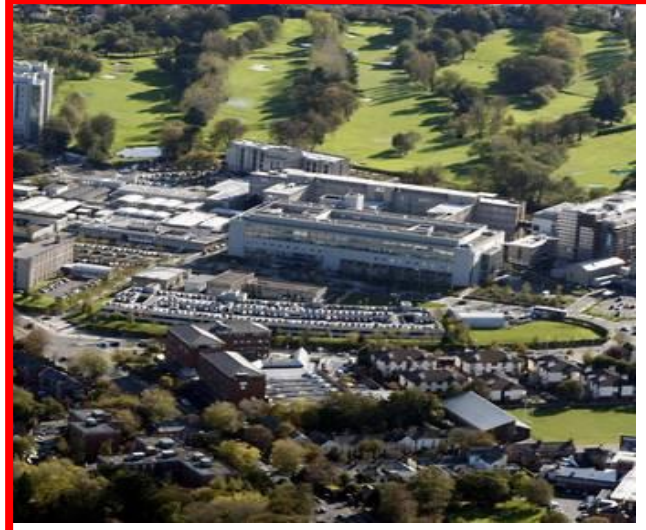
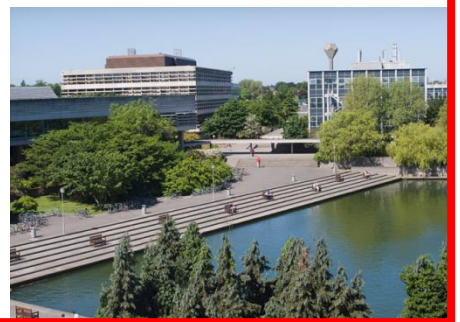


