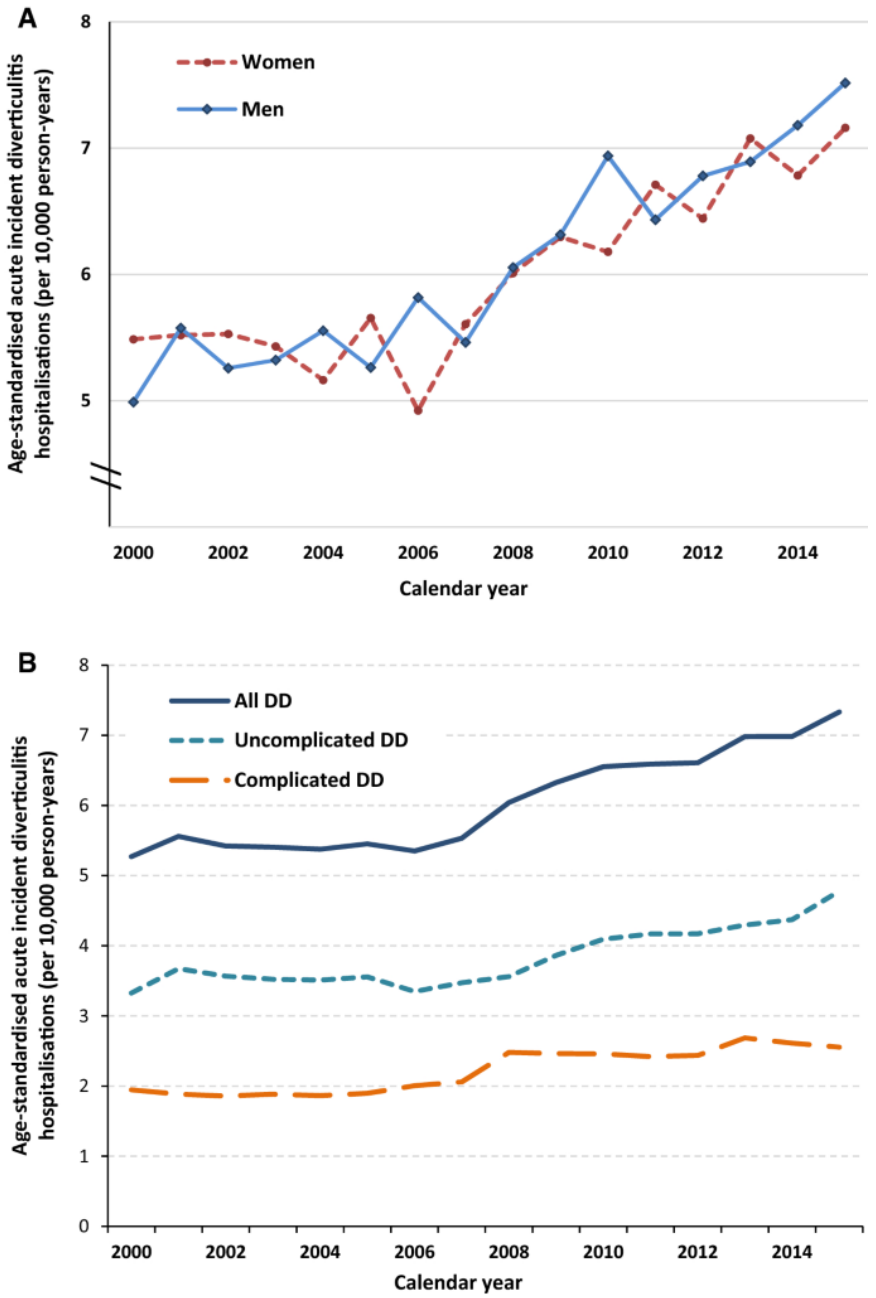
Colonic Investigation following acute diverticulitis in Northland, New Zealand

J. Tiro, O. Lengyel, M. McGuinness, C. Harmston

Whangarei Hospital, NDHB

Background



Broad, J.B., Wu, Z., Xie, S. *et al.* Diverticular disease epidemiology: acute hospitalisations are growing fastest in young men. *Tech Coloproctol* **23,** 713–721 (2019).

