

Nottingham University Hospitals NHS Trust

EAST MIDLANDS N55

The Nottingham University Hospitals NHS Trust incorporates Queen's Medical Centre and City Hospital in Nottingham
<https://www.nuh.nhs.uk/> <<https://www.nuh.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 2014 – 31 Mar 2015. The exceptions are for 2-year mortality and 18-month stoma rate. Two-year mortality estimates include patients undergoing a major resection between 1 April 2012 and 31 March 2013. 18-month stoma rates include rectal cancer patients undergoing a major resection between 1 April 2012 and 31 March 2015. The Audit dataset is linked to Hospital Episode Statistics (HES) at the patient level to obtain further information on patient care and follow-up such as stoma reversal and emergency readmissions in England, and to the National Radiotherapy Dataset (RTDS) for information on radiotherapy treatment in England.

Data Quality

Data completeness

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

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. This can be larger than 100 if more patients are reported to the Audit than identified in HES.

7 audit items for risk-adjustment

The per cent of patients with complete data items on all of age, sex, ASA grade, pathological T-stage, pathological N-stage, distant metastases and site of cancer.

Management of all patients

No major resection: too little cancer

Those undergoing a local resection of polypectomy.

No major resection: too much cancer

No excision and reason for no treatment includes advanced stage cancer OR no excision and non-curative intent and metastatic disease.

No major resection: too frail

not in too much cancer group AND no excision and reason for no treatment includes significant co-morbidity OR no excision and performance status 3 or 4.

No major resection: unknown/other reason:

no excision and does not meet any of the above criteria.

Compare trust outcomes

Funnel plots display trust risk-adjusted outcomes for 90-day mortality, 30-day unplanned readmission, 2-year mortality and, for rectal cancer patients, 18-month stoma rate. 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, 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.

A stoma is considered to be reversed if a HES record with relevant code is identified with 18 months of the initial surgical procedure.

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	284	2135	28013
Case ascertainment (%)	91	91	93
Data completeness of:			
– Pre-treatment TNM (%)	99	65	71
– Performance status (%)	100	64	77

Patients having major resection:	Trust	Network	National
Number of patients in Audit	244	1304	18809
ASA grade 1 (%)	N/A	13	14
ASA grade 2 (%)	67	59	53
ASA grade 3 (%)	25	22	25
ASA grade 4+ (%)	3	2	3
ASA grade not recorded (%)	4	4	5
Data completeness of:			
7 Audit items for risk-adjustment (%)	96	87	82

Key:

Management of all patients

All Patients:	Trust	Network	National
Number of patients in Audit	284	2135	30122
Seen by Clinical Nurse Specialist (%)	88	92	92

Management of patients having major resection

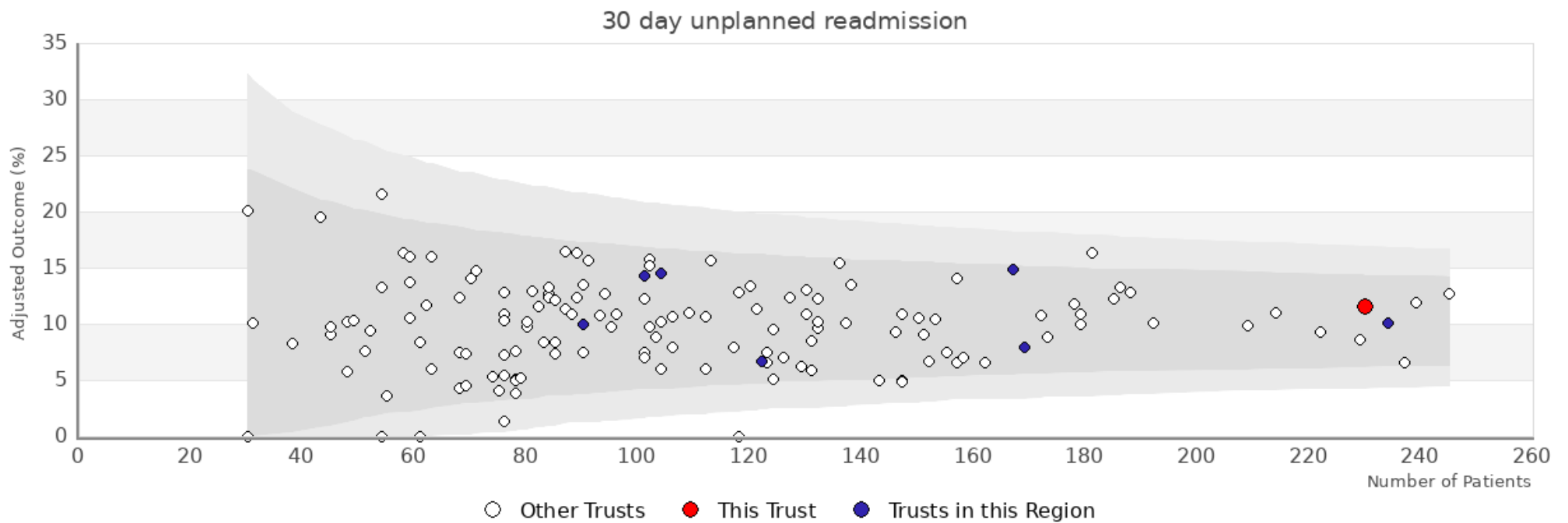
Patients having major resection:	Trust	Network	National
Number of patients in Audit	244	1304	18809
Distant metastases (%)	10	10	9
Urgent or emergency surgery (%)	20	18	16
Median number of lymph nodes excised	15	16	17
Laparoscopic surgery attempted (%)	70	53	61

