



# The BCCOM Project: Using Data to Improve Performance and Promote Good Practice

## NCIN Annual Conference

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# Background



- The NHSBSP and Association of Breast Surgery (ABS) at BASO UK audit of **screen-detected** breast cancer has demonstrated wide variations in the treatment of these cancers
- Since its inception the screening audit has brought about major **changes in clinical practice**
- The Breast Cancer Clinical Outcome Measures (BCCOM) Project aims to provide similar, trusted cancer intelligence for **symptomatic** breast cancers



# Data sources



**STEP 1: BCCOM initial dataset = cancer registry data**

- BCCOM project: 5 years
- Variable data completeness



# Data sources



**STEP 1:** BCCOM initial dataset = **cancer registry data**



**STEP 2:**  
Initial BCCOM dataset matched with **Hospital Episode Statistics (HES)**



# Data sources

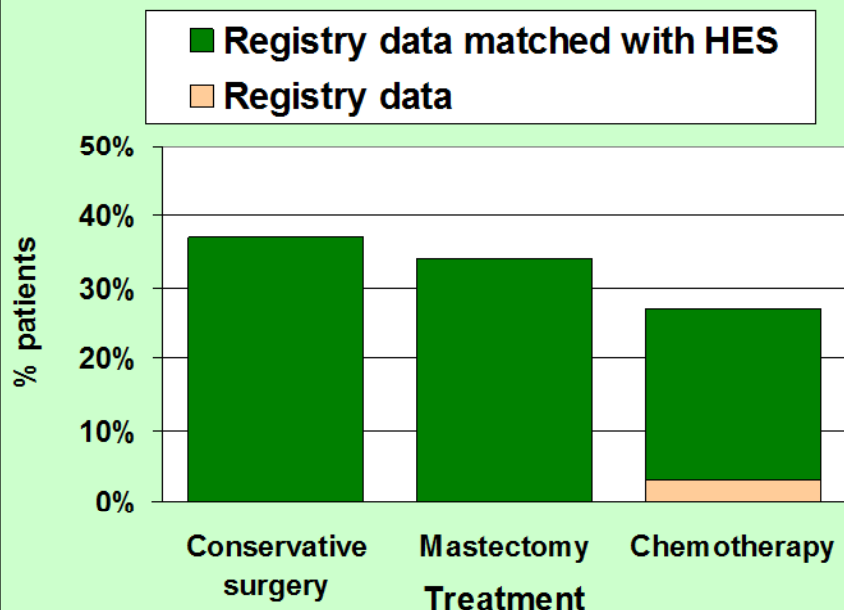


**STEP 1: BCCOM initial dataset = cancer registry data**

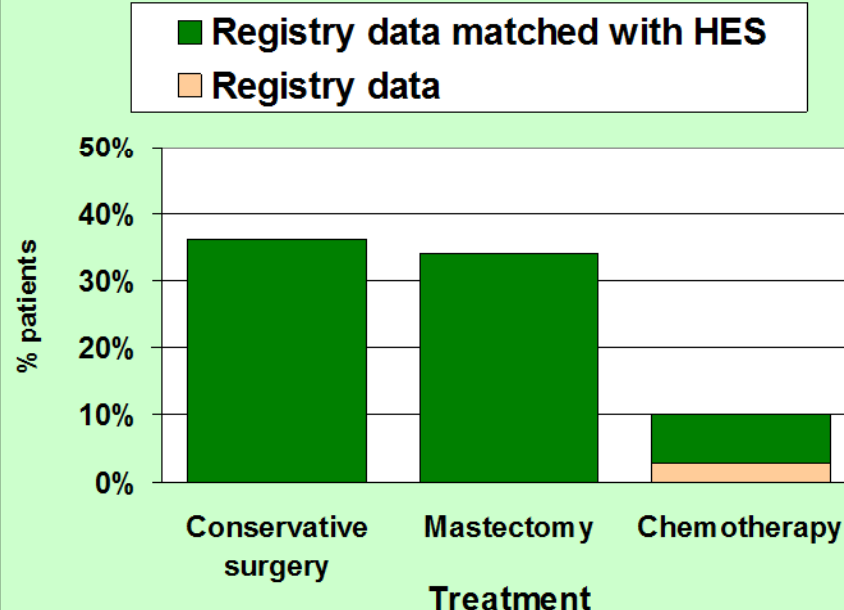


**STEP 2:**  
Initial BCCOM dataset matched with **Hospital Episode Statistics (HES)**

Matching Trent cancer registry data with HES



Matching North West cancer registry data with HES





# Data sources

**STEP 1:** BCCOM initial dataset = **cancer registry data**



**STEP 2:** Initial BCCOM dataset matched with **HES**



**STEP 3:** Contribution and validation by **local clinicians**



# Data sources

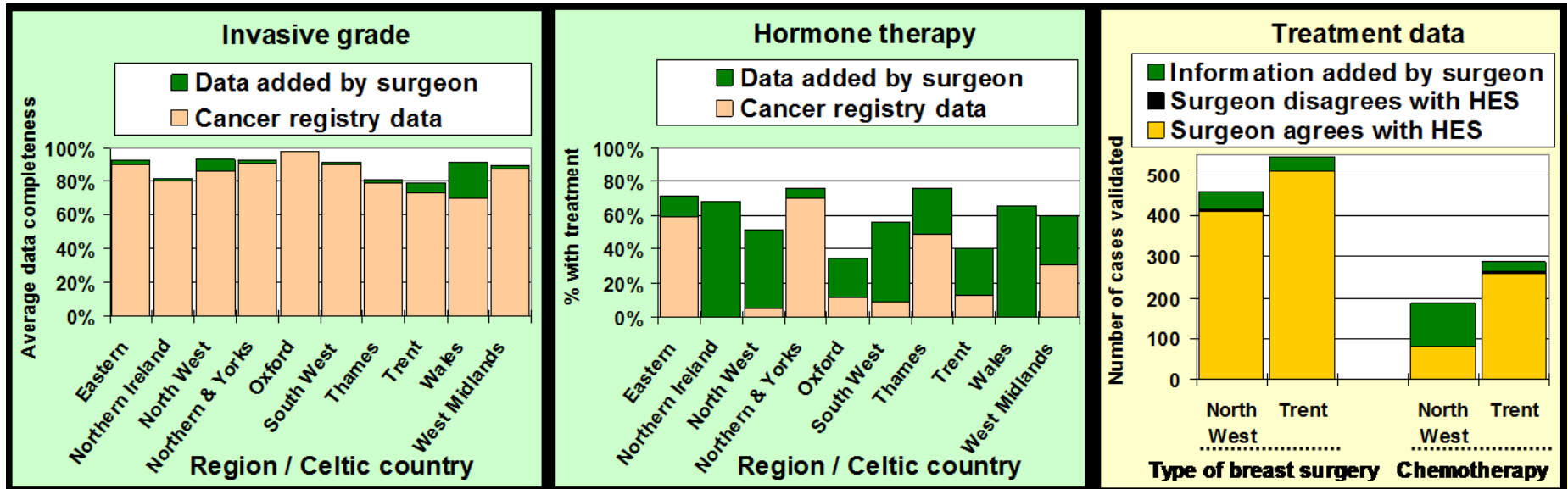
**STEP 1:** BCCOM initial dataset = **cancer registry data**



