

# National Bowel Cancer Audit Report 2006

## Public and Executive Summary



Prepared in association with:

The Healthcare Commission • The Association of Coloproctology of Great Britain and Ireland

FOR HEALTH AND SOCIAL CARE



# National Bowel Cancer Audit

## Public and Executive Summary

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This first Public and Executive Summary for the National Bowel Cancer Audit presents findings on data collected between April 2003 and March 2004, and between April 2004 and March 2005.

Printed copies of the first Public and Executive Summary report for the National Bowel Cancer Audit can be ordered quoting reference number 09100602, or call The Information Centre's Contact Centre on 0845 300 6016 or email [bowelcancer@ic.nhs.uk](mailto:bowelcancer@ic.nhs.uk)

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For previous reports and the risk model please refer to:

NBOCAP website: [www.nbocap.org.uk](http://www.nbocap.org.uk)

# Foreword

National clinical audits have a very important role in driving up the quality of Cancer Services. I would like to congratulate all the colorectal teams in the UK who have contributed data for this report. The findings show significant improvements on several important parameters. However, only around one third of hospitals are currently participating. Our objective must be to encourage others to submit data.



**Prof. Mike Richards**

National Cancer Director

# Acknowledgements

The National Bowel Cancer Audit is managed by The Information Centre for health and social care (The IC) and has been commissioned by the Healthcare Commission and developed in partnership with the Association of Coloproctology of Great Britain and Ireland (ACPGBI). The analysis for the annual report on which this summary is based was undertaken by the Department of Biosurgery and Surgical Technology at Imperial College, London.

Lynn Faulds Wood is the patient representative for the National Bowel Cancer Audit.

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# Executive Summary

The detail within this Public and Executive Summary is taken from The Association of Coloproctology of Great Britain and Ireland (ACPGBI) report of The National Bowel Cancer Audit Project "Assessing Quality" published June 2006. The ACPGBI annual report describes the clinical details and outcomes of patients diagnosed with bowel cancer in the periods April 2003 to March 2004, and April 2004 to March 2005.

Casemix adjustment has been an important feature of this audit so that in the future, when the audit includes most of the bowel cancers in the UK and there is confidence in the completeness and quality of the data, it will be possible to make fair comparisons between hospital units and put the detailed results into the public domain.

This report includes information from 18,539 patients from 78 hospital units, approximately 30 per cent of all hospital units in the UK. 16,463 patients (84 per cent) underwent surgery, with an overall post-operative mortality rate of 6 per cent, ranging from 4 per cent in patients having planned operations to 20 per cent in those having emergency operations. On a national basis much of the data have remained stable since the first report 5 years ago. In contrast, at unit level, there can be marked variation in clinical outcomes year by year. Such annual differences are probably a natural phenomenon, due to the variability of presentation of bowel cancer, but may also reflect the relatively small sample sizes at the hospital unit level. For these reasons, analysis of several years' pooled data is essential to provide reliable measures of unit clinical outcomes for comparison against national standards.

The permanent colostomy (stoma/pouch/bag) rate after surgery for rectal cancer is a measure of the quality of surgical care, in that it should be performed in as few cases as possible. The rate has fallen from 25 per cent to 18 per cent over the 5 years of audit.

The thoroughness of examination of the lymph glands that drain fluid from the cancer has been identified by the National Institute for Clinical Excellence (NICE) as a marker of care. This examination, by the pathologist, has a key impact on deciding whether chemotherapy would be of additional benefit following surgery. The proportion of units meeting the NICE target of an average of 12 lymph nodes to be examined per case has risen from 28 per cent to 50 per cent between 2001 and 2005.

The aggregated data from 5 years of the audit, based on 47,510 patients, shows that 85 per cent of patients undergo surgery for colorectal cancer, 78 per cent of these being treated on an elective basis. Overall 18 per cent of those patients undergoing surgery have disease that is so advanced no cure is possible. Another 25-30 per cent subsequently develop widespread disease after treatment and become incurable.

There is an urgent need to increase the number of cases entered into the audit and improve the completeness and quality of the data submitted. Just over 30 per cent of hospital units have contributed data to this year's audit report. Increased participation and improvements in data completeness and quality will require the necessary resources and the combined efforts not only of the clinicians treating bowel cancer but also the support of hospital management, who should understand that this is a very cost effective way of monitoring and improving the process of care and clinical outcomes including survival from bowel cancer.

The Healthcare Commission acknowledges that participation by hospital units in clinical audits is an indication of good governance. Participation by hospital units in relevant national audits will form part of the Annual Health Check.

'The Cancer Measures', a key element of the cancer Peer Review process, requires Networks to establish a robust clinical audit system and programme; participation in the national audit would support this directly.

Recommendations for the future:

- Patients should ask if their unit participates in the National Audit
- All trusts should participate
- Cancer Networks should encourage trusts to submit their data to the audit and use this data for local audit
- Hospitals need to provide better data on:
  - Circumferential Resection Margin Involvement
  - Local staging
  - MDT discussions
  - Excision of lymph nodes
  - ASA grade.

# Background to Bowel Cancer

Colorectal (large bowel) cancer is the most common cancer in non-smokers and second most common cause of death from cancer in England and Wales. Each year over 30,000 new cases are diagnosed, and bowel cancer is registered as the underlying cause of death in half of this number.

The incidence of bowel cancer is gradually increasing, largely due to an ageing population because, as with most forms of cancer, it is age related. In men there is an overall increase in incidence.

In patients over 75 years, 300 cases are diagnosed per 100,000 of the population per year. The overall median age at diagnosis is just over 70. Age specific rates and overall incidence rates vary across Britain and this suggests that lifestyle and environmental factors contribute to the development of the disease.

Survival beyond 5 years in bowel cancer is usually equivalent to a cure and survival rates in the UK have been rising steadily over the past three decades. However, significant international differences suggest that there is considerable scope for improvement. In the United Kingdom 50 per cent of patients with bowel cancer survive 5 years which is lower than Western Europe (over 50 per cent survival) and America (60 per cent survival). Differences are mainly due to UK patients presenting to hospital with late stage, more advanced disease. The reasons for this are not yet clear but could be due to poorer access to diagnostic investigations and lifestyle.

## Characteristics of Bowel Cancer

The large intestine (bowel) has two major sections, the colon (proximal large bowel) and the rectum (last 15cms of the large bowel). About two-thirds of cancers develop in the colon and the remainder in the rectum. Rectal cancer is more common in men than in women.

Bowel cancer usually develops from small benign outgrowths (polyps) which may have been present for a number of years before becoming malignant. Identification of polyps through screening may therefore actually prevent the development of cancer in some cases. However, about a third of all cases are admitted to hospital as emergencies. These possibly reflect a subset of more aggressive bowel cancers as they are usually found after the patient has had severe symptoms for only a short time.

