Rick Linforth

CONSULTANT BREAST SURGEON

Medico-legal Expert
email:rick@ricklinforth.com

RICK LINFORTH
CONSULTANT BREAST SURGEON

Select Language

GODADDY VERIFIED & SECURED VERIFY SECURITY

Mr Rick Linforth Medico-legal Expert in Breast Cancer

BOND SOLON Wilmington Professional

TOP RANKED Chambers LITIGATION SUPPORT 2019 Bond Solon

CARDIFF UNIVERSITY BOND SOLON CIVIL Expert Certificate

UK Register of Expert Witnesses
Mr Richard Anthony Linforth
See my entry at www.jspubs.com

Expert Witness Established 1996

Medical Expert in Breast Surgery and Oncology, Breast Cancer Treatment.
Medico-legal reports on Breach of Duty, Causation, Condition and Prognosis, Delayed diagnosis, Tumour Doubling Times, Informed Consent-Montgomery compliance.

LAWYER MONTHLY Expert Witness Awards 2021 WINNER

Click here for Expert Witness Profile.pdf

UK REGISTER OF EXPERT WITNESSES REGISTERED 2022

2023 EXPERT WITNESS

www.ricklinforth.com

Breast cancer: presentation

Lump/mass	69%
Screening	23%
Nipple discharge	2%
Pain	1%
Skin tether	1%
Others	4%

< AGE 40 94% PRESENT WITH A LUMP/MASS!!!

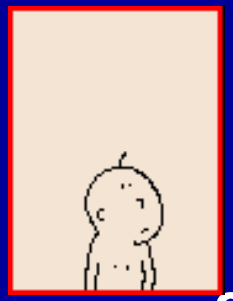
Triple assessment

1) History and Physical assessment P score

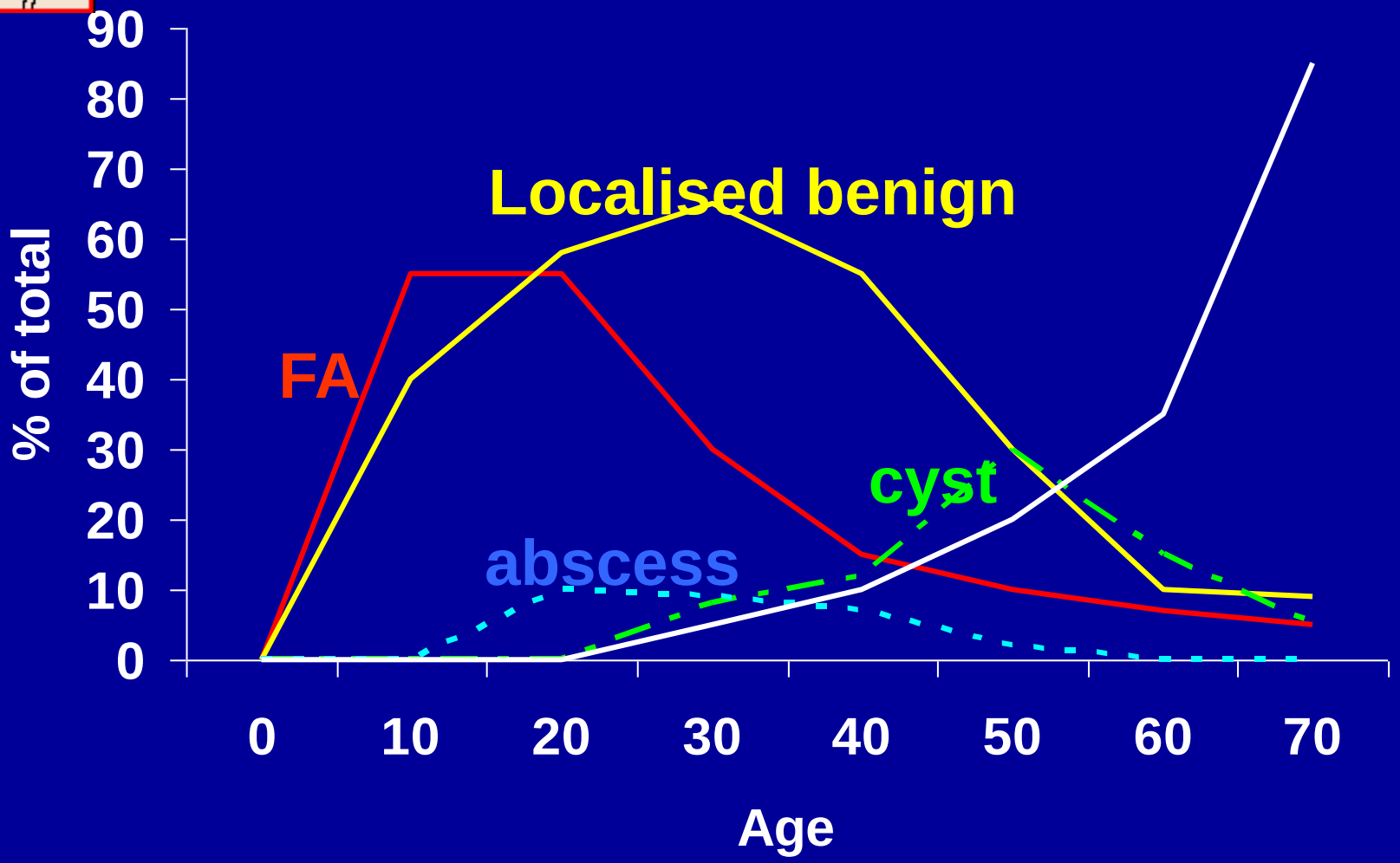
2) Imaging (Ultrasound + >40 Mammogram)
U score and M score (or R score)

3) Needle core biopsy: B Score

- 1-normal, 2-benign 3-indeterminate
- 4-suspicious 5-malignant



Taking a history: Age



Endogenous oestrogens and breast cancer risk

↑ risk of breast cancer

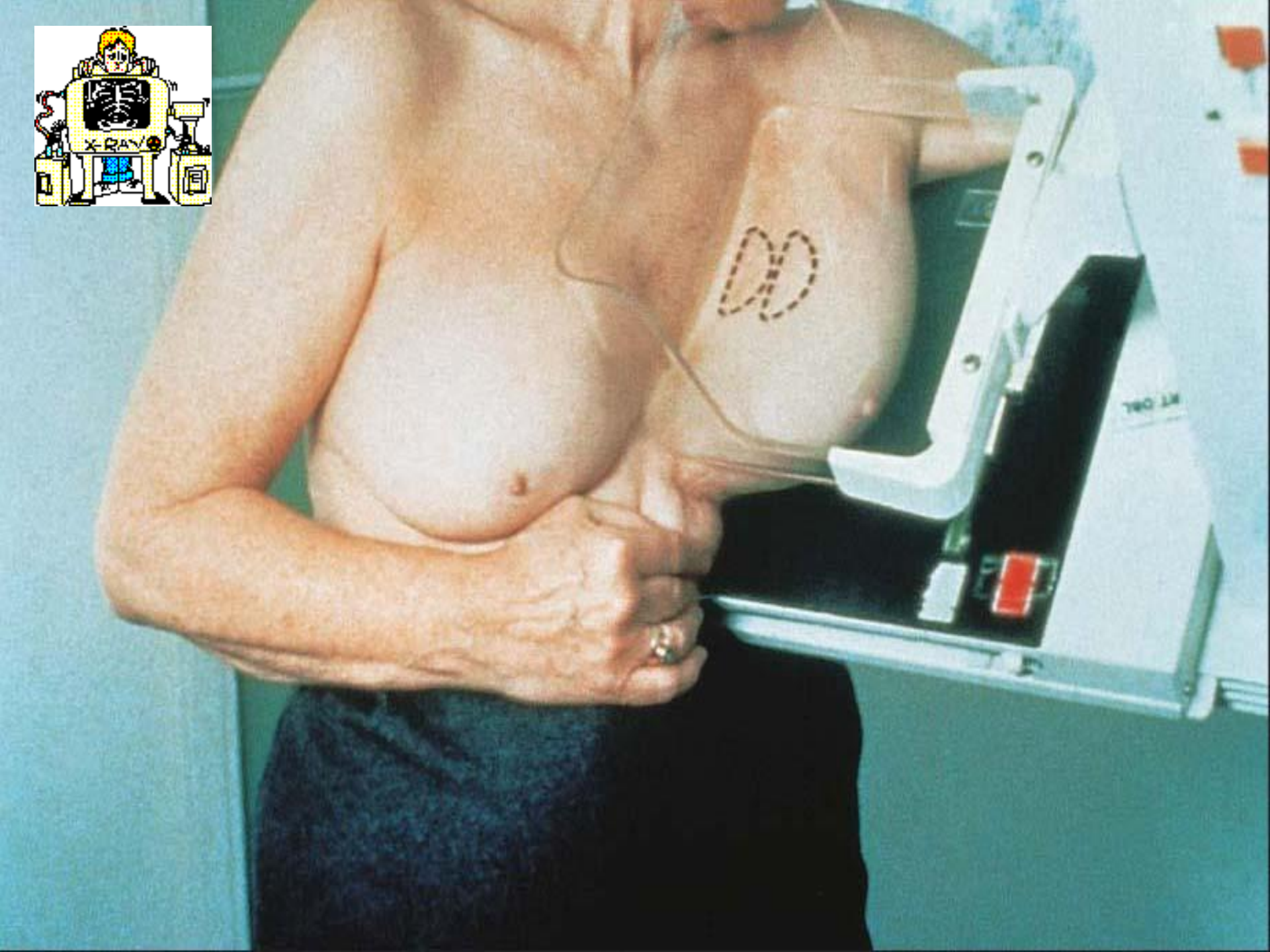
- Age of menarche → 10% reduction for every year delay,14
- Age 1st pregnancy → x2 risk if over 30 compared to <20
- nulliparity → x3 risk compared to women >3 pregnancies
- late menopause → 10% increase
- post-menopausal obesity → Approx. 1% for each Kg > ideal weight

