



West Midlands  
Cancer Intelligence Unit



breakthrough  
breast cancer 

# **Breast Cancer Clinical Outcome Measures (BCCOM) Project: Pilot Study**

Publication: BCCOM/2

**March 2005**

**Breast Cancer Clinical Outcome Measures (BCCOM) Project: Pilot Study****Contents**

	<b>Page</b>
<b>1. Project Aims</b>	<b>2</b>
<b>2. Date of Current Report</b>	<b>2</b>
<b>3. Project Context</b>	<b>2</b>
<b>4. Aims of the Pilot Study</b>	<b>2</b>
<b>5. Method</b>	<b>3</b>
<b>6. Results of the Pilot Study</b>	<b>3</b>
<b>6.1 Level of participation</b>	
<b>6.2 Case ascertainment</b>	
<b>6.3 Assignment of a surgeon</b>	
<b>6.4 Conclusions</b>	<b>4</b>
<b>7. Difficulties Encountered and Comments Received</b>	<b>4</b>
<b>8. Comparison of Data Completeness and Accuracy Between Cancer Registry and Surgeons Database: West Midlands Data</b>	<b>4</b>
<b>8.1 Case Ascertainment</b>	<b>4</b>
<b>8.2 Data completeness and accuracy</b>	<b>5</b>
<b>8.3 Conclusion</b>	<b>5</b>
<b>9. Next steps of the BCCOM Project</b>	<b>5</b>
<b>9.1 Extention to all surgeon members of ABS at BASO</b>	<b>5</b>
<b>9.2 Clinical outcome analysis</b>	<b>6</b>
<b>10. Key Achievements</b>	<b>6</b>
<b>11. Conference Presentations</b>	<b>6</b>
<b>Appendix 1</b>	
<b><i>BCCOM National Pilot Questionnaire</i></b>	<b>7</b>
<b>Appendix 2</b>	
<b><i>Results of the National Pilot</i></b>	<b>8</b>
<b>Appendix 3</b>	
<b><i>“Decision Tree”</i></b>	
<b><i>Developed to assist in the allocation of a surgeon by the cancer registry</i></b>	<b>10</b>
<b>Appendix 4</b>	
<b><i>Clinical Measures in the West Midlands</i></b>	<b>11</b>
<b>Appendix 5</b>	
<b><i>Dataset for BCCOM 2005 national project</i></b>	<b>12</b>

## **Breast Cancer Clinical Outcome Measures (BCCOM) Project: Pilot Study**

The BCCOM Project is funded by Breakthrough Breast Cancer and administered through the West Midlands Cancer Intelligence Unit (WMCIU).

### **1. Project Aims**

To set up routine methods to support the efficient, effective and confidential collection and analysis of data relating to symptomatic breast cancer patients diagnosed and treated in the United Kingdom (UK). To use the data collected to develop clinical outcomes measures and monitor performance against symptomatic breast cancer treatment guidelines. To compare clinical outcomes for cancers detected through the NHS Breast Screening Programme (NHSBSP) and cancers presenting through the symptomatic service. To use these accurate performance data to evaluate the quality of breast cancer services, identifying examples of good practice and areas for improvement.

### **2. Date of Current Report**

This report covers the period June 2004 to December 2004.

### **3. Project Context**

The annual Association of Breast Surgery at the British Association of Surgical Oncology (ABS at BASO) and the NHSBSP audit of screen detected breast cancer has demonstrated wide variations in the treatment of screen-detected breast cancer across the UK. Since its inception eight years ago, the audit has brought about major changes and improvements in clinical practice.

For the past four years ABS at BASO has also carried out an audit of symptomatic breast cancers. The data have been collected directly from individual breast surgeons (mainly those using the BASO database) and analysed by consultant breast surgeon Mr Ian Monypenny, who is based at the Velindre Hospital NHS Trust in Wales. In 2001/02, only 83 of the breast units in the UK participated in this important audit, and this number fell to 50 breast units (less than 8,000 breast cancers) in 2002/03.

The consensus view of the ABS at BASO is that the current methodology is not working and that, instead of improving, the number of surgeons participating in the audit is decreasing. The Association therefore agreed that an alternative method for collecting these data is required and that the new method should be piloted across the UK to test its effectiveness before being launched nation-wide.

