



PUBLIC FORUM

THE NATIONAL BEATING CANCER PLAN - BUILDING A BARRIER AGAINST THE DISEASE

www.ecpc.oncobg.info

24-th of November 2023, Sofia



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WITH THE SUPPORT OF:



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Battling the Backlog in Breast Cancer:

Innovative Approaches in the NHS for Streamlining Patient Management

Dr Hemmel Amrania PhD

Clinical Innovation Fellow

NHS England

Clinical Research Fellow Imperial College London



European Cancer
Patient Coalition

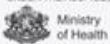


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cancer and Friends (Bulgaria)
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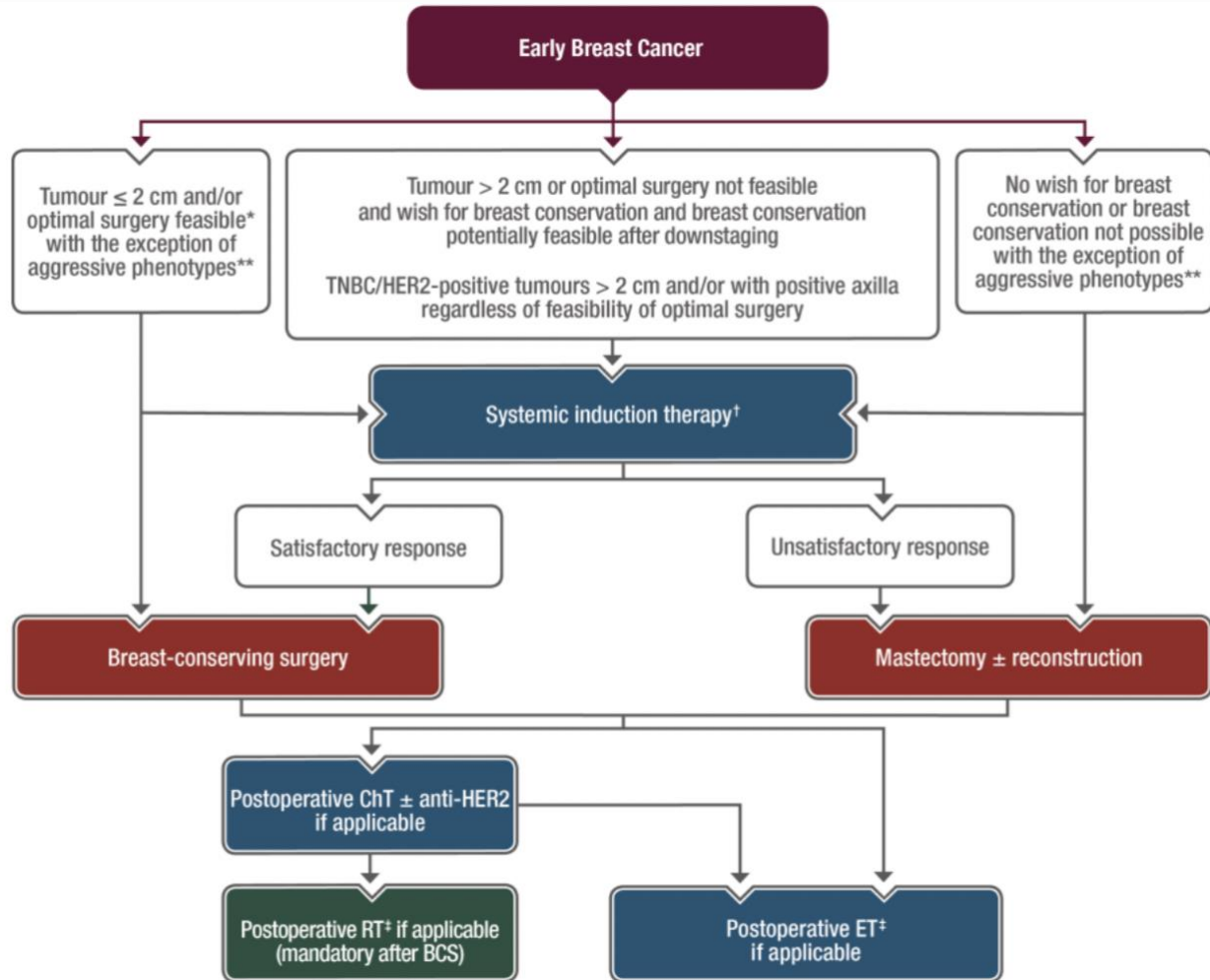
NVA