## Impact of Bowel Cancer on Patients

Bowel cancer requires major surgery, with a significant risk of death and serious post-operative complications. Surgery results in 18 per cent of patients having a permanent stoma (pouch/bag).

6 per cent of patients die following surgery. This 'post-operative mortality' ranges from 4 per cent of patients who have planned operations to 20 per cent of patients who have surgery as an emergency.

There are 15,000 deaths from bowel cancer per year (40 patients per day) in the UK, only 50 per cent of all patients are cured of their disease.

# Why the National Bowel Cancer Audit Project is good news for patients

- Lynn Faulds Wood

"When people are diagnosed with bowel cancer, once the shock has worn off, the questions increasingly being asked are:

- "How good is my hospital?"
- "Would I have better chances of survival, better results from my treatment at another hospital?"

This questioning attitude is being encouraged by the Department of Health's Choice Agenda - and it is information which people surely have a right to know.

We now know there is a postcode lottery in that patients have better outcomes in some parts of the country, in some hospitals rather than others, and of course we all want to go to the best medical centres available to us. This is particularly important for bowel cancer - the commonest cancer in Europe last year and second biggest cancer killer in this country. Since the discovery that the UK, far from being one of the best places to be treated for this common cancer, is actually among the worst in Europe with our average survival rate 50 per cent compared with over 50 per cent in Europe and 60 per cent in the United States.

The National Bowel Cancer Audit, broader in the areas covered than previous official audits and much more accurate, is great news for patients as it could dramatically drive up standards of care. It will help medical teams to measure how they are doing against the national average and help hospitals to assess on a broad range of measures how good their services really are to bowel cancer patients.

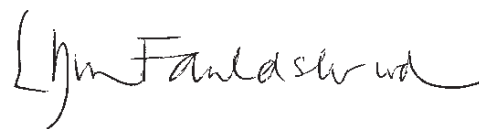
Audits in the United States, like the national cystic fibrosis audit, have shown that they can greatly improve life expectancy and treatment, simply by doctors and medical teams being able to compare their work with best practice. Tell doctors or Multi Disciplinary Teams (MDT) that they are not as good as other hospitals in the country and the improvement in performance is almost immediate. It may be simply a problem with data collection or a re-training issue but without the National Bowel Cancer Audit who would know if there was a problem?

Good audits provide a tremendous fillip to re-training, re-examination of practice to simply doing better.

Patients have a right to expect good treatment and increasingly they will be asking if their hospitals are members of the audit. To all hospital managers - please ensure your bowel cancer team has the resources to join the audit and help UK patients to have the same chances as the rest of the Western world."

Lynn Faulds Wood is the patient representative for the National Bowel Cancer Audit and the founder of Lynn's Bowel Cancer Campaign ([www.bowelcancer.tv](http://www.bowelcancer.tv)). Lynn is also a committee member of:

- Department of Health Colorectal Cancer Cost-Benefit Committee
- European Commission Colorectal Cancer Quality Screening Guidelines Group
- National Cancer Director's Bowel Cancer Advisory Group.



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# Introduction to the National Bowel Cancer Audit

## Aims of the Audit

The main purposes of the audit are to measure the process of care and clinical outcomes, enabling comparisons between hospitals and bringing about improvements where necessary. This comparison is complicated because of the variation in the mix of patients (casemix) between one hospital and another. Currently the main factors to consider in casemix include age, social deprivation, extent of development of the cancer (stage), operative urgency (whether an emergency or not) and whether the patient also has another illness (comorbidity).

The data collected via the audit enables individual surgeons to know their unit's results in terms of:

- Their casemix i.e. the age, stage of disease and fitness of their patients
- Processes of care i.e. quality of investigations, access to specialist care, time to treatment
- Clinical outcomes i.e. post-operative mortality, length of hospital stay after operation, frequency of stomas and serious post-operative complications, local recurrence of the cancer after rectal cancer surgery and survival from cancer.

All of these can be compared with national averages.

Hospitals that consistently achieve above average results will be identified and by adopting their methods in other centres, the quality of care and survival rates for bowel cancer patients across the United Kingdom will be improved.

The audit will, in time, assess achievement against many of the NICE guidelines and is a potentially powerful way of monitoring which hospitals are observing the national guidance for bowel cancer care.

## Organisation of the Audit

The National Bowel Cancer Audit is run jointly by the National Clinical Audit Support Programme, within The Information Centre for health and social care, and the Association of Coloproctology of Great Britain and Ireland. The audit has been commissioned by the Healthcare Commission and will run for 3 years until March 2009.

The National Bowel Cancer Audit builds on an existing audit provided by the Association of Coloproctology of Great Britain and Ireland.

This audit has been in existence since 1999 and the results have been published in a series of annual reports. The audit has been able to present trend analysis, focused on outcome of treatment, for 5 consecutive years.

## The Association of Coloproctology of Great Britain and Ireland (ACPBG I)

The Association is a multi-professional organisation with over 1,000 doctors and nurses who treat the majority of patients with bowel cancer. In addition to developing a national audit the association has also worked with the Department of Health and NICE to develop guidelines and set standards for the management of patients with bowel cancer. It also sponsors and promotes research to improve outcomes.

## Audit and the Healthcare Commission

The National Bowel Cancer Audit has been commissioned by the Healthcare Commission. The Healthcare Commission is responsible for carrying out independent, authoritative and patient-centred assessments of the performance of each local NHS organisation.

The Healthcare Commission recognises that participation in clinical audits and outcomes monitoring is an indication of good governance that will be used in the Annual Health Check. Participation by trusts in national audits is amongst the information used to risk profile trusts and identify which should receive inspection visits, as part of the NHS core standards cross-checking process.

Participation in national clinical audit is also a requirement in the Wales Assembly Government's healthcare policy document, Designed for Life.

The use of specific audit items for future inclusion in the trust assessment process against Developmental Standards is under active discussion.

## National Clinical Audit Support Programme (NCASP)

The Information Centre for health and social care's National Clinical Audit Support Programme (NCASP) ([www.icservices.nhs.uk/ncasp](http://www.icservices.nhs.uk/ncasp)) manages four other national clinical audits in cancer, (Head and Neck cancer, Lung cancer, Oesophago-Gastric cancer and Mastectomy and Breast Reconstruction), together with audits in coronary heart disease and diabetes.

The Healthcare Commission funds and commissions most of these audits.