Patients having major resection:	Trust	Network	National
Length of stay > 5 days (%)	66	66	69

Rectal cancer patients

Patients having major resection:	Trust	Network	National
Number of patients in Audit	75	380	4769
Neoadjuvant therapy (%)	23	43	37
Circumferential resection margin: Recorded (%)	7	5	25
Circumferential resection margin: Positive (%)	4	7	7
Rectal volume	N/A	N/A	N/A

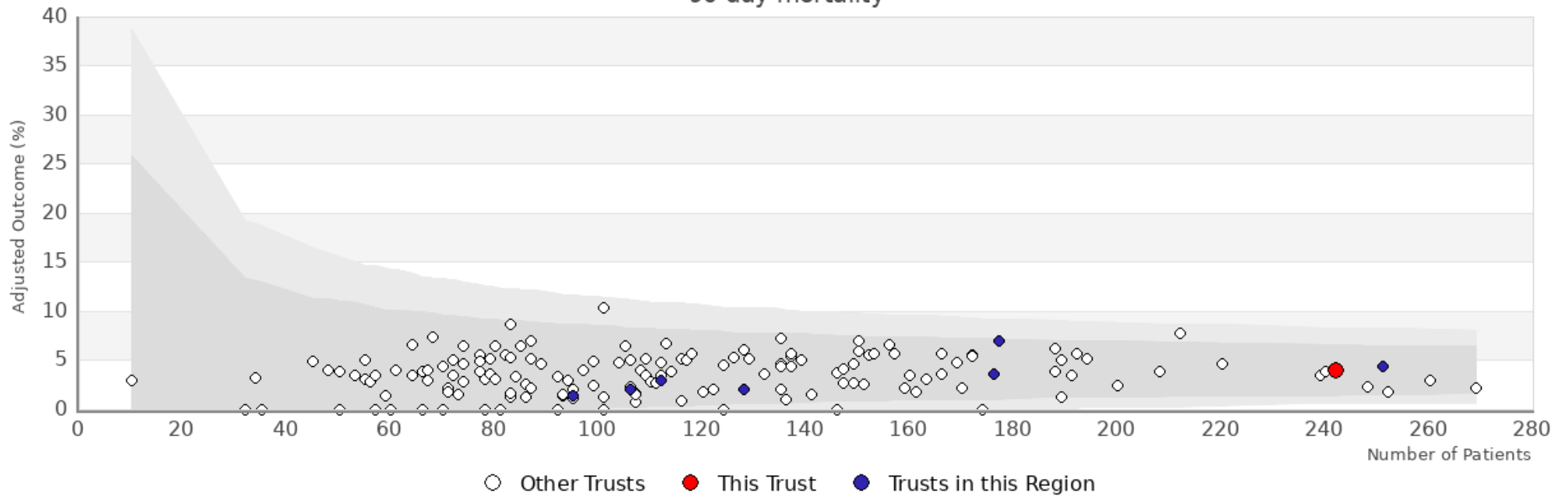
Patients in APER/Hartmanns estimate:	Trust	Network	National
Number of patients in APER/Hartmanns estimate	N/A	N/A	N/A
APER/Hartmanns (%)	N/A	N/A	N/A



