



# BCCOM Project

(Breast Cancer Clinical Outcome Measures Project)



West Midlands Cancer Intelligence Unit (WMCIU)

Newsletter

January 2007

Volume 1, Issue 2

## ... The BCCOM Project at a glance ...

**Aims of the BCCOM project**

- To audit, across the UK, the treatment of symptomatic breast cancer
- To compare management with published national standards and targets
- To measure against treatment' hypotheses/gold standards
- To inform the setting of future standards
- To obtain complete and accurate outcome measures including survival

**Progress so far..**

- Over the last 2 years, **293 consultant surgeons** have collaborated with the **12 UK cancer registries** to submit data to the BCCOM project
- More than **30,000 primary symptomatic breast cancers** are now included in the BCCOM database
- In some parts of England, BCCOM has been adopted as a **cancer network audit**

**Thanks to Breakthrough Breast Cancer, funding for the BCCOM Project has been secured for Year 4 (audit of cases diagnosed in 2005)**

### Presentation of BCCOM Year 2:

- *ABS at BASO conference (Nottingham, 14/06/06)*
- *UK Association of Cancer Registries (Amsterdam, 19/10/06)*
- *SABCS (San Antonio, 15/12/06; see copy of poster Page 6)*

Deadline	Launch of BCCOM Year 3 Action	Who?
15 Dec 2006	Consultant breast surgeons to sign consent form for cancer registries to release data..... <b>Update: 306 signed forms received (as at 19/01/2007)!</b>	Surgeons
16 Feb 2007	Provide the lead breast surgeons in each hospital with data for patients treated by consenting surgeons in that hospital in 2004	BCCOM project team
28 Feb 2007	Distribute the relevant patients' data to surgeon who managed them	Lead surgeons
Mar-Apr 07	Check, amend if necessary and sign off data	Surgeons
20 Apr 2007	Deadline for checked or un-checked data to be sent back to WMCIU	Surgeons
23 May 2007	Presentation of progress report on the BCCOM project Year 3 at the ABS at BASO conference	BCCOM steering group

**Project Funded by:**



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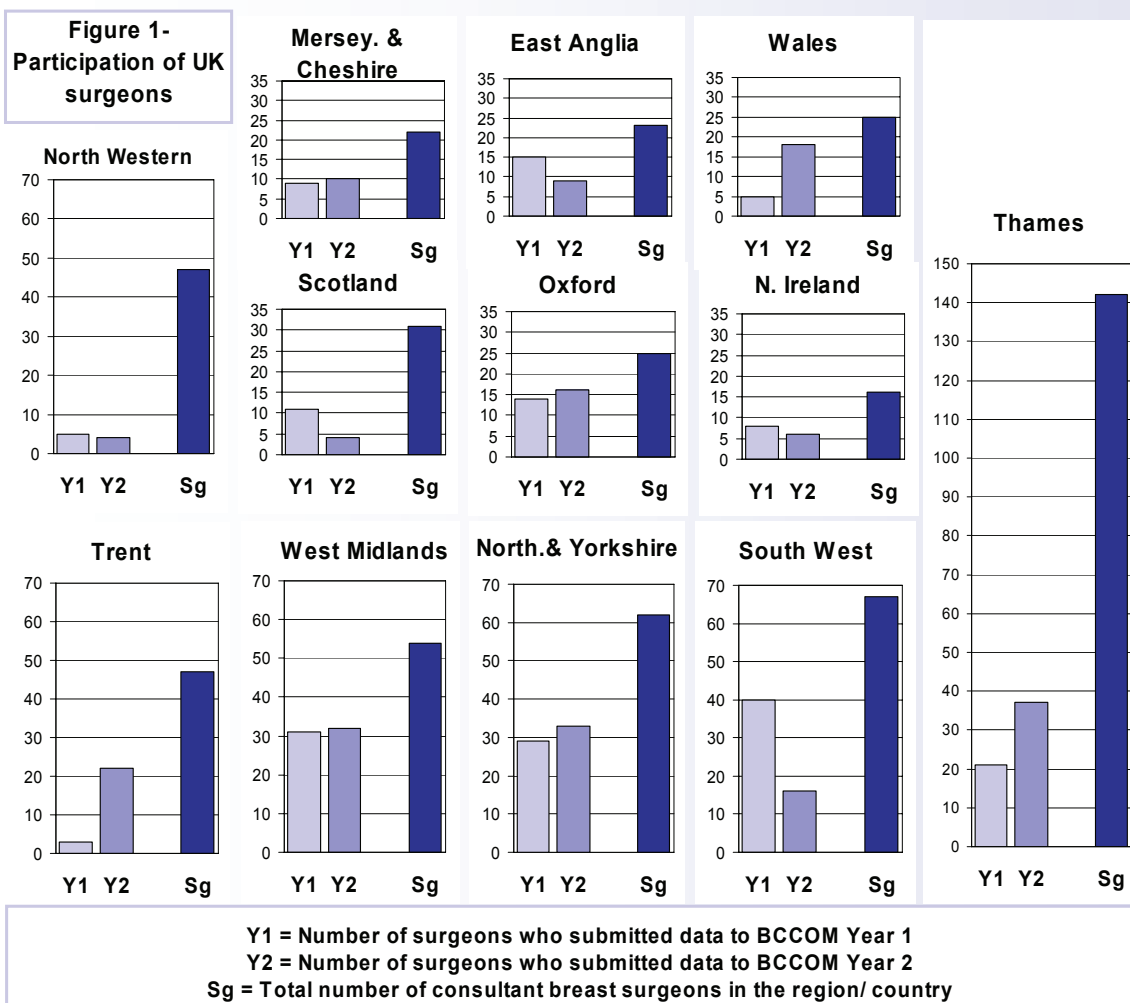
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# Results BCCOM Year 2 Participation

