



# Comparison of Northern and Yorkshire Cancer Registry and Hospital Episode Statistics Rectal Cancer Data



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Northern and Yorkshire Cancer Registry and Information Service

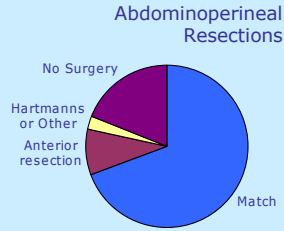
## Background

- Rectal cancer is a common disease, often with a poor prognosis.
- Surgery is the only curative treatment available. There are two main operations used – abdominoperineal resection (APR) and anterior resection (AR).
- ARs leave a functioning anal sphincter but APRs leave the patient with a permanent colostomy. This impacts both on quality of life and hospital resource use. Whilst some patient will always require an APR due to technical reasons there is a larger group of patients for whom either operation would be feasible.
- Analysis of Hospital Episode Statistics (HES) data have suggested that the rates of APR vary considerably across the Country (being particularly high in the North of England) and, consequently, a concern has arisen that some patients are not offered a sphincter saving AR.
- There is currently considerable interest in using HES to study patterns of cancer management but the quality of the data coding in HES has been questioned and it is not clear if the high rates observed demonstrate a true effect

## Comparison of surgical coding

### Abdominoperineal Resections

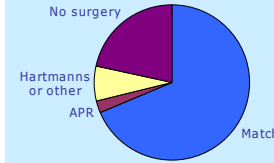
- NYCRIS recorded 1,512 APRs over the study period in contrast to 1,271 in HES.
- The sources matched in 1,118 cases.
- In 142 cases coded by NYCRIS as APR HES recorded AR
- In 16 cases coded by NYCRIS as APR HES recorded a Hartmann's procedure
- In 29 cases coded by NYCRIS as APR HES recorded an unspecified/other rectal resection.
- In 297 cases coded by NYCRIS as APR no rectal cancer resection was recorded in HES



### Anterior Resections

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- NYCRIS recorded 2,741 ARs over the study period in contrast to 2,131 in HES
- The sources matched in 1,880 cases
- In 71 cases coded by NYCRIS as AR HES recorded an APR
- In 65 cases coded by NYCRIS as AR HES recorded a Hartmann's procedure
- In 131 cases coded by NYCRIS as AR HES recorded an unspecified/other rectal resection
- In 594 cases coded by NYCRIS as AR no rectal cancer resection operation was recorded by HES



## Objectives

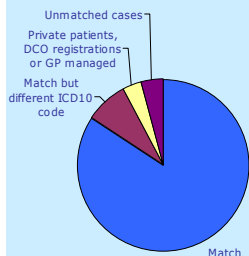
- To compare HES data to Northern & Yorkshire Cancer Registry (NYCRIS) data to assess their agreement and determine whether HES data overestimates the use of APR and AR in the North of England.

## Methods

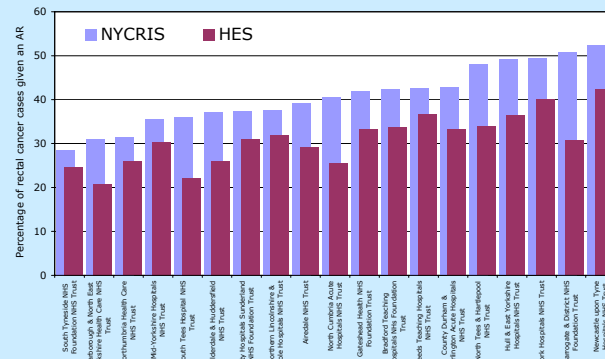
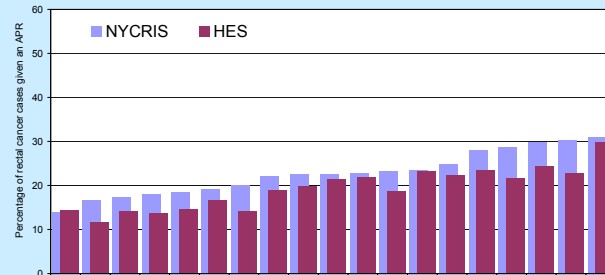
- NYCRIS data were linked to HES data via the NHS number, postcode, gender and date of birth of each patient.
- After linkage the HES cases that matched against NYCRIS cases were compared for each patient in relation to ICD10 codes and surgical rectal cancer OPCS4 codes.
- Trusts were ranked according to their percentage APR and AR rates calculated via NYCRIS. These rates were then compared to those calculated via HES.

## Matching

- 7,547 patients were recorded as being newly diagnosed with rectal cancer in the Northern and Yorkshire Region between 1998 and 2003
- 6,368 (84.3%) matched directly to HES rectal cases
- 630 (8.3%) matched to patients coded by HES as having colon or rectosigmoid junction cancers
- 19 (0.25%) patients matched to patients coded by HES as residing outside the Northern and Yorkshire area.
- 150 (2%) private patients were managed privately
- 62 (0.8%) were death certificate only registrations
- 22 (0.3%) patients were recorded by NYCRIS as being managed by their GP only



## Comparison of surgical rates in NHS Trusts



### Abdominoperineal Resections

- In all the trusts examined, with the exception of one, NYCRIS data indicated more APRs were undertaken than recorded by HES.
- On average NYCRIS figures suggested 3.4% more APRs were undertaken in each Trust than were recorded in HES
- There was reasonable agreement between NYCRIS and HES in percentage rates of APR. Those Trusts with high APR rates according to NYCRIS tended to have high APR rates according to HES and vice versa.

### Anterior resections

- Larger variation was observed in the rates of AR between the two data sources.
- Again, overall NYCRIS recorded more ARs than HES did.
- On average NYCRIS recorded 9.8% more ARs in each Trust than HES.
- There was less agreement in NYCRIS and HES ranks for AR. There was a trend that trusts ranking high for AR according to NYCRIS had high HES ranks but the discrepancy was bigger than for APR.

## Conclusions

- There was reasonable agreement between NYCRIS and HES data in the coding of rectal cancer and its surgical treatment.
- HES, however, tended to underestimate the number procedures undertaken when compared to NYCRIS
- Whilst in most trusts the trends of surgical rates in NYCRIS was mirrored in HES there were some Trusts with notable discrepancies. This may be due to inconsistencies in coding in different hospitals.