**STEP 2:** Initial BCCOM dataset matched with **HES**

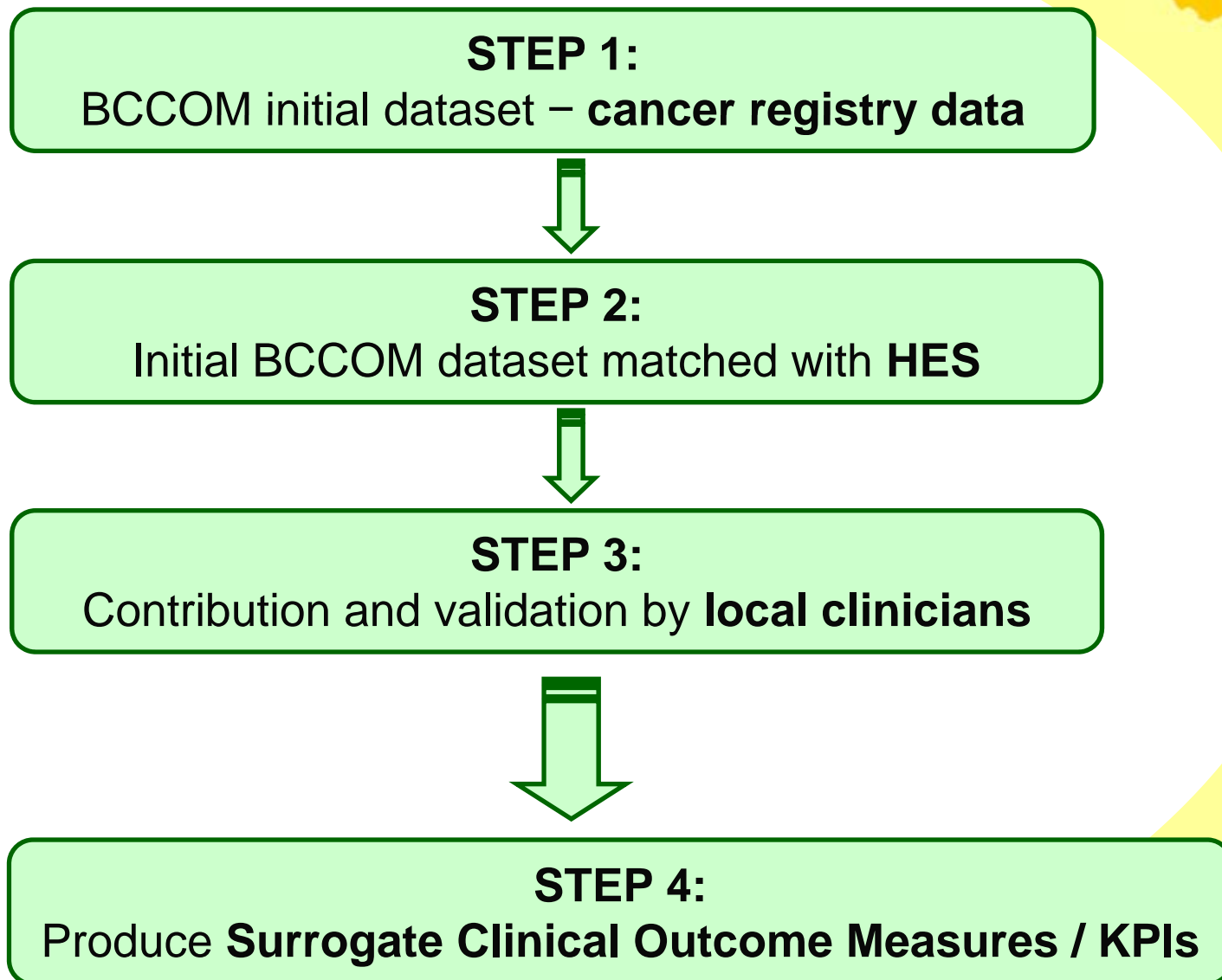


**STEP 3:** Contribution and validation by **local clinicians**





# Data sources





# Surrogate outcome measures



## Surrogate clinical outcome measures

1. Breast cancers for which complete information is received
2. Symptomatic and screen-detected breast cancers treated in a hospital per capita
3. Breast cancers for which there is a non-operative diagnosis
4. Breast cancers operated on in hospital only
5. Breast cancers treated surgically
6. Mammography rate by stage of breast cancer
7. Invasive breast cancers for which nodal status is known
8. Histologically node-negative invasive breast cancers for which a non-diagnosed node was harvested
9. Invasive breast cancers treated by conservation surgery and receiving radiotherapy
10. ER-positive patients with breast cancer, aged 60 or under, receiving chemotherapy
11. Patients with ER-positive invasive breast cancers receiving hormone therapy

