Breast Service of the Future

Mr Stuart Robertson
MD FRCS
Consultant Breast Surgeon
National Oncoplastic Fellow
HEEWM Regional Education Lead
Clinical Lecturer University of Warwick
stuart.robertson@uhcw.nhs.uk

GenesisCare

Warwickshire Breast Clinic

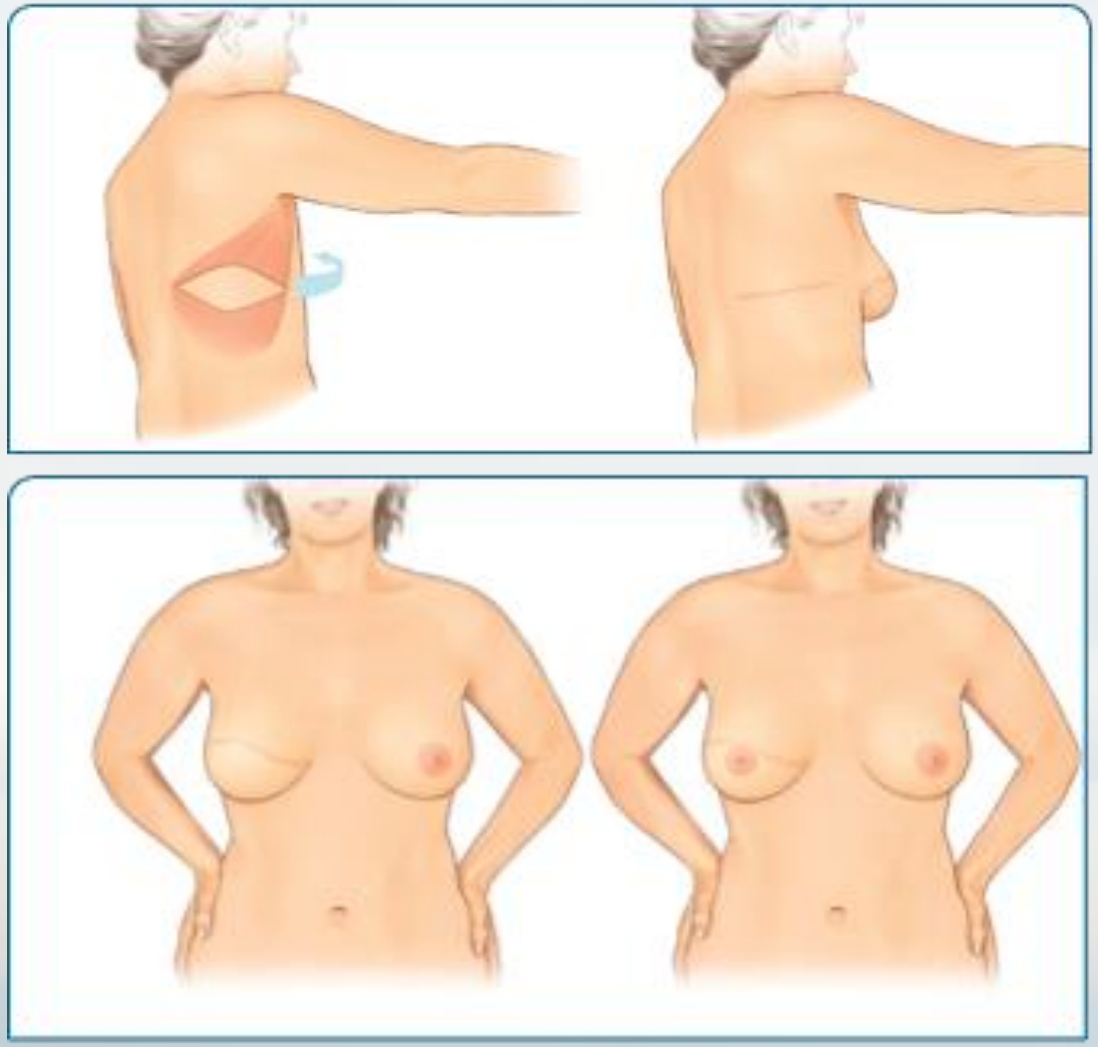
- Mr Stuart Robertson and Dr Penny Kechagioglou
- Private breast clinics at Warwickshire Nuffield Hospital and BMI Meriden Hospital
- Multidisciplinary Team
- Rapid access clinics covering all aspects of breast care
- High quality facilities / High quality care
- More personalised care (shared decision making / patient focussed / more time)
- Oncoplastic Breast Surgery
- Aesthetic Breast Surgery

