustment may be required*
- Signs of bruising and bleeding
- Injection site / skin reactions

## HAEMATOLOGY CONTACT INFORMATION

| C&W Site | | WMUH Site | |
|---|---|---|---|
| Consultant Haematologist | Ext 58211 | Consultant Haematologist | Via Switchboard |
| Haematology SpR | Bleep 0902 | Haematology SpR | Bleep 121 /272 |

*Out of Hours: Contact Via Switchboard*

## VTE RISK FACTORS

- Age > 60 years
- Dehydration
- Varicose veins with phlebitis
- Active cancer or cancer treatment
- One or more significant medical comorbidities (e.g. heart disease; metabolic, endocrine or respiratory pathologies; acute infectious diseases; inflammatory conditions)
- Personal history or first-degree relative with a history of VTE
- Use of HRT or oestrogen-containing contraceptive therapy
- Critical care admission
- Known thrombophilias
- Obesity (BMI > 30kg/$m^2$)

## SURGICAL PATIENTS AND PATIENTS WITH TRAUMA AT RISK OF VTE

- If total anaesthesia time + surgical time is >90 minutes or
- If surgery involves pelvis or the lower limbs and total anaesthetic + surgical time is > 60 minutes or
- If acute surgical admission with inflammatory or intra-abdominal condition or
- If expected to have significant reduction in mobility or
- If any VTE risk factor present

## PATIENTS HAVING ELECTIVE SURGERY

- Advise women to consider stopping oral contraceptives and HRT 4 weeks before surgery
- Assess risks and benefits of stopping pre-existing antiplatelet therapy 1 week before surgery - *Consider involving a multidisciplinary team in the assessment*
- Do not routinely offer pharmacological or mechanical VTE prophylaxis to patients having surgery with local anaesthesia by local infiltration with no limitation of mobility

## FOR ALL PATIENTS

- Do not allow patients to become dehydrated unless clinically indicated
- Encourage patients to mobilise as soon as possible
- Do not regard aspirin or other antiplatelet agents as adequate thromboprophylaxis

## CREATININE CLEARANCE

(N = 1.23 males, 1.04 females)

$$\text{CrCl (mL/min)} = \frac{\text{N x [140 – Age (years)] x Weight (kg)}}{\text{Serum creatinine (µmol/L)}}$$

## ANTI-EMBOLISM STOCKINGS (AES)

For surgical patients at risk of VTE, offer AES unless contraindicated.
For medical patients at risk of VTE with a LMWH contraindication, offer AES unless contraindicated.

Please check with a senior if you are unsure if a patient may have heparin. Some reasons to hold heparin may be:

- Already anticoagulated (e.g. warfarin)
- Active bleeding
- Thrombocytopenia <100,000

## Treatment dose Tinzaparin

For PE and DVT this is a once daily weight based dosing, see trust guidelines for dose

**VTE TREATMENT**

*Check body weight and renal function before prescribing*

*Doses rounded to practical syringe size*

| Body Weight | Tinzaparin Dosage via subcutaneous injection ONCE daily (OD) CrCl≥20mL/min* | Injection Volume | Tinzaparin Syringe Preparation |
|---|---|---|---|
| 40 – 49 kg | 8,000 units OD | 0.4 mL | Tinzaparin 8,000 units in 0.4 mL |
| 50 – 59 kg | 10,000 units OD | 0.5 mL | Tinzaparin 10,000 units in 0.5 mL |
| 60 – 74 kg | 12,000 units OD | 0.6 mL | Tinzaparin 12,000 units in 0.6 mL |
| 75 – 89 kg | 14,000 units OD | 0.7 mL | Tinzaparin 14,000 units in 0.7 mL |
| 90 – 99 kg | 16,000 units OD | 0.8 mL | Tinzaparin 16,000 units in 0.8 mL |
| 100 – 109 kg | 18,000 units OD | 0.9 mL | Tinzaparin 18,000 units in 0.9 mL |
| 110 – 119 kg | 20,000 units OD | 1.0 mL | Two syringes of Tinzaparin 10,000 units in 0.5 mL |
| 120 – 129 kg | 22,000 units OD | 1.1 mL | Tinzaparin 10,000 units in 0.5 mL + Tinzaparin 12,000 units in 0.6 mL |
| 130 – 150 kg | 24,000 units OD | 1.2 mL | Two syringes of Tinzaparin 12,000 units in 0.6 mL |
| <40kg *or* >150kg | 175 x body weight (kg) = Units ONCE Daily Dose *Refer to Haematology* | | |

