



The National Colorectal Cancer Dataset - Paradigm for the Future

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Current Dataset

- Covers time period of 1998 to 2004
- Pooled cancer registry information to form a national dataset of ~267,000 tumours
- Linked to extract of HES that includes all episodes for patients who had a diagnosis of colorectal cancer (~4.5 million episodes)
- Dataset allows us to track in-patient hospital care of all patients treated within the NHS
- Based on routine data not designed for medical research

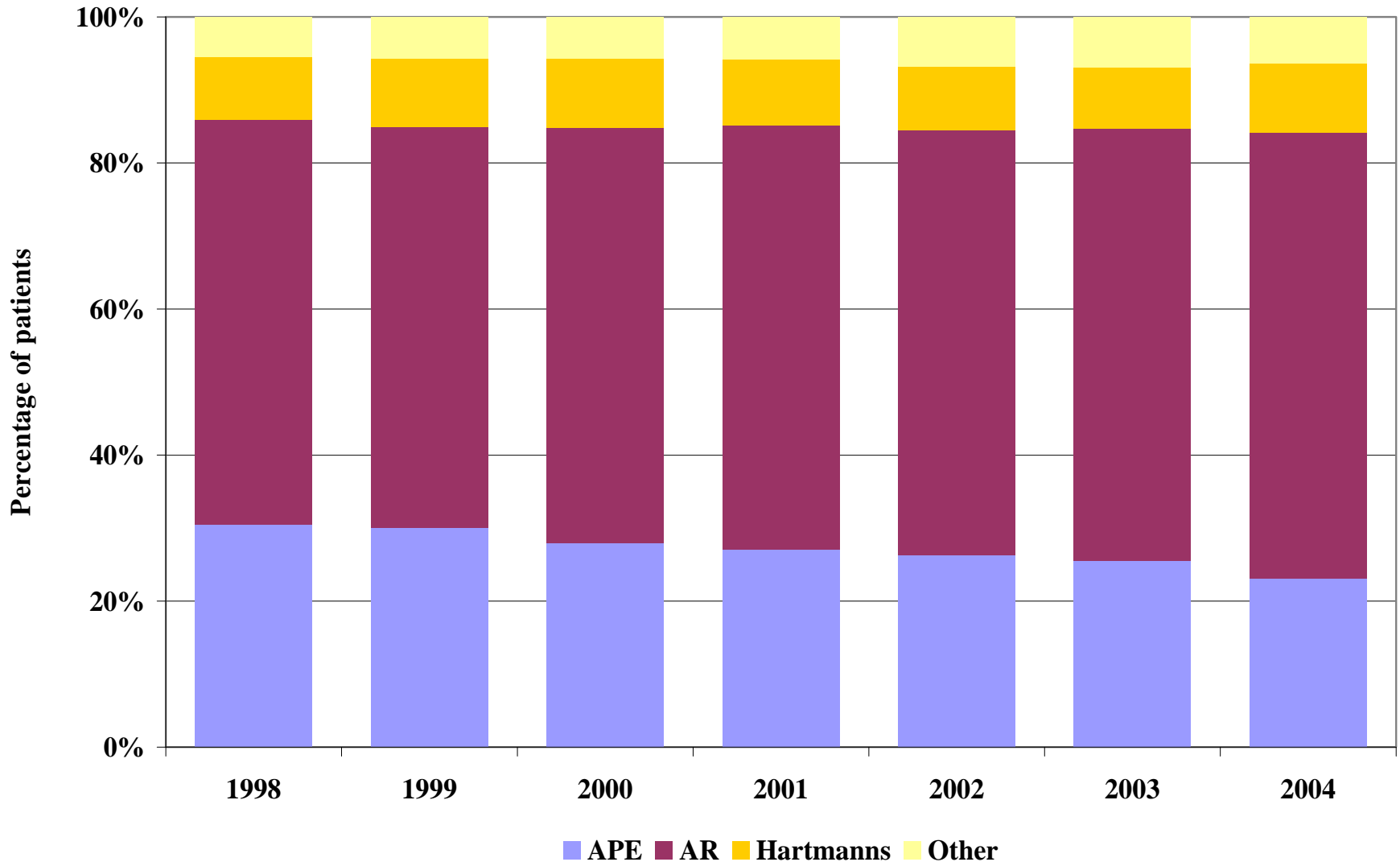


Rectal cancer surgery

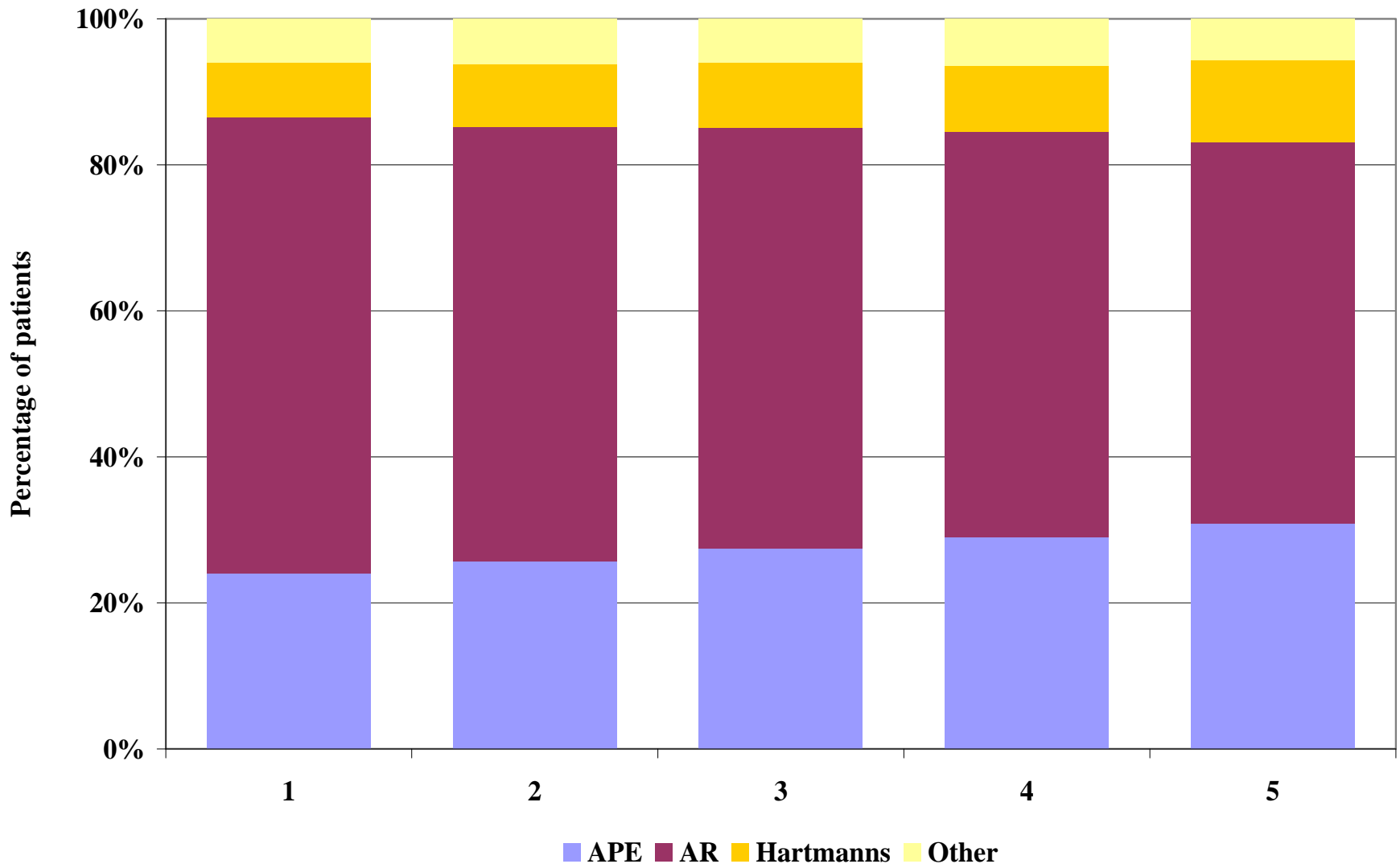
Main procedures

- Abdominoperineal resection (APE)
 - Anterior resection (AR)
- Are there differences in rectal surgical practice between networks, trusts and surgeons?
 - Studied practice across 31,223 individuals who received a major resection for rectal cancer between 1998 and 2004

