



# Partnership with the NHS Biobanking and Breast Cancer Research

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# Tissue Banking and Breast Cancer Research

- Trials
- Opportunistic
- The future

# Patient Recruitment

- Patients recruited from 381 centres in 21 countries
- Patients recruited between July 1996 and March 2000
- 9366 patients entered the trial
  - Anastrozole n=3125
  - Tamoxifen n=3116
  - Combination n=3125

The logo for the ATAC trial, consisting of the letters "ATAC" in a white, sans-serif font inside a rounded rectangular border. A small white circle is positioned at the bottom center of the border, with a thin white line extending upwards from it to the letter "A".

ATAC

# Patient Characteristics

|                              | Anastrozole<br>(n=3125) | Tamoxifen<br>(n=3116) | Combination<br>(n=3125) |
|------------------------------|-------------------------|-----------------------|-------------------------|
| Mean age (years)             | 64.1                    | 64.1                  | 64.3                    |
| Mean weight (kg)             | 70.8                    | 71.1                  | 71.3                    |
| <b>Receptor status (%)</b>   |                         |                       |                         |
| Positive                     | 83.7                    | 83.3                  | 84.0                    |
| Negative                     | 7.4                     | 8.0                   | 6.9                     |
| Other                        | 8.9                     | 8.7                   | 9.1                     |
| <b>Primary treatment (%)</b> |                         |                       |                         |
| Mastectomy                   | 47.8                    | 47.3                  | 48.1                    |
| Axillary surgery             | 95.5                    | 95.7                  | 95.2                    |
| Radiotherapy                 | 63.3                    | 62.5                  | 62.0                    |
| Chemotherapy                 | 22.3                    | 20.8                  | 20.8                    |
| Prior tamoxifen              | 1.6                     | 1.7                   | 1.7                     |

# Crude

- Reliant on large numbers of patients
- Lets give them all something and see what happens
- It does look at outcome
- But crude on mechanism
- Slow on development
- 10 years to get not very far

# The Impact Study

## Phase III Trial of Neoadjuvant Anastrozole vs Tamoxifen vs the Combination

Protocol ID: IMPACT  
Accrual: 330 (Closed)



SOURCE: Smith I. Presentation. SABCS, 2003; [Abstract 1](#).

# IMPACT Outcome Measures

- Pre and post treatment biopsies
- Alteration in Ki 67 and Apoptosis
- After three months treatment

# The Power of the Window Study

- What ATAC took ten years to prove in 9000 patients  
IMPACT showed in 3 months in 300
- Dependent on tissue banking



# Breast Cancer



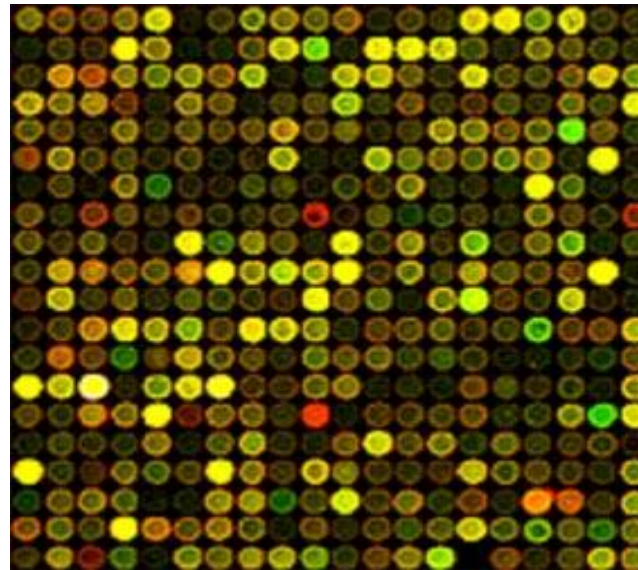
# Breast Cancer



# Individual people with individual cancers



# A Gene Microarray



# The fundamental importance of Tissue and Biobanking

Which pathway?

Currently Recruiting to Window Studies:

AKT Pathway

The oestrogen receptor

The Her 2 receptor

# Metastatic Studies

- Inhibition of the Src- Pathway
- Inhibition of the PI3K Pathway
- Inhibition of the steroid sulphase pathway

# The Future Tissue is King

- The importance of the Chief Investigator
  - The importance of good pathology
  
  - The well characterised
  - Trial tissue bank and dataset
- Answers to specific questions