CrCl 20 - 30mL/min: Consider Anti-Xa monitoring - *discuss with Haematology*

***Renal Impairment: If CrCl <20mL/min use Unfractionated Heparin intravenous infusion** (see separate guideline on the intranet)*

**CONTRAINDICATIONS / BLEEDING RISK FACTORS**

- Creatinine clearance <20 mL/min
- Active major bleeding
- Cerebral haemorrhage
- Acute stroke
- Acquired bleeding disorder such as acute liver failure
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- Lumbar puncture/epidural/spinal anaesthesia within the previous 4 hours or expected within the next 12 hours
- Thrombocytopenia (platelets <75 x $10^9$/L)
- Heparin induced thrombocytopenia
- Uncontrolled systolic hypertension (≥230/120mmHg)
- Untreated inherited bleeding disorders (e.g. haemophilia, von Willebrand's disease)
- Septic endocarditis
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**MONITORING REQUIREMENTS** *(at initiation and periodically thereafter)*

- Renal and liver function
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- Potassium - *due to risk of hyperkalaemia*
- Changes in body weight – *dose adjustment may be required*
- Signs of bruising and bleeding
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(N = 1.23 males, 1.04 females)

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| *Out of Hours: Contact Via Switchboard* | | | |

***Reversal of tinzaparin:*** *Seek advice from Haematology* SPC for Tinzaparin

Direct oral anticoagulants (DOACs)

- Apixiban, dabigatran, rivaroxaban, edoxaban
- Can be used as treatment for DVT and PE now instead of warfarin
- First start treatment dose dalteparin, then discuss with haematology for which agent to start

DOACs are not licensed for cancer patients

- Therefore discuss with haematology which agent to start after treatment dose dalteparin

## Holding anticoagulation pre-procedure or pre-operatively

It is best to always check with consultant / haematologist as local guidelines can change☐☐The full guidelines can be found via the trust homepage

Anticoagulation Clinic Contact Information

9am - 5pm: Clinical Nurse Specialist for Anticoagulation Services

Telephone: 0208 321 6953 / 726953 Bleep: 448

# FLUIDS

## Daily requirements

Maintenance requirements are approximately

- 3L fluid per day
- Na 100mmol per day
- K+ 60mmol per day

Minimum urine output 0.5ml/kg (30ml/h)

Daily Requirements

- 3L dex-saline $c^{-}$ 20mM K+ in each bag
- 1L NS + 2L dex $c^{-}$ 20mM K+ in each bag
- Each bag over 8h = 125ml/h

We prescribe either

- 0.9% normal saline + 5% dextrose with 20mmol K+ in each bag
- Plasmalyte
- Hartmanns

### Crystalloid fluid composition

Normal saline

- 0.9% NaCl = 9g/L
- 154mM NaCl

5% Dextrose

- 50g dextrose /L

Dextrose-Saline

- 4% dextrose = 40g/L
- 0.18% NaCl = 31mM NaCl

Hartmann's

- Na: 131mM
- Cl: 111mM
- K: 5mM
- Ca: 2.2mM
- Lactate / HCO3: 29Mm

Plasmalyte

- Na: 140mM
- Cl: 98mM
- K: 5mM
- Gluconate: 23

# ANTIBIOTICS

See the trust guidelines (access via trust homepage, clinical apps) for more detail

