

# Treatment of data in national clinical audits undertaken by the Clinical Radiology Audit Sub-Committee of the Royal College of Radiologists

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**On behalf of the Clinical  
Radiology Audit Sub-Committee**

Implementation of change

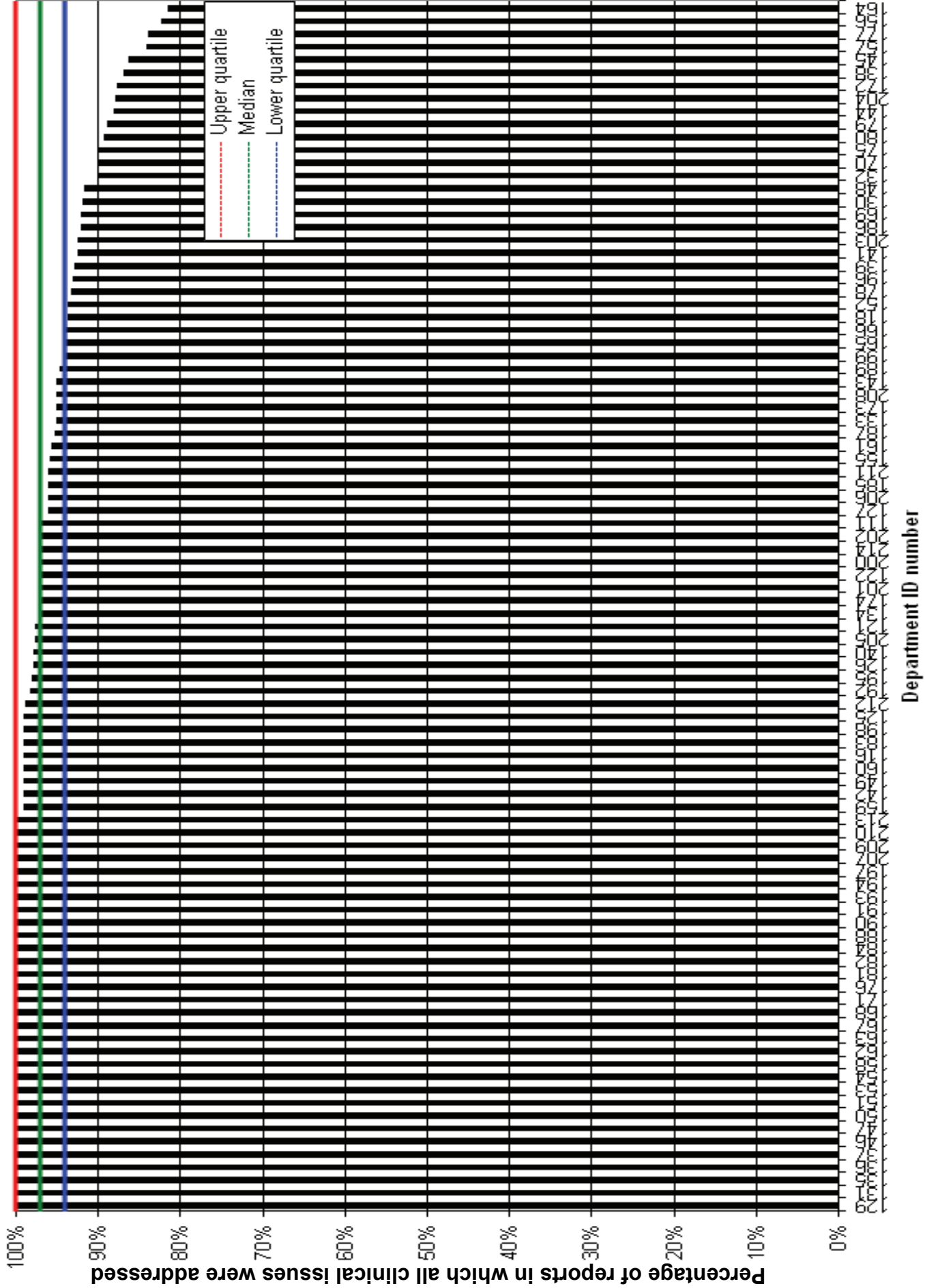
Patient  
care or  
outcomes  
before  
change

