



Preliminary Results From the Second Year of the BCCOM Project

ABS at BASO Annual Conference
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Breast Cancer Clinical Outcome Measures (BCCOM) Project

“To determine whether routine data collected by regional cancer registries can be used as the starting point for the derivation of clinical outcome measures for symptomatic breast cancers equivalent to those derived for screen detected breast cancers in the annual ABS at BASO audit”

BCCOM Audit Flow



ABS at BASO symptomatic representatives	<p>Contact lead breast surgeons in their region</p> <p>Encourage all consultant breast surgeons to sign the consent form (for cancer registry to release data)</p>
Local cancer registry	Identify primary breast cancers diagnosed in 2003
	Exclude screen-detected breast cancers
	Assign a consultant breast surgeon
	Check surgeon has signed the consent form
	Send 'surgeon level' data to lead surgeon of treating hospital
Lead surgeon	<p>Allocate cases to relevant consultant surgeon</p> <p>Request surgeons to check, amend and sign off data</p> <p>Send signed-off data to local cancer registry</p>
Local cancer registry	Send data signed by surgeons to WMCIU
WMCIU/ BCCOM steering group	Collect and analyse results



Breast Cancer Clinical Outcome Measures (BCCOM) Project

Analysis of the management of symptomatic breast cancers diagnosed in 2002

1st Year Report March 2006



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Year 2: Who contributed to BCCOM?

Cancer Registry (CR) Cohort for BCCOM Year 2	No. eligible cases at local CR	No. Cases included 19 May 2006	% Cases included	Number of surgeons member of ABS at BASO	No. participating surgeons 19 May 2006	% Cases checked or partly checked
East Anglia (ERIC)	approx. 2,500	962	38%	16	9	47.4%
Mersey & Cheshire (MCCN)	approx. 1,900	288	15%	16	10	93.4%
Northern Ireland (NICR)	1,033	367	36%	8	6	100.0%
North Western (NWCR)	approx. 2,800	132	5%	26	2	0.0%
Northern & Yorkshire (NYCRIS)	2,389	1,956	82%	48	32	100.0%
Oxford (OCIU)	1,902	1,405	74%	18	16	0.0%
Scotland (SISD)	2,863	181	6%	24	4	100.0%
South West (SWCIS)	5,192	1,001	19%	51	16	95.8%
Thames (TCR)	8,783	2,118	24%	112	32	48.3%
Trent	4,119	1,453	35%	28	17	63.3%
Wales (WCISU)	1,332	952	71%	22	18	90.9%
West Midlands (WMCIU)	3,485	2,044	59%	41	30	61.6%
TOTAL =	approx. 38,000	12,859	approx. 34%	410	192	64.2%

Who contributed to BCCOM?



Cancer Registry Cohort for BCCOM Year 2	No. Cases included 19 May 2006	May 2005 BCCOM Year 1 No. cases included	September 2005 BCCOM Year 1 No. cases included
East Anglia (ECRIC)	962	1,691	1,691
Mersey & Cheshire (MCCN)	288	595	595
Northern Ireland (NICR)	367	304	640
North Western (NWCR)	132	496	496
Northern & Yorkshire (NYCRIS)	1,956	606	2,419
Oxford (OCIU)	1,405	1,292	1,341
Scotland (SISD)	181	931	934
South West (SWCIS)	1,001	3,152	3,253
Thames (TCR)	2,118	148	1,750
Trent	1,453	408	408
Wales (WCISU)	952	240	351
West Midlands (WMCIU)	2,044	1,744	2,529
TOTAL :	12,859	11,607	16,407

Data completeness



100% unkn	75-99% Ukn	50-74% Ukn			25-49% Ukn	1-24% Ukn	0% Unknown					
Region	East Anglia	MCCN	North West	NI	NYCRIS	OCIU	Scotland	SWCIS	Thames	Trent	Wales	WMCIU
sex	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.21%	0.00%
date of birth	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%
tumour side	0.21%	0.33%	0.00%	12.11%	0.59%	2.08%	0.01	6.49%	2.04%	0.41%	3.95%	0.00%
basis of diagnosis	0.00%	0.00%	0.00%	1.58%	0.00%	0.49%	0.00%	0.10%	1.19%	0.07%	3.22%	0.00%
had pre-op diag (when known there was surgery)	78.75%	54.72%	22.05%	100.00%	5.42%	23.02%	0.00%	21.33%	76.91%	0.00%	1.85%	14.38%
invasive status	0.10%	3.26%	0.00%	0.00%	0.05%	0.00%	0.00%	0.70%	0.00%	0.00%	33.64%	0.05%
histological tumour type	0.00%	0.00%	0.00%	0.53%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.21%	0.05%
invasive grade (invasive BC)	4.87%	6.36%	47.90%	23.23%	14.96%	11.45%	30.29%	9.84%	14.53%	24.53%	5.88%	10.50%
non invasive grade (non invasive BC)	21.11%	0.00%	100.00%	64.00%	82.14%	13.16%	33.33%	92.86%	61.36%	68.00%	20.00%	12.63%
invasive size (invasive BC)	94.32%	10.25%	17.65%	27.20%	10.73%	36.83%	9.71%	93.05%	36.14%	80.57%	22.06%	33.47%
whole tumour size	13.62%	93.49%	100.00%	32.63%	81.62%	100.00%	29.83%	19.96%	93.48%	80.21%	41.64%	25.07%
vasc/lymph invasion (invasive BC)	89.21%	60.07%	100.00%	70.54%	89.11%	0.51%	28.00%	73.16%	80.42%	73.87%	14.22%	20.63%
excision margins (when known there was surgery)	89.31%	0.75%	100.00%	67.12%	83.81%	6.98%	4.48%	90.76%	81.23%	21.27%	14.04%	1.26%
number nodes sampled (invasive BC)	16.13%	56.54%	100.00%	26.06%	83.83%	23.84%	14.86%	26.84%	28.49%	66.74%	11.93%	22.90%
number nodes positive (when known how many nodes sampled)	0.00%	0.00%	na	30.89%	0.35%	0.00%	0.81%	0.29%	40.34%	1.09%	0.19%	0.00%
ER status	88.25%	27.04%	100.00%	72.89%	82.32%	100.00%	2.21%	69.96%	78.85%	71.13%	15.78%	18.81%
PgR status	99.06%	50.49%	100.00%	89.74%	88.81%	100.00%	64.64%	95.91%	89.06%	96.63%	69.16%	88.65%
HER-2 status	100.00%	88.93%	100.00%	89.47%	99.16%	100.00%	10.50%	99.30%	94.33%	100.00%	80.17%	93.14%
Radiotherapy	33.06%	0.00%	39.39%	0.00%	0.45%	51.04%	3.87%	55.49%	62.06%	73.75%	67.19%	39.49%
Chemotherapy	69.13%	19.54%	79.55%	0.00%	0.40%	74.41%	0.00%	52.89%	56.98%	74.78%	64.90%	54.54%
Hormone therapy	33.89%	0.00%	68.94%	100.00%	0.30%	93.34%	0.00%	71.16%	50.86%	69.83%	65.21%	44.87%
type final surgery to breast	9.77%	55.05%	100.00%	0.00%	0.15%	17.55%	0.00%	15.17%	24.18%	66.53%	25.55%	0.30%
sentinel node procedure? (when known how many nodes sampled)	89.21%	0.00%	na	100.00%	54.58%	100.00%	0.00%	69.56%	79.10%	9.97%	44.08%	71.23%
NPI (for invasive BC)	95.59%	86.57%	100.00%	100.00%	99.37%	100.00%	36.57%	85.24%	94.04%	73.29%	52.94%	25.62%
vNPI (for non invasive BC)	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	90.53%
date last surgery when known there was surgery	0.00%	0.75%	79.55%	6.44%	0.06%	0.00%	0.00%	0.24%	0.28%	0.73%	0.77%	0.48%
hospital chemotherapy when known there was CT	0.43%	18.75%	33.33%	0.00%	0.17%	1.36%	0.00%	11.81%	7.42%	15.15%	22.01%	4.14%
date chemotherapy when known there was CT	0.00%	0.00%	33.33%	0.00%	0.17%	0.00%	0.00%	0.84%	3.15%	0.61%	22.64%	11.47%
hospital radiotherapy when known there was RT	0.33%	0.33%	1.25%	15.35%	0.10%	0.00%	0.00%	62.31%	0.43%	0.45%	36.26%	0.75%
date radiotherapy when known there was RT	0.00%	0.33%	2.50%	0.00%	0.00%	0.00%	8.79%	6.69%	10.68%	0.00%	37.91%	7.34%
date hormone therapy when known there was HT	0.32%	48.97%	58.54%	na	0.44%	0.00%	0.00%	78.01%	2.90%	0.00%	37.05%	30.13%