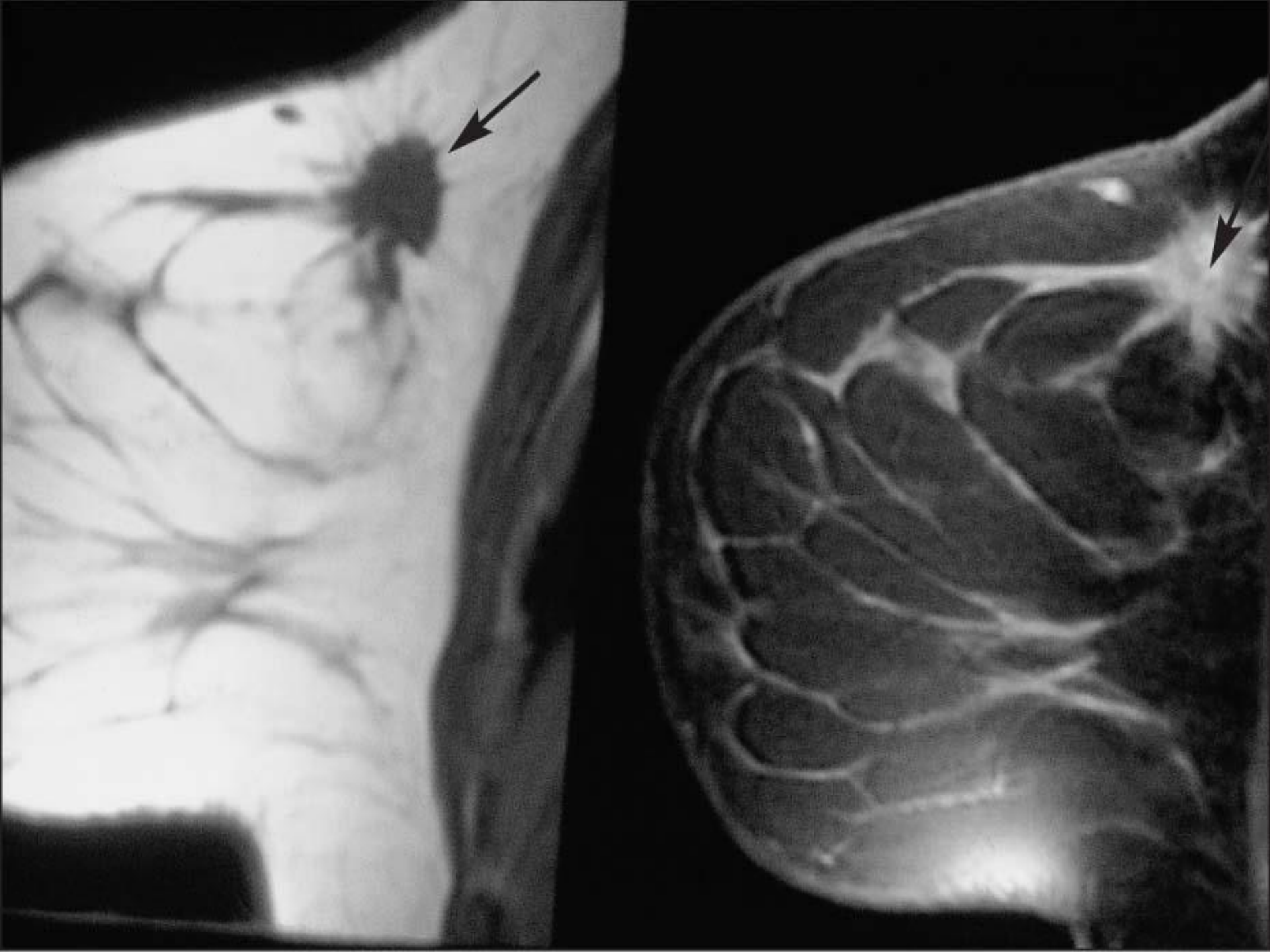
HRT effects on breast cancer incidence in 50yr old women

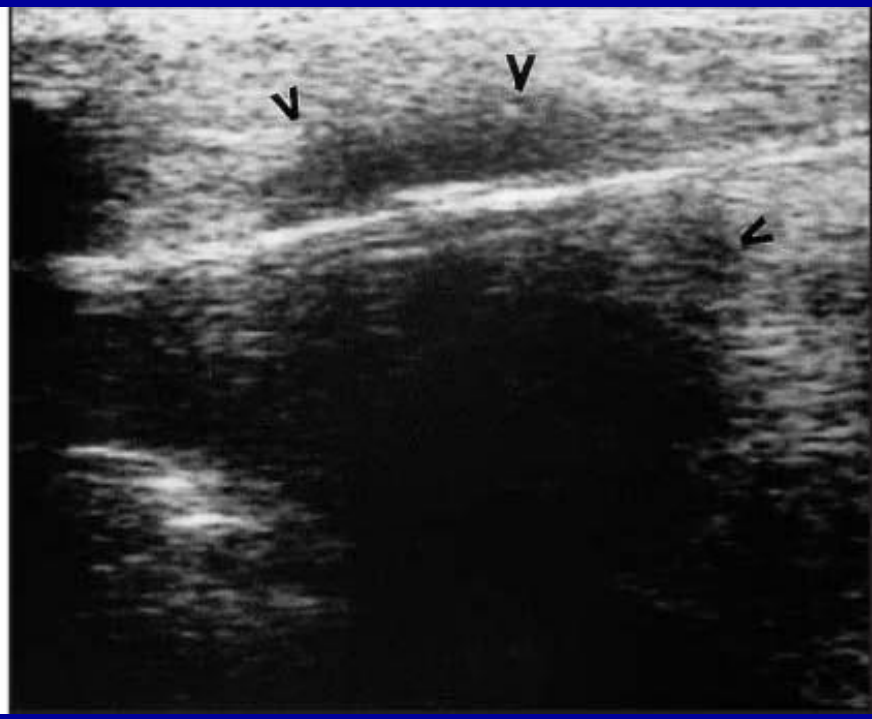
Time on HRT	Expected cancers	Extra cancers in HRT users
Never users	45 in 1000	N/A
5 years use	47 in 1000	2 in 1000
10 years use	51 in 1000	6 in 1000
15 years use	57 in 1000	12 in 1000

