

Northumbria Healthcare NHS Foundation Trust

Northern A09

The Northumbria Healthcare NHS Foundation Trust incorporates Hexham General Hospital, Wansbeck Hospital and North Tyneside General Hospital <https://www.northumbria.nhs.uk/> <<https://www.northumbria.nhs.uk/>>

Patient inclusion and data sources

The 2022 Annual Report includes results for patients in England and Wales diagnosed with bowel cancer 1 April 2020 – 31 March 2021, and patients diagnosed between 01 April 2019 and 31 March 2020 who underwent a major resection after 31 March 2020.

30-day unplanned readmission, 30-day unplanned return to theatre and 90-day mortality are further restricted to patients undergoing surgery up to 31 October 2021. Two-year mortality estimates include patients undergoing a major resection between 1 April 2018 and 31 March 2019. Adjuvant chemotherapy estimates include patients undergoing major resection for pathological stage III colon cancer between 01 December 2017 and 31 August 2020. APER/Hartmann's and unclosed ileostomy estimates include patients undergoing rectal cancer surgery between 01 April 2015 and 31 March 2020. Annual rectal cancer resection volume includes major resections for rectal cancer performed between 01 April 2020 and 31 March 2021.

The Audit dataset is linked to Hospital Episode Statistics (HES) and Patient Episode Database for Wales (PEDW) at the patient level to obtain further information on patient care and follow-up such as stoma reversal and emergency readmissions in England/Wales. The dataset also links to Office of National Statistics records. These provide information about date, place and cause of death.

NBOCA also links to the National Radiotherapy Dataset (RTDS) for information on radiotherapy treatment in England, and the Systemic Anti-Cancer Therapy database (SACT) for information on chemotherapy treatment in England.

Data Quality

Case ascertainment

Number of patients reported to the Audit as a percentage of the number of patients admitted for the first time to the trust/network with a diagnosis of bowel cancer within the audit period according to HES in England and PEDW in Wales. This can be larger than 100 if more patients are reported to the Audit than identified in HES/PEDW.

Data completeness

% of relevant patient group with useable value of data item.

ASA grade

% of patients recorded as having a major resection who have a particular ASA grade recorded, or no ASA recorded.

Management of all patients

Potentially curative patients

Patients electively diagnosed with colon cancer with pre-treatment staging of T2-T4 and no evidence of metastatic disease.

Management of patients having major resection

At least 12 lymph nodes excised (%)

% of colon cancer patients undergoing major resection with a recorded number of lymph nodes, who had at least 12 lymph nodes examined.

Adjuvant chemotherapy

% of adjuvant chemotherapy in patients undergoing major resection for pathological stage III colon cancer between 01 June 2017 and 31 August 2020. These are unadjusted chemotherapy rates. SACT and HES data are used for patients treated in England and PEDW data are used for patients treated in Wales.

Rectal cancer patients

Neo-adjuvant therapy (%)

% of rectal cancer patients having short- or long-course radiotherapy prior to major resection.

Circumferential resection margin: Negative (%)

% of rectal cancer patients undergoing major resection whose CRM is reported to be negative.

Circumferential resection margin: Recorded (%)

% of rectal cancer patients undergoing a major resection who have a recorded CRM.

APER rate (%)

% of patients with rectal cancer undergoing abdominoperineal excision of the rectum and therefore having a permanent stoma this audit year.

APER/Hartmann's (%)

% of patients whose rectal cancer resection is an abdomino-perineal excision of rectum (APER)/pelvic exenteration/Hartmann's 1 April 2015 to 30 September 2020.

Compare trust outcomes

Funnel plots display trust risk-adjusted outcomes only for 2-year mortality this year. Other outcomes are not outlier-reported this year because they are measured on patients diagnosed and/or treated during the COVID-19 pandemic. The funnel regions represent the 95 per cent limit and the 99.8 per cent limit for trusts compared to the national average. Those trusts with results outside the outer (99.8 per cent) limit are considered potential outliers. Previous years of results show funnel plots for all five trust outcomes.

Risk adjustment is performed using the seven items listed under Data Quality as well as mode of admission (elective/emergency) and number of co-morbidities according to HES/PEDW, and an interaction between age and distant metastases. Missing values are imputed using Multiple Imputation. The model for two-year mortality additionally includes interactions between follow-up time (0-3 months after surgery vs. 3-24 months after surgery) and all of the risk factors.

See [FAQs <https://www.nboca.org.uk/about/faq/>](https://www.nboca.org.uk/about/faq/) for more details.