The Breast Cancer Clinical Outcome Measures (BCCOM) Project proposes that the required information could be collected from the regional cancer registries which are mandated to collect details of all cancers diagnosed and treated in their area. These data could then in turn be validated by the surgeons to ensure accuracy and completeness before being returned to the West Midlands Cancer Intelligence Unit for analysis.

### **4. Aims of the Pilot Study**

- To examine the level of registration for cases of symptomatic breast cancers at each cancer registry and their ability to correctly assign cases to the responsible treating consultant surgeon
- To explore whether data obtained from cancer registries can be used to generate clinical outcome measures for symptomatic breast cancers

## 5. Method

- Two consultant breast surgeons working in hospitals located within each of the regional cancer registry catchment areas and who supplied good quality data to the previous attempt at a national symptomatic audit were selected to take part in the pilot.
- Breast cancer cases seen in their breast units between 1 April 2001 and 31 March 2002 were identified by the surgeons (this was the cohort included in the ABS at BASO 2001-2002 symptomatic audit)
- The information summarised in Table 1 of the BCCOM National Pilot Questionnaire (see Appendix 1) was supplied by surgeons to their local cancer registry
- Cohorts of breast cancer cases supplied by surgeons were checked by cancer registries against the cases registered on their cancer registration database
- The information described in Table 2 and Table 3 the BCCOM National Pilot Questionnaire (see Appendix 1) was returned by cancer registries to the surgeons
- Questionnaires were checked by the surgeons to solve any discrepancies between the data held by the surgeons and the cancer registries
- Questionnaires were returned to the West Midlands Cancer Intelligence Unit for analysis.

## 6. Results of the Pilot Study

### 6.1 Level of participation

Of the 21 surgeons who originally agreed to take part in the BCCOM Project, 15 (71%) returned a completed questionnaire. One surgeon withdrew from the pilot due to data collection issues. Data from the other three surgeons were processed by cancer registries but were not received by the WMCIU in time to be included in this report. Finally, two surgeons encountered various technical difficulties and were not able to send the questionnaire to their cancer registry.

### 6.2 Case ascertainment

On average, 89.5% ( $\pm 9.0$ ; median 89.7%) of cases submitted to the national symptomatic audit were registered at the local cancer registry within the stated period. (See Appendix 2; Table A and Figure 1a).

*Outliers:* In two cases, less than 80% of the surgeon's cases were registered at local cancer registry.

- 63.6% of surgeon G1 cases were registered at Welsh cancer registry.

- 78.6% of surgeon J1 cases were registered at Thames cancer registry and data from only one surgeon were received from Thames cancer registry.

The reasons for these results are being investigated.

### 6.3 Assignment of a surgeon

77.3% ( $\pm 20.7$ ; median 81.3%) of the registered tumours were recorded at the local cancer registry under the correct consultant's name. (See Appendix 2; Table A and Figure 1b).

*Outliers:* In four cases, less than 70% of cases were assigned to the correct surgeon:

- The Merseyside and Cheshire Cancer Registry was able to assign correctly 72.6% of surgeon F2's cases but assignment level reached only 25.9% for surgeon F1. Due to the patient referral patterns operating in the geographical area covered, most cases from surgeon F1 were sent to both the Merseyside and Cheshire Cancer Registry and the North Western Cancer Registry. The North Western cancer registry was able to assign correctly 97.5% of surgeon E2's cases but the assignment level was only 62.4% for surgeon F1. In surgeon F1's hospital, patients are not under

the care of an individual consultant surgeon adding to the difficulty for cancer registries to accurately allocate a case to a surgeon.

- In Wales, only 43.4% of surgeon G1's cases were correctly allocated
- In the Thames area, only 64.3% of surgeon J1's cases were correctly allocated

The reasons for these individual results are being investigated with each registry. More generally, the following reasons were given by cancer registries for not being able to always assign the correct surgeon to a case:

- Some cancer registries record one consultant against each treatment episode (surgeon, oncologist etc.) thus several surgeons names can be recorded if the patient had several operations.
- Some cancer registries do not record the investigative procedure. Thus, if the patient did not receive surgical treatment, no consultant name would be recorded on the registry database.
- In the few cases where patients were seen by breast surgeon whilst they were an in-patient under the care of another specialist consultant (e.g. cardiologist) the cancer registry had on record the referring consultant and not the breast surgeon.