Warwickshire Breast Clinic

Oncoplastic Breast Surgery

- Dual trained in breast general surgery and plastic breast surgery
- National Oncoplastic Fellowship (Royal College of Surgeons)
- Mastectomy and Reconstruction
- Lumpectomy with optimisation of breast appearance
- Fat filling / perforator flaps / breast reduction / mammoplasty / nipple reconstruction / contralateral symmetrisation
- Breast aesthetic surgery (breast reduction / augmentation / breast lift / nipple eversion / gynaecomastia)

Latissimus Dorsi Reconstruction



www.warwickshirebreastclinic.com

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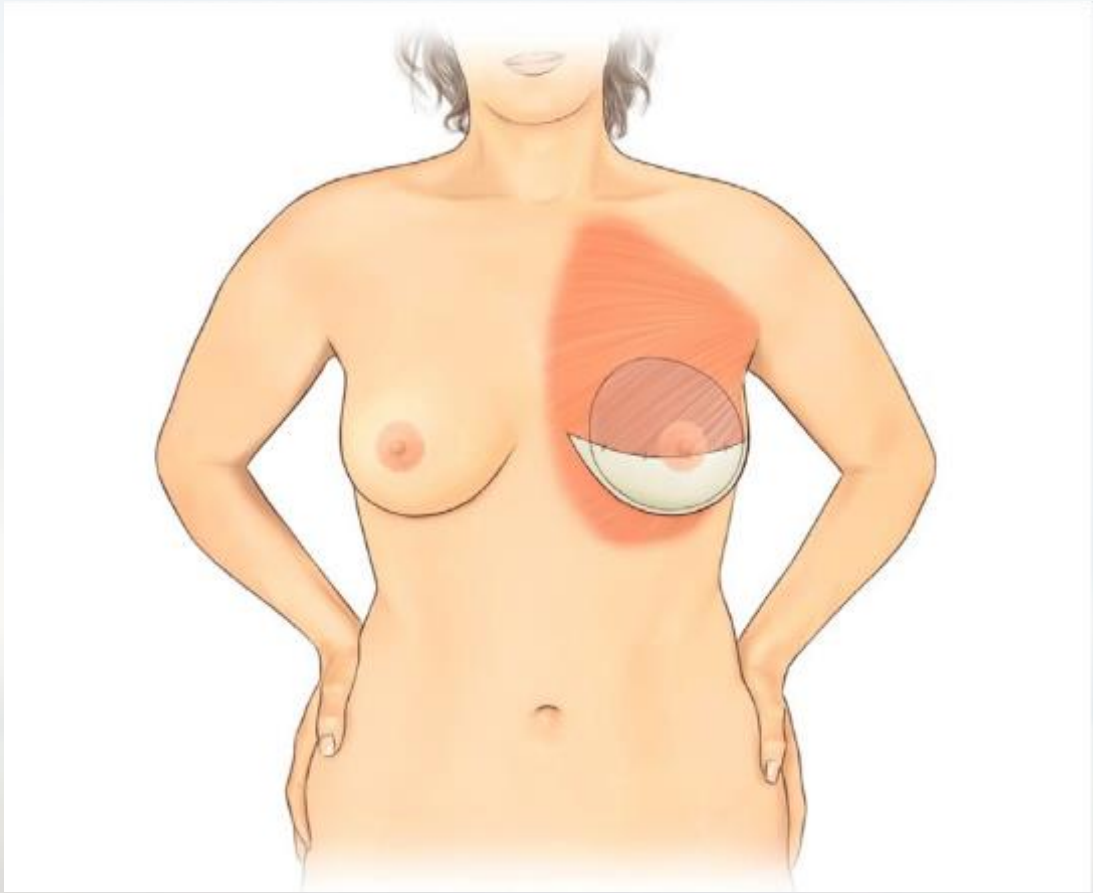
Immediate Implant Reconstruction