Current Landscape

- BC accounts for nearly 30% of all female cancer diagnoses.
- **Early detection** and **prompt treatment** are crucial for improving breast cancer survival rates.
- The UK's (BSP) - vital role in early detection by offering regular mammograms to women aged 50-70 years.
- Despite effectiveness of BSP still challenges in breast cancer patient screening and management.



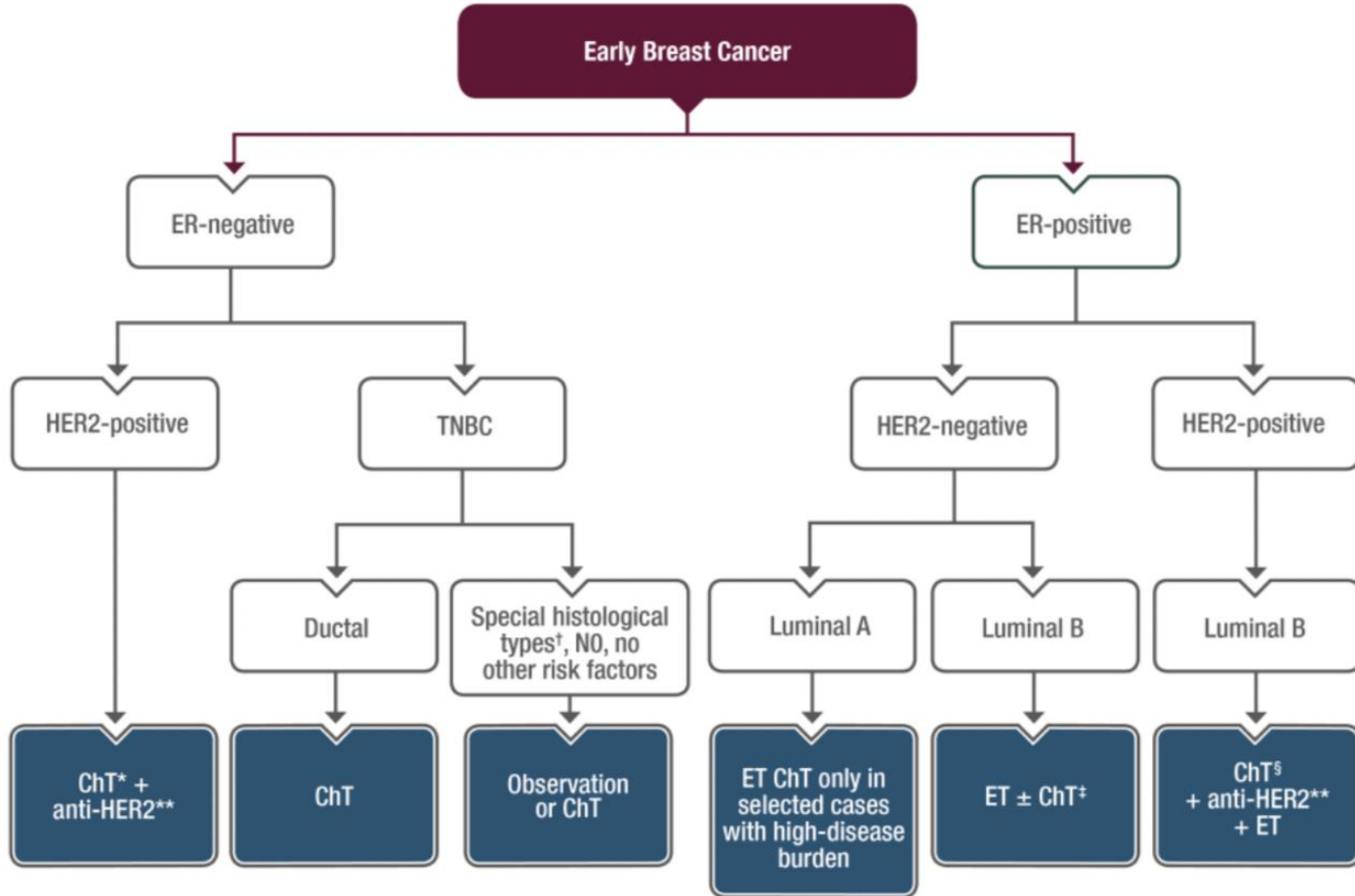
Adjuvant Therapy Guidance (ESMO)