Current management of diverticular disease

Des Winter

St Vincent's University Hospital
Dublin, Ireland



Hinchey (1978) Adv Surg 1978

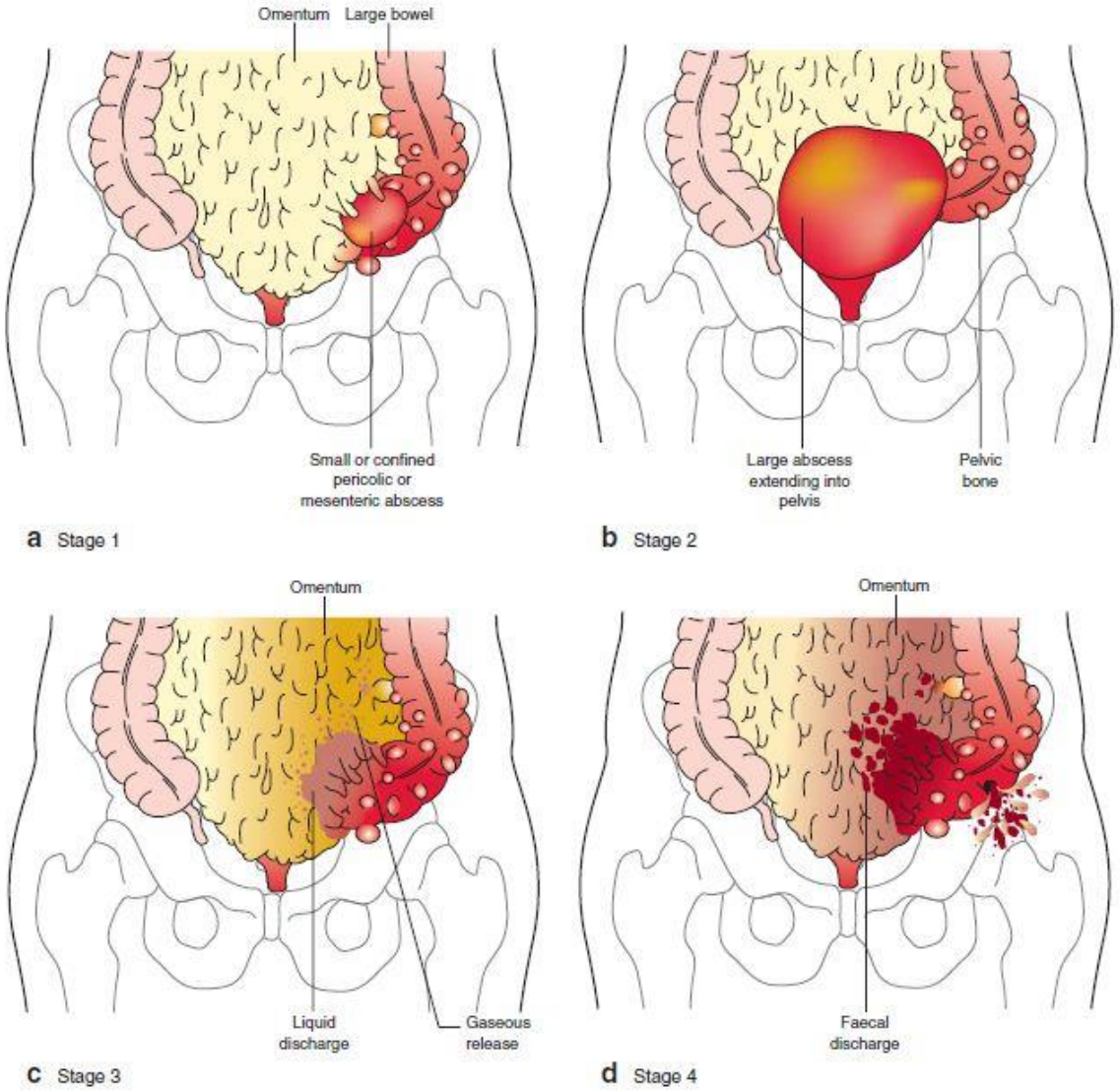
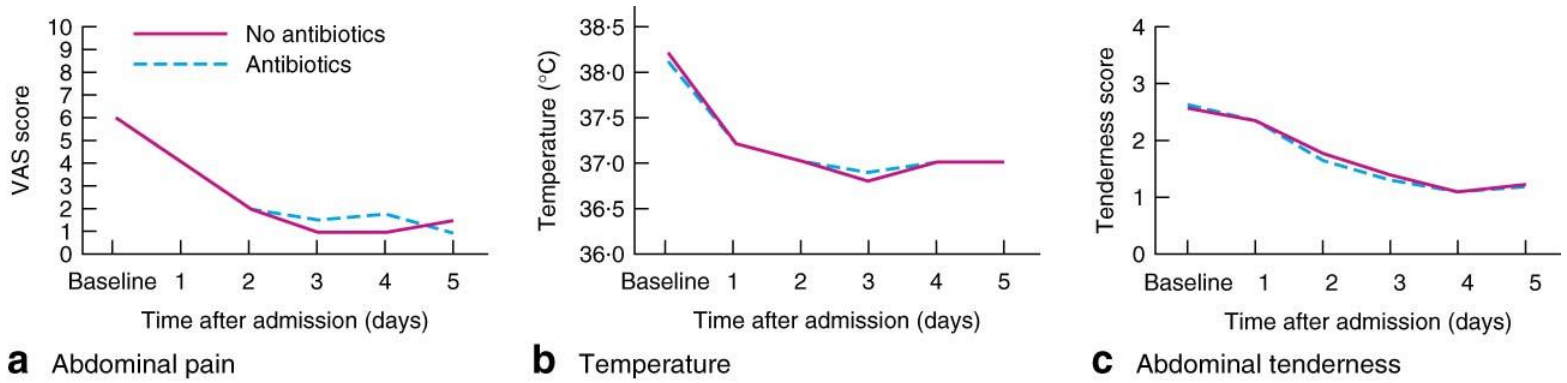