Checked data versus non-checked data



	0% Unknown		1-24% Uk		25-49% Uk		50-74% Uk		75-99% Uk		100% Uk	
Region	East Anglia		Thames		Trent		WMCIU					
	Checked	Not Checked	Checked	Not Checked	Checked	Not Checked	Checked	Not Checked	Checked	Not Checked	Checked	Not Checked
sex	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
date of birth	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
tumour side	0.00%	0.40%	1.88%	0.71%	0.22%	0.75%	0.48%	0.13%				
basis of diagnosis	0.00%	0.00%	0.94%	0.91%	0.00%	0.19%	0.00%	0.00%				
had pre-op diag (when known there was surgery)	80.00%	100.00%	19.81%	100.00%	0.00%	na	11.99%	20.49%				
invasive status	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.16%	0.00%				
histological tumour type	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.16%	0.00%				
invasive grade (invasive BC)	3.70%	5.38%	5.24%	16.05%	19.38%	33.47%	14.02%	8.78%				
non invasive grade (non invasive BC)	22.73%	11.54%	34.78%	70.77%	50.00%	100.00%	11.43%	19.35%				
invasive size (invasive BC)	82.22%	100.00%	29.68%	37.12%	69.43%	100.00%	31.76%	33.38%				
whole tumour size	11.74%	13.37%	78.82%	99.09%	68.91%	100.00%	28.05%	24.49%				
vasc/lymph invasion (invasive BC)	80.37%	100.00%	32.92%	98.91%	63.07%	100.00%	25.84%	18.88%				
excision margins (when known there was surgery)	80.37%	100.00%	38.34%	98.52%	21.38%	na	1.02%	1.06%				
number nodes sampled (invasive BC)	12.22%	19.51%	14.71%	31.88%	47.52%	100.00%	25.68%	21.14%				
number nodes positive (when known how many nodes sampled)	0.00%	0.00%	18.55%	49.36%	1.35%	na	0.00%	0.00%				
ER status	80.54%	100.00%	28.00%	98.48%	54.57%	100.00%	17.59%	21.17%				
PgR status	96.98%	100.00%	63.53%	98.88%	94.67%	100.00%	92.39%	95.66%				
HER-2 status	100.00%	100.00%	79.76%	100.00%	100.00%	100.00%	93.98%	97.83%				
Radiotherapy	31.88%	34.73%	24.71%	76.12%	58.59%	100.00%	30.43%	48.09%				
Chemotherapy	59.06%	77.05%	18.35%	71.04%	60.22%	100.00%	42.00%	80.61%				
Hormone therapy	35.57%	36.33%	23.06%	61.48%	52.39%	100.00%	29.16%	71.68%				
type final surgery to breast	7.05%	8.38%	12.24%	23.88%	42.50%	100.00%	0.63%	0.13%				
sentinel node procedure? (when known how many nodes sampled)	77.45%	100.00%	52.73%	100.00%	9.73%	na	79.81%	99.66%				
NPI (for invasive BC)	85.93%	100.00%	79.05%	99.89%	57.90%	100.00%	30.07%	23.54%				
vNPI (for non invasive BC)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	74.29%	100.00%				

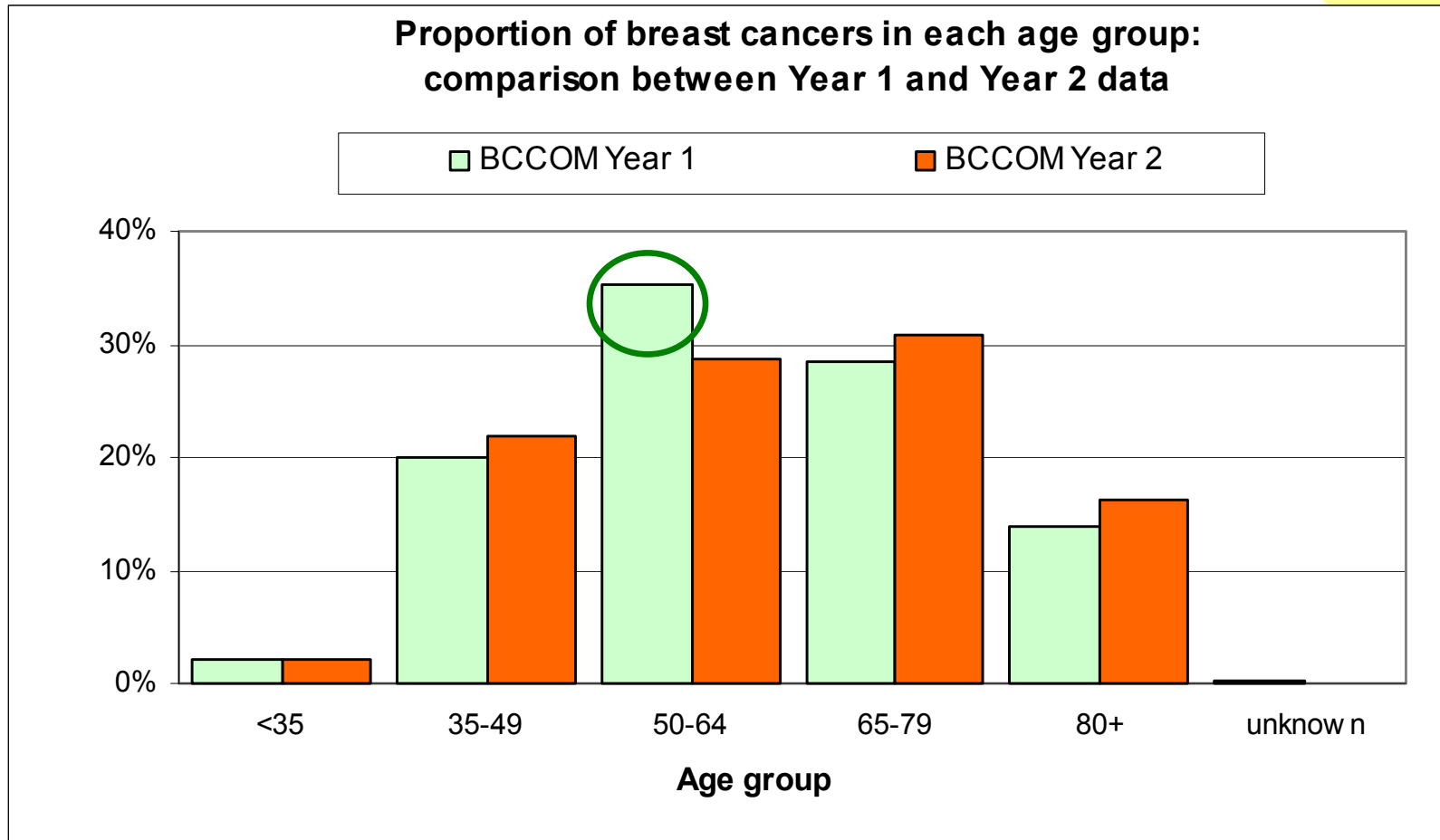


Cancers included in BCCOM Year 2

Parameter	BCCOM Year 2		[BCCOM Year 1]
	No. cancers	% all Year 2 cancers	% all Year 1 cancers
women	12,155	99.2	99.1
men	102	0.8	0.9
left side	6,186	50.5	50.2
right side	5,746	46.9	46.3
side other *	327	2.7	3.5
Invasive	11,225	91.6	92.6
deaths	1,697	13.8	12.2