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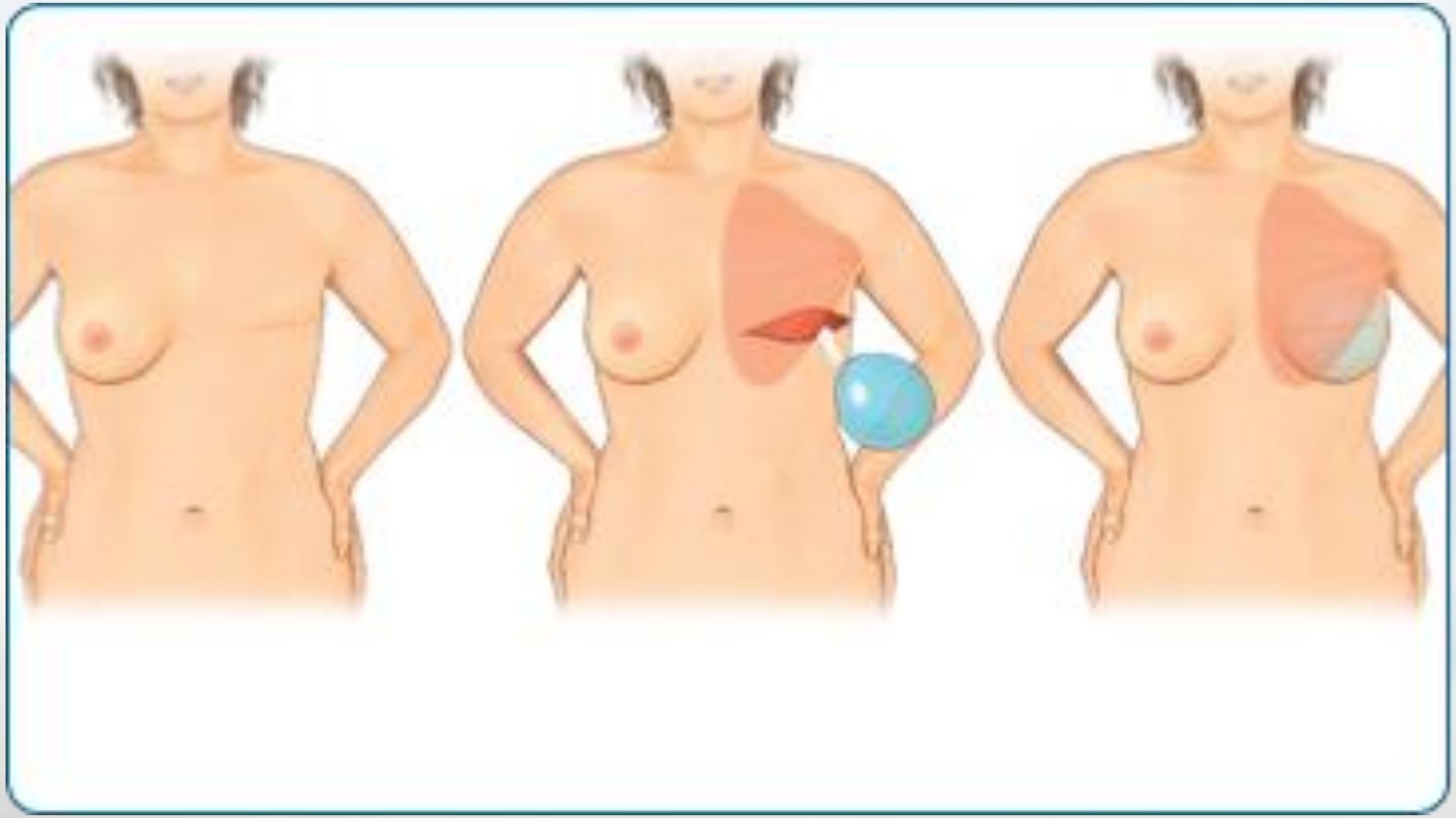
Delayed Implant Reconstruction