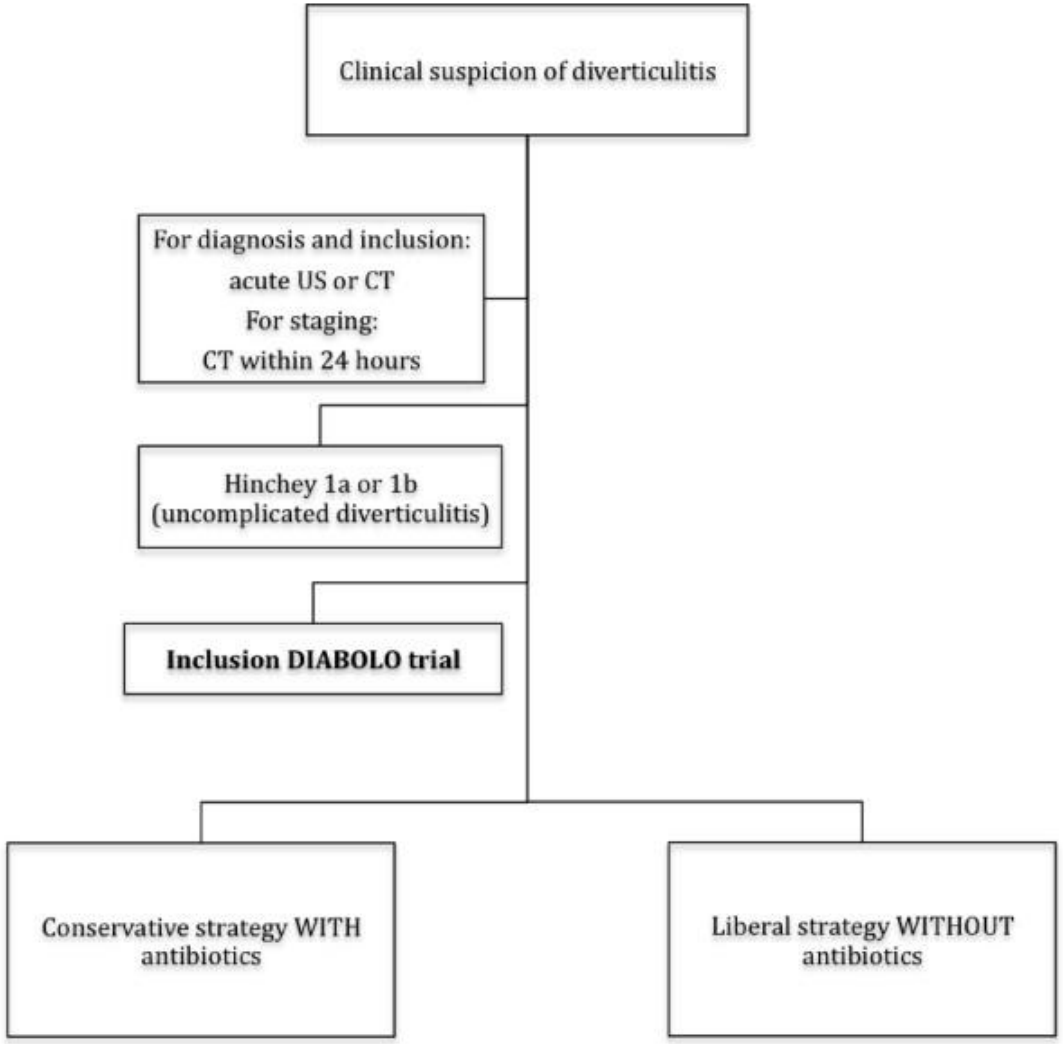
Fig. 1 Hinchey classification: **a** stage 1, mesocolic abscess; **b** stage 2, pelvic abscess; **c** stage 3, purulent peritonitis; **d** stage 4, faeculent peritonitis

Randomized clinical trial of antibiotics in acute uncomplicated diverticulitis·

A. Chabok, L. Påhlman, F. Hjern, S. Haapaniemi, K. Smedh for the AVOD Study Group



Dutch Diverticular Disease (3D) Collaborative Study Group DIABOLO Trial



Diverticular Abscess (<5cm) - Drainage ?

Many resolve without drainage (or discharge into lumen perhaps)

Anterolateral versus posteromedial or caudal

Large Diverticular Abscess (>5cm) - Percutaneous Drainage ?