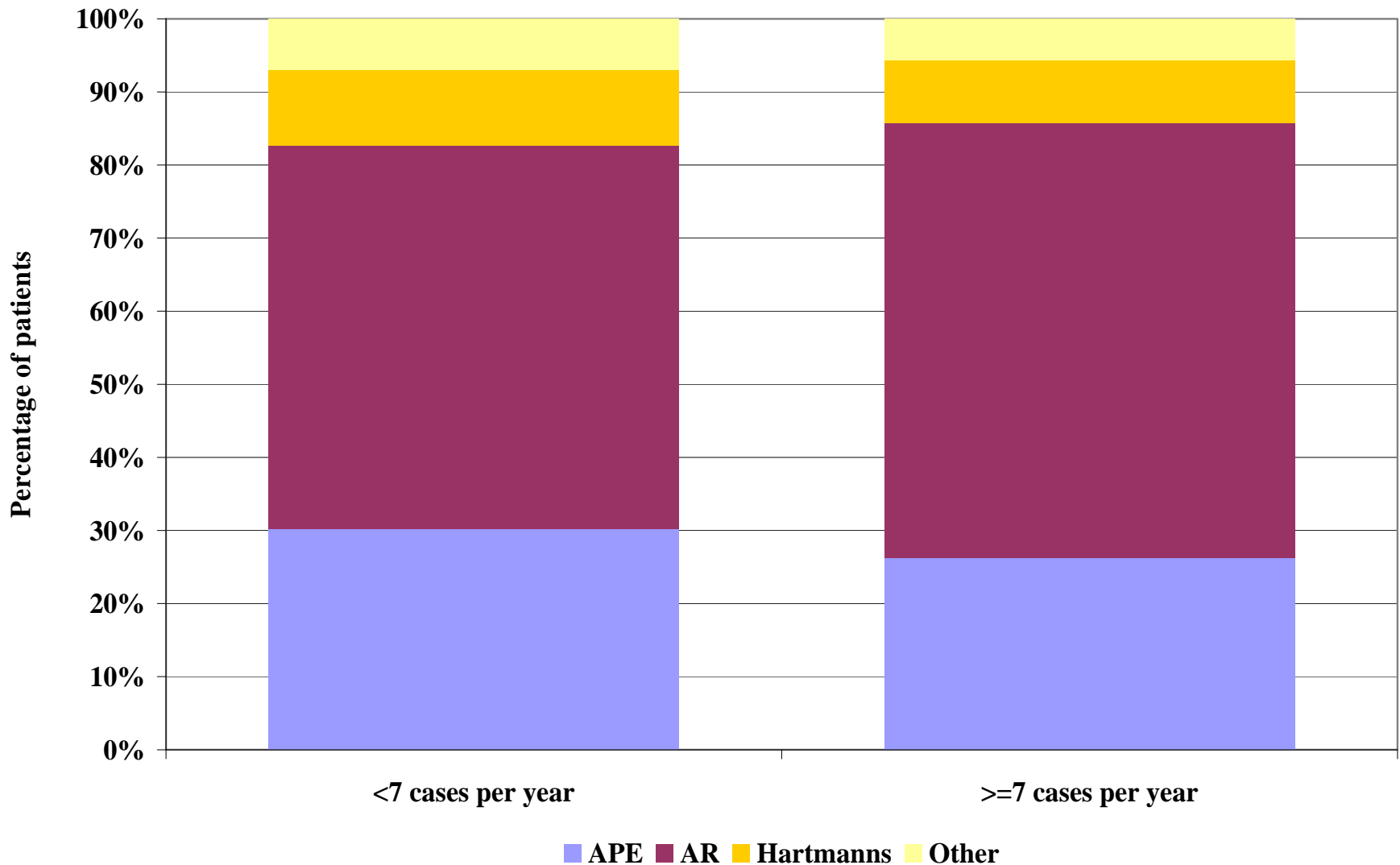
Rectal surgery in relation to year of diagnosis



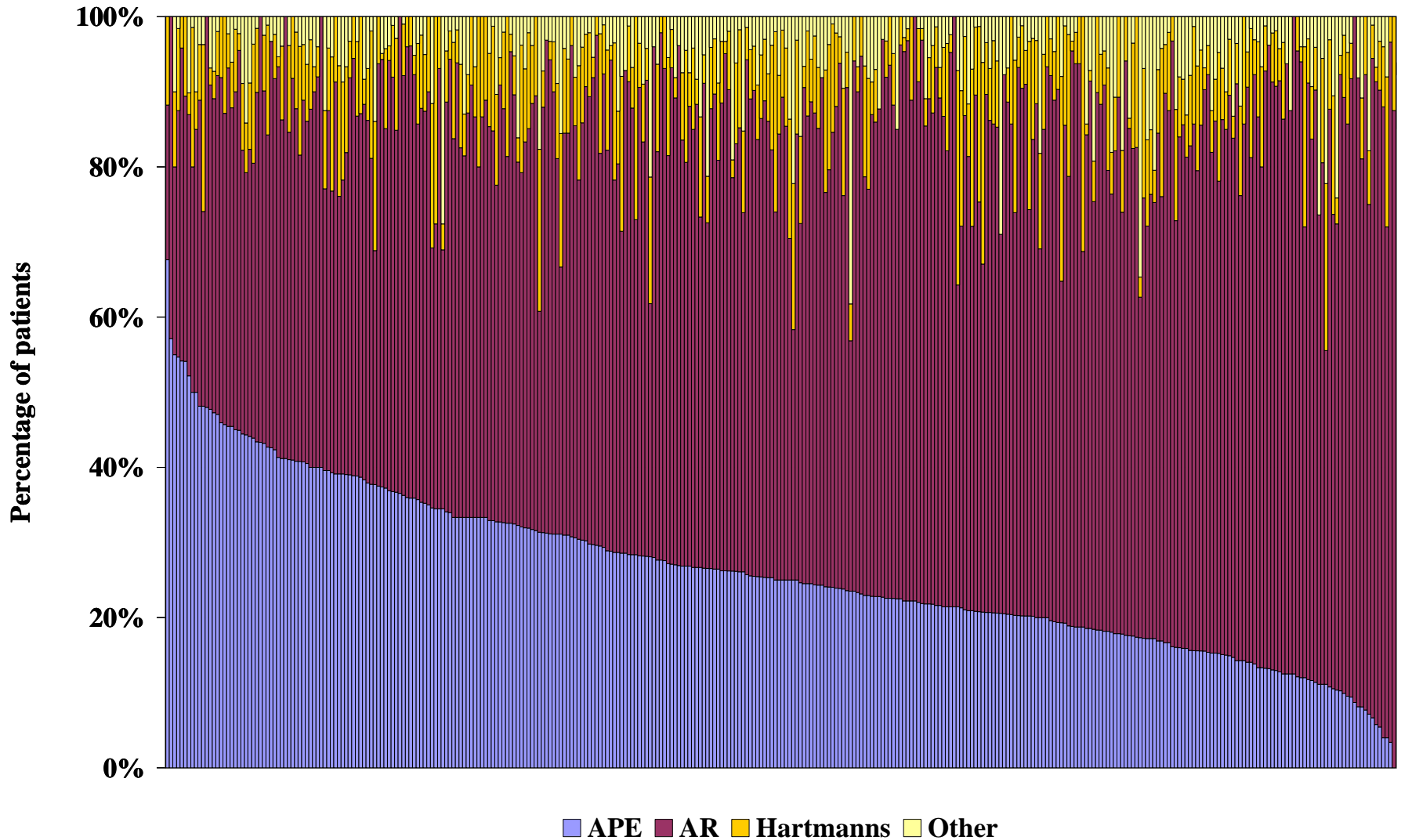
Rectal surgery in relation to socioeconomic deprivation quintile



