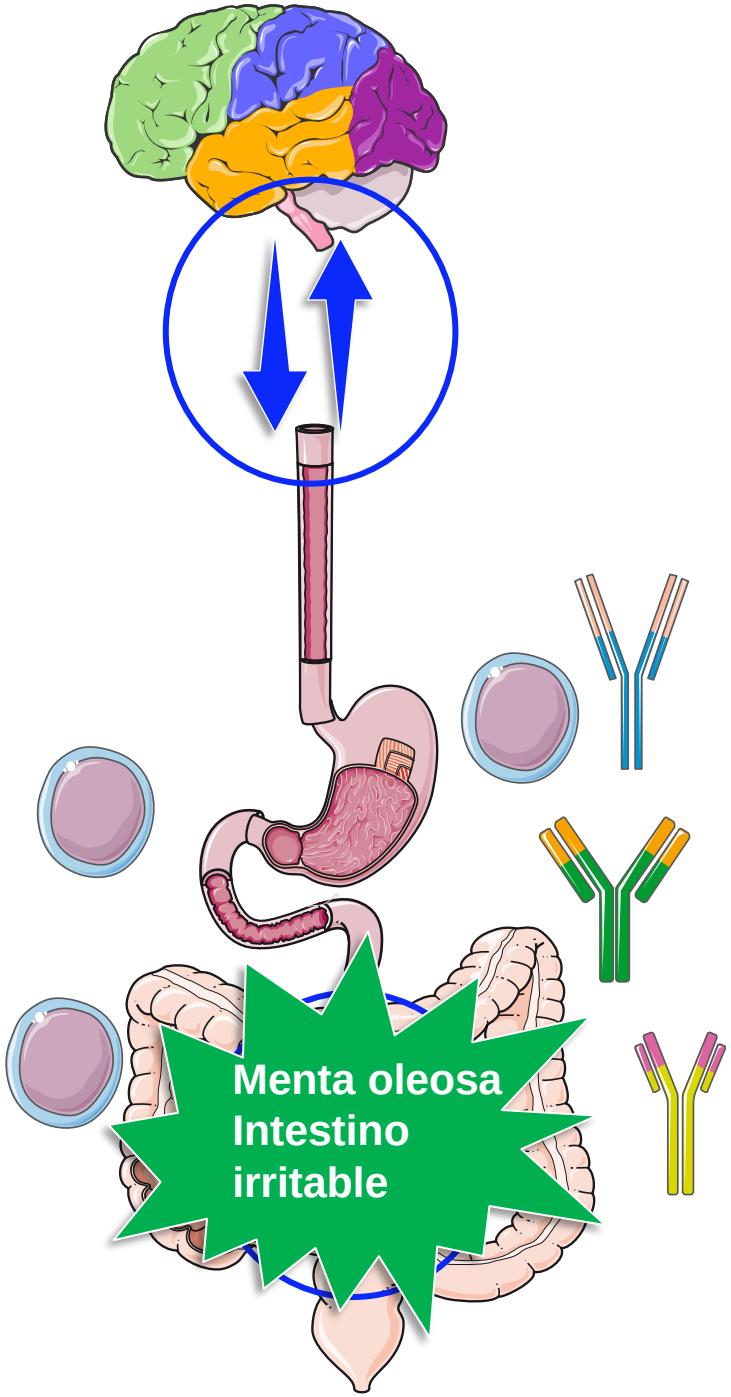
Bogotà octubre 12, 13, Menta Oleosa en SII

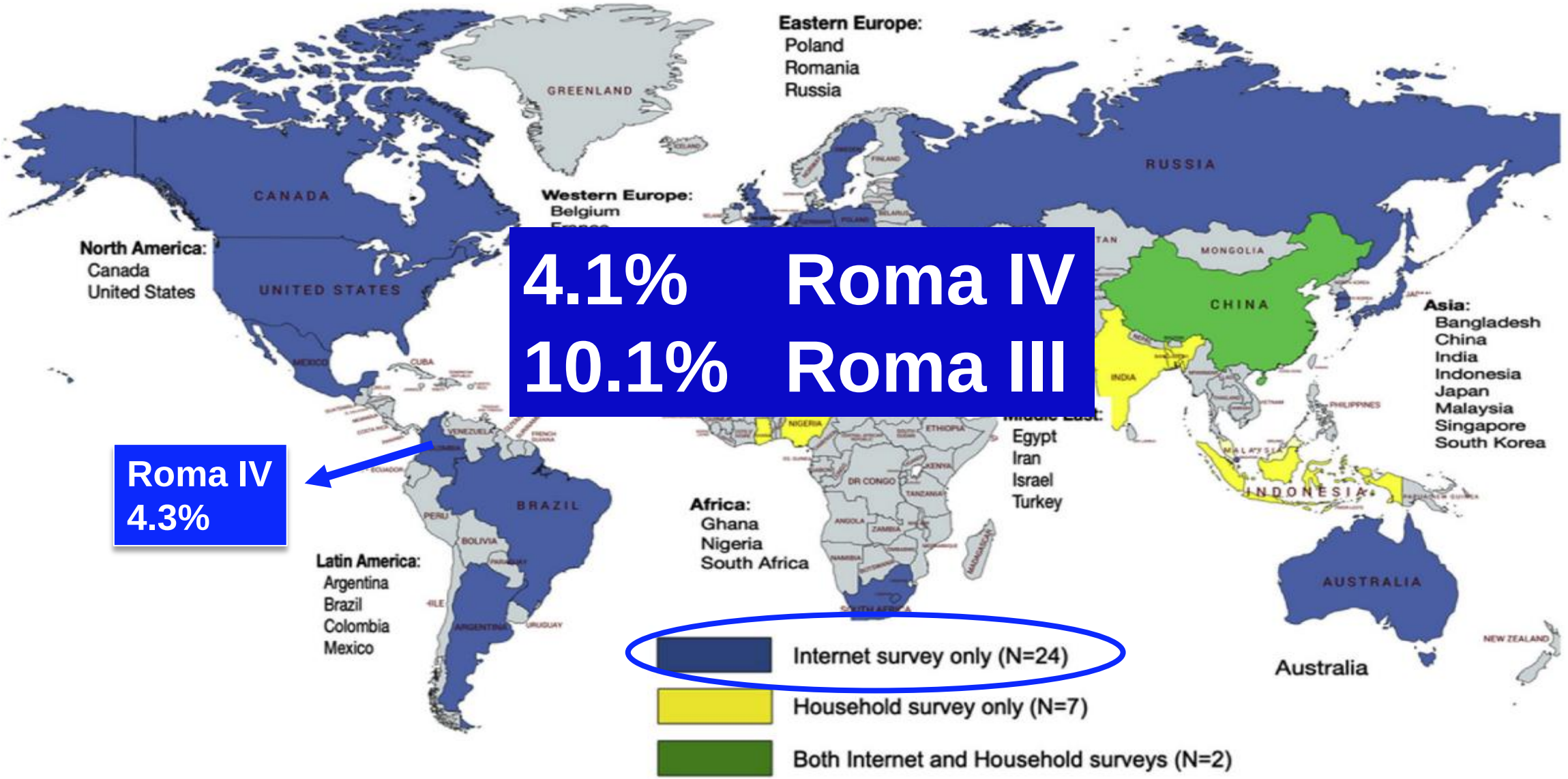
Menta Oleosa y su impacto en el Sìndrome de Intestino Irritable

William Otero MD FAGA, FACP
Profesor Titular de Medicina
Unidad de Gastroenterología
Universidad Nacional de Colombia
Hospital Universitario Nacional de Colombia

Youtoube “William otero gastroenterólogo”



Worldwide Prevalence and Burden of Functional Gastrointestinal Disorders, Results of Rome Foundation Global Study



Gastroenterology 2021;160:99–114

Principal Diagnóstico Gastroenterología 28%

Developing Valid and Reliable Health Utilities in Irritable Bowel Syndrome: Results From the IBS PROOF Cohort

Brennan Spiegel, MD, MSHS[1–5], Lucinda Harris, MD[6], Susan Lucak, MD[6], Emeran Mayer, MD[2,3], Bruce Naliboff, PhD[1–3], Roger Bolus, PhD[2,3,5], Eric Esrailian, MD, MPH[2,5], William D. Chey, MD[7], Anthony Lembo, MD[8], Hetal Karsan, MD[9,10], Kirsten Tillisch, MD[2,3], Gareth Dulai, MD, MSHS[11], Jennifer Talley, MSPH[1,5] and Lin Chang, MD[2,3,5]

Pacientes cambiarìan 10 -15 años de su vida

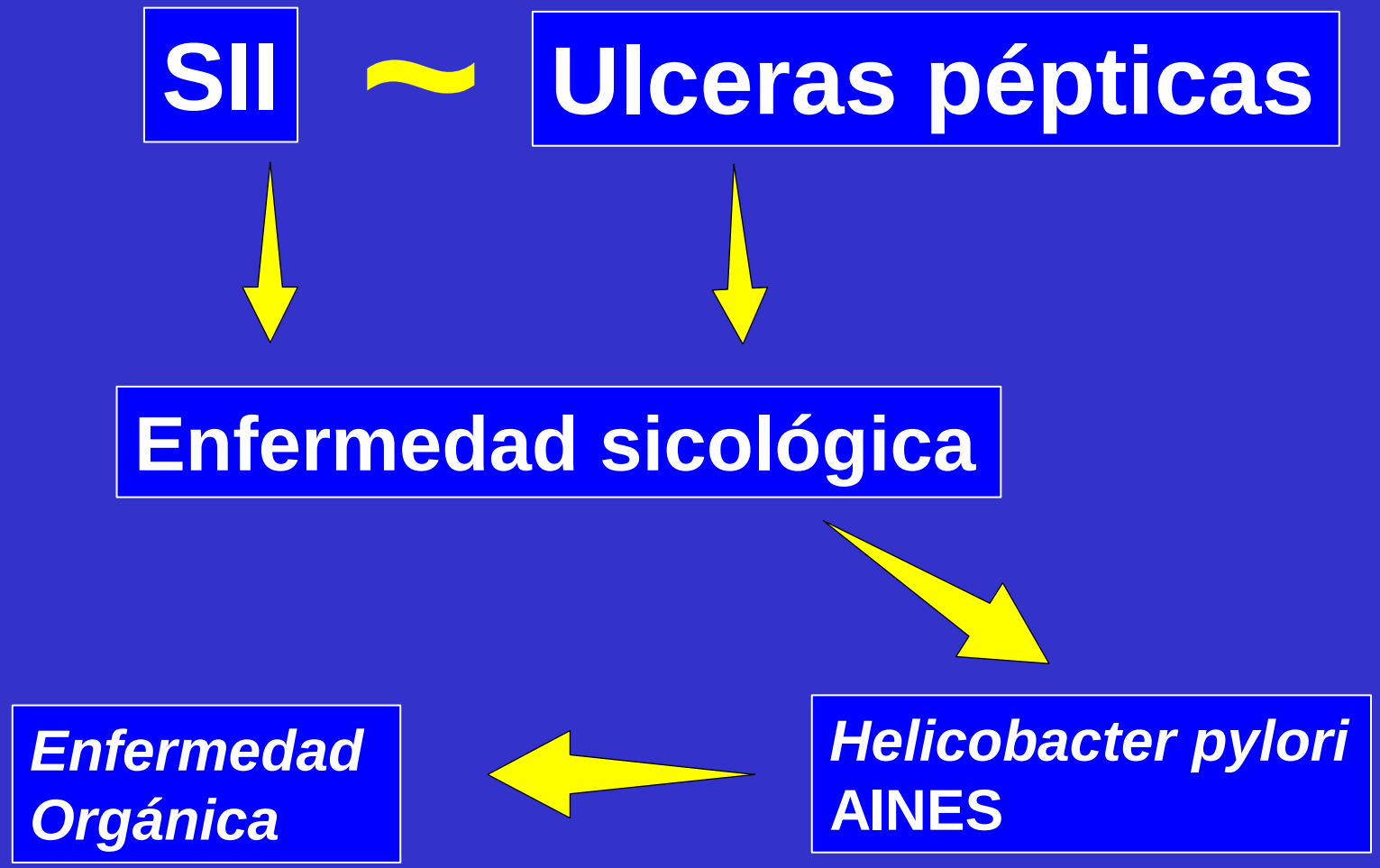
Por un tratamiento eficaz !!

Spiegel B, Am J Gastroenterol 2009;104:1984-91

Síndrome de Intestino Irritable ≠ **Colon Irritable**

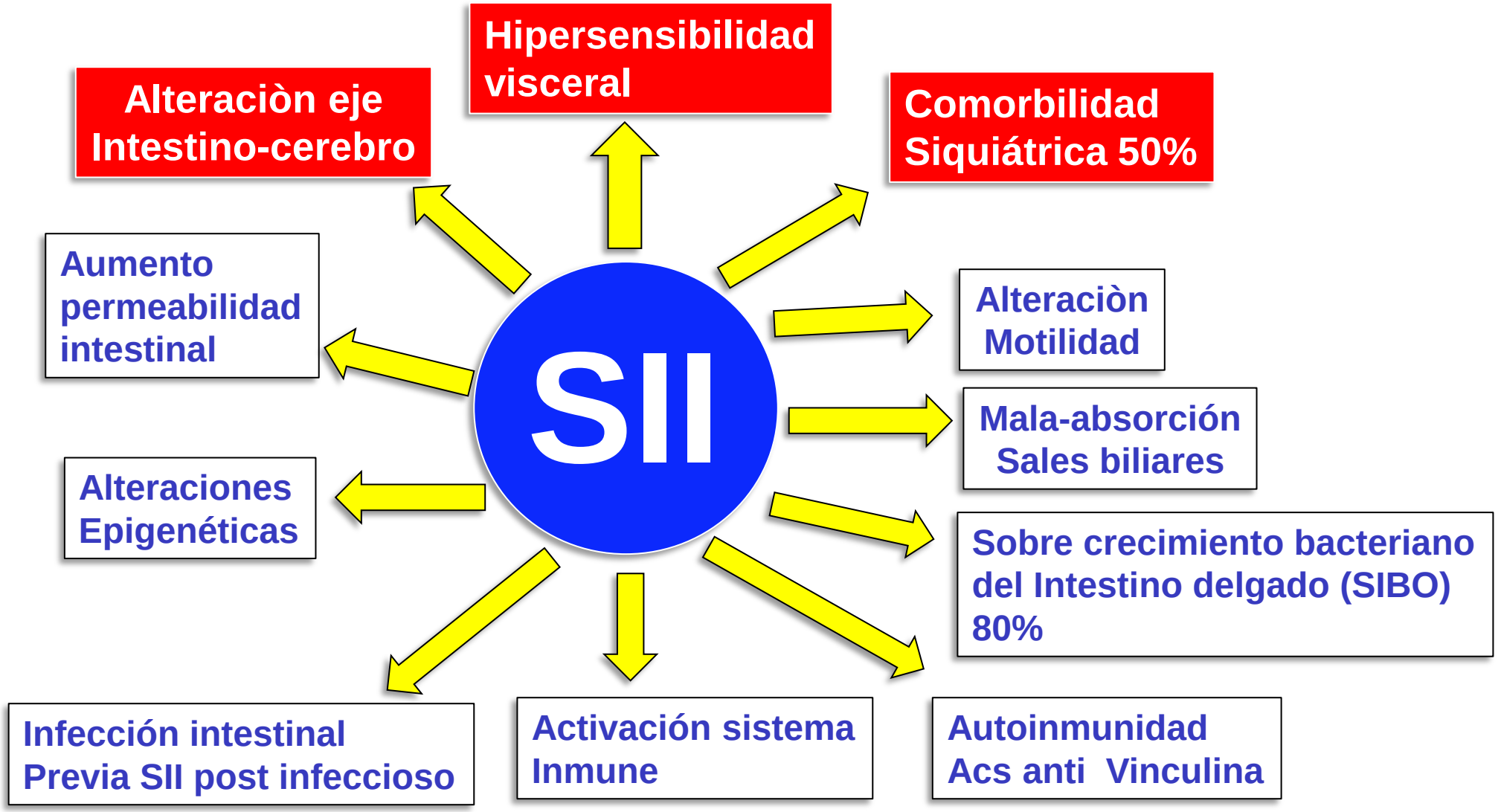
No Existe!!