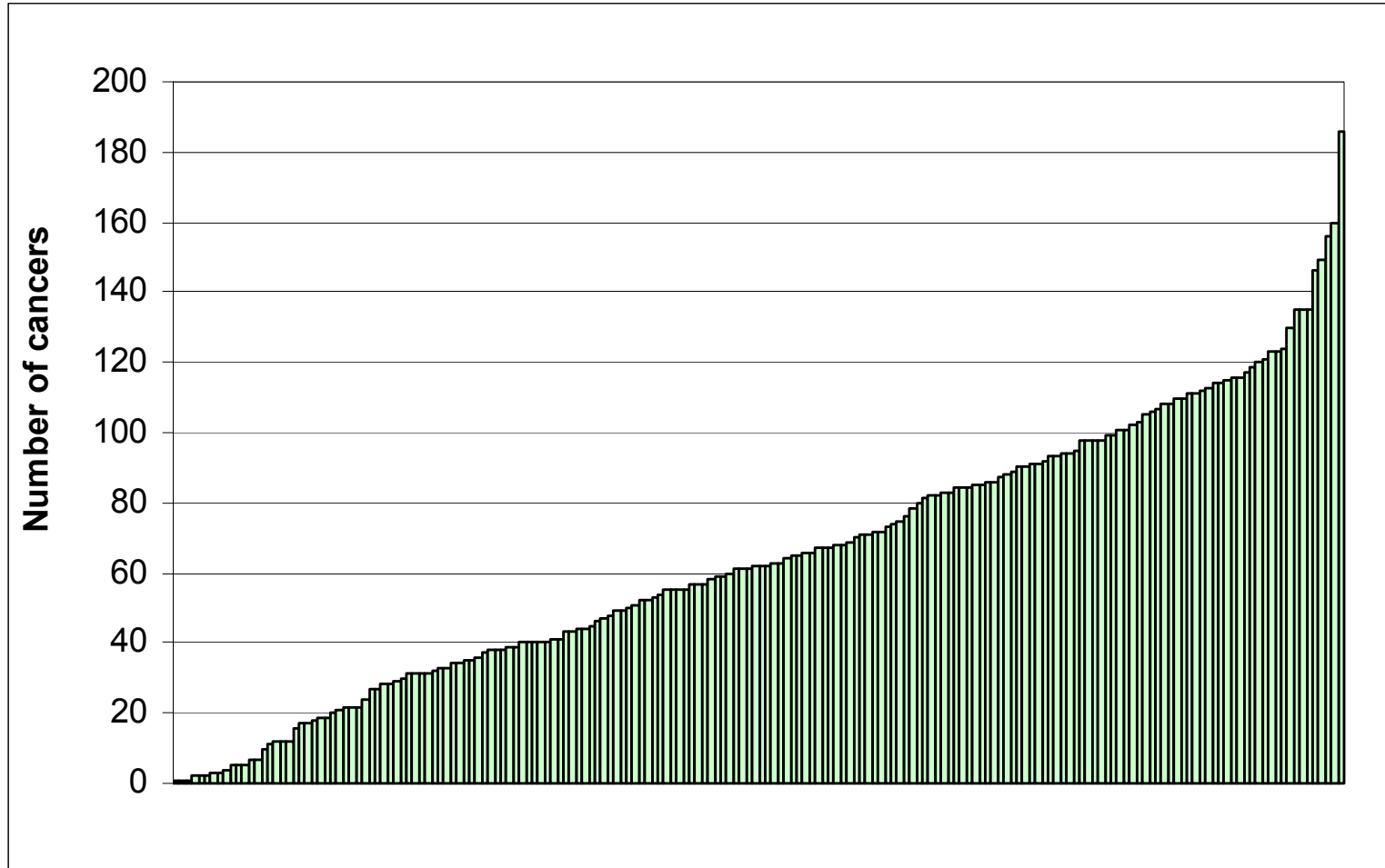
* Includes 98 bilateral cancers

Age distribution of patients

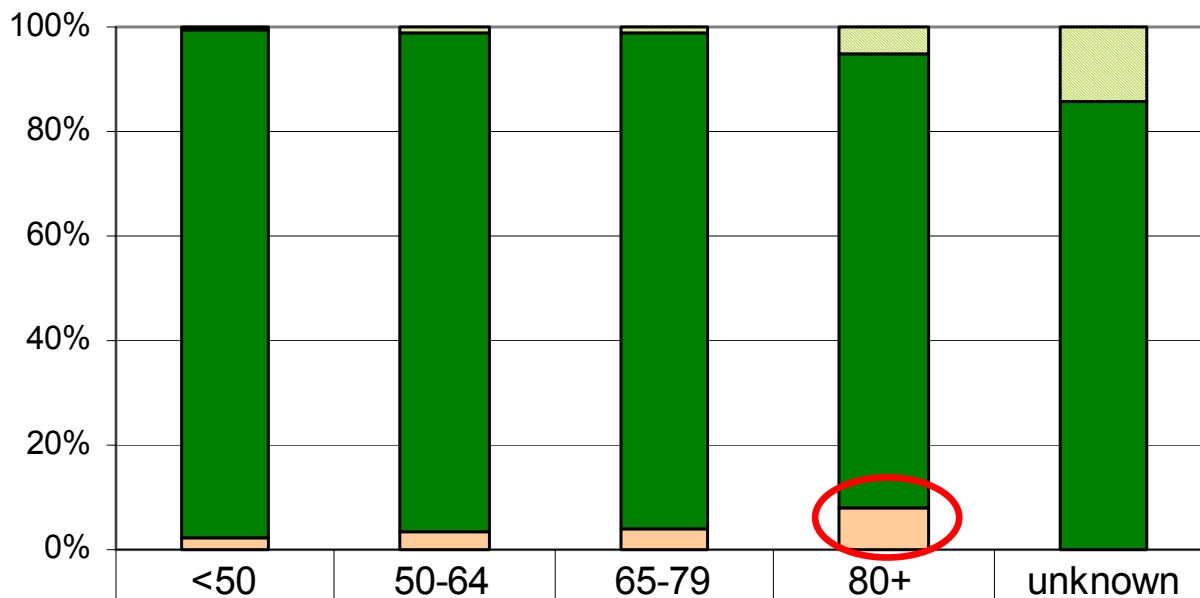


Reflects inclusion of screen-detected cancers in year 1

Variation in the number of cases treated by surgeons



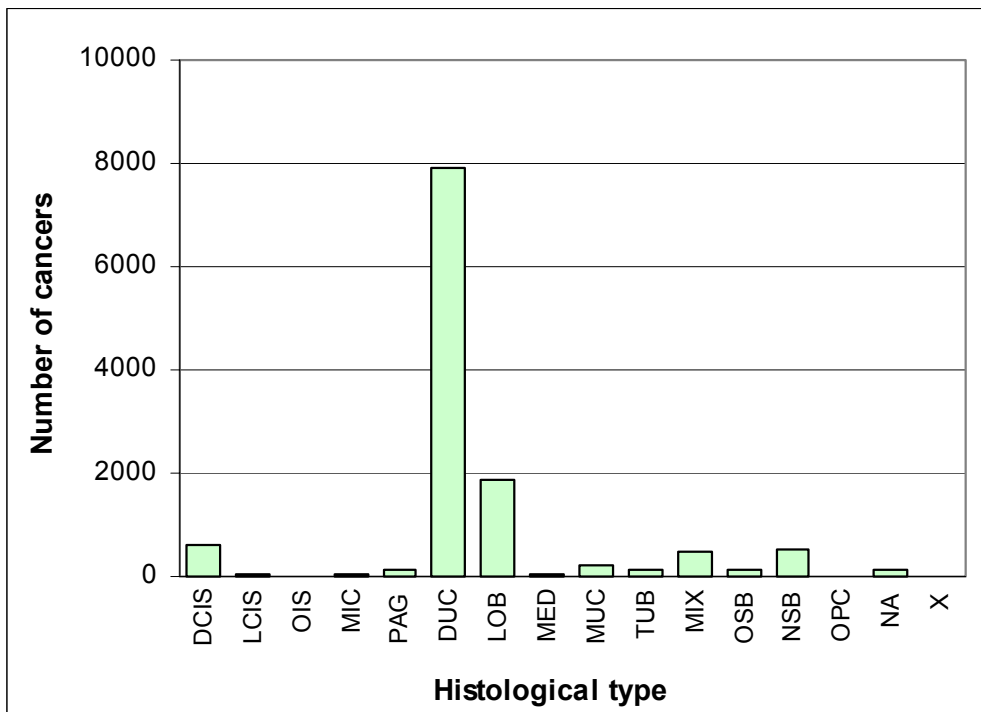
Type of diagnosis: variation with age



Other	20	32	45	106	2
Histology of primary	2856	3372	3578	1735	12
Cytology	75	116	151	159	0

