

## Imperial College Healthcare NHS Trust

RM Partners A17

The Imperial College Healthcare NHS Trust incorporates Charing Cross Hospital, St Mary's Hospital Paddington, and Hammersmith Hospital in London <https://www.imperial.nhs.uk/> <<https://www.imperial.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 2019 – 31 Mar 2020. The exceptions are for adjuvant chemotherapy, APER/Hartmann's and the five trust outcomes: 30-day unplanned readmission, 30-day unplanned return-to-theatre, 90-day mortality 2-year mortality and unclosed ileostomy.

30-day unplanned readmission, 30-day unplanned return to theatre and 90-day mortality are further restricted to patients undergoing surgery up to 31 March 2020. Two-year mortality estimates include patients undergoing a major resection between 1 April 2017 and 31 March 2018. Adjuvant chemotherapy estimates include patients undergoing major resection for pathological stage III colon cancer between 01 December 2016 and 31 August 2019.

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 June 2016 and 31 August 2019. These are unadjusted chemotherapy rates. SACT and HES data re 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 2014 to 30 September 2018.

## Compare trust outcomes

Funnel plots display trust risk-adjusted outcomes for 30-day unplanned readmission, 30-day unplanned return to theatre, 90-day mortality, 2-year mortality and 18-month unclosed ileostomy. 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/faq/>](https://www.nboca.org.uk/about/faq/) for more details.

## Data Quality

All Patients:	Trust	Network	National
Number of patients in Audit	182	1404	32641
Case ascertainment (%)	Good	Good	Good
Data completeness of:			
– Pre-treatment TNM (%)	92	78	85

<b>All Patients:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
– Performance status (%)	100	83	86

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	123	874	18552
ASA grade 1 (%)	11	10	9
ASA grade 2 (%)	67	53	53
ASA grade 3 (%)	20	23	30
ASA grade 4+ (%)	1	1	2
ASA grade not recorded (%)	N/A	14	6
Data completeness of:			
7 Audit items for risk-adjustment (%)	96	78	89

#### Key:

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

## Management of all patients

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<b>All Patients:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	182	1381	29766
Seen by Clinical Nurse Specialist (%)	100	98	86

<b>All patients deemed potentially curative</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of potentially curative patients	57	314	8157
Undergoing major resection (%)	89	87	83

## Management of patients having major resection

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<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	123	874	18515
Distant metastases (%)	7	9	6
Urgent or emergency surgery (%)	5	13	21
At least 12 lymph nodes excised (%)	99	84	86
Laparoscopic surgery attempted (%)	69	73	71

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Risk-adjusted length of stay > 5 days (%)	68	70	58

<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	73	485	10335
Adjuvant chemotherapy (%)	42	57	63