**Table 1:** General characteristics of the cases collected by the second round of the BCCOM Project

TABLE 1	Primary symptomatic breast cancers diagnosed in 2003					No. Eligible Surgeons
	Invasive	Non-inv	Micro-inv	Unknown	TOTAL	
Number of eligible cases (approx. whole UK)	*	*	*	*	34,500	560
Cases received from surgeons	12,907	826	56	331	14,120	206
Cases checked/partly checked	8,452	545	43	252	9,292	154
Male breast cancer	115	4	2	3	124	88
Sex and/or age unknown	13	2	0	1	16	9
Women less than 50	3,240	211	19	76	3,546	200
Women 50-64 years old	3,564	345	24	87	4,020	199
Women 65 years or older	5,975	264	11	164	6,414	200

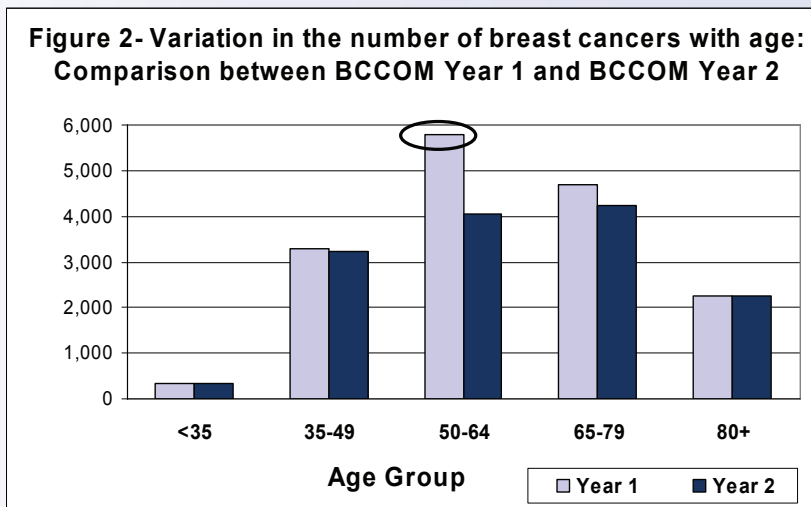
**Figure 1:** Illustrates the number of consultant breast surgeons contributing to the BCCOM Project over the last 2 years, compared with the total number of eligible surgeons in each region/ country.