# Opportunistic Tissue Banking



# Stratified Medicine



# Partnership NHS and Academia



# The NHS



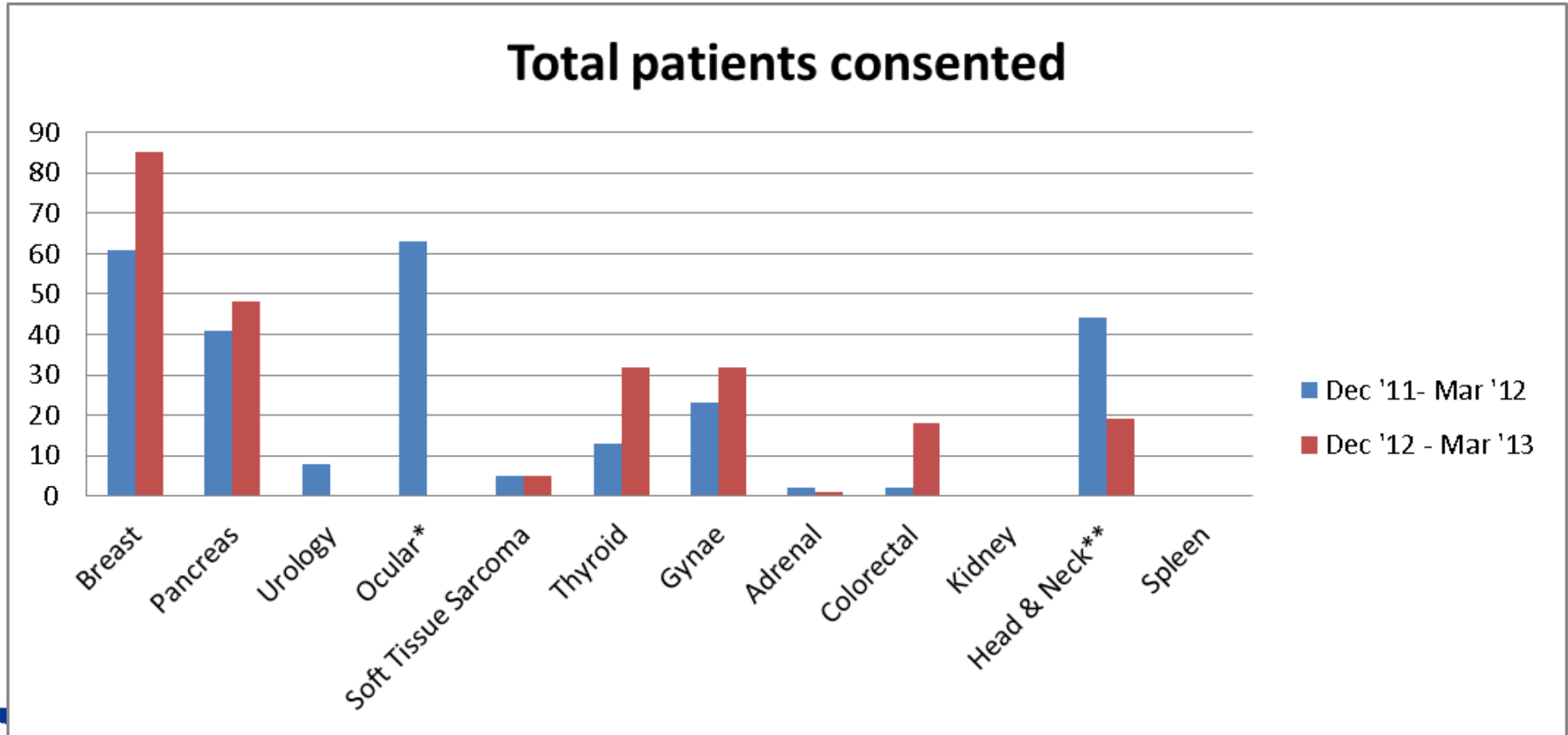
# The NHS

- Consent
- Tissue Collection
- Treatment Data
- Outcome Data

# All too often reluctant partners



# Partnership



# Breast Tissue A Major Resource

- Total of 3709 breast patients consented and access to tissue

# How – The Tissue

- Enthusiasm
- Embedding in to practise
- Preoperative Assessment – Julie Atkinson
- Getting the detail right
- Making sure everyone knows
- Feedback
- Competition!



# The Data

- It is all there, it is discussed at the MDT every week
- Yes but.....
  
- Database
- Somerset
- Clatterbridge Cancer Centre
- Recurrence
- ONS

- The tissue
- The clinical data
- The outcome

# Where Next?

## Specific Tissue Collections

- LTB collects resectional material in excess of that required for diagnosis
- Paired Biopsy Series
  - High Risk Lesions
  - Recurrent Cancer

# Ethical Approval for the Collection of Additional Core Biopsies for Research

- High Risk Lesions
  - Collect a series of biopsies with Atypical Ductal Hyperplasia
  - Who develops cancer and why?

# Ethical Approval for the Collection of Additional Core Biopsies for Research

- Recurrent Cancer
  - Database
  - Biopsy recurrences
    - Important for treatment, is the metastasis the same as the primary?
  - Consent for tissue banking
  - Targeted in radiology and the Breast Unit, can it become the culture?

# The Virtuous Circle

- Good care
- Good research
- The right culture, which values compassion, care, innovation and research
  - Enthusiastic tissue banking
- Improved patient care and experience
  - Lives saved now and in the future

# 10 Year Relative Survival