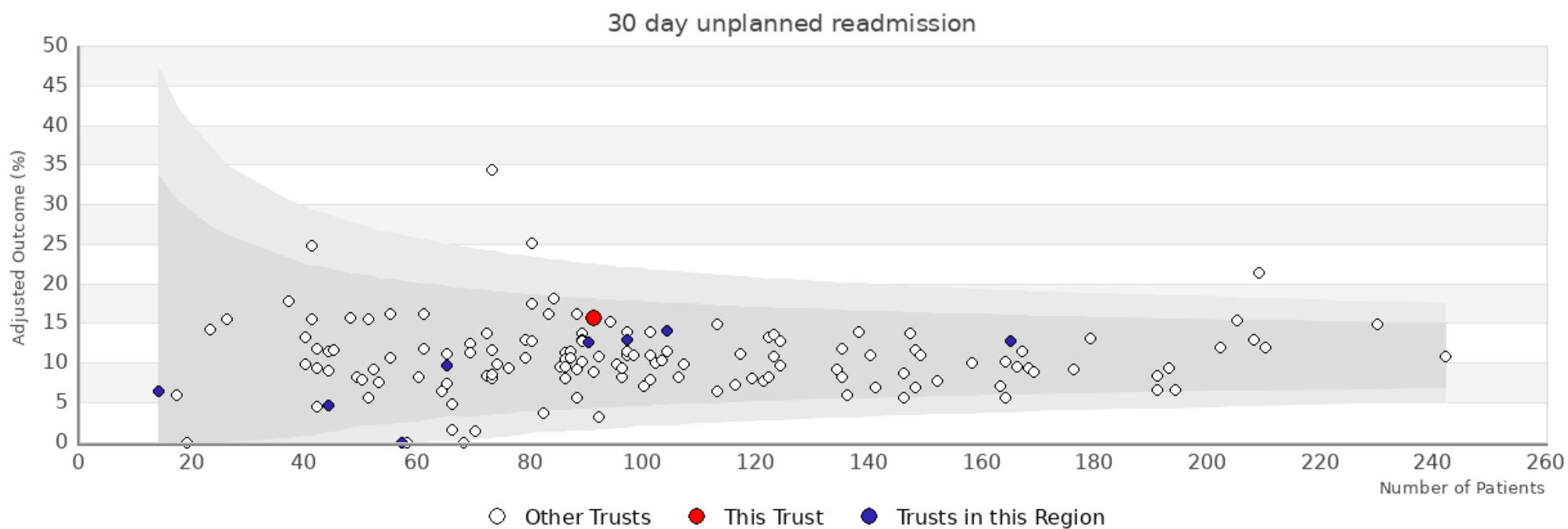
## Rectal cancer patients

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<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	29	191	4137
Neoadjuvant therapy (%)	32	28	34
Circumferential resection margin: Recorded (%)	90	86	90
Circumferential resection margin: Negative (%)	72	80	84
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	117	776	17956

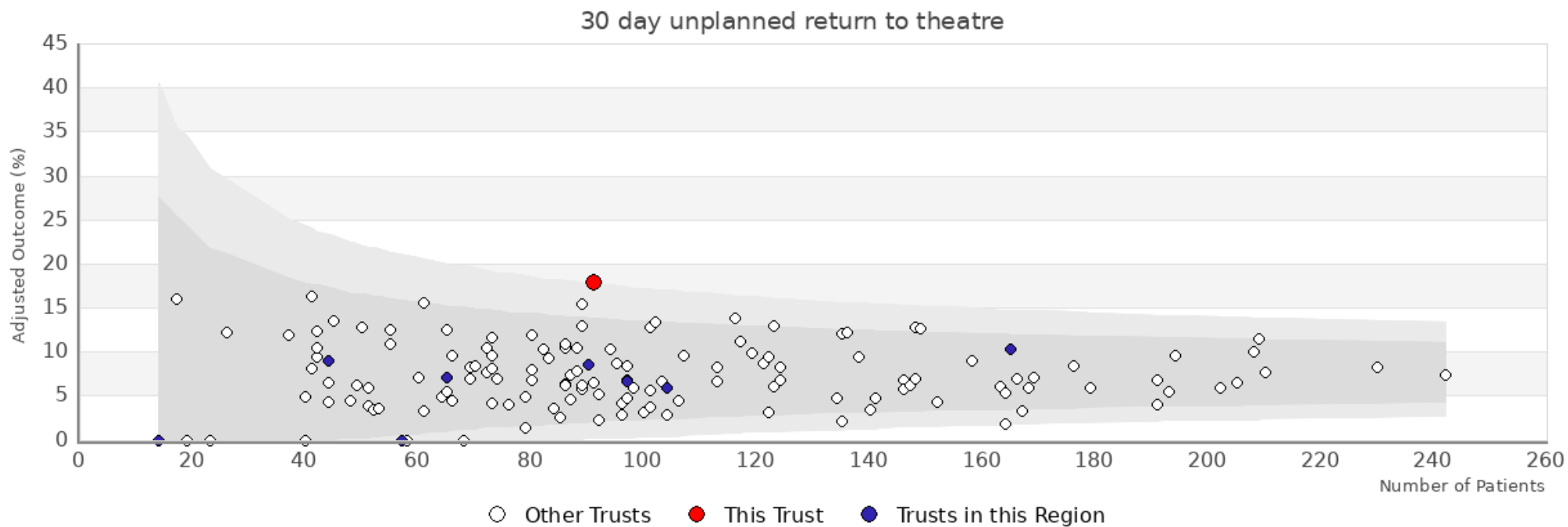
<b>Patients in APER/Hartmanns estimate:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
APER/Hartmanns (%)	25	31	37