Significant failure rate - same admission surgery common
Pelvic and retroperitoneal are troublesome
Recurrence of symptoms or problems 18-50%

Reasonable to observe and consider surgery if problems

Ambrosetti P, Chautems R, Soravia C et al (2005) Long-term outcome of mesocolic and pelvic diverticular abscesses of the left colon: a prospective study of 73 cases. Dis Colon Rectum 48:787–791
Kaiser AM, Jiang JK, Lake JP et al (2005). The management of complicated diverticulitis and the role of computed tomography. Am J Gastroenterol.;100:910–917

Absolute and Relative Indications for Elective Surgery

Uncertainty in differentiating cancer

Symptomatic stricture

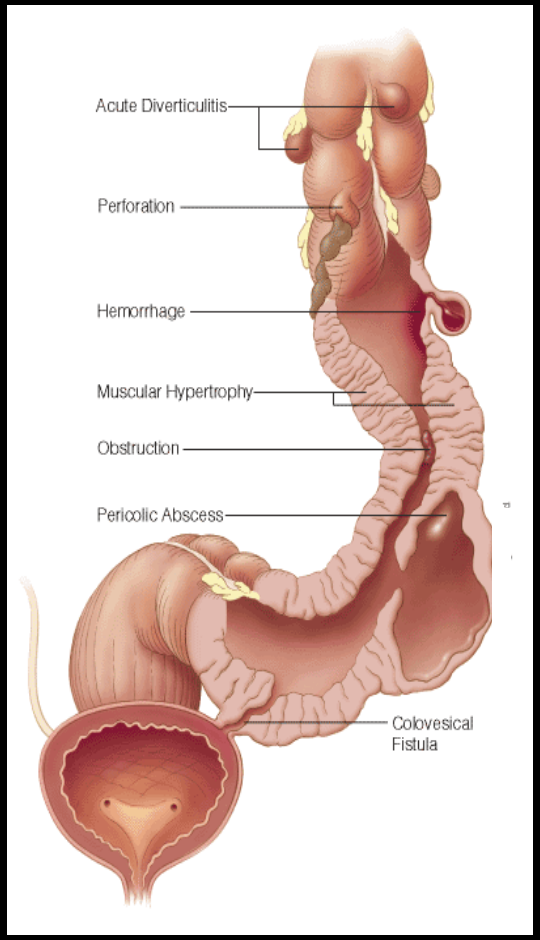
Fistula - colovesical /colovaginal/colocutaneous

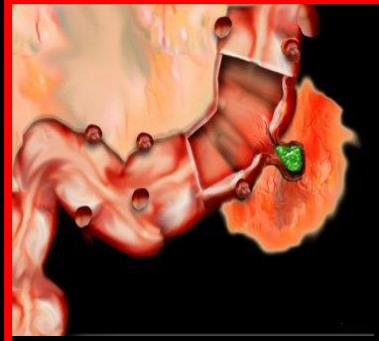
Chronic phlegmon

Patient choice following 4 episodes (especially < 50 yoa)

Complicated diverticulitis (abscess)

Immune suppressed patients





Perforated Diverticulitis

Vast majority are first episode

Risk of surgery highest (15-20%) for first episode

Incidence of perforated diverticulitis rising
Age-adjusted (adult) incidence: 3.5 - 4 / 100,000 p.a.