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Therapeutic mammoplasty

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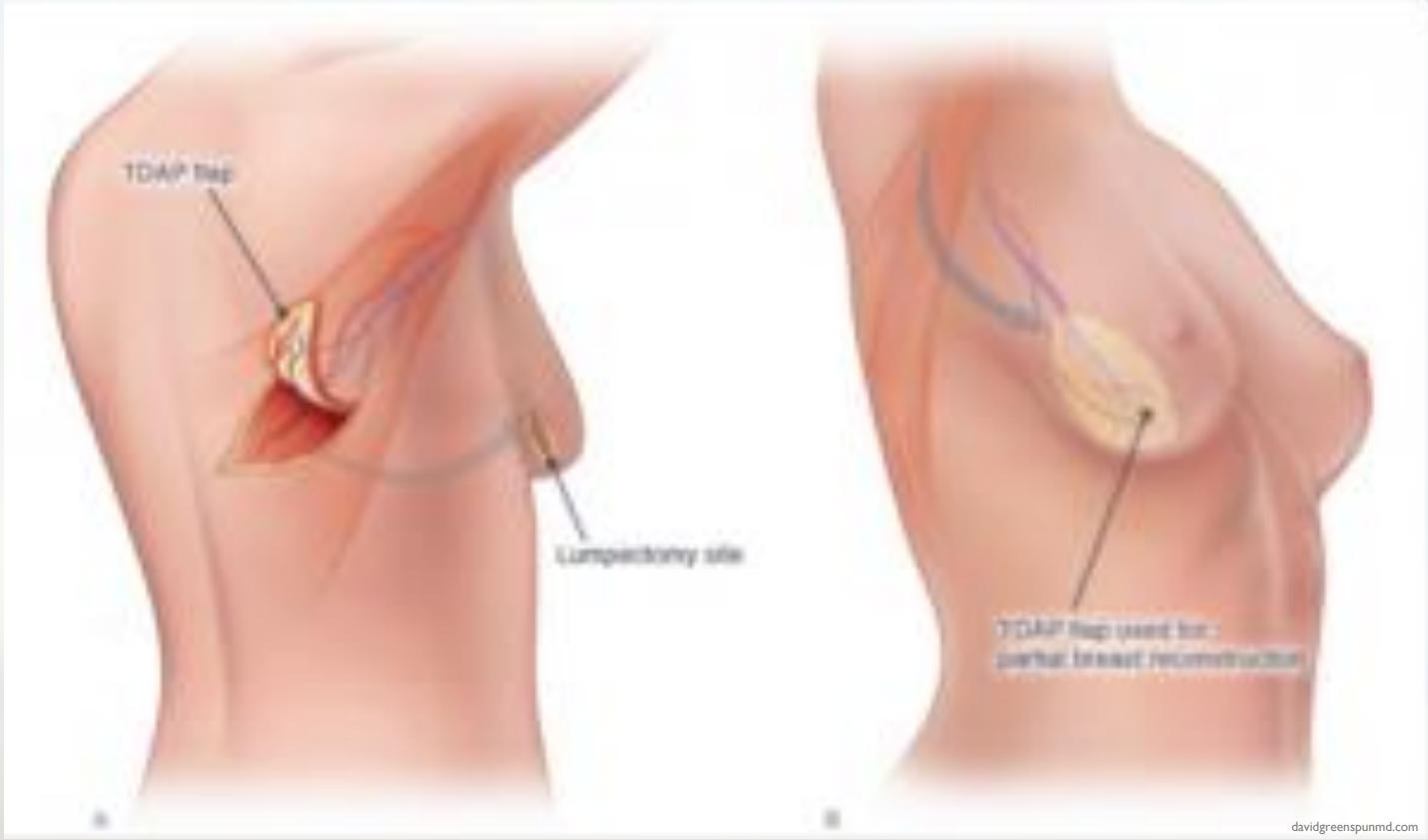
LICAP flaps



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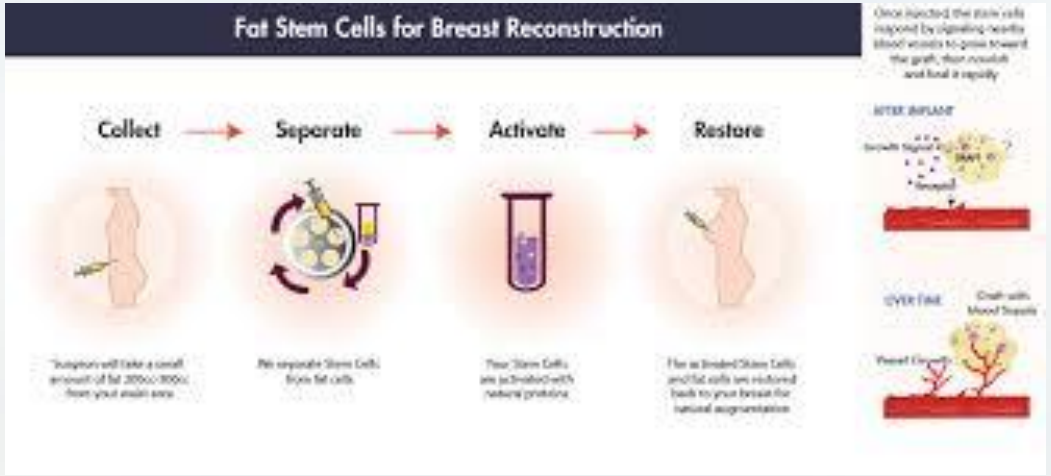
Lipomodelling



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COVID adjustments

- More telecommunication (but still need F2F for full breast assessment)
- Excellent safety measures in clinics and theatres
- Masks / social distancing / hand gel / control waiting room numbers / one way system / cleaning rooms inbetween patients / PPE with visor for examination
- Theatres: shielding pre and post-op, COVID swab pre-op . Full PPE / FFP3/ laminar flow
- Some loss of theatre capacity during height of pandemic - now returning
- Patients who delayed seeking assessment - now coming forward

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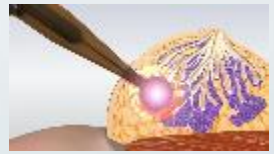
- Less is more
- Maximum tolerable —> minimum effective (continue this journey)
- Best cancer outcomes **and** best quality of life
- More day case surgery / less pain / intraoperative LA blocks
- More breast conservation / less mastectomies (extended indications for BCS)
- Less axillary surgery (less lymphoedema) …Z011 study (USA)…POSNOC trial (UK)
- More neoadjuvant treatment (—>more breast conservation / TLND)
- Magseed (small magnetic localiser clips rather than wires)

