

Functional anorectal disorders

Anton Emmanuel

Swiss Coloproctology Study Group, January 2019



**National Hospital
for Neurology
& Neurosurgery**



Approach

Pelvic floor neurophysiology

Faecal incontinence (*Dr Heinrich*)

Constipation (*Dr Gingert*)

Anorectal pain syndromes

Causes of peri-anal pain

Muscular causes

- levator ani syndrome
- proctalgia fugax
- myofascial syndrome
- coccygodynia

Structural causes with a lump

- thrombosed haemorrhoid
- anal abscess (may be with a fistula)
- sentinel tag (with anal fissure)
- condyloma

Structural causes without a lump

- anal fissure
- anal fistula

Rectal causes

- rectal prolapse
- proctitis

Pruritus ani

Proctalgia fugax

Pain: **ASS** = **A**cute, **S**evere, **S**hort-lived

Physical treatments: leg flexion, perianal pressure

Multiple therapies

- internal sphincter relaxants (~10% advantage over placebo)
- salbutamol (22% advantage over placebo)
- anxiolytic (~16% advantage over placebo)

Levator ani syndrome

Chronic or recurrent (bouts >20 minutes)

Dull pressure – worse with sitting, eased on standing

Associated with constipation/dyspareunia

Levator tenderness on palpation (esp during contraction)

Most common in women 30-60 years old

Idiopathic...also post-op, trauma (including surgical),
prolonged sitting, stress

Levator ani syndrome

Very treatable

Digital massage } by reducing

Hot baths (40 C) } anal pressure

Electrogalvanic treatment – partial or complete relief 43%

Pelvic floor biofeedback – 35% relief, unrelated to pelvic manometry

Local injection triamcinolone – relief 40%

Muscle relaxants } anecdotal

Anxiolytics / analgesics } evidence

Myofascial syndrome

Sharp, chronic, deep muscular pain

Perineal and anorectal location – may extend to thighs

Otherwise identical to levator ani syndrome **except...**

...multiple trigger points (pelvic floor, gluteals, abdo wall)

Avoid straining

Digital massage, local anaesthetic

Local anaesthetic injections, Botox injection

Acupuncture

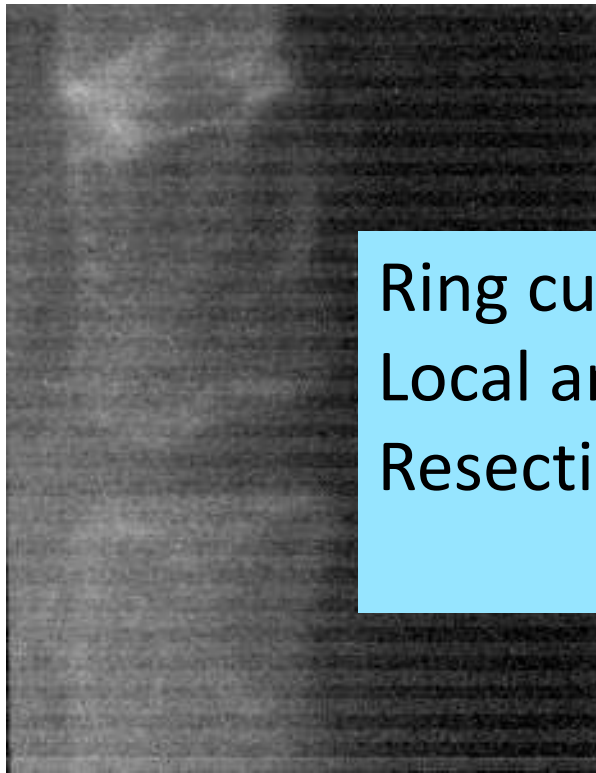
Coccygodynia

Localised pain – worse on sitting or straining

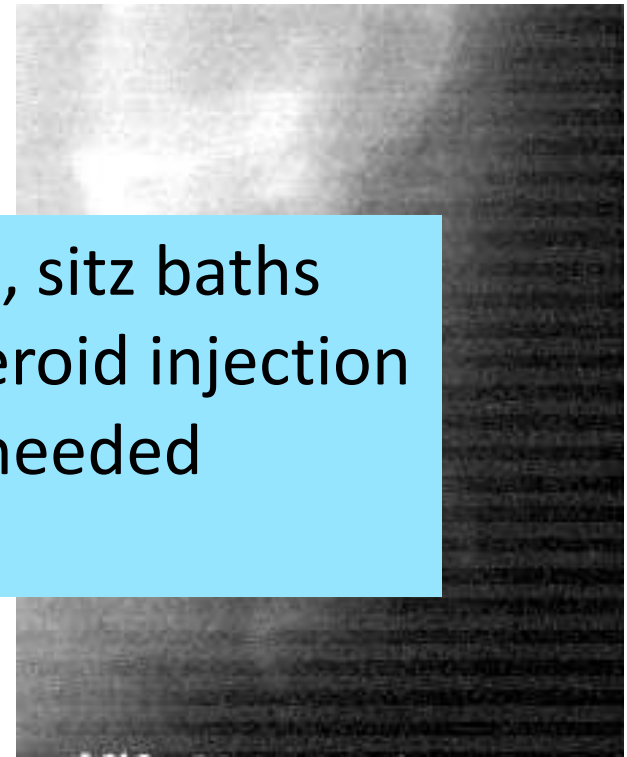
Painful, incomplete defaecation

Females and obese especially

Trauma history common – rarely idiopathic, arthritic



Coccyx x-ray



Ring cushion, analgesia, sitz baths
 Local anaesthetic or steroid injection
 Resection VERY rarely needed

Rectal prolapse

Mucosal prolapse is painless

Full thickness prolapse associated with heaviness, dull pain

Faecal or mucus soiling

Examine while straining

Investigate for more generalised pelvic organ dysfunction

Surgery and behavioural training

Treat cause

Dermatological condition	Faecal soiling	Dietary triggers	Infection
Dermatitis	Incontinence	Caffeine	Pinworm
Lichen planus	Fissure/fistula	Beer	Candida
Lichen sclerosis	Altered bowel function	Chilli	STD
Psoriasis	Haemorrhoids/skin tags		Abscess
Hydradenitis	Rectal prolapse		
Systemic disease	Malignancy	Irritants	Neurogenic
Anaemia	Squamous cancer	Deodorants	Lumbosacral radiculopathy
Diabetes	Bowen disease	Detergents	
Leukaemia		Tight clothing	
IBD			

Pruritus ani

Itch-scratch cycle

Perianal hygiene and avoid irritants

Sedating histamine (hydroxyzine)