Colonic Investigation?

The AGA suggests that colonoscopy be performed after resolution of acute diverticulitis in appropriate candidates to exclude the misdiagnosis of a colonic neoplasm if a high-quality examination of the colon has not been recently performed. (*Conditional recommendation, low quality of evidence*).

EAES/SAGES Consensus 2018

Recommendation: Our expert group recommends against routine colonic evaluation after successfully treated uncomplicated acute diverticulitis, unless high-risk features are present. (LoE: moderate. Strength of recommendation: weak).

ESC Guidelines 2020

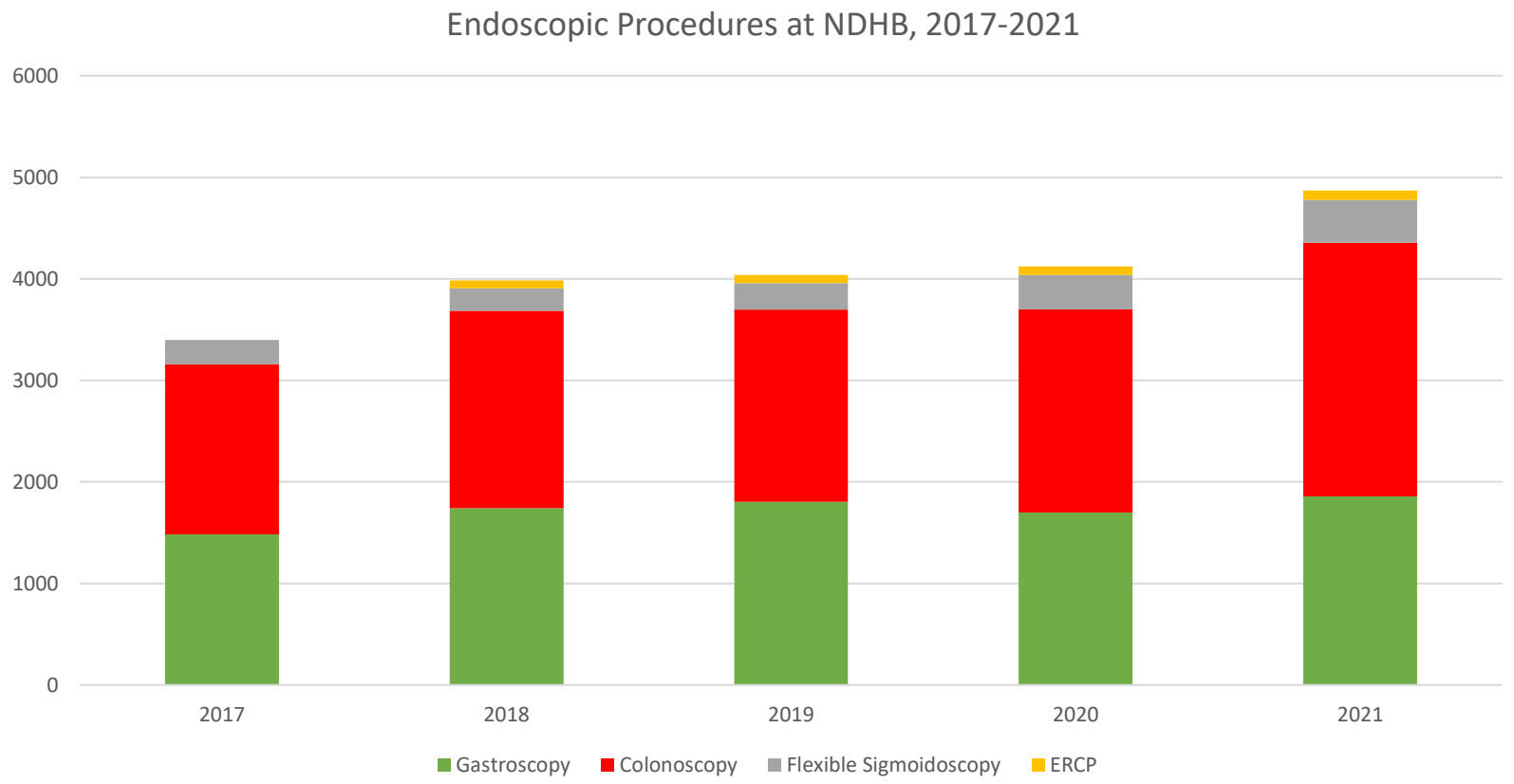
1.5.1 Endoscopic follow-up: for patients with symptom-free recovery after a single episode of CT verified uncomplicated diverticulitis endoscopic follow-up remains controversial and may not be necessary. All other patients treated without resection for acute diverticulitis should be followed up with an examination of the colon at least 6 weeks after the acute episode, if not done within the last 3 years.