#### **6.4 Conclusions**

Generally, the level of case ascertainment was higher than the level of assignment to a surgeon. The information gleaned through the pilot indicated that the proposed methodology is a viable method in gaining data for symptomatic breast cancers.

### **7. Difficulties Encountered and Comments Received**

Most queries received from the participants (clinicians, data managers and cancer registry) were requests for guidance on how to fill in the questionnaire, and for a more detailed definition of each data item. For example, guidance was requested in the case of multiple primaries or bilateral tumours. Similarly, rules were missing for surgeons whose patients are registered at two different cancer registries because of overlapping geographical boundaries (surgeon F1). A log of the different queries and comments received was maintained and has been instrumental in designing the next phase of the BCCOM project.

Following the difficulties encountered by some cancer registries to assign one unique surgeon to each cancer, a 'decision tree' algorithm to help choose a surgeon was designed and used for the national roll out of the project (see Appendix 3). Similarly, guidance on multiple primary and bilateral tumours was included in the next phase.

### **8. Comparison of Data Completeness and Accuracy Between Cancer Registry and Surgeons Database: West Midlands Data**

To explore whether data obtained from cancer registries can be used to generate clinical outcome measures for symptomatic breast cancers West Midlands cancer registration data was compared with the data provided by the selected West Midlands surgeons to the ABS at BASO screening and symptomatic audits.

#### **8.1 Case ascertainment**

4135 primary breast tumours diagnosed in the West Midlands between 1 March 2001 and 31 April 2002 were registered by the West Midlands Cancer Intelligence Unit. Of these 4135 tumours, 834 (20%) were submitted to the ABS at BASO screening audit and 594 (14%) were submitted to the ABS at BASO symptomatic audit. While all of the nine West Midlands breast screening units

contributed to ABS at BASO screening audit, only six of the nineteen breast units treating symptomatic breast cancers submitted data to the symptomatic audit.

Matching ABS at BASO tumour data to cancer registration data allowed the identification of patients with multiple primaries or a recurrence. Of the 616 symptomatic breast cancers submitted to the ABS at BASO audit, 594 (96%) were recorded as primary breast cancers on the cancer registration database. A further 15 were matched to a patient on the database. Of these, 13 were recurrences of primary breast cancers. Clinical outcome measures or survival analysis on these cases will be carried out separately as it is inaccurate to compare outcomes for these patients with patients diagnosed with a primary breast tumour. 95% of the primary breast cancers could be assigned to a unique treating clinician.

## **8.2 Data completeness and accuracy**

For screen detected tumours, the pre-operative diagnosis rate calculated was 91% when based on ABS at BASO data and 87% when based on cancer registration data. Based on cancer registration data, 81% of symptomatic tumours had a pre-operative diagnosis.

Two surgeons were selected (surgeons H1 and H2 in Figure 1 in Appendix 2) for more in-depth comparison of their data recorded on the West Midlands cancer registration database and the data they submitted to the ABS at BASO symptomatic audit.

As shown in Table B (see Appendix 4), the level of agreement between ABS at BASO symptomatic data and the cancer registration database was at least 88% for most of the data items analysed (age, tumour side and grade, invasive and nodal status). Most cases of disagreement found in relation to 'Tumour total size' were due to the different interpretation by the two databases of 'total size' vs. 'invasive size'. The level of recording of ER status on the cancer registration database was particularly low at 36-43%. This is because the West Midlands Cancer Intelligence Unit only started to record 'ER status' for breast cancer in 2002. When patients diagnosed in 2001 were excluded from the analysis, the level of agreement for 'ER status' increased to 56-65%.

## **8.3 Conclusion**

Due to the relatively small number of breast cancer cases submitted to the symptomatic audit, the outcome measures produced by the ABS at BASO 2001/02 audit were based on a small proportion of the total cases of symptomatic breast cancer treated in the West Midlands region. Therefore, they should not be taken as representative of the management of breast cancer in the West Midlands. The pilot study shows that using cancer registration data could improve the completeness of symptomatic breast cancer data.