Topical hydrocortisone

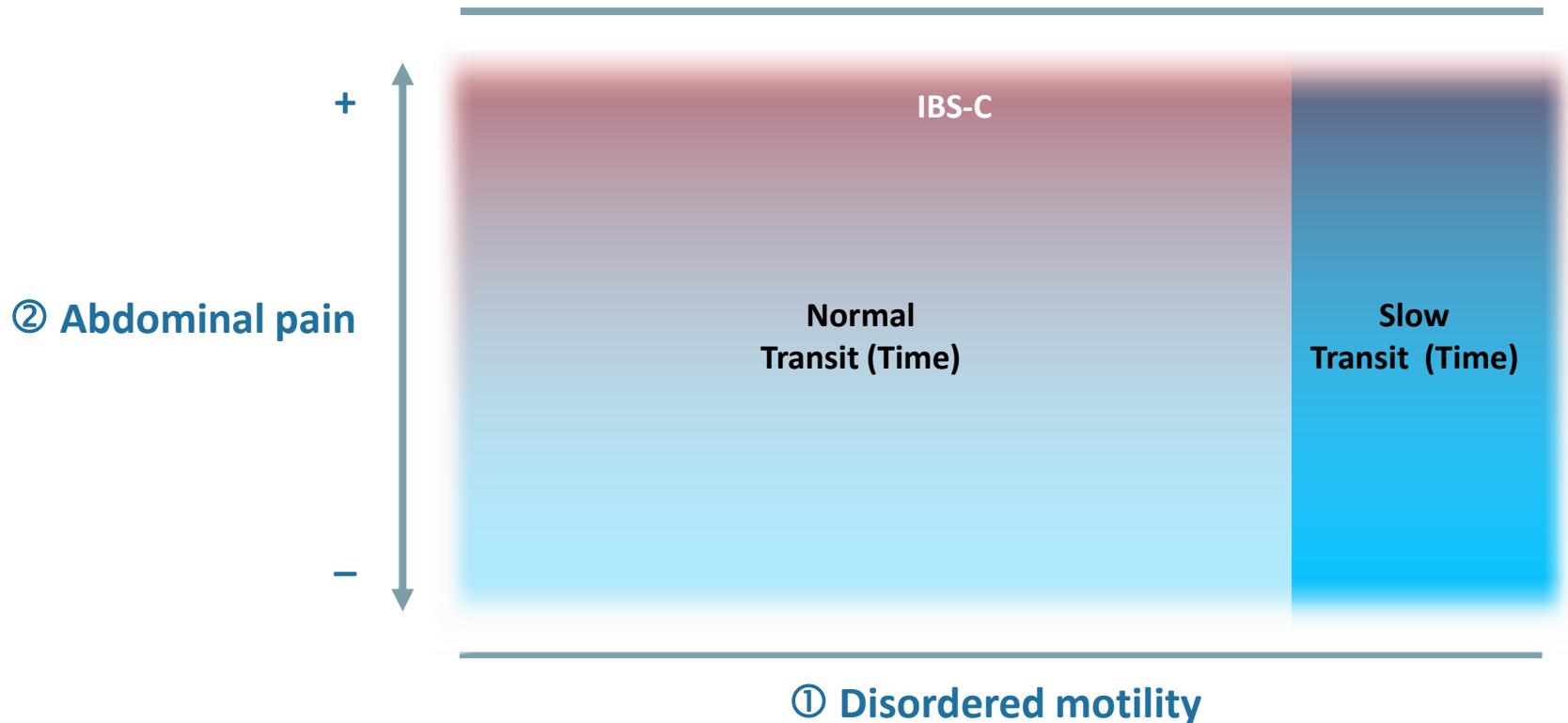
Topical capsaicin (0.0006% in white paraffin)

Biopsy?

Three overlapping pathogenic features to classify constipation

③ Evacuatory dysfunction
(structural or physiological)

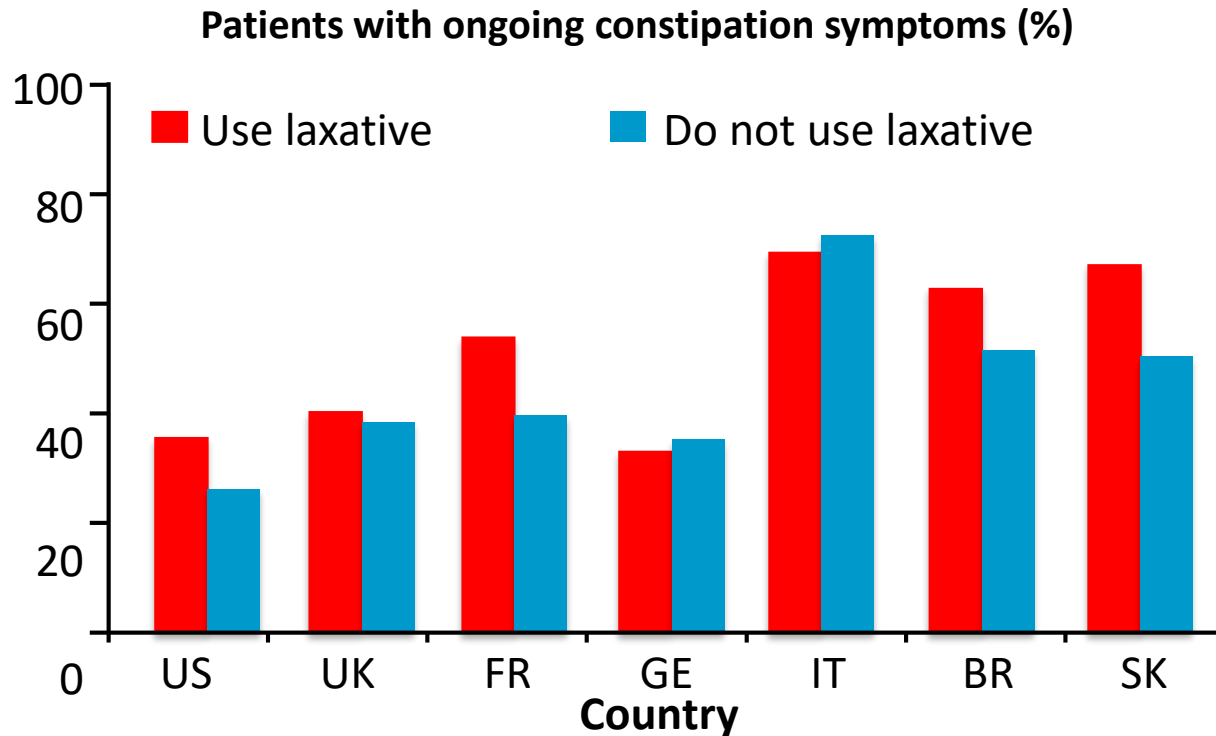
NO or **YES**



Are current laxative options effective for chronic constipation?

