

## Warrington and Halton Hospitals NHS Foundation Trust

### Cheshire and Merseyside A01

The Warrington and Halton Hospitals NHS Foundation Trust incorporates Halton Hospital in Runcorn and Warrington Hospital <http://www.whh.nhs.uk/> <<http://www.whh.nhs.uk/>>

## Patient inclusion and data sources

The majority of these results are for patients in England and Wales diagnosed with bowel cancer 1 Apr 2018 – 31 Mar 2019. The exceptions are for adjuvant chemotherapy and the four trust outcomes: 30-day unplanned readmission, 90-day mortality and 2-year mortality. 30-day unplanned readmission and 90-day mortality are further restricted to patients undergoing surgery up to 31 October 2019. Two-year mortality estimates include patients undergoing a major resection between 1 April 2016 and 31 March 2017. Adjuvant chemotherapy estimates include patients undergoing major resection for pathological stage III colon cancer between 01 December 2015 and 31 August 2018.

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 NCRAS in England and PEDW in Wales. This can be larger than 100 if more patients are reported to the Audit than identified in NCRAS/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 December 2015 and 31 August 2018 in England only. These are unadjusted chemotherapy rates.

## 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.

## Compare trust outcomes

Funnel plots display trust risk-adjusted outcomes for 90-day mortality, 30-day unplanned readmission and 2-year mortality. This year we are not reporting 18-month stoma rates in readiness for two new stoma indicators in 2021. 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.

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/fq/>](https://www.nboca.org.uk/about/fq/) for more details.

## Data Quality

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All Patients:	Trust	Network	National
Number of patients in Audit	89	1506	29766
Case ascertainment (%)	60	97	90
Data completeness of:			
– Pre-treatment TNM (%)	94	94	83
– Performance status (%)	98	84	85

Patients having major resection:	Trust	Network	National
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Number of patients in Audit	71	891	16499
ASA grade 1 (%)	7	10	10
ASA grade 2 (%)	48	60	53
ASA grade 3 (%)	42	28	30
ASA grade 4+ (%)	3	2	3
ASA grade not recorded (%)	0	1	4
Data completeness of:			
7 Audit items for risk-adjustment (%)	100	87	86

### Key:

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

## Management of all patients

<b>All Patients:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	89	1506	29766
Seen by Clinical Nurse Specialist (%)	84	86	86

<b>All patients deemed potentially curative</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of potentially curative patients	19	387	7226
Undergoing major resection (%)	84	84	86

## Management of patients having major resection

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	71	891	16474
Distant metastases (%)	7	4	6
Urgent or emergency surgery (%)	4	14	15
At least 12 lymph nodes excised (%)	91	83	84

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Laparoscopic surgery attempted (%)	38	66	72
Risk-adjusted length of stay > 5 days (%)	78	67	62

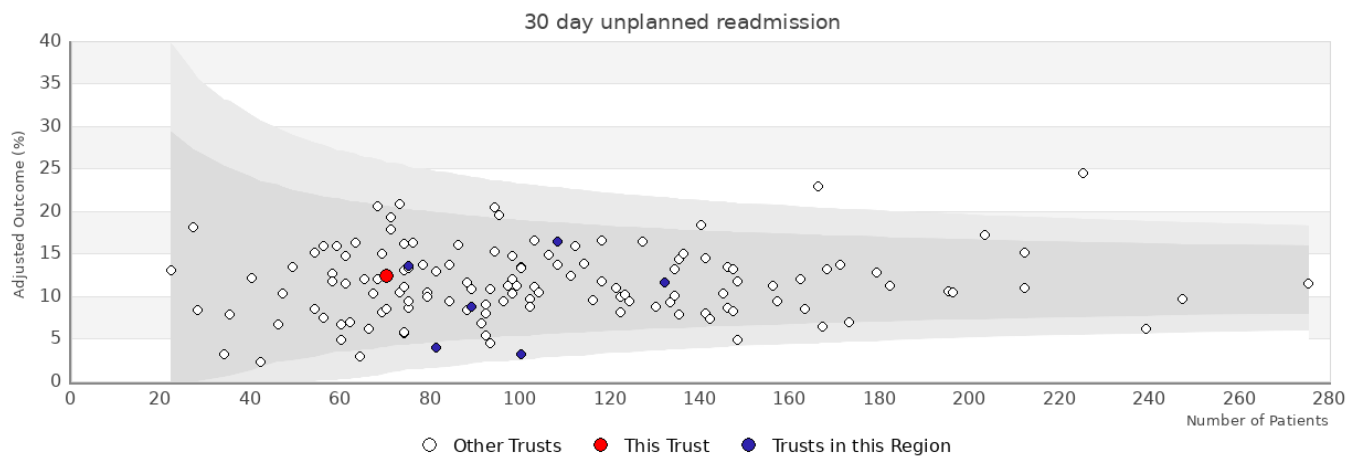
<b>Patients having major resection for stage III colon cancer:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in audit	37	505	10641
Adjuvant chemotherapy (%)	54	55	61