Breast Service of the Future

- More oncoplastic techniques (LICAPs, mammoplasties, ?simultaneous lipofilling)
- More immediate implant reconstructions(home next day), pre-pectoral implants (less pain)
- More nipple-preserving mastectomies (selected cases / improved cosmesis / oncologically safe)
- More patient-tailored radiotherapy (Import Low / FastForward / IORT)



- Less diagnostic surgery —> more outpatient diagnostics (eg: needle suction biopsies)
- More research—> role of tumour microenvironment / immune system / immunotherapy

Questions

Breast Service of the Future

Dr Penny Kechagioglou

MBBS, MRCP, FRCR, MPH, MBA

Consultant Clinical Oncologist

Chief Medical Officer GenesisCare

Clinical Lecturer University of Warwick

Penny.Kechagioglou@uhcw.nhs.uk

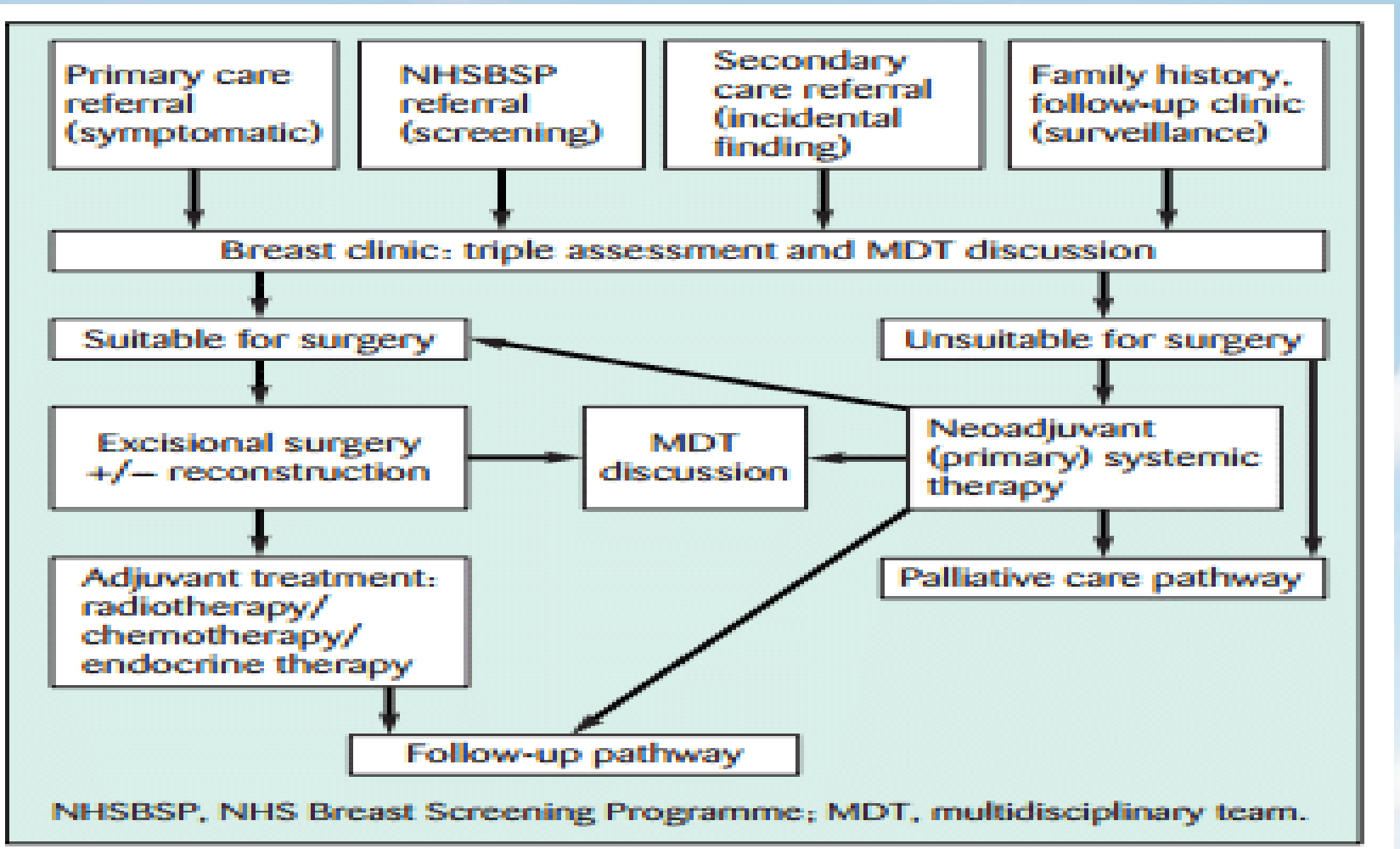
Warwickshire Breast Clinic

- Mr Stuart Robertson and Dr Penny Kechagioglou
- Warwickshire Nuffield Hospital and BMI Meriden Hospital
- Multidisciplinary Team – weekly Cancer MDTs at UHCW
- Chemotherapy Facility (Nuffield) – private rooms, chemo sister, cool cap x2, acute oncology service
- Immunotherapy and targeted agents
- Imaging – CT, MRI, Ultrasound, Mammography, Echo
- Joined surgical and oncology clinics – CNS support
- Lymphoedema support – Myton Hospice
- Breast Surgery