16–40% of those with constipation use laxatives

Symptoms persist despite laxative use



Approximately 2000 adults each from: United States, US; United Kingdom, UK; France, FR; Germany, GE; Italy, IT; Brazil, BR; South Korea, SK

Wald *et al. Aliment Pharmacol Ther* 2008;**28**:917

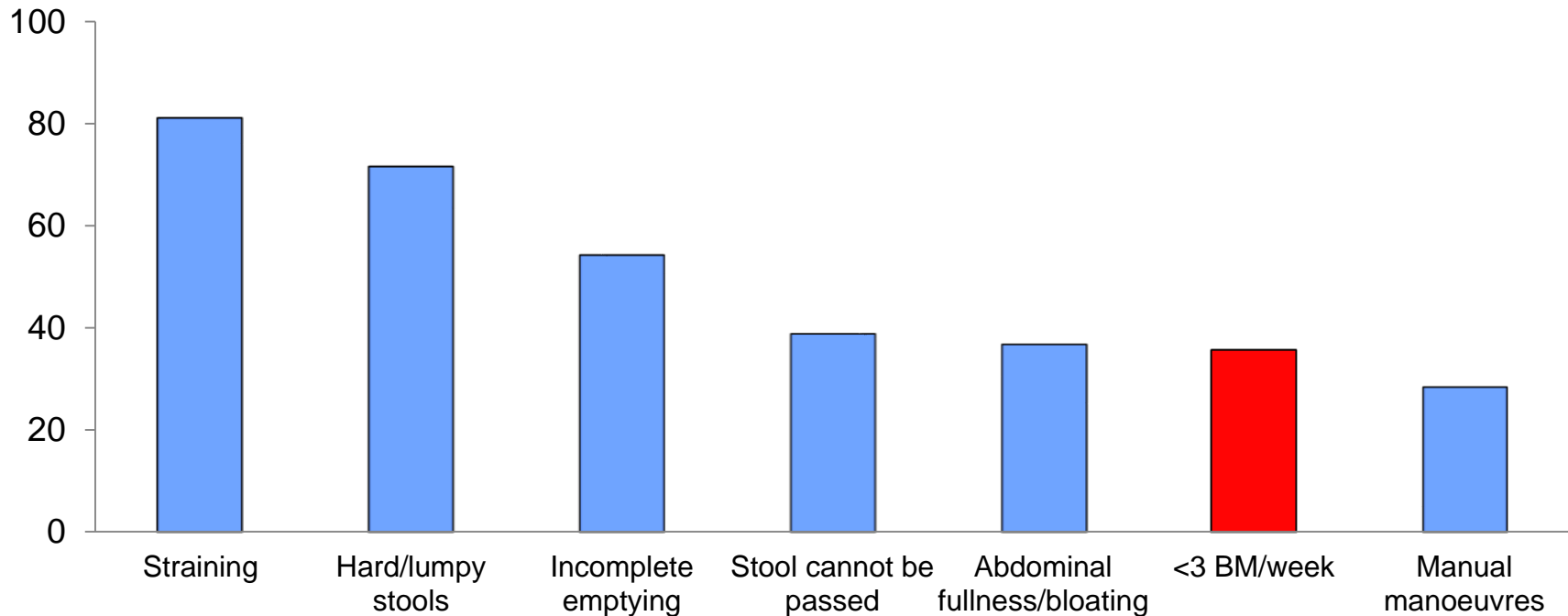
Chronic constipation: Symptoms in self-reported constipation

1149 participants

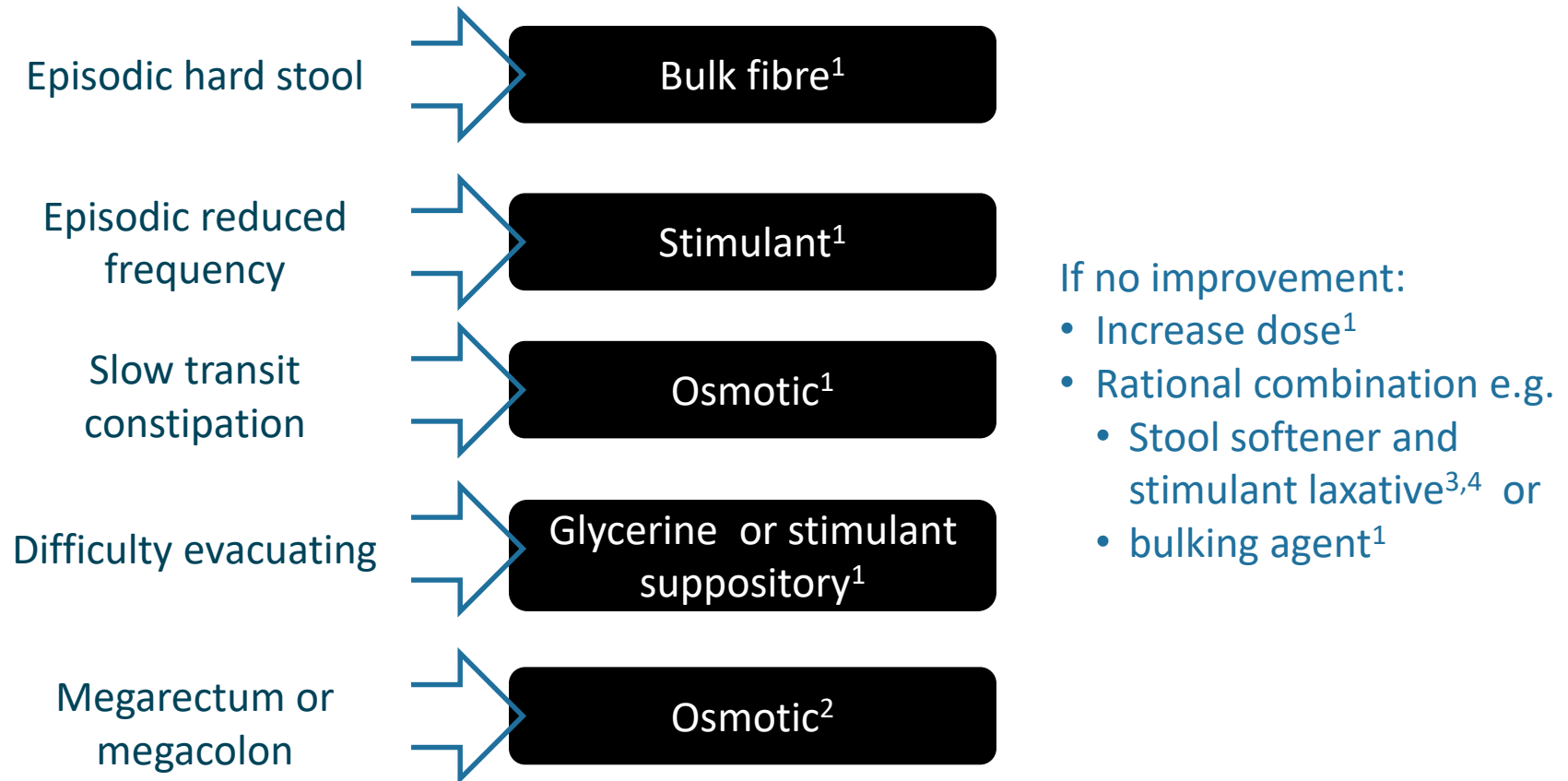
27.2% self-reported constipation within the past 3 months