Trust	Number	Adjusted	Observed
Nottingham University Hospitals NHS Trust	230	11.5%	11.7%
Other trusts within the region: EAST MIDLANDS			
Burton Hospitals NHS Foundation Trust	101	14.3%	14.9%
Derby Hospitals NHS Foundation Trust	169	7.9%	7.7%

Trust	Number	Adjusted	Observed
Kettering General Hospital NHS Foundation Trust	122	6.7%	6.6%
Northampton General Hospital NHS Trust	90	10%	10%
Sherwood Forest Hospitals NHS Foundation Trust	104	14.5%	14.4%
United Lincolnshire Hospitals NHS Trust	167	14.9%	15%
University Hospitals of Leicester NHS Trust	234	10.1%	10.3%

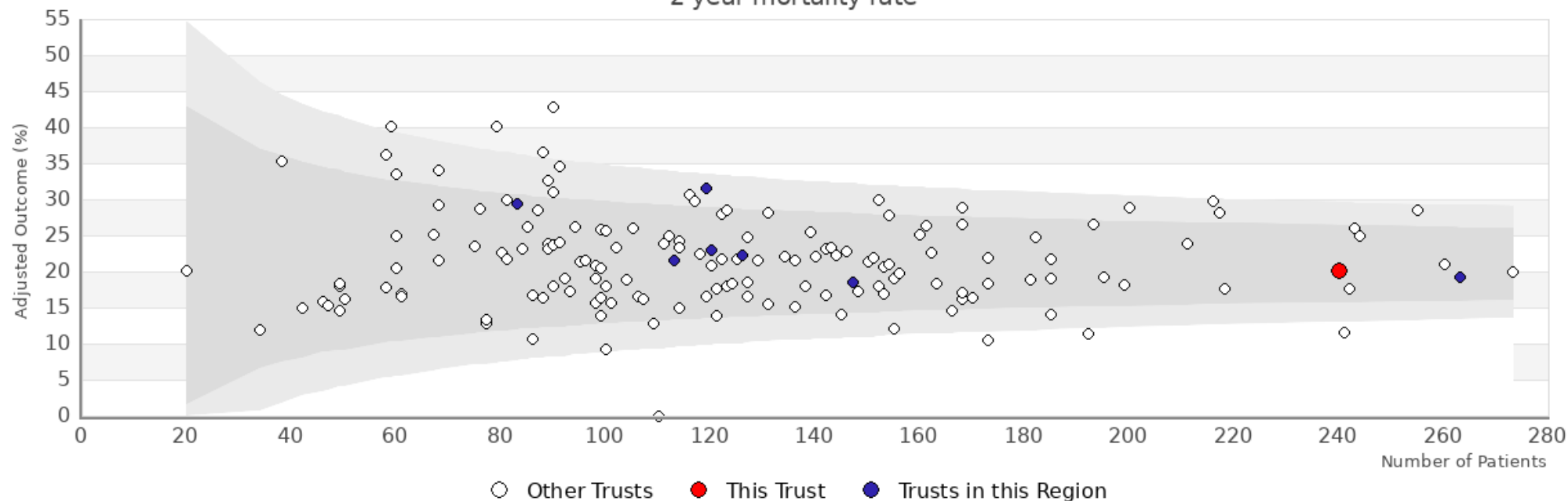
90 day mortality



Trust	Number	Adjusted	Observed
Nottingham University Hospitals NHS Trust	242	4%	4.1%
Other trusts within the region: EAST MIDLANDS			
Burton Hospitals NHS Foundation Trust	106	2%	1.9%
Derby Hospitals NHS Foundation Trust	176	3.6%	2.8%