## Breast surgery prophylaxis

### Breast Surgery Prophylaxis

| | 1st line therapy | Alternative therapy | |
|---|---|---|---|
| | *Dosing* | *Wt < 70kg* | *Wt ≥ 70kg* |
| | *Gentamicin 3mg/kg* | *160mg* | *240mg* |
| | *Teicoplanin 6mg/kg* | *400mg* | *600mg* |
| **Breast cancer surgery - consider prophylaxis**<br>e.g. mastectomy, wide local excision, axillary clearance, duct excision<br>**Breast re-shaping - consider prophylaxis**<br>**Breast surgery with implant – prophylaxis recommended** | Flucloxacillin 2g IV *plus*<br>Gentamicin IV STAT *plus*<br>Metronidazole 500mg IV | Teicoplanin IV STAT *plus*<br>Gentamicin IV STAT *plus*<br>Metronidazole 500mg IV STAT | *Colonisation :*<br>If MRSA +ve / High-risk : USE Teicoplanin based therapy |

**If an infection is discovered an appropriate course of antibiotic treatment should be prescribed. Discuss with microbiology**

## General surgery prophylaxis

### General Surgery Prophylaxis

| | 1st line therapy | Alternative therapy | |
|---|---|---|---|
| *Pre-incision antibiotic prophylaxis for general surgical procedures*<br>†High risk patients: **Consider high risk if history of cancer, recent surgery, immunosuppression, prosthesis (e.g. stents or mesh) in situ at surgical site, high-risk Gastro (perforation or obstruction), or high-risk Biliary (acute cholecystitis/pancreatitis or jaundice).** | | | |
| **Appendectomy**<br>**Biliary surgery**<br>*Open surgery*<br>*Laparoscopic surgery (in high risk† patients only)*<br>**Colorectal surgery**<br>*including anastomotic repair, reversal of stoma, uro-gastro procedures*<br>**Gastro-duodenal surgery**<br>**Procedures involving entry into the lumen of GI tract**<br>*Gastric ulcer patch repair, Bariatric surgery, Whipple's procedure, Gastric resection*<br>**Procedures that do not enter the lumen** *(in high risk† patients only)*<br>*Gastric banding, Reflux surgery, Nissen's fundoplication*<br>**Hernia repairs** *(in high risk† patients and/ or mesh use only)*<br>**Liver surgery**<br>**Small bowel surgery** *including PEG insertion*<br>**Splenectomy** *(in high risk† patients only)*<br>*See medical prophylaxis section for follow-up management* | Co-amoxiclav 1.2g IV*<br>PLUS Gentamicin 5mg/kg IV STAT | Teicoplanin 400mg IV STAT (600mg if >70kg)<br>Metronidazole 500mg IV STAT<br>PLUS Gentamicin 5mg/kg IV STAT | *Colonisation :*<br>If MRSA +ve : Use Teicoplanin IV STAT<br>If VRE/ ESBL / CRO: Discuss with microbiology |
| | **Post-op dosing:**<br>Additional post-operative prophylactic doses, up to 48 hours total, may be given if there is:<br>a) Gross spillage from a viscus, or b) major break in sterile technique<br>If an infection is discovered e.g. pus or peritonitis, an appropriate course of antibiotic treatment should be prescribed | | |

**Gentamicin Dosing Guide (based on ideal body weight if over-weight / obese)**

| | | 30 -45kg | 45.1 - 55kg | 55.1 - 65kg | 65.1 - 75kg | ≥75kg |
|---|---|---|---|---|---|---|
| Normal GFR | 5mg/kg | 200mg | 240mg | 300mg | 360mg | 400mg |
| GFR <40ml/min | 3mg/kg | 120mg | 160mg | 180mg | 200mg | 240mg |
| **AKI** | | Consider omitting aminoglycoside therapy. Discuss with micro for alternative | | | | |