16.7% and 14.9% constipation according to Rome I and II

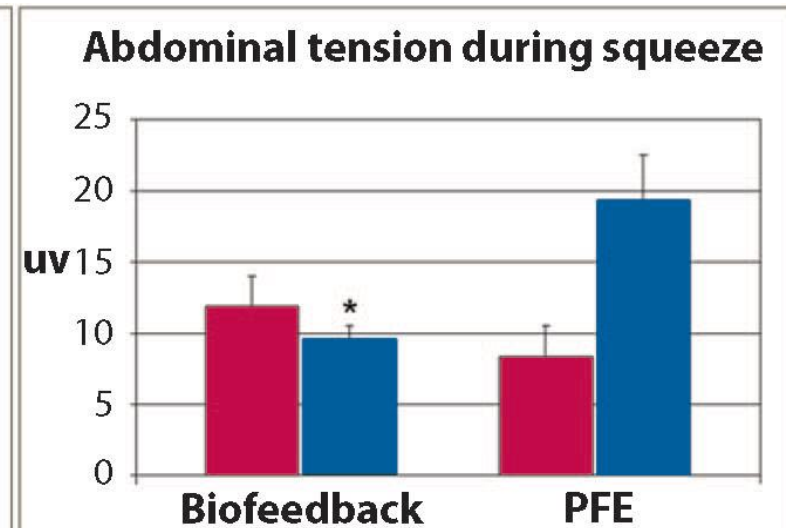
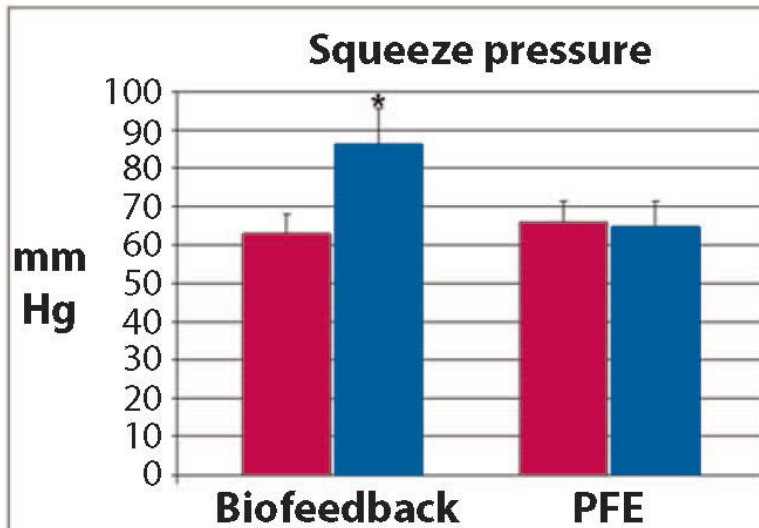
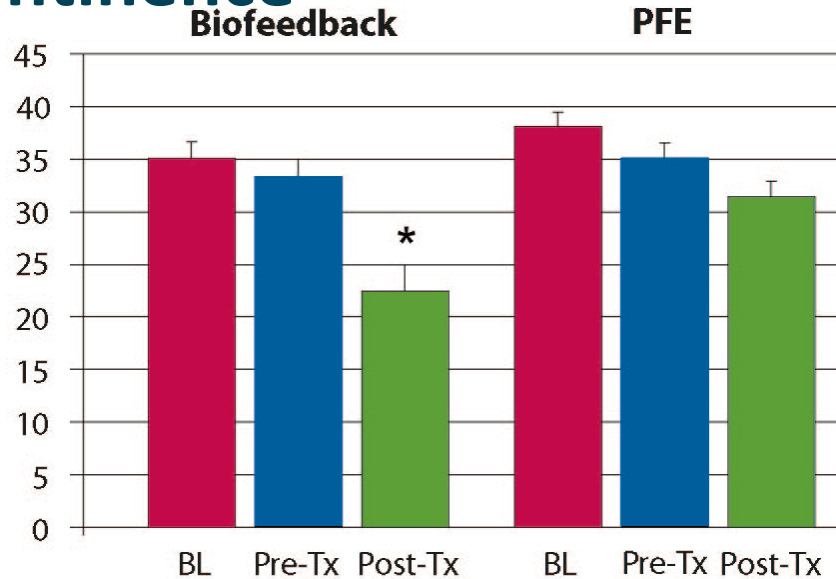
Self-reported responders (%)



Summary: Tailoring laxatives to the patient, based on their symptoms and diagnosis



Faecal Incontinence

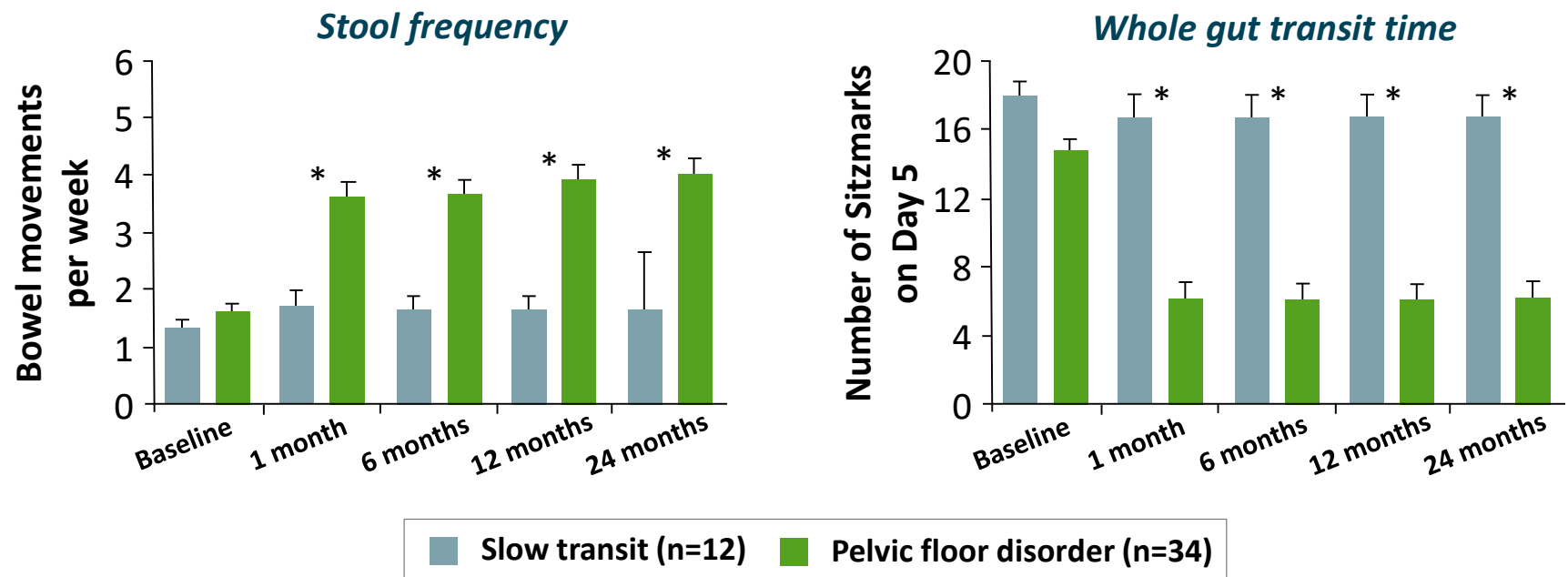


Biofeedback for constipation

Evidence

Large amount of short- and long-term data from RCTs for biofeedback as an effective treatment for chronic constipation¹⁻⁵