## **9. Next steps of the BCCOM Project**

### **9.1 Extension to all surgeon members of ABS at BASO**

- In December 2004, cancer registries were sent a list of all ABS at BASO member surgeons within their catchment area and a copy of the BCCOM project data items (See Appendix 5). The data items and definitions were based on those included in the National Cancer Data Set
- In February and March 2005 cancer registries will send to each listed ABS at BASO surgeon details of the cases registered as being under their care during the audit period 1 January 2002 to 31 December 2002
- Surgeons have been asked to check their cases, amend as necessary, sign the data off as being an accurate reflection of activity over the audited time period and return the information without patient identifiers to the West Midlands Cancer Intelligence Unit (WMCIU) with a copy to their local cancer registry

- If surgeons do not have time to check their cases but are willing to allow them to be included in the symptomatic audit, they can be sent to the West Midlands Cancer Intelligence Unit, flagged as 'not checked'

## 9.2 *Clinical outcome analysis*

- The data returned to the WMCIU will be utilised to generate clinical outcome measures including: surgical caseload for each surgeon, pre-operative diagnostic rate, small cancers mastectomy rate, and adherence to nodal management and adjuvant therapy protocols. Preliminary results will be presented at the ABS at BASO conference on the 11 May 2005, with a booklet containing more detailed analyses to follow.
- Comparison of clinical outcome measures between screen-detected and symptomatic breast cancer cases will also be undertaken.
- An evaluation will be undertaken to examine if the data collected can be used to generate the outcome measures required by the Breast National Cancer Audit Support Programme (NCASP) initiative.

## 10. **Key Achievements**

- The West Midlands study has demonstrated the feasibility of using cancer registration data to extract accurate data on symptomatic breast cancers
- The national pilot study has shown that across the country on average 89.5% of breast cancers seen by consultants are registered on the local cancer registry database
- The pilot has promoted contacts and exchanges between breast surgeons/clinical data managers with their local cancer registries

## 11. **Conference Presentations**

“Extending Quality Assurance to all Breast Cancers: The BCCOM Project”  
G. Lawrence; United Kingdom Association of Cancer Registries (UKACR) Conference, London, 29-30 September 2004; Oral presentation

“How can we set up a complete audit of the symptomatic service?”  
G. Lawrence and I. Monypenny; Cancer Services Collaborative, National Breast Leads Meeting, Nottingham, 25 May 2004 ; Oral presentation

## Appendix 1 BCCOM National Pilot Questionnaire

**BREAST UNIT:** \_\_\_\_\_

**LEAD BREAST SURGEON:** \_\_\_\_\_

**Table 1 Information to be sent to the cancer registry by participating breast surgeons for each symptomatic breast cancer case diagnosed between 1<sup>st</sup> April 2001 and 31<sup>st</sup> March 2002**

Patient Name
Address
Full Postcode
Date of Birth
NHS Number (if available)
Invasive Status
Consultant Surgeon
Hospital Number(s)
Name of Hospital of Surgical Treatment (if no surgery, hospital of surgical assessment)
Date of 1 <sup>st</sup> visit to breast unit

**Table 2 Information to be added by the cancer registry against each breast cancer case in Table 1 and returned to the lead breast surgeon**

Is the patient registered?	Yes/No
Is the breast cancer registered?	Yes/No
Is the breast cancer registered with the same invasive status?	Yes/No
Is the breast cancer registered under the name of the same consultant surgeon?	Yes/No
Is the breast cancer registered under the name of a different consultant?	Yes/No
Please supply diagnosis date recorded at the cancer registry.	dd/mm/yy
Please supply the cancer registration number recorded at the cancer registry (to identify the case in future)	local format

**Table 3 Summary table to be returned by the cancer registry to the lead breast surgeon**

1	The number of breast cancers submitted in Table 1 by the breast unit to the cancer registry	
2	The number of breast cancers registered (in any time period)	
2-a	The number of breast cancers registered with diagnosis dates in the period 1 <sup>st</sup> April 2001 – 31 <sup>st</sup> March 2002	
2-b	The number of breast cancers registered with diagnosis dates after 31 <sup>st</sup> March 2002	
2-c	The number of breast cancers registered with diagnosis dates before 1 <sup>st</sup> April 2001	
3	The number of patients registered with other type of cancer (in any time period)	
4	The number of patients not registered with cancer (in any time period)	
5	The number of breast cancers registered under the name of the same consultant surgeon	

Data checks for Table 3:

$$1.=2.+3.+4.$$

$$2.=2-a. + 2-b. + 2-c.$$

**Please return the completed questionnaire to the lead breast surgeon) by 9<sup>th</sup> August.**

**The lead breast surgeon should then forward a copy of the completed questionnaire to the WMCIU by 16<sup>th</sup> August.**