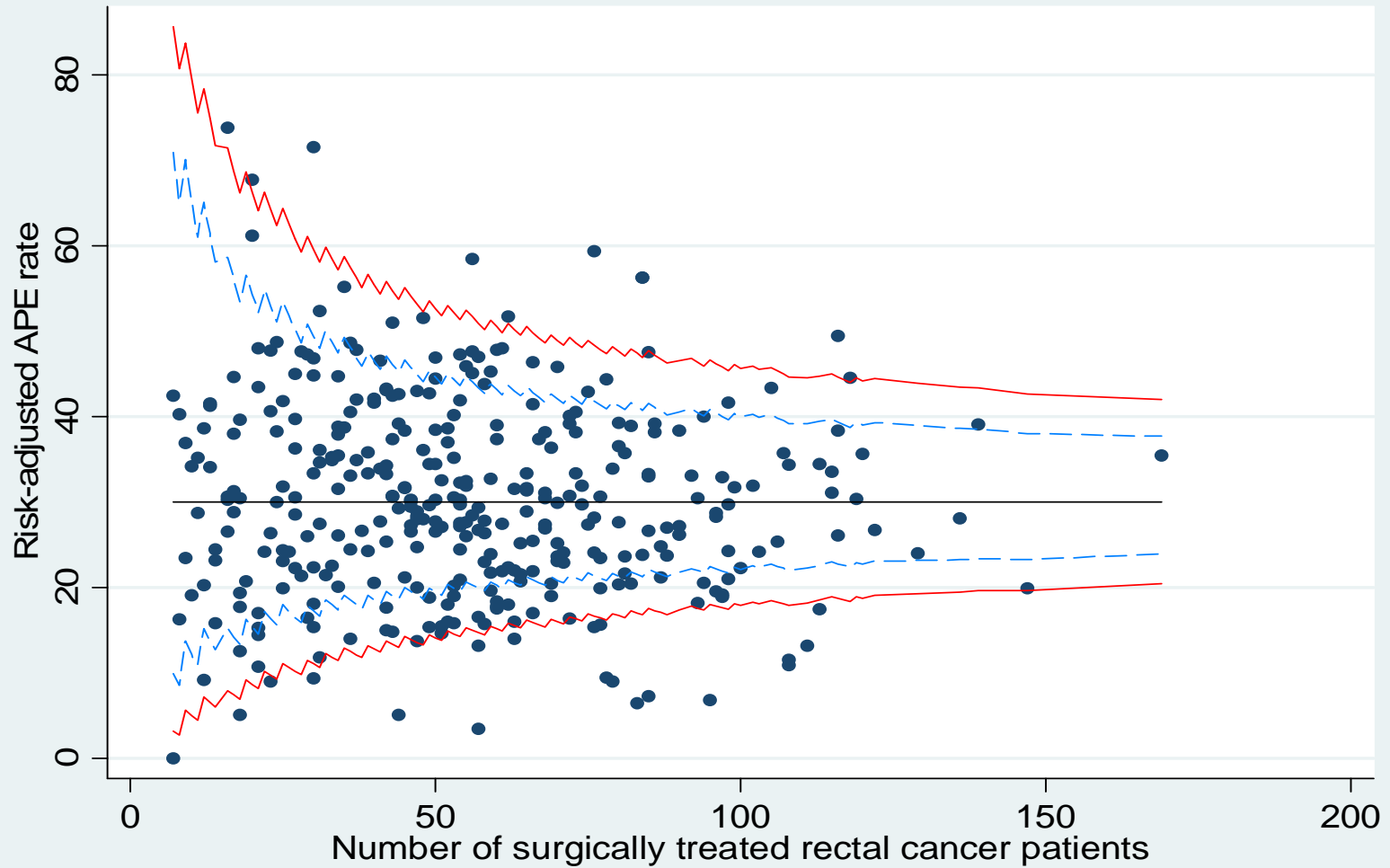
Rectal surgery in relation to specialisation of operating surgeon