# GI TRACT / ABDOMINAL

| FIRST LINE TREATMENT | ALTERNATIVE TREATMENT OPTION |
|---|---|

## Acute Abdomen / Abdominal Sepsis*

Link to dosing guide

***Includes:** Peritonitis / Bowel Perforation / Ruptured Appendix / Acute Diverticulitis*

**Common pathogens:**
Polymicrobial including Enterobacteriaceae, Enterococcus spp., anaerobes

**Notes:**
a. Consider the possibility of a collection if a patient fails to respond
b. Obtain an urgent surgical opinion; the underlying cause of peritonitis is usually managed surgically
c. Discuss patient with microbiology if evidence or suspicion of ESBL or CRO colonisation
d. If patient deteriorating; discuss with microbiology for escalation options

| FIRST LINE TREATMENT | ALTERNATIVE TREATMENT OPTION |
|---|---|
| Co-amoxiclav IV 1.2g TDS<br>*If severe sepsis, hospital acquired infection or recent ABX:*<br>Add Gentamicin IV (Extended dosing guideline)<br><br>**For failed therapy / relapse:**<br>Discuss with microbiology | Cefuroxime IV 1.5g TDS (penicillin allergy cross sensitivity reported at ≈ 6%),<br>**Plus Metronidazole** IV 500mg TDS<br>*If severe sepsis, hospital acquired infection or recent ABX:*<br>**Add Gentamicin** IV (Extended dosing guideline)<br><br>**Beta-Lactam Free option:**<br>**Ciprofloxacin** IV 400mg BD<br>**Plus Metronidazole** IV 500mg TDS<br>*If severe sepsis, hospital acquired infection or recent ABX:*<br>**Add Gentamicin** IV (Extended dosing guideline) |

***48-72 hour Review:***
*If patient is eating/drinking, infection is improving, and NO deep source of infection found;*
De-escalate to **Co-amoxiclav** PO (or **Ciprofloxacin / Metronidazole** PO for beta-lactam free option)

*If patient deteriorating;* discuss with microbiology for escalation options

**Duration:**
Antimicrobial therapy of established infection should be limited to 4–7 days, unless it is difficult to achieve adequate source control e.g. presence of intra-abdominal collections.

## Biliary Tract Infections / Sepsis

***Includes:** Acute Cholangitis / Acute Cholecystitis / Biliary Sepsis*

**Common pathogens:**
Enterobacteriaceae, Enterococcus spp., Bacteroides spp., Clostridium spp., *Haemophilus influenzae*

**Notes:**
a. Antibiotics should be combined with drainage of obstructed bile
b. Blood cultures should be taken before therapy is initiated if infection is suspected, but do not delay therapy for this purpose
c. Discuss patient with microbiology if evidence or suspicion of ESBL or CRO colonisation
d. If patient deteriorating; discuss with microbiology for escalation options

Treat as above for acute abdomen
Addition of **Gentamicin** IV advised for ***all*** empiric treatment regimes

***48-72 hour Review:***
*If patient is eating/drinking, infection is improving, and obstruction resolved;*
De-escalate to **Co-amoxiclav** PO (or **Ciprofloxacin *plus* Metronidazole** PO for beta-lactam free option)

*If patient deteriorating;* discuss with microbiology for escalation options

**Duration:**
**Cholangitis:**
*Mild Disease*: 3 day course if clinically improved / adequate drainage [ref];
*Moderate/Severe Disease*: 5-7 days then review with clinical progress and inflammatory markers