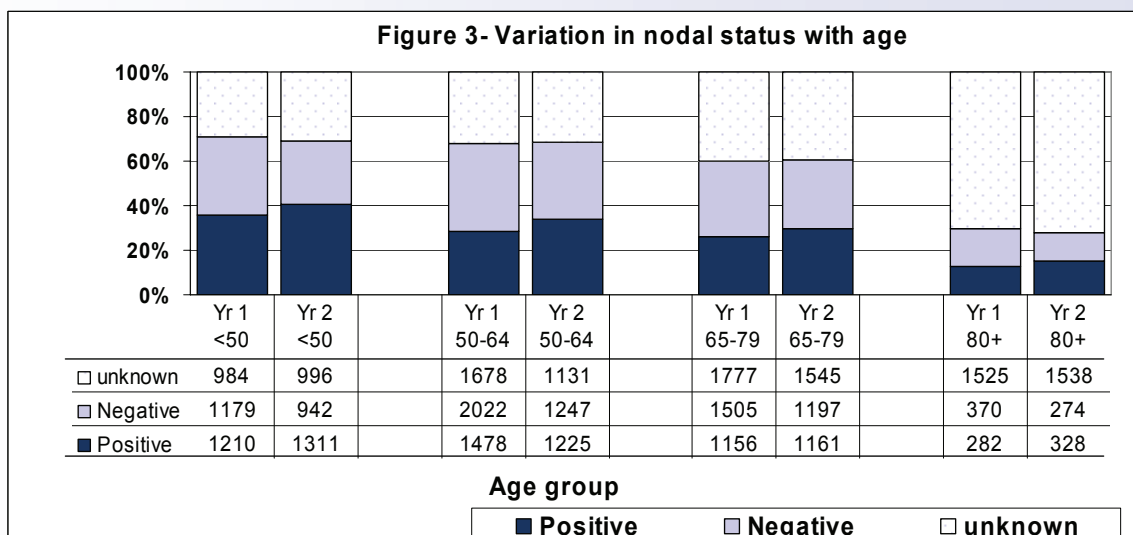
# Results BCCOM Year 2 Cohort characteristics



**Figure 2:** The proportion of patients in the age group 50-64 (population invited for screening) decreased between BCCOM Year 1 and Year 2 showing that in Year 2 most cancer registries were able to identify (and exclude from BCCOM) screen-detected breast cancers. This is also suggested by the slightly higher proportion of Grade 3 invasive cancers in Year 2 (37.0%) compared to Year 1 (34.8%).



**Figure 3:** 60% of invasive breast cancers had a known nodal status. For cases with known nodal status, 45% of invasive cancers included in BCCOM Year 1 were node positive compared with 52% of the invasive cancers included in Year 2. This is also consistent with the inclusion of some screen-detected cancers in Year 1.



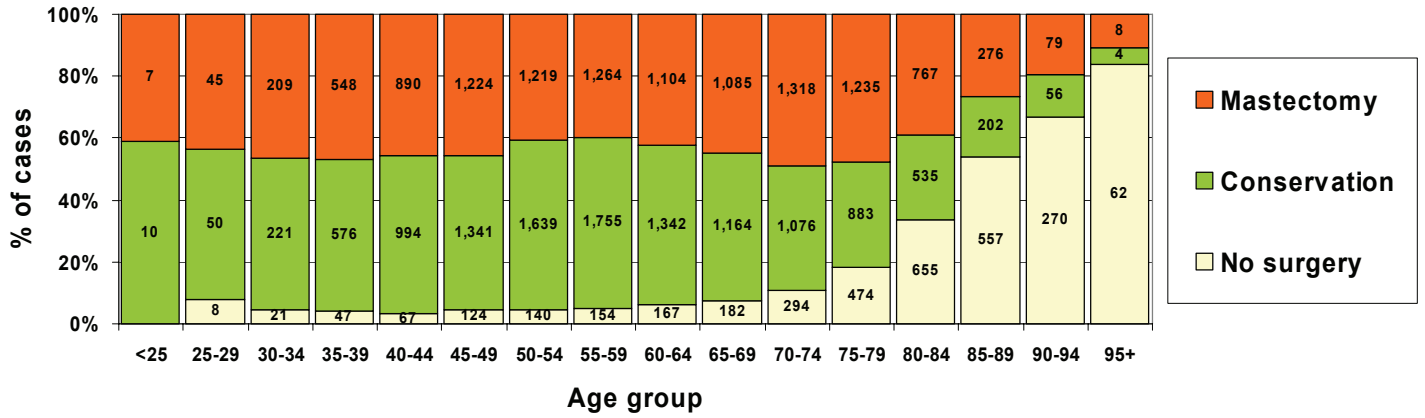
**Table 2:** 256 male breast cancers, treated by 140 surgeons, were submitted to BCCOM Year 1 and Year 2.