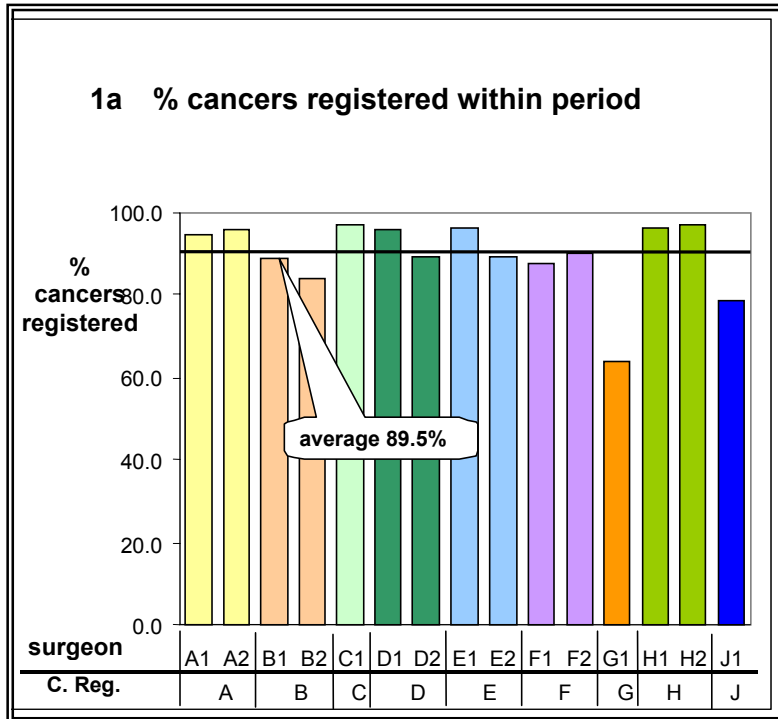
## Appendix 2 Results of the National Pilot

**Table A Case ascertainment of symptomatic breast cancers (SBC) at each cancer registry**

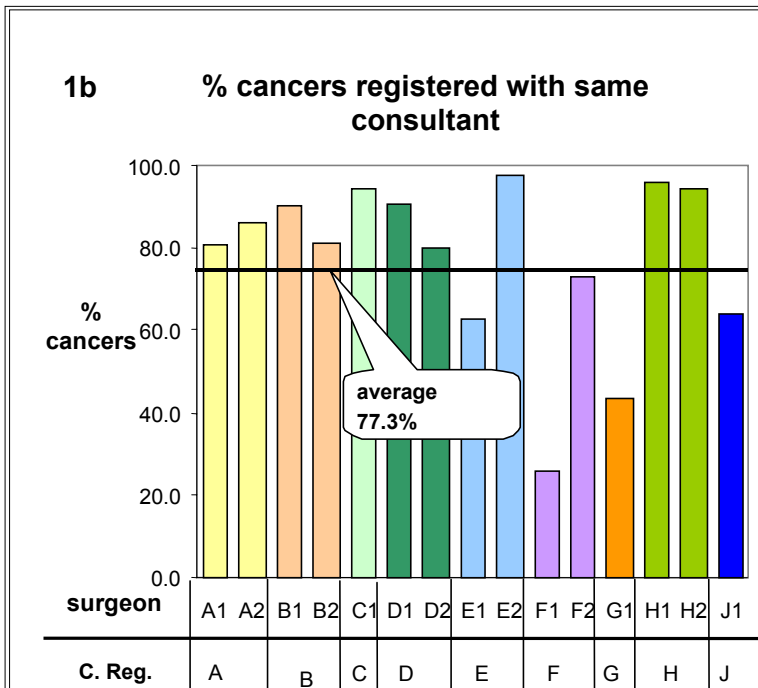
Cancer Registry	Consultant Surgeon	Number of SBC submitted to 2001-2002 Symptomatic Audit	SBC registered within 2001-2002 period (%)	SBC registered with same consultant (%)
A South West CIS	A1	290	<b>94.5</b>	80.3
	A2	112	<b>95.5</b>	<b>85.7</b>
B NYCRIS	B1	195	88.7	<b>90.3</b>
	B2	235	83.8	81.3
C East Anglia	C1	197	<b>97.0</b>	<b>94.4</b>
D Trent	D1	460	<b>95.7</b>	<b>90.9</b>
	D2	231	89.6	80.4
E North Western	E1	149	<b>96.0</b>	<b>62.4</b>
	E2	161	89.4	<b>97.5</b>
F Merseyside & Cheshire	F1	112	87.5	<b>25.9</b>
	F2	234	89.7	72.6
G Wales	G1	258	<b>63.6</b>	<b>43.4</b>
H West Midlands	H1	128	<b>96.1</b>	<b>96.1</b>
	H2	106	<b>97.2</b>	<b>94.3</b>
J Thames	J1	70	<b>78.6</b>	<b>64.3</b>
<b>Average</b> ( $\pm$ SD) Median		<b>196</b> $\pm$ 97 195	<b>89.5%</b>	<b>77.3%</b>
			$\pm$ 9.0	$\pm$ 20.7
			89.7%	81.3%