Patient  
care or  
outcomes  
after  
change

Percentage of  
events that  
comply with  
criterion

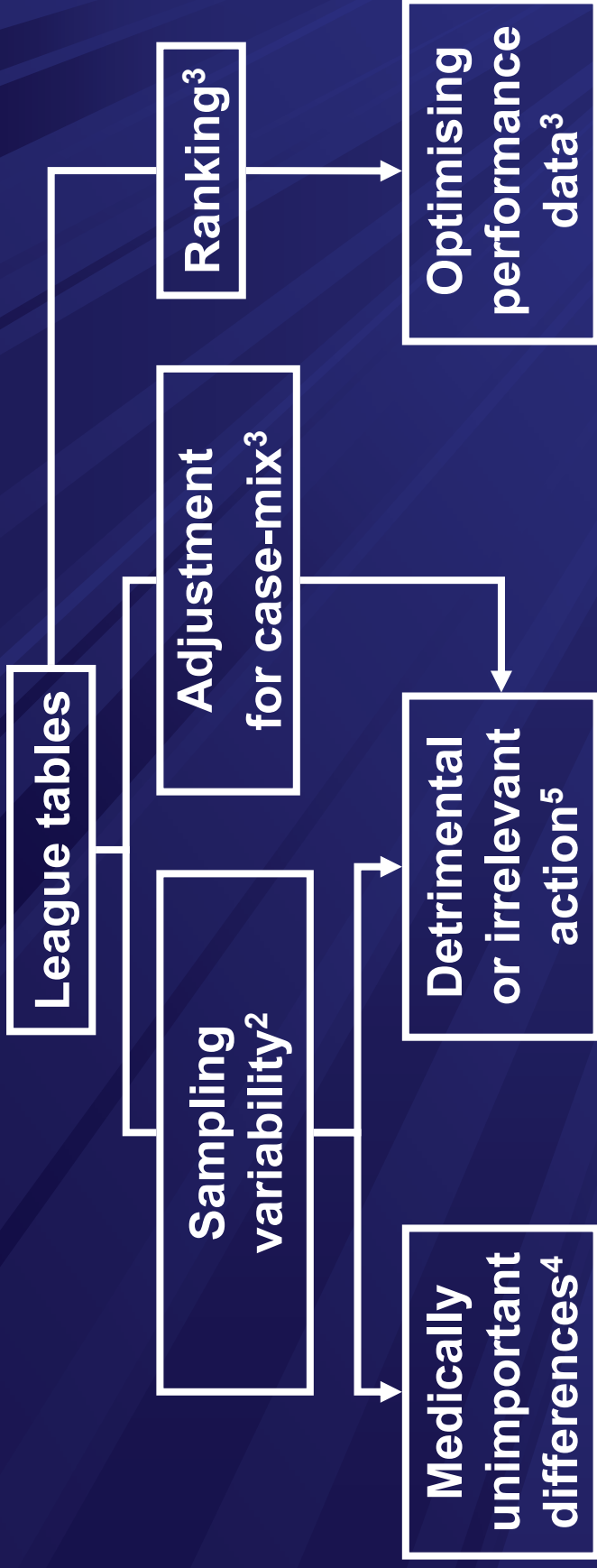
Percentage of  
events that  
comply with  
criterion

<i>Clinical issues should be addressed</i>	Audit	Re-audit
Target	>=95%	>=95%
Observed %	810/900=90%	835/870=96%
95% CI for 'true' %	88–92%	95–97%
Standard met?	No	Yes
% difference		96-90=6%
95% CI for 'true' % difference		4–8%
Improvement?		Yes