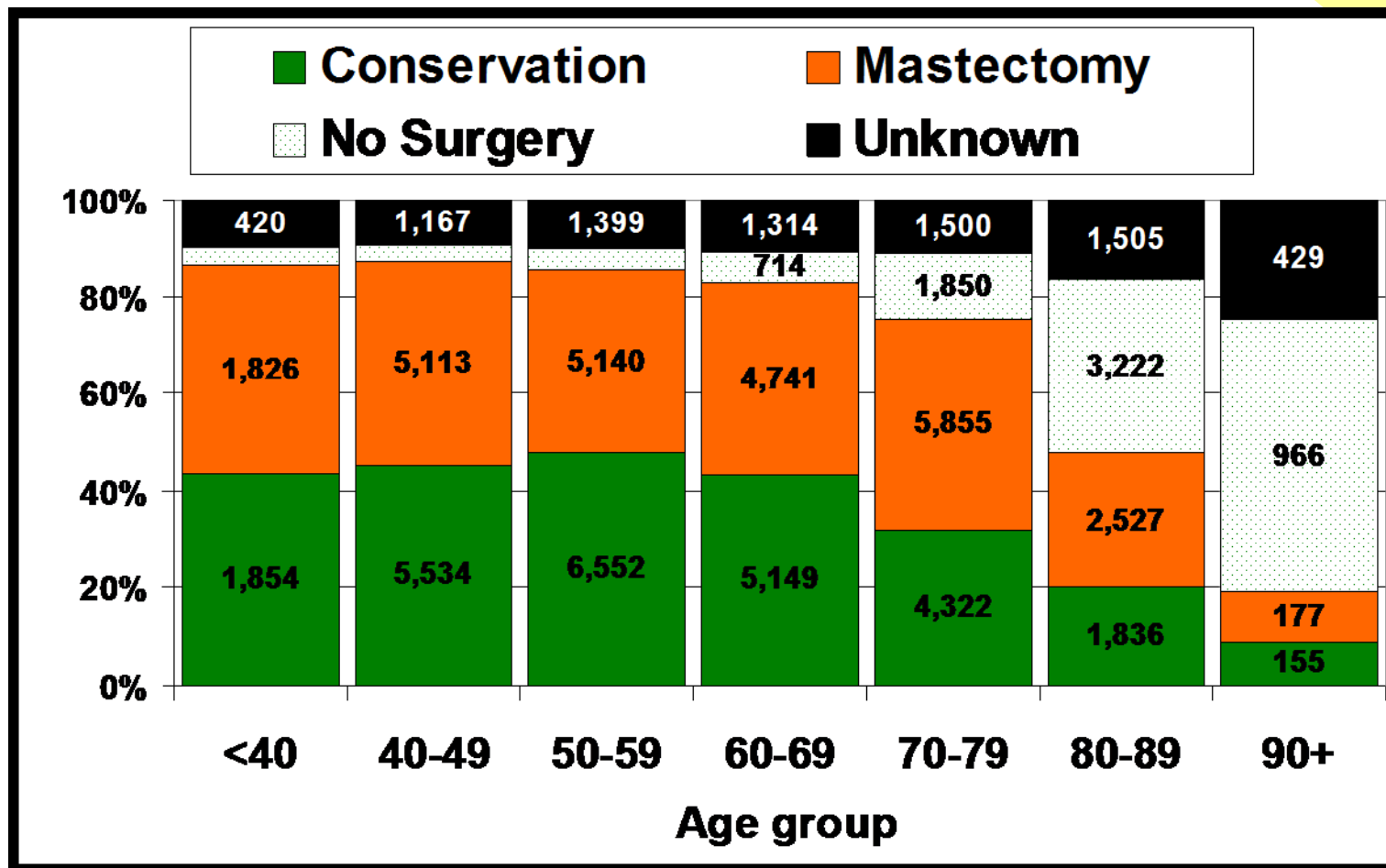


# Participation in the BCCOM Project



Region or Celtic country	Diagnosis year					
	2002	2003	2004	2005	2006	2002-2006
	BCCOM Year 1	BCCOM Year 2	BCCOM Year 3	BCCOM Year 4	BCCOM Yr 5***	TOTAL
<b>Eastern</b>	1,691	997	1,507	1,399	1,007	<b>6,601</b>
<b>North West</b>	1,091	524	1,397	823	891	<b>4,726</b>
<b>Northern and Yorkshire</b>	2,419	2,029	1,910	2,260	2,222	<b>10,840</b>
<b>Northern Ireland</b>	640	367	432	349	211	<b>1,999</b>
<b>Oxford</b>	1,341	1,442	899	851	860	<b>5,393</b>
<b>Scotland</b>	934	181	1,836	749	929	<b>4,629</b>
<b>South West</b>	3,253	1,001	2,234	2,424	1,565	<b>10,477</b>
<b>Thames</b>	1,750	2,709	1,530	1,363	1,995	<b>9,347</b>
<b>Trent</b>	408	1,588	1,453	1,702	1,454	<b>6,605</b>
<b>Wales</b>	351	952	1,201	1,098	563	<b>4,165</b>
<b>West Midlands</b>	2,529	2,330	2,340	1,963	2,006	<b>11,168</b>
<b>TOTAL</b>	<b>16,407</b>	<b>14,120</b>	<b>16,739</b>	<b>14,981</b>	<b>13,703</b>	<b>75,950</b>