Rectal Cancer Surgery



Rectal cancer surgery

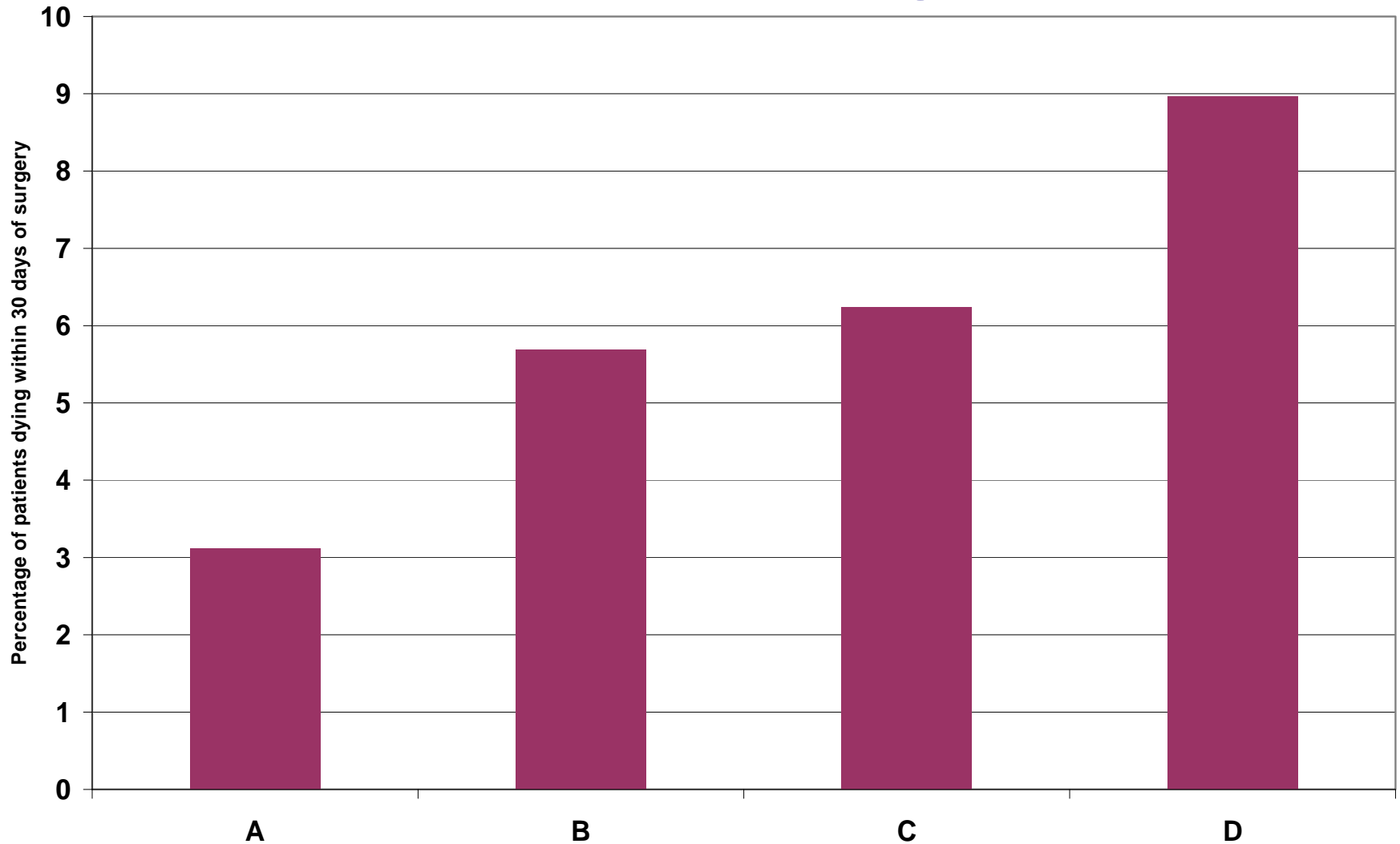


Post-operative mortality

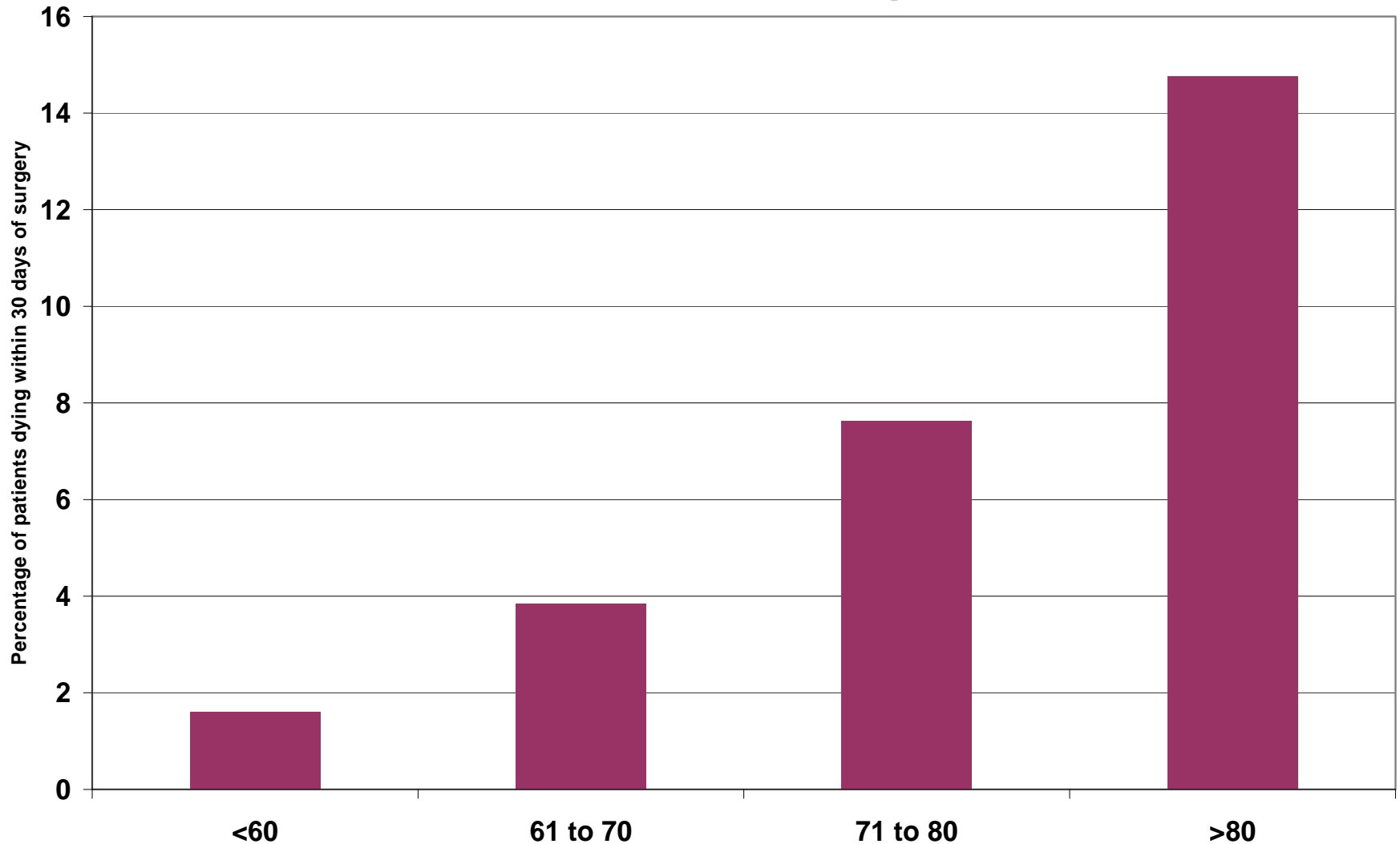
- Included all patients who underwent a major surgical procedure for colorectal cancer between 1998-2004 (~125,000)
- Overall 30-day post-op mortality rate was 6.7%
- Big variation in mortality across country



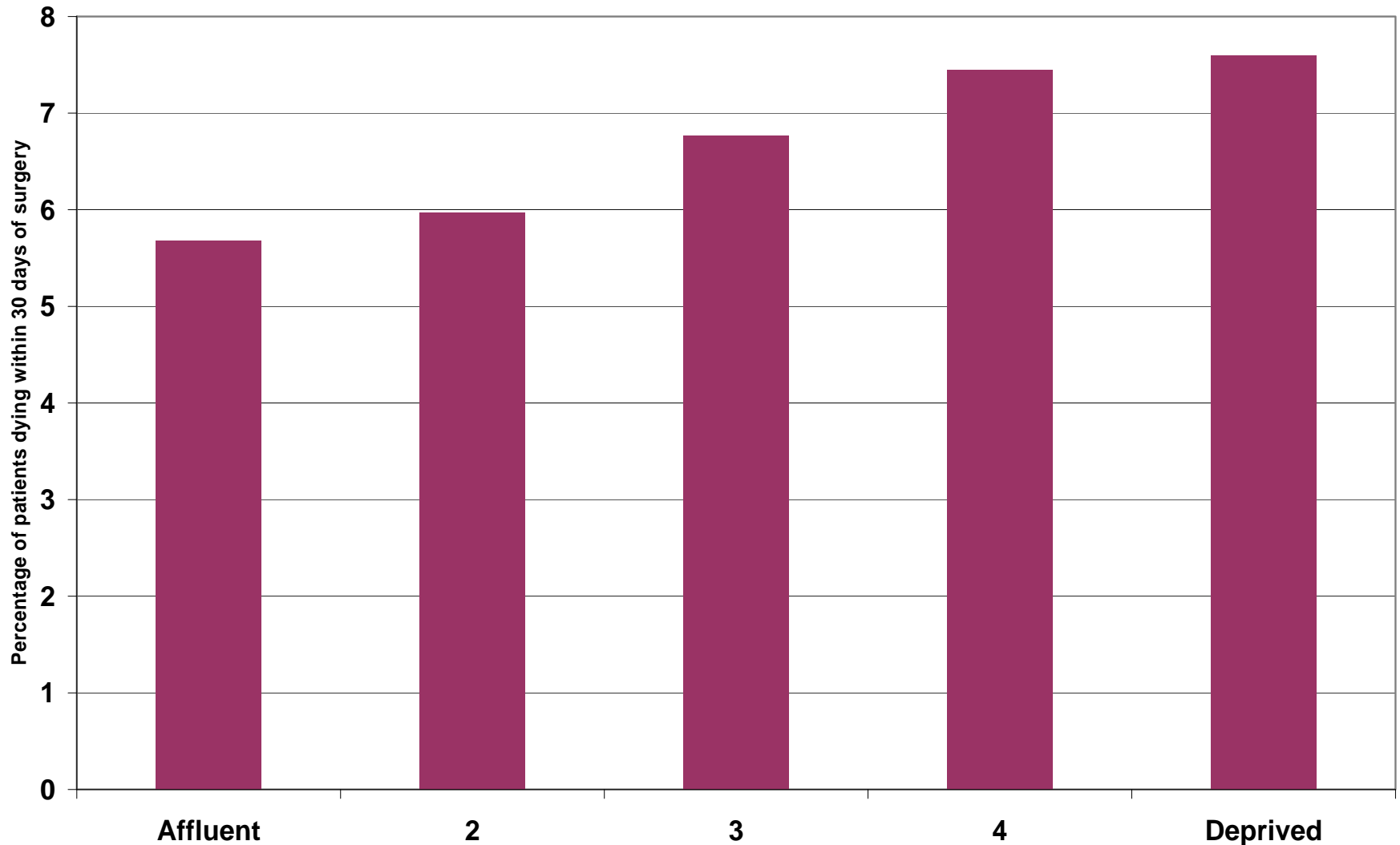
Post-operative mortality in relation to Dukes stage