Age group

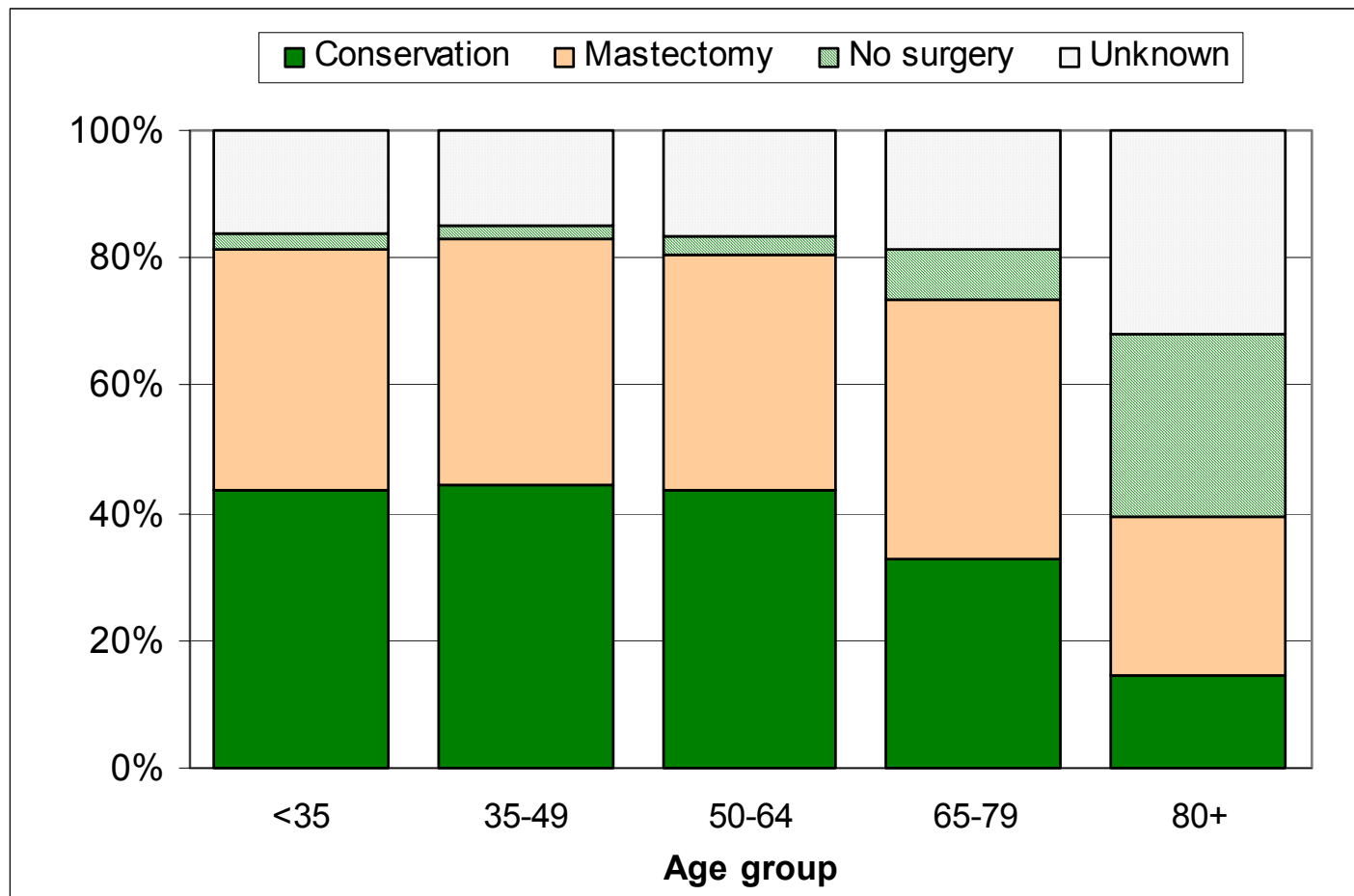
Histological type



BCCOM histology code	Histological type
DCIS	Ductal carcinoma <i>in situ</i>
LCIS	Lobular carcinoma <i>in situ</i>
OIS	Other <i>in situ</i> breast cancer
MIC	Micro-invasive breast cancer
PAG	Paget's disease of nipple
DUC	Invasive ductal carcinoma (NST)
LOB	Invasive lobular carcinoma
MED	Invasive medullary carcinoma
MUC	Invasive mucinous/colloid carcinoma
TUB	Invasive tubular carcinoma
MIX	Invasive tumour:mixed
OSB	Other specified malignant tumour of breast
NSB	Non-specific malignant tumour of breast
OPC	Other primary carcinoma (not breast)
NA	Invasive tumour:not assessable