Evidence level 3. Agreement 100% (third voting)

Previous Research

Year	Author	Journal	n	CRC Rate, Total	CRC Rate, Uncomplicated	CRC Rate, Complicated	Polyp Rate
2012	Sai	Radiology	771	2.10%	2.10%		
2014	Daniels	GI Endoscopy	1796	1.60%	1.60%		20.20%
2014	HS de Vries	Surg Endoscopy	1468	1.16%	1.16%		16.70%
2022	Balk	Annals Internal Medicine	6041	1.60%	1.60%		
2014	Sharma	Annals of Surgery	1970	1.60%	0.70%	10.80%	19.50%
2019	Rottier	Br J Surg	3296	2.10%	0.50%	8.30%	
2019	Meyer	Clin Gastroenterol Hepatol	5,273	1.90%	1.30%	7.90%	22.70%
2020	Koo	Dis Colon Rectum	29348	1.67%	1.22%	6.14%	

Why is this important?



- The aim of this study was to investigate which patients in Northland undergo colonic investigation following an episode of Diverticulitis, define malignancy detection rate and aid in the formulation of local guidelines.

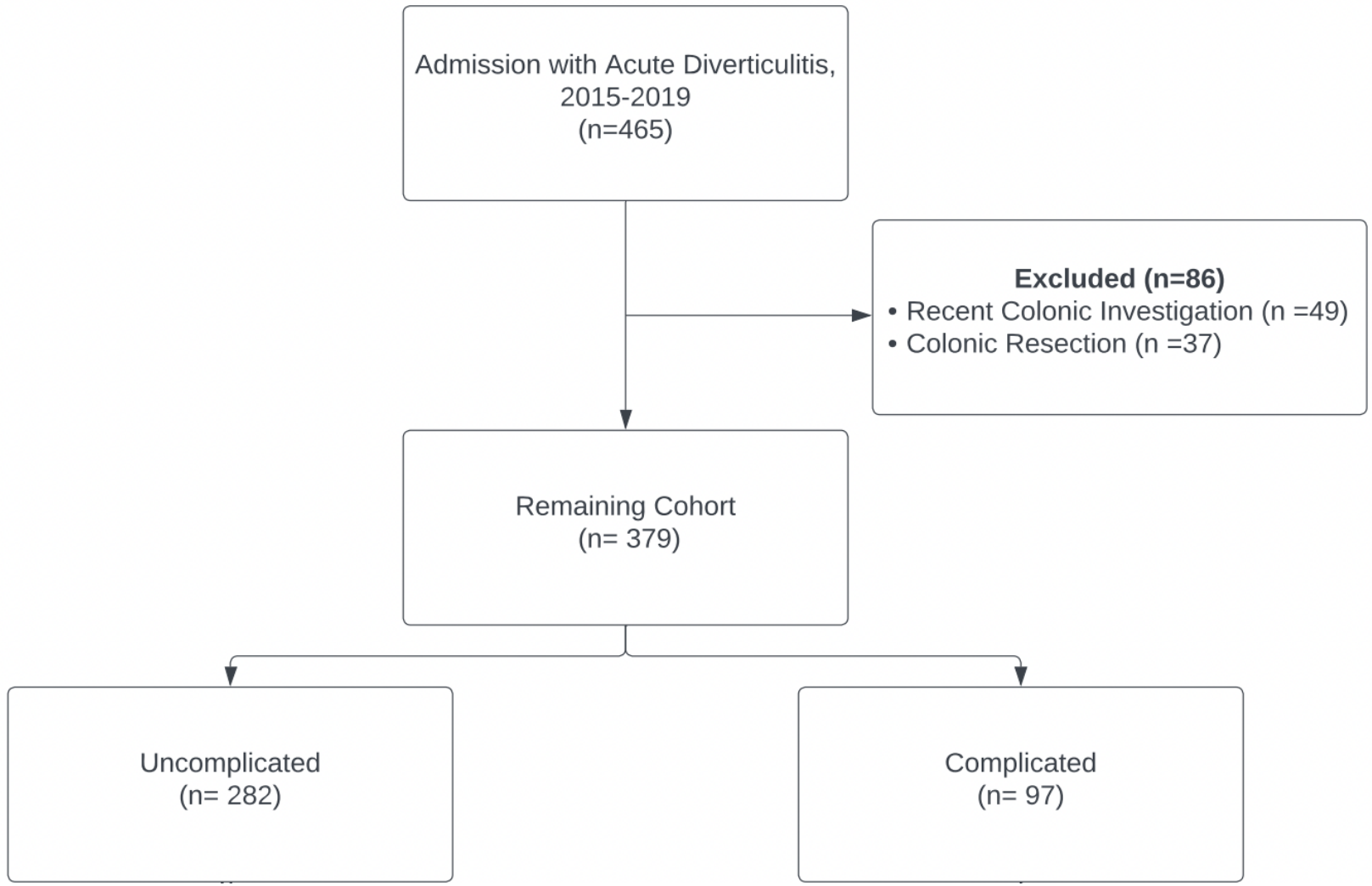
Methods

- Retrospective analysis
- Adults admitted to Whangarei hospital with diverticulitis from January 2015 to December 2019
- Exclusions:
  - Colonic Investigation in past 3 years
  - Colonic Resection on index admission
- Follow up minimum 2 years

Outcomes of Interest

- Primary
  - Rate of colonic investigation (Colonoscopy or CT Colonography)