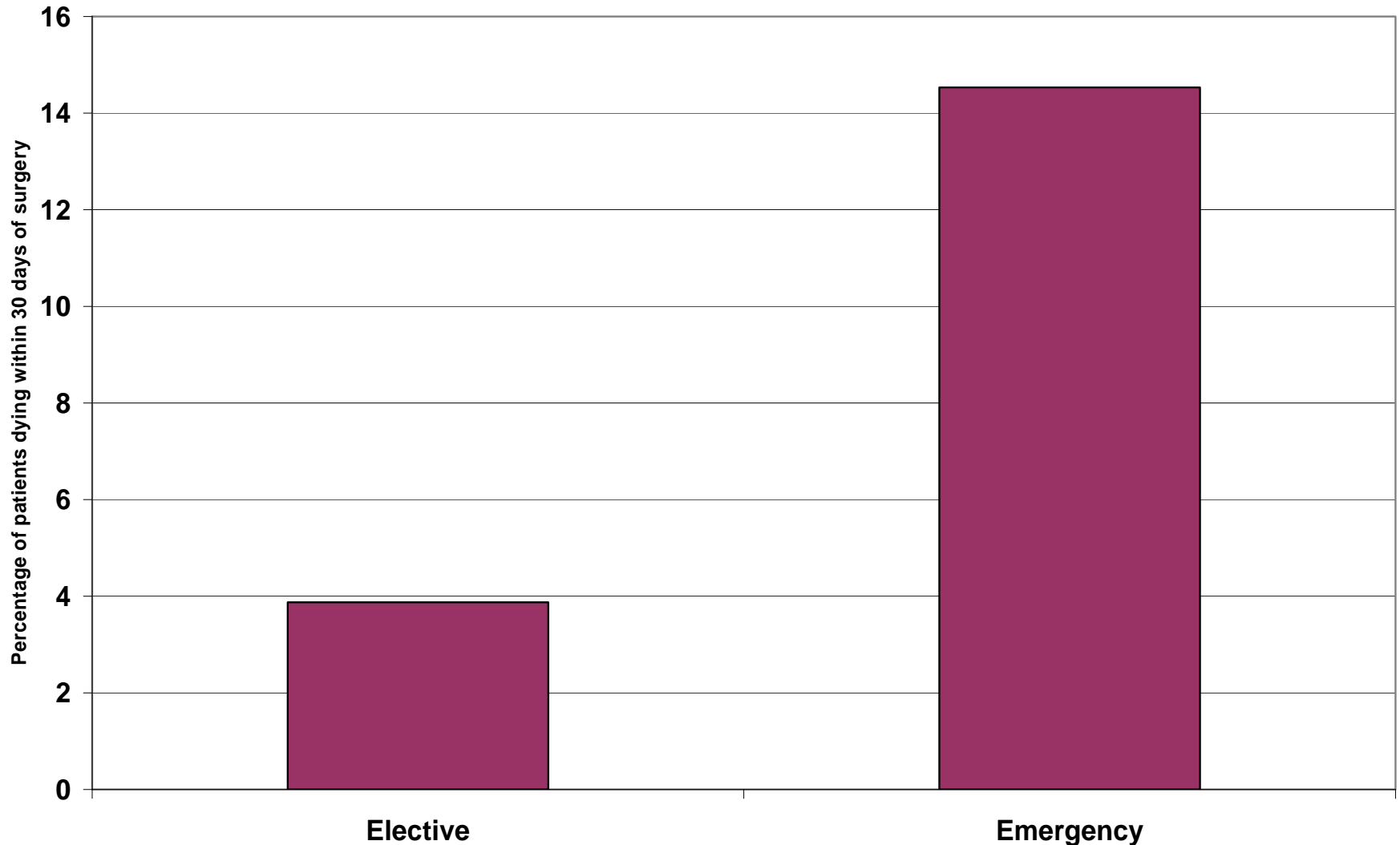
Post-operative mortality in relation to patient age



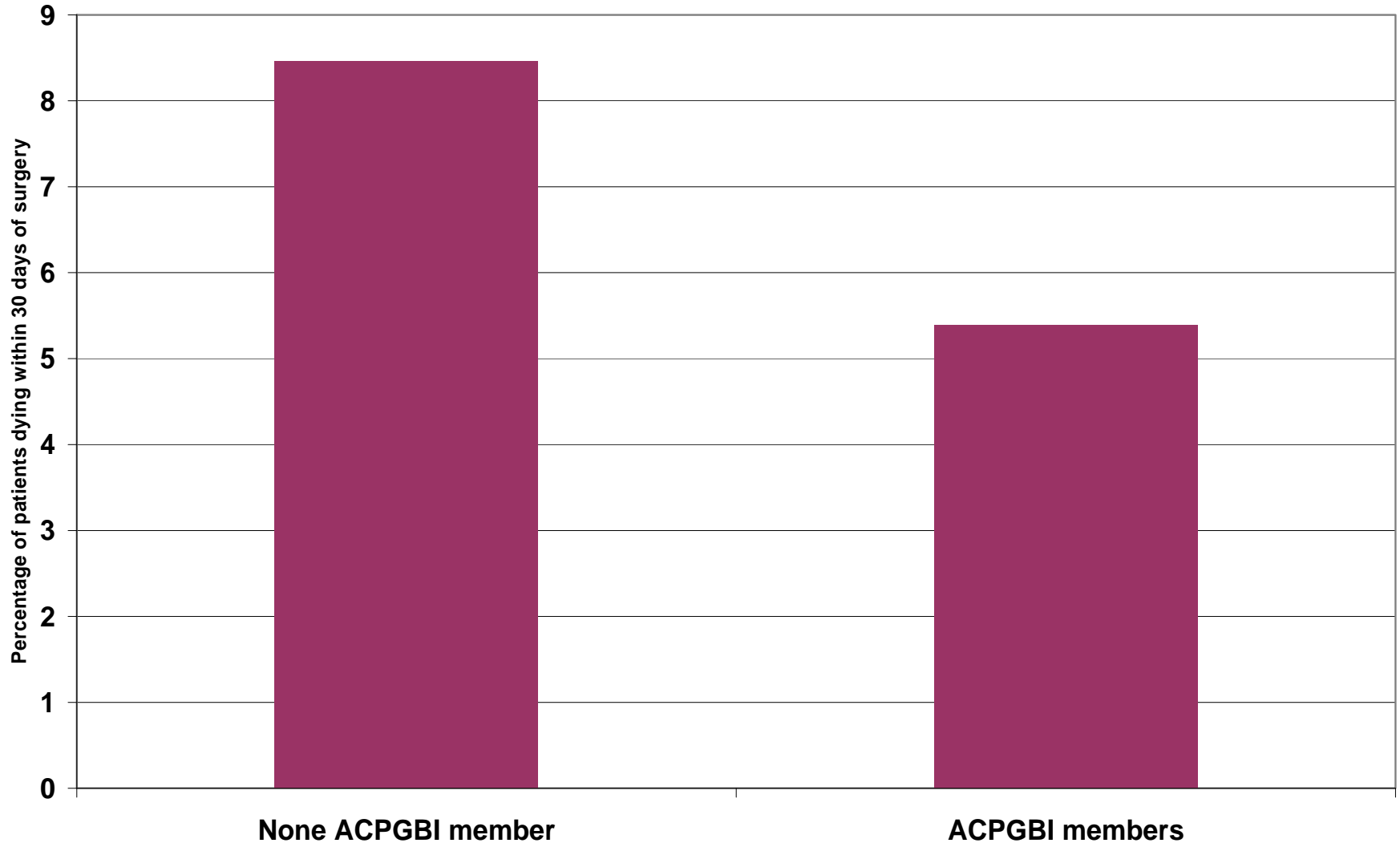
Post-operative mortality in relation to socio-economic deprivation quintile