Radiotherapy centre at GenesisCare Little Aston

- Single Linac – SABR and conventional, partial breast RT
- Deep Inspiration Breath Hold (DIBH) radiotherapy
- Surface Guided RT
- Image Guided RT
- Integrative Medicine in collaboration with Penny Brohn UK

Current Breast Cancer Pathways



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Why challenge status quo in Breast Cancer Care

- Variable Radiotherapy treatment access and quality → reduced fractionation (5 from 15) and centralised dosimetry to speed access to treatment
- One size does not fit all → personalised treatments according to genetic and tumor risk factors
- Technique evolution → whole breast to partial breast, conformal to arc therapy to reduce normal tissue toxicity and cover target more accurately
- Right sided as well as left sided DIBH → reduce dose to lungs, heart and liver (COVID-19)
- Patient reported outcome measures → Real World Data
- Multi-disciplinary approach to decision-making, and radiotherapy planning → virtual MDT & peer review
- Integrative Oncology Care – HOPE course, @Yestolife, Exercise medicine, lymphoedema service (Myton Hospice)

Breast Cancer burden is increasing, access to timely Breast Radiotherapy is critical

Clinical Oncology

Original Article

The Effect of Waiting Times for Postoperative Radiotherapy on Outcomes for Women Receiving Partial Mastectomy for Breast Cancer: a Systematic Review and Meta-Analysis

Abstract

Introduction

ScienceDirect

Article original

Impact pronostique du délai d'induction de la radiothérapie adjuvante dans le cancer du sein

Prognosis impact of breast cancer adjuvant radiotherapy delay

Results

Of the 1855 women with an invasive breast cancer, 904 (48.7%) had an adjuvant radiotherapy without chemotherapy.

90 day delay

= Independent factor negatively impacting recurrence free survival HR = 2.12 [1.03–4.36] p = 0.04

70 day delay

= Independent factor negatively impacting Overall survival HR 3.41 [1.005–11.62], p = 0.04

65 day delay

= Independent factor negatively impacting recurrence free survival HR = 2.29 [1.16–4.54], p = 0.02

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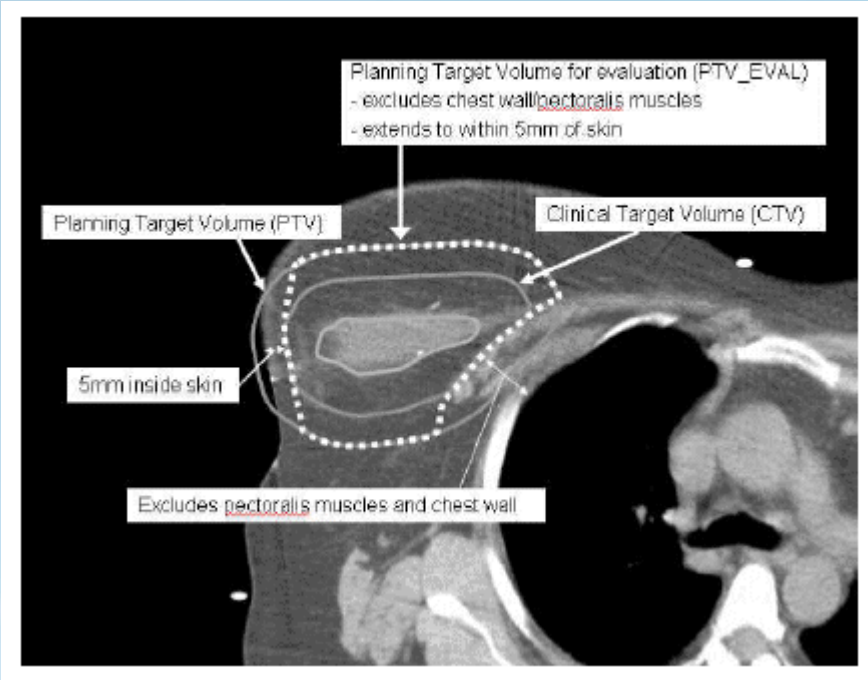
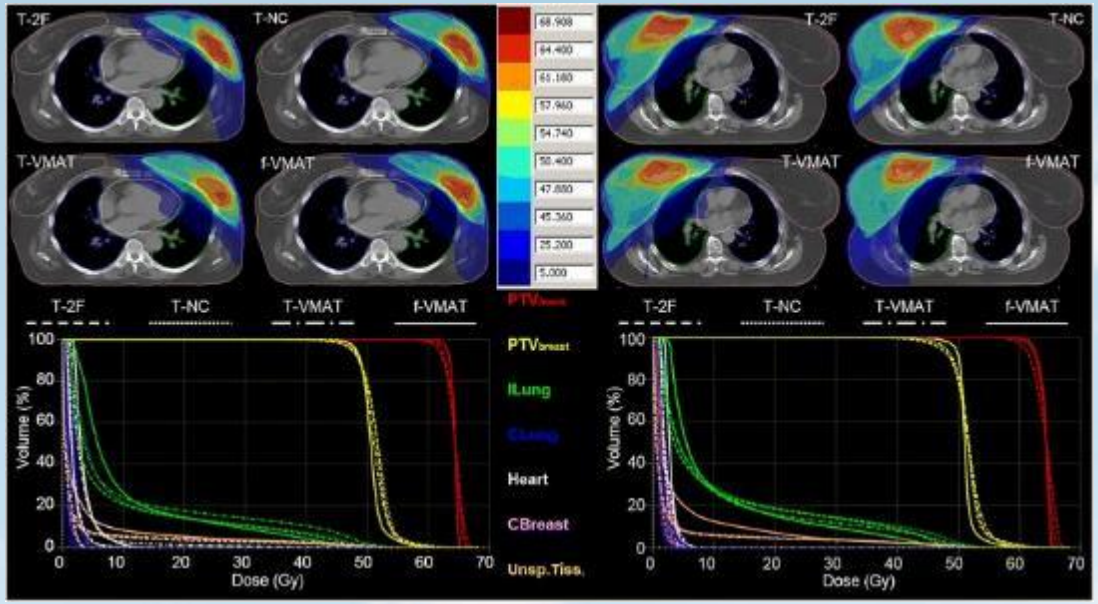
(Accelerated) Partial Breast Radiotherapy