“Dentre”
“Aiga”



Otero W, 2020, PLM Perú

SII -Fisiopatología



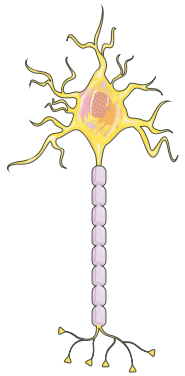
Ferreira AI, GE Port J Gastroenterol 2020;27:255-68
Takakura W, Patog Dis 2022;80:1-11
Otero W, PLM Perú 2021

Autoimmunity Links Vinculin to the Pathophysiology of Chronic Functional Bowel Changes Following *Campylobacter jejuni* Infection in a Rat Model

Mark Pimentel · Walter Morales · Venkata Pokkunuri · Constantinos Brikos · Sun Moon Kim · Seong Eun Kim · Konstantinos Triantafyllou · Stacy Weitsman · Zachary Marsh · Emily Marsh · Kathleen S. Chua · Shanthi Srinivasan · Gillian M. Barlow · Christopher Chang

Anticuerpos Anti CdTB (Toxina citoletal distensionante)

Reacción cruzada Vinculina en Células Cajal Ganglios mientéricos



Vinculina
Proteína Fundamental
Integridad estructural
Adhesion/migración
Neuronal

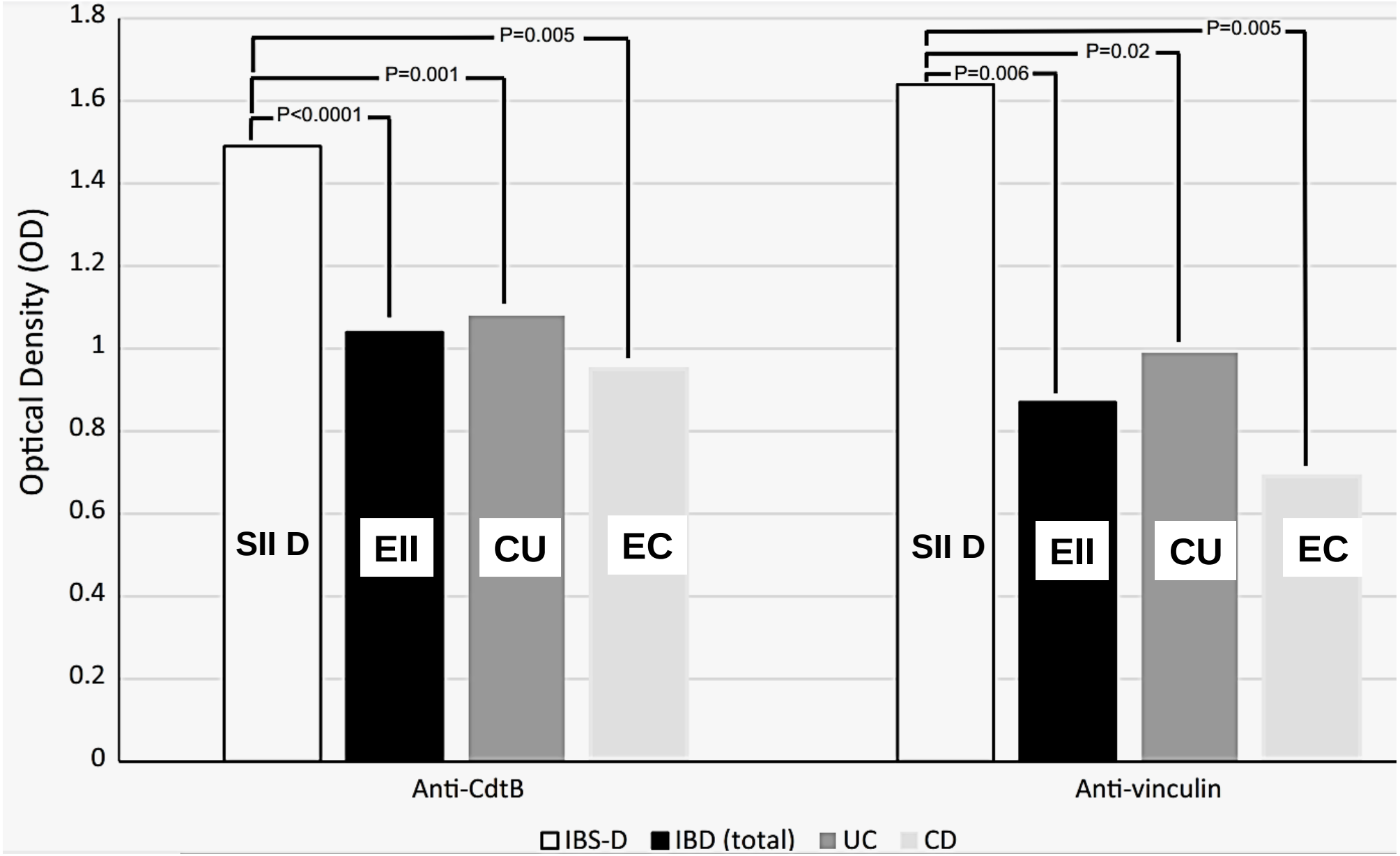
Alteración Motilidad gastrointestinal

Dig Dis Sci. 2015;60:1195-205.

Second-Generation Biomarker Testing for Irritable Bowel Syndrome Using Plasma Anti-CdtB and Anti-Vinculin Levels

Walter Morales[1] · Ali Rezaie[1] · Gillian Barlow[1] · Mark Pimentel[1]

Morales W, Dig Dis Sci. 2019;64:3115-21



Morales W, Dig Dis Sci. 2019;64:3115-21

Second-Generation Biomarker Testing for Irritable Bowel Syndrome Using Plasma Anti-CdtB and Anti-Vinculin Levels

Walter Morales[1] · Ali Rezaie[1] · Gillian Barlow[1] · Mark Pimentel[1]

Test	Sensitivity	Specificity	PPV	NPV	LR+
Anti-CdtB (OD > 1.56)	43.0	93.5	95.6	33.7	6.7
Anti-vinculin (OD > 1.60)	52.0	90.9	96.3	29.4	5.7
Both antibodies positive	22	100	100	22	∞

Morales W, Dig Dis Sci. 2019;64:3115-21

Second-Generation Biomarker Testing for Irritable Bowel Syndrome Using Plasma Anti-CdtB and Anti-Vinculin Levels

Walter Morales[1] · Ali Rezaie[1] · Gillian Barlow[1] · Mark Pimentel[1]

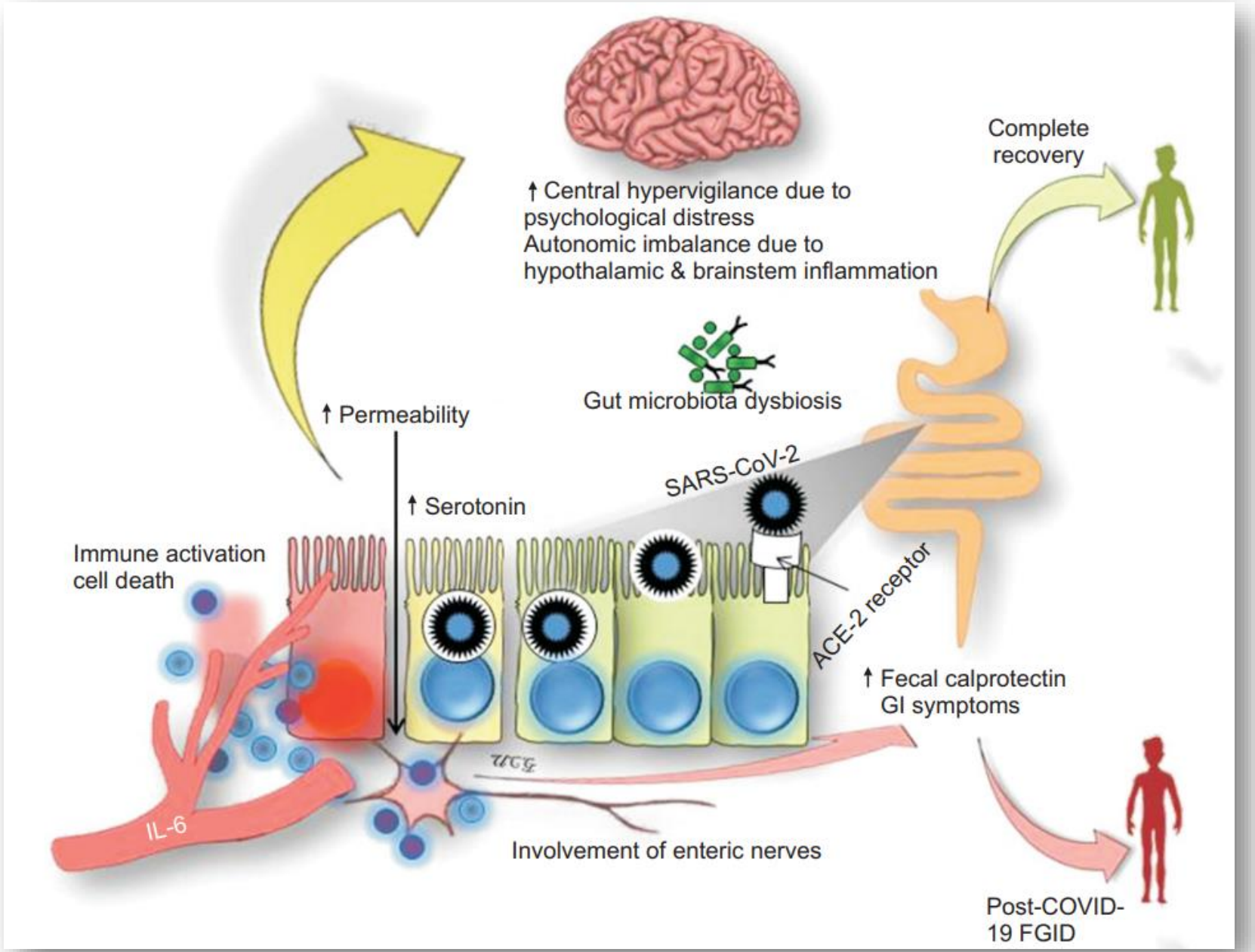
Table 3 Posttest probability of IBS based on testing positive for one or both antibodies

Anti-CdtB	Anti-vinculin	Posttest probability of IBS (%)
+	−	89.9
−	+	88.3
+	+	98.1

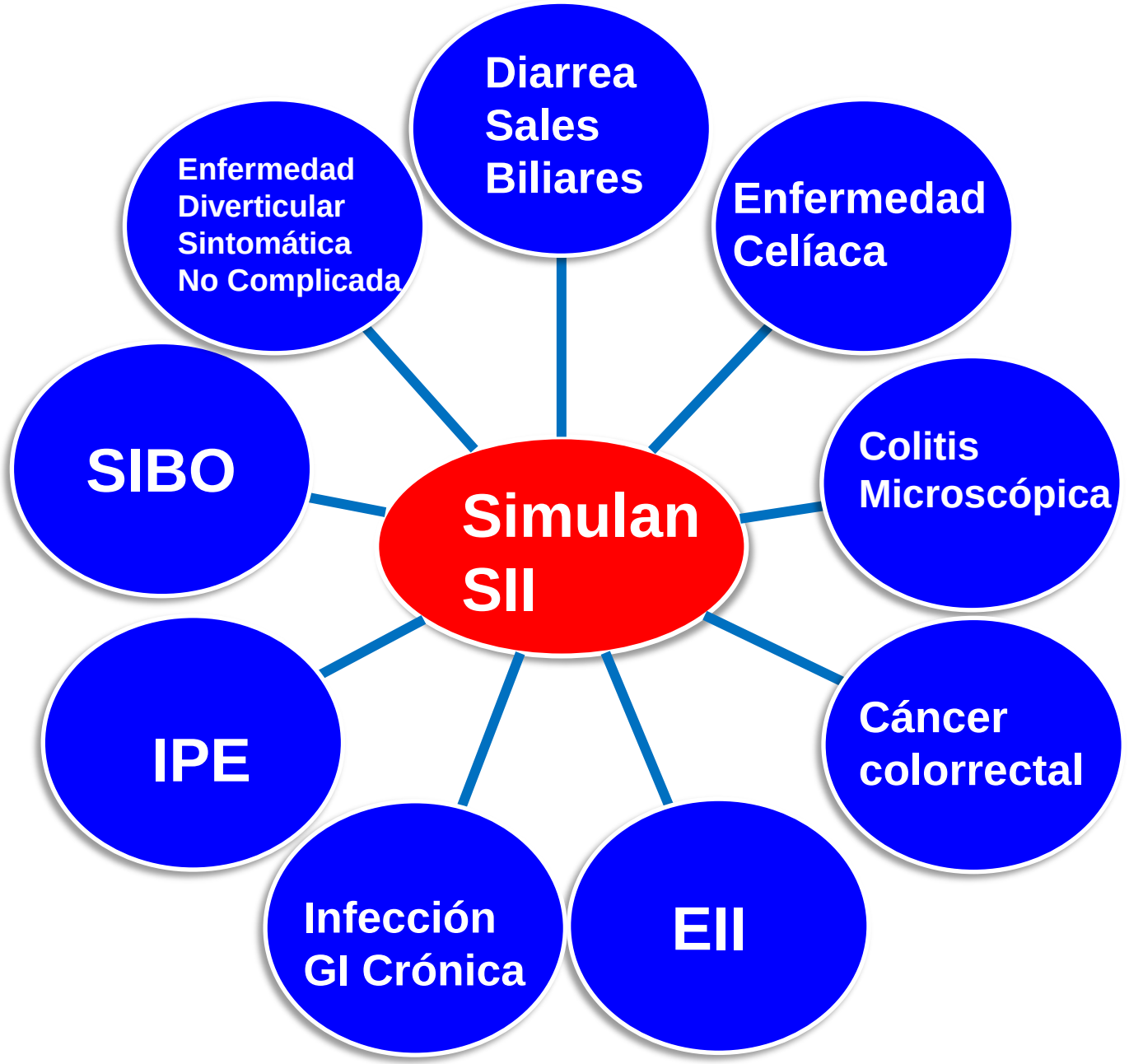
No hay controles sanos

Morales W, Dig Dis Sci. 2019;64:3115-21

SII
Pos COVID-19



Ghoshal UC.Gut Liver. 2021 Online Nov 18.



Aziz I, Lancet Gastroenterol Hepatol. 2021;6:139-148

SII: Diagnóstico

Enfermedad orgánica
“Mientras se validan y llegan”
Marcadores Biológicos

Se hace con los “Criterios clínicos”
No es un diagnóstico de exclusiòn!

Roma IV

SII, Criterios diagnósticos, Roma IV 2016

En ausencia de síntomas, o signos de alarma o Patologías que expliquen los síntomas

Lacy BE, Gastroenterology 2016;150:1393-407

SII, Criterios diagnósticos, Roma IV 2016

Dolor Abdominal

Recurrente: 6 meses
Actividad: últimos 3 meses
Frecuencia: 1vez/semana

2 o más

- Asociado a la Defecación
- Cambio en la Frecuencia heces
- Cambio en la Apariencia heces

Lacy BE, Gastroenterology 2016;150:1393-407

Subtipos: Fisiopatología diferente

Síndrome de Intestino Irritable

SII con Diarrea 30%
Heces acuosas >25% B/6-7
Duras <25% B1,2

SII con Estreñimiento
Heces duras >25% B/1,2
Heces acuosas <25%

SII Mixto
Heces duras >25%
Heces acuosas >25%

SII Inclasificable
Cumple criterios SII heces inclasificables

Roma IV 2016

ORIGINAL RESEARCH

Comparison of the Rome IV criteria with the Rome III criteria for the diagnosis of irritable bowel syndrome in secondary care

Christopher J Black ,[1,2] Orla Craig,[1] David J Gracie ,[1] Alexander C Ford [1,2]

Black CJ, et al. Gut 2021;70:1110-6

Roma IV versus Roma II

	Specificity (95% CI)	Positive likelihood ratio (95% CI)	Positive predictive value (95% CI)
Rome IV criteria for IBS	82.9% (74.8% to 89.2%)	4.82 (3.30 to 7.28)	94.9% (92.3% to 96.9%)
Rome IV criteria for IBS with constipation	97.0% (84.2% to 99.9%)	25.7 (5.07 to 145)	98.9% (93.9% to 99.9%)
Rome IV criteria for IBS with diarrhoea	60.5% (44.4% to 75.0%)	2.07 (1.48 to 3.12)	88.4% (82.0% to 93.1%)
Rome IV criteria for IBS with mixed bowel habits	92.0% (74.0% to 99.0%)	10.6 (3.39 to 38.2)	98.6% (95.2% to 99.8%)
Rome III criteria for IBS	65.0% (54.6% to 74.4%)	2.45 (1.90 to 3.27)	90.4% (86.9% to 93.3%)

Black CJ, et al. Gut 2021;70:1110-6

Roma IV
"Gold standard"

Valor Predictivo Positivo

SII estreñimiento — **99%**
SII mixto — **98%**
SII diarrea — **88%**

Black CJ, et al. Gut 2021;70:1110-6

SII -Diarrea

Roma IV

RESEARCH

Evaluation of the clinical and cost-effectiveness of the York Faecal Calprotectin Care Pathway

James Turvill,[1] Daniel Turnock,[2] Hayden Holmes,[3] Alison Jones,[2]
Eleanor Mclaughlan,[4] Victoria Hilton,[5] Stacey Marriott[6]

< 100 mcg/gr
No alarma, Q.sanguínea
SII 98% Certeza

≥ 250 mcg/gr
Colonoscopia
Falsos (+): AINES, Obesidad, tumores

Turvill J,Frontline Gastroenterol. 2018;9:285-294

ACG Clinical Guideline: Management of Irritable Bowel Syndrome

Brian E. Lacy, PhD, MD, FACG[1], Mark Pimentel, MD, FACG[2], Darren M. Brenner, MD, FACG[3], William D. Chey, MD, FACG[4], Laurie A. Keefer, PhD[5], Millie D. Long, MDMPH, FACG (GRADE Methodologist)[6] and Baha Moshiree, MD, MSc, FACG[7]

Recommendation

We suggest that either fecal calprotectin[1] or fecal lactoferrin[2] and C-reactive protein[1] be checked in patients without alarm features and with suspected IBS and diarrhea symptoms to rule out inflammatory bowel disease.