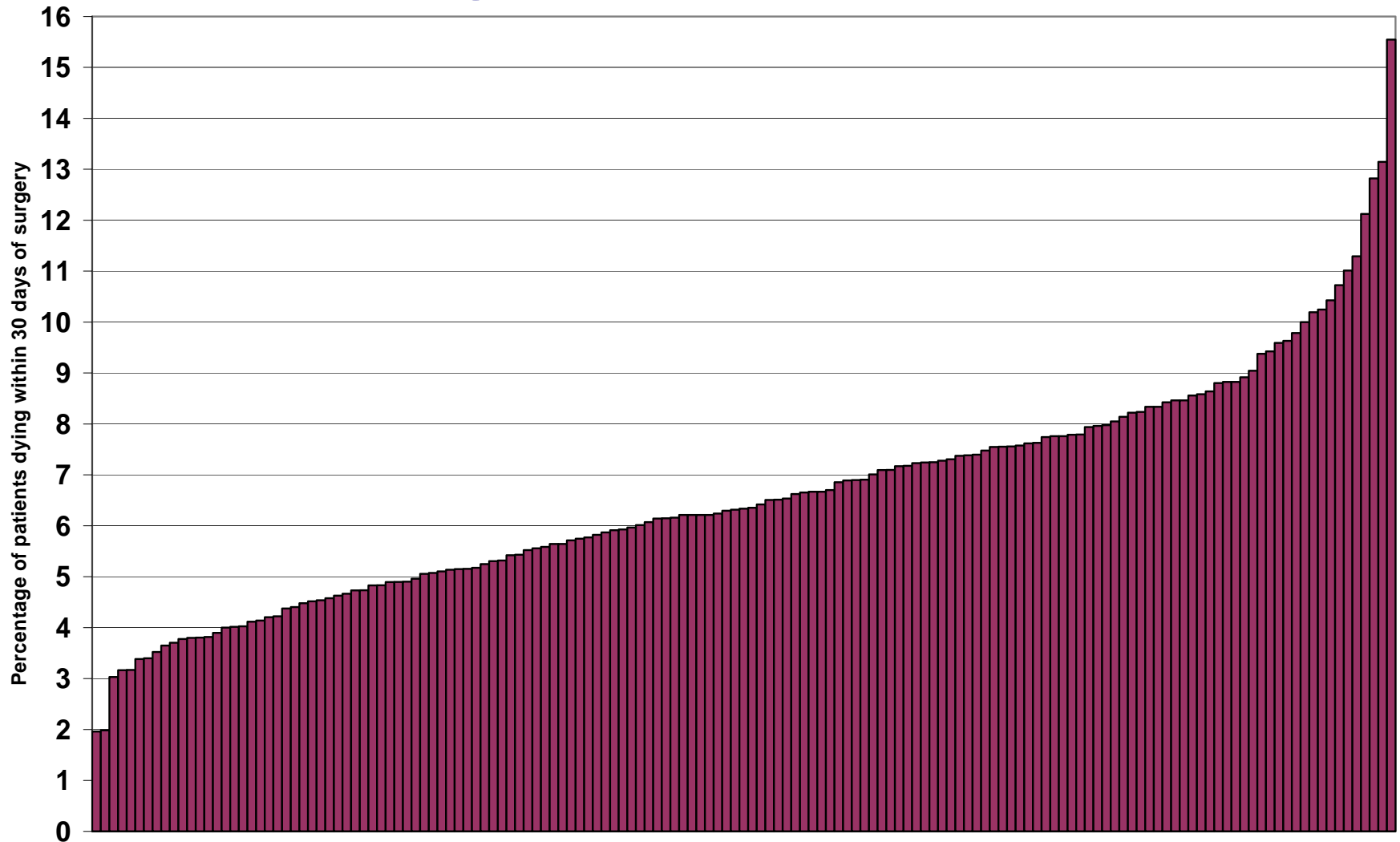
Post-operative mortality in relation to method of admission to hospital



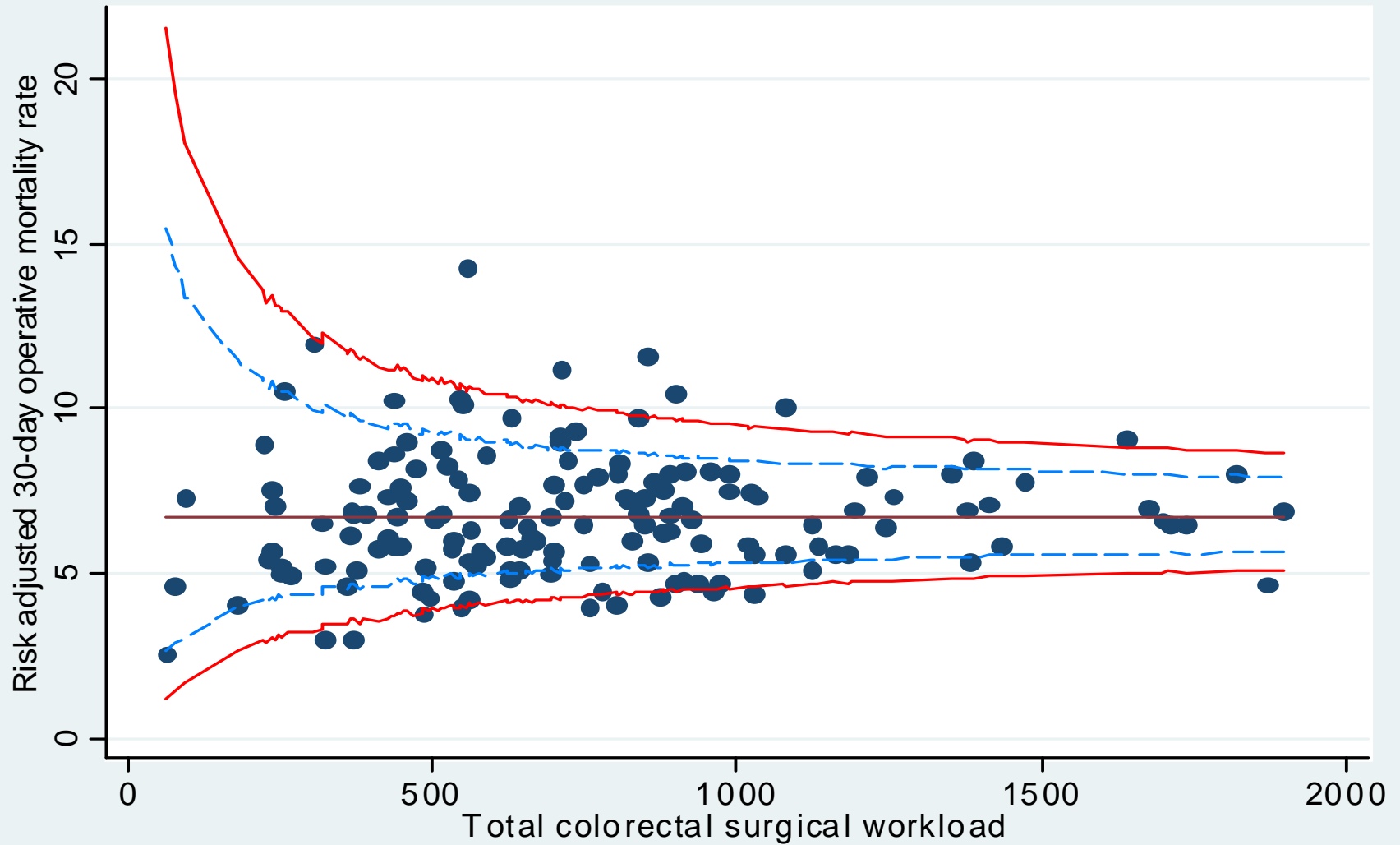
Post-operative mortality in relation to specialisation of operating surgeon