# League tables

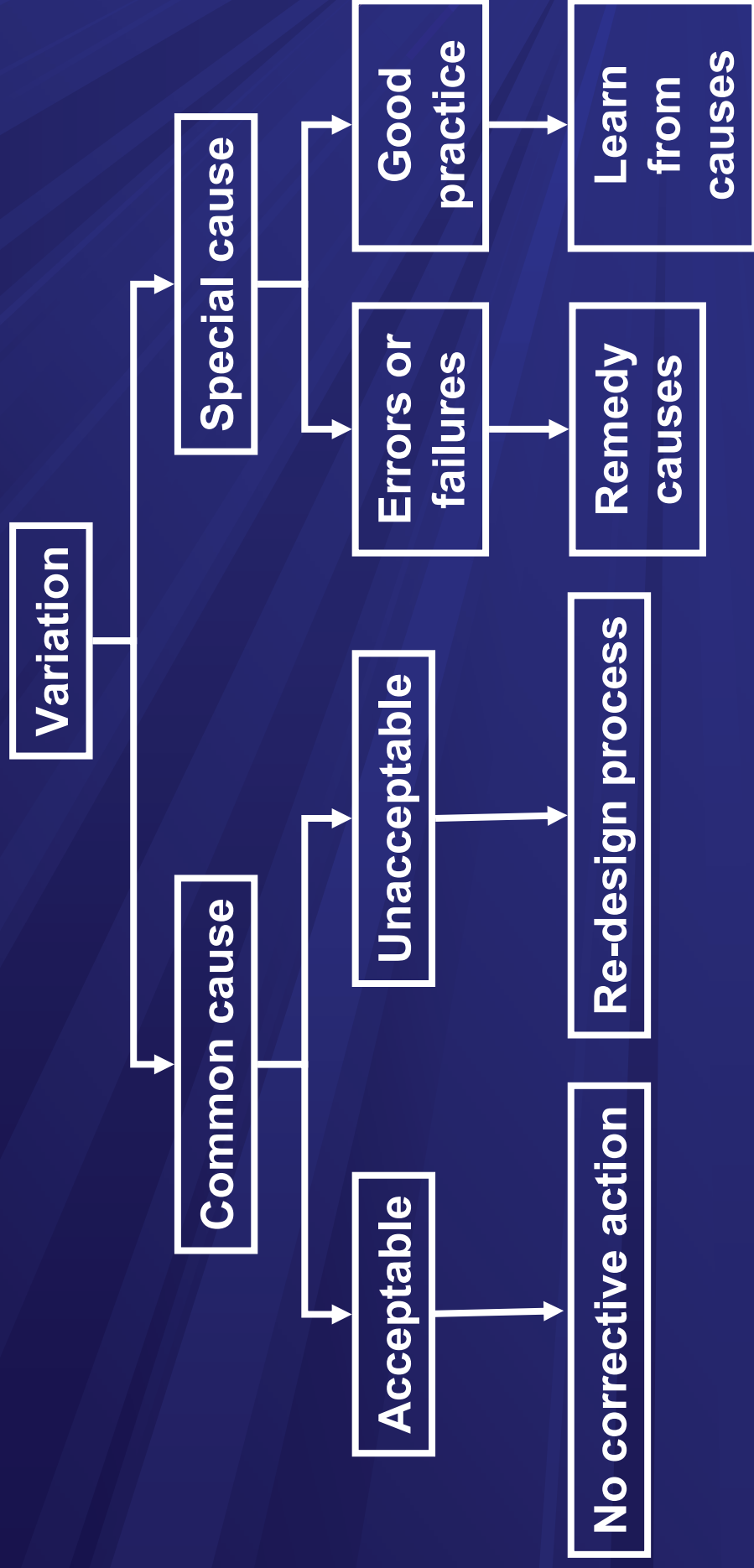
- **Easy to create**
- **Easy to compare performance**
- **Help individual departments to seek resource to climb up league**
- **Have been used by other UK royal medical colleges to set standards at 75<sup>th</sup> centile**