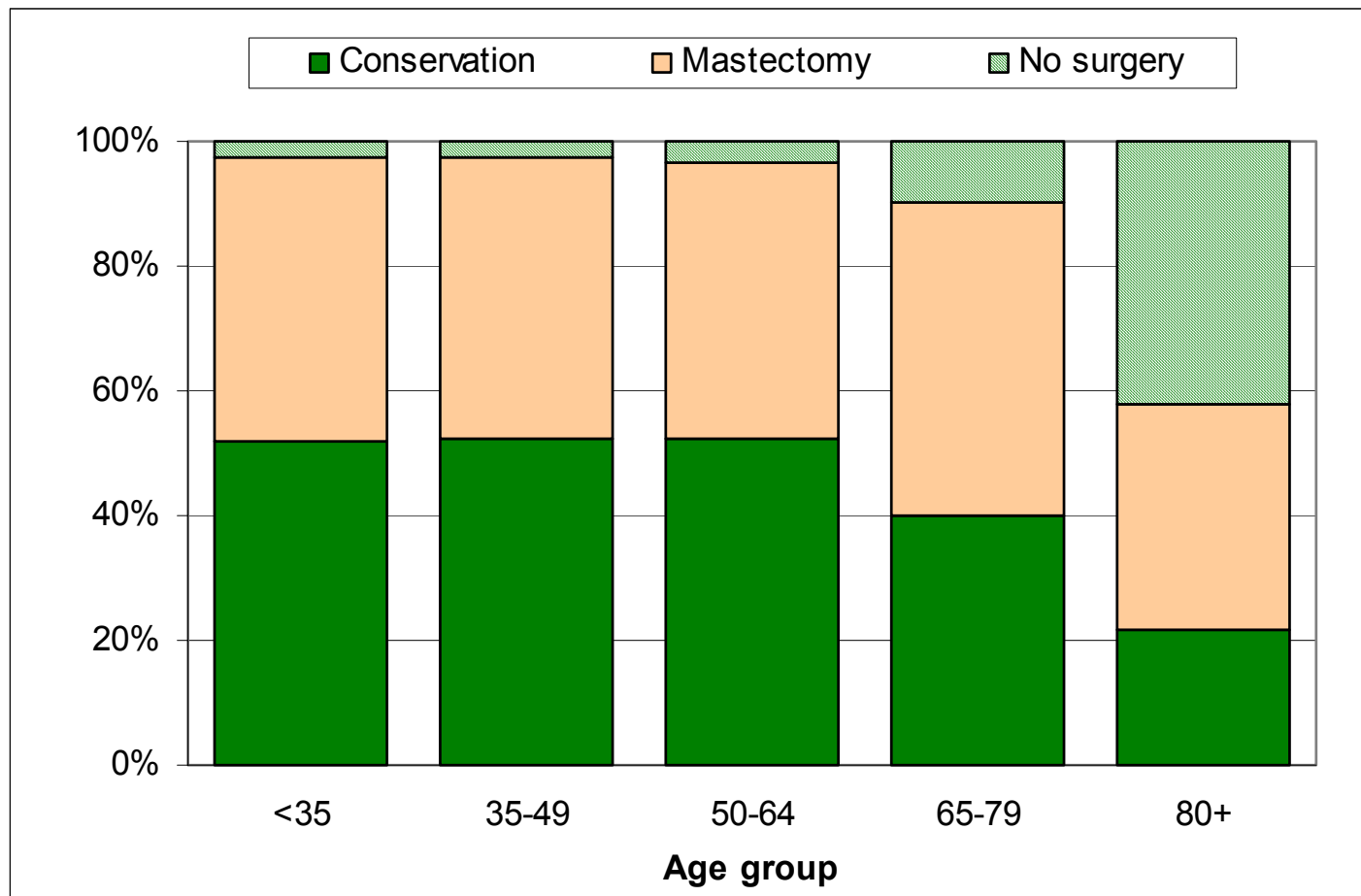


Surgical treatment: variation with age - all cancers -



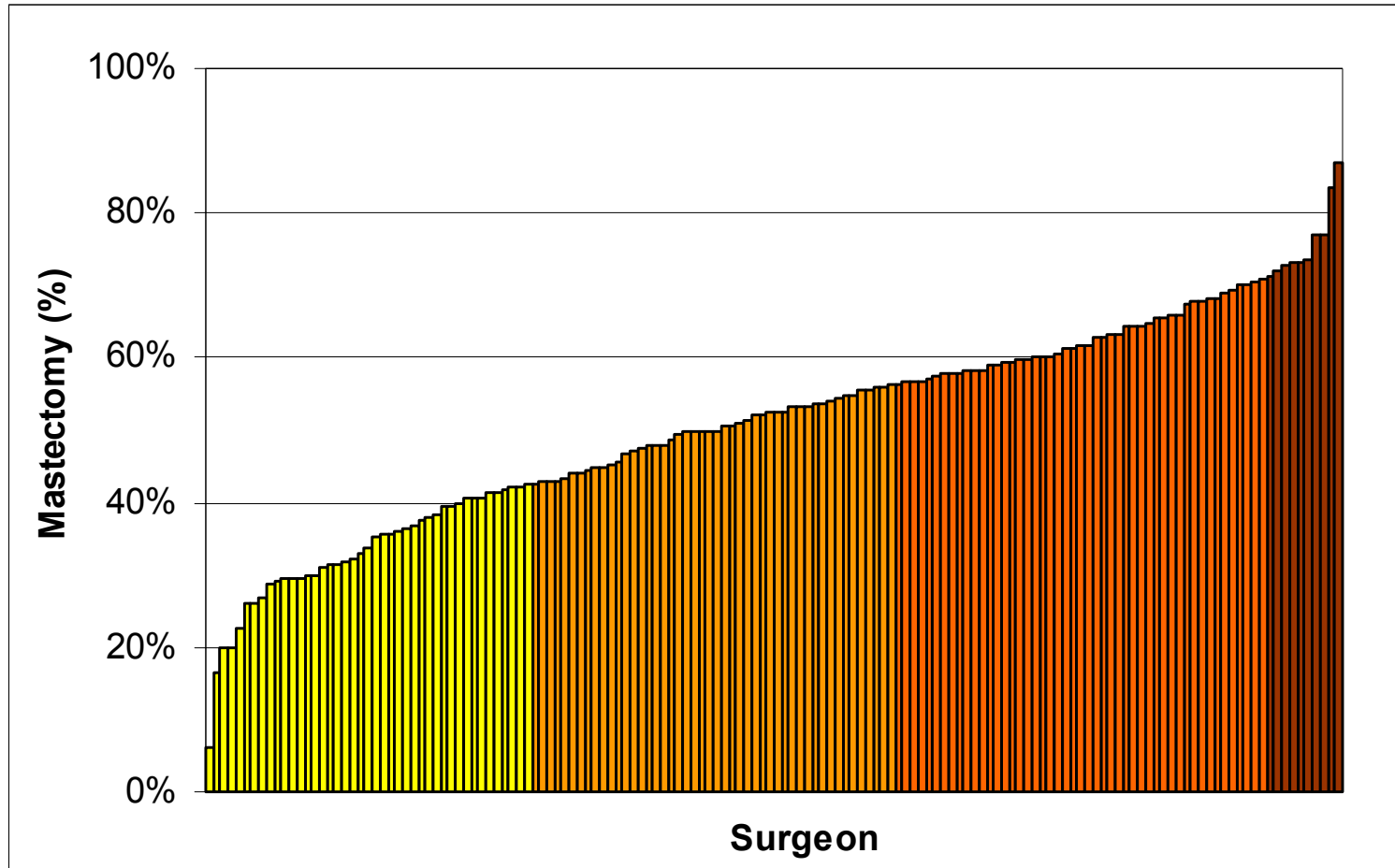


Surgical treatment: variation with age - where surgery is known -

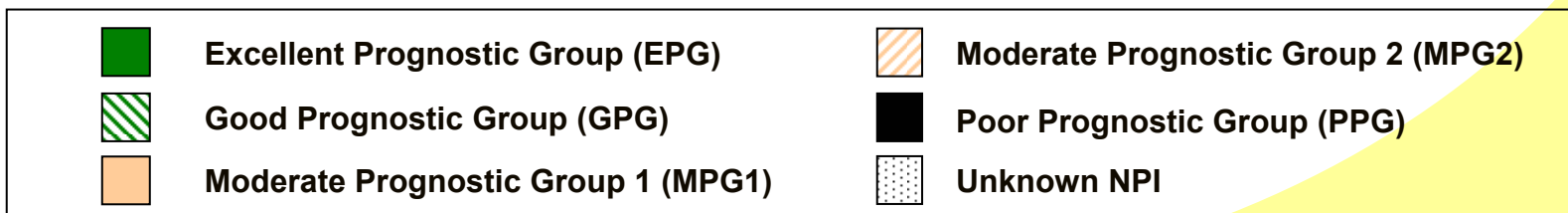
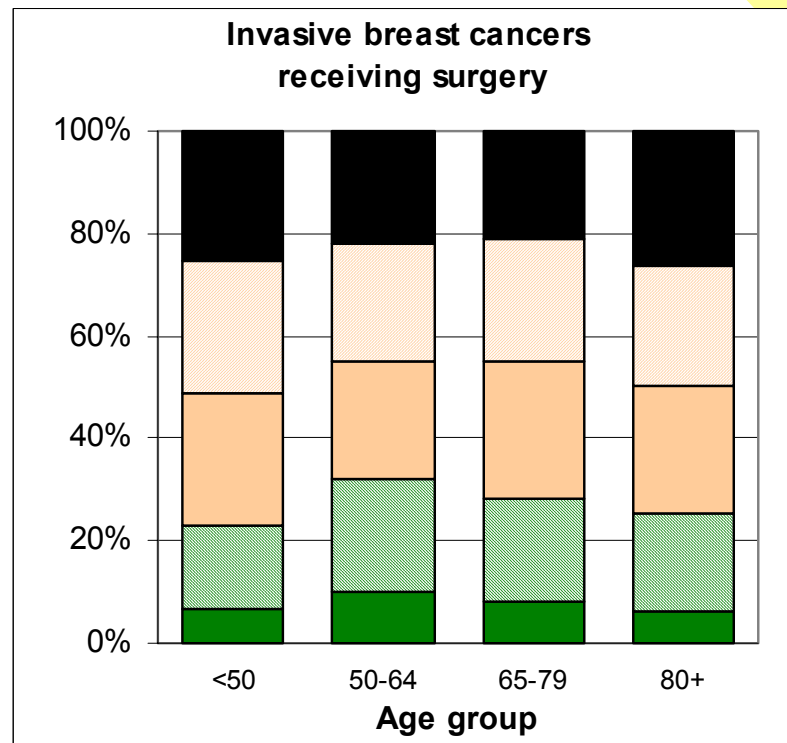
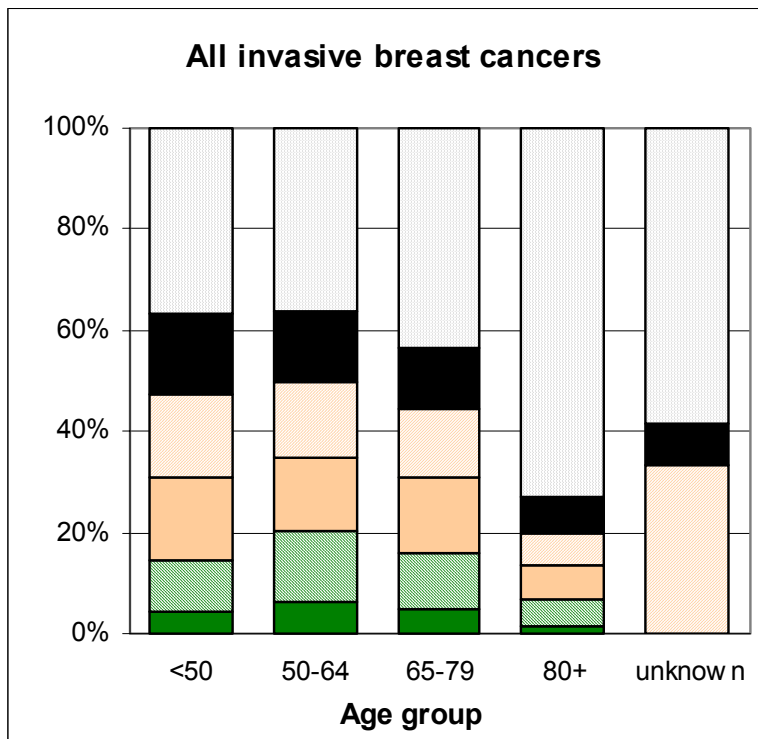