Remember 6 less colon cancers

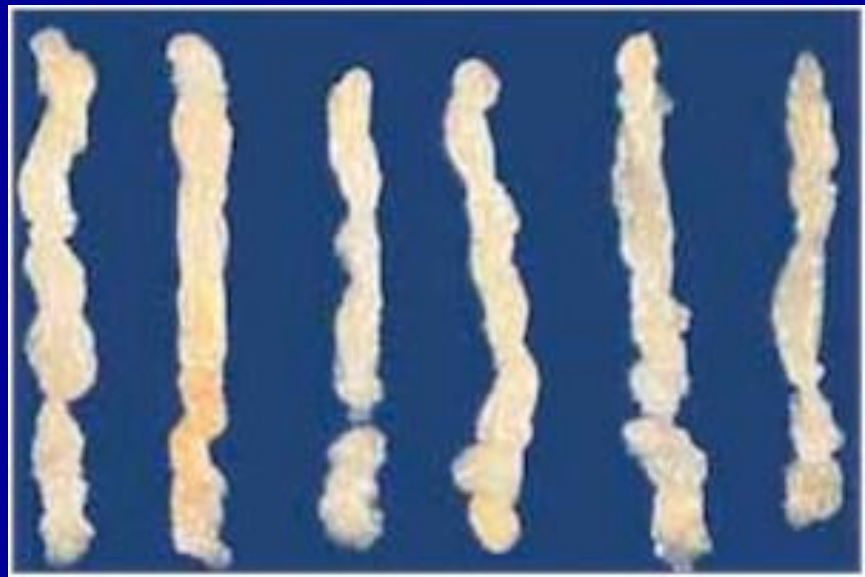

BEFORE HRT
AFTER 3 YEARS ON HRT


X-RAY

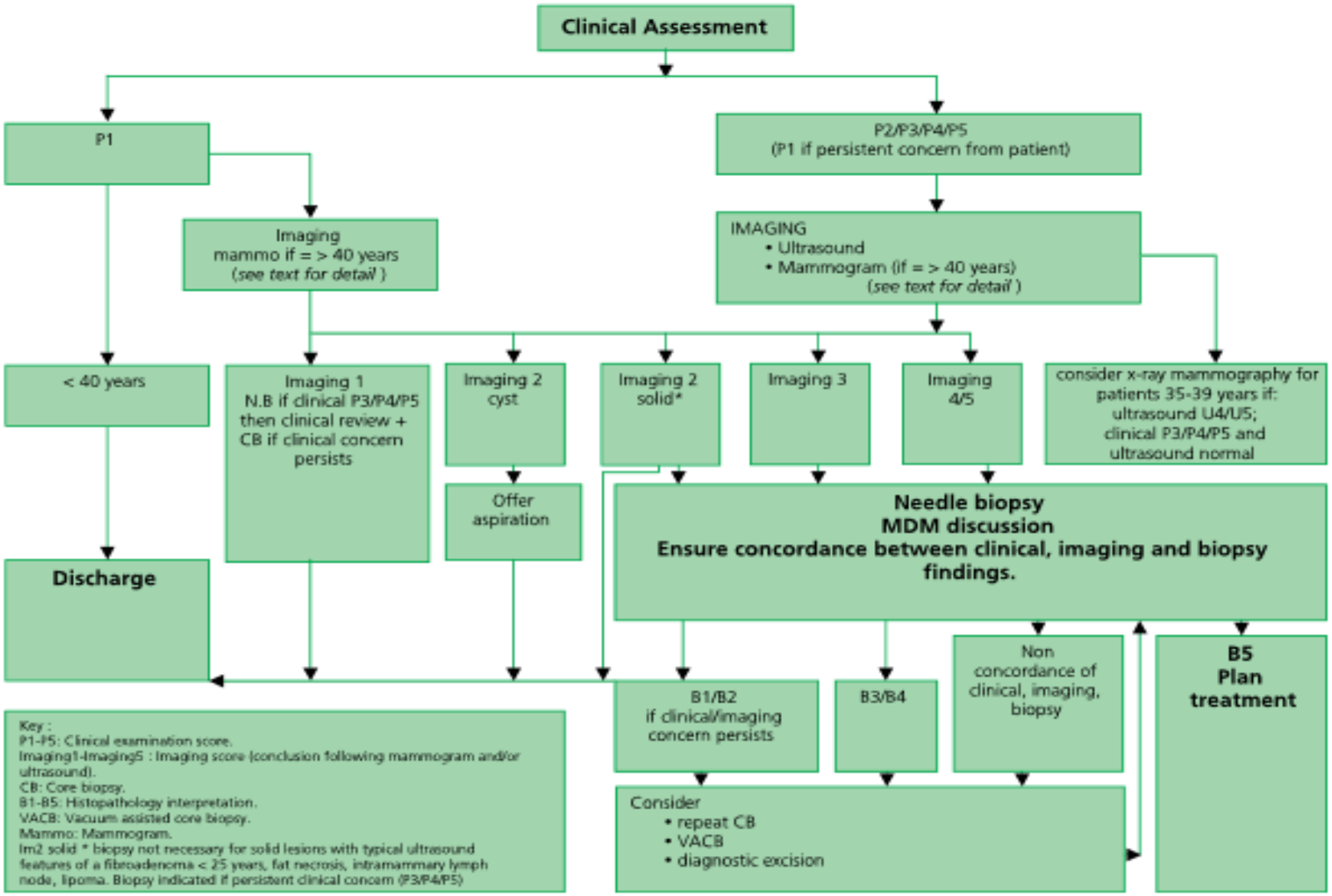



V
V

Biopsy: The Mammotome

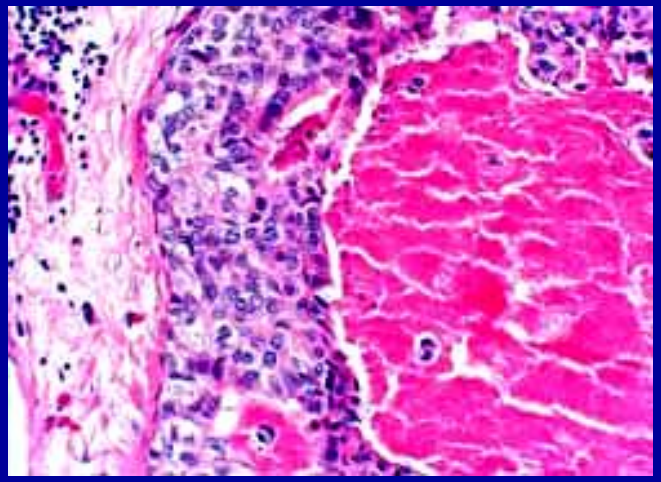


5. Algorithm A. Assessment: Lump/Lumpiness



Willet et al Best practice 2010

DCIS: ductal carcinoma in situ



Low grade

uniform cells

cribriform/ micropapillary

no necrosis/ atypia

Intermediate grade

mild/moderate atypia

cribriform/ micropapillary/solid

with/without necrosis

High grade

pleomorphic nuclei

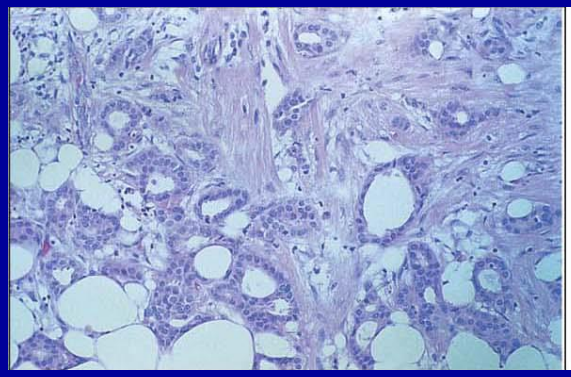
irregular nuclei

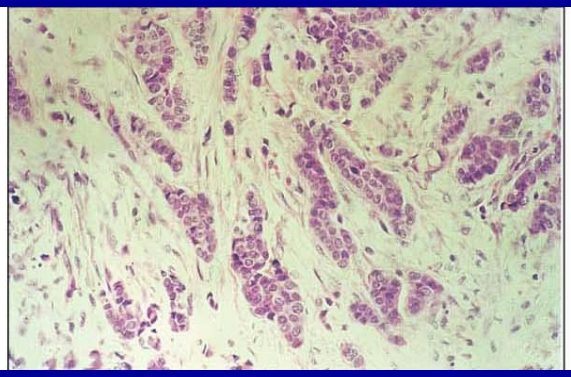
frequent mitoses

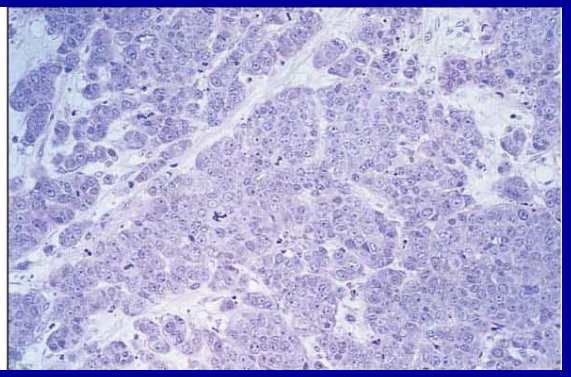
necrosis

Invasive Ductal Carcinoma of No Specific Type (NST)

80% of all cancer







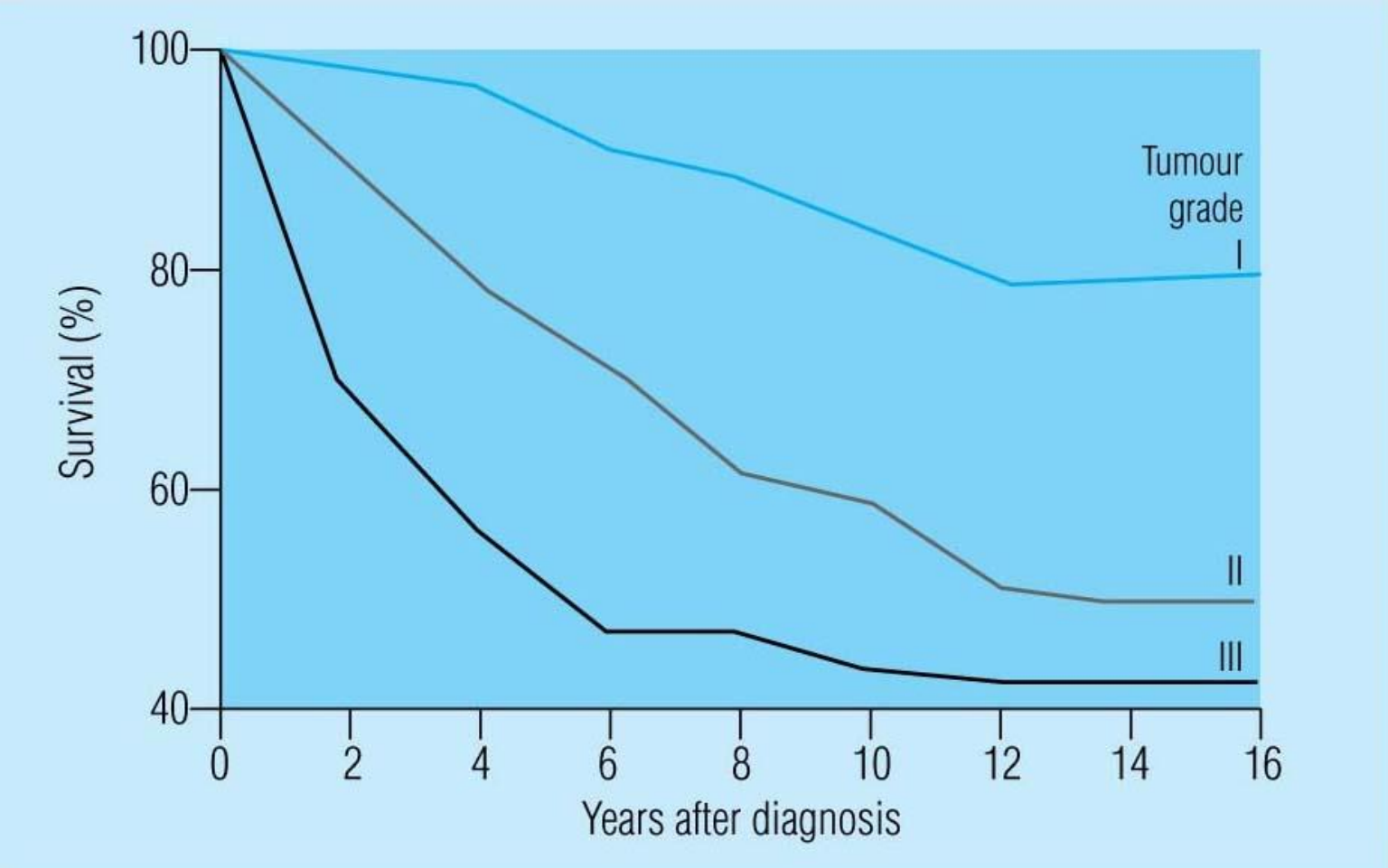
Grade 1 2 3

Least Aggressive / slow growing

Most Aggressive/fastest growing

Other cancer Lobular 10% (medulary, tubular, papillary, metaplastic= Special types 10%)