The advisory groups for the audits include representatives from the wider professional bodies and from patient groups wherever possible. Current reports on the coronary heart disease audits, the National Diabetes Audit, the National Lung Cancer Audit and the National Head and Neck Cancer Audit may be found at: [www.icservices.nhs.uk/ncasp](http://www.icservices.nhs.uk/ncasp)

## Peer Review

In England the Peer Review process assesses the quality of cancer services organised and provided by the cancer networks and the hospital based multi-disciplinary teams (MDT). The Peer Review team wishes to use specific indicators, derived from the national cancer audits in this process.

Detailed discussions are in progress to determine the precise details of the indicators, reinforcing the role of national audit as a tool for peer review.

The Cancer Measures, a key element of the review process, requires Networks to establish a robust clinical audit system and programme; participation in the national audit would support this directly.

## Contributing and Non-contributing Hospitals

The following table displays a list of all acute hospital trusts in England and Wales, and participating units from Scotland, Northern Ireland and the Republic of Ireland, indicating (✓) those which have contributed data to the ACPGBI bowel cancer audit during the five consecutive 12 month periods from April 2000 to March 2005.

| Name of NHS trust   | Year          |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
|   | 2000<br>-2001 | 2001<br>-2002 | 2002<br>-2003 | 2003<br>-2004 | 2004<br>-2005 |
| <b>England</b>  |               |               |               |               |               |
| Addenbrooke's NHS Trust   | X             | X             | X             | ✓             | ✓             |
| Aintree Hospitals NHS Trust   | X             | X             | X             | X             | X             |
| Airedale NHS Trust  | X             | X             | ✓             | X             | X             |
| Ashford and St Peter's Hospitals NHS Trust                                  | ✓             | ✓             | X             | X             | X             |
| Barking, Havering and Redbridge Hospitals NHS Trust                         | X             | X             | X             | ✓             | X             |
| Barnet and Chase Farm Hospitals NHS Trust                                   | X             | X             | X             | X             | X             |
| Barnsley District General Hospital NHS Trust                                | X             | X             | X             | X             | X             |
| Barts and The London NHS Trust  | X             | ✓             | ✓             | ✓             | ✓             |
| Basildon and Thurrock University Hospitals NHS Trust                        | X             | ✓             | X             | ✓             | X             |
| Bedford Hospitals NHS Trust   | X             | X             | X             | X             | X             |
| Birmingham Heartlands and Solihull (Teaching) NHS Trust                     | X             | X             | X             | X             | X             |
| Blackpool, Fylde and Wyre Hospitals NHS Trust                               | X             | ✓             | X             | X             | X             |
| Bolton Hospitals NHS Trust  | X             | X             | X             | X             | X             |
| Bradford Teaching Hospitals NHS Trust                                       | X             | X             | X             | ✓             | ✓             |
| Brighton and Sussex University Hospitals NHS Trust                          | ✓             | ✓             | ✓             | X             | X             |
| Bromley Hospitals NHS Trust   | X             | X             | X             | X             | X             |
| Buckinghamshire Hospitals NHS Trust   | X             | X             | ✓             | ✓             | X             |
| Burton Hospitals NHS Trust  | X             | X             | X             | X             | X             |
| Calderdale and Huddersfield NHS Trust                                       | X             | ✓             | ✓             | ✓             | X             |
| Central Manchester and Manchester Children's University Hospitals NHS Trust | ✓             | X             | X             | X             | X             |

| Name of NHS trust  | Year          |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
|  | 2000<br>-2001 | 2001<br>-2002 | 2002<br>-2003 | 2003<br>-2004 | 2004<br>-2005 |
| Chelsea and Westminster Healthcare NHS Trust               | ✓             | ✓             | ✓             | ✓             | ✓             |
| Chesterfield and North Derbyshire Royal Hospital NHS Trust | ✗             | ✗             | ✗             | ✗             | ✗             |
| Christie Hospital NHS Trust                                | ✗             | ✗             | ✓             | ✓             | ✓             |
| City Hospitals Sunderland NHS Trust                        | ✓             | ✓             | ✓             | ✓             | ✗             |
| Countess of Chester Hospital NHS Trust                     | ✓             | ✗             | ✗             | ✓             | ✓             |
| County Durham and Darlington Acute Hospitals NHS Trust     | ✓             | ✓             | ✓             | ✓             | ✗             |
| Dartford and Gravesham NHS Trust                           | ✗             | ✗             | ✓             | ✓             | ✗             |
| Doncaster and Bassetlaw Hospitals NHS Trust                | ✗             | ✗             | ✗             | ✗             | ✗             |
| Dudley Group of Hospitals NHS Trust                        | ✗             | ✓             | ✓             | ✗             | ✗             |
| Ealing Hospital NHS Trust                                  | ✗             | ✗             | ✗             | ✗             | ✗             |
| East and North Hertfordshire NHS Trust                     | ✓             | ✓             | ✓             | ✓             | ✓             |
| East Cheshire NHS Trust                                    | ✗             | ✗             | ✗             | ✗             | ✗             |
| East Kent Hospitals NHS Trust                              | ✗             | ✗             | ✓             | ✗             | ✗             |
| East Lancashire Hospitals NHS Trust                        | ✗             | ✗             | ✗             | ✗             | ✗             |
| East Somerset NHS Trust                                    | ✗             | ✓             | ✓             | ✓             | ✓             |
| East Sussex Hospitals NHS Trust                            | ✓             | ✓             | ✓             | ✓             | ✓             |
| Epsom and St Helier University Hospitals NHS Trust         | ✗             | ✗             | ✗             | ✗             | ✗             |
| Essex Rivers Healthcare NHS Trust                          | ✓             | ✓             | ✓             | ✓             | ✓             |
| Frimley Park Hospital NHS Trust                            | ✗             | ✗             | ✗             | ✗             | ✗             |
| Gateshead Health NHS Trust                                 | ✓             | ✓             | ✓             | ✗             | ✗             |
| George Eliot Hospital NHS Trust                            | ✗             | ✗             | ✗             | ✗             | ✓             |
| Gloucestershire Hospitals NHS Trust                        | ✗             | ✗             | ✗             | ✗             | ✗             |
| Good Hope Hospital NHS Trust                               | ✓             | ✓             | ✓             | ✓             | ✓             |
| Guy's and St Thomas' NHS Trust                             | ✗             | ✗             | ✗             | ✗             | ✗             |
| Hammersmith Hospitals NHS Trust                            | ✓             | ✓             | ✗             | ✓             | ✓             |
| Harrogate Health Care NHS Trust                            | ✗             | ✓             | ✓             | ✓             | ✓             |
| Heatherwood and Wexham Park Hospitals NHS Trust            | ✓             | ✓             | ✓             | ✗             | ✗             |
| Hereford Hospitals NHS Trust                               | ✓             | ✓             | ✓             | ✓             | ✗             |
| Hinchingbrooke Health Care NHS Trust                       | ✗             | ✗             | ✗             | ✗             | ✗             |
| Homerton University Hospital NHS Trust                     | ✓             | ✓             | ✓             | ✓             | ✓             |
| Hull and East Yorkshire Hospitals NHS Trust                | ✓             | ✗             | ✗             | ✗             | ✗             |
| Ipswich Hospital NHS Trust                                 | ✗             | ✗             | ✗             | ✗             | ✗             |
| Isle of Wight Healthcare NHS Trust                         | ✗             | ✗             | ✗             | ✗             | ✗             |
| James Paget Healthcare NHS Trust                           | ✗             | ✓             | ✓             | ✓             | ✗             |
| Kettering General Hospital NHS Trust                       | ✓             | ✗             | ✗             | ✓             | ✗             |
| King's College Hospital NHS Trust                          | ✓             | ✓             | ✗             | ✗             | ✗             |
| Kings Lynn and Wisbech Hospitals NHS Trust                 | ✗             | ✗             | ✗             | ✗             | ✗             |