# Surgical treatment: variation with age (Yr1-YR5)



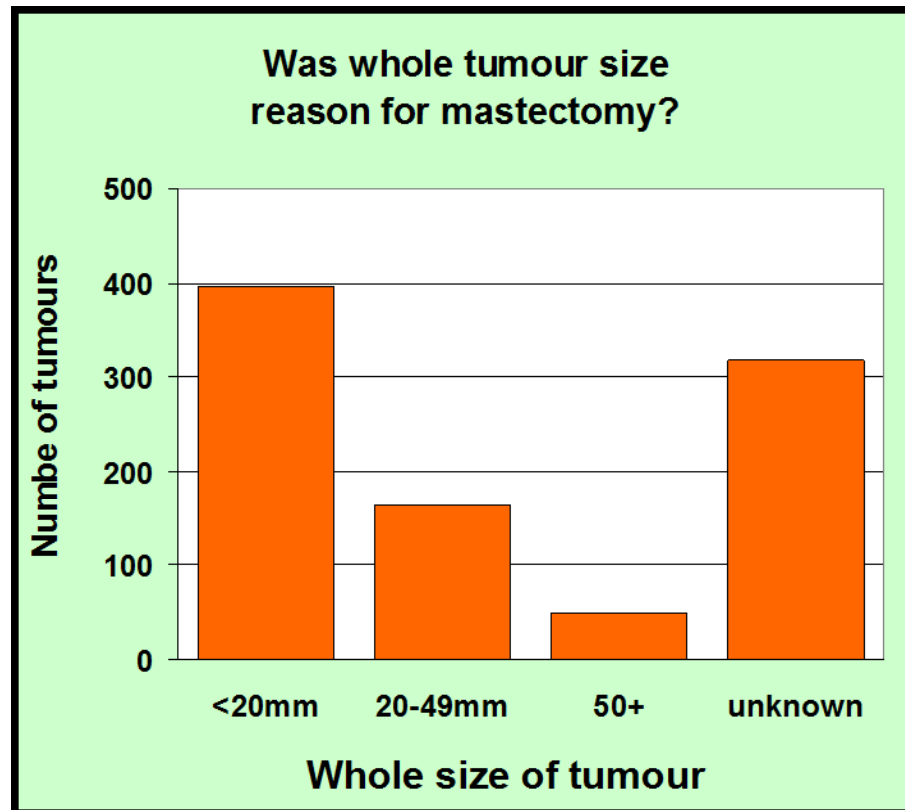
Fewer older patients receive surgery and more have a mastectomy



# Mastectomy for invasive cancers with size <15mm

**18,396 symptomatic invasive breast cancers (BCCOM Year 4&5):**

- 15% (2,775) had an invasive size of less than 15mm
- 33% (927) of these small invasive tumours received a mastectomy