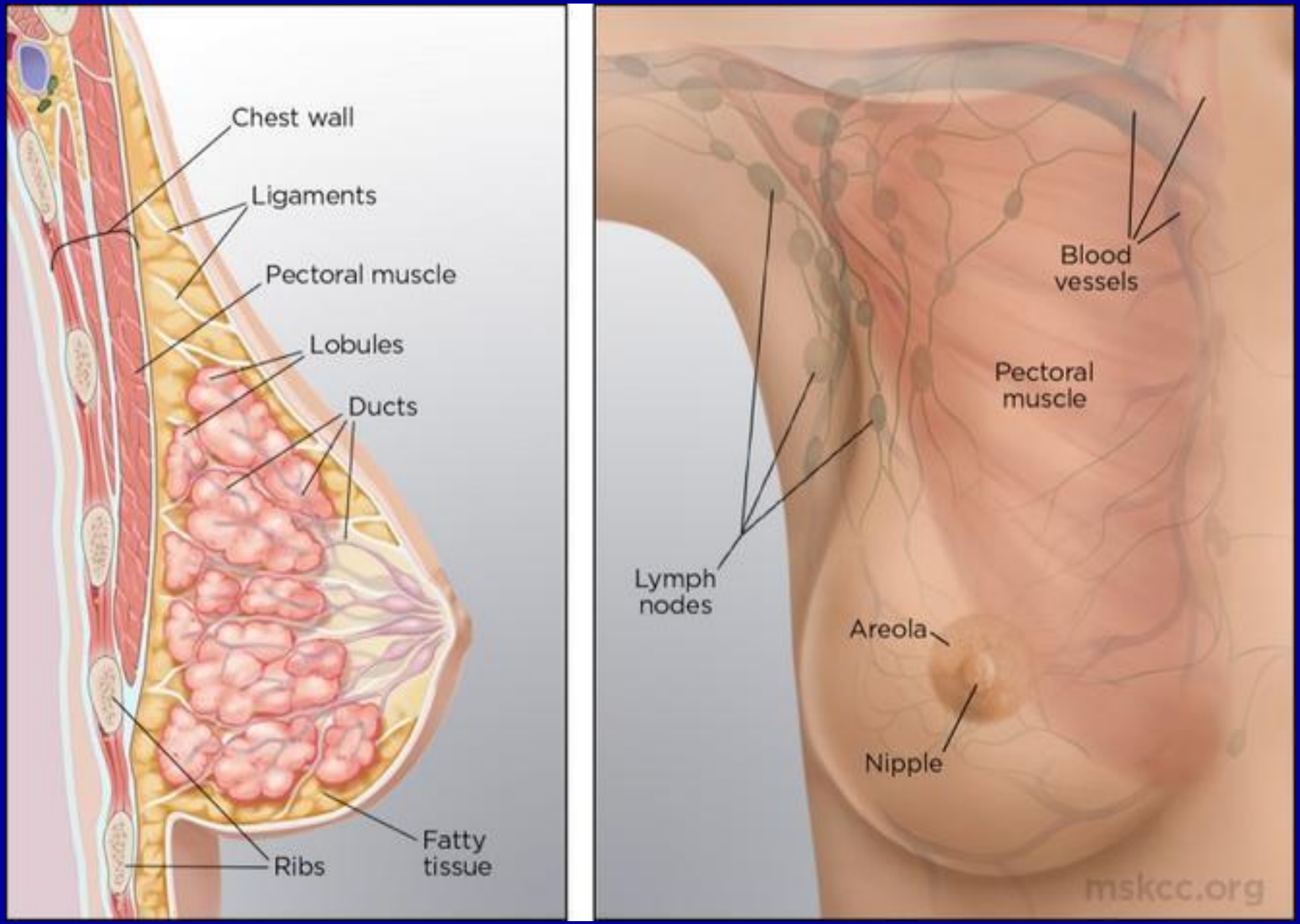
FIGURE 7.3



Back to Chapter 7 thumbnails

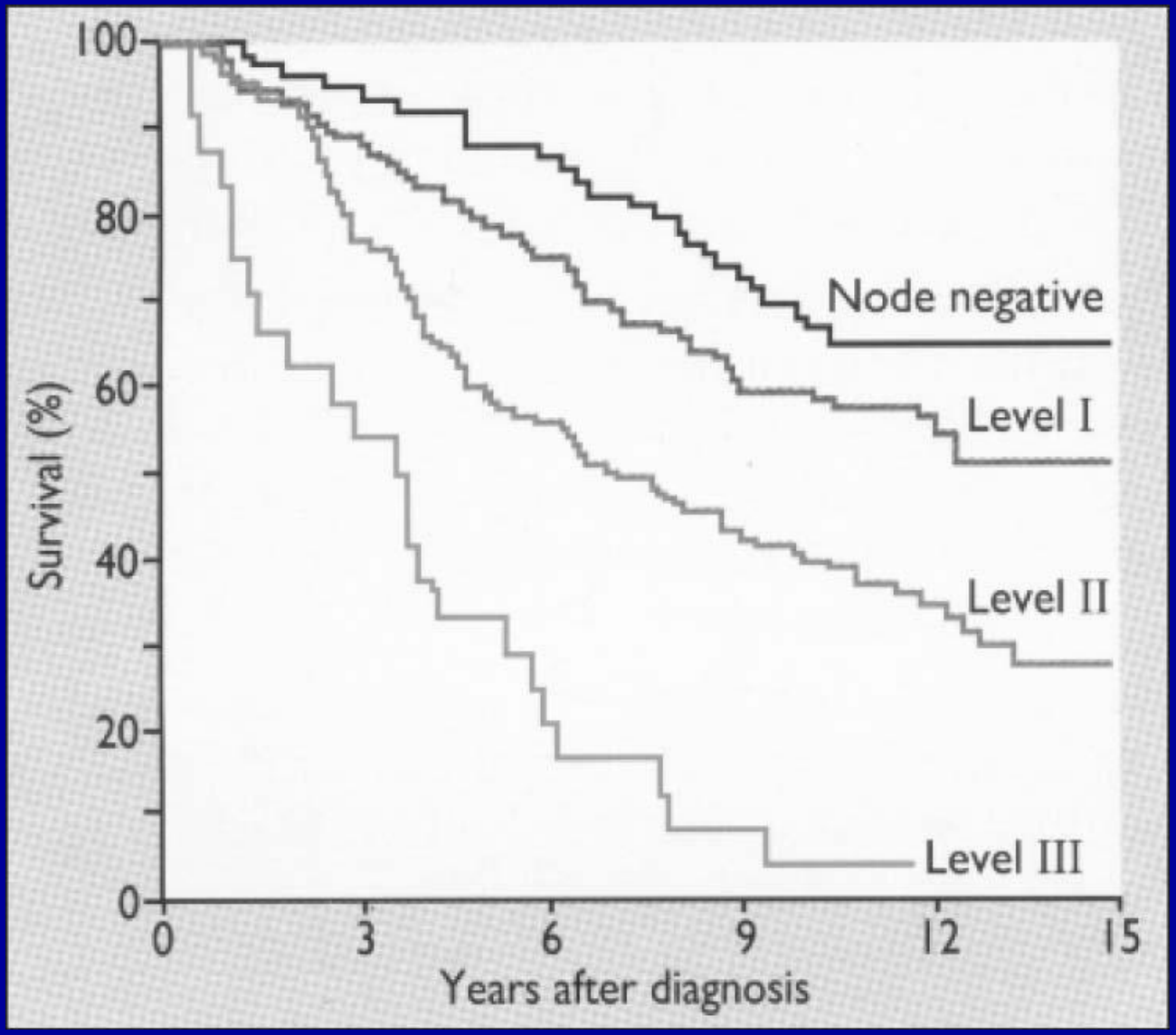
Back to Contents

Anatomy and lymph nodes



Sentinel Node Biopsy

FIGURE 8.7



Back to Chapter 8 thumbnails

Back to Contents

Adjuvant Treatment after Surgery

- All patients who have had WLE need Radiotherapy.
- If ER or Pr receptor positive- Endocrine therapy for at least 5 years.
- Premen =Tamoxifen
- Post men=Aromatase inhibitors

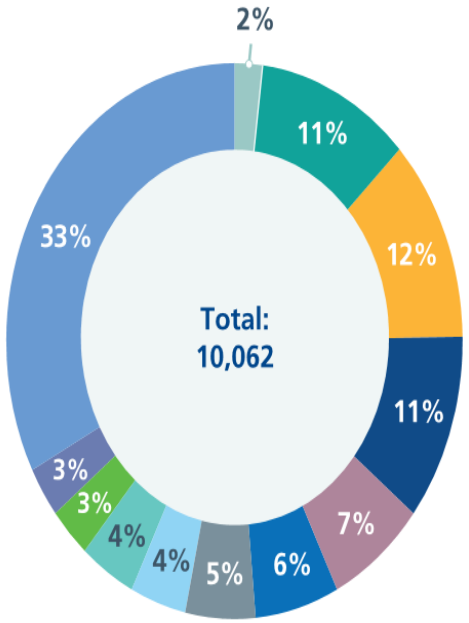
  eg Arimedex ,Letrozole, Exemestane

Adjuvant Treatment after Surgery

- Chemotherapy:
- All who are node +ve or ER/ Pr-ve

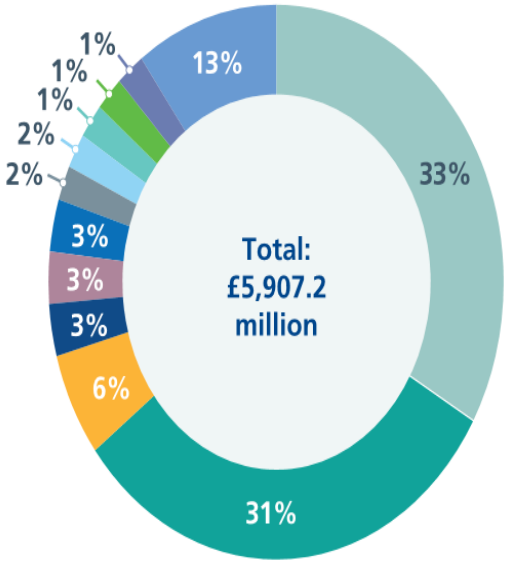
- Node –ve patients who are:-
- Young women under 40.
- Large cancer >3cm if grade 3, or LVI+ve

Figure 17: Total number of clinical claims received in 2022/23 by speciality[1]



Obsterics	13%
- Early Notification	2%
- Non-Early Notification	11%
Emergency medicine	12%
Orthopaedic surgery	11%
General surgery	7%
Gynaecology	6%
General medicine	5%
Radiology	4%
Psychiatry/mental health	4%
Ophthalmology	3%
Gastroenterology	3%
Other	33%

Figure 18: Total value of clinical claims received in 2022/23 by speciality[2]



Obsterics	64%
- Early Notification	33%
- Non-Early Notification	31%
Emergency medicine	6%
Orthopaedic surgery	3%
General surgery	3%
Gynaecology	3%
General medicine	2%
Radiology	2%
Psychiatry/mental health	1%
Ophthalmology	1%
Gastroenterology	1%
Other	13%

Obstetric claims total 13% but cost 64%
Breast is lost in General surgery costing 3%

Total cost of claims £2.6 Billion 2022-2023.

Standard of Care:--What is it for Breast?

Best practice diagnostic guidelines for patients presenting with breast symptoms

Editors

Alexis M Willett, Michael J Michell, Martin J R Lee

November 2010

Best Practice Guidelines

ONCOPLASTIC BREAST RECONSTRUCTION

Guidelines for Best Practice

Editors: Dick Rainsbury and Alexis Willett

November 2012

Oncoplastic guidelines 2012 updated 2021

Early and locally advanced breast cancer: diagnosis and management

NICE guideline

Published: 18 July 2018

nice.org.uk/guidance/ng101

Nice 2009/2018

ABC of breast diseases 1994-2012

www.ricklinforth.com

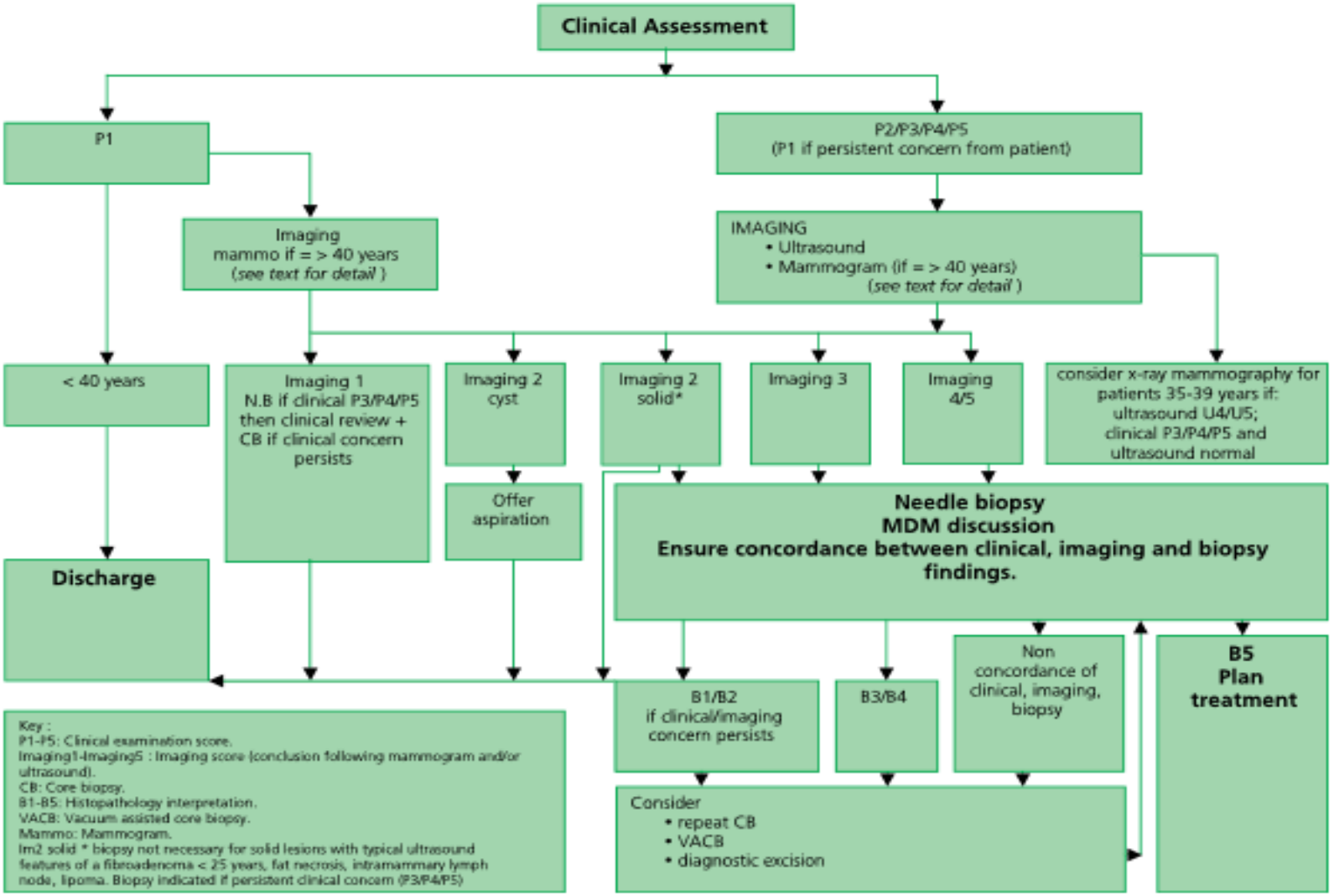
2.2	One-stop assessment
QI9	• At one-stop assessment all the required elements of triple assessment are performed during a single visit. This provides: – a basis for definitive diagnosis in the majority of patients – reassurance with no need for further attendance in most patients with non-malignant conditions – information for multidisciplinary meeting (MDM) treatment planning prior to review of those diagnosed to have cancer • Some patients do not require all the elements of triple assessment, as outlined below and defined in the Algorithms. This includes those with: – resolved symptoms and no clinical abnormality – clearly identified benign conditions with no other suspicious features found on clinical and imaging assessment such as: ▪ areas of benign breast change and diffuse nodularity without a dominant mass ▪ simple cysts whether aspirated or not ▪ breast pain ▪ non-bloody nipple discharge ▪ gynaecomastia

Beware the focal nodularity-P3

Needs a core biopsy!