## Rectal cancer patients

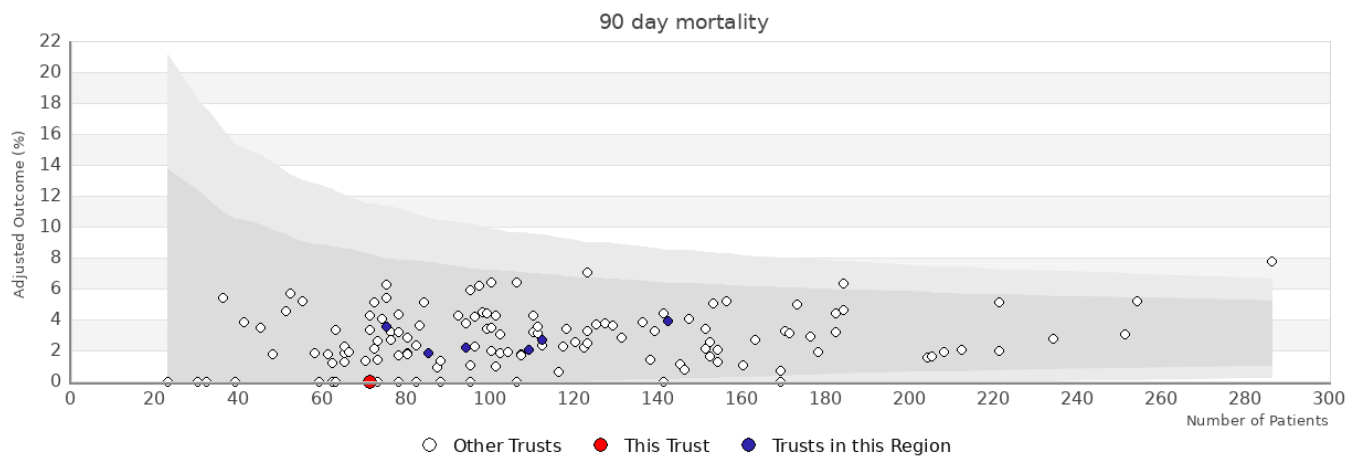
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<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	21	211	3899
Neoadjuvant therapy (%)	7	42	32
Circumferential resection margin: Recorded (%)	95	80	86
Circumferential resection margin: Negative (%)	95	63	79
Rectal volume	N/A	N/A	N/A