Trust	Number	Adjusted	Observed
Imperial College Healthcare NHS Trust	91	15.6%	16.5%
Other trusts within the region: RM Partners			
Chelsea and Westminster Hospital NHS Foundation Trust	104	14.1%	14.4%
Croydon Health Services NHS Trust	44	4.7%	4.6%



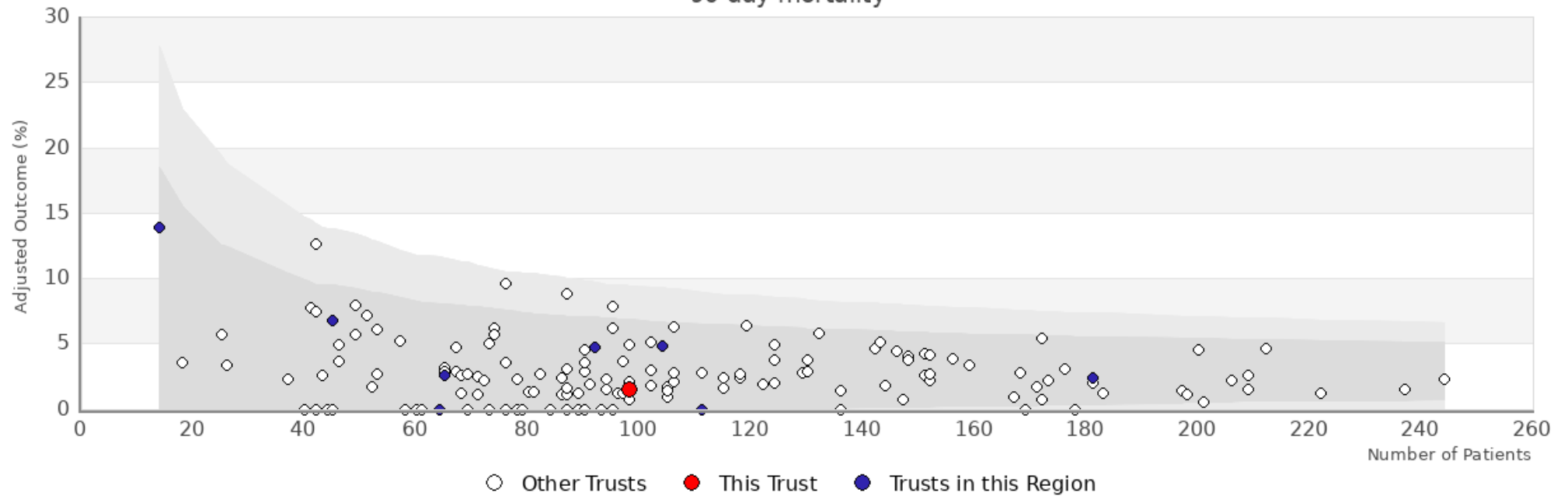
Trust	Number	Adjusted	Observed
Epsom and St Helier University Hospitals NHS Trust	97	13%	12.4%
Kingston Hospital NHS Foundation Trust	90	12.6%	12.2%
London North West Hospitals NHS Trust	165	12.7%	13.3%
The Hillingdon Hospitals NHS Foundation Trust	65	9.7%	10.8%
The Royal Marsden NHS Foundation Trust	14	6.4%	7.1%



Trust	Number	Adjusted	Observed
Imperial College Healthcare NHS Trust	91	17.9%	18.7%
Other trusts within the region: RM Partners			
Chelsea and Westminster Hospital NHS Foundation Trust	104	6%	5.8%
Croydon Health Services NHS Trust	44	9.1%	9.1%