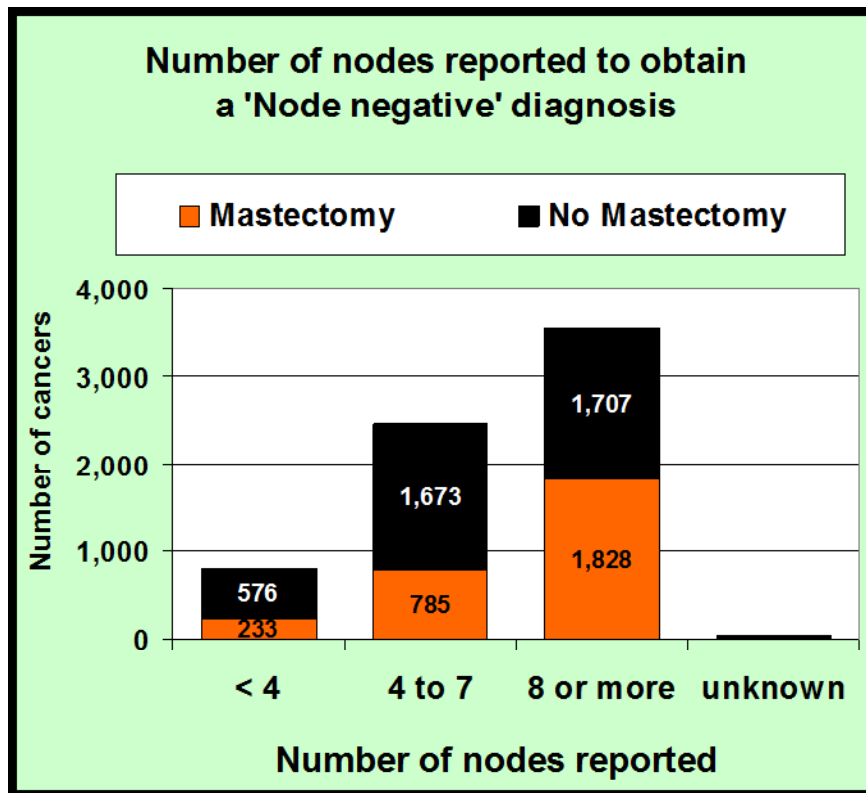


# >7 nodes taken for invasive cancers with negative nodal status



12,459 symptomatic invasive breast cancers had a known nodal status (BCCOM Year 4&5):

- 55% (6,845) were node negative
- 52% (3,535) of the node negative cancers had more than 7 nodes reported : **47% (1,677) of these received conservative surgery**



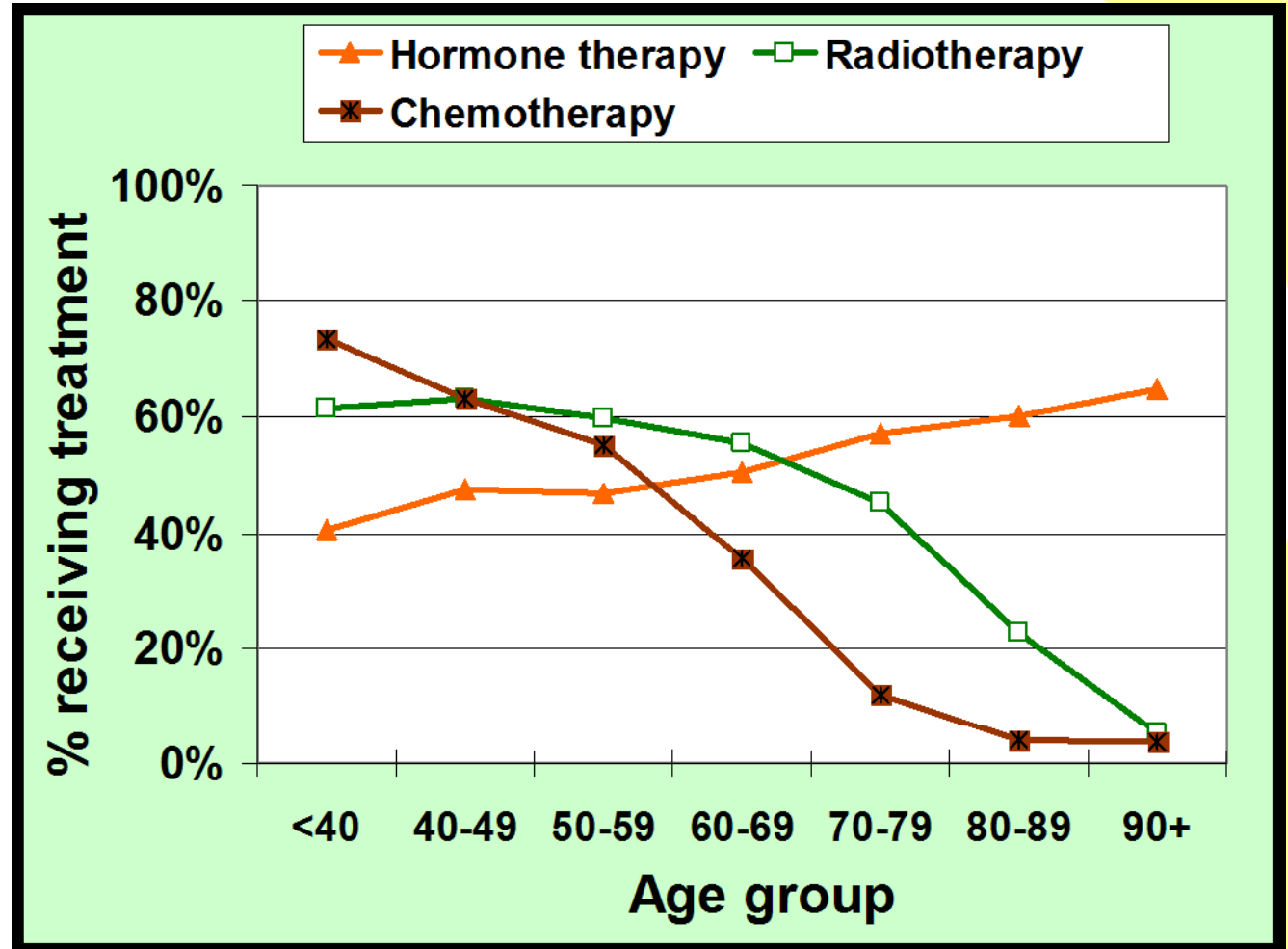
# Treatment for invasive breast cancer: variation with age