TABLE 2		Number	in % of male cases	Comparison: % for female cases diagnosed in 2002-2003
Male breast cancers diagnosed in 2002-2003				
Total cases		256	-	[30,269 cases]
Tumour Side	Left	128	50.0%	50.4%
	Right	116	45.3%	46.7%
	Unknown	12	4.7%	3.0%
Age	less than 50	23	9.0%	23.6%
	50-64 years old	78	30.5%	32.3%
	65 years or older	154	60.2%	43.9%
Invasive status	Invasive	237	92.6%	92.1%
	Non-invasive	11	4.3%	6.1%
	Micro-invasive	3	1.2%	0.4%
	Unknown	5	2.0%	1.3%
Nodal status	Positive	78	30.5%	27.2%
	Negative	72	28.1%	30.2%
	Unknown	106	41.4%	42.6%
Type of surgery	Mastectomy	171	66.8%	37.3%
	Conservation	25	9.8%	39.2%
	No surgery	22	8.6%	10.7%
	Unknown	38	14.8%	12.8%

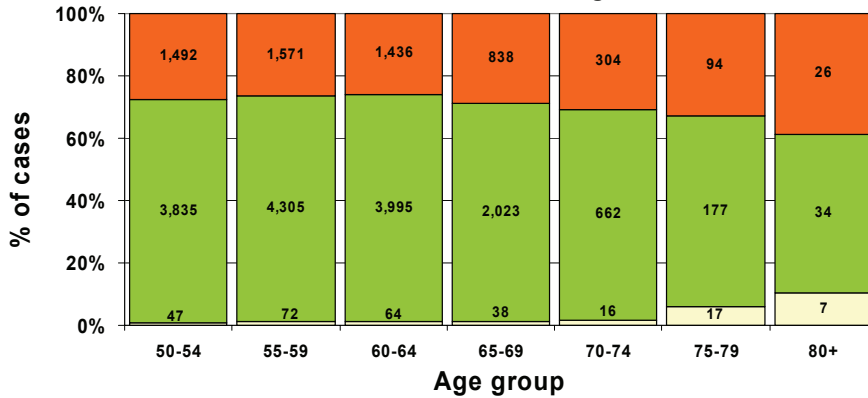
# Results BCCOM Year 2

## Type of treatment

**Figure 4- Variation in the type of surgery with age, female symptomatic breast cancers only (2002 - 2003)**



**Figure 5- Variation in the type of surgery with age for women with screen-detected breast cancer diagnosed in 2002 – 2003**



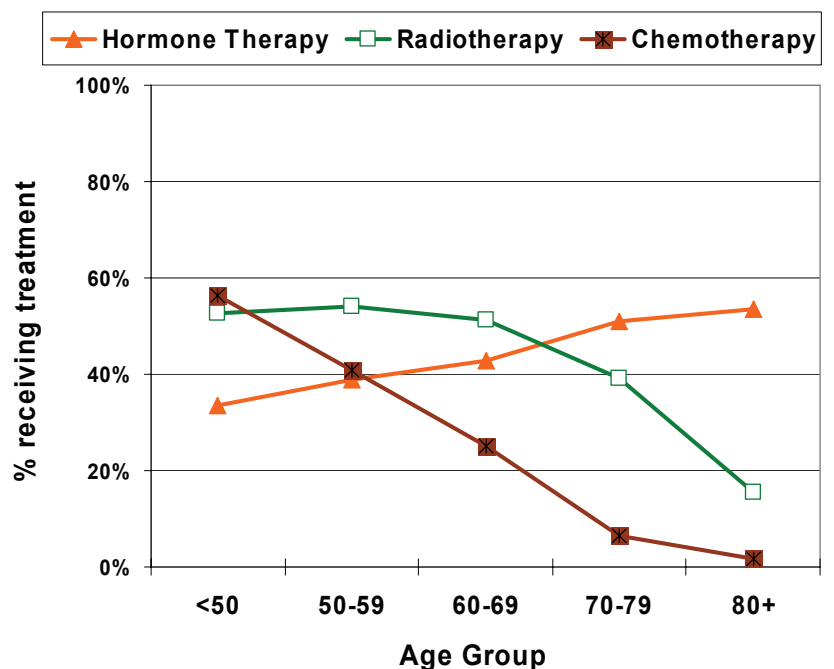
**Figures 4 and 5:**

The proportion of symptomatic breast cancers not undergoing surgery increased with age, from 5.2% in patients aged less than 70 to 26.4% in patients aged 70 or more.