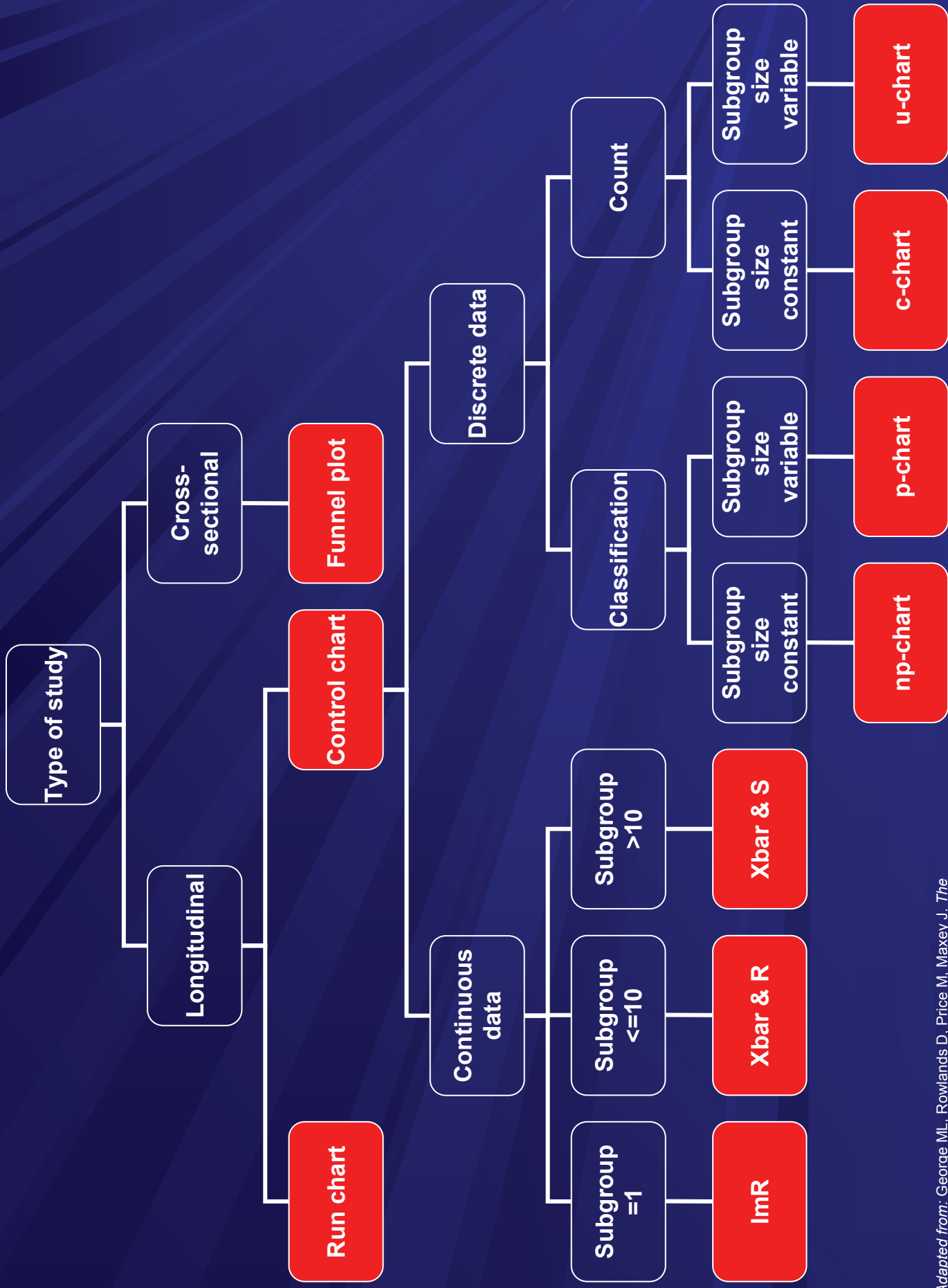


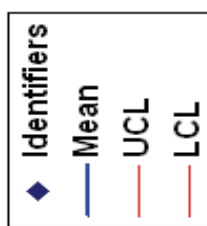
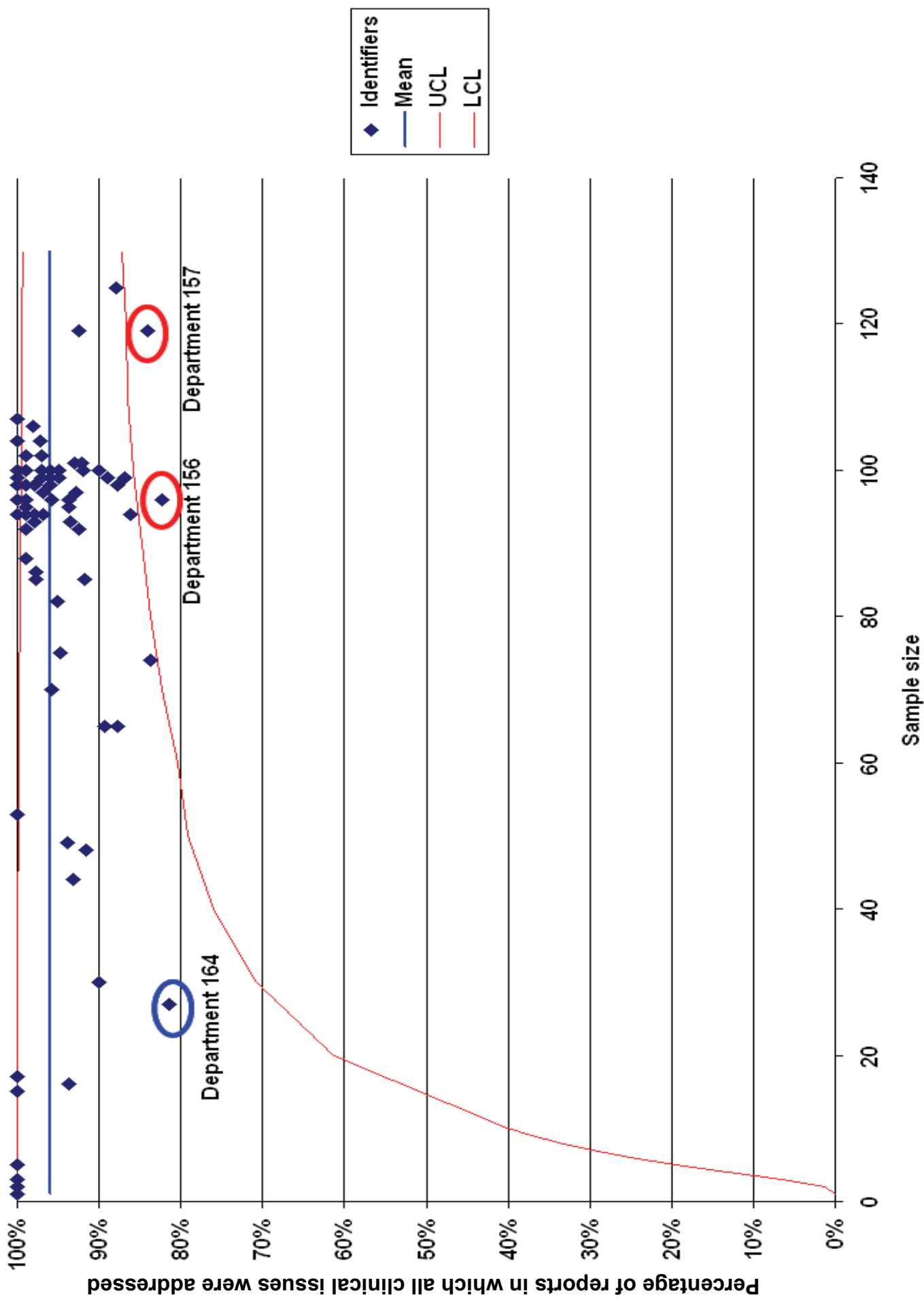
### Optimising performance data<sup>6</sup>

- Coding creep
- Choice of risk adjustment method
- Transfer of patients
- Change of operating class
- Denial of treatment
- Cream skimming of healthier patients