Fewer older patients receive radiotherapy

More younger patients receive chemotherapy

More older patients receive hormone therapy





# Invasive cancers treated by conservation surgery not followed by radiotherapy

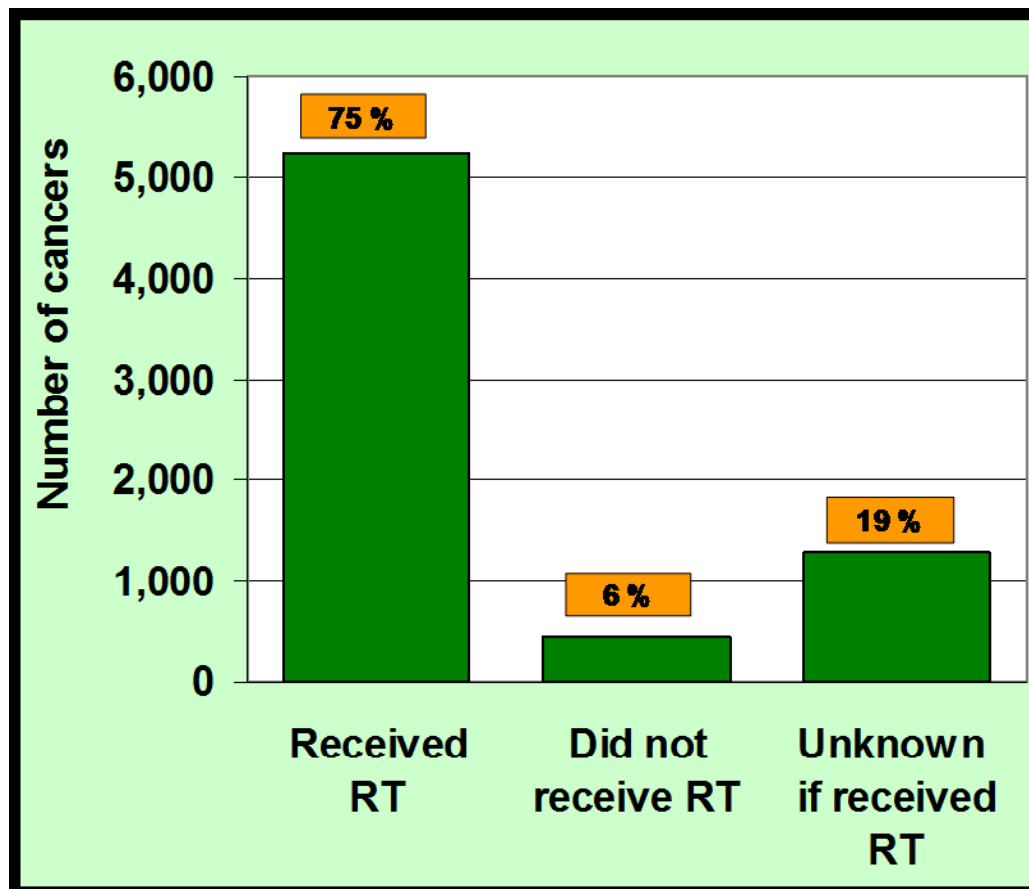
6,987 invasive breast cancers had conservation surgery:

- 6% did not receive radiotherapy

Data collection?

Small, grade 1,  
node negative?

Patient choice?





# Key features of BCCOM



- Return of data to surgeons for validation: **clinical ownership**
- Can include other large data sets e.g. **Scottish Cancer Network Audits**
- Can include **clinicians' personal series** e.g. Trent region
- Can combine with other datasets e.g. HES (**ethnicity**), census (**deprivation**)
- Can generate surgeon level/ hospital level/ cancer network level reports for local audits: **completion of audit cycle**



# Thank you

- WMCIU: Louise Williams, Alan Macdonald, Mike Porter, Olive Kearins, Gill Lawrence
- All BCCOM contacts @ UK cancer registries
- BCCOM Steering Group