**In red: results where 'value < average-10'**  
**In green: results where 'value > average + 5'**

**Figure 1 Case ascertainment of symptomatic breast cancers (SBC) at each cancer registry**  
**1a) SBC registered within 2001-2002 period**  
**1b) SBC registered with same consultant**

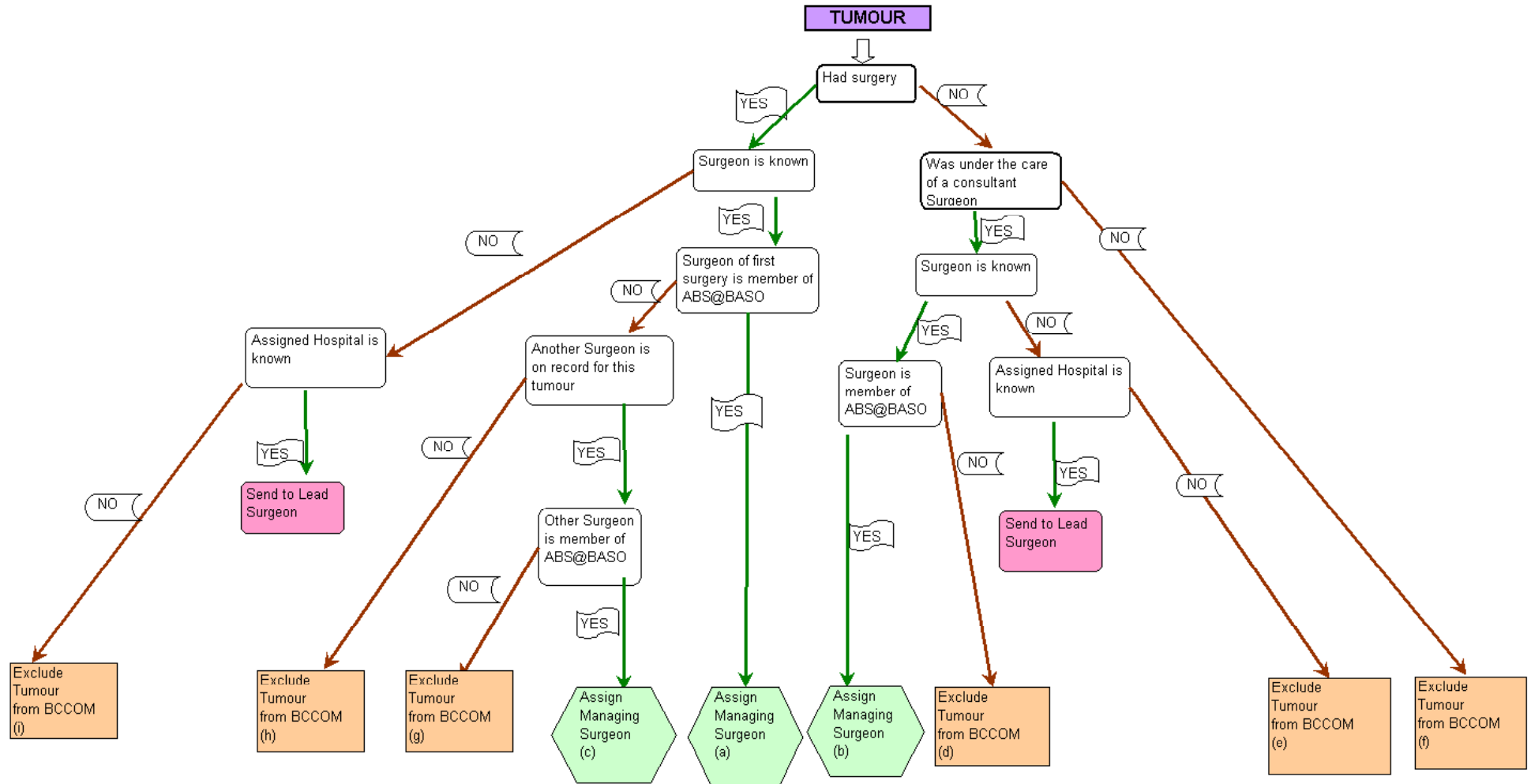


Cancer Registries	
A=	South West CIS
B=	NYCRIS
C=	East Anglia (1/2 missing)
D=	Trent
E=	North Western
F=	Merseyside & Cheshire
G=	Wales (1/2 missing)
H=	West Midlands
J=	Thames (1/2 missing)
K=	Scotland (2/2 missing)
L=	Northern Ireland (1/1 missing)
M=	Oxford (not solicited)



### Appendix 3 “Decision Tree” developed to assist in the allocation of a surgeon by the cancer registry

#### Decision Tree II: Assign a Managing Consultant Surgeon



## Appendix 4 Clinical Measures in the West Midlands

**Table B Comparison of data values held on the West Midlands cancer registration database and the data submitted by surgeons H1 and H2 to the ABS at BASO 2001/02 symptomatic audit database**

Data Item	Level of agreement* between West Midlands cancer registration database and the ABS at BASO audit database	
	Surgeon H1	Surgeon H2
Patient's age band	93.5%	96.1%
Tumour side	99.2%	0% **
Invasive status	100%	93.2%
Tumour total size	89.4%	74.8%
ER status	43.1%***	35.9%***
Nodal status	93.5%	91.3%
Tumour grade	95.1%	88.3%

\* Agreement was defined as 'the same value contained in each database for a specific data item' or 'neither of the database contained any information for this data item'. Data items could be missing from or incorrect on either database.

Level of agreement = (number of cancers where there is agreement x 100)/ total number of cancers registered for surgeon H

\*\* No data submitted to ABS at BASO symptomatic audit by surgeon H2 for this data item

\*\*\* The West Midlands Cancer Intelligence Unit only started recording 'ER status' on their cancer registration database in January 2002