[1]Strong recommendation; moderate quality of evidence (CRP, fecal calprotectin).

[2]Strong recommendation; very low quality of evidence (fecal lactoferrin).

Lacy BE, et al. Am J Gastroenterol 2021;116:17-44.

Colonoscopia: indicaciones

Edad > 45 años
Diarrea persistente: colitis microscópica
Rectorragia, anemia, masa, Pérdida de peso
Ascitis, hepato esplenomegalia,fiebre
Masa Rectal, HF Ca de colon, EII
Adultos mayores

Roma IV
Lacy BE, Am J Gastroenterol 2021;116:17-44

Adultos mayores

Cáncer de colon
Isquemia colónica
E. Inflamatoria Intestinal
Colitis microscópica
Diverticulitis
Clostridioides difficile
Enf diverticular sintomática no complicada

Crane S, Clin Geriatr Med 2007;23:721-34

Diagnóstico positivo no de exclusión

Laboratorios
Colonoscopia
Caso por caso

Examen Físico

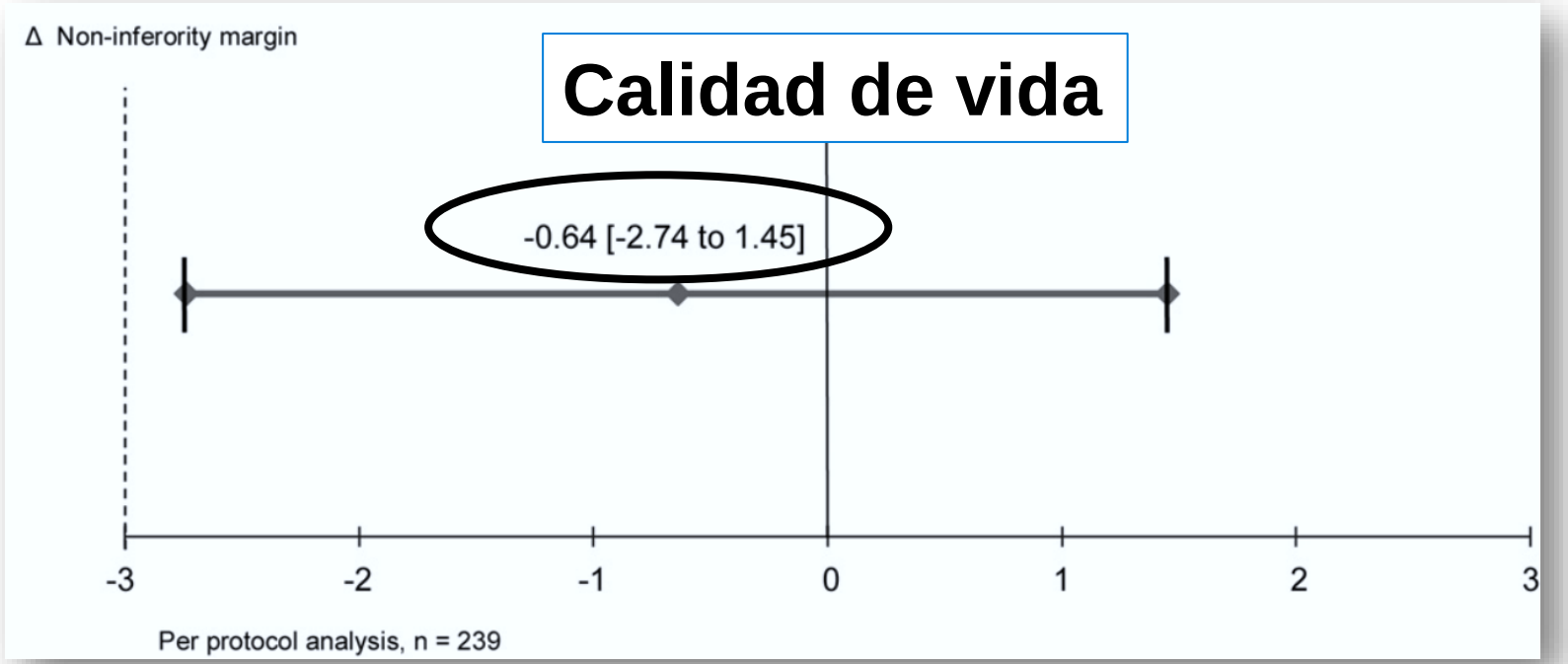
Historia Clínica

Roma IV

A Positive Diagnostic Strategy Is Noninferior to a Strategy of Exclusion for Patients With Irritable Bowel Syndrome

LUISE M. BEGTRUP,*,‡ ANNE LINE ENGSBRO,§ JENS KJELDSEN,* PIA V. LARSEN,‡
OVE SCHAFFALITZKY DE MUCKADELL,* PETER BYTZER,§ and DORTE E. JARBØL‡

Aleatorizado, Cabeza a cabeza, Seguimiento un año



Costo anual US$

40% màs costoso

Positivo
3.160
C. Hemático
PCR

Exclusión
5.075
Múltiples
Exámenes

Begtrup LM, Clin Gastroenterol Hepatol. 2013;11:956-62.

A positive diagnostic strategy is safe and saves endoscopies in patients with irritable bowel syndrome: A five-year follow-up of a randomized controlled trial

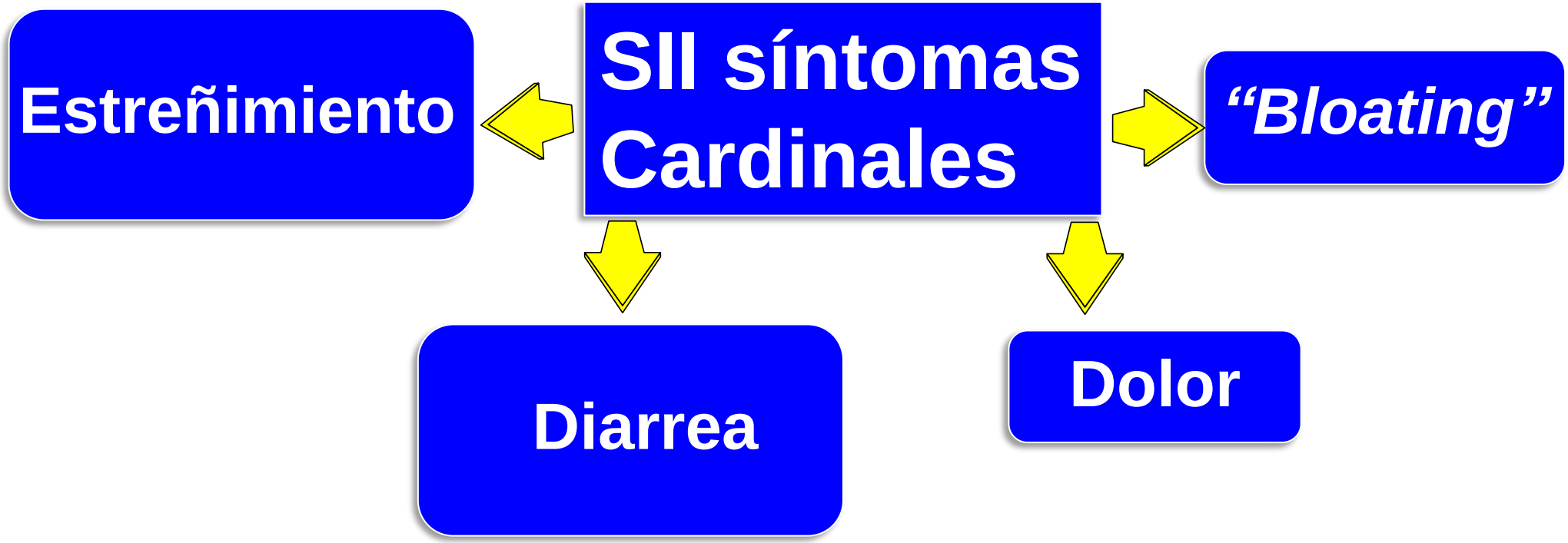
Anne Line Engsbro[1,2] | Luise M. Begtrup[3,4] | Peter Haastrup[4] | Maria Munch Storsveen[4]
Peter Bytzer[1] | Jens Kjeldsen[5] | Ove Schaffalitzky De Muckadell[5] | Dorte Ejg Jarbøl[4]

13 vs 23

Engsbro AL, Neurogastroenterol Motil. 2021;33:e14004

Tratamiento està dirigido a los sìntomas

Múltiples alteraciones orgánicas
Autoinmunidad, eje intestino cerebro




Mejor tratamiento
No farmacológico
Piedra angular
Excelente relación
Médico-Paciente

SII

Tratamiento farmacológico

Respuesta placebo 37%

Ford AC, Aliment Pharmacol Ther 2010;32:144-58

Dieta

CLINICAL PRACTICE UPDATE

AGA Clinical Practice Update on the Role of Diet in Irritable Bowel Syndrome: Expert Review

William D. Chey,[1] Jana G. Hashash,[2,3] Laura Manning,[4] and Lin Chang[5]

Gluten

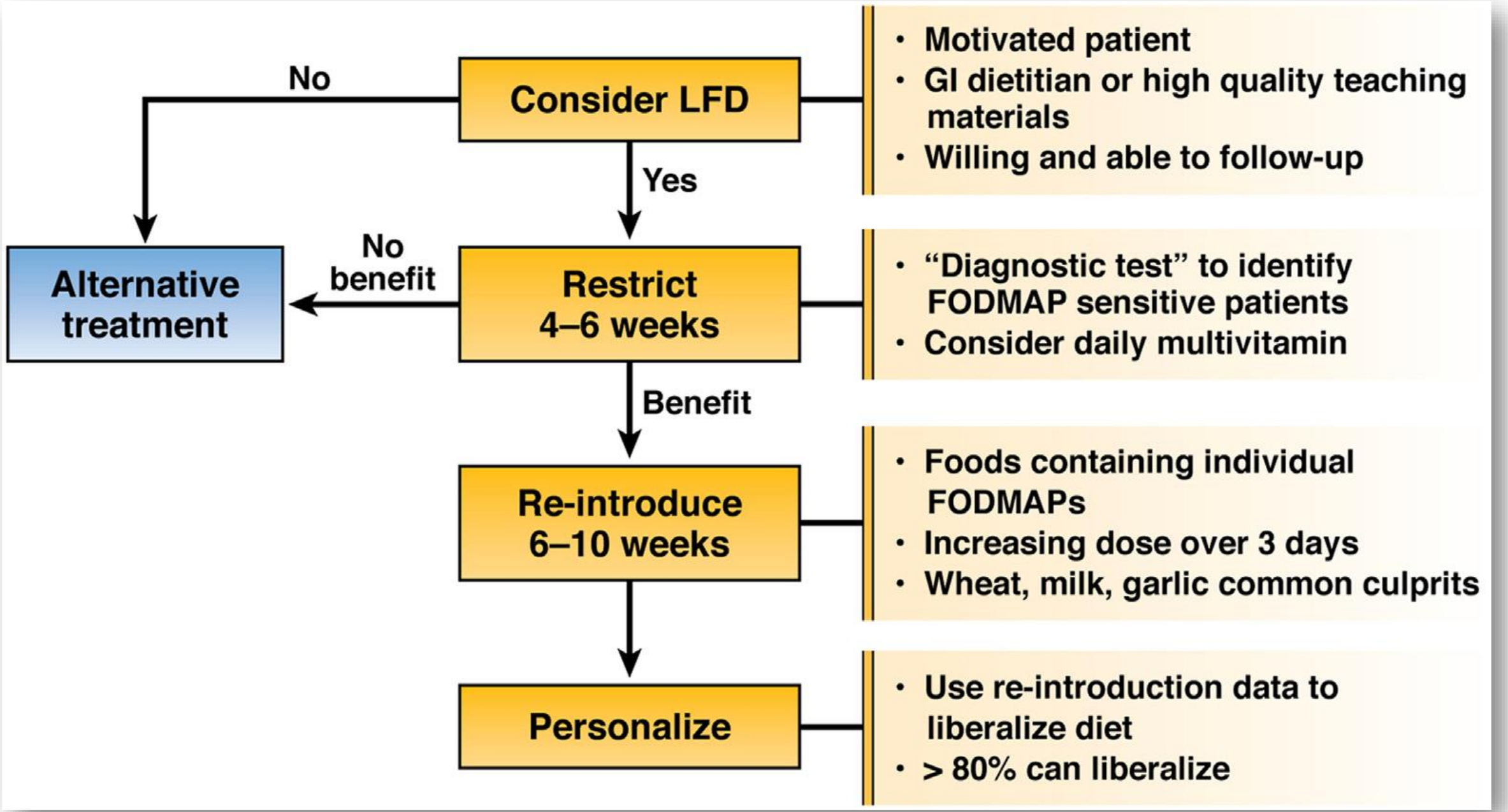
Best Practice Advice 8: Although observational studies found that most patients with IBS improve with a gluten-free diet, randomized controlled trials have yielded mixed results.

Dieta baja en FODMAP

Best Practice Advice 6: The LFD is currently the most evidence-based diet intervention for IBS. Healthy eating advice as described by the National Institute of Health and Care Excellence Guidelines, among others, also offers benefit to a subset of patients with IBS.

Best Practice Advice 7: The LFD consists of 3 phases: 1) restriction (lasting no more than 4–6 weeks), 2) reintroduction of FODMAP foods, and 3) personalization based on results from reintroduction.

Chey W, Gastroenterology 2022;162:1737–1745



Chey W, Gastroenterology 2022;162:1737–1745

ACG Clinical Guideline: Management of Irritable Bowel Syndrome

Brian E. Lacy, PhD, MD, FACG[1], Mark Pimentel, MD, FACG[2], Darren M. Brenner, MD, FACG[3], William D. Chey, MD, FACG[4], Laurie A. Keefer, PhD[5], Millie D. Long, MDMPH, FACG (GRADE Methodologist)[6] and Baha Moshiree, MD, MSc, FACG[7]

Recommendation

We recommend a limited trial of a low FODMAP diet in patients with IBS to improve global symptoms.

Conditional recommendation; very low quality of evidence.

Lacy BE, et al. Am J Gastroenterol 2021;116:17-44.