- Greatest effect in patients with pelvic floor dyssynergia:⁵

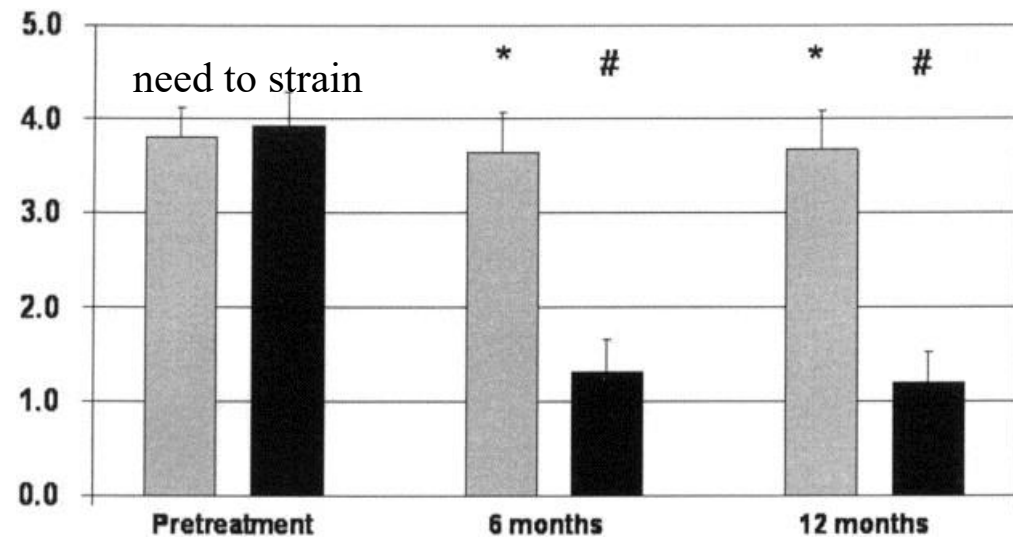
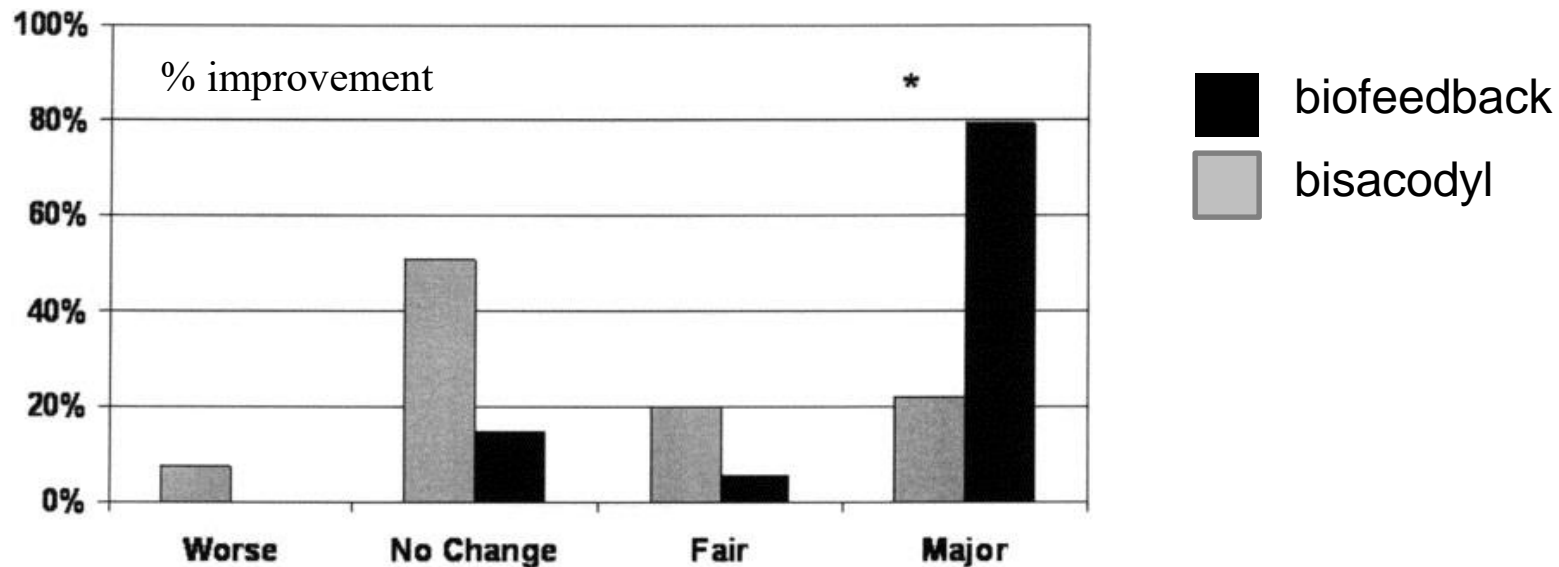


*For each follow-up interval, $P < 0.001$

1. Rao. Gastroenterol Clin North Am. 2008;37(3):569-86
 2. Rao et al. Clin Gastroenterol Hepatol. 2007;5(3):331-8
 3. Rao et al. Am J Gastroenterol. 2010;105(4):890-6