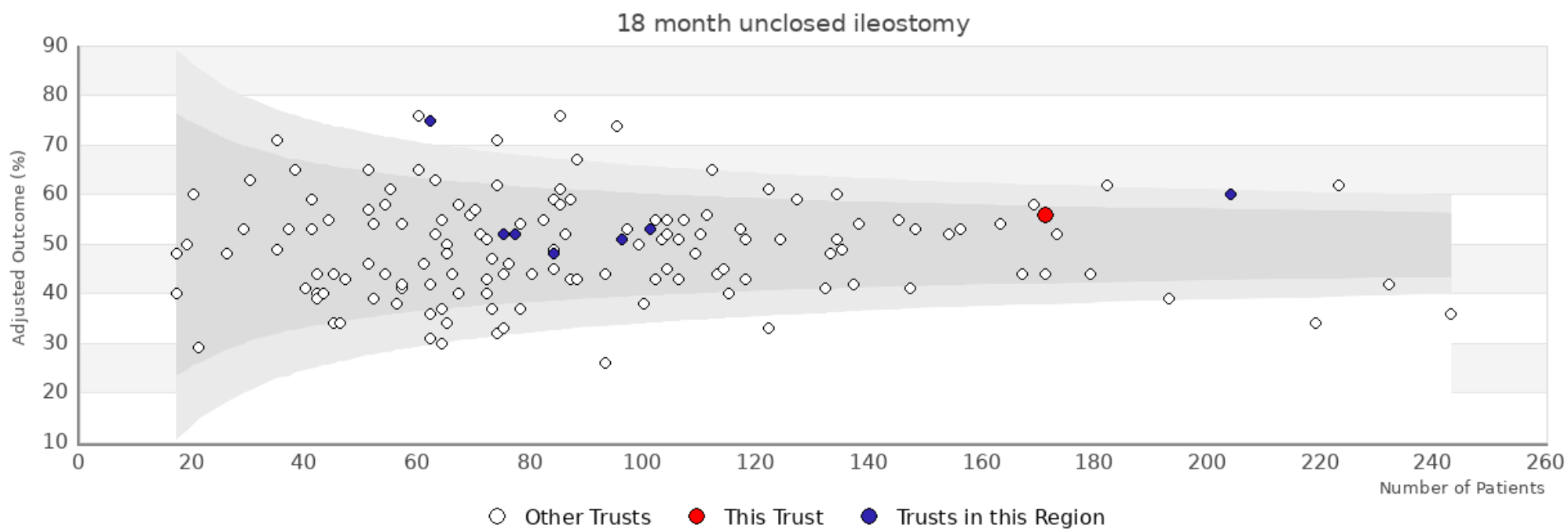
Trust	Number	Adjusted	Observed
Kettering General Hospital NHS Foundation Trust	128	2%	1.6%
Northampton General Hospital NHS Trust	95	1.4%	1.1%
Sherwood Forest Hospitals NHS Foundation Trust	112	2.9%	2.7%
United Lincolnshire Hospitals NHS Trust	177	7%	6.8%
University Hospitals of Leicester NHS Trust	251	4.4%	4.4%

2 year mortality rate



Trust	Number	Adjusted	Observed
Nottingham University Hospitals NHS Trust	240	20.1%	17.3%
Other trusts within the region: EAST MIDLANDS			
Burton Hospitals NHS Foundation Trust	113	21.6%	26.6%
Derby Hospitals NHS Foundation Trust	147	18.6%	13.8%

Trust	Number	Adjusted	Observed
Kettering General Hospital NHS Foundation Trust	120	22.9%	27.2%
Northampton General Hospital NHS Trust	119	31.6%	28%
Sherwood Forest Hospitals NHS Foundation Trust	126	22.3%	18.5%
United Lincolnshire Hospitals NHS Trust	83	29.4%	32.1%
University Hospitals of Leicester NHS Trust	263	19.3%	20.6%



Trust	Number	Adjusted	Observed
Nottingham University Hospitals NHS Trust	171	56%	53%
Other trusts within the region: EAST MIDLANDS			
Burton Hospitals NHS Foundation Trust	75	52%	53%
Derby Hospitals NHS Foundation Trust	101	53%	50%

Trust	Number	Adjusted	Observed
Kettering General Hospital NHS Foundation Trust	96	51%	50%
Northampton General Hospital NHS Trust	84	48%	49%
Sherwood Forest Hospitals NHS Foundation Trust	77	52%	51%
United Lincolnshire Hospitals NHS Trust	62	75%	76%
University Hospitals of Leicester NHS Trust	204	60%	63%