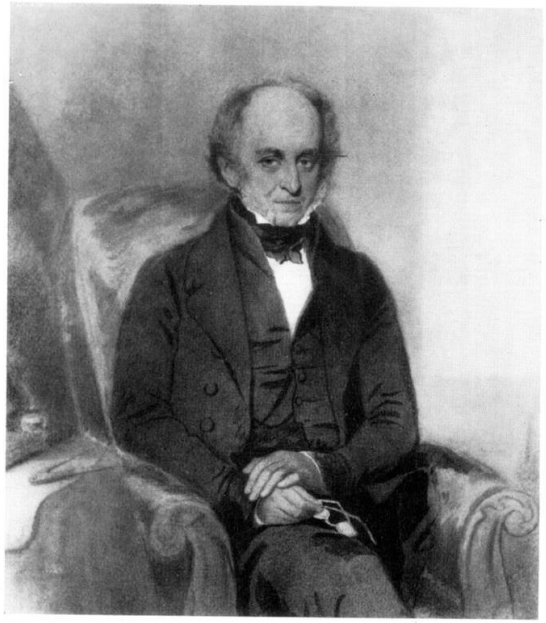
Willet et al : Best Practice

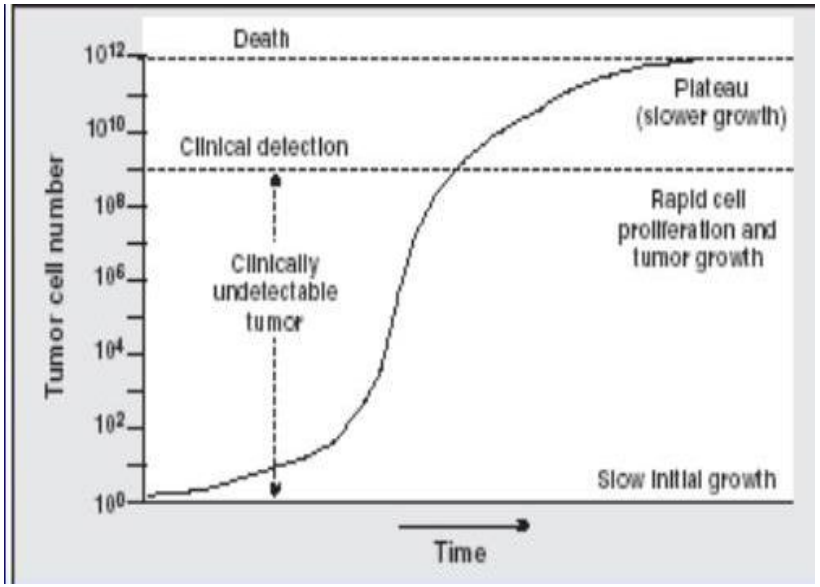
5. Algorithm A. Assessment: Lump/Lumpiness



Missed cancers are usually P2-3 U1, without review or biopsy

Tumour Volume Doubling Times: TVDT: How fast does it grow !





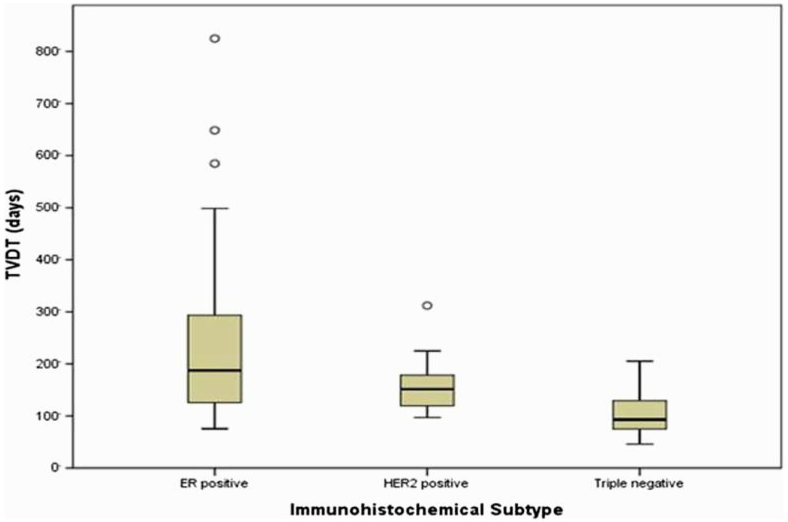
Benjamin Gompertz 1779-1865

www.ricklinforth.com

Tilanus-Linthorst et al Clinical Cancer Res 2007;13(24) December 15, 2007

	≤40 y (*n* = 31)	41-50 y (*n* = 42)	>50 y (*n* = 27)
No. BRCA1/2	23	24	12
No. high risk	8	18	15
Mean DT days (95% reference)			
BRCA1/2	28 (4-222)	68 (9-553)	81 (10-653)
High risk	83 (12-593)	121 (17-850)	173 (25-1,202)

Gene carriers grow the fastest = 28 days



Peer et al :.Cancer, June 1,1993,Volume 71, No 11.

Table 3. Tumor Volume Doubling Time of Primary Breast Cancer According to Age

Age at diagnosis (yr)	Geometric mean in days (95% confidence limits)	68% range*
< 50	80 (44–147)	24–273
50–70	157 (121–204)	46–533
> 70	188 (120–295)	55–640

Likelihood ratio test: $P = 0.06$

* Sixty-eight percent of the tumor volume doubling times are between the presented limits: 16% is smaller than the lower limit, 16% is larger than the upper limit.

80 days for under 50s
188 days for >70s

Ryu et al Eur Radiol 92014) 24:2227-2235.

Faster Doubling times seen in:

AGE <50 (single most important factor)

Grade III

Biology: Triple negative > HER2> ER pos

Pregnancy

BRCA status (often Triple negative)

Ki 67 positive: a marker of proliferation

Tools to demonstrate causation

http://radclass.mudr.org/content/doubling-time-calculation-growth-rate-lesion-or-mass

For tumour size

https://nomograms.mskcc.org/breast/

For nodal status

https://breast.predict.nhs.uk/predict_v2.0.html

For survival prognosis

http://www.lifemath.net/cancer/breastcancer/therapy/index.php

For years of life lost

Example of back calculation:

35 female, No FH, referred with lump UOQ left breast .

Patient seen in clinic: 1/1/20 P3 lump uoq: imaging normal u1: discharged.

Patient seen in clinic 1/1/21 P5 lump with lymph node : final pathology
T2 35mm IDC G3, Er positive Her 2 neg. 1 node pos.

Back calculation:

Doubling time - calculation of growth rate of a lesion or a mass

calculator CT MRI ultrasound x-ray

Calculating doubling time of focal lesions or massess can give a hint, whether it has a malignant or rather benign growth dynamics. Doubling time of malignant lesions is between 30 and 500 days with a median of 100 days.

Calculate	Diameter [mm]	Volume [mm^3]
First examination	Date (d/m/yy)	01/01/2020
	Diameter [mm]	8.5
Second examination	Date (d/m/yy) Today	01/01/2021
	Diameter [mm]	35

Calculate doubling time

Days between: 367
Doubling time: 60 days

Clear

http://radclass.mudr.org/content/doubling-time-calculation-growth-rate-lesion-or-mass

Breast Cancer Nomogram: Sentinel Lymph Node Metastasis

TEXT SIZE

This nomogram can be used to help newly diagnosed breast cancer patients assess the likelihood that their breast cancer has spread to the sentinel lymph nodes.

Enter Your Information — Clear — Calculate

Current Age
Enter current age. Must be between 20 and 91.
35 (20 to 91 yrs)

Breast Tumor Size
Size of the primary tumor (as measured either in imaging study or pathological exam), in centimeters.
0.85 (0.1 to 11.0 cm)

Special Type?
Check box if tumor has been pathologically defined as pure tubular, pure colloid (mucinous), or typical medullary carcinomas on the pathology report. Other histologies such as atypical medullary carcinoma or carcinoma with ductal and lobular features should be classified as ductal -- see Tumor Type and Grade section below for more details.
☐ YES

Tumor is confined to UIQ?
Check box if tumor is confined within the upper inner quadrant (UIQ) of the breast.
☐ YES

Lymphatic or Vascular Structure Involvement (LymphovascularInvasion)
Select YES if one or more tumor cells found in the blood or lymphatic vessels.
☐ YES

Multifocality?
Select YES if breast cancer has cancer cells seperated from the main tumor mass.
☐ YES

Tumor Type and Grade
Indicate if tumor type is ductal or lobular, as noted in the pathology report. If ductal, indicate the nuclear grade -- I: slight or no variation in the size and shape of the nucleus; II: moderate variation in the size and shape of the nucleus; III: marked variation in the size and shape of the nucleus.
Lobular

Estrogen-Receptor Status
Select NEGATIVE if estrogen receptors stain positive in <10% of cells; select POSITIVE if estrogen receptors stain positive in ≥10% of cells.
Positive

Progesterone-Receptor Status
Select NEGATIVE if progesterone receptors stain positive in <10% of cells; select POSITIVE if progesterone receptors stain positive in ≥10% of cells.
Positive

Your Results

Learn more about your results below.

Probability of Spread to Sentinel Lymph Nodes	35%

Print These Results

Enter Your Information — Clear — Calculate

Current Age
Enter current age. Must be between 20 and 91.
35 (20 to 91 yrs)

Breast Tumor Size
Size of the primary tumor (as measured either in imaging study or pathological exam), in centimeters.
3.5 (0.1 to 11.0 cm)

Special Type?
Check box if tumor has been pathologically defined as pure tubular, pure colloid (mucinous), or typical
☐ YES

Your Results

Learn more about your results below.