- Highly stratified treatment protocols WRT to other cancer types
- Critically dependent on diagnostic outcomes



Neo-Adjuvant Therapy Guidance (ESMO)



- Patient outcomes heavily dependent on speed
- Challenging to navigate pathway efficiently



UK's BC Management Problems Post Covid

Delayed diagnosis and treatment	15% increase in waiting times for diagnosis, 10% decrease in survival rates
Backlogs in care	20% increase in waiting times for appointments, 30% increase in waiting times for surgery
Increased anxiety and uncertainty	50% increase in reported anxiety and depression among breast cancer patients
Disparities in access to care	20% increase in disparities in breast cancer outcomes
Workforce shortages	10% increase in vacancies for breast cancer specialists

The Core20Plus5 Program

REDUCING HEALTHCARE INEQUALITIES



The Core20PLUS5 approach is designed to support Integrated Care Systems to drive targeted action in healthcare inequalities improvement

CORE20
The most deprived 20% of the national population as identified by the Index of Multiple Deprivation



PLUS
ICS-chosen population groups experiencing poorer-than-average health access, experience and/or outcomes, who may not be captured within the Core20 alone and would benefit from a tailored healthcare approach e.g. inclusion health groups



Target population

CORE20 PLUS 5

Key clinical areas of health inequalities

1



MATERNITY
ensuring continuity of care for women from Black, Asian and minority ethnic communities and from the most deprived groups

2



SEVERE MENTAL ILLNESS (SMI)
ensure annual Physical Health Checks for people with SMI to at least, nationally set targets

3



CHRONIC RESPIRATORY DISEASE
a clear focus on Chronic Obstructive Pulmonary Disease (COPD), driving up uptake of Covid, Flu and Pneumonia vaccines to reduce infective exacerbations and emergency hospital admissions due to those exacerbations