| Name of NHS trust                                      | Year          |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
|  | 2000<br>-2001 | 2001<br>-2002 | 2002<br>-2003 | 2003<br>-2004 | 2004<br>-2005 |
| Kingston Hospital NHS Trust                            | X             | X             | ✓             | ✓             | ✓             |
| Lancashire Teaching Hospitals NHS Trust                | X             | X             | ✓             | X             | ✓             |
| Leeds Teaching Hospitals NHS Trust                     | ✓             | ✓             | ✓             | ✓             | ✓             |
| Luton and Dunstable Hospital NHS Trust                 | ✓             | ✓             | ✓             | ✓             | X             |
| Maidstone and Tunbridge Wells NHS Trust                | X             | X             | X             | X             | X             |
| Mayday Healthcare NHS Trust                            | X             | ✓             | ✓             | X             | X             |
| Medway NHS Trust                                       | X             | X             | X             | X             | X             |
| Mid Essex Hospital Services NHS Trust                  | ✓             | X             | ✓             | ✓             | ✓             |
| Mid Staffordshire General Hospitals NHS Trust          | X             | X             | X             | X             | X             |
| Mid Yorkshire Hospitals NHS Trust                      | X             | X             | X             | X             | X             |
| Milton Keynes General Hospital NHS Trust               | X             | X             | X             | X             | X             |
| Morecambe Bay Hospitals NHS Trust                      | X             | X             | X             | X             | X             |
| Newham Healthcare NHS Trust                            | X             | ✓             | ✓             | ✓             | ✓             |
| Norfolk and Norwich University Hospital NHS Trust      | X             | X             | X             | ✓             | ✓             |
| North Bristol NHS Trust                                | X             | ✓             | ✓             | ✓             | ✓             |
| North Cheshire Hospitals NHS Trust                     | X             | X             | X             | ✓             | X             |
| North Cumbria Acute Hospitals NHS Trust                | ✓             | ✓             | ✓             | ✓             | X             |
| North Hampshire Hospitals NHS Trust                    | X             | X             | X             | X             | X             |
| North Middlesex University Hospital NHS Trust          | X             | X             | X             | X             | X             |
| North Tees and Hartlepool NHS Trust                    | ✓             | ✓             | ✓             | ✓             | X             |
| North West London Hospitals NHS Trust                  | ✓             | ✓             | ✓             | X             | X             |
| Northampton General Hospital NHS Trust                 | X             | X             | X             | X             | X             |
| Northern Devon Healthcare NHS Trust                    | ✓             | ✓             | ✓             | X             | X             |
| Northern Lincolnshire and Goole Hospitals NHS Trust    | X             | X             | X             | X             | X             |
| Northumbria Healthcare NHS Trust                       | ✓             | ✓             | ✓             | ✓             | X             |
| Nottingham University Hospitals NHS Trust              | ✓             | X             | ✓             | ✓             | ✓             |
| Oxford Radcliffe Hospitals NHS Trust                   | X             | X             | ✓             | ✓             | ✓             |
| Pennine Acute Hospitals NHS Trust                      | X             | X             | X             | X             | X             |
| Peterborough Hospitals NHS Trust                       | ✓             | ✓             | ✓             | X             | X             |
| Plymouth Hospitals NHS Trust                           | ✓             | ✓             | X             | X             | X             |
| Poole Hospitals NHS Trust                              | ✓             | ✓             | ✓             | ✓             | ✓             |
| Portsmouth Hospitals NHS Trust                         | ✓             | ✓             | ✓             | ✓             | ✓             |
| Queen Elizabeth Hospital NHS Trust                     | ✓             | ✓             | ✓             | X             | X             |
| Queen Mary's Sidcup NHS Trust                          | X             | X             | X             | X             | X             |
| Rotherham General Hospitals NHS Trust                  | X             | X             | X             | X             | X             |
| Royal Berkshire and Battle Hospitals NHS Trust         | ✓             | X             | X             | X             | X             |
| Royal Bournemouth and Christchurch Hospitals NHS Trust | ✓             | ✓             | ✓             | ✓             | ✓             |