**Cholecystitis:**
5-7 days then review with clinical progress and inflammatory markers

# SKIN AND SOFT TISSUE

| FIRST LINE THERAPY | ALTERNATIVE OPTION |
|---|---|

## Peri - Anal Abscess

Link to dosing guide

**Common pathogens:**
*Mixed skin flora, enterobacteriaceae, enterococcus,* anaerobes

**Notes:**
a. Surgical drainage and/or debridement should precede consideration of antibiotic therapy
b. Antibiotics may have a role in special circumstances including valvular heart disease, immunosuppression, extensive cellulitis, or diabetes

| FIRST LINE THERAPY | ALTERNATIVE OPTION |
|---|---|
| **No surrounding cellulitis:** Drainage only<br><br>**Surrounding cellulitis:** Drainage PLUS<br>**Co - amoxiclav** 625mg PO TDS<br>for a total of 5 - 7 days | **No surrounding cellulitis:** Drainage only<br><br>**Surrounding cellulitis:** Drainage PLUS<br>**Clindamycin** 450mg PO QDS<br>for a total of 5 - 7 days |

## Wound infections (post-surgical)

**Clean-surgery site infection**
**Common pathogens:**
Staph. Aureus, Streptococcus group A,C,G

*Check for recent microbiology results to guide therapy.*
*Patients known or risk of MRSA infection should use Teicoplanin / Vancomycin based therapy*

| FIRST LINE THERAPY | ALTERNATIVE OPTION |
|---|---|
| **Flucloxacillin** 500mg PO QDS for 5 days and review<br>[IV 2g QDS if NBM or systemically unwell] | **Clindamycin** 450mg PO QDS for 5 days and review<br>[IV 600mg QDS if NBM or systemically unwell] |

**Non-clean / dirty surgery site infection (e.g. pelvic/abdominal)**
**Common pathogens:**
Mixed skin flora, enterobacteriaceae, enterococcus, anaerobes

| FIRST LINE THERAPY | ALTERNATIVE OPTION |
|---|---|
| **Co-amoxiclav** 1.2g IV TDS<br>plus **Gentamicin** IV (Extended dosing guideline)<br>**Review after 48-72 hours** | **Discuss with microbiology**<br><br>**Review after 48-72 hours** |

## Breast Abscess

**Common pathogens:**
*Staph. aureus Streptococcus species, anaerobe, Rarely Proteus species*

**Notes:**
a. Surgical drainage is essential where possible

| FIRST LINE THERAPY | ALTERNATIVE OPTION |
|---|---|
| **Flucloxacillin** 500mg PO QDS *plus* **Metronidazole** 400mg PO TDS<br>[IV option: **Flucloxacillin** 2g IV QDS / **Metronidazole** 500mg IV TDS if NBM or systemically unwell] | **Clindamycin** 450mg PO QDS for 5 days and review<br>[IV option: **Clindamycin** 600mg IV QDS if NBM or systemically unwell] |

# ESSENTIAL BREAST ANATOMY

Breast

- Mammary glands and connective tissue stroma
- Anterior to ribs 2–6 and extend superolaterally to the mid-axillary line.

Mammary glands

- Ducts and secretory lobules converge to form 15-20 lactiferous ducts which each open onto the nipple.

Connective tissue

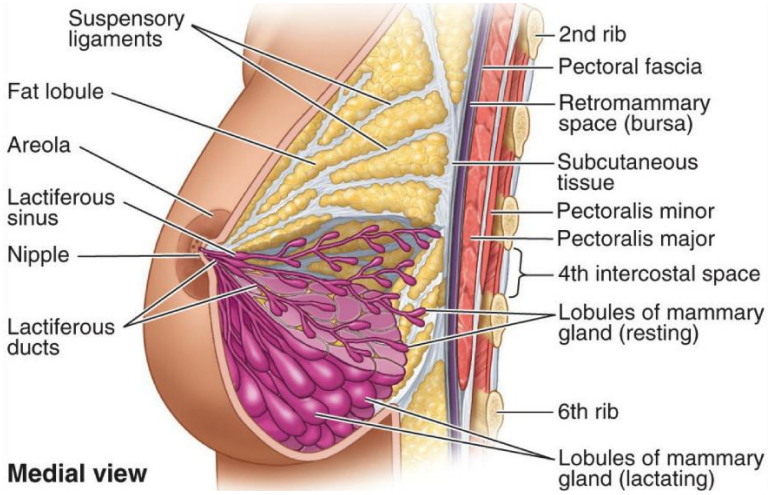
- Surrounds mammary glands
- Suspensory ligaments (of Cooper) are continuous with the dermis and support the breast.
- Layer of loose connective tissue (retromammary space) separates the breast from the deep fascia and allows some movement over the underlying structures.