4



EARLY CANCER DIAGNOSIS
75% of cases diagnosed at stage 1 or 2 by 2028

5



HYPERTENSION CASE-FINDING
and optimal management and lipid optimal management



- Targeting the 20% most deprived population
- 75% Stage 1 BC by 2030

High Impact Areas for Improvement

Mammograms - 1 in 3 women do not show up to screenings

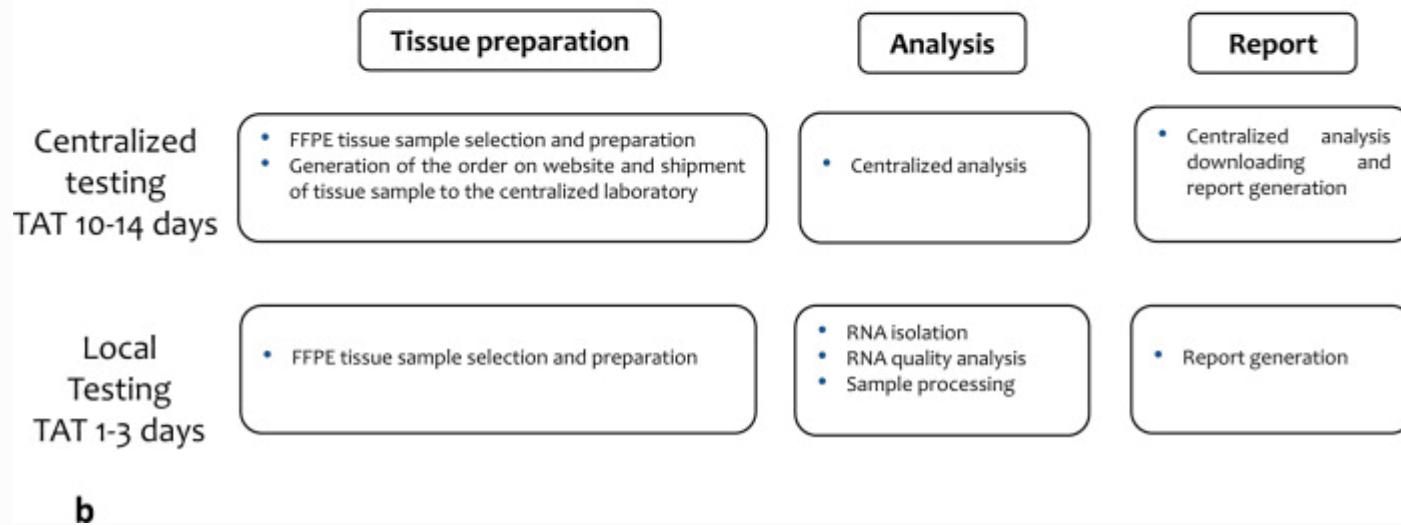
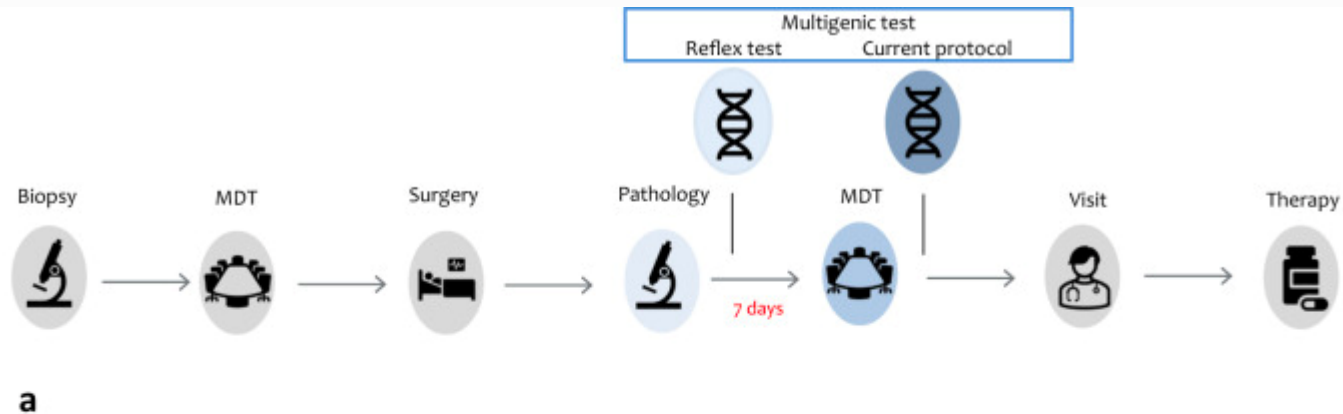
Radiologists unable to attend to complicated cases due to workload

BAME patients 3X more likely to have Triple negative BC

HR+ BC, BAME patients dangerously underscored with genomic risk profiling tests



High Impact Improvement Post Surgery



Innovative Solutions Trialed by the NHS

AI Assisted Screening - Imperial College Study

RWD - detects 13% more BC cases than human radiologists


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Prospective implementation of AI-assisted screen reading to improve early detection of breast cancer

[Annie Y. Ng](#) , [Cary J. G. Oberije](#), [Éva Ambrózay](#), [Endre Szabó](#), [Orsolya Serfőző](#), [Edit Karpati](#), [Georgia Fox](#), [Ben Glocker](#), [Elizabeth A. Morris](#), [Gábor Forrai](#) & [Peter D. Keckemethy](#)

[Nature Medicine](#) (2023) | [Cite this article](#)

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Bottleneck in Precision Medicine is Diagnostics

27% BC PATIENTS DEATHS - CHEMOTHERAPY OVERTREATMENT 2009 - UK

- Current diagnostic tests cost \$4000 each
- 95% BC patients cannot access lifesaving diagnostics
- **Current treatment decisions delayed by up to 8 weeks**
- **30 day delay = 13% mortality risk**



Harold J. Burstein, MD, PhD | Boston MA

Finally, molecular profiling will only be classed as truly useful when it is available and affordable all over the world. There are genuine concerns that as the diagnostic testing costs rise, along with increasing medication prices, more disparities will be evident in terms of who can access cutting-edge technologies and treatments. As time goes by, the platforms for these technologies should become less expensive, in the same way that the overall price for genome sequencing has come down, and there may be similar kinds of scale incentives to offer testing at a lower price in the future.