| Name of NHS trust   | Year          |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
|   | 2000<br>-2001 | 2001<br>-2002 | 2002<br>-2003 | 2003<br>-2004 | 2004<br>-2005 |
| Royal Cornwall Hospitals NHS Trust                            | X             | X             | X             | X             | X             |
| Royal Devon and Exeter Healthcare NHS Trust                   | X             | ✓             | ✓             | ✓             | ✓             |
| Royal Free Hampstead NHS Trust                                | ✓             | ✓             | ✓             | ✓             | X             |
| Royal Liverpool and Broadgreen University Hospitals NHS Trust | X             | ✓             | X             | X             | X             |
| Royal Surrey County Hospital NHS Trust                        | ✓             | ✓             | X             | X             | X             |
| Royal United Hospital Bath NHS Trust                          | X             | X             | X             | X             | X             |
| Royal West Sussex NHS Trust                                   | X             | ✓             | ✓             | ✓             | ✓             |
| Salford Royal Hospitals NHS Trust                             | X             | X             | X             | ✓             | X             |
| Salisbury Health Care NHS Trust                               | X             | X             | X             | X             | X             |
| Sandwell and West Birmingham Hospitals NHS Trust              | X             | X             | X             | X             | X             |
| Scarborough and North East Yorkshire Healthcare NHS Trust     | X             | ✓             | X             | X             | X             |
| Sheffield Teaching Hospitals NHS Trust                        | ✓             | X             | X             | X             | X             |
| Sherwood Forest Hospitals NHS Trust                           | X             | X             | X             | X             | X             |
| Shrewsbury and Telford Hospitals NHS Trust                    | X             | ✓             | X             | ✓             | ✓             |
| South Devon Health Care NHS Trust                             | ✓             | ✓             | X             | X             | X             |
| South Manchester University Hospitals NHS Trust               | ✓             | ✓             | ✓             | ✓             | X             |
| South Tees Hospitals NHS Trust                                | ✓             | ✓             | ✓             | ✓             | X             |
| South Tyneside Healthcare NHS Trust                           | ✓             | ✓             | ✓             | ✓             | X             |
| South Warwickshire General Hospitals NHS Trust                | X             | X             | ✓             | X             | X             |
| Southampton University Hospitals NHS Trust                    | X             | X             | ✓             | ✓             | ✓             |
| Southend Hospital NHS Trust                                   | X             | X             | X             | ✓             | ✓             |
| Southern Derbyshire Acute Hospitals NHS Trust                 | X             | X             | X             | X             | X             |
| Southport and Ormskirk Hospital NHS Trust                     | X             | ✓             | X             | ✓             | ✓             |
| St George's Healthcare NHS Trust                              | X             | X             | X             | X             | X             |
| St Helens and Knowsley Hospitals NHS Trust                    | X             | ✓             | ✓             | X             | ✓             |
| St Mary's NHS Trust   | X             | ✓             | ✓             | ✓             | X             |
| Stockport NHS Trust   | X             | ✓             | X             | X             | X             |
| Surrey and Sussex Healthcare NHS Trust                        | X             | X             | X             | X             | X             |
| Swindon and Marlborough NHS Trust                             | X             | ✓             | ✓             | X             | X             |
| Tameside and Glossop Acute Services NHS Trust                 | X             | X             | X             | X             | X             |
| Taunton and Somerset NHS Trust                                | X             | ✓             | ✓             | ✓             | ✓             |
| The Hillingdon Hospital NHS Trust                             | X             | X             | ✓             | X             | X             |
| The Lewisham Hospital NHS Trust                               | ✓             | ✓             | X             | X             | X             |
| The Mid Cheshire Hospitals NHS Trust                          | X             | X             | X             | X             | X             |
| The Newcastle Upon Tyne Hospitals NHS Trust                   | ✓             | ✓             | ✓             | X             | X             |
| The Princess Alexandra Hospital NHS Trust                     | X             | X             | X             | X             | X             |
| The Queen Victoria Hospital NHS Trust                         | X             | X             | X             | X             | X             |

| Name of NHS trust  | Year          |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
|  | 2000<br>-2001 | 2001<br>-2002 | 2002<br>-2003 | 2003<br>-2004 | 2004<br>-2005 |
| The Royal Wolverhampton Hospitals NHS Trust              | X             | X             | X             | X             | X             |
| The Whittington Hospital NHS Trust                       | X             | ✓             | ✓             | ✓             | ✓             |
| Trafford Healthcare NHS Trust                            | X             | X             | X             | X             | X             |
| United Bristol Healthcare NHS Trust                      | X             | X             | X             | X             | X             |
| United Lincolnshire Hospitals NHS Trust                  | X             | ✓             | X             | X             | X             |
| University College London Hospitals NHS Trust            | X             | X             | ✓             | ✓             | ✓             |
| University Hospital Birmingham NHS Trust                 | X             | X             | X             | X             | X             |
| University Hospital of North Staffordshire NHS Trust     | X             | X             | X             | X             | X             |
| University Hospitals Coventry and Warwickshire NHS Trust | X             | ✓             | ✓             | ✓             | ✓             |
| University Hospitals of Leicester NHS Trust              | ✓             | ✓             | ✓             | ✓             | ✓             |
| Walsall Hospitals NHS Trust                              | X             | X             | X             | X             | X             |
| West Dorset General Hospitals NHS Trust                  | ✓             | ✓             | ✓             | ✓             | ✓             |
| West Hertfordshire Hospitals NHS Trust                   | ✓             | ✓             | ✓             | ✓             | X             |
| West Middlesex University NHS Trust                      | X             | X             | X             | ✓             | ✓             |
| West Suffolk Hospitals NHS Trust                         | X             | ✓             | ✓             | X             | ✓             |
| Weston Area Health NHS Trust                             | X             | X             | X             | X             | X             |
| Whipps Cross University Hospital NHS Trust               | ✓             | X             | X             | ✓             | ✓             |
| Winchester and Eastleigh Healthcare NHS Trust            | X             | ✓             | ✓             | ✓             | X             |
| Wirral Hospital NHS Trust                                | X             | ✓             | X             | ✓             | X             |
| Worcestershire Acute Hospitals NHS Trust                 | X             | X             | X             | X             | ✓             |
| Worthing and Southlands Hospitals NHS Trust              | ✓             | ✓             | X             | ✓             | ✓             |
| Wrightington, Wigan and Leigh NHS Trust                  | ✓             | ✓             | ✓             | ✓             | X             |
| York Hospitals NHS Trust                                 | X             | ✓             | X             | X             | ✓             |
| <b>Wales</b>   |               |               |               |               |               |
| Bro Morgannwg NHS Trust                                  | ✓             | ✓             | ✓             | ✓             | ✓             |
| Cardiff and Vale NHS Trust                               | X             | X             | ✓             | X             | X             |
| Carmarthenshire NHS Trust                                | ✓             | ✓             | ✓             | ✓             | ✓             |
| Ceredigion & Mid Wales NHS Trust                         | X             | ✓             | ✓             | ✓             | ✓             |
| Conwy and Denbighshire NHS Trust                         | ✓             | ✓             | ✓             | X             | X             |
| Gwent Healthcare NHS Trust                               | ✓             | ✓             | ✓             | ✓             | ✓             |
| North East Wales NHS Trust                               | X             | X             | X             | ✓             | ✓             |
| North Glamorgan NHS Trust                                | X             | X             | X             | ✓             | X             |
| North West Wales NHS Trust                               | X             | X             | ✓             | ✓             | ✓             |
| Pembrokeshire and Derwen NHS Trust                       | ✓             | ✓             | ✓             | X             | X             |
| Pontypridd & Rhondda NHS Trust                           | X             | ✓             | ✓             | ✓             | X             |
| Swansea NHS Trust  | ✓             | ✓             | X             | ✓             | X             |

| Name of Hospital or trust                                   | Year          |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
|   | 2000<br>-2001 | 2001<br>-2002 | 2002<br>-2003 | 2003<br>-2004 | 2004<br>-2005 |
| <b>Northern Ireland</b>                                     |               |               |               |               |               |
| Newry and Mourne HSS Trust                                  | X             | X             | X             | ✓             | ✓             |
| The Royal Group of Hospitals and Dental Hospitals HSS Trust | ✓             | ✓             | ✓             | X             | X             |
| <b>Republic of Ireland</b>                                  |               |               |               |               |               |
| Adelaide and Meath Hospital, Dublin                         | X             | X             | X             | X             | ✓             |
| St James's Hospital, Dublin                                 | X             | ✓             | ✓             | ✓             | ✓             |
| <b>Scotland</b>   |               |               |               |               |               |
| Borders General Hospital NHS Trust                          | ✓             | X             | X             | X             | X             |
| Forth Valley Acute Hospitals NHS Trust                      | X             | X             | ✓             | ✓             | ✓             |
| NHS Lanarkshire   | X             | X             | X             | ✓             | ✓             |
| Tayside University Hospitals NHS Trust                      | ✓             | ✓             | X             | ✓             | X             |