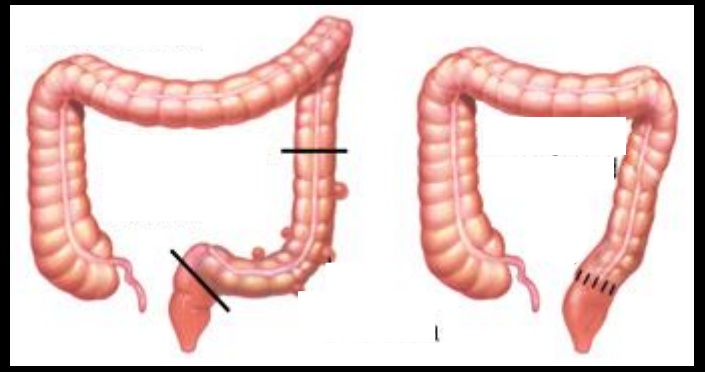
Female : Male 3:2

Mortality 10 – 25 %

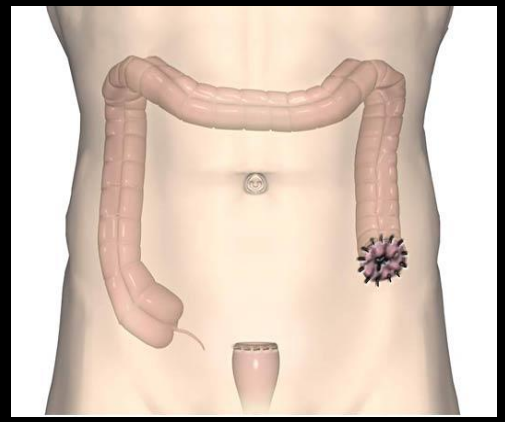
Morris (2008) Br J Surg
Makela (2002) Dis Colon Rectum
Hart (2000) Eur J Gastroenterol Hepatol

Hinchey IV - Faecal Peritonitis

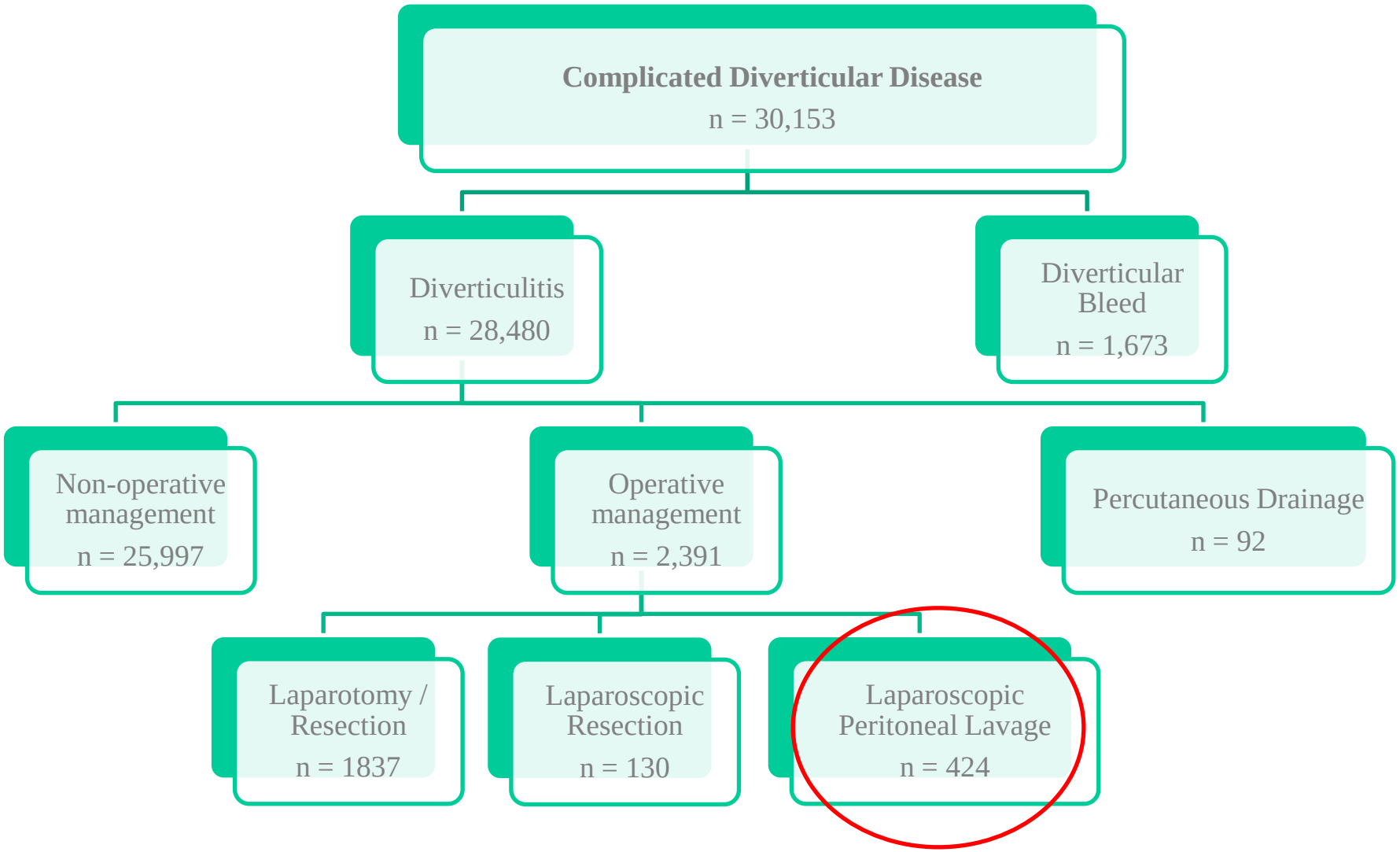
Stable, favourable patient :
Resection with anastomosis
And defunctioning stoma