Systematic review: quality of trials on the symptomatic effects of the low FODMAP diet for irritable bowel syndrome

L. R. Krogsgaard[1,2] | M. Lyngesen[1] | P. Bytzer[1,2]

	Random sequence generation [a](Selection bias)	Allocation concealment [a](Selection bias)	Blinding of participants and personnel [b](Performance bias)	Blinding of outcome assessment [b](Detection bias)	Incomplete outcome data [c](Attrition bias)	Selective reporting [c](Reporting bias)	Choice of control group [d](Bias in design)	Objective evaluation of data [d](Interpretive bias)
Esweran[14]	Unclear risk	Unclear risk	High risk	Low risk				High risk
Peters[10]	Low risk							Low risk
McIntosh[15]	Low risk							Low risk
Böhn[16]	Low risk							High risk
Chumpitazi[17]	Low risk				Low risk	Low risk	High risk	High risk
Pedersen[18]	Low risk	Low risk	High risk	High risk	High risk	High risk	High risk	Low risk
Halmos[9]	Low risk	Unclear risk	High risk	High risk	Low risk	Low risk	High risk	High risk
Staudacher[19]	Low risk	Low risk	High risk	High risk	Low risk	High risk	High risk	High risk
Ong[20]	Low risk	Unclear risk	High risk	High risk	High risk	High risk	High risk	High risk

Seis semanas
Fase de reintroducción ?
Todo parece un efecto placebo

Aliment Pharmacol Ther. 2017; On line Sept 2017

Dieta

Dieta <<< FODMAP
Inconvenientes

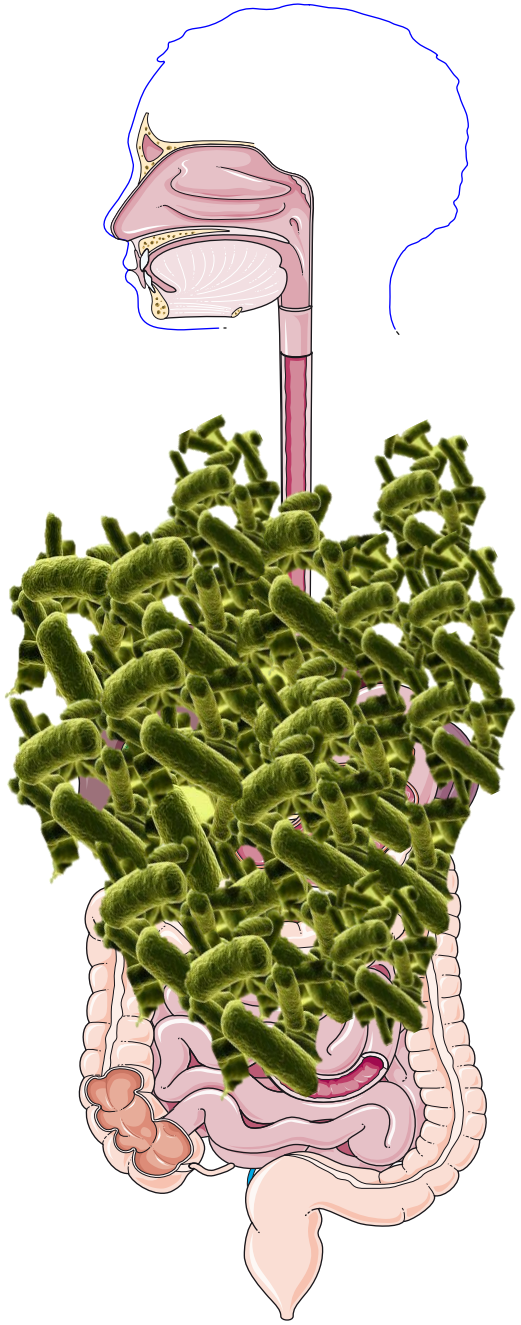
Difícil de seguir
Qué componentes de la dieta?
Restrictiva
Modifica microbiota
Modifica el metaboloma
Acidos grasos de cadena corta
Cambios no saludables en la microbiota
Prevotella, *Clostridium*
<<<<Bifidobacterium

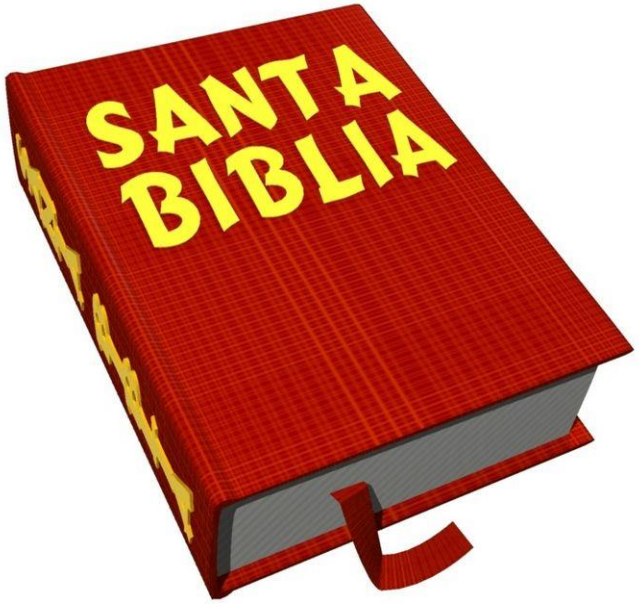
Holvoet T, Gut 2017;66: 980-982
Mcintosh K, Gut 2016; on line Nov
Camilleri M Gut 2017, On line Sept 28

Dieta

Suspender lo que haga daño

Probióticos





“No me hables de tu fe, háblame de tus obras”

AGA Technical Review on the Role of Probiotics in the Management of Gastrointestinal Disorders

Geoffrey A. Preidis,[1] Adam V. Weizman,[2] Purna C. Kashyap,[3] and Rebecca L. Morgan[4]

[1]Section of Gastroenterology, Hepatology and Nutrition, Department of Pediatrics, Baylor College of Medicine and Texas Children's Hospital, Houston, Texas; [2]Division of Gastroenterology, Mount Sinai Hospital, Department of Medicine, University of Toronto, Toronto, Ontario, Canada; [3]Enteric Neuroscience Program, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, Minnesota; and [4]Health Research Methods, Evidence and Impact, McMaster University, Hamilton, Ontario, Canada

The overall CoE across all critical outcomes for probiotics for the treatment of children and adults with IBS was Low.

Solamente en el contexto de ensayos clínicos

Preidis GA, Gastroenterology 2020;159:708–738

ACG Clinical Guideline: Management of Irritable Bowel Syndrome

Brian E. Lacy, PhD, MD, FACG[1], Mark Pimentel, MD, FACG[2], Darren M. Brenner, MD, FACG[3], William D. Chey, MD, FACG[4], Laurie A. Keefer, PhD[5], Millie D. Long, MDMPH, FACG (GRADE Methodologist)[6] and Baha Moshiree, MD, MSc, FACG[7]

Recommendation

We suggest against probiotics for the treatment of global IBS symptoms.

Conditional recommendation; very low level of evidence.

Lacy BE, et al. Am J Gastroenterol 2021;116:17-44.

SII Estreñimiento

Estreñimiento-Síntoma

Estreñimiento Funcional

Disminución tránsito colónico
< Contracciones alta amplitud
Tránsito lento
Disinergia piso pélvico

Microbiota Metanogénica
Defecación Disinérgica
Responden similar

SII Estreñimiento

Hipersensibilidad visceral
Alodinia, hiperalgesia
> Permeabilidad
SIBO
Disinergia piso pélvico

Whitehead WE, Neurogastroenterol Motil 2016;28:783-92
Takakura W, Pimentel M. Front Psych 2020;11:Art 664

THE RED SECTION

Myths and Misconceptions About Constipation: A New View for the 2020s

Kyle Staller, MD, MPH[1] and Brooks D. Cash, MD[2]

Mito #2:
El estreñimiento crónico funcional es diferente a SII-Estreñimiento

Staller K , Am J Gastroenterol 2020;115:1741–1745.

CLINICAL GUIDELINES

ACG Clinical Guideline: Management of Irritable Bowel Syndrome

Brian E. Lacy, PhD, MD, FACG[1], Mark Pimentel, MD, FACG[2], Darren M. Brenner, MD, FACG[3], William D. Chey, MD, FACG[4], Laurie A. Keefer, PhD[5], Millie D. Long, MDMPH, FACG (GRADE Methodologist)[6] and Baha Moshiree, MD, MSc, FACG[7]

We recommend the use of chloride channel activators to treat global IBS-C symptoms.

Strong recommendation; moderate quality of evidence.

Lubiprostone 8mcg 2v/d
Plecanatide 3mg

We recommend the use of guanylate cyclase activators to treat global IBS-C symptoms.

Strong recommendation; high quality of evidence.

Linaclotide 290 mcg
Plecanatide 3mg

We suggest that the 5-HT_4 agonist tegaserod be used to treat IBS-C symptoms in women younger than 65 years with ≤1 cardiovascular risk factors who have not adequately responded to secretagogues.

Conditional recommendation; low quality of evidence.

Tegaserod 6 mg 2v/día

We suggest against the use of PEG products to relieve global IBS symptoms in those with IBS-C.

Conditional recommendation; low quality of evidence

Insuficiente Evidencia

PEG Nosotros Si

Lacy BE, Am J Gastroenterol 2021;116:17–44.

GUIDELINES

AGA Clinical Practice Guideline on the Pharmacological Management of Irritable Bowel Syndrome With Constipation

Lin Chang,[1,*] **Shahnaz Sultan**,[2,3,*] Anthony Lembo,[4] G. Nicholas Verne,[5] Walter Smalley,[6] and Joel J. Heidelbaugh[7]

6. Should Polyethylene Glycol Laxatives Be Used in Patients With Irritable Bowel Syndrome With Constipation?

The AGA suggests using PEG laxatives in patients with IBS-C.
(Conditional recommendation, low certainty in the evidence of effects)

Chang L, Gastroenterology 2022;163:118–136

CLINICAL GUIDELINES

ACG Clinical Guideline: Management of Irritable Bowel Syndrome

Brian E. Lacy, PhD, MD, FACG[1], Mark Pimentel, MD, FACG[2], Darren M. Brenner, MD, FACG[3], William D. Chey, MD, FACG[4], Laurie A. Keefer, PhD[5], Millie D. Long, MDMPH, FACG (GRADE Methodologist)[6] and Baha Moshiree, MD, MSc, FACG[7]

Recommendation

Estreñimiento refractario

We suggest that anorectal physiology testing be performed in patients with IBS and symptoms suggestive of a pelvic floor disorder and/or refractory constipation not responsive to standard medical therapy.

Consensus recommendation; unable to assess using GRADE methodology

Lacy BE, Am J Gastroenterol 2021;116:17–44.

SII con Estreñimiento ?

Estreñimiento Primario/Funcional ?

Tranquilo: Mientras la ciencia lo descubre

Los remedios son similares

El dolor requiere otros medicamentos

SII Diarrea predominante

Roma IV

SII diarrea predominante

Antiguos
Loperamida
Antidepresivos

Antagonistas 5HT3
Alosetrón
Ondansetrón
Ramosetrón A5HT3

<< Sales biliares
Colestiramina
Colestipol,
Colesevelam

Dieta
<< FODMAP

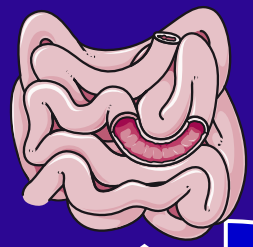
Eluxadoline
(Agonista opioide)
100 mg 2v/día
NO en: pancreatitis
Disfunción de Oddi,
Hepatopatía crónica
FDA: Mayo 28,2015

Rifaximina
FDA: Mayo 28/15
550 mg 3v/dia, 14dias

Lacy BE, Gastroenterology 2016;150:1393-407

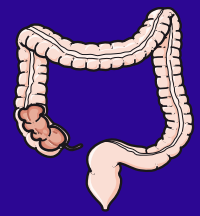
1ª línea SII

Rifaximina



Antibiótico acción tópica.

550 mg cada 8 horas/14 días



Microbioma

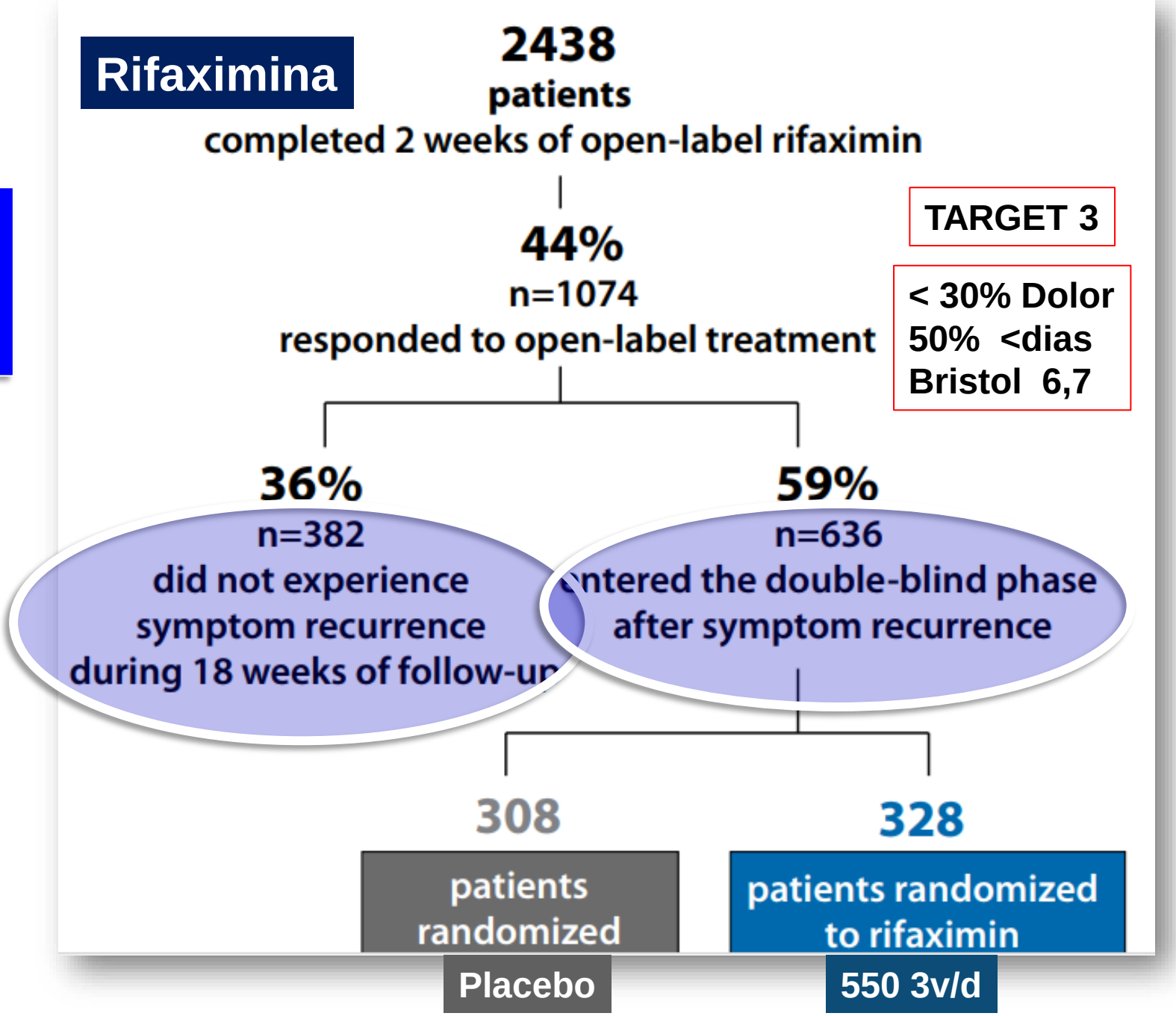
SIBO

"Bloating" | *Diarrea* | *Dolor*

Seguro
Superior
a placebo

Ford AC, et al, Am J Gastroenterol 2018;113:1-18.
Black CJ, et al, Gut 2019;0:1–9
Black CJ, Ford AC, Frontline Gastroenterology 2020;0:1–13.
Pimentel M, et al, N Engl J Med 2011;364:22-32.

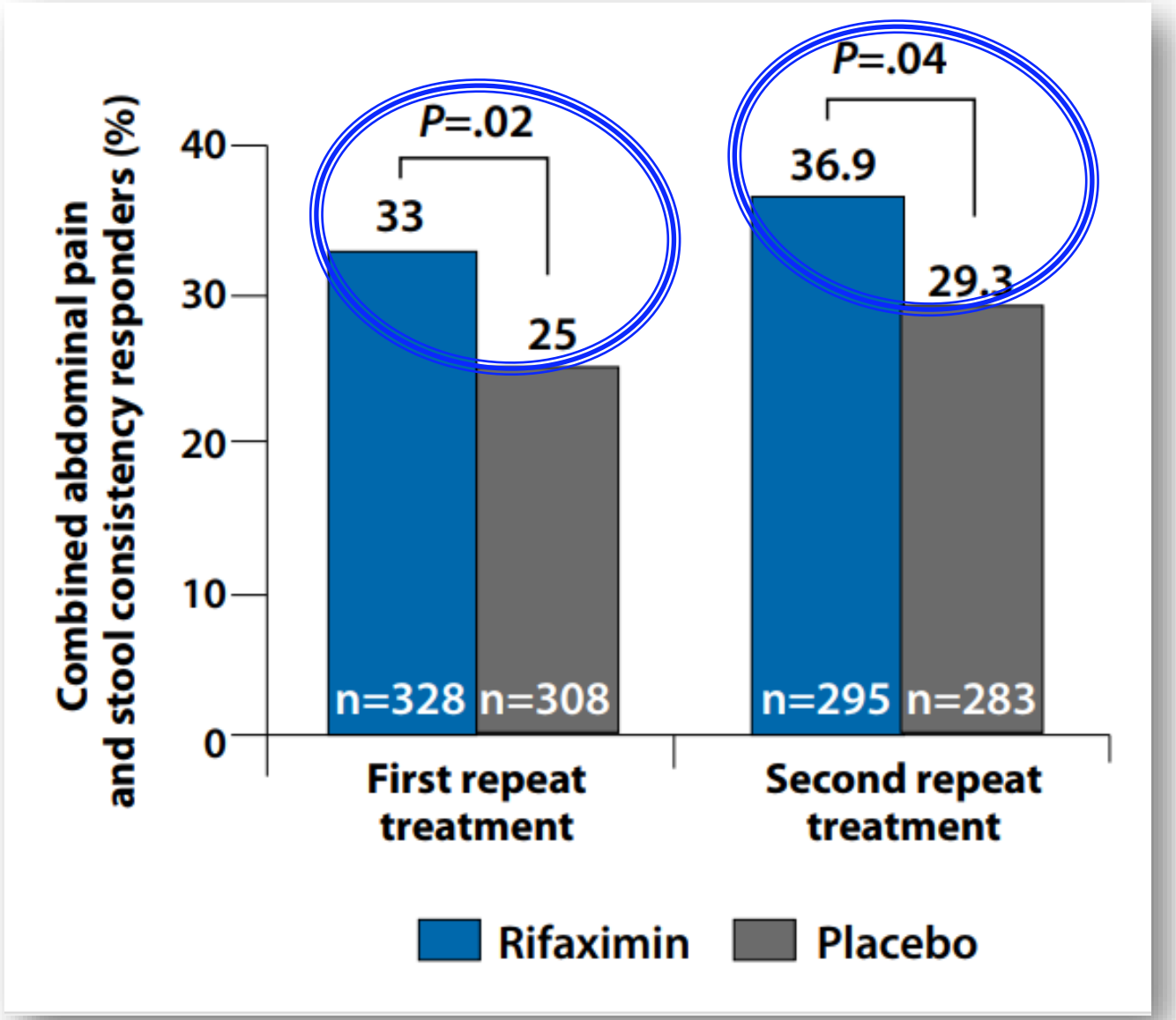
Rifaximina Retratamiento En recaídas



Salix, Pharmaceuticals NJ 2015,, Lembo AJ, ACG Abstract 45

Rifaximina -SII

FDA



Lembo AJ, TARGET-3 study.
American College of Gastroenterology; October 17-22; Philadelphia, PA. Abstract 45.