- Adjuvant PBI should be offered to all eligible patients using 40Gy/15# or 26Gy/5# using DIBH ideally.
- UK consensus statement for PBI: to be considered for patients ≥50y, G1-2, ≤3cm, ER+/Her2-, N0, ≥2mm margins (DCIS), ≥1mm margins (invasive).
- APBI 30Gy/5# alternate days (Florence trial 10y data ~ 40Gy/15# conventional RT).
- Patients should be informed of choices.



Simultaneous Integrated Boost Radiotherapy

- Total dose 48Gy/15# to the boost area and 40Gy/15# to the whole breast at the same time.
- The boost area gets a 'hot dose' as this is the area of highest risk for local recurrence.
- Patients eligible for boost: <50y old and/or positive excision margins.
- Shorter treatment times (3 weeks rather than 4+ weeks), well tolerated and better dose distribution than 2-phase treatment.
- Ideally offered with DIBH, SGRT and IGRT.



Aly et al Radiation Oncology (2015) 10:139

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Neoadjuvant radiotherapy in breast cancer

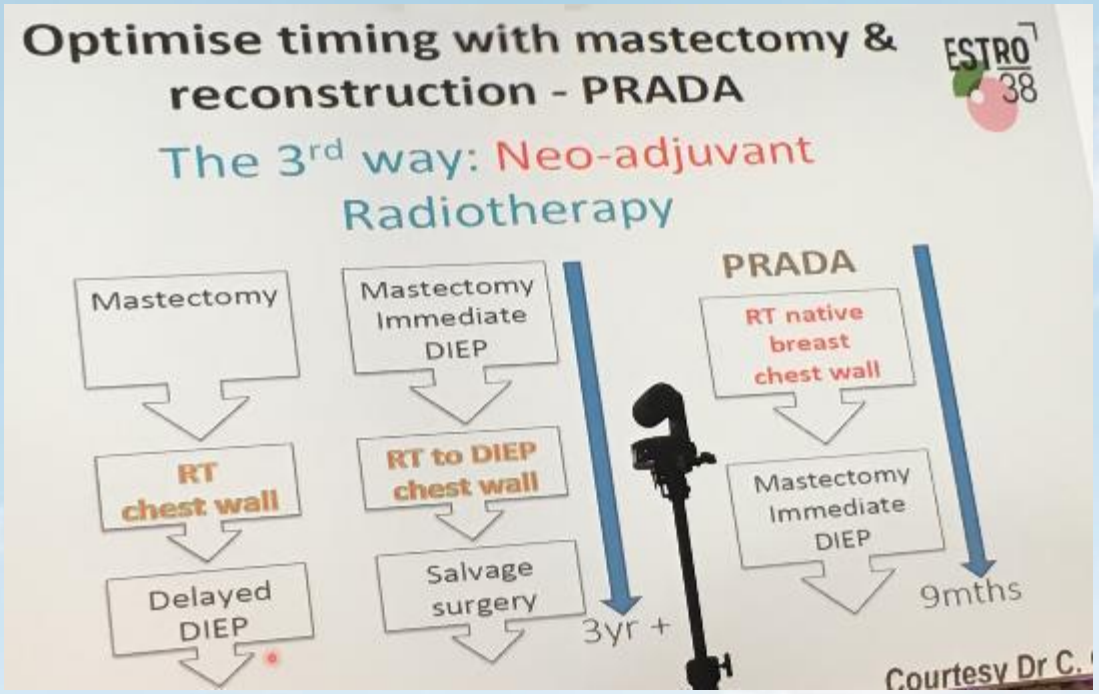
Pre-operative RT in France 1990s - good outcomes: 89% control rate at 25 years