4. Gadel Hak et al. Arab J Gastroenterol. 2011;12(1):15-9
 5. Chiarioni et al. Gastroenterology. 2005;129(1):86-97

Biofeedback for constipation

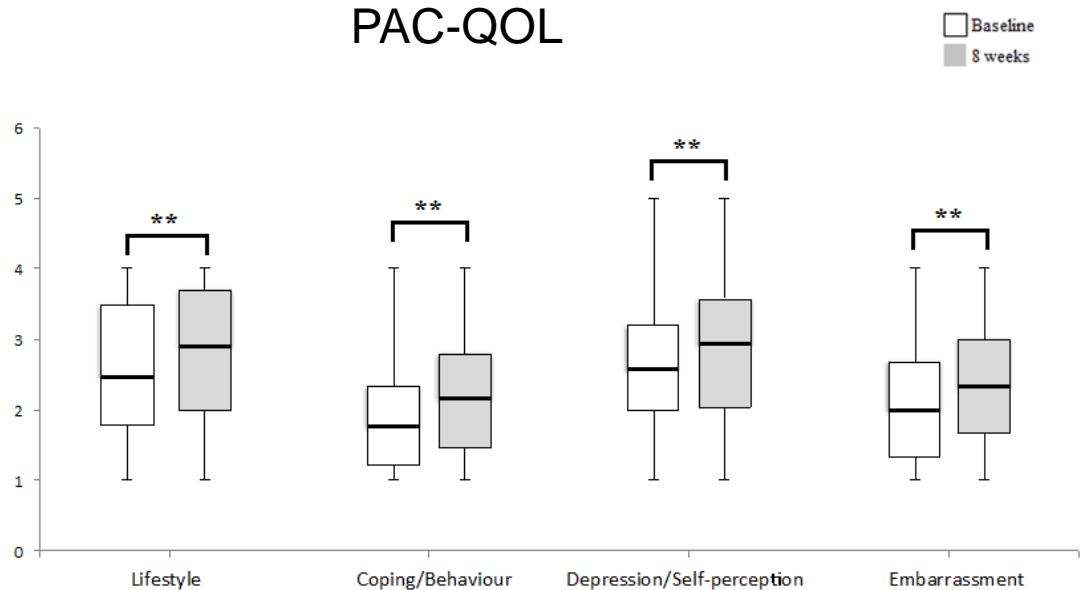


Biofeedback for slow transit

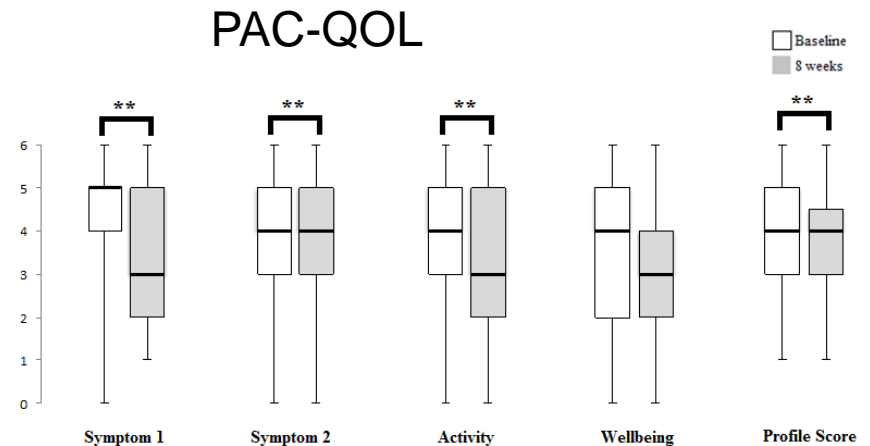
	<i>Slow transit (n=22)</i>		<i>Normal transit (n=27)</i>	
	<i>Before biofeedback</i>	<i>After biofeedback</i>	<i>Before biofeedback</i>	<i>After biofeedback</i>
Subjective improvement	—	14	—	15
Bowel frequency <3 per week	16	6	11	3
Hard or pellet stool	15	4	15	3
Need to strain	12	3	14	6
Need to digitate	4	2	15	7
Abdominal bloating	19	5	20	6
Laxative use	20	5	14	4
Normal transit	—	13	27	27
Mean number of retained markers	42.5	32.4	17.1	15.2

PTNS in Constipation

- Slow transit only (n=22)



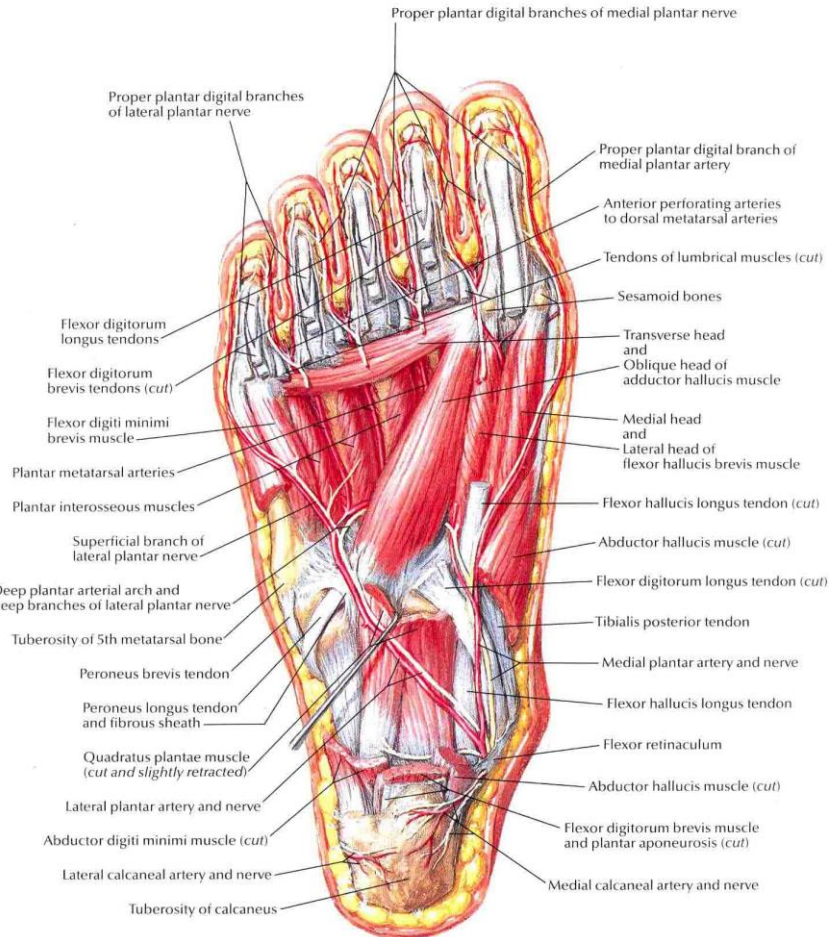
- Puborectalis dyssynergia – manometric (n=24)



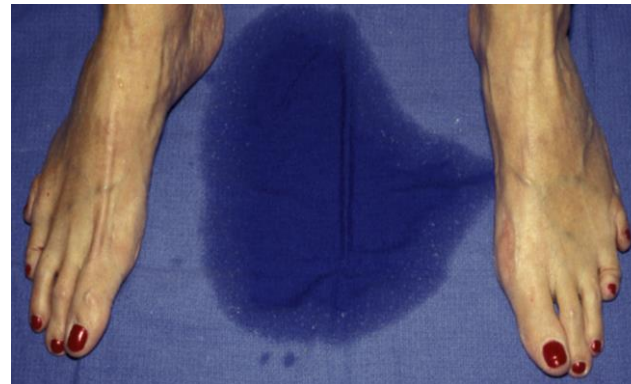
** p=NS for all

Feet reveal pelvic structure and function

S2-S3 innervation to both



Lateral toes more distal



Hypoplastic lateral toes associated with weak pelvic floor

Asymmetry in SNS – al-Qassab et al, Atlanta

n=57 SNS implant patients (urology)

38 patients with *asymmetry*; 19 with *symmetry*

Success: 35 with *asymmetry* (92%); 13 with *symmetry* (68%)

19 *asymmetry* patients underwent bilateral:

68% success in less well-formed side

21% success in better formed side

Understanding the brain-gut axis

Posterior tibial nerve stimulation



Obstetric anal sphincter injury

Table 3. Measures of Symptom Severity Before and After Treatment in Responders and Nonresponders.

