

# Differences in post-operative bowel function and ileus between right and left sided radical colorectal resections.



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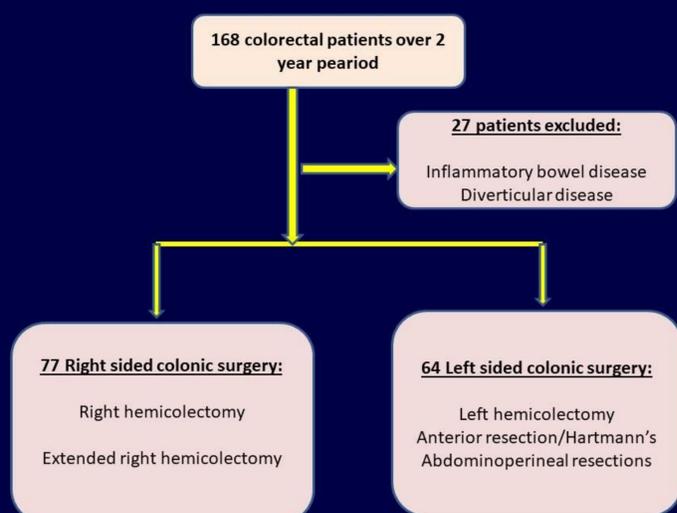
## INTRODUCTION

Enhanced Recovery (ERAS) programme recommends early commencement of post-operative diet. Is this equally feasible among different types of colorectal resections? The ERAS society has warned that early feeding can lead to increased risk of vomiting, and have identified several factors that influence post operative ileus e.g. laparoscopic surgery, mid-thoracic epidurals instead of systemic opioids etc. At Glan Clwyd Hospital, we suspected that ileus is more common among radical right-sided colonic resections than left-sided equivalents, but very limited literature has hitherto addressed this.

## OBJECTIVES

This retrospective comparative study aims to answer the question: are there differences in post-operative bowel functions and the rates of post-operative ileus between right and left-sided radical colonic resections?

## METHODS



141 radical resections for cancer in two groups - 77 cases of right-sided colectomies (right and extended-right hemicolectomies) and 64 cases of left sided resections (left hemicolectomies and anterior resections) from a two-year period (2014-2016) are reviewed.

Patient characteristics, operative techniques, time to passage of motions, tolerance of diet, incidence and duration of post-operative vomiting are compared.

## RESULTS

Besides stoma rate, no differences in the baseline characteristics (patient age, laparoscopic/open surgery, emergency/elective) were found. Patients undergoing right colonic resections take longer to establish bowel motion (4.92 vs. 4.00 days;  $p=0.028$ ), tolerate diet (6.03 vs. 3.42 days;  $p=0.017$ ), and vomit for longer (5 vs. 2.5 days;  $p=0.029$ ) compared with left-sided resections. Under subgroup analyses for patients with anastomoses and elective surgery only, the results remain statistically significant. Post operative length of stay are longer after right hemicolectomies than left sided colectomies (11.3 vs 7.6 days  $p = 0.035$ )

	Right colonic resections	Left colonic resections	P value
Days to opening bowels	5	3	0.02034
Vomiting , duration	5	2.5	0.02852
Days to tolerating diet	4	3	0.01428
Length of Hospital Stay (days)	11.3	7.6	0.030512

	Right colonic resections	Left colonic resections	P value
Days to opening bowels (with anastomoses)	5	3	0.0466
Days to tolerating diet (with anastomoses)	4	2	0.00278
Days to opening bowels (elective surgery)	4	3	0.01878
Days to tolerating diet (elective surgery)	4	3	0.03662

## DISCUSSIONS

We propose that the slower bowel function found in radical right-sided colonic resections is an effect of disturbances of nervous tissues around the duodenum during right colonic mobilisation. This is in contrast to early experimental data suggesting left colonic anastomosis being the determining factor for the recovery of bowel function, in an era where radical lymph node dissection was not routine. This may explain rates of post-op ileus in D3-lymphadenectomies being as high as 9%. Perhaps ERAS should be modified for right-colectomies.

## CONCLUSIONS

This study demonstrated a slower recovery of bowel functions in patients undergoing radical right-sided colonic resection compared to left-sided surgery.