Arterial Supply

- Laterally: vessels from the axillary artery
- Medially: branches from the internal thoracic artery
- 2nd – 4th intercostals via superficial perforating branches

Lymphatic Drainage

- 75% drain superolaterally into axillary nodes
- Remainder into deep parasternal nodes




# VERY USEFUL PHONE APPS:

- Induction - contains most of the hospital phone numbers and some guidelines
- BNF - your main reference for drug prescribing
- RxGuidelines - Chelsea & Westminster Hospital Antimicrobial Guidelines
- iResus - Resus council (UK) guidelines - ALS, Brady/Tachycardia, Anaphylaxis

# USEFUL NUMBERS

**How to bleep:**
Pick up a hospital phone
Dial 8
Dial the bleep number you wish to contact
Dial your own extension number
If any of the bleeps do not work you can go through switchboard by dialing '0' and asking for 'operator' at the prompt

**To respond to bleep using a mobile**
For almost all numbers dial 0208 321 (extension number)
Dial any extension from a hospital phone

## Surgical bleeps

**230** Surgical On-Call Registrar

**108** Surgical On-Call SHO

**032** Surgical On-Call F1

**143** Theatre co-ordinator

**301/055/498** Colorectal Registrar

**479** Colorectal SHO

**308/096/243** Colorectal F1

**089** Breast House Officer

**114** Orthopaedic Surgery On-Call SHO

**217** Orthopaedic Surgery (Zadeh) SHO

**233** Orthopaedic Surgery (Desai) SHO

**232** Orthopaedic Surgery (Nathan) SHO

**235** Orthopaedic Surgery (Babu) SHO

**200** Orthopaedic Surgery (Huber) SHO

**533** Urology SHO

**086** Urology House Officer

**532** Gynae Registrar

**494** Gynae SHO

**530/531** Obs Registrar

**493** Obs SHO

**091** ENT SHO

## Anaesthetics / ITU bleeps

**Bleep: 181** for theatre cases

**5833** ITU desk

**5834** ITU desk

**340** ITU House Officer

**404** ITU SHO

**5331** HDU desk Registrar

**181** HDU desk House Officer

**143** Theatre co-ordinator

## Medical Teams bleeps

**393** Medical On-Call Registrar

**481/434** Medical On-Call SHO

**722** Medical On-Call House Officer

**449/468/603** AMU Registrar

**472/473/570/574** AMU SHO

**469/571/573/582** AMU House Officer

**005/161** Cardiology Registrar

**262/416** Cardiology SHO

**035/456** Cardiology House Officer

**244/276** Respiratory Registrar

**116/102** Respiratory SHO

**261/034** Respiratory HO

**171/101/309** Gastroenterology Registrar

**042/295** Gastro SHO

**024/025/220/059** Gastroenterology House Officer

**170/421** Endo Registrar

**227/417** Endocrinology SHO

**053/418** Endoc House Officer

**399** Rheumatology Registrar

**102** Rheumatology SHO

**261** Rheumatology House Officer

**121/272** Haematology Registrar

**150** Haematology SHO

**188** Stroke Registrar

**519** Stroke SHO

**001/371** Stroke House Officer

**188/149** Care of the Elderly Registrar

**222/163/216/128** Care of the Elderly SHO

**001/371** (Kew) Care of the Elderly House Officer

**013/043** (Crane) Care of the Elderly House Officer

**650** (Lampton) Care of the Elderly House Officer