Probability of Spread to Sentinel Lymph Nodes	71%

Print These Results

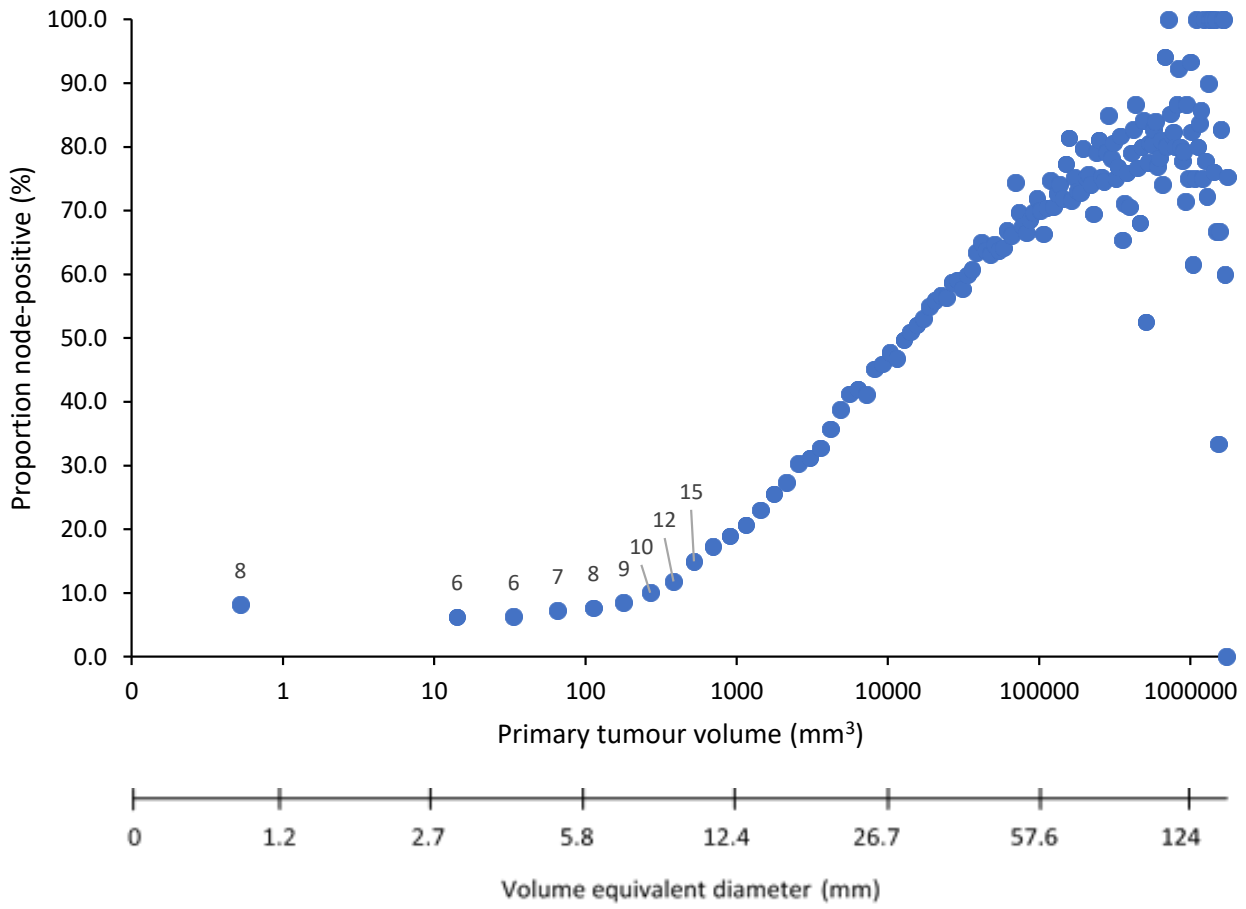
Treated : T2 (35mm) N1 M0
Mastectomy, ANC, Chemotherapy , Radiotherapy.

Hypothetical : T1(8.5mm) N0 M0

WLE/SLNB, RT, Endocrine therapy.

www.ricklinforth.com

Supplementary Figure 4a. Proportion node-positive vs. primary tumour volume (logarithmic scale) among ER+/HER2- patients stratified according to tumour size by 1-mm intervals (N = 693,686)



As tumour size/volume increases nodal disease increases

T1 8.5mm N0 M0 Tamoxifen

T2 35mm N1 M0

Results

Table | Curves | Chart | Texts | Icons

Select number of years since surgery you wish to consider:

5 | 10 | 15

This table shows the percentage of women who survive at least 15 years after surgery.

Treatment	Additional Benefit	Overall Survival %
Surgery only	-	87%
+ Hormone therapy	3.5% (1.1% – 4.0%)	91%

If death from breast cancer were excluded, 97% would survive at least 15 years, and 3% would die of other causes.

Show ranges? Yes | No

Results

Table | Curves | Chart | Texts | Icons

Select number of years since surgery you wish to consider:

5 | 10 | 15

This table shows the percentage of women who survive at least 15 years after surgery.

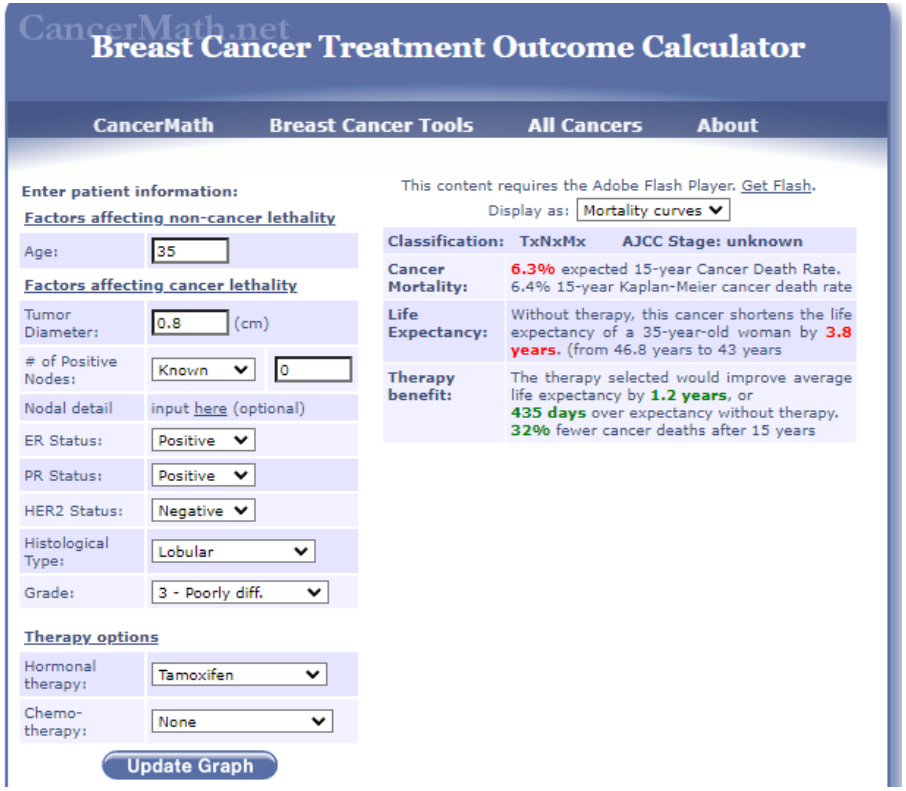
Treatment	Additional Benefit	Overall Survival %
Surgery only	-	61%
+ Hormone therapy	11.8% (3.5% – 14%)	72%
+ Chemotherapy	7.9% (5.9% – 9.8%)	80%

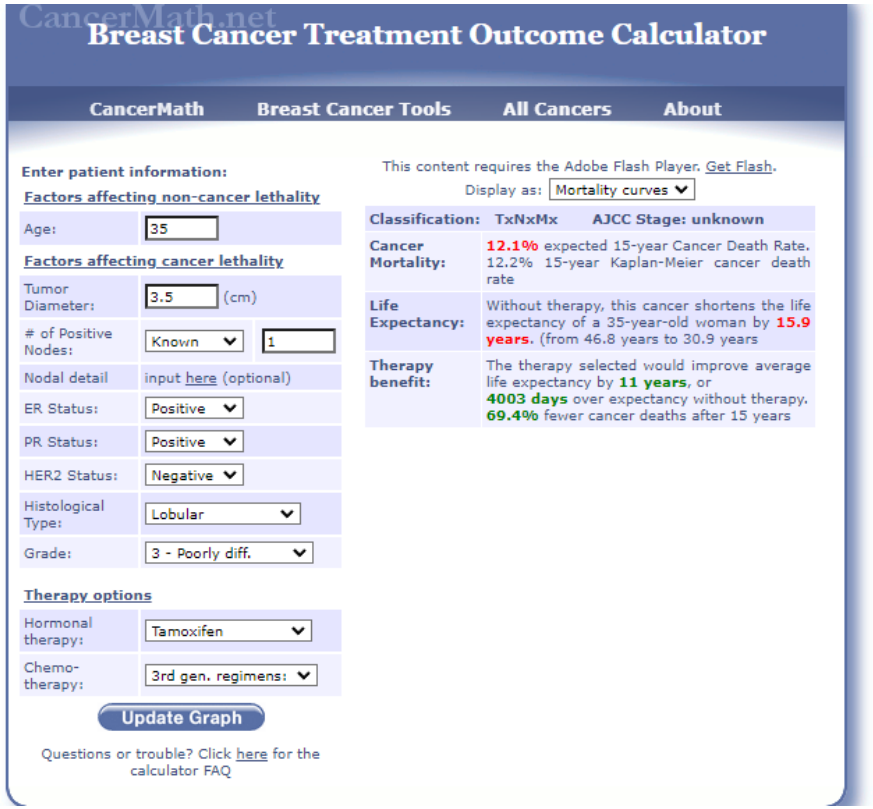
If death from breast cancer were excluded, 97% would survive at least 15 years, and 3% would die of other causes.

Show ranges? Yes | No

Survival reduced by 11% over 15 years .

www.ricklinforth.com





3.8 yrs -1.2 yrs=2.6 years lost

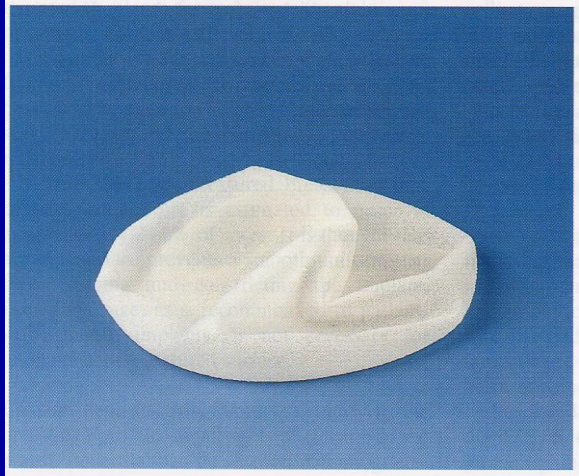
15.9 yrs-11 yrs= 4.9 years lost

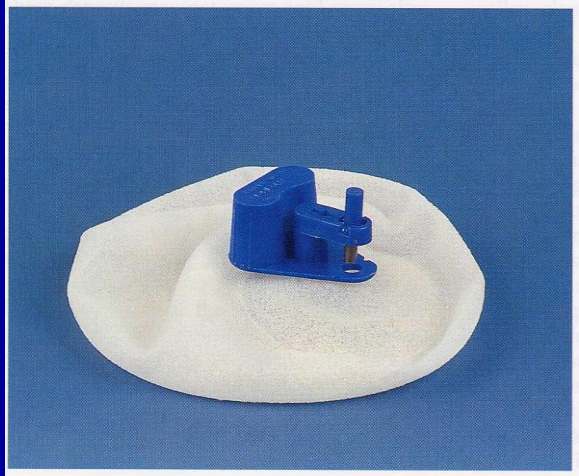
Amount loss due to breach= 4.9-2.6 =

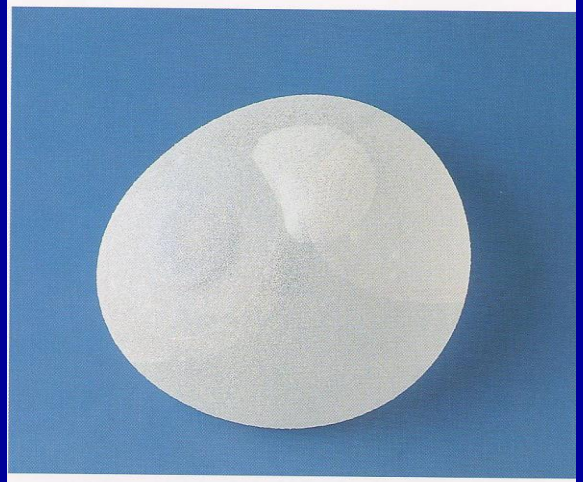
2.3 years of life lost

What's been lost?