Unstable, shocked patient :
Resection with end stoma



IRISH HIPE DATA ON COMPLICATED DIVERTICULAR DISEASE 1995 - 2008



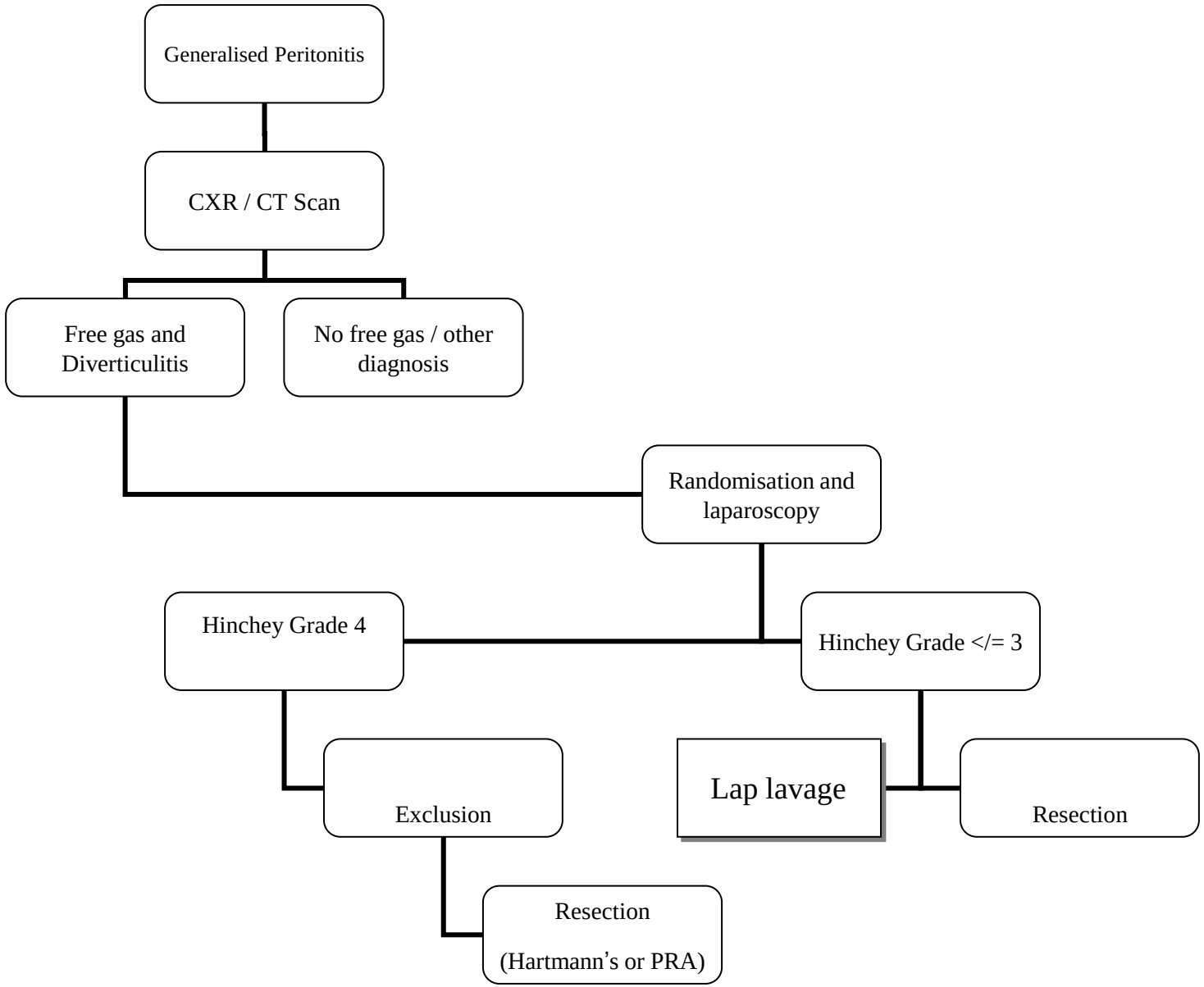
Demographics and outcomes of patients with acute diverticulitis undergoing emergency procedures 1995 - 2008		
	Laparotomy/Resection	Laparoscopic Lavage
Overall Admissions (%)	7·4	1·5
Overall Procedures (%)	83·5	11·1
Male (%)	44·3	47·2
Female (%)	55·7	52·8
Average Age (Years)	65·0	59·8
Average number of listed comorbidities	2·0	0·8
Length of Stay (days)	29·1	14·8
Admitted to ICU (%)	11·1	4·4
Stoma Formation (%)	52·7	0·0
Mortality (%)	10·1	4·1