TABLE 3. NNT and NNH Across IBS-D Trials[32,46]

Treatment	Study duration	NNT	NNH[a]	NNT:NNH ratio
Alosetron	48 weeks	9	8	1.125
Eluxadoline	26 weeks	8.7	23.3	0.373
Rifaximin	10 weeks	10.6	8971	0.001

IBS-D indicates irritable bowel syndrome with prominent diarrhea; NNH, number needed to harm; NNT, number of patients needed to be treated.
[a]NNH for alosetron is the reciprocal of the treatment difference between alosetron and placebo for any adverse effects; NNH for eluxadoline includes patients who experienced an adverse event(s) that prompted discontinuation.

Chey WD, et al. *Am J Gastroenterol*. 2004;99(11):2195-2203.
Lucak S, et al. Ther Adv Gastroenterol. 2017;10(2):253-275.

Rifaximina

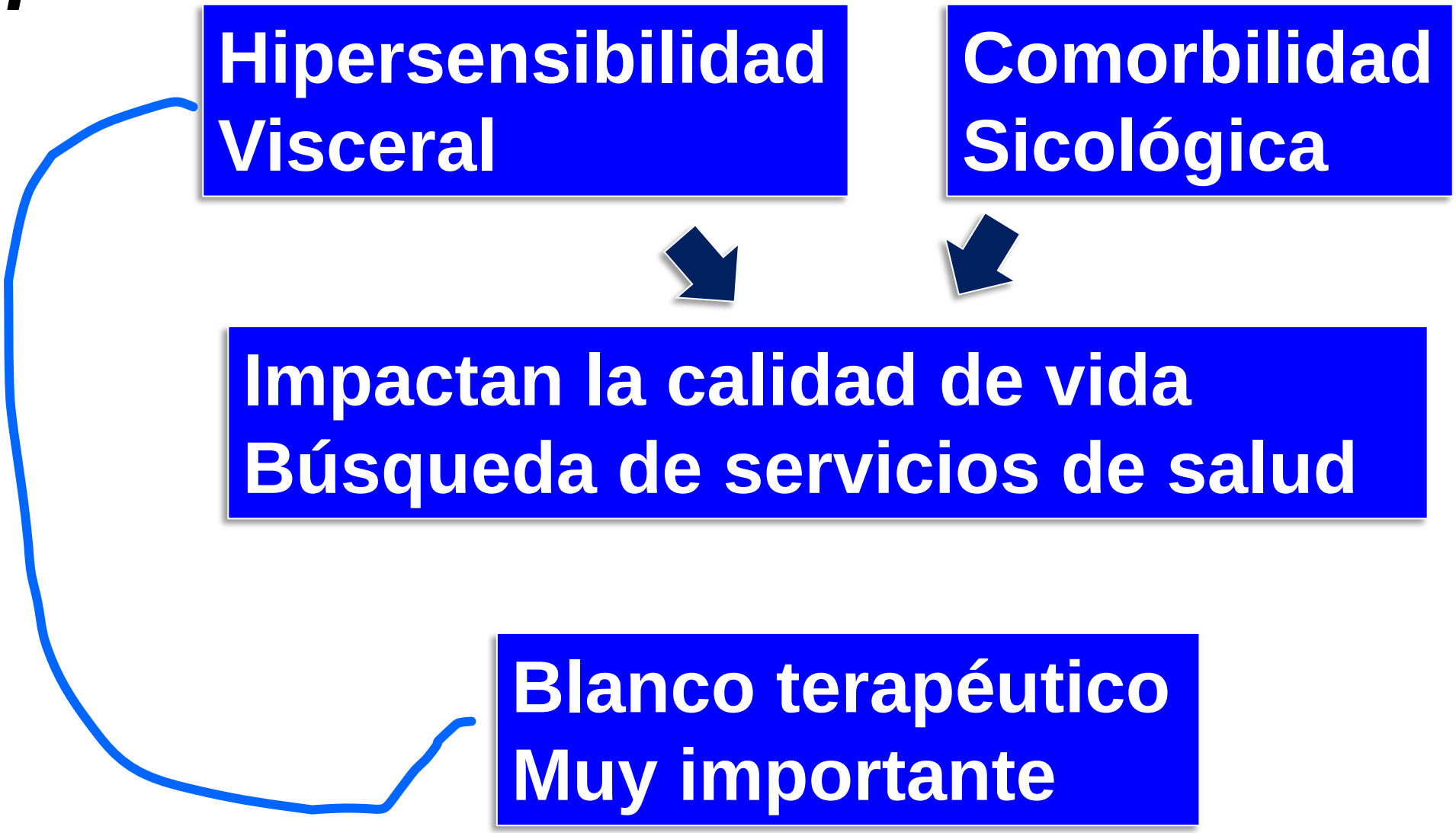
No es solamente SIBO
Mùtiples efectos biològicos

Actúa tópicamente
Reduce virulencia ciertas bacteria
Reduce unión bacteria-mucosa
Eubiótico
>>> *Lactobacilo*
>>> *Bifidobacterium*
>>> *Faecalobacterium prausnitzii*

Chey WD, Therap Adv Gastroenterol 2020;13:1756284819897531
Ponziani FR, Dig Dis 2016;34:269-78
Ponziani FT, *World J Gastroenterol* 2017; 23: 4491-4499

Dolor

SII



Paine P, Aliment Pharmacol Ther 2021; 54(Suppl.1):S75-S88

1ª línea

Antiespasmódicos

Relajan músculo liso intestinal

Black CJ, et al. Lancet Gastroenterol Hepatol 2020; 5:117-31.
Ford AC, et al. BMJ 2008;337:a2313

ACG Clinical Guideline: Management of Irritable Bowel Syndrome

Brian E. Lacy, PhD, MD, FACG[1], Mark Pimentel, MD, FACG[2], Darren M. Brenner, MD, FACG[3], William D. Chey, MD, FACG[4], Laurie A. Keefer, PhD[5], Millie D. Long, MDMPH, FACG (GRADE Methodologist)[6] and Baha Moshiree, MD, MSc, FACG[7]

Recommendation

We recommend against the use of antispasmodics currently available in the United States to treat global IBS symptoms.

Conditional recommendation; low quality of evidence.

Lacy BE, Am J Gastroenterol 2021;116:17–44.

Anti-Espasmódicos
Bromuro Pinaverio
Bromuro Otilonium

Menta oleosa

Dolor

Antibiótico
Rifaximina

Masuy I, Minerva Gastroenterol Dietl 2020;66:136-50

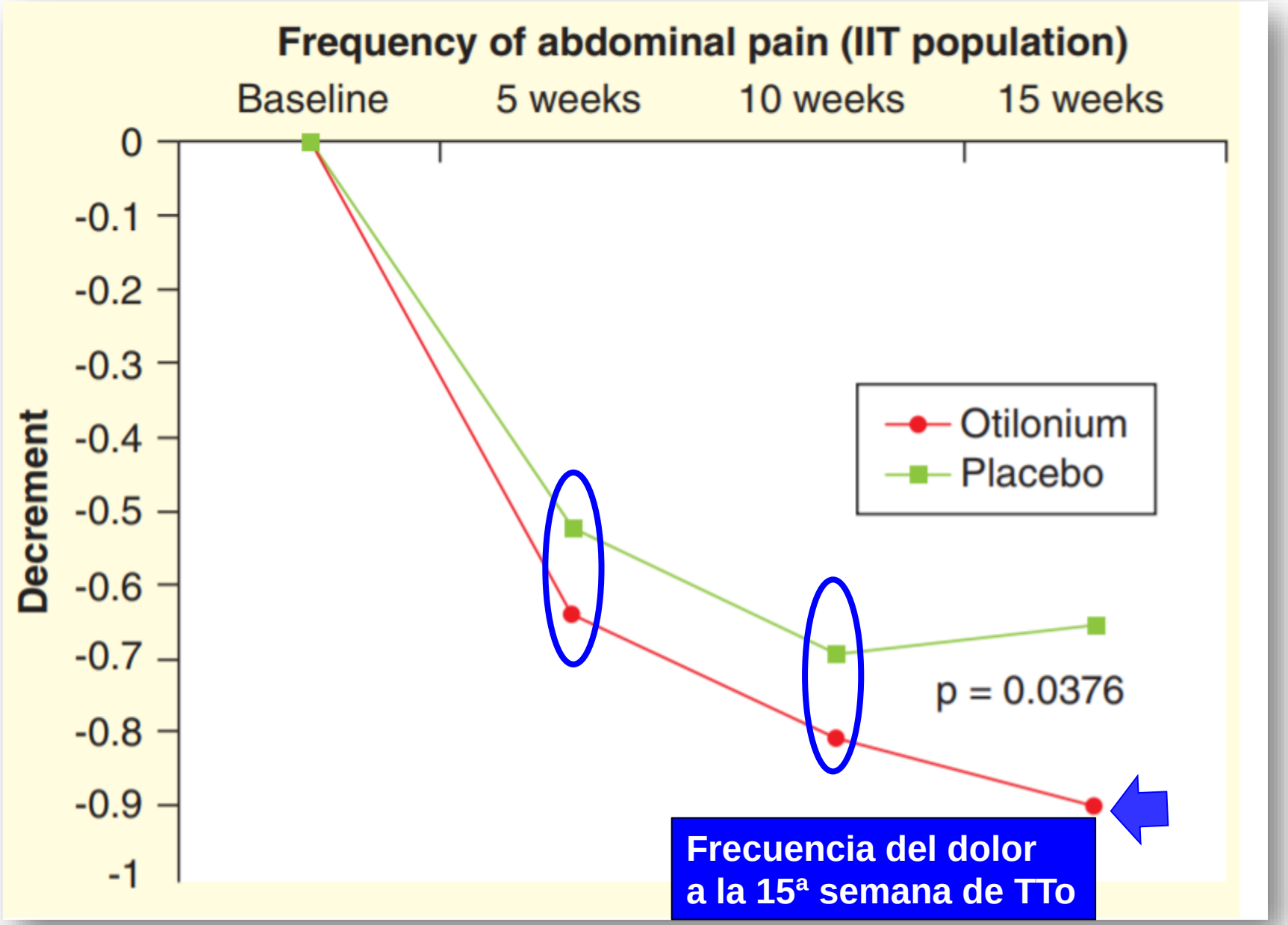
AP&T Alimentary Pharmacology and Therapeutics

Randomised clinical trial: otilonium bromide improves frequency of abdominal pain, severity of distention and time to relapse in patients with irritable bowel syndrome

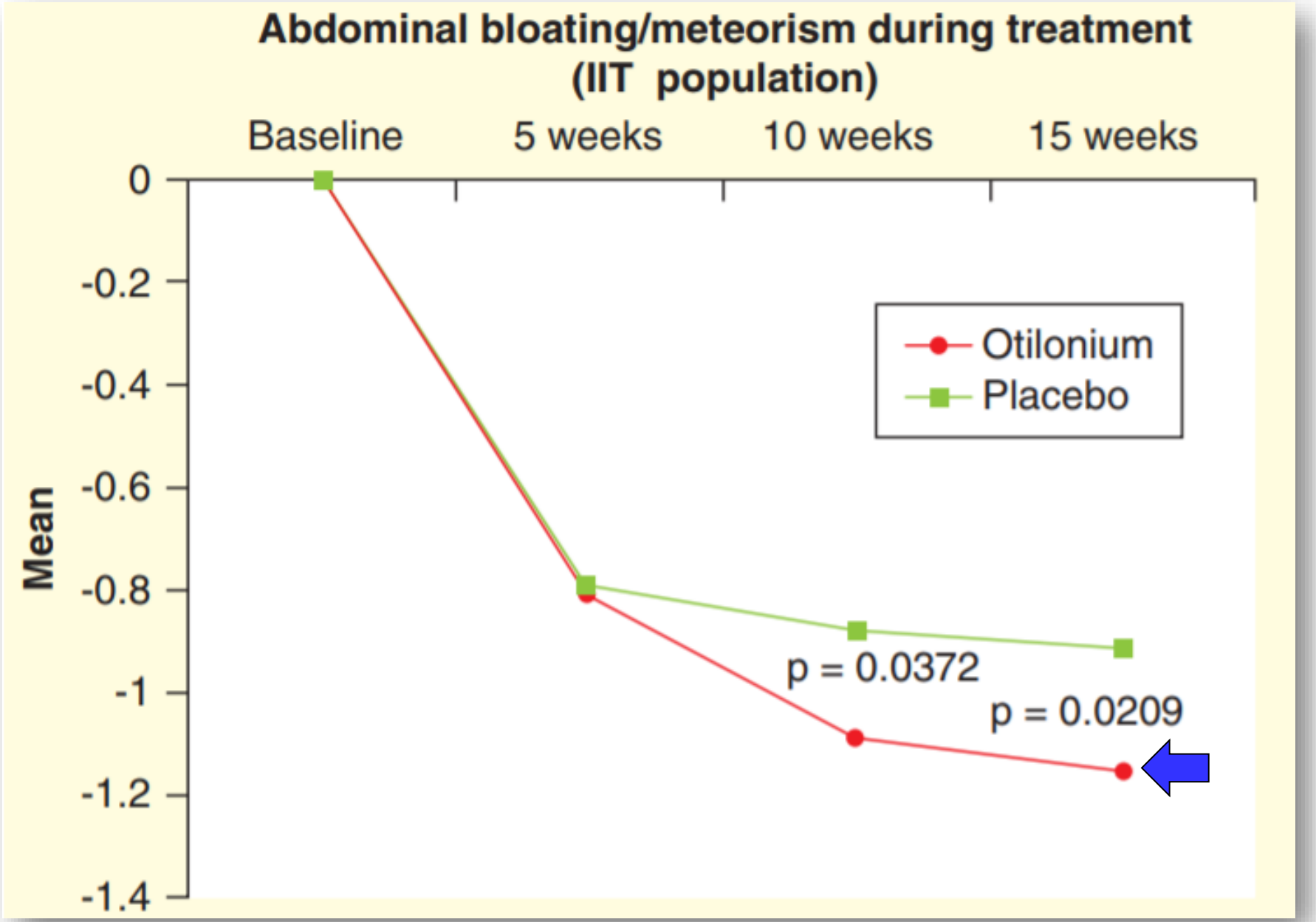
P. Clavé*,†,‡, M. Acalovschi§, J. K. Triantafillidis¶, Y. P. Uspensky**, C. Kalayci††, V. Shee‡‡ & J. Tack§§ on behalf of the OBIS Study Investigators

Aliment Pharmacol Ther 2011; 34: 432–442

Bromuro De Otilonium



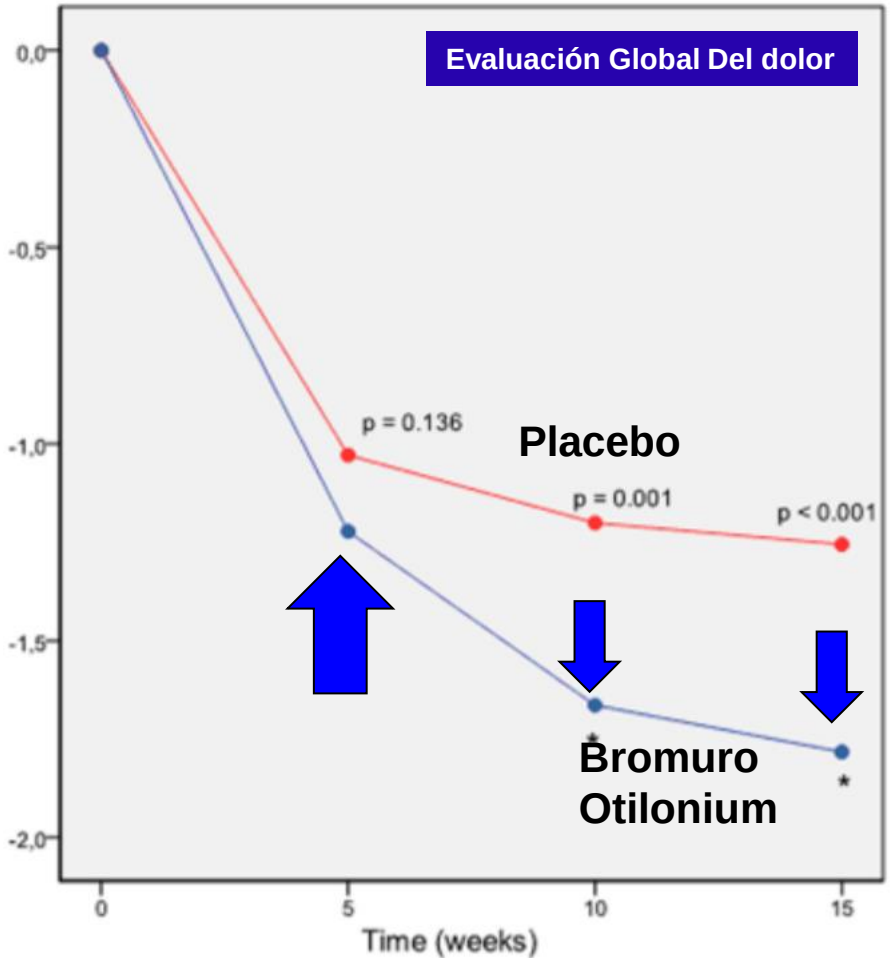
Clavé P, Aliment Pharmacol Ther 2011; 34: 432–442