- Breast Form
- Shape, volume, skin surface area
- Nipple/areola complex specialised structure
- Ptosis, movement
- Function - lactation, sports, activities, sexual wholeness
- Psychological and social deficit







Skin Reducing Mastectomy- utilising patients own dermis

Journal of Plastic, Reconstructive & Aesthetic Surgery (2007) xx, 1–6

ELSEVIER

JPRAS
An International Journal of Surgical Reconstruction
www.JPRASurg.com

Skin-reducing mastectomy with breast reconstruction and sub-pectoral implants

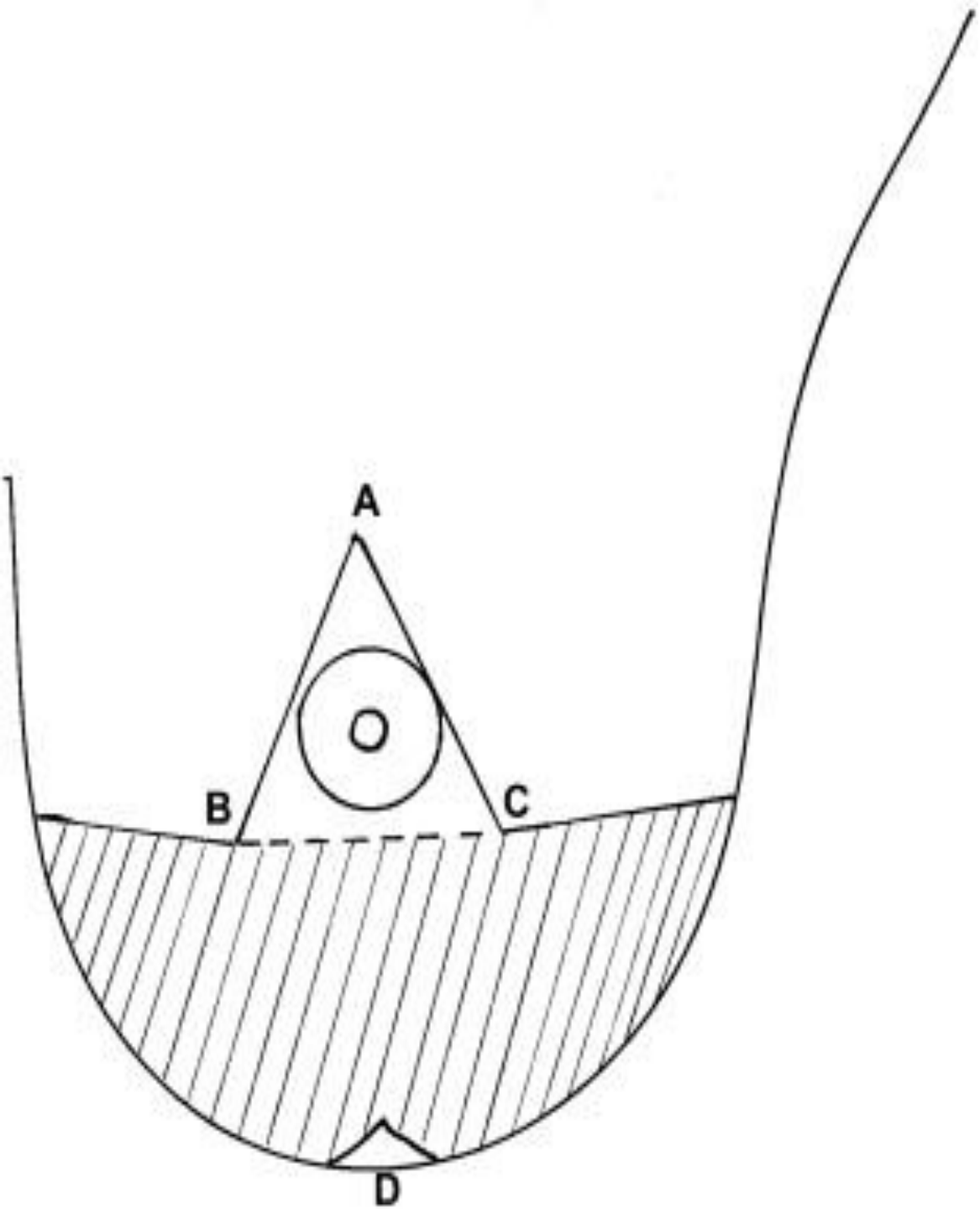
G. Querci della Rovere [a,*], M. Nava [b], R. Bonomi [a], G. Catanuto [b], J.R. Benson [c]

[a] *Department of Surgery, The Royal Marsden Hospital, Down's Road, Sutton, Surrey SM2 5PT, UK*
[b] *Instituto Nazionale Tumori, Milan, Italy*
[c] *Cambridge Breast Unit, Addenbrooke's Hospital, Hills Road, Cambridge CB2 2QQ, UK*

Received 8 August 2006; accepted 22 June 2007

Journal of Plastic reconstructive and Aesthetic Surgery (2007)xx,1-6

LifeCell
A KCI Company



Pre operative skin marking for skin reducing mastectomy and single stage reconstruction

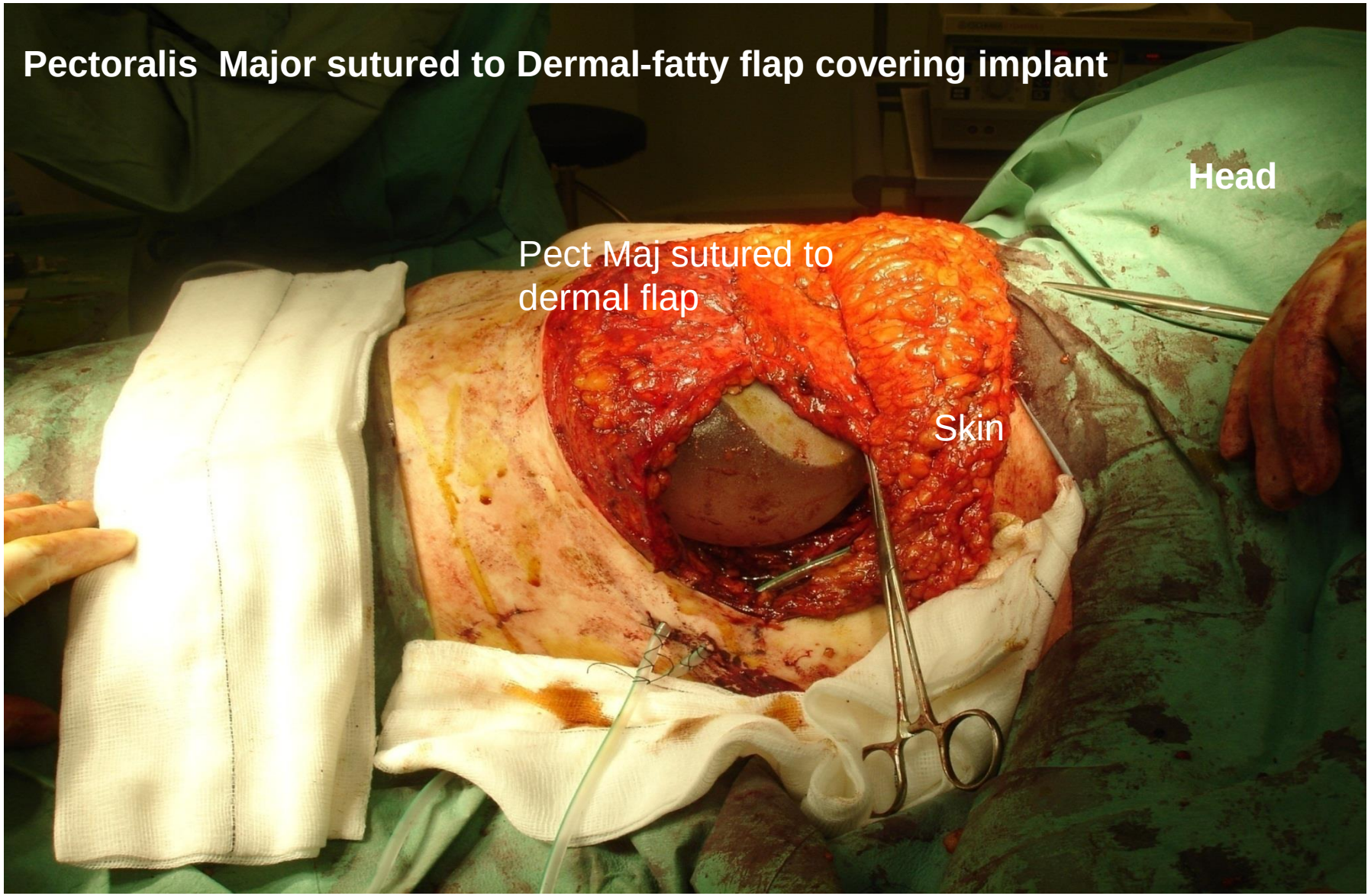
A:Proposed nipple height when nipple reconstructed.

B+C new NAC-IMF (6-9cm)