## Appendix 5

### Dataset for BCCOM 2005 national project

#### **BCCOM Project: SYMPTOMATIC primary BREAST CANCERS detected in 2002**

Surgeon GMC code:

Surgeon name:

Surgeon contact  
details

Cancer registry name:

Contact name

At cancer registry

Data Item	Description
Cancer Registry	Name of Cancer Registry
Patient Number	Patient's number at Cancer Registry
Tumour Number	Registration number of the primary breast cancer
Assigned Hospital	Hospital. To assign an Hospital, see 'Decision tree' sheet.
Managing Surgeon Name	Managing consultant surgeon's name. To assign a surgeon, see 'Decision Tree' sheet
Managing Surgeon Code	Managing consultant surgeon's GMC code
Surname	The patient's Surname at time of diagnosis
Sex	The patient's sex
Date of Birth	The patient's date of birth
NHS Number	The patient's unique 10 digit new format NHS Number
Laterality	The laterality of the primary tumour.
Diagnosis date	This field records the date of diagnosis of the tumour. It is required with the date of birth to derive the age at diagnosis
Basis of diagnosis	This field records the eligibility of the tumour for registration based on the best source of information known to the Trust and allows derivation of the degree of certainty of diagnosis. It is therefore an indicator of data quality, with microscopic histological verification being viewed as the 'gold standard' diagnosis.
Pre-operative Diagnosis	Whether the presence of cancer was confirmed histologically or cytologically BEFORE surgery took place. If Cancer Registry has a pathological report on record for this tumour AND if the date of this report is before the date of first surgery, then Pre-operative diagnostic = Yes Otherwise, leave blank for the Managing Surgeon to complete.
Invasive Status	
Histological Tumour Type	The cell type of the tumour. (table 1 on Tumour & Treatment sheet)
Grade of Differentiation Invasive tumour	Qualitative assessment of the differentiation of the tumour expressed as the extent to which a tumour resembles the normal tissue at that site.