## Confidentiality of Hospital Data

In this year's annual report members of the ACPGBI were asked for their opinion on the disclosure of hospital/unit-identifiable data. The annual reports have shown outcomes by unit, rather than individual surgeons, and all published data has been anonymised. The precedence for change has been set by the Society for Cardiothoracic Surgery, the National Lung Cancer Audit (LUCADA), the National Head and Neck Cancer Audit (DAHNO) and the Healthcare Commission. Although surgery is a critical part of treatment, the outcome for patients also depends on the activity of other clinicians (anaesthetists, radiologists, pathologists etc) and other healthcare workers (ward nurses, theatre staff etc). It also depends on the facilities and resources of individual hospitals. For these reasons the audit results are given by hospital, not individual surgeon, reflecting the team responsibility to care.

Reports that include surgeon and/or unit-identifiable data for other audits may be found at:

<http://heartsurgery.healthcarecommission.org.uk/>

[http://www.icservices.nhs.uk/ncasp/pages/audit\\_topics/lungcancer/](http://www.icservices.nhs.uk/ncasp/pages/audit_topics/lungcancer/)

[http://www.icservices.nhs.uk/ncasp/pages/audit\\_topics/DAHNO/annualreport.asp](http://www.icservices.nhs.uk/ncasp/pages/audit_topics/DAHNO/annualreport.asp)

ACPGBI members have been asked to comment on the disclosure of certain information submitted to National Bowel Cancer Audit for the 2007 report. It is suggested that the number of cases submitted and the percentage of missing data items should be published using unit-identifiable data for the following data items:

- Age
- Gender
- ASA grade: a measure of the patient's fitness for surgery
- Urgency of operation
- Whether the cancer was removed
- Dukes' staging.

It is planned that this should be an evolutionary process that will eventually lead to release of unit-identifiable clinical and process outcomes in the public domain.

# Findings

Measures of the quality of care received by patients are required to drive and monitor improvement. Abdominoperineal excision of rectum (APER) rates, local staging, local recurrence of the cancer, lymph node harvest, length of hospital stay and post operative mortality are all indicators of the quality of care received by the patient.

The 2006 annual report of The National Bowel Cancer Audit includes details of 18,539 patients. 78 hospitals submitted data on 11,068 patients for the period April 2003 to March 2004 and 56 hospitals submitted data on 7,471 patients for the period April 2004 to March 2005. The drop in numbers in the last year is due to a period of 'catch up' where the audit is reducing the time period for submission of data. Those hospitals that were unable to submit their 2005 data in time for this year's report will be able to submit it next year.

Of the 11,068 patient records submitted in 2003/04, 8,992 (81.3 per cent) underwent surgery and the overall 30-day mortality rate was 6.3 per cent. In 2004/05, 6,399 of the 7,471 patients (85.7 per cent) had surgery and the 30-day mortality rate was 5.9 per cent.

## Age/Gender Distribution

The incidence of bowel cancer is gradually increasing, partly due to the ageing of the population. As with most forms of cancer, its incidence rises sharply with age.

Evidence suggests that there is a gradual overall increase in incidence in men between 65 and 84 years.

The median age of the patients at diagnosis was 72 years.

| Age Group    | 2003-05      |      |              |      |
|--------------|--------------|------|--------------|------|
|              | Male         |      | Female       |      |
|              | Number       | %    | Number       | %    |
| <65          | 2,686        | 31.6 | 1,887        | 27.5 |
| 65-74        | 2,665        | 31.4 | 1,792        | 26.1 |
| 75-84        | 2,617        | 30.8 | 2,416        | 35.3 |
| 85-95        | 513          | 6.0  | 733          | 10.7 |
| >95          | 11           | 0.1  | 25           | 0.4  |
| <b>Total</b> | <b>8,492</b> |      | <b>6,853</b> |      |

**Table 5.1 Age distribution by gender for 2003-5**

This table shows that nearly a third of patients are of working age, in spite of bowel cancer being largely a disease of the elderly.

## Surgery

The aggregated data from 5 years of audit based on 47,510 patients shows that 85 per cent of patients

undergo surgery for bowel cancer, with 78 per cent of these being treated on an elective (planned) basis and 22 per cent as an emergency or urgent case. If the unreported (missing) values are excluded, the data for 2004 and 2005 show the same distribution.

| Mode         | 2004   |      | 2005   |      |
|--------------|--------|------|--------|------|
|              | Number | %    | Number | %    |
| Elective     | 5,702  | 63.4 | 4,233  | 64.6 |
| Urgent       | 613    | 6.8  | 543    | 7.5  |
| Emergency    | 970    | 10.8 | 738    | 11.1 |
| Missing data | 1,707  | 19.0 | 885    | 16.8 |

**Table 5.2 Urgency of surgery for 2004 and 2005**

Overall, 18 per cent of patients already have widespread incurable disease at the time of surgery. Another 25-30 per cent subsequently develop widespread disease after treatment and become incurable. 9 per cent (1,292) of patients underwent an operative procedure but did not have their cancer removed because of the advanced stage of the disease. In the future with increasing availability of CT scanning some of these patients could avoid unnecessary surgery.

## Surgery for Rectal Cancer

Most patients with rectal cancer have an anterior resection, which avoids the use of a permanent stoma (bag/pouch). However, some patients require a different operation - an abdominoperineal excision of rectum (APER) which results in a permanent colostomy or stoma (bag/pouch). The skill of the surgeon can determine the frequency of this procedure. It is one of the NICE guidelines that this should be kept to a minimum and is therefore used as a measure of the quality of surgical care. The APER rate has fallen from 24.5 per cent to 18 per cent over the 5 year period of the audit (2001-2005).