D-optional skin bridge

LifeCell
A KCI Company

Pectoralis Major sutured to Dermal-fatty flap covering implant

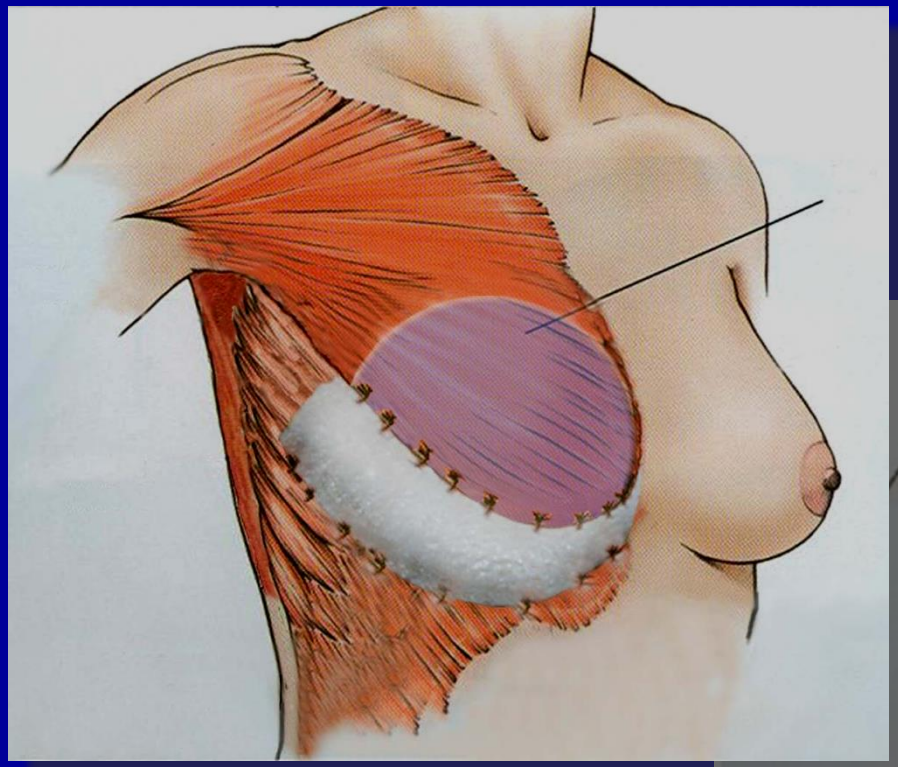


LifeCell
A KCI Company

Closure of skin envelope in Reduction Wise Pattern

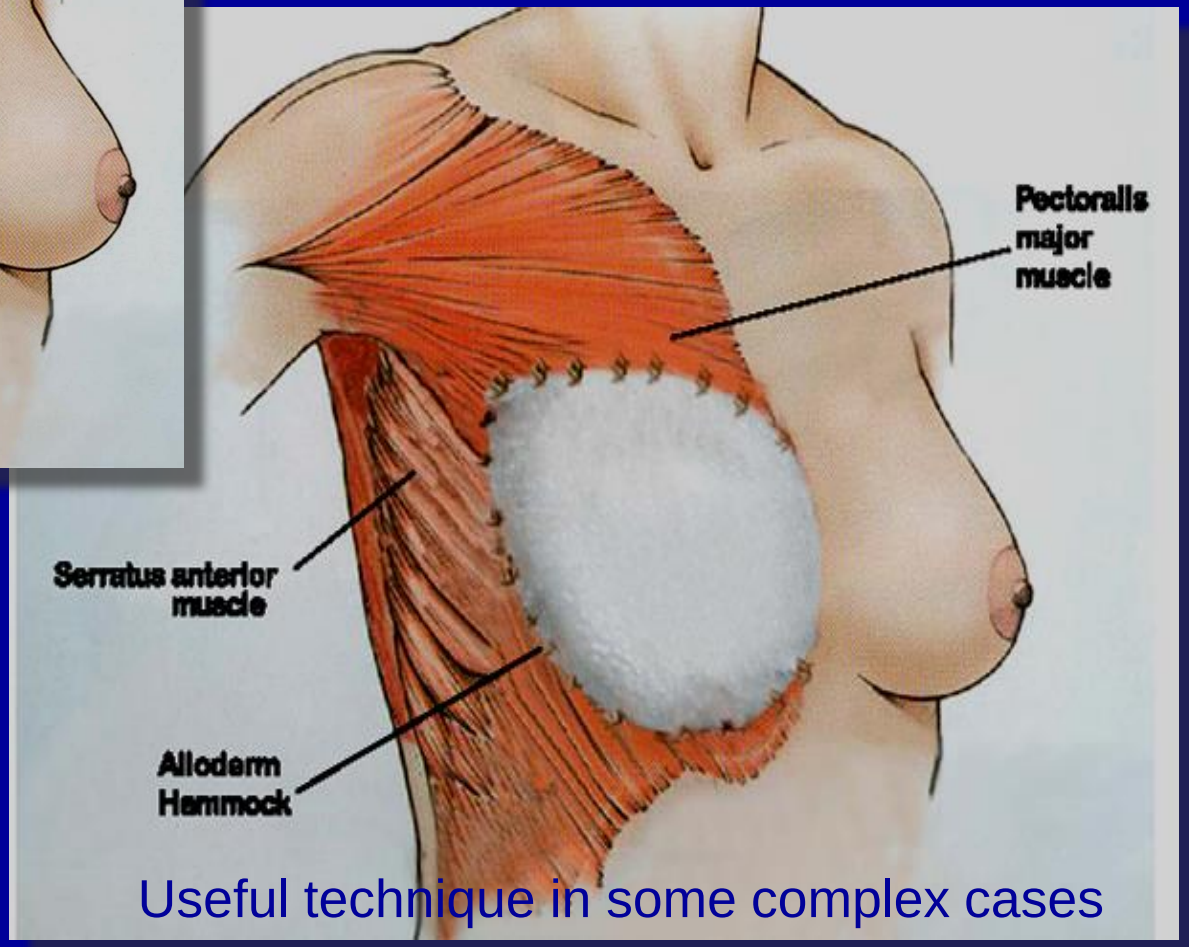
LifeCell
A KCI Company

Acelluar Dermal Matrix Implant recon



Subpectoral ADM Implant
Reconstruction 2008-current

Total Pre pectoral cover
Most common used technique today
2016 to current



Useful technique in some complex cases

Implants

Benefits

- Relatively ‘simple’
- Small scars, no donor site scars
- Reversible and replaceable
- Short anaesthesia and recovery period

Problems

- Engineering/prosthetic limitations/deflation
- Foreign body/infection
- Capsule formation
- Limited projection/ptosis
- Poor Inframammary fold
- BIA-ALCL a rare cancer
- 1 in 5000 cases

Skin Necrosis Ultimately leading to loss of implant

Aggressive management even if strattice not exposed. Consider Exchange of Implant for tissue expander with lower initial volume with skin debridement

There is no clear consensus on the ideal biologic or synthetic mesh.

Specific points for discussion are.

- The origin of the specific mesh should be discussed.
- Whether the mesh remains permanently or is expected to be absorbed.
- Patients should be informed of local and global experience with the mesh used including uncertainty regarding long term outcome.
- Knowledge and acceptance that the reconstruction involves a breast implant.
- Patients should be aware that revisional surgery is frequent in the early stages following reconstruction.
- That a drain may be left in-situ for up to two weeks.

Patients need to be aware of the risks of complications, local and personal complication rates. Complications are common in implant only mesh assisted or dermal sling procedures. By 3 months national rates are [68].

- Readmission – 18%.
- Infection – 25%.
- Reoperation – 18%.
- Implant loss – 9%.

ARTICLE IN PRESS

European Journal of Surgical Oncology xxx (xxxx) xxx

Contents lists available at ScienceDirect

European Journal of Surgical Oncology

journal homepage: www.ejso.com

Oncoplastic breast surgery: A guide to good practice

A. Gilmour [a], R. Cutress [b], A. Gandhi [c], D. Harcourt [d], K. Little [e], J. Mansell [f], J. Murphy [g], E. Pennery [h], R. Tillett [i], R. Vidya [j], L. Martin [e, *]

[a] Canniesburn Plastic Surgery Unit, Glasgow Royal Infirmary, United Kingdom
[b] University of Southampton and University Hospital Southampton, United Kingdom
[c] Manchester Academic Health Sciences Centre & Manchester University Hospitals NHS Trust, Manchester, United Kingdom
[d] Centre for Appearance Research, University of the West of England, Bristol, United Kingdom
[e] Liverpool Breast Unit, Liverpool University Foundation Trust, United Kingdom
[f] Gartnavel General Hospital, Glasgow, United Kingdom
[g] Manchester University Hospitals NHS Trust, United Kingdom
[h] Breast Cancer Now, United Kingdom
[i] Royal Devon and Exeter NHS Trust, Exeter, United Kingdom
[j] The Royal Wolverhampton NHS Trust, Wolverhampton, United Kingdom

Latissimus dorsi flaps

- Large volume
- Autogenous fat layer
- Weight & ptosis
- Flap viability
- Variable skin shape/size
- Acceptability with implants
- Bicipital groove tendon division

4 stage Procedure

1

2

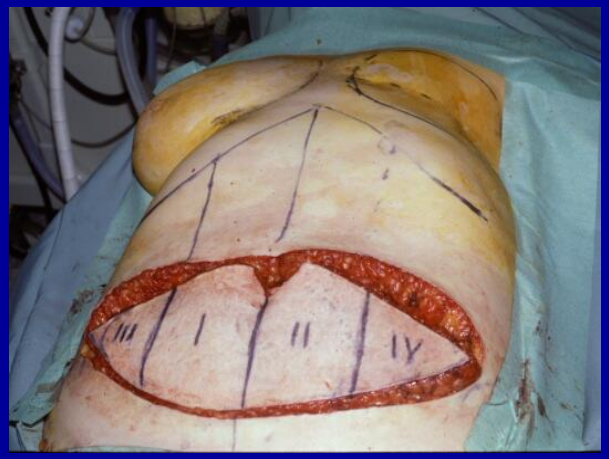
3

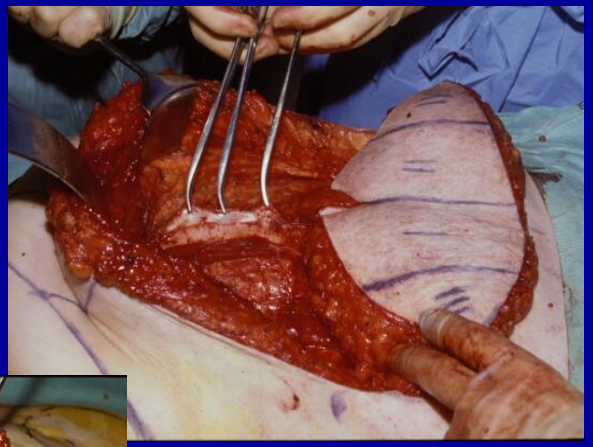
4

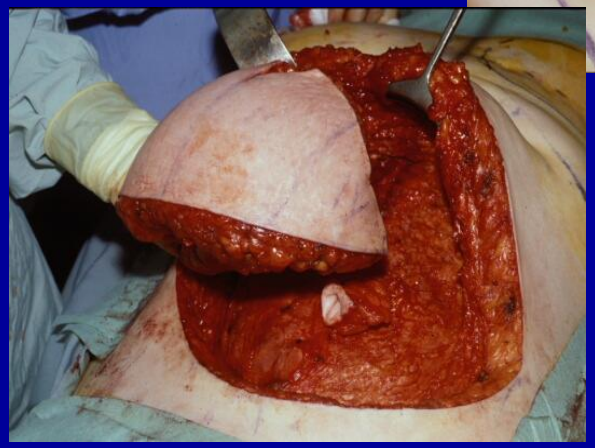
LD flap complications

- Poor back scar
- Shoulder dysfunction
- Shrinkage, retraction
- Back seroma
- Implant problems if used
- Longer recovery / time off work

DIEP flap







DIEP flaps

- Benefits
  - Weight, warmth, volume, movement, ‘natural’
- Problems
  - Intense peri and postoperative care
  - Abdominal complications
  - Flap complications
  - Long scar

TRAM complications

- Ischaemia and flap failure
- Fat necrosis
- Poor planning
- Abdominal hernia
- Loss of sensation in abdomen

40 % of women treated for Breast Cancer require mastectomy

But most can have both an

oncological and cosmetically good outcome..

Rick Linforth

CONSULTANT BREAST SURGEON

Medico-legal Expert
email:rick@ricklinforth.com

RICK LINFORTH
CONSULTANT BREAST SURGEON

Select Language

GODADDY VERIFIED & SECURED VERIFY SECURITY

Home | About Us | Breast Services | Medicolegal Reports | Breast Check | Breast Information

Mr Rick Linforth Medico-legal Expert in Breast Cancer

BOND SOLON Wilmington Professional

TOP RANKED Chambers LITIGATION SUPPORT 2019 Bond Solon

CARDIFF UNIVERSITY BOND SOLON CIVIL Expert Certificate

UK Register of Expert Witnesses
Mr Richard Anthony Linforth
See my entry at www.jspubs.com

Expert Witness Established 1996

Medical Expert in Breast Surgery and Oncology, Breast Cancer Treatment.
Medico-legal reports on Breach of Duty, Causation, Condition and Prognosis, Delayed diagnosis, Tumour Doubling Times, Informed Consent-Montgomery compliance.

LAWYER MONTHLY Expert Witness Awards 2021 WINNER

Click here for Expert Witness Profile.pdf

UK Register of Expert Witnesses REGISTERED 2022

2023 EXPERT WITNESS

www.ricklinforth.com

Thank you for listening