Trust	Number	Adjusted	Observed
Epsom and St Helier University Hospitals NHS Trust	97	6.6%	6.2%
Kingston Hospital NHS Foundation Trust	90	8.5%	7.8%
London North West Hospitals NHS Trust	165	10.3%	10.3%
The Hillingdon Hospitals NHS Foundation Trust	65	7.1%	7.7%

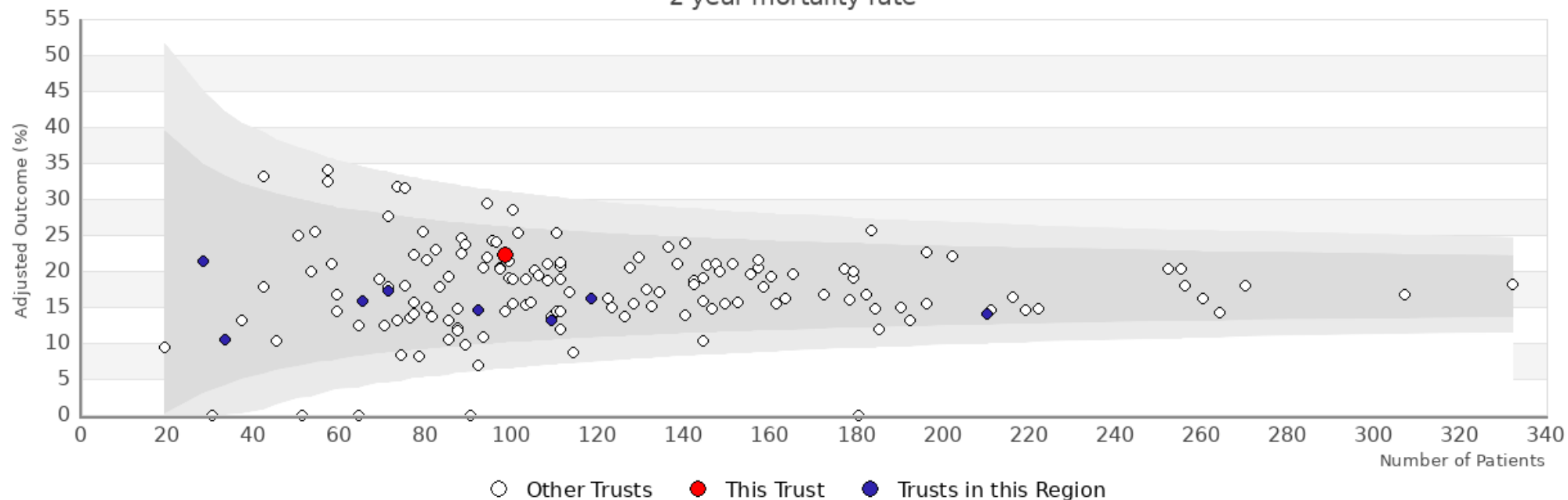
### 90 day mortality



Trust	Number	Adjusted	Observed
Imperial College Healthcare NHS Trust	98	1.5%	1%
Other trusts within the region: RM Partners			
Croydon Health Services NHS Trust	45	6.8%	6.7%
Epsom and St Helier University Hospitals NHS Trust	104	4.9%	3.9%