Clavé P, Aliment Pharmacol Ther 2011; 34: 432–442

Efficacy of otilonium bromide in irritable bowel syndrome: a pooled analysis

3 ECC , N 833, 69% mujeres

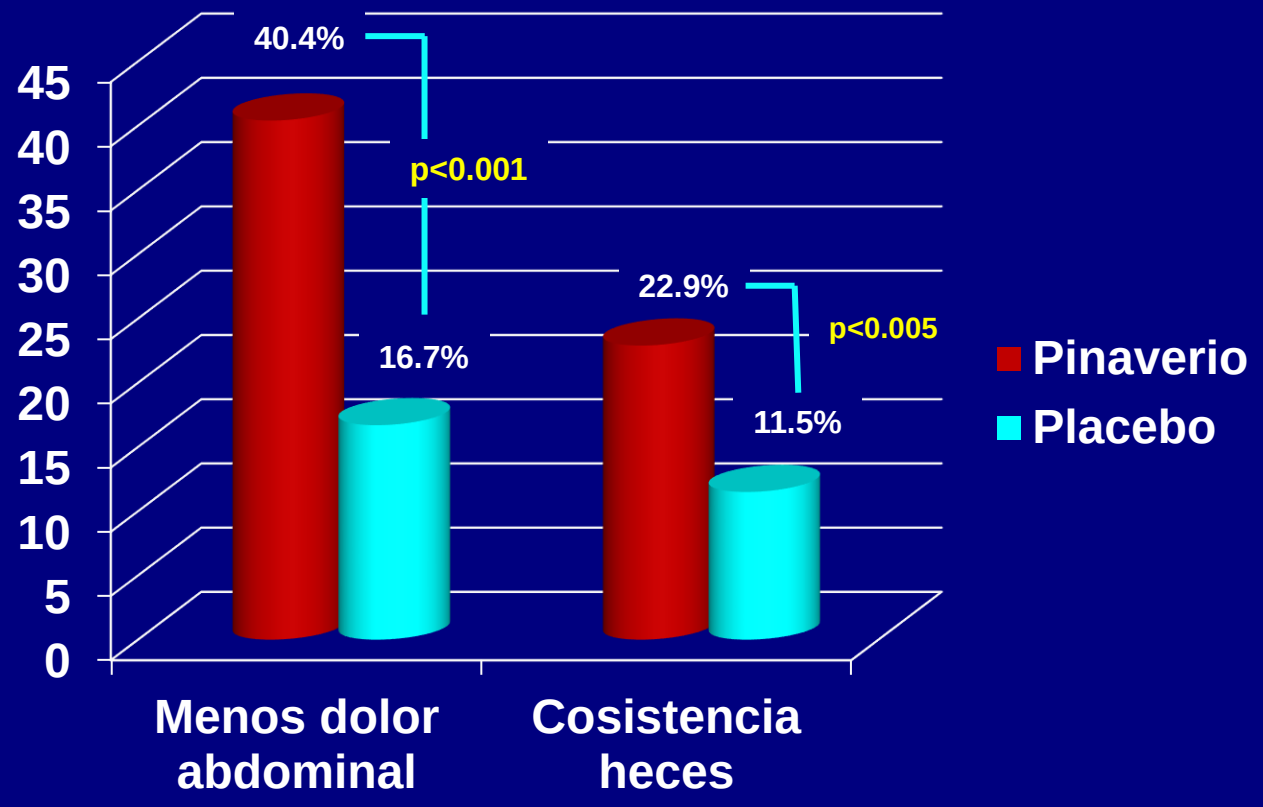


Clavé P, Tack J, Ther Adv Gastroenterol 2017;10:311–322

Pinaverium Reduces Symptoms of Irritable Bowel Syndrome in a Multicenter, Randomized, Controlled Trial

Liang Zheng,* Yaoliang Lai,‡ Weimin Lu,§ Baiwen Li,‖ Heng Fan,¶ Zhixiang Yan,#

Dos semanas

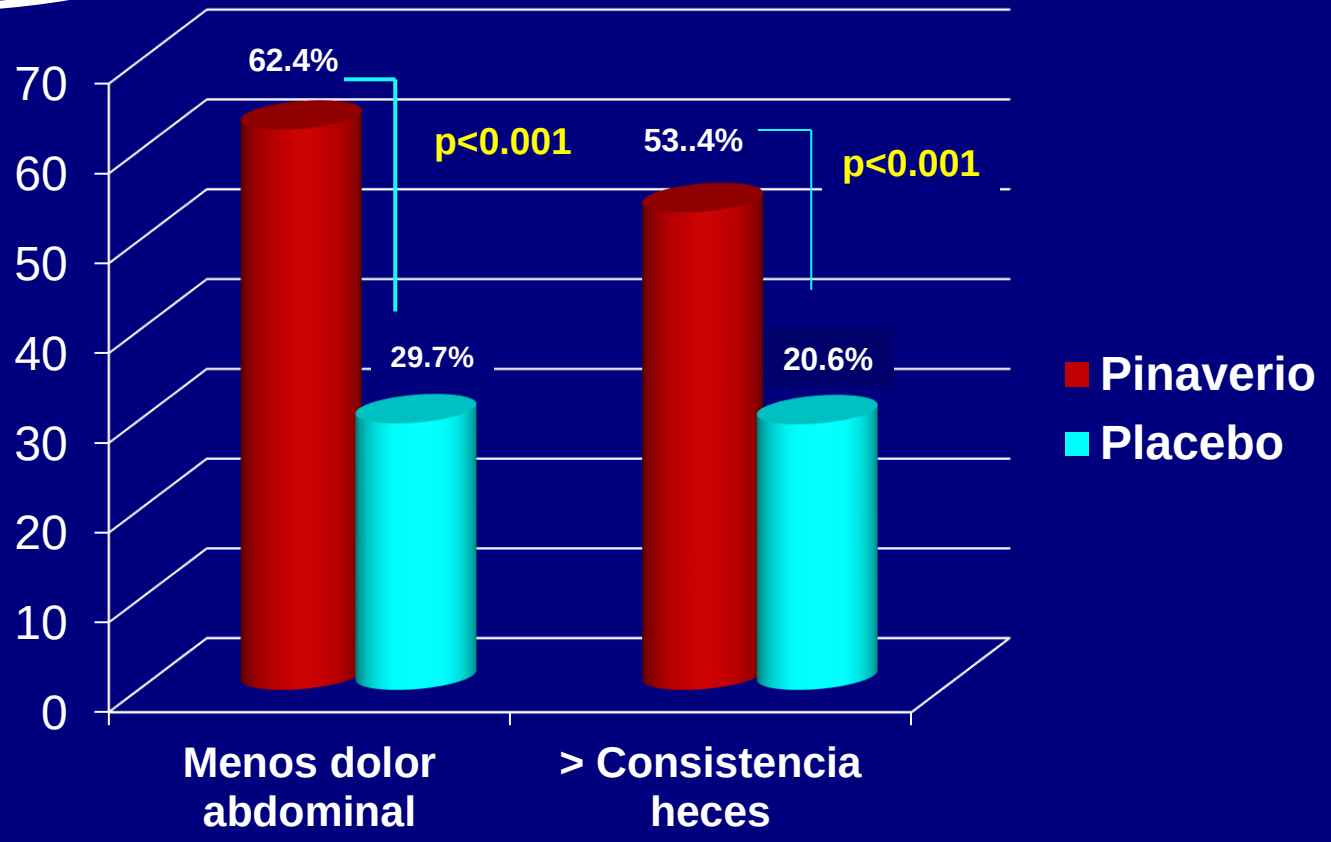


Clin Gastroenterol Hepatol 2015;13:1285–1292

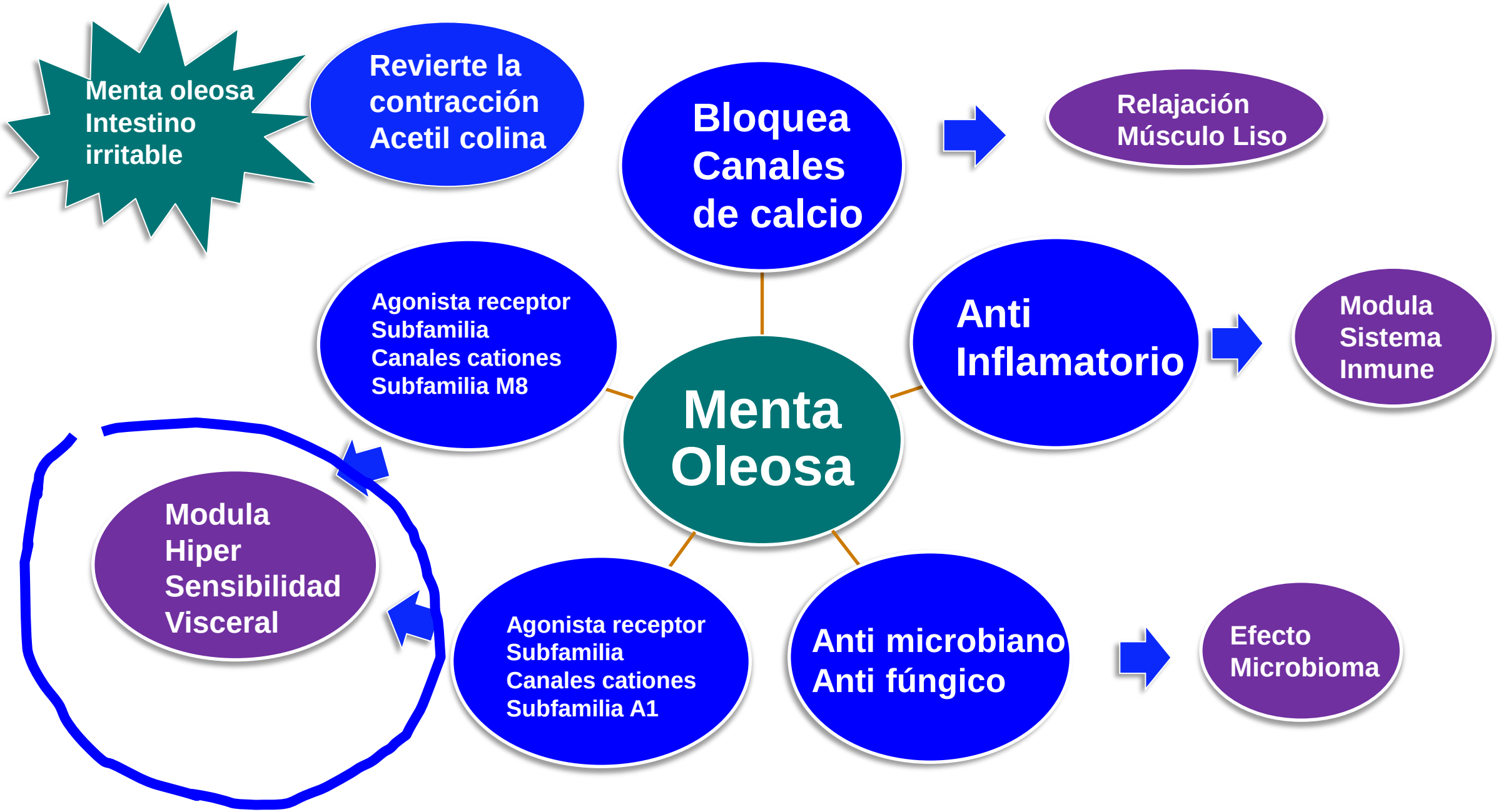
Pinaverium Reduces Symptoms of Irritable Bowel Syndrome in a Multicenter, Randomized, Controlled Trial