# Statistical process control (SPC) charts







# Special cause checklist<sup>8</sup>

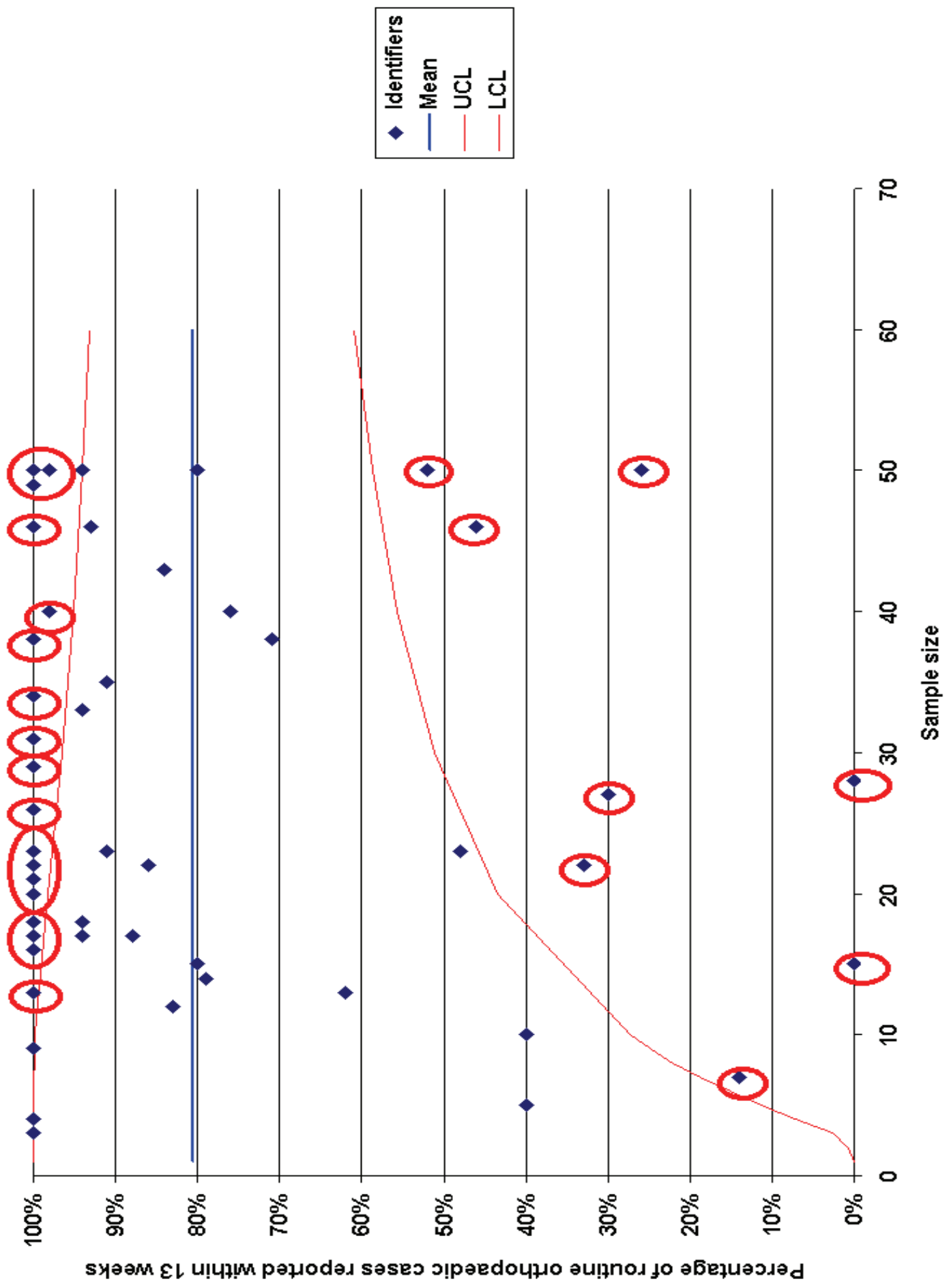
- **Data**
- **Case-mix**
- **Resources**
- **Work process**
- **Practitioners**

# National audit of sensitivity of double contrast barium enema in diagnosis of colo-rectal carcinoma<sup>9</sup>

- **Standard**
  - Lesion demonstrated in at least 95 % of cases
- **Special cause variation (errors/failures)**
  - 8/131 (6%) departments
- **Remedial actions**
  - Thorough colon cleansing regimens
  - Better adherence to technical protocols
  - Closer supervision of trainees
  - Repeats of films of poor quality
  - Adequate filming of all redundant areas of the colon
  - Double reading
  - Subspecialisation

# National audit of provision of MRI services 2006/07<sup>10</sup>

- **Standard**
  - Orthopaedic scans reported within 13 weeks in 50% of cases
- **Special cause variation from (apparent good practice)**
  - 18/60 (30%) departments
- **Learning points**
  - Better organisation
  - Flexible practice
  - Better utilisation of radiologists' and radiographers' time
  - Investment in equipment and technology
  - Alternative investigations



# Conclusions

- League tables
  - Comparative rankings of performance<sup>3</sup>
  - Ignore random variation
- SPC charts
  - Identify random variation
  - Guide to action<sup>11</sup>
- Royal College of Radiologists uses league tables and SPC charts

# References



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