	Responders			Nonresponders			Change in values		
	Baseline	After treatment	<i>p</i>	Baseline	After treatment	<i>p</i>	Responders	Nonresponders	<i>p</i>
Wexner score	13 ± 3	4 ± 2	<0.01	13 ± 5	12 ± 5	0.13	-9	-1	<0.01
Visual analogue scores									
Bowel	63 ± 19*	36 ± 24	<0.01	48 ± 20*	39 ± 23	0.10	-26.8	-20.0	0.05
Bladder	49 ± 30	45 ± 30	0.61	62 ± 30	56 ± 30	0.10	-3.6	-11.1	0.71
Rockwood quality of life scores									
Life	3.2 ± 0.6	3.2 ± 0.6	0.70	2.8 ± 0.8	2.8 ± 0.8	0.61	0	0	0.50
Coping and behavior	2.5 ± 0.8	2.5 ± 0.5	1	2.1 ± 0.7	2.1 ± 0.8	0.80	0	0	0.86
Depression and self-perception	1.9 ± 1.0	2.9 ± 0.9	<0.01	2.4 ± 0.9	2.6 ± 0.8	0.10	+1.0	+0.2	0.03
Embarrassment	2.2 ± 1.1	3.0 ± 0.9	0.04	2.4 ± 1.0	2.5 ± 0.9	0.54	+0.8	+0.1	0.09
Bristol stool form score	5 (1)	3 (2)	<0.01	5 (2)	4 (1.5)	0.08	-2	-1	0.06

Underlined values are statistically significant ($P \leq 0.05$).

* $p < 0.01$ for responders vs. nonresponders baseline values; higher visual analogue scores correspond to greater severity of symptoms; lower Rockwood scores correspond to greater disability; lower Bristol Stool Form scores correspond to firmer stool consistency; values are means ± SD, medians (IQR).

Multiple Sclerosis

Table 1. Wexner Score Changes in Responders and Nonresponders to PTNS.

	Responders	Nonresponders
<i>N</i> (%)	26 (79%)	7 (21%)
Baseline Wexner score, mean ± SD	13.5 ± 3.8	13.4 ± 3.9
Post-therapy Wexner score, mean ± SD	7.0 ± 2.8	13.9 ± 3.1

Table 2. Measures of Symptom Severity Before and After Treatment in Responders and Nonresponders.

	Responders			Nonresponders			Change in values		
	Baseline	After treatment	<i>P</i>	Baseline	After treatment	<i>P</i>	Responders	Nonresponders	<i>P</i>
Visual analogue scores									
Bowel	58.5 ± 25.4	52.3 ± 24.8	0.28	45.7 ± 22.8	46.4 ± 14.1	0.67	-6.2	+0.9	0.47
Bladder	51.0 ± 26.0	53.1 ± 23.2	0.69	52.9 ± 25.1	50.7 ± 20.1	0.74	+2.1	-2.2	0.91
Rockwood quality of life scores									
Life	2.5 ± 0.9	2.9 ± 0.8	0.11	3.2 ± 0.7	3.1 ± 0.9	0.01	+0.4	-0.1	0.25
Coping and behavior	2.0 ± 0.7	2.4 ± 0.9	0.15	2.6 ± 0.4	2.4 ± 0.8	0.15	+0.4	-0.2	0.20
Depression and self-perception	2.7 ± 0.8*	3.1 ± 0.9	0.01	3.4 ± 0.4*	3.1 ± 0.8	0.18	+0.4	-0.3	0.05
Embarrassment	2.2 ± 0.8	2.6 ± 0.8	0.06	2.5 ± 1.0	2.4 ± 1.0	0.54	+0.4	-0.1	0.21
Bristol stool form score	5 (4-6)	4 (3-4)	0.02	5 (5-5.5)	5 (4.5-5.5)	0.44	-1	0	0.01

Higher visual analogue scores correspond to greater severity of symptoms.

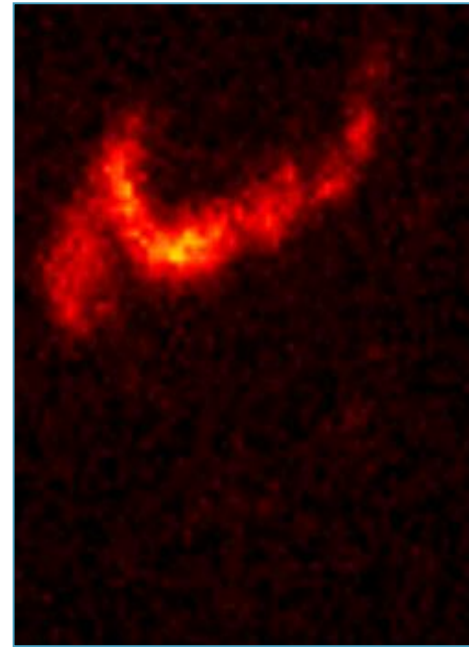
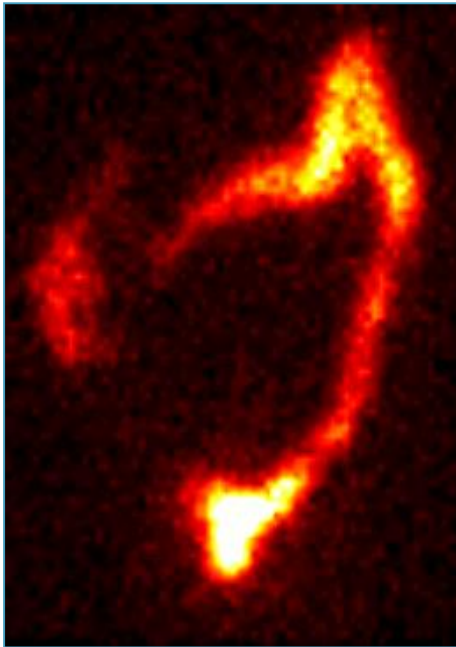
Lower Rockwood scores correspond to greater disability.

Lower Bristol Stool Form scores correspond to firmer stool consistency.