Liang Zheng,* Yaoliang Lai,‡ Weimin Lu,§ Baiwen Li,‖ Heng Fan,¶ Zhixiang Yan,#

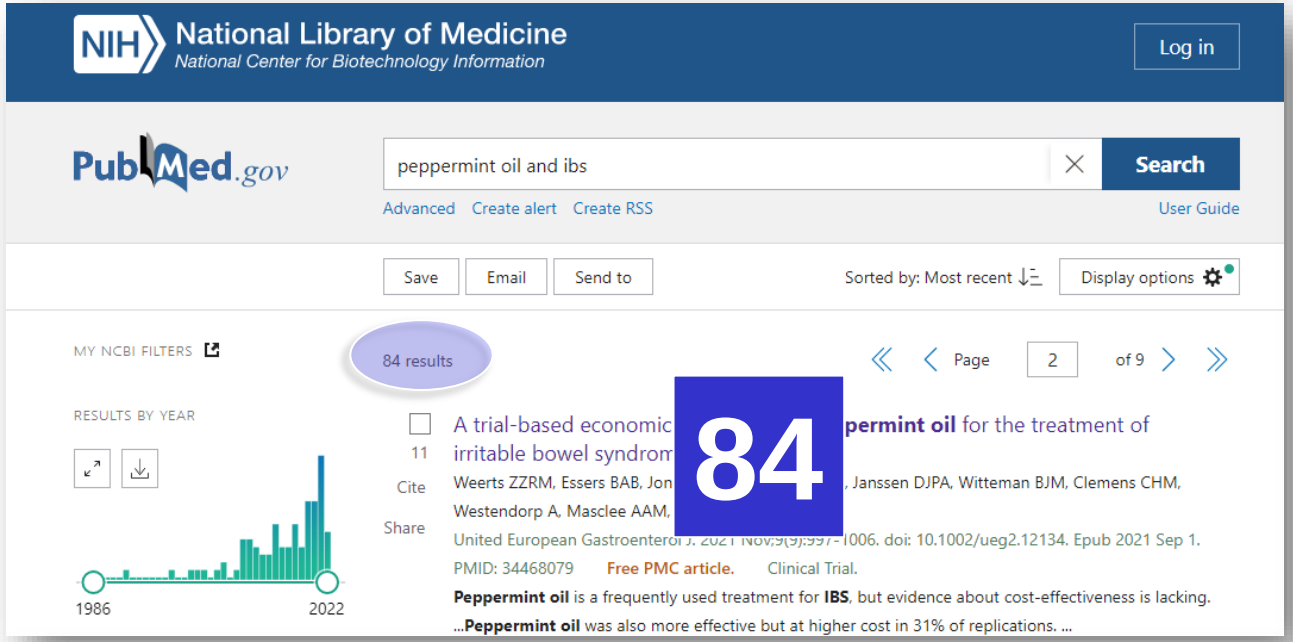
4 semanas

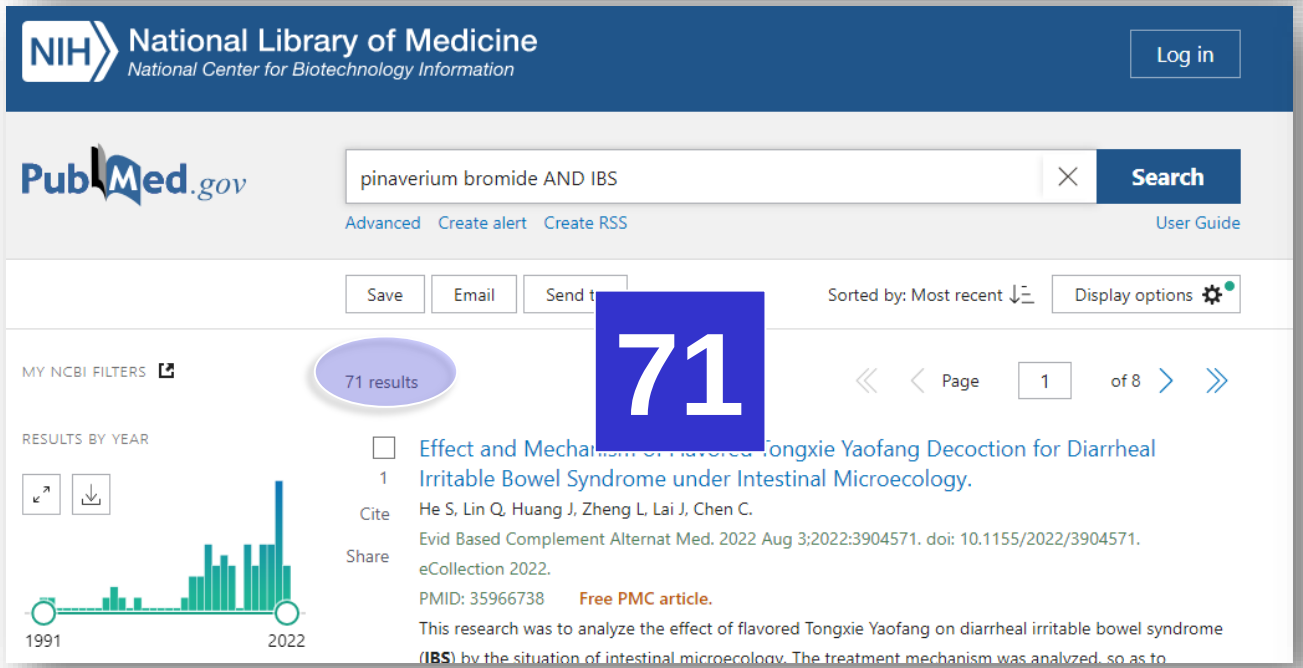


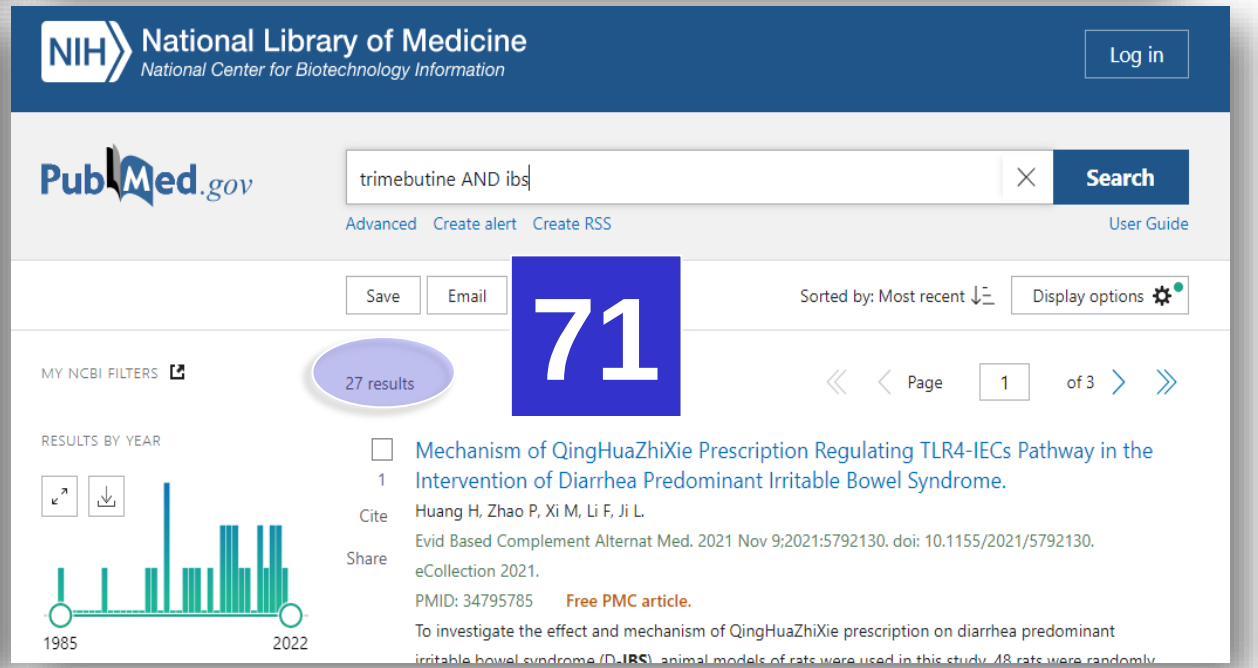
Clin Gastroenterol Hepatol 2015;13:1285–1292



Chumpitazi BP, Aliment Pharmacol Ther. 2018;47:738-52







Septiembre 6, 2022

PubMed.gov

IBS AND peppermint oil

Search

Advanced Create alert Create RSS User Guide

Save Email Send to

ed b t recent Display options

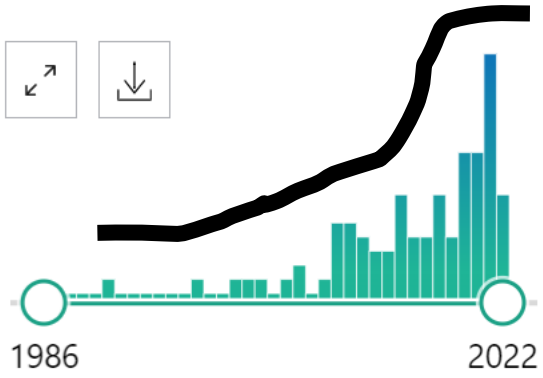
MY NCBI FILTERS

85 results

Sept 11, 2022

Page 1 of 9

RESULTS BY YEAR



TEXT AVAILABILITY

- [ ] Abstract
- [ ] Free full text
- [ ] Full text

1 Cite Share

Herbal Approaches to Pediatric Functic

Cherry RN, Blanchard SS, Chogle A, Santucci NR,

Children (Basel). 2022 Aug 22;9(8):1266. doi: 10.3 081266.

PMID: 36010156 Free PMC article. Revi

AP-FGIDs affect approximately 20% of childre lude funct spepsia (FD), irritable bowel syndrome (**IBS**), functional abdominal **BS** accounts for 45% of pediatric AP-FGIDs. ...In this article, we di

2 Cite Share

Systematic review and meta-a **peppermint oil** in irritable bowel syndrome.

Ingrosso MR, Ianiro G, Nee J, Lembo AJ, Moayyedi P, Black CJ, Ford AC.

Aliment Pharmacol Ther. 2022 Sep;56(6):932-941. doi: 10.1111/apt.17179. Epub 2022 Aug 9.

PMID: 35942669

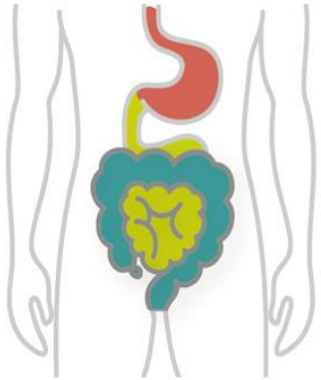
Back to

Efficacy and Safety of Peppermint Oil in a Randomized, Double-Blind Trial of Patients With Irritable Bowel Syndrome

Zsa Zsa R. M. Weerts,[1] Ad A. M. Masclee,[1] Ben J. M. Witteman,[2,3] Cees H. M. Clemens,[4] Bjorn Winkens,[5] Jacobus R. B. J. Brouwers,[6] Henderik W. Frijlink,[7] Jean W. M. Muris,[8] Niek J. De Wit,[9] Brigitte A. B. Essers,[10] Jan Tack,[11] Johanna T. W. Snijkers,[1] Andrea M. H. Bours,[1] Annieke S. de Ruiter-van der Ploeg,[12] Daisy M. A. E. Jonkers,[1] and Daniel Keszthelyi[1]

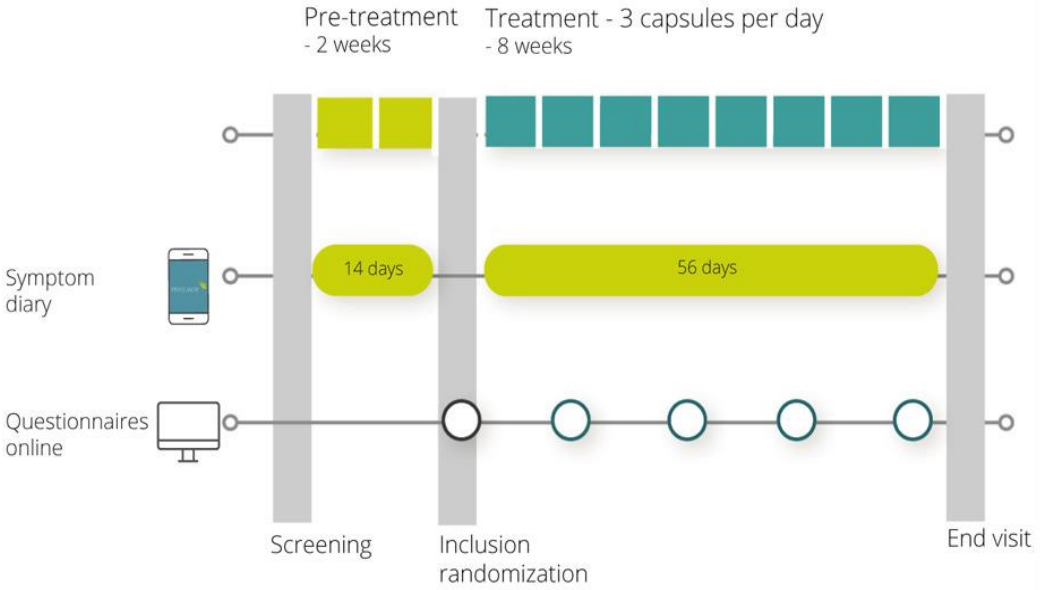
PERSUADE Peppermint oil in irritable bowel syndrome

Concept



- 189 Patients with IBS (Rome IV)
- Mean age 34.0 years
- 77.8% female, 57.7% primary care

Design

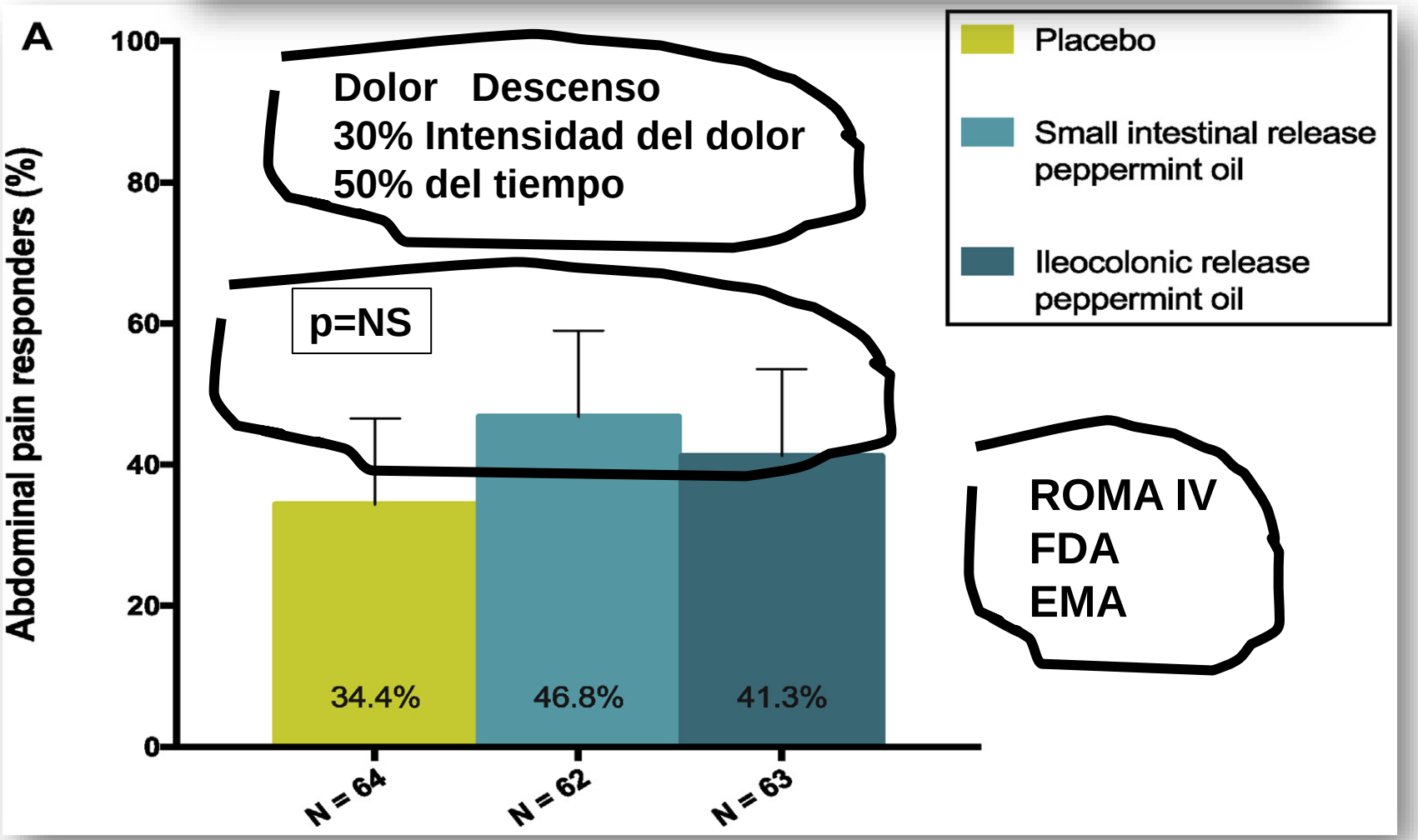


- Primairy outcome: Abdominal Pain Response rate %
- Secondary outcomes, *e.g.*: IBS-symptom severity system (IBS-SSS)

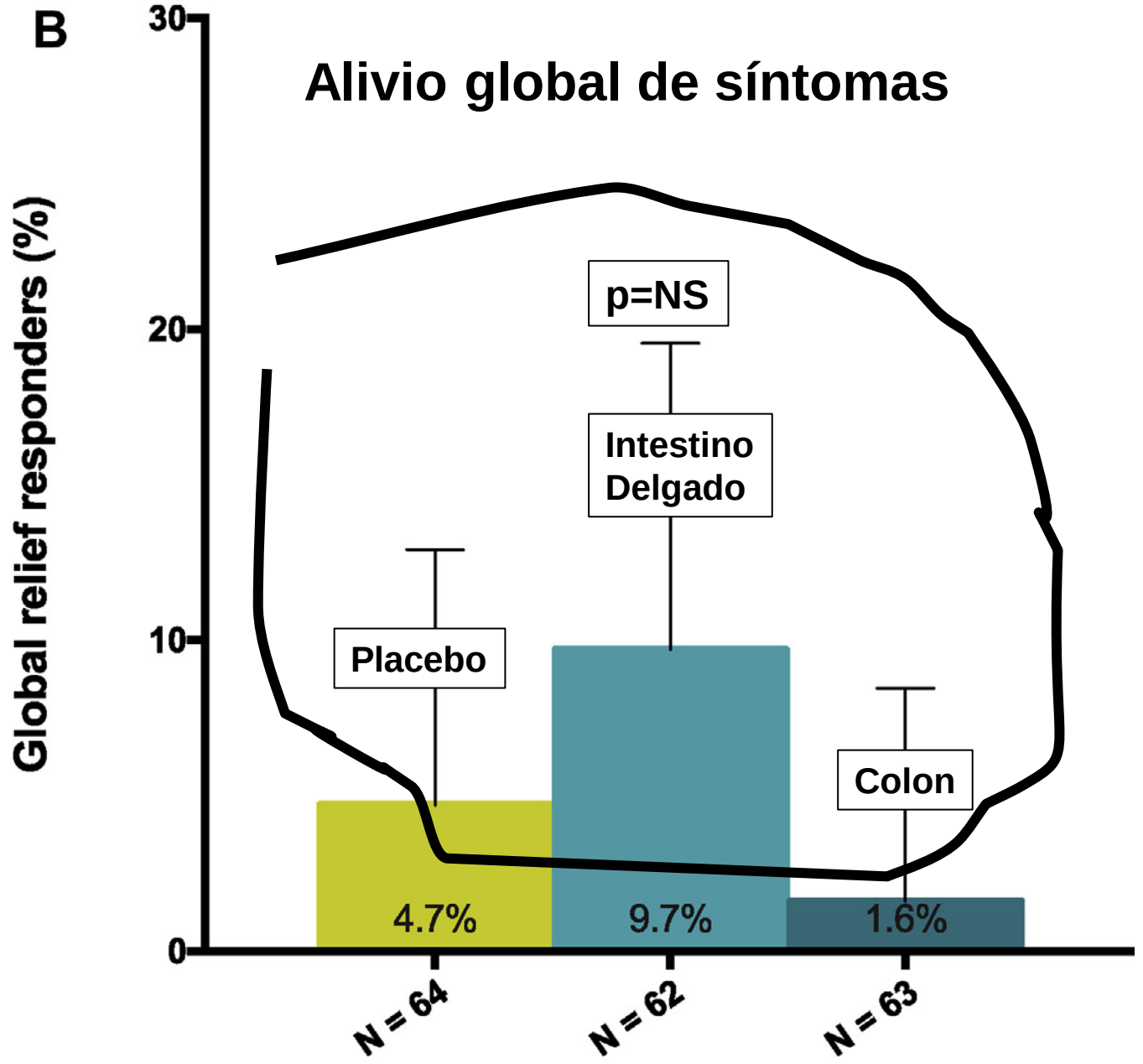
Weets ZZRM, Gastroenterology 2020;158:123-36