Co-morbidities predisposing to death in patients undergoing procedures

	Odds Ratio	Lower CI	Upper CI	P value
Acute Renal Failure	18.81	6.24	56.73	0.000
Chronic Kidney Disease	9.65	2.80	33.31	0.000
Acute Respiratory Conditions	3.50	1.72	7.10	0.001
Congestive Cardiac Failure	2.77	1.24	6.19	0.013
Chronic Respiratory Disease	2.41	1.05	5.50	0.037

4 randomised clinical trials with broadly similar approaches

Laparoscopic Lavage for Non-faeculent perforated Diverticulitis (LapLaND)



	DILALA (75)		LOLA (88)		LapLAND (70)	
	Lavage	Resection	Lavage	Resection	Lavage	Resection
Number	39	36	46	42	37	33
Age	62	68	62	64	60	64
Sex (M/F)	21/18	15/21	26/20	25/17	17/20	14/19
ASA 2/3	30	23	26	26	22	24
BMI	25.6	24.9	27.6	27	28	28
PHx diverticulitis	5	5	12	10	3	2
PHx surgery	16	11	4	3	6	6

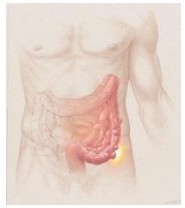
	DILALA (75)		LOLA (88)		LapLAND (70)	
	Lavage	Resection	Lavage	Resection	Lavage	Resection
Number	39	36	46	42	37	33
ICU	5	4	18	13	2	8
Hospital stay	6	9	8	10	7	12
Stoma problems	0	16	5	18	0	15
Reoperation	5	6(26)	13	5 (29)	3	5(19)
Morbidity	20	14	24	22	13	22
Readmission	0	2	18	19	3	5
Mortality	3	4	2	5	2	5

Crude aggregated data from 3 trials (n = 233)

	Lavage	Resection
Number	122	111
ICU	25	25
Hospital stay	7	10
Stoma problems	5 (4%)	49 (44%)
Reoperation	21 (17%)	16 (14%) (74 - 66%)
Morbidity	57 (47%)	58 (53%)
Readmission	10 (8.1%)	12 (10.8%)
Mortality	7 (5.7%)	14 (12.6%)

When SCANDIV data (n = 197) included (n = 430)

	Lavage	Resection
Number	223	207
ICU		
Hospital stay		↑
Stoma problems		↑
Reoperation		
Morbidity		
Readmission		
Mortality	21 (9.4%)	26 (12.5%)



CONCLUSIONS

1. **Laparoscopy and lavage in Hinchey III diverticulitis has lower mortality than resection**

2. **Shorter hospital stay with less stoma problems**

3. **Failure to thrive suggests ongoing leak (or tumour) and mandates re-operation (resection)**

4. **Good quality pre-operative CT (+/- intra-operative endoscopy) and air leak testing is advisable**