- Secondary outcomes
  - Rate of malignancy
  - Polyp detection rate

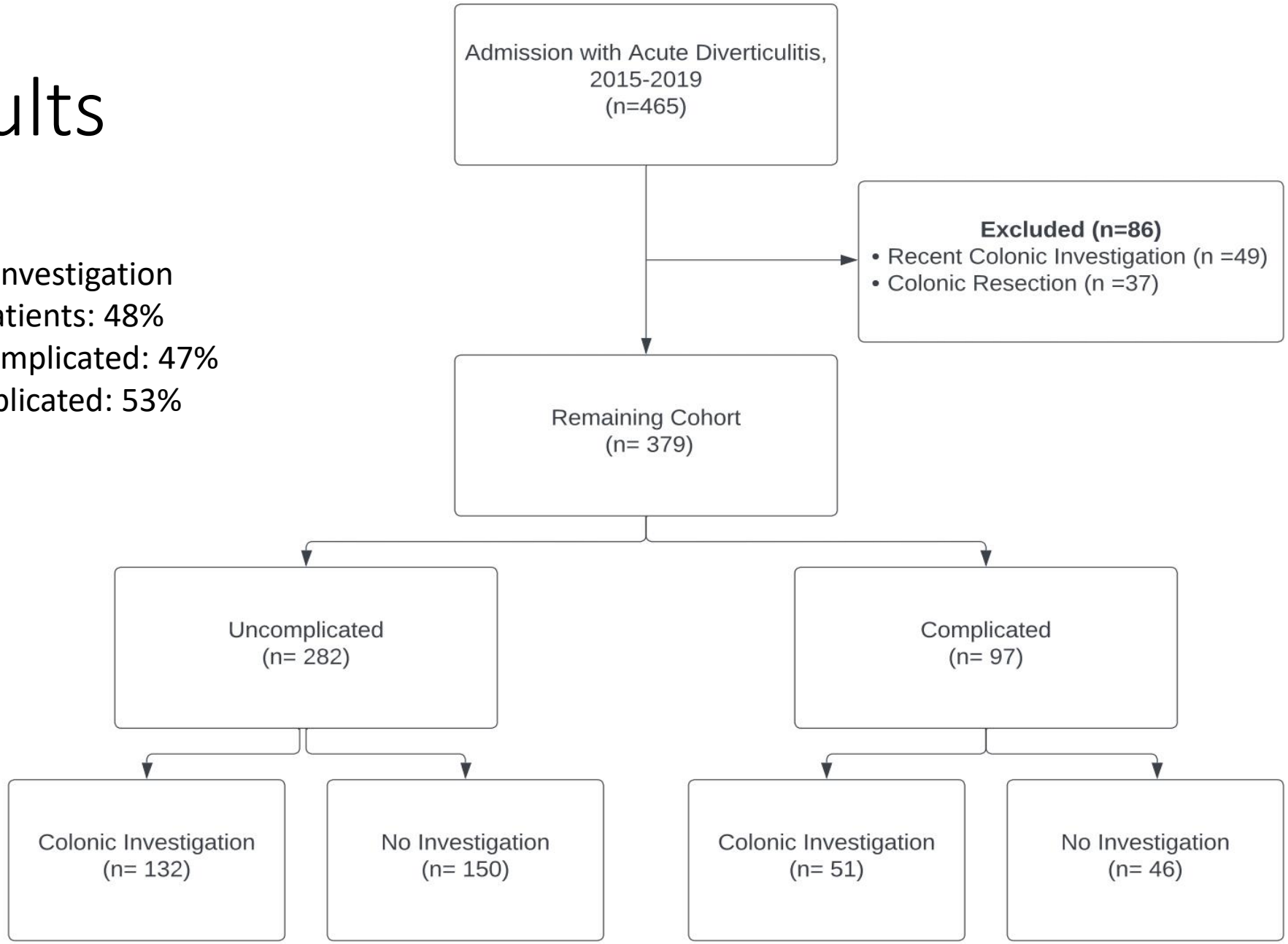

Admission with Acute Diverticulitis, 2015-2019 (n=465)
Excluded (n=86)
• Recent Colonic Investigation (n =49)
• Colonic Resection (n =37)
Remaining Cohort (n= 379)
Uncomplicated (n= 282)
Complicated (n= 97)

Patient Cohort

	Total	Complicated	Uncomplicated	p-value
	379	97 (26%)	282 (74%)	
Age, mean (SD)	60 (13.6)	58.5 (13)	60.5 (13.8)	0.222
Gender				
Female, n (%)	200 (53%)	41 (42%)	159 (56%)	0.016
Male, n (%)	179 (47%)	56 (58%)	123 (44%)	
Ethnicity				0.310
Maori, n (%)	76 (20%)	16 (16%)	60 (21%)	
Non-Maori, n (%)	303 (80%)	81 (84%)	222 (79%)	

Results

Rate of Investigation
- All patients: 48%
- Uncomplicated: 47%
- Complicated: 53%