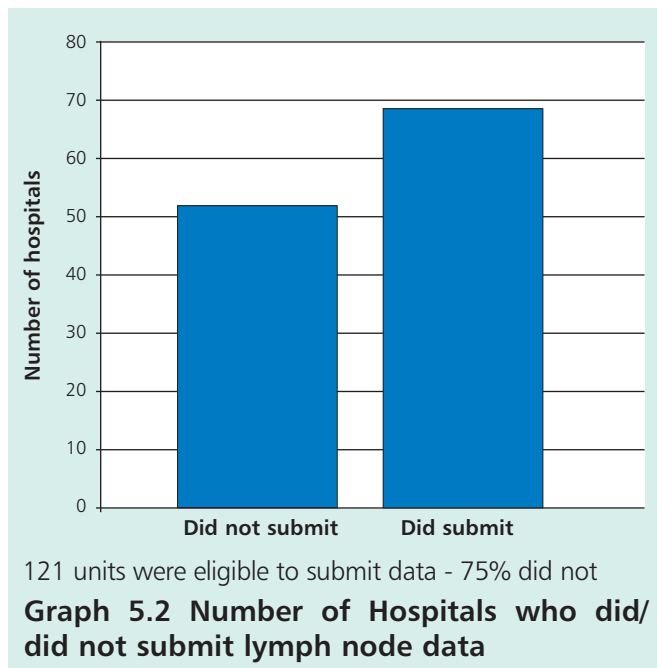
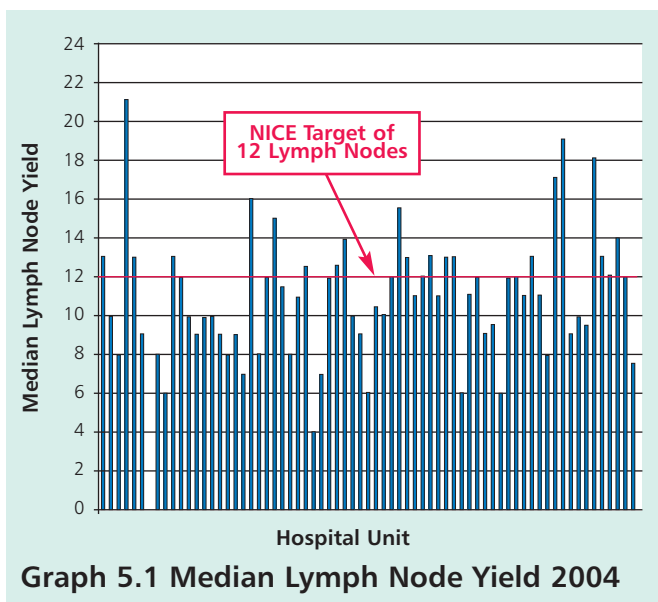
| Year         | Anterior Resection (number) | APER (number) | APER Rate (%) |
|--------------|-----------------------------|---------------|---------------|
| 2001/2       | 1,784                       | 581           | 24.6          |
| 2002/3       | 2,280                       | 671           | 22.7          |
| 2003/4       | 2,229                       | 643           | 22.4          |
| 2004/5       | 2,265                       | 558           | 19.8          |
| 2005/6       | 1,723                       | 378           | 18.0          |
| <b>Total</b> | <b>10,281</b>               | <b>2,831</b>  | <b>21.6</b>   |

**Table 5.3 Frequencies of the two modes of surgery for rectal cancer by year (2001-2005)**

## Lymph Node Harvest

Thorough examination of the lymph nodes in a surgical specimen will help to improve staging of the cancer and provide more information to determine whether or not the patient may benefit from adjuvant chemotherapy.

NICE guidance has suggested that there should be a median of 12 lymph nodes removed and examined for each surgical specimen.



## Length of Hospital Stay

Length of hospital stay may be a very simple and effective way of measuring quality of care. It reflects not just whether patients have an uncomplicated recovery but also whether the unit is up-to-date in introducing enhanced recovery programmes. These programmes can result in a dramatic fall in hospital stay to as little as 6 days and are associated with a decline in complication rates. Although they are complex to introduce, there should be economic benefits.

At the moment in the United Kingdom patients stay in hospital on average up to 13 days after their surgery. Age, Dukes' stage, ASA grade (see page 19) and operative urgency all impact on the length of post-operative stay. However, once the data has been risk-adjusted then it is a reasonably easy way of measuring the quality of care patients receive by comparison with national figures.

The model for measuring risk-adjusted length of stay developed by the ACPGBI could be used to assess how quickly enhanced recovery programmes are being introduced nationally. The model could also be used to aid surgical resource planning, by determining the surgical bed-days required for a given unit.

In the 5 years of the audit the proportion of hospitals who met the NICE target has risen from 28 per cent to 50 per cent.

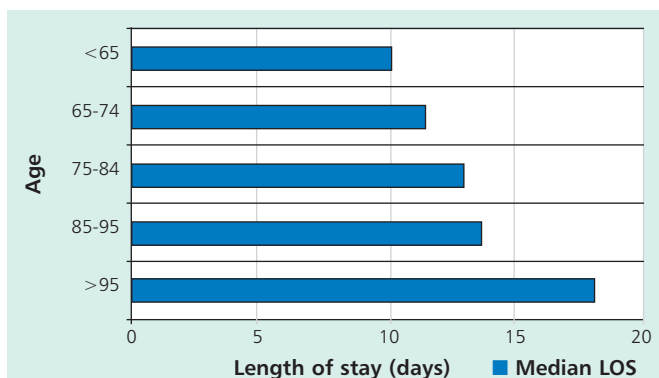
| Year | Units with median LN harvest of 12+ | Units with median LN harvest of <12 | % units with median LN harvest of 12+ |
|------|-------------------------------------|-------------------------------------|---------------------------------------|
| 2001 | 11                                  | 29                                  | 27.5                                  |
| 2002 | 22                                  | 45                                  | 32.8                                  |
| 2003 | 27                                  | 49                                  | 35.5                                  |
| 2004 | 30                                  | 39                                  | 43.0                                  |
| 2005 | 28                                  | 28                                  | 50.0                                  |

**Table 5.4 Proportion of units achieving the target for lymph node harvest**

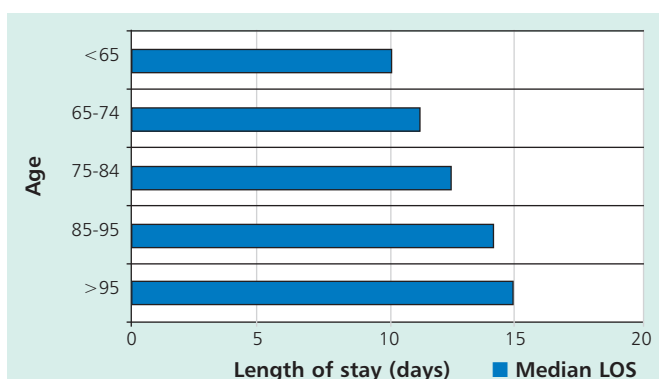
However, only one third of hospitals currently submit this data. It is therefore not possible to assess whether the remaining hospitals are meeting this NICE guideline.