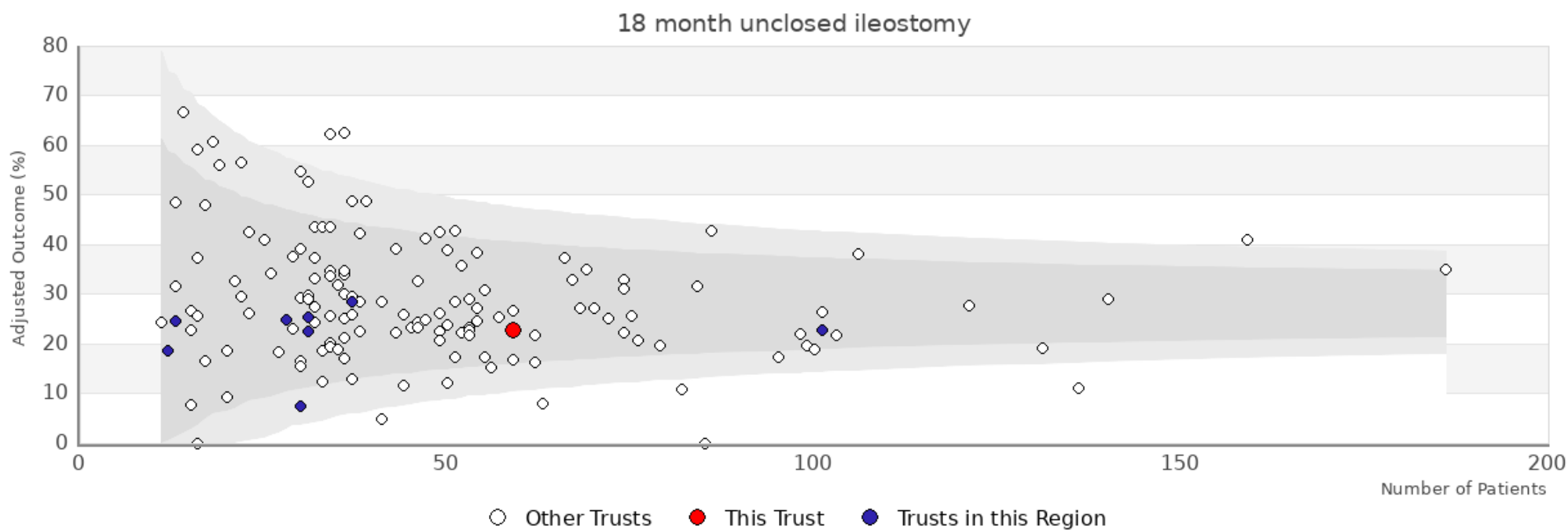
Trust	Number	Adjusted	Observed
Kingston Hospital NHS Foundation Trust	92	4.8%	5.4%
London North West Hospitals NHS Trust	181	2.4%	2.2%
The Hillingdon Hospitals NHS Foundation Trust	65	2.6%	3.1%
The Royal Marsden NHS Foundation Trust	14	13.9%	7.1%

2 year mortality rate



Trust	Number	Adjusted	Observed
Imperial College Healthcare NHS Trust	98	22.3%	22.3%
Other trusts within the region: RM Partners			
Chelsea and Westminster Hospital NHS Foundation Trust	109	13.2%	12.8%
Croydon Health Services NHS Trust	71	17.3%	19.4%

Trust	Number	Adjusted	Observed
Epsom and St Helier University Hospitals NHS Trust	118	16.3%	14.7%
Kingston Hospital NHS Foundation Trust	92	14.6%	15.1%
London North West Hospitals NHS Trust	210	14.1%	13.3%
St George's Healthcare NHS Trust	28	21.4%	15.6%
The Hillingdon Hospitals NHS Foundation Trust	65	15.8%	18.4%
The Royal Marsden NHS Foundation Trust	33	10.4%	9.5%



Trust	Number	Adjusted	Observed
Imperial College Healthcare NHS Trust	59	22.9%	23.7%
Other trusts within the region: RM Partners			
Chelsea and Westminster Hospital NHS Foundation Trust	37	28.5%	27%
Croydon Health Services NHS Trust	28	24.8%	25%



Trust	Number	Adjusted	Observed
Epsom and St Helier University Hospitals NHS Trust	31	22.6%	22.6%
Kingston Hospital NHS Foundation Trust	13	24.5%	23.1%
London North West Hospitals NHS Trust	101	22.7%	22.8%
St George's Healthcare NHS Trust	30	7.4%	6.7%
The Hillingdon Hospitals NHS Foundation Trust	31	25.3%	29%
The Royal Marsden NHS Foundation Trust	12	18.5%	16.7%