Data Quality

All Patients:	Trust	Network	National
Number of patients in Audit	350	1965	28523
Case ascertainment (%)	Good	Good	Good
Data completeness of:			
– Pre-treatment TNM (%)	70	75	86

All Patients:	Trust	Network	National
– Performance status (%)	80	79	88
Patients having major resection:	Trust	Network	National
Number of patients in Audit	197	1125	15891
ASA grade 1 (%)	5	7	8
ASA grade 2 (%)	60	50	52
ASA grade 3 (%)	29	33	31
ASA grade 4+ (%)	2	3	2
ASA grade not recorded (%)	4	7	7
Data completeness of:			
7 Audit items for risk-adjustment (%)	96	90	87

Key:

- > 80%
- 50 - 80%
- < 50%

Management of all patients

All Patients:	Trust	Network	National
Number of patients in Audit	350	1965	28523
Seen by Clinical Nurse Specialist (%)	35	69	85

All patients deemed potentially curative	Trust	Network	National
Number of potentially curative patients	79	461	7393
Undergoing major resection (%)	71	79	82

Management of patients having major resection

Patients having major resection:	Trust	Network	National
Number of patients in Audit	197	1125	15855
Distant metastases (%)	5	5	7
Urgent or emergency surgery (%)	17	17	20
At least 12 lymph nodes excised (%)	92	90	86
Laparoscopic surgery attempted (%)	78	81	67

Patients having major resection:	Trust	Network	National
Risk-adjusted length of stay > 5 days (%)	37	47	56

Patients having major resection for stage III colon cancer:	Trust	Network	National
Number of patients in audit	101	658	10794
Adjuvant chemotherapy (%)	58	54	60

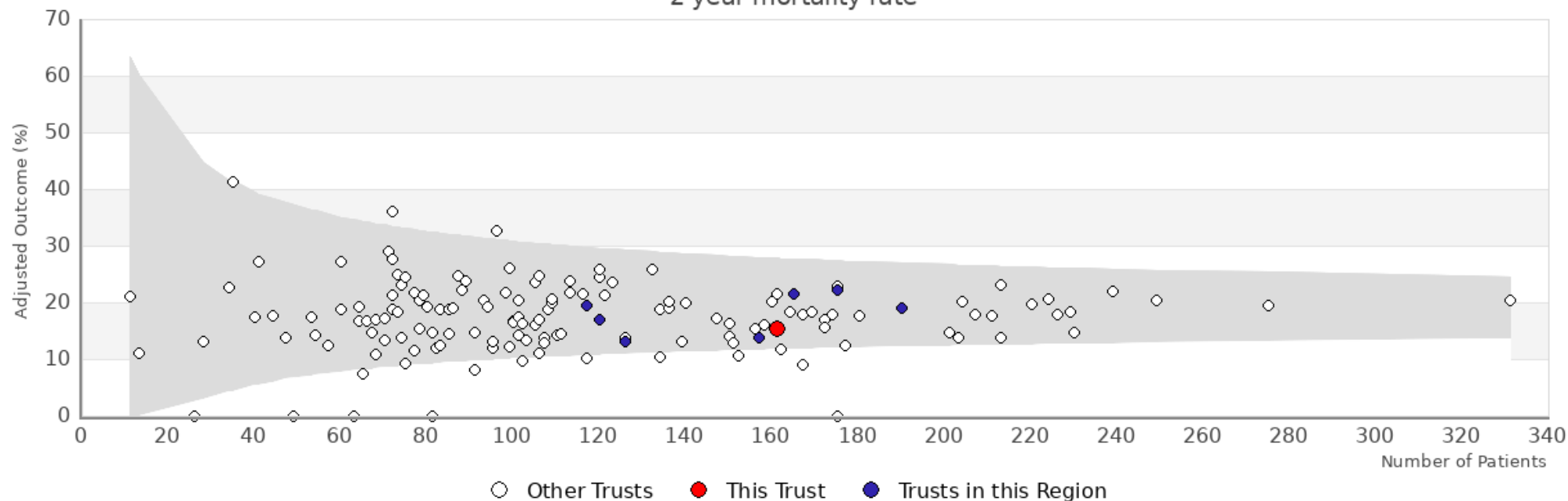
Rectal cancer patients

Patients having major resection:	Trust	Network	National
Number of patients in Audit	48	270	3481
Neoadjuvant therapy (%)	27	33	38
Circumferential resection margin: Recorded (%)	100	92	89
Circumferential resection margin: Negative (%)	96	87	82
Rectal volume	47	261	3374

Patients in APER/Hartmanns estimate:	Trust	Network	National
Number of patients in APER/Hartmanns estimate	179	1328	19595

Patients in APER/Hartmanns estimate:	Trust	Network	National
APER/Hartmanns (%)	39	37	36

2 year mortality rate



Trust	Number	Adjusted	Observed
Northumbria Healthcare NHS Foundation Trust	161	15.3%	14.3%
Other trusts within the region: Northern			
County Durham and Darlington NHS Foundation Trust	190	19%	16.6%
Gateshead Health NHS Foundation Trust	117	19.4%	21.1%

Trust	Number	Adjusted	Observed
North Cumbria Integrated Care NHS Foundation Trust	120	17%	15.7%
North Tees and Hartlepool NHS Foundation Trust	126	13%	18.5%
South Tees Hospitals NHS Foundation Trust	165	21.6%	23.9%
South Tyneside and Sunderland NHS Foundation Trust	175	22.3%	16.8%
The Newcastle Upon Tyne Hospitals NHS Foundation Trust	157	13.8%	14.4%