The extent of examination of lymph nodes affects the accuracy of staging of cancers and hence the overall casemix for the hospital. Examination of insufficient lymph nodes can result in the inappropriate 'understaging' of cancers and can lead to a unit's performance appearing worse than it really is.

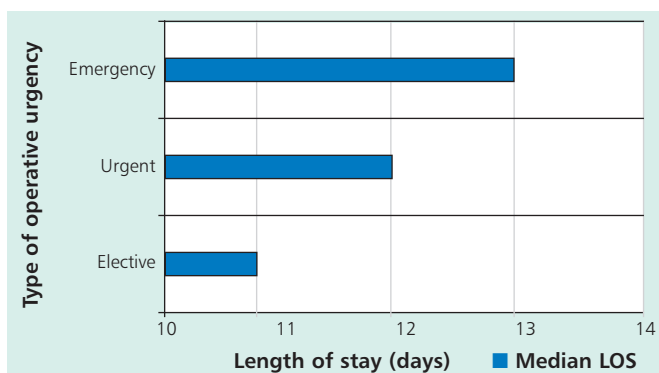
The charts below show length of stay by patient age and by the urgency of operation for 2003/04 and 2004/05.



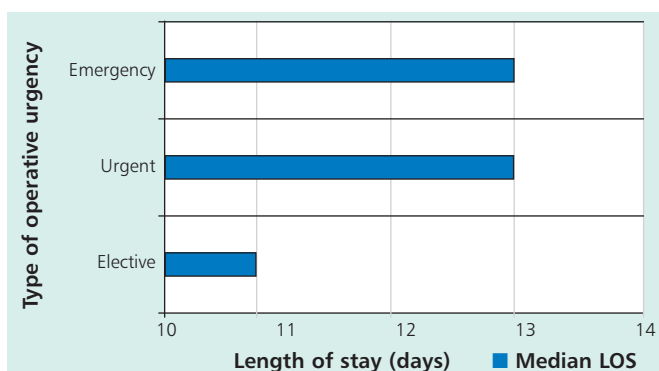
**Graph 5.3 Length of stay by age 2003-04**



**Graph 5.4 Length of stay by age 2004-05**



**Graph 5.5 Length of stay by operative urgency 2003-04**



**Graph 5.6 Length of stay by operative urgency 2004-05**

## Post-operative Mortality

Post-operative mortality is defined as the proportion of patients dying within 30 days of an operation.

Factors affecting post-operative mortality are the patient's age, general state of health and stage of cancer as well as the surgeon's and unit's skills in providing safe post-operative care. Post-operative mortality data must therefore be adjusted for casemix. Clinical units working in deprived areas, where death from all causes may be greater, regardless of whether or not they have surgery, will appear to have worse outcomes if there is no adjustment for casemix. There are considerable variations from year to year with some units being well below average one year and above average the next. Therefore, any unit's post-surgical death rate should be measured over a period of 3-5 years before any conclusion can be made about where it stands against a national standard.

Audit data for 2004/05 shows a post-operative mortality rate of 4 per cent for patients having planned (elective) operations and 20 per cent for those having surgery as an emergency. The reported data over the 5-year period of the audit shows a tendency towards a reduction in post-operative mortality.

## American Society of Anaesthetists (ASA) grade. A measurement of the state of health of patients before operation

The general state of health of patients before their operation is one of the factors effecting length of stay and post-operative mortality. Patients who are already unfit or ill before undergoing surgery for bowel cancer are more likely to die or take longer to recover than patients in good health. Assessment of co-existing illness (co-morbidity) is important in deciding the safest treatment for the patient and in risk adjustment of hospitals' clinical outcomes. It is incorporated into the ACPGBl model for calculating risk-adjustment.

The ASA grades:

- ASA 1 - Fit and well
- ASA 2 - Mild disease e.g. smoking, obesity, treated hypertension: not necessarily the cancer
- ASA 3 - Disease restricting activity
- ASA 4 - Life threatening diseases
- ASA 5 - Not expected to survive for 24 hrs.

Despite the importance of ASA grade in adjusting for risk and management of the patient, a significant number of hospitals do not report the information.

## Local Staging of Rectal Cancer

Local staging, with either MRI or endo-anal ultrasound scanning, is a potential marker of quality of care. However, results show that these are poorly reported and may well lead to an underestimation of the extent to which these investigations are used.

## Local Recurrence after Rectal Cancer Surgery

When the cancer recurs locally after rectal cancer surgery, this can be a painful and unpleasant experience for the patient and is usually incurable. To reduce the chance of this happening, the surgeon attempts to ensure that there is a cancer-free zone between the tumour and the edge of the section of bowel being removed - the resection margin. To assess the absence of recurrence requires follow-up of the patient over several years. However, pathological examination of the surgical specimen, checking resection margins for cancer, is a good indicator of the likelihood of local recurrence. This measure of the "Circumferential Resection Margin" (CRM) is currently poorly reported.

# Conclusions

The National Bowel Cancer Audit is already a success in terms of the considerable amount of data that has been submitted and analysed since the beginning of the audit. Clinical outcomes are risk-adjusted for casemix using the ACPGBI operative-mortality predictive model. However, incomplete submission of data has an adverse effect on this process. Incomplete data also means that it is not possible to measure some processes of care such as attendance at the MDT meeting recommended by NICE as a measure of quality of care and a key focal point for data collection.

Although national standards for clinical care could be based on the existing data these would better reflect current practice across the United Kingdom if more units submitted complete data. As a voluntary audit the National Bowel Cancer Audit currently only collects data from one third of all trusts in the United Kingdom. Improved participation and data completeness will enable units to assess whether they meet the NICE guidelines and safely compare themselves nationally against other units.

It is hoped that greater national awareness of the audit amongst patients, health professionals and trust chief executives and the acknowledgement of its value will increase participation and data submission. The Healthcare Commission believe that better participation and improved data quality, two of the audit's stated key goals, would be achievable if the audit moves as quickly as possible to open reporting. Open reporting is what the public have the right to expect and this will help the patients in being able to make judgements about the care they are offered.

Recommendations for the future:

- Patients should ask if their unit participates in the National Audit
- All trusts should participate
- Cancer Networks should encourage trusts to submit their data to the audit and use this data for local audit.
- Hospitals need to provide better data on:
  - Circumferential Resection Margin Involvement
  - Local staging
  - MDT discussions
  - Excision of lymph nodes
  - ASA grade.

The audit has identified that there have been significant improvements in the delivery of care to bowel cancer patients over the five year audit period. Further improvements in clinical care are likely to be more promptly achieved if clinicians are aware of whether their patients are receiving the best possible care compared with average and national standards.





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