



UNIVERSITY OF LEEDS

This is a repository copy of *Short Term Pathology Results from the First World Wide Randomised Trial of Robotic Versus Laparoscopic Resection for Rectal Cancer (ROLARR)*.

White Rose Research Online URL for this paper:  
<http://eprints.whiterose.ac.uk/111802/>

Version: Accepted Version

---

**Proceedings Paper:**

West, NP [orcid.org/0000-0002-0346-6709](http://orcid.org/0000-0002-0346-6709), Jayne, DG [orcid.org/0000-0002-8725-3283](http://orcid.org/0000-0002-8725-3283), Pigazzi, A et al. (11 more authors) (2016) Short Term Pathology Results from the First World Wide Randomised Trial of Robotic Versus Laparoscopic Resection for Rectal Cancer (ROLARR). In: Journal of Pathology. Nottingham Pathology 2016. 9th Joint Meeting of the British Division of the International Academy of Pathology and the Pathological Society of Great Britain & Ireland, 28 Jun - 01 Jul 2016, Nottingham, UK. Wiley , S17-S17.

<https://doi.org/10.1002/path.4818>

---

This is an author produced version of a paper published in the Journal of Pathology. Uploaded in accordance with the publisher's self-archiving policy.

**Reuse**

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.



[eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk)  
<https://eprints.whiterose.ac.uk/>



## Nottingham Pathology 2016

East Midlands Conference Centre · University of Nottingham  
28 June – 1 July 2016

### Abstract Submission Details & Terms and Conditions

**PLEASE ENSURE THAT YOU:**

**1) CLICK THE BOX TO ACCEPT THE TERMS & CONDITIONS FURTHER DOWN THE PAGE**

**2) CLICK ON THE "FINISH" BUTTON AT THE BOTTOM RIGHT OF THE SCREEN TO COMPLETE THE ABSTRACT SUBMISSION PROCESS.**

---

### Corresponding Author Details

Family Name: West  
First Name: Nick  
Title: Dr  
Hospital/Institution: University of Leeds  
Address: Wellcome Trust Brenner building  
St. James's University Hospital  
City: Leeds  
Postal/Zip Code: LS9 7TF  
United Kingdom  
E-mail: [n.p.west@leeds.ac.uk](mailto:n.p.west@leeds.ac.uk)

#### Title

Short term pathology results from the first world wide randomised trial of robotic versus laparoscopic resection for rectal cancer (ROLARR)

#### Abstract Text

Purpose of the study: The clinical benefit of robotic surgery in rectal cancer, and many other cancers, is unknown. Methods: We undertook the first worldwide randomised trial of robotic versus laparoscopic resection for rectal cancer (ROLARR) between 2011 and 2014. 1276 patients were assessed for eligibility by 40 surgeons from 26 sites across 10 countries. 471 (36.9%) of these patients were randomised; 234 to laparoscopic (LAP) and 237 to robotic (ROB) surgery. 466 patients underwent operation with 456 (97.9%) undergoing the allocated treatment. Summary of results: The primary end point was overall rate of conversion to open surgery, which was LAP 28/230 (12.2%) vs. ROB 19/236 (8.1%) (adjusted OR 0.614, 95%CI 0.311 to 1.211, p=0.158). No differences were seen in bladder or sexual function at 6 months. 76.4% of tumours were stage pT2 or pT3. Mean lymph node yields were high in both arms (23.6 SD 12.43) and 35.9% of cancers were node positive. The overall circumferential resection margin involvement (CRM+) rate was 26/459 (5.7%) with similar odds of between the arms (adjusted OR 0.785, 95% CI 0.350 to 1.762, p=0.557). No distal margin and one laparoscopic proximal margin were involved by tumour. Local pathological assessment of the quality of surgery following anterior resection was of the highest standard in 75.3% of cases, with no difference between the laparoscopic or robotic groups. Central review of the slides and photographs is currently on-going. Conclusions: ROLARR has shown that both laparoscopic and robotic rectal cancer surgery, when performed by experienced surgeons, can achieve excellent short-term outcomes with low CRM+ rates, low conversion rates to open surgery, high lymph node yields, respectable pathological specimens, and low rates of postoperative bladder and sexual dysfunction. It sets a new standard for the quality of pathology examination in bowel cancer trials. Acknowledgements: NW is supported by a Pathsoc Career Development Fellowship.