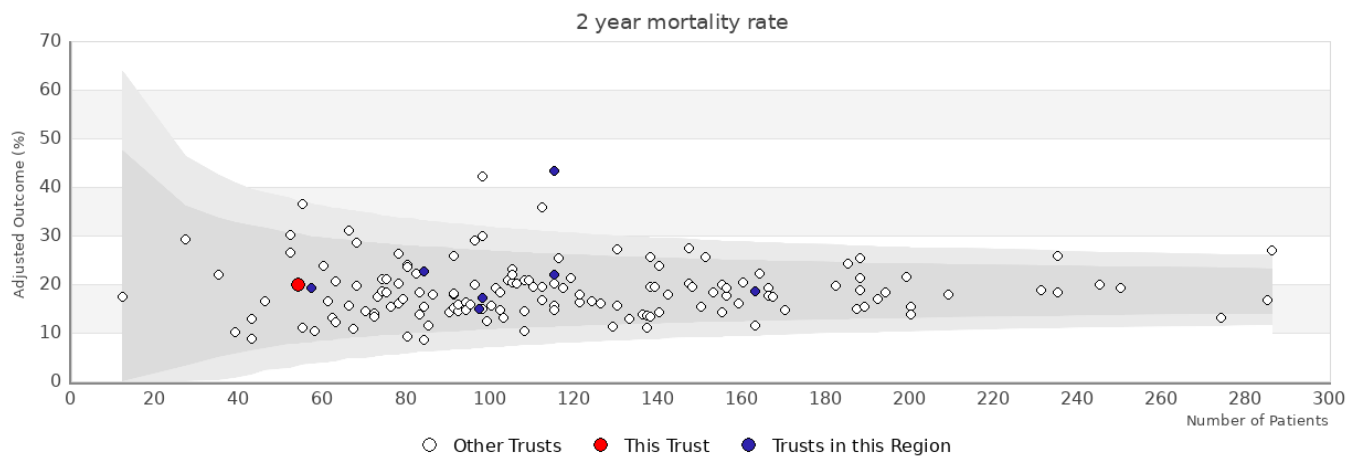
<b>Patients in APER/Hartmanns estimate:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in APER/Hartmanns estimate	N/A	N/A	N/A
APER/Hartmanns (%)	N/A	N/A	N/A



Trust	Number	Adjusted	Observed
Warrington and Halton Hospitals NHS Foundation Trust	70	12.4%	12.9%
Other trusts within the region: Cheshire and Merseyside			
Liverpool University Hospitals NHS Foundation Trust	89	8.8%	9%
Countess of Chester Hospital NHS Foundation Trust	108	16.4%	14.8%
East Cheshire NHS Trust	75	13.6%	13.3%
Mid Cheshire Hospitals NHS Foundation Trust	81	3.9%	3.7%
St Helens and Knowsley Hospitals NHS Trust	132	11.7%	12.1%
Wirral University Teaching Hospital NHS Foundation Trust	100	3.2%	3%



Trust	Number	Adjusted	Observed
Warrington and Halton Hospitals NHS Foundation Trust	71	-	-
Other trusts within the region: Cheshire and Merseyside			
Liverpool University Hospitals NHS Foundation Trust	94	2.2%	2.1%
Countess of Chester Hospital NHS Foundation Trust	112	2.7%	1.8%
East Cheshire NHS Trust	75	3.5%	4%
Mid Cheshire Hospitals NHS Foundation Trust	85	1.9%	1.2%
St Helens and Knowsley Hospitals NHS Trust	142	3.9%	4.9%
Wirral University Teaching Hospital NHS Foundation Trust	109	2.1%	1.8%



Trust	Number	Adjusted	Observed
Warrington and Halton Hospitals NHS Foundation Trust	54	20%	30.6%
Other trusts within the region: Cheshire and Merseyside			
Liverpool University Hospitals NHS Foundation Trust	115	43.4%	30.9%
Countess of Chester Hospital NHS Foundation Trust	97	14.9%	12%
East Cheshire NHS Trust	57	19.3%	24.3%
Mid Cheshire Hospitals NHS Foundation Trust	98	17.3%	12.2%
Southport and Ormskirk Hospital NHS Trust	84	22.6%	24.1%
St Helens and Knowsley Hospitals NHS Trust	163	18.6%	23.5%
Wirral University Teaching Hospital NHS Foundation Trust	115	22%	22.5%