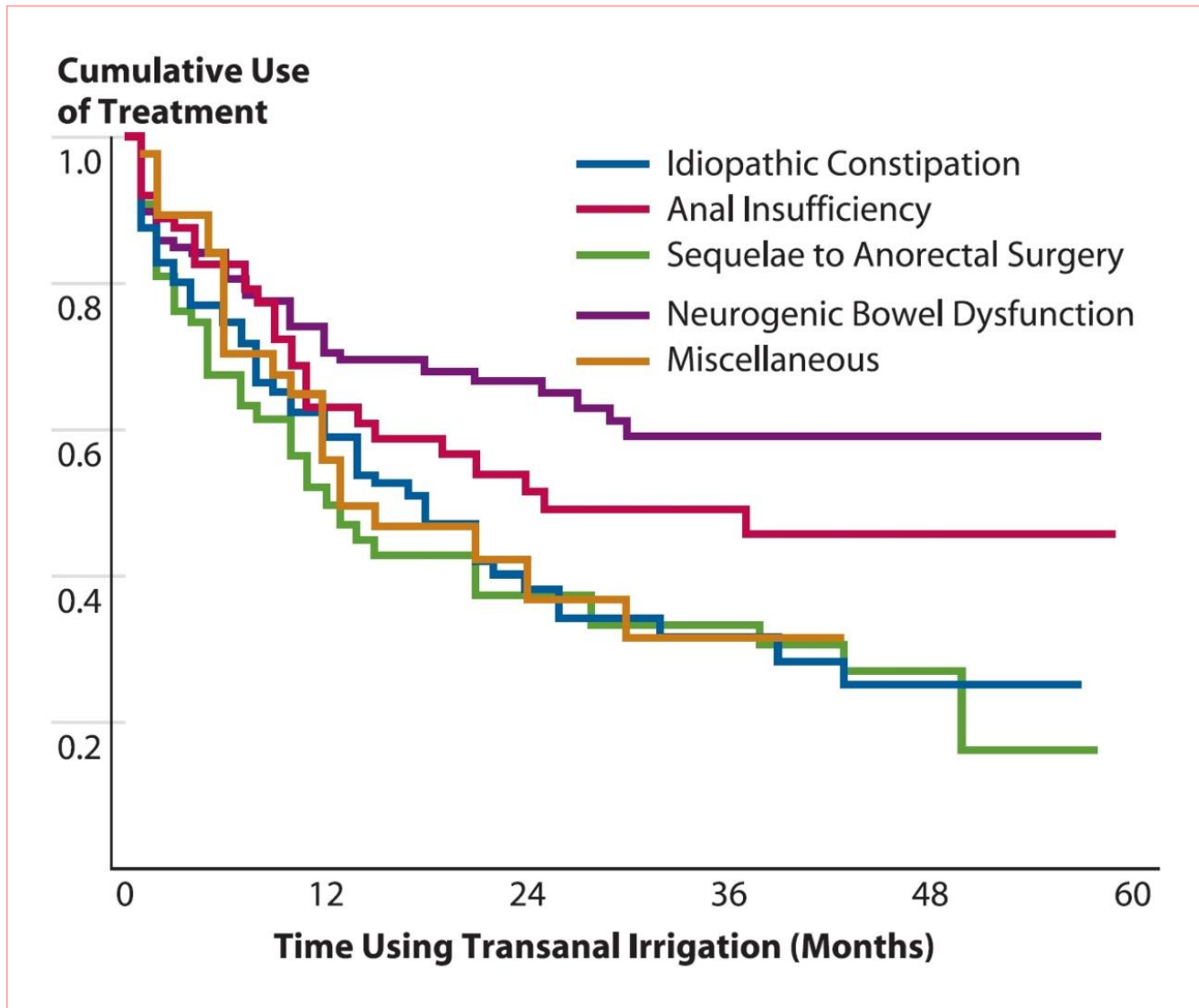
Values are means ± SD, medians (IQR).

* $P < 0.05$ for responders vs. nonresponders baseline values.

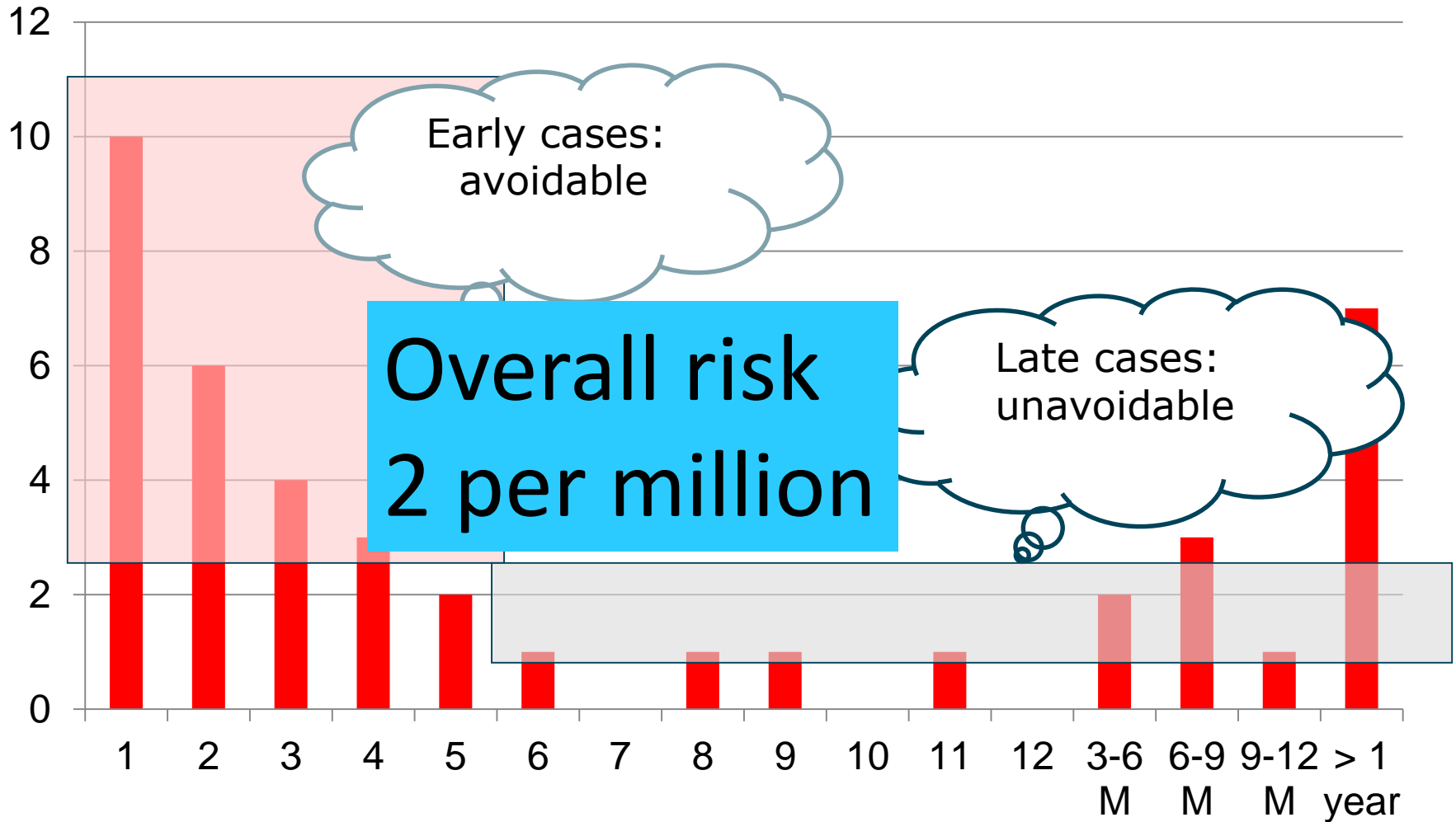
Transanal irrigation



Adherence with transanal irrigation



Perforations by weeks



Work done by the best Physiology Unit