Data Item	Description
Grade of Differentiation Non-Invasive Tumour	Qualitative assessment of the differentiation of the tumour expressed as the extent to which a tumour resembles the normal tissue at that site.
Invasive Size	The size (maximum diameter) of the invasive component of the tumour
Whole tumour size	The size of the invasive tumour and any surrounding <i>in situ</i> disease
Vascular or lymphatic invasion	The presence of unequivocal tumour in vascular spaces
Excision Margins	Whether all the excision margins were clear of tumour after the final operation to the breast.
Local/regional nodes examined	The total number of local/regional nodes examined. If several axillary procedures were performed, add the nodes obtained and enter this sum
Local/regional nodes positive	The number of local/regional nodes reported as being positive for the presence of tumour metastases. If several axillary procedures were performed, add the positive nodes obtained and enter this sum
ER status	Measure of Estrogen Receptor expression
PgR status	Measure of Progesterone Receptor expression
ErbB-2/ HER-2 status	Measure of ErbB-2 (HER2) expression
Radiotherapy	Whether the patients received radiotherapy as treatment for her/his breast cancer. Exclude treatment for recurrence.
Chemotherapy	Whether the patients received chemotherapy as treatment for her/his breast cancer. Exclude treatment for recurrence.
Hormone therapy	Whether the patients received hormone therapy as treatment for her/his breast cancer. Exclude treatment for recurrence.
Type of final therapeutic surgery to the breast	Exclude axillary surgery, reconstruction, treatment to recurrence
Any Sentinel Node procedure?	This field will be more easily completed by managing surgeons
Death date	The date the patient died. Leave blank if the patient is still alive.
NPI	Nottingham Prognostic Index score (Invasive cancer) <b>NPI = 0.2 x Invasive Size (cm) + Grade + Nodes</b> where Grade is the tumour grade (Bloom & Richardson): 1, 2 or 3 where Nodes equals 1 (0 positive nodes) or Nodes equals 2 (1, 2 or 3 positive nodes) or Nodes equals 3 (>= 4)

Data Item	Description
VNPI	Van Nuys Prognostic Index (Non Invasive cancer) <b>VNPI = Size score + Margin score + Pathological classification score</b> where size score is: 1 (<or = 15mm); 2 (16 to 40mm); 3 (>or = 40) where margin score is: 1 (width >or = 10mm); 2 (width 1 to 9mm); 3 (width < 1mm)
	where path classification score is: 1 (non high grade without necrosis); 2 (non high grade with necrosis); 3 (high grade with/without necrosis)
pT Category	The extent of the primary tumour after excision or biopsy of the primary cancer. This can be derived from Local Invasion - Tumour Extent and Structure (s) Invaded data items on the Pathology dataset
pN Category	The histological evidence of the absence or presence and extent of regional lymph node metastases. This can be derived from Local/Regional nodes positive, Other Nodes positive and Marker lymph node 1 positive data items on the Pathology dataset.
pM Category	The histological evidence of the absence or presence of distant metastases. This can be derived from the Distant Metastases data item on the Pathology dataset.
Overall Pathological TNM stage grouping	The combination of pT with pN and pM into stage groups that are more or less homogeneous in respect of survival and for which the survival rates are distinctive.
Patient's Hospital number	This is the patient's hospital number at surgery (or at diagnostic if no surgery was performed). If a patient had several surgical operations, give the hospital number for last surgery.
Date of last Surgery to the breast	Exclude axillary surgery, reconstruction, treatment to recurrence
Hospital of Chemotherapy	The hospital at which Chemotherapy took place
Date of Chemotherapy	date the treatment started
Hospital of Radiotherapy	The hospital at which Radiotherapy took place
Date of Radiotherapy	date the treatment started
Date of Hormone Therapy	date the treatment started
Forenames	The patient's Forenames
1st line of Address	The address where the patient lived at the time of diagnosis
2nd line of Address	The address where the patient lived at the time of diagnosis
3rd line of Address	The address where the patient lived at the time of diagnosis
4th line of Address	The address where the patient lived at the time of diagnosis
Postcode at Date of Diagnosis	The postcode where the patient lived at the time of diagnosis