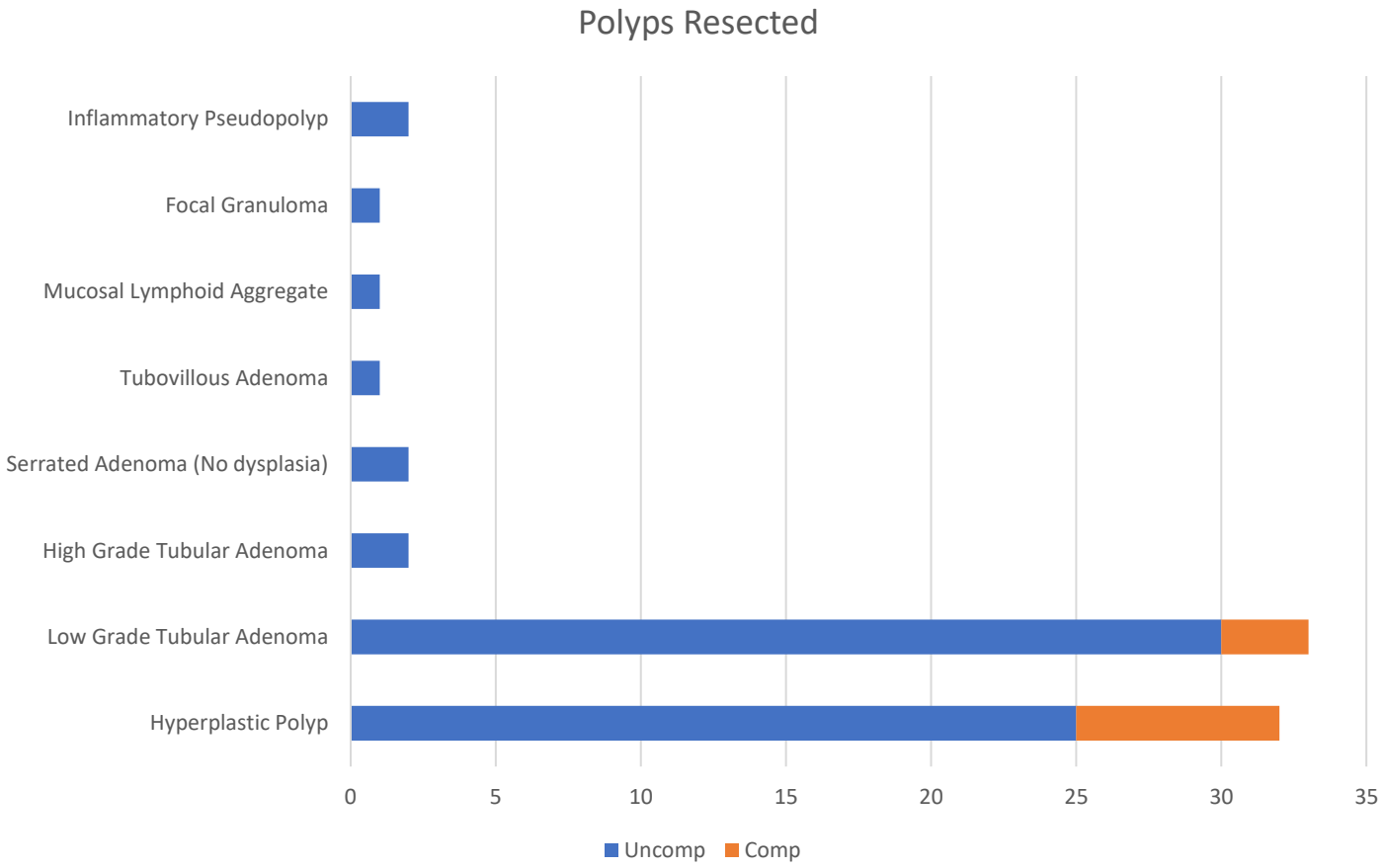
Primary Outcome

Investigation Method	Patients (n)
Colonoscopy	170 (92.9%)
CT Colonography	18 (9.8%)
Total Patients	182

Secondary Outcomes

	Total N(182)	Complicated N(50)	Uncomplicated N(132)
Malignancy, n (%)	2 (1.1%)	0 (0%)	2 (1.5%)
Polyp, n (%)	61 (33.5%)	10 (20%)	51 (38.6%)
Benign stricture, n (%)	3 (1.7%)	2 (4%)	1 (0.8%)
Colitis, n (%)	4 (2.2%)	1 (2%)	3 (2.3%)
Haemorrhoids, n (%)	3 (1.7%)	2 (4%)	1 (0.8%)

Polyps


Polyps Resected
Inflammatory Pseudopolyp
Focal Granuloma
Mucosal Lymphoid Aggregate
Tubovillous Adenoma
Serrated Adenoma (No dysplasia)
High Grade Tubular Adenoma
Low Grade Tubular Adenoma
Hyperplastic Polyp
0
5
10
15
20
25
30
35
Uncomp
Comp

How Do We Compare?

	n	Uncomplicated	Complicated	Total	Polyp Rate	ROI
NDHB	379	1.50%	0%	1.10%	33.50%	48%
Westwood et al	292	0.50%	N/A	0.50%	24.40%	70%
8 Systematic Reviews		0.5-2.1 %	6.1-10.8%	1.2-2.1%	16.7-22.7%	

Limitations

- Small retrospective cohort
- Low investigation rate (48%)
- Follow up with clinical records only
- Symptoms?

Conclusions

- Colonic investigation following an admission for acute diverticulitis in Northland is not consistent with recently published guidelines
- Rate of colonic malignancy on both investigation and longer term follow up was low
- Larger studies and national guidance are needed to guide clinicians and maximise efficiency of resource utilisation

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