On average, 48.8% of the symptomatic breast cancers treated with surgery received mastectomy compared with only 27.8% of the screen-detected breast cancers.

**Figure 6- Variation in Adjuvant Treatment with age.**

BCCOM Year 2 data only, all invasive breast cancers including those with unknown adjuvant treatment



**Figure 6:**

The proportion of patients undergoing chemotherapy or radiotherapy decreased markedly with age, while the proportion of cases having hormone therapy increased with age.

## Surrogate clinical outcomes

**Table 3:** The BCCOM Project Steering Group is in the process of developing surrogate outcome measures which, in lieu of being able to calculate survival so soon after treatment, will give an insight into the appropriateness of the treatment delivered. A number of these measures were included in the presentation of year 1 and 2 BCCOM data at the ABS at BASO Annual Conference in May 2006 and at the San Antonio Breast Cancer Symposium (see page 6).

**Table 3: Proposed surrogate clinical outcome measures**

i.	Number of symptomatic and screen detected cancers treated in a breast unit per annum.
ii.	Number and proportion of symptomatic cases for which there is a non-operative diagnosis.
iii.	Number and proportion of cases primarily medically treated.
i.	Number and proportion of cases primarily surgically treated.
v.	Mastectomy rate by size of tumour (<15, 15 - <25, 25 - <35, 35 - <50 & >50 mm whole size).
vi.	Number and proportion of invasive cancers for which nodal status is known (with and without surgery).
vii.	Number and proportion of cancers which were histologically node negative for which more than seven nodes were harvested.
viii.	Number and proportion of invasive cancers treated by conservation surgery and receiving radiotherapy.
ix.	Number and proportion of node positive patients, aged less than 60, receiving chemotherapy.
x.	Number and proportion of ER positive patients, receiving hormone therapy.
xi.	Number and proportion of patients for whom complete information is received.

*The BCCOM Project steering group would welcome any suggestions or comments you might have regarding these proposed surrogate outcome measures.*

Please send any comments to [catherine.lagord@wmciu.nhs.uk](mailto:catherine.lagord@wmciu.nhs.uk)

***“The BCCOM Project team is very grateful to all the contributors to BCCOM and would welcome your views and comments on this audit process, particularly if you are involved in the collection and/or analysis of breast cancer data.”***

*For queries, general comments or to add recipients to the contacts database please feel free to contact*

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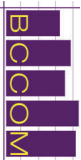
**Thanks to the ABS at BASO for the funding of this newsletter and to Lucy Davies for her kind assistance in the distribution.**

[www.wmpho.org.uk/wmciu](http://www.wmpho.org.uk/wmciu)  
[www.baso.org](http://www.baso.org)  
[www.breakthrough.org](http://www.breakthrough.org)

Visit the BCCOM website:  
<http://www.wmpho.org.uk/wmciu/BQA10.ht>



Poster presented at the at the San Antonio Breast Cancer Symposium on the 15th of December 2006



# The UK Breast Cancer Clinical Outcome Measures (BCCOM) Project

Ian Monypenny, Consultant Breast Surgeon, University Hospital of Wales, UK - on behalf of the BCCOM Project Steering Group



## A - BCCOM: An Audit of Symptomatic Breast Cancers

Who?	Action
Regional ABS at BASO symptomatic representatives	<ul style="list-style-type: none"> <li>Contact lead breast surgeons in their region</li> <li>Encourage all consultant breast surgeons to sign the consent form (for cancer registry to release data)</li> </ul>
12 UK Cancer Registries (population-based registries)	<ul style="list-style-type: none"> <li>Identify primary breast cancer diagnosed in audit year</li> <li>Assign a consultant breast surgeon</li> <li>Check surgeon has signed the consent form to release data</li> </ul>
Consultant breast surgeon	<ul style="list-style-type: none"> <li>Check/ amend and sign of the data</li> <li>Send signed-off data to BCCOM project team</li> <li>Collect and analyse results</li> </ul>
BCCOM project team and BCCOM steering group	<ul style="list-style-type: none"> <li>Check/ amend and sign of the data</li> <li>Send signed-off data to BCCOM project team</li> <li>Collect and analyse results</li> </ul>
ABS at BASO = Association of Breast Surgery at BASO (British Association of Surgical Oncology)	