Neoadjuvant concurrent chemo-RT (S14 trial) with surgery 6 weeks later

- 34% cCR, 27% pCR
- Acceptable toxicity

Why revisit pre-op RT?

- Some tumours respond poorly to pre-op systemic therapy
- Easier to delineate tumour volume
- Combinations with novel molecules can be explored
- Downstaging may help breast conservation surgery
- Optimise timing with mastectomy and reconstruction
- Avoid delays to RT from healing problems



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Radiotherapy after breast reconstruction

EBCTCG overview shows RT improves OS

Steady increase in immediate implant reconstruction rates over recent years

Danish trial ongoing immediate vs delayed reconstruction

Complication	Delayed reconstruction (%)	Immediate reconstruction (%)
Mild capsular contracture	30	37
Severe capsular contracture	25	32
Major complications	18	31
Minor complications	49	39
Reconstruction failure	19	20
Successful implant reconstruction	83	80

Reirradiation in breast cancer

Amsterdam experience

For locally recurrent inoperable breast cancer undergoing reirradiation:

Response rate = 80% (often durable 2-3 years)

Ulceration = 40%

Fibrosis = 21%

Recommendations:

Consider reirradiation for patients with macroscopic inoperable disease

Complete resection and low risk = no RT

Complete resection with risk factors = consider reirradiation

Incomplete resection = strongly consider RT

Balance risks vs benefits

Breast Service of the Future – Care Excellence

Diagnosis → Treatment & Wellbeing → Survivorship → Clinical Outcomes

One Stop Breast clinics

Triple Assessment

Breast cancer MDT, Key worker or Breast CNS, personalised treatment pathway, Integrative Oncology

Surgery & recon, Genetic and Genomic testing, Exercise & nutrition plan, Cardiology monitoring, Well-being therapies, Lymphoedema support, chemo & RT

Advanced radiotherapy techniques, Patient reported outcomes and experience data (RWD)

Personalised surveillance & survivorship including health Promotion program

Consider patient enrolment into registries and clinical trials

Breast Cancer Care during Pandemic

Warwickshire Breast Clinic

COVID adjustments

- Telemedicine and Virtual clinics
- Genomic testing to choose patient for adjuvant chemotherapy
- Bridging endocrine therapy for low risk ER+ patients who can have delayed surgery
- Hypofractionated radiotherapy to reduce hospital footfall
- DIBH access crucial to reduce dose to heart and lungs
- Risks & Benefits of treatment 'first do not do harm'
- Treat the +ve well patients end of day with careful monitoring for complications

New Radiotherapy protocols and processes – COVID 19

- Centralised radiotherapy planning and dosimetry
- Hypofractionated radiotherapy regimens
- Whole breast or prostate RT in 5 sessions instead of 15 and 20 respectively
- Rectal cancer RT in 5 sessions and delay surgery for up to 12 weeks
- Neoadjuvant radiotherapy (breast, sarcoma, rectum, upper GI)
- Definitive radiotherapy for head/neck, bladder and cervical cancer
- Stereotactic radiotherapy and radiosurgery

Live Questions on patient surveillance

- **Case 1**

36y old patient with Her2+ breast cancer presents 6m after Herceptin completion with headaches to your clinic. What do you do?

Choose one Answer:

- Send her home with analgesics, likely migraine
- Refer her for an urgent MRI scan of head and make an urgent referral to her oncologist
- Refer her back to her breast surgeon

- **Case 2**

54y old lady with past ER+ breast cancer presents to your clinic c/o ipsilateral breast pain but no lump felt. What do you do?

Choose one Answer:

- Do nothing, she has a mammogram due in 3 months
- Refer her back to her oncologist as it's likely Tamoxifen induced breast pain
- Refer her back to her breast surgeon for a clinical exam and further tests

Questions