Post-operative mortality across English NHS trusts



Post-operative mortality

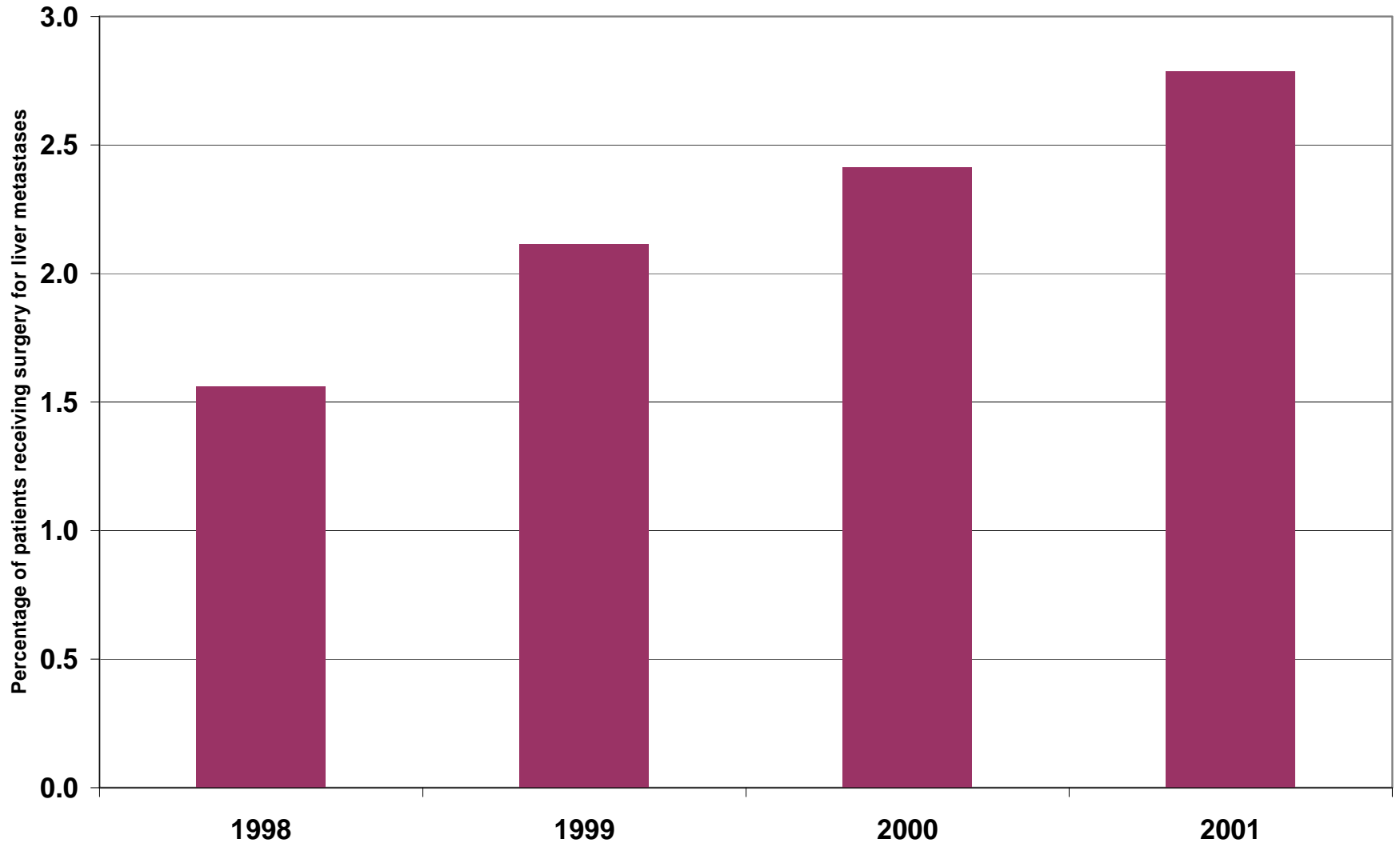


Resection of liver metastases

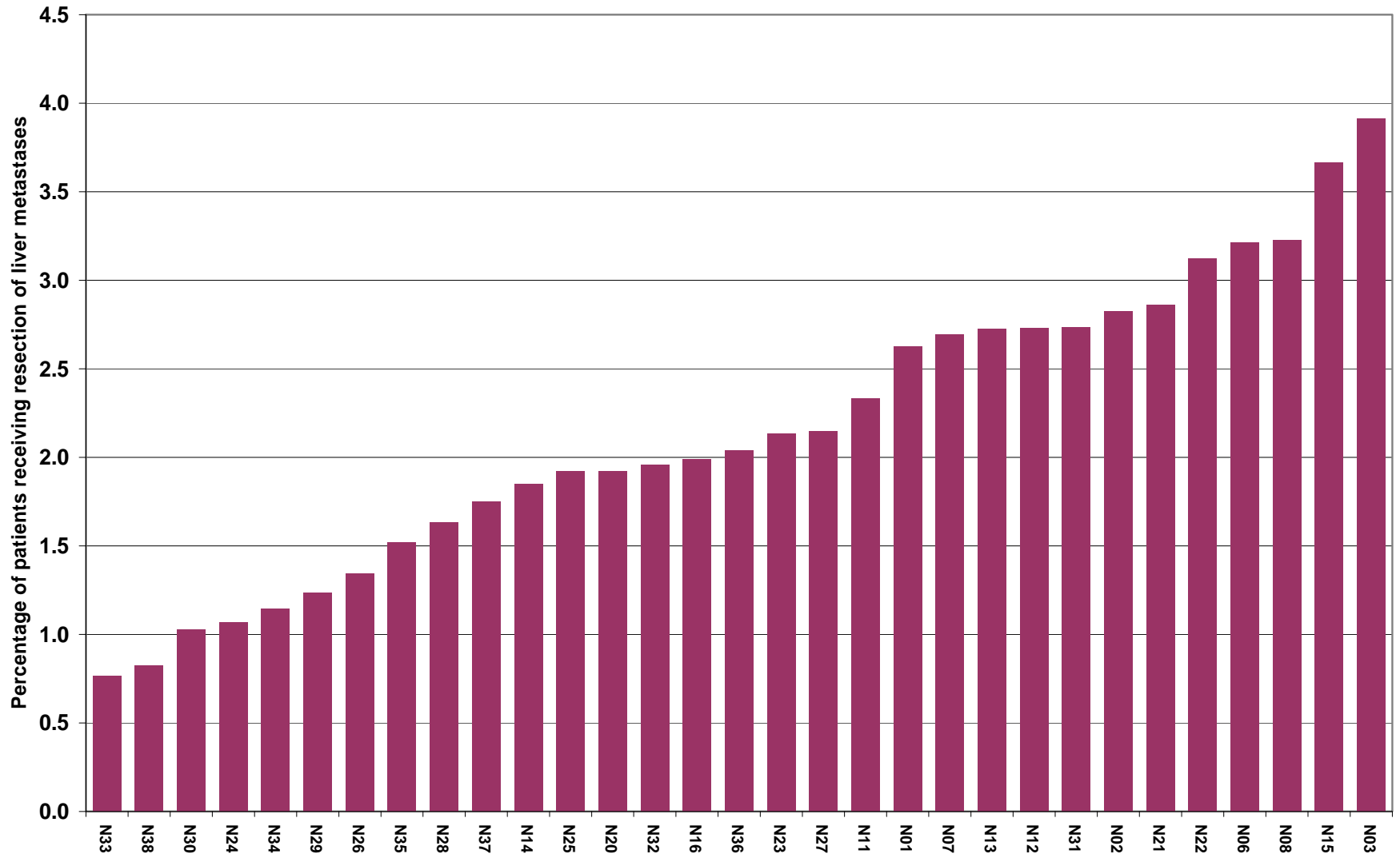
- Growing evidence that, where possible, the resection of liver metastases is associated with improved survival
- ~70,000 eligible patients with major surgical procedure for colorectal cancer, 1998-2001
- 1500 patients underwent liver resection within 3 years of surgery for primary disease



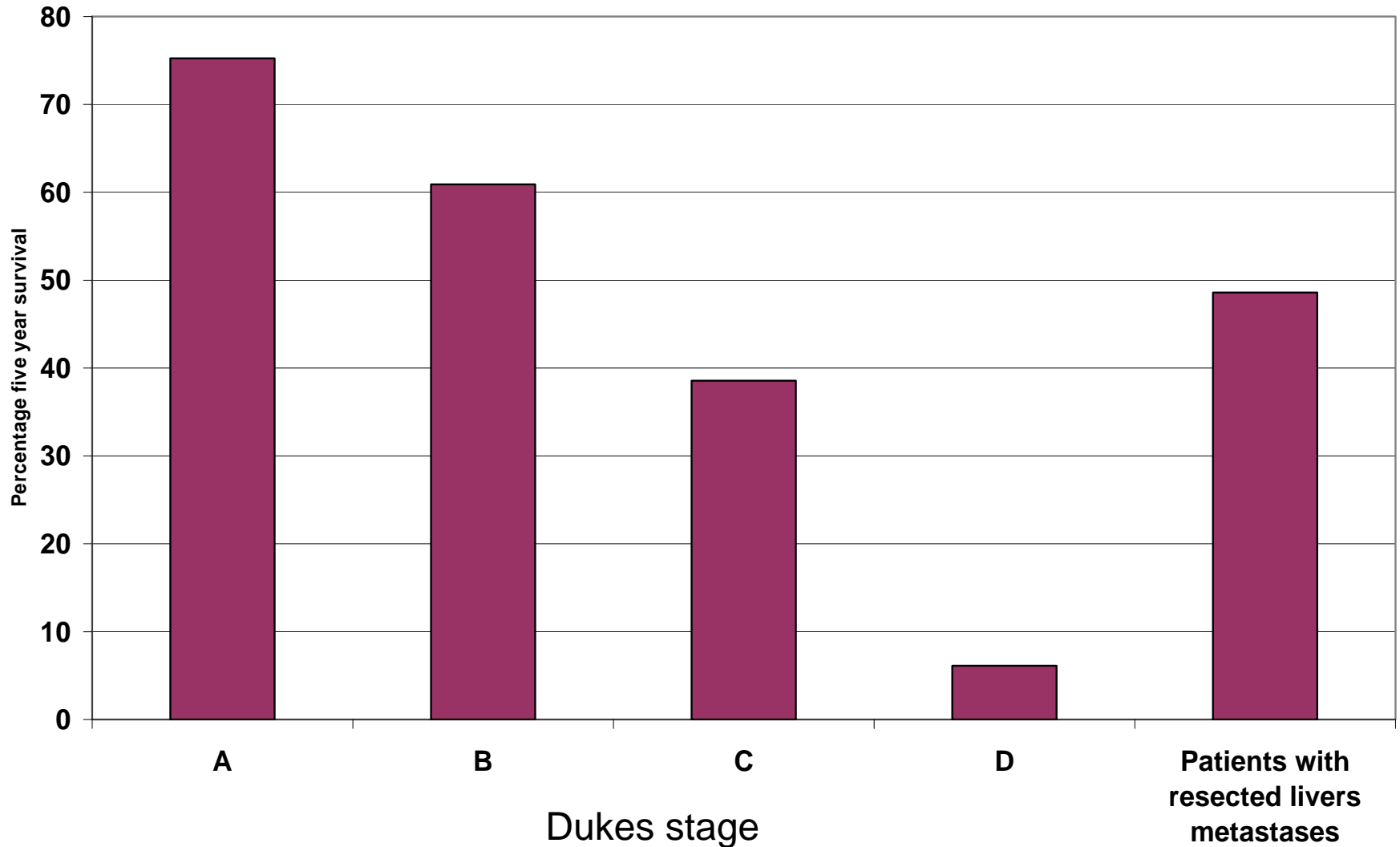
Resection of liver metastases over time



Resection of liver metastases



Survival following the resection of liver metastases



Radiotherapy Data

- Detailed episode-based information now being collected directly from linear accelerators and held as RES
- Preliminary linkage already undertaken
- Will enable variation in radiotherapy usage across country to be assessed

Chemotherapy data

- Link to prescribing systems to assess use of chemotherapy
- Monitor the uptake of new drugs
- Assess their impact on outcomes & long-term side effects

Clinical Trial Data

- Clinical trials expensive and difficult to run due to long term follow-up
- Possible to monitor long-term progress and outcome of participants in dataset?
- Increase efficiency of trials and enable much longer follow-up that currently possible?



Genetic Datasets

- Extensive research underway to identify genes and tumour markers associated with prognosis and response
- Via linkage to such datasets hope to relate tumour biology to prognosis, response to treatment and outcome

Bowel Screening Programme

- New screening programme being rolled out across country
- Linkage to this data source will enable
 - Monitor frequency of interval tumours
 - Identification of high risk pathological features that pre-disposing patients to colorectal cancer
 - Compare the profile of screen-detected, non screen-detected and interval cancers
 - Assess efficacy of the programme



Conclusions

- Powerful population-based dataset
- Potential for further linkages
 - Primary care data
 - Outpatient HES
- Caution about quality and consistency of coding in the data
- Methodology being translated to all other cancer sites by NCIN



Acknowledgements

- James Thomas
- Rebecca Birch
- Lesley Fairley
- David Forman
- Phil Quirke
- Paul Finan
- Graeme Poston
- Brian Cottier