Efficacy and Safety of Peppermint Oil in a Randomized, Double-Blind Trial of Patients With Irritable Bowel Syndrome

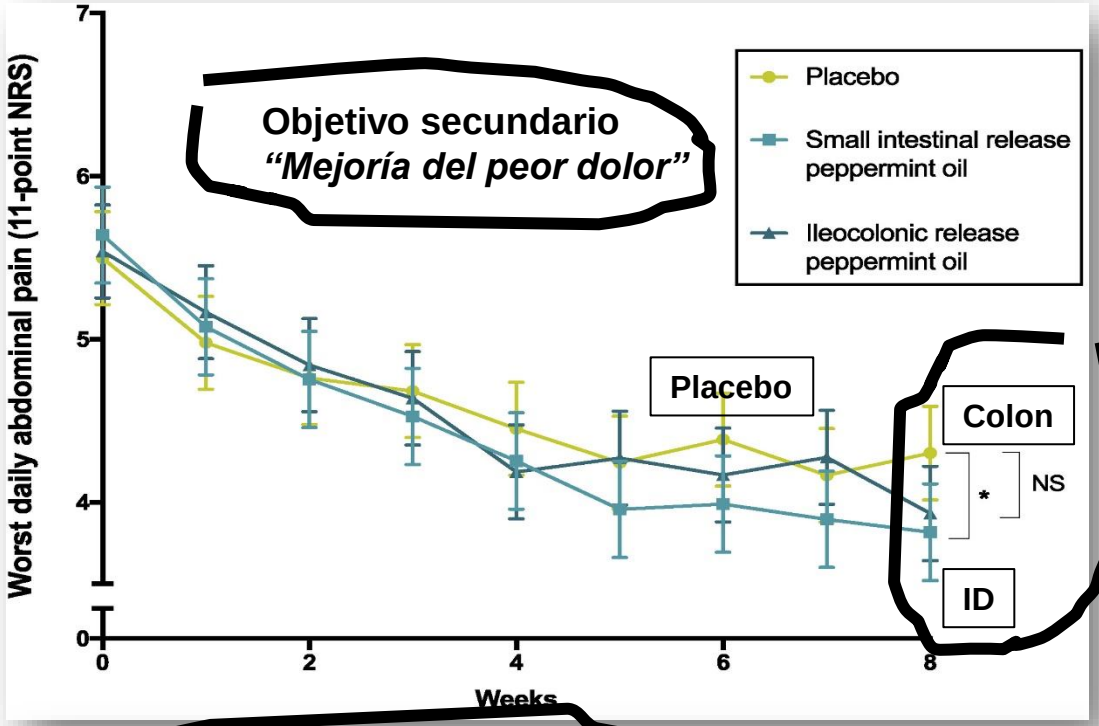
Zsa Zsa R. M. Weerts,[1] Ad A. M. Masclee,[1] Ben J. M. Witteman,[2,3] Cees H. M. Clemens,[4] Bjorn Winkens,[5] Jacobus R. B. J. Brouwers,[6] Henderik W. Frijlink,[7] Jean W. M. Muris,[8] Niek J. De Wit,[9] Brigitte A. B. Essers,[10] Jan Tack,[11] Johanna T. W. Snijkers,[1] Andrea M. H. Bours,[1] Annieke S. de Ruiter-van der Ploeg,[12] Daisy M. A. E. Jonkers,[1] and Daniel Keszthelyi[1]



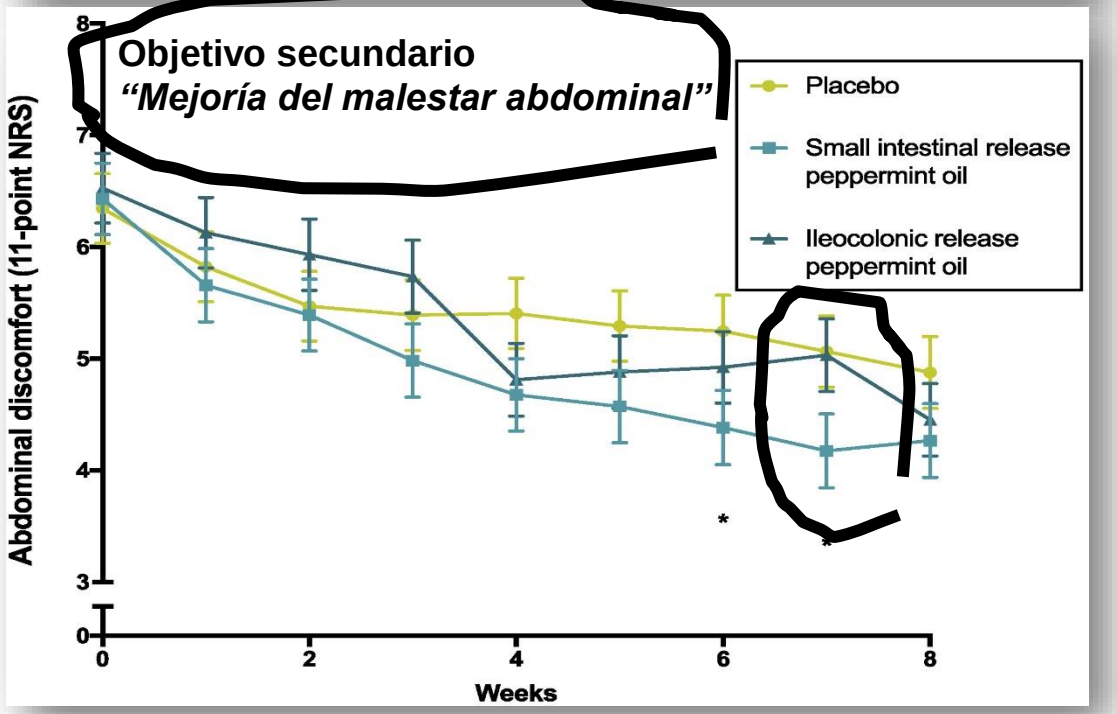
Weets ZZRM, Gastroenterology 2020;158:123-36



Weets ZZRM, Gastroenterology 2020;158:123–136



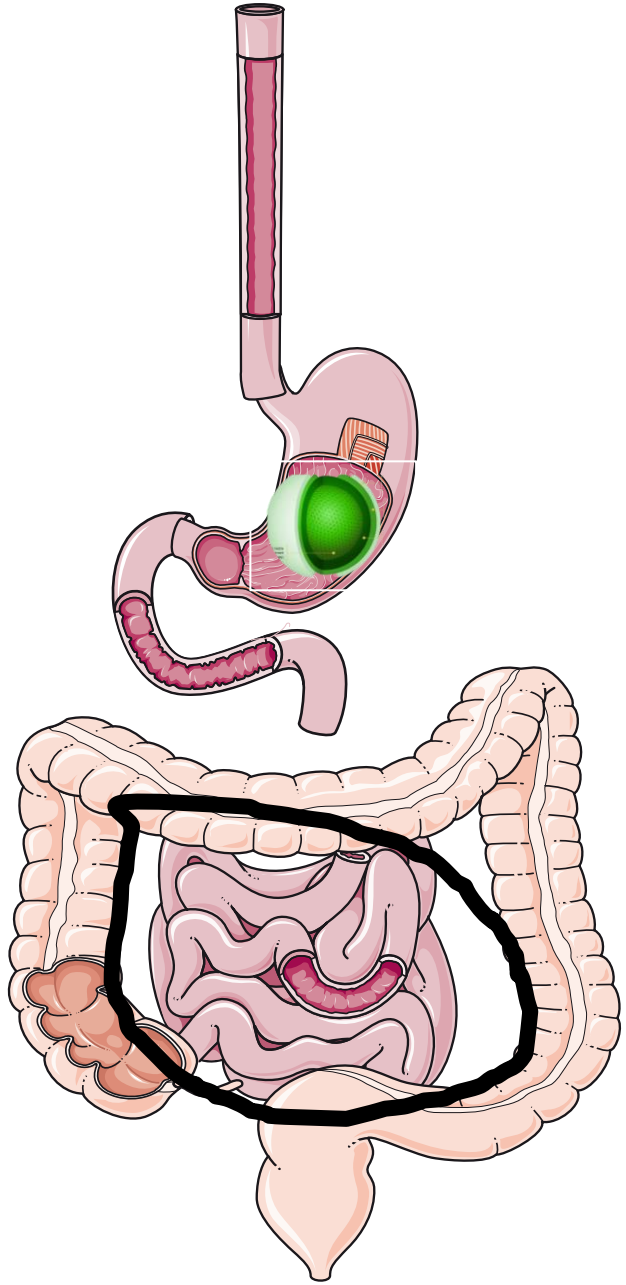
Liberación en Intestino delgado Superior a placebo



Liberación en Colon = placebo

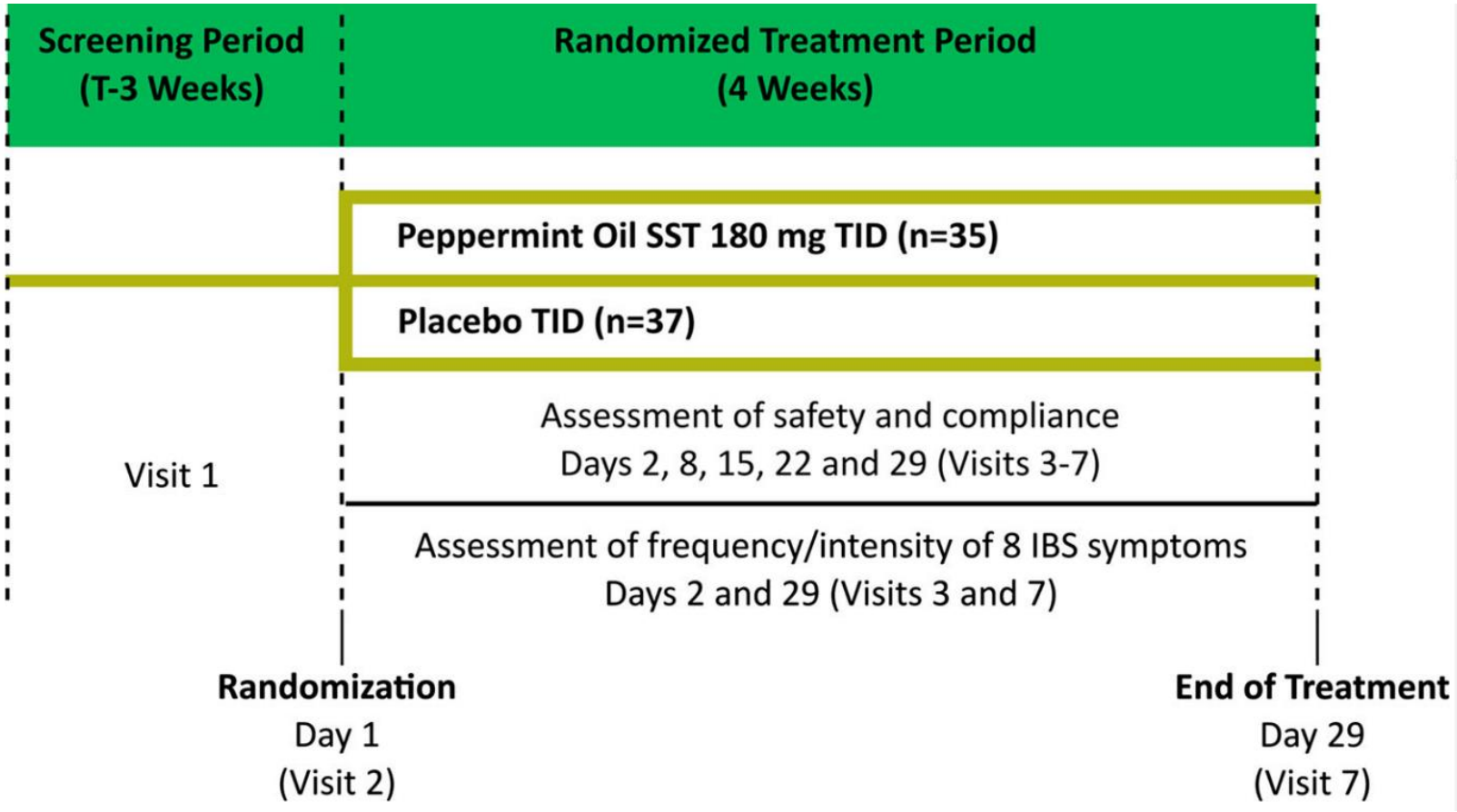
Weerts ZZRM et al
Gastroenterology 2020;158:123–136

Bacterias en el intestino delgado son fundamentales en SII

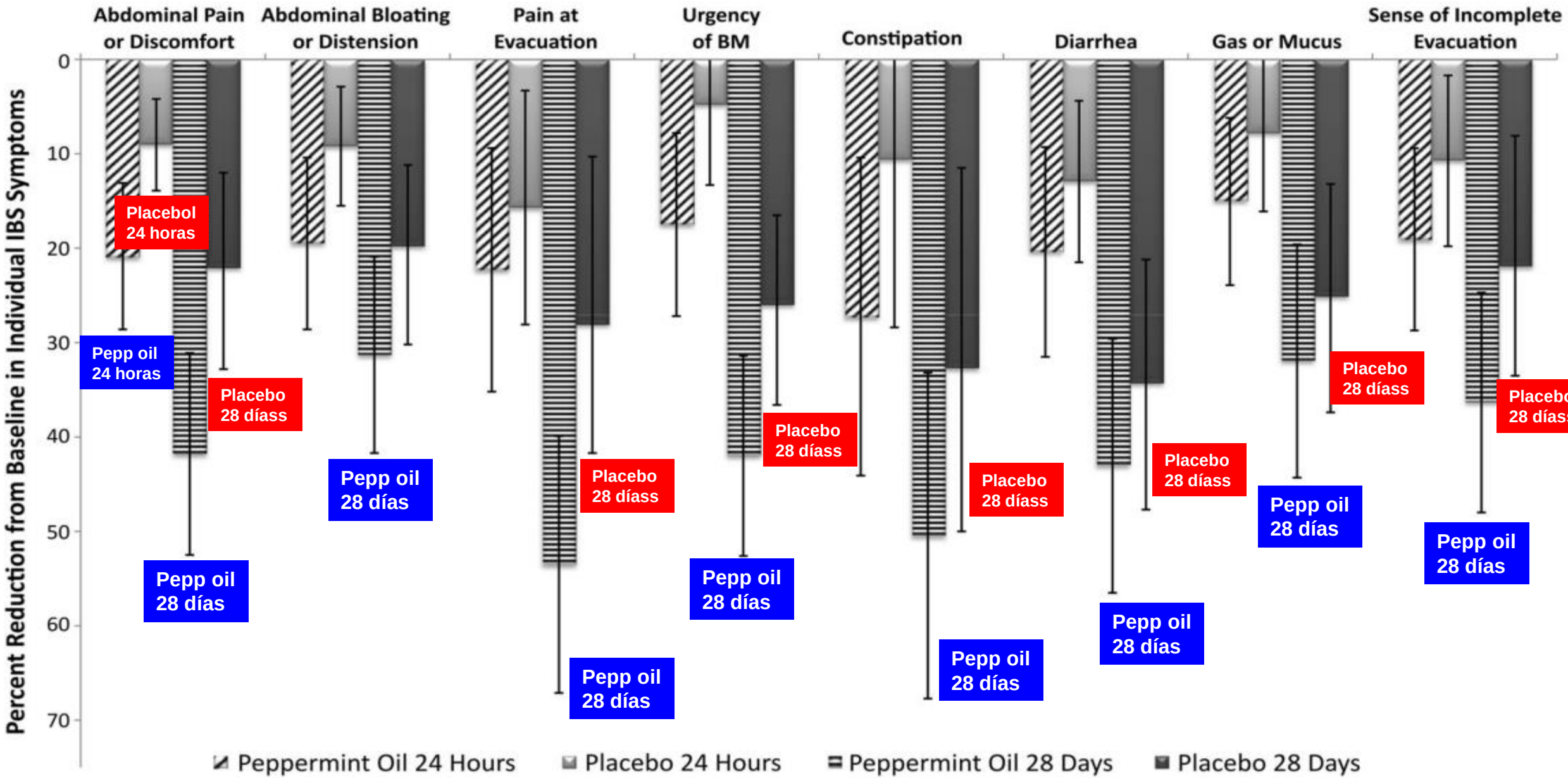


A Novel Delivery System of Peppermint Oil Is an Effective Therapy for Irritable Bowel Syndrome Symptoms

Brooks D. Cash[1] · Michael S. Epstein[2] · Syed M. Shah[3]