Surgical treatment: variation with surgeon

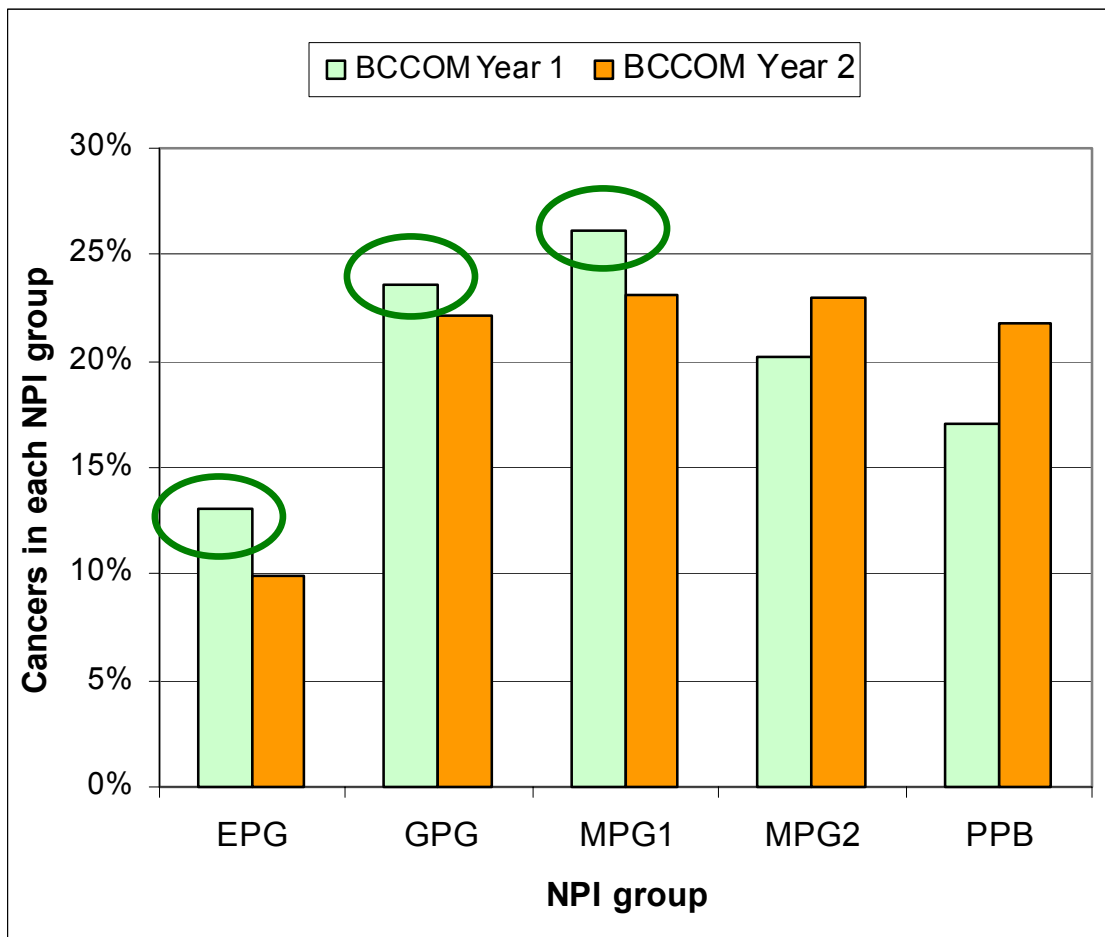


Nottingham Prognostic Index: Variation with age





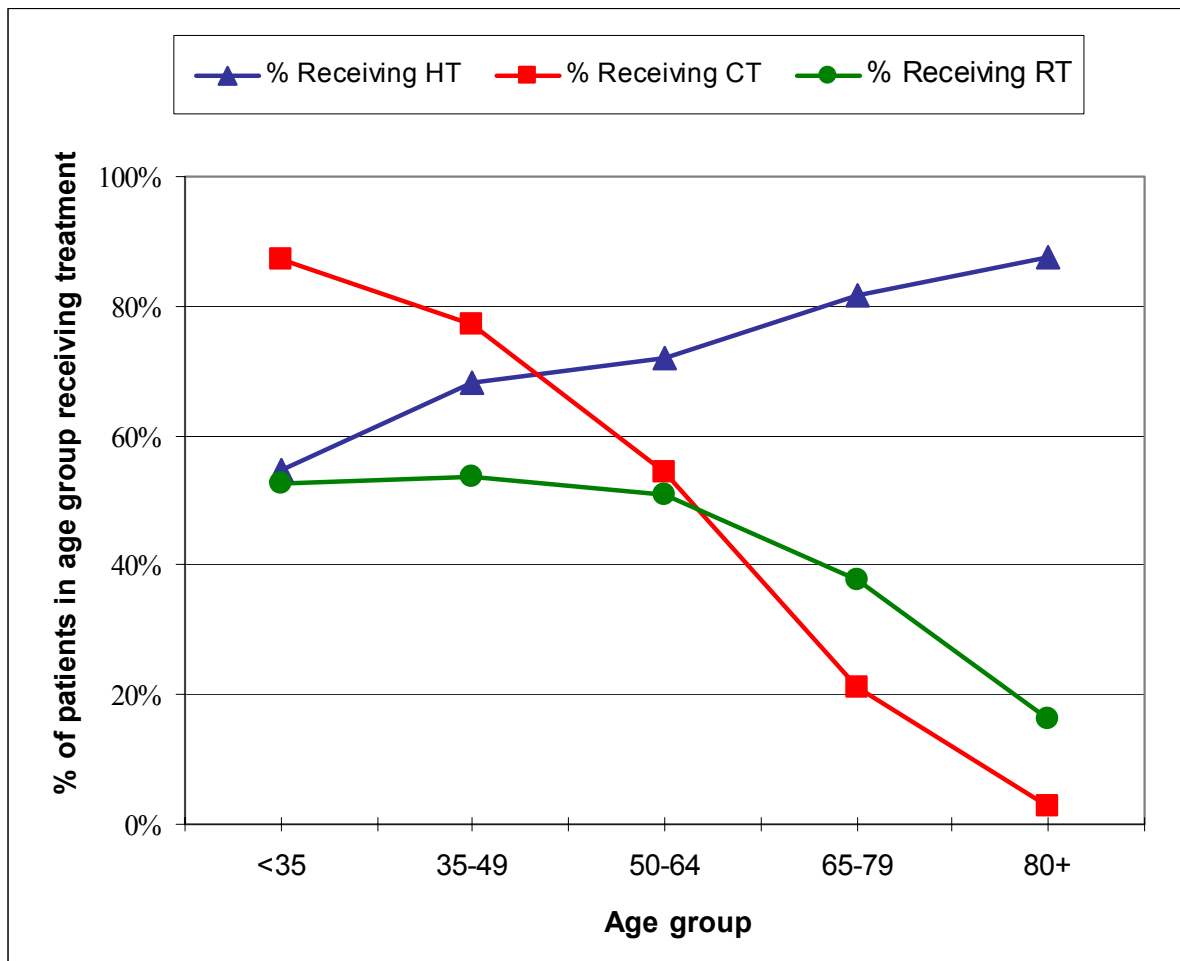
NPI variation for patients aged 50-64 between BCCOM Year 1 and Year 2



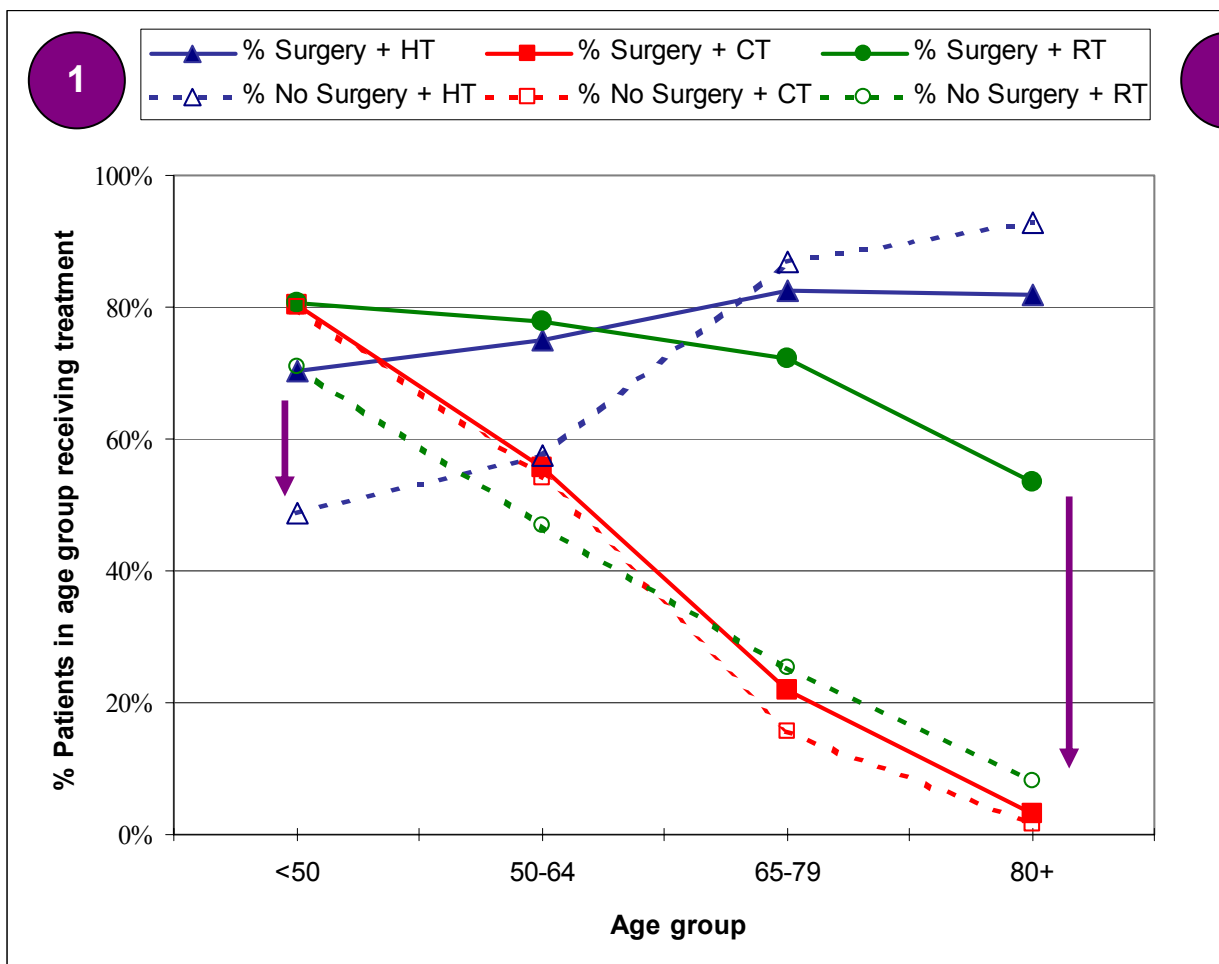
Reflects inclusion of screen-detected cancers in year 1