A2 - PARTICIPATION		TOTAL CASES	
Breast cancer cases included in BCCOM	BCCOM Year 1 (cases diagnosed in 2002)	BCCOM Year 2 (cases diagnosed in 2003)	
All Cases	16,407	14,043	30,450
Male breast cancers	132	121	253
Invasive cancers	15,214	12,835	15,215
Participating surgeons	Numbers	Numbers	Surgeons involved over 2 years
Surgeons taking part	191	206	292
Surgeons checking data	94	153	198

## B - KEY FINDINGS for 2002 and 2003 Symptomatic Breast Cancers

**B1 - Age at Diagnosis**  
The proportion of patients in the age group 50-64 (population invited for screening) decreased between BCCOM Year 1 and Year 2 showing that in Year 2 most cancer registries were able to identify (and exclude from BCCOM) screen detected breast cancers.

**B2 - Type of Adjuvant Treatment**  
The proportion of patients undergoing chemotherapy and/or radiotherapy decreased with age while the proportion of cases having hormone therapy increased with age.

**B3 - Type of Surgery to the Breast**  
The proportion of patients not receiving surgery to the breast increased with age from 3.4% in patients aged 50-64 to 34.8% in patients aged 80 and over.

**B4 - Mastectomy Rates**  
Mastectomy rates varied widely between surgeons (not shown) and hospitals, with no obvious relationship between surgical caseload and mastectomy rate.

## C - Surrogate Outcome Measures

Data collected by the BCCOM Project can be used to monitor the clinical management of symptomatic breast cancers.

- Lymph node status was known for 75% of the invasive breast cancers surgically treated [C1].
- For cases where the adjuvant treatment was known, 90% of the cases treated with conservation surgery received radiotherapy [C2].
- Of the patients aged less than 60 with known positive nodes, 91% received chemotherapy [C3].

**C1 - "Nodal Status of Invasive breast cancers should be known"**

**C2 - "Invasive tumours treated by conservation surgery should receive radiotherapy (RT)"**

**C3 - "Node positive patients aged less than 60 should receive chemotherapy"**

**D - Comparison Screen-Detected versus Symptomatic Breast Cancers**

**D1 - Type of surgery for tumours with invasive size <15mm**

**D2 - 60% of the screen-detected cases were in the NPI Excellent or Good prognostic groups compared with 32% of the symptomatic cases.**

**D3 - Small Invasive (invasive size <15mm) symptomatic breast cancers were more likely to receive mastectomy than small invasive screen-detected cancers.**

**D4 - NPJ Group, D2 compare Symptomatic Breast Cancers and Cancers diagnosed within the UK NHS Breast Screening Programme.**

**D5 - NPJ of Invasive cancers (women aged 50 to 65)**

**Notttingham Prognostic Index**

NPJ Group: Invasive Size (cm) & Grade Nodes = 0, 2 or 3 (0 positive nodes), 1 (1-2 positive nodes), 2 (3-4 positive nodes), 3 (5-6 positive nodes), 4 (7-8 positive nodes), 5 (9-10 positive nodes), 6 (>10 positive nodes)

ERG (Excellent Prognostic Group) <2.4  
MPOG (Moderate Prognostic Group) 2.401-3.4  
MPOG (Poor Prognostic Group) 3.401-4.4  
PBG (Poor Prognostic Group) >5.4

Project funded by: **breakthrough** breast cancer

To contact the BCCOM Project Manager: [caithrline.lagord@wmcu.nhs.uk](mailto:caithrline.lagord@wmcu.nhs.uk)

**CONCLUSIONS**

- National audit of symptomatic breast cancer is possible if baseline data can be provided from cancer registries and if the surgeons are actively engaged in the process.
- Age is an important determinant of the treatment received, most probably because of the increasing prevalence of conditions that contraindicate using more radical treatment.