There is no doubt that molecular profiling has its uses, but I do not think it has realised its full potential yet across all breast cancer settings.



Clinicopathological Assessment of BC

- Subjectivity in grading leads to overtreatment of chemotherapy
- 2003 - Genomic risk profiling heralded as the solution
- Only 1 / 70 genes in Mammaprint (SCUBE2) appears in Oncotype gene panel
- **Comparatively <40% of BC tumours were classified similarly by genomic tests***
 - **There is still room for subjectivity in the vast parameter space of genomics**
- Gene expression is measured with RNA transcription
 - RNA expression level - inherent variability among patients
 - Leads to incorrect subgrouping of patient by risk**



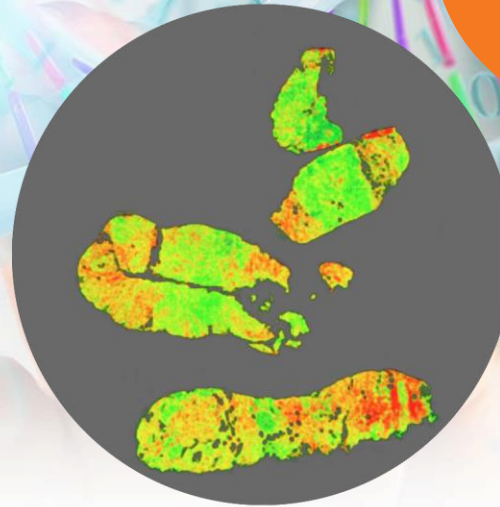
Clinicopathological Assessment of BC

PRECISION ANALYSIS OF TUMOUR MARKERS

Tissue scan captures a unique spectral signature of the tumor to enable:

- Quantitative Mapping of Chemical Moieties - AI Based Approach
- Precise & Accurate Measurement of Aneuploidy*

✓
>10,000
data points
analysed



* *Amrania et al Converg. Sci. Oncol. 2018*

Patent: WO2016174441A1

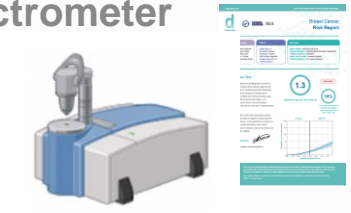


Rapid Software Based Biopsy Analysis

30 DAY DELAY = 13% PATIENT MORTALITY



Spectrometer



Rapid Treatment Decision

\$1k


Current Process



\$4-6k/ test



Superior Accessibility & Speed

	oncotype dx[®] Breast Recurrence Score (seves 80% of eligible patients globally)	 digistain
Accuracy	>95%	>95%
Speed	2- 8 Weeks	15 mins
Accessibility	~\$4-6k per test	<\$1k per test
Complexity	Central Lab (Shipping Required)	Point of Care (Software)



Immediate Impact on UK NHS

Independent Government Commissioned Study

Health Economic Impact

- >€300Mn savings in UK (>€1B Europe)
- 1266 Life Years saved

Environmental Impact

- 460-850K CO₂ savings



Concluding Remarks

- Overcoming challenges in BC screening and management requires a comprehensive and multifaceted approach.
- The UK's strategic approach:
 - a. increasing breast screening uptake,
 - b. improving diagnostic accuracy,
 - c. developing personalized risk assessment tools,
 - d. addressing disparities in access and outcomes
 - e. advancing research in breast cancer treatment.



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Thank you for your attention!

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ASSOCIATION OF THE RESEARCH-BASED
PHARMACEUTICAL MANUFACTURERS IN BULGARIA
Innovative Solutions for the Bulgarian Patient



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