Adjuvant therapy: all invasive cancers variation with age



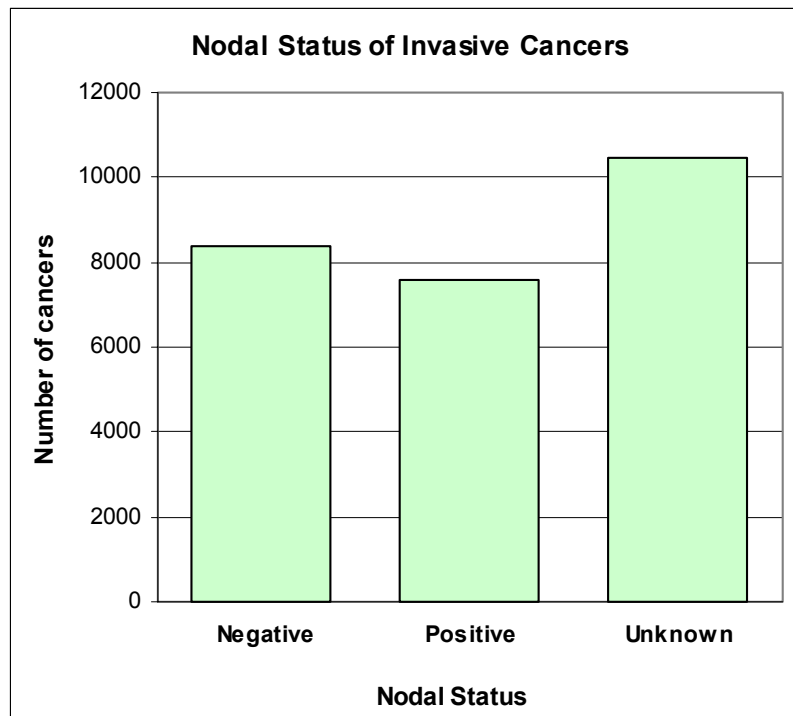
Adjuvant therapy:



“Nodal status of invasive cancers should be known”

26,439 invasive cancers diagnosed in 2002/2003 were entered in BCCOM:

- 32% were node negative
- 29% were node positive
- 39% had unknown nodal status

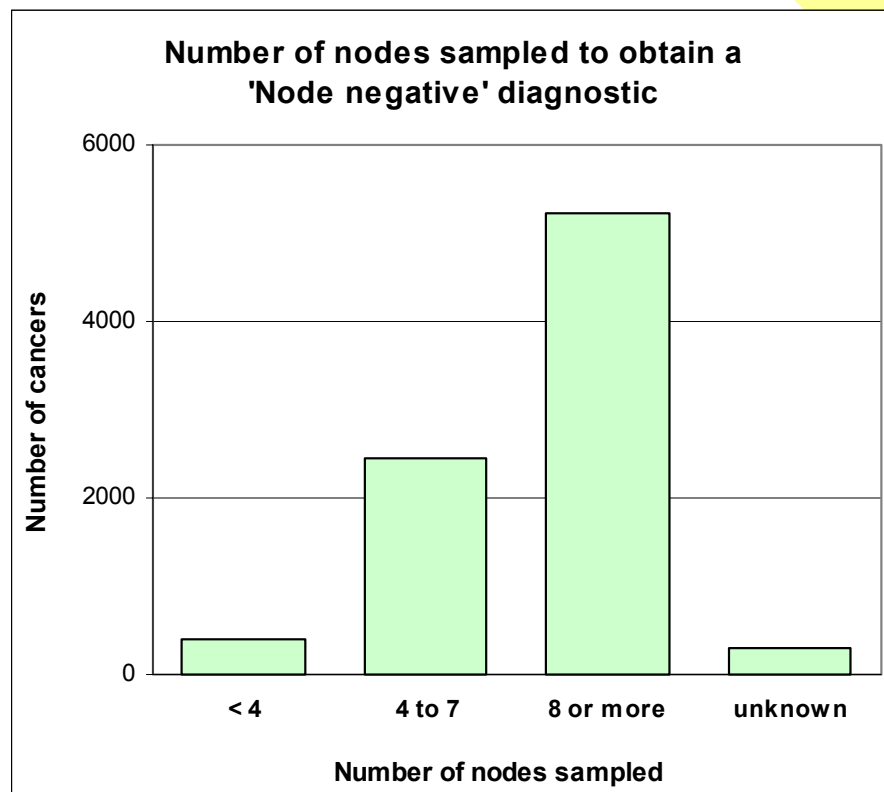




“No more than 7 nodes should be sampled to obtain a negative nodal status”

Breast cancers diagnosed in 2002/2003:
8,366 invasive cancers were node negative

- 4.7% had less than 4 nodes sampled
- 29.4% had 4 to 7 nodes sampled
- 62.4% had 8 or more nodes sampled (for 2/3 of those, 10 or more nodes were sampled)
- For 3.5%, the number of nodes sampled was unknown



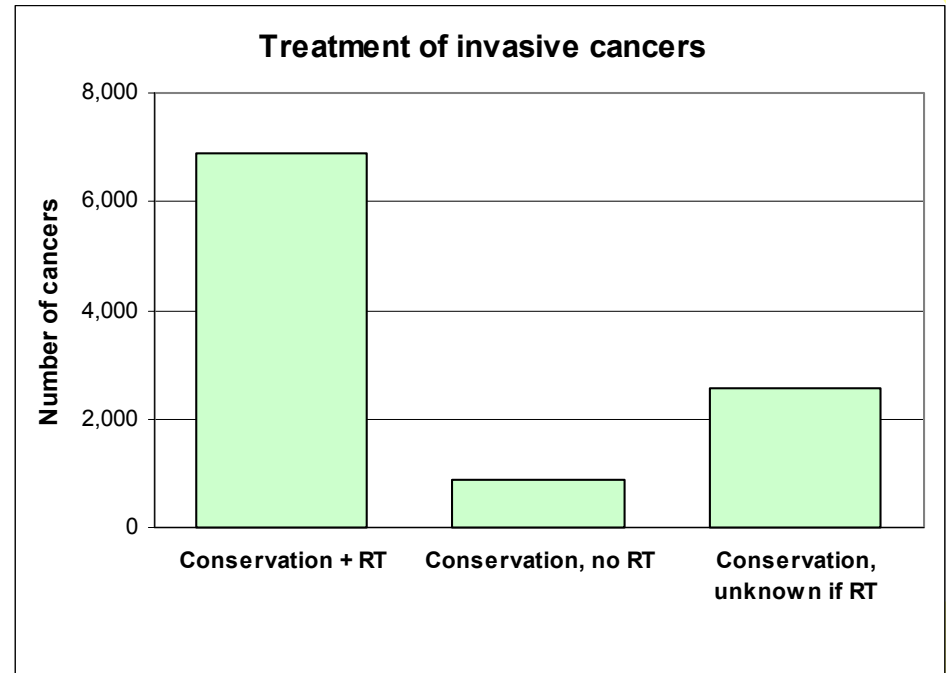


“Invasive tumours treated by conservation surgery should receive radiotherapy (RT)”

Breast cancers diagnosed in 2002/2003:

10,342 invasive cancers received conservation surgery

- 66.7% received radiotherapy
- 8.4% did not receive radiotherapy
- For 24.9%, radiotherapy data were not available