**583/581**Orthogeriatrics HO

**355** (A&E) Paediatrics Registrar

**663** (ward) Paediatrics Registrar

**677** (A&E) Paediatrics SHO

**443** (ward) Paediatrics SHO

**223** Neonates Registrar

**345** Neonates SHO

**340** Anaesthetics Registrar

**181** Anaesthetics SHO

**182** Anaesthetics Obstetric SHO

**021/368** Anaesthetics House Officer

**385** Psychiatry Registrar

**274/385** Psychiatry SHO

## Specialist Nurses

**041** Gastro / PEG

**6139** Gastro / PEG

**068** Respiratory

**5332** Heart failure

**373** Heart failure

**045** Outreach

**413** Stroke

**052** Haematology

**509** Psych liason

**018/403** Palliative care

**6822** Palliative care

**584/585** Diabetes

**546/642** Tissue viability

**009/286** Stoma

**037** Acute Pain

**020** Orthopaedic

**5507** Ultrasound

**044** Urology

**402/372** TB

**5831** TB

**5029** TB

**206** SCBU

**076** ENT

## Dietician bleeps

**201** AMU 1, Marble Hill 1, Syon 1

**279** ITU, Osterley 1&2, Syon 2

**264** Lampton / Kew

**268** Crane, Marble Hill 2

**265** Paeds

**279** For any TPN enquiries

**02086303047** For any fax referrals

## Wards

**5747** A&E Reception

**5748** A&E Reception

**5730** A&E Nurses

**5746** A&E Nurses

**6532** AMU

**6533** AMU

**5148** AMU 2

**5344** AMU 2

**6941** AAU

**6730** AAU

**6582** CCU

**6944** CCU

**5453** Crane

**5454** Crane

**5265** Crane

**5331** HDU

**5833** ITU

**5834** ITU

**5264** Kew

**5265** Kew

**5711** Kew

**5783** Lampton

**5257** MDU

**5966** MDU

**5652** Obs Bay

**5345** Osterley 1

**5346** Osterley 1

**6016** Osterley 2

**6019** Osterley 2

**5820** Recovery

**5340** Richmond

**5343** Richmond

**5362** Starlight

**5837** Syon 1

**5130** Syon 1

**5837** Syon 2

**5924** Syon 2

**6319** Theatre Reception

**6849** Theatre Reception

5988 Anticoag Clinic

**5515** Blood Bank

**238** Blood Bank

**045** Critical Care Outreach

**2585** Endoscopy Nurses

**5405** Education Centre

**5406** Education Centre

**2500** IT

**5718** GUM Clinic

**5880** Medicines Information

**5858** Microbiology

**6565** MRI Radiographers

**5044** Occupational Health

**545** OASIS

**6261** PALS

**5931** Path Lab

**5932** Path Lab

**175** Path Lab

**5708** Pharmacy (IP)

**5321** Porter Helpdesk

**280** Site / Bed Manager

**336** Security

**5702** OPD 1

**5584** OPD 2

**5735** OPD 3

**6203** OPD 4

**6834** OPD 6

**5573** Patient Affairs

## Clinical Imaging

**5232** Reception

**6268** Receptiony

**5872** Reception

**6825** Reception

**5985** Radiographers

**5507** USS Nurses

**6577** CT

**6246** Echo

**5111** Gynae USS

**6565** MRI Radiographers

**5649** RealTime

**5771**/5145 Mammography

**5232** X-ray

**148** Radiographer on-call

## Secretaries

**6979** Antenatal

**5771** Breast

**5336** Cardio

**6937** Central Admissions

**6839** Colorectal

**5352** Gastro

**5532** ENT

**5752** Endoscopy

**5956** Maternity

**5243** Orthopaedics

**6017** Paeds

**5337** Respiratory

**5919** Stroke

**5055** Urology