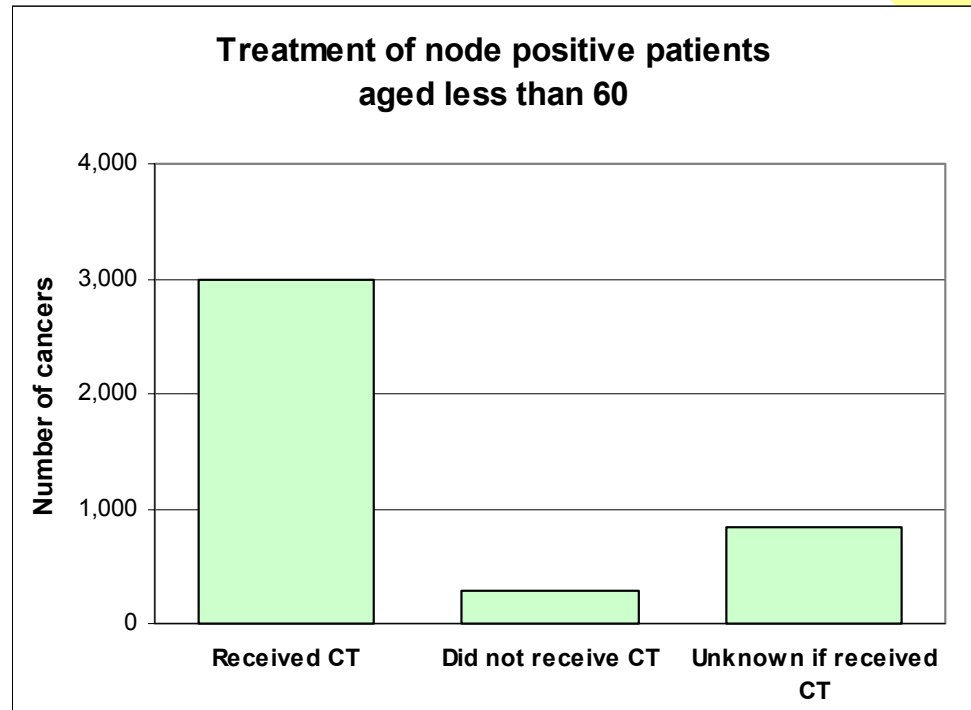


“Node positive patients aged less than 60 should receive chemotherapy (CT)”

Breast cancers diagnosed in 2002/2003:

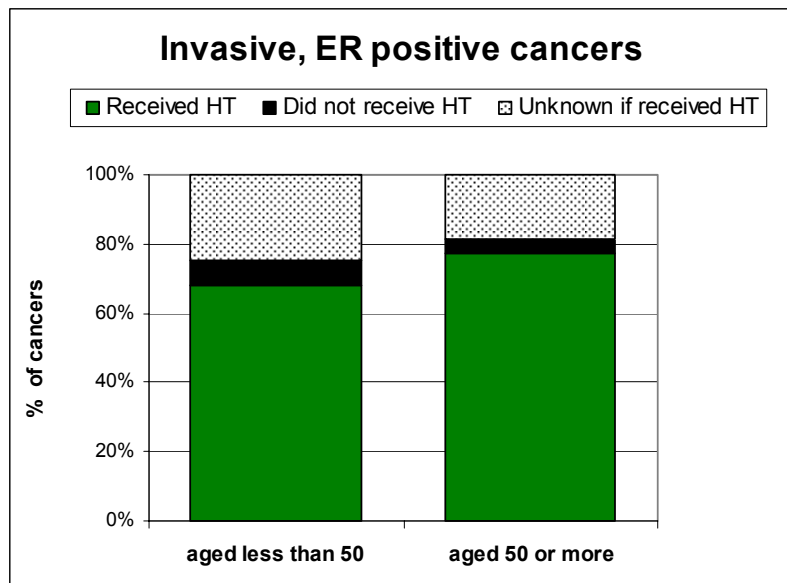
4,109 patients aged less than 60 were node positive

- 72.7% received chemotherapy
- 7.2% did not receive radiotherapy
- For 20.2%, chemotherapy data were not available

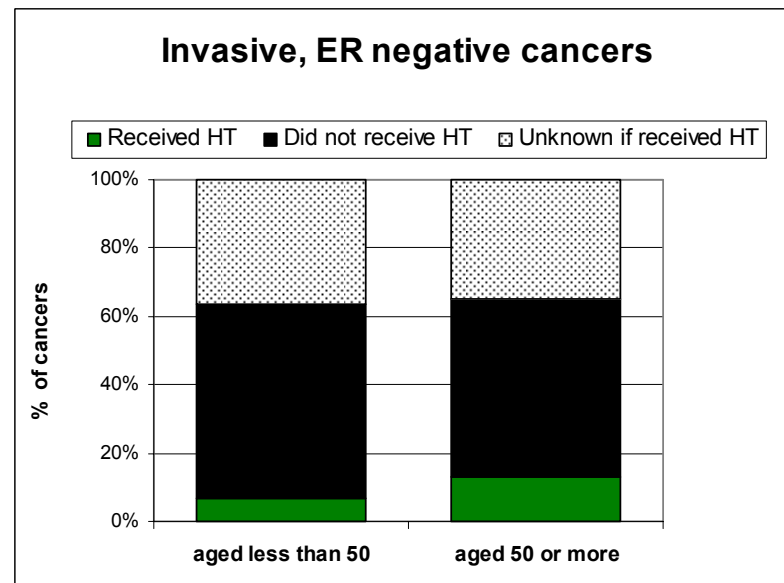




“% of patients receiving hormone therapy (HT)”



- 1,696 patients aged less than 50 were ER positive
- 5,569 patients aged 50 or more were ER positive



- 576 patients aged less than 50 were ER negative
- 1,397 patients aged 50 or more were ER negative



Thankyou
Thankyou



Contribution to BCCOM Year 2 data were received from:



NYCRIS	East Anglia	Merseyside & Cheshire	North Western	Thames	Scotland	West Midlands
P Bhaskar	TI Abdullah	R Audisio	E Gross	IA Ahmed	AD Newland	Abeywickrene
RD Bliss	T Archer	L Chagla	DGD Sandilands	SM Allan	MK Osman	A Aukland
R Brookstein	EJ Duggan	MV Chandrashekar		<i>WH Allum</i>	CJ Simpson	B Balasubramanian
DA Browell	PG Gough	MB Clague	Northern Ireland	T Bates	P Whitford	JH Brown
M Carr	CJ Mortimer	C Holcombe	AM Carragher	PG Bentley		R Brown
WJ Cunliffe	JH Pereira	S Jmor	D Gilpin	M Burke		TE Bucknall
PJ Drew	MR Pittam	Meehan	SJ Kirk	RS Cummins	Wales	AP Corder
GW Dyke	D Ravichandran	S Poonawalla	RAJ Spence	AJ Desai	RA Cochrane	TJ Duffy
JN Fox	S Singh	Ray	WJI Stirling	M Douek	DJ Crawford	DJ Ellis
IA Goulbourne		A Waghorn	A Wilkinson	<i>SR Ebbs</i>	CA Gateley	DW England
CD Griffith				I Fentiman	S Goyal	JWL Fielding
AB Griffiths	Oxford	South West	Trent	NJ Griffiths	PA Holland	K Fortes Mayer
C Hennessy	K Abdul-Wahab	R Bourne	D Chadwick	<i>G Gui</i>	S Holt	A Francis
MJ Higgs	PJ Clarke	PJ Cant	NW Everson	JRW Gumpert	RC Johnson	R Gendy
K Horgan	SP Courtney	E Drabble	BJ Harrison	H Hamed	MH Lewis	MT Hallissey
IF Hutchinson	JW Dawson	JJ Earnshaw	HW Holliday	Hedde	M Lwin	C Hinton
RA Knox	MN De Halvi	D Finch	S Holt	DB Jackson	RE Mansel	R Hurlow
V Kurup	MJ Greenall	M Galea	NH Kazzazi	M Keshtgar	I Monypenny	B Isgar
MRJ Lansdown	CL Griffiths	M Graham	SR Kohlhardt	<i>G Querci della Rovere</i>	JK Pye	B Jones
T Layzell	J Harisha	JW Groome	KM Kolar	Rather	SG Shering	RM Kirby
T Lennard	GA McPherson	ME Lucarotti	JV Psaila	Rehman	HM Sweetland	MJR Lee
J MacFie	A Mitchell	A Paterson	MW Reed	<i>NPM Sacks</i>	E Vaughan-Williams	P Matey
TK Mahapatra	MD Rashed	C Rickford	M Sibbering	R Sainsbury	R Visvanathan	R Nangalia
Mancey-Jones	PC Rutter	A Sammon	A Stotter	<i>AE Searle</i>	DJT Webster	SJ Parker
VK Modgill	RG Souter	Shinkfield	K Valassiadou	E Shah	RJL Williams	CA Rogers
AH Nejim	RD Stewart	D Snyders	Y Wahedna	H Singhal		Sterne
S Nicholson	AR Taylor	JM Symes	R Windle	HD Sinnett		P Stonelake
CJ Pritchett	HN Umeh	R Watkins	L Wyld	Smedley		J Taylor
NK Sharma			A Wyman	Stoker		T Usman
M Williams				KK Thakur		L Vishwanath
MMKI Youssef				AE Young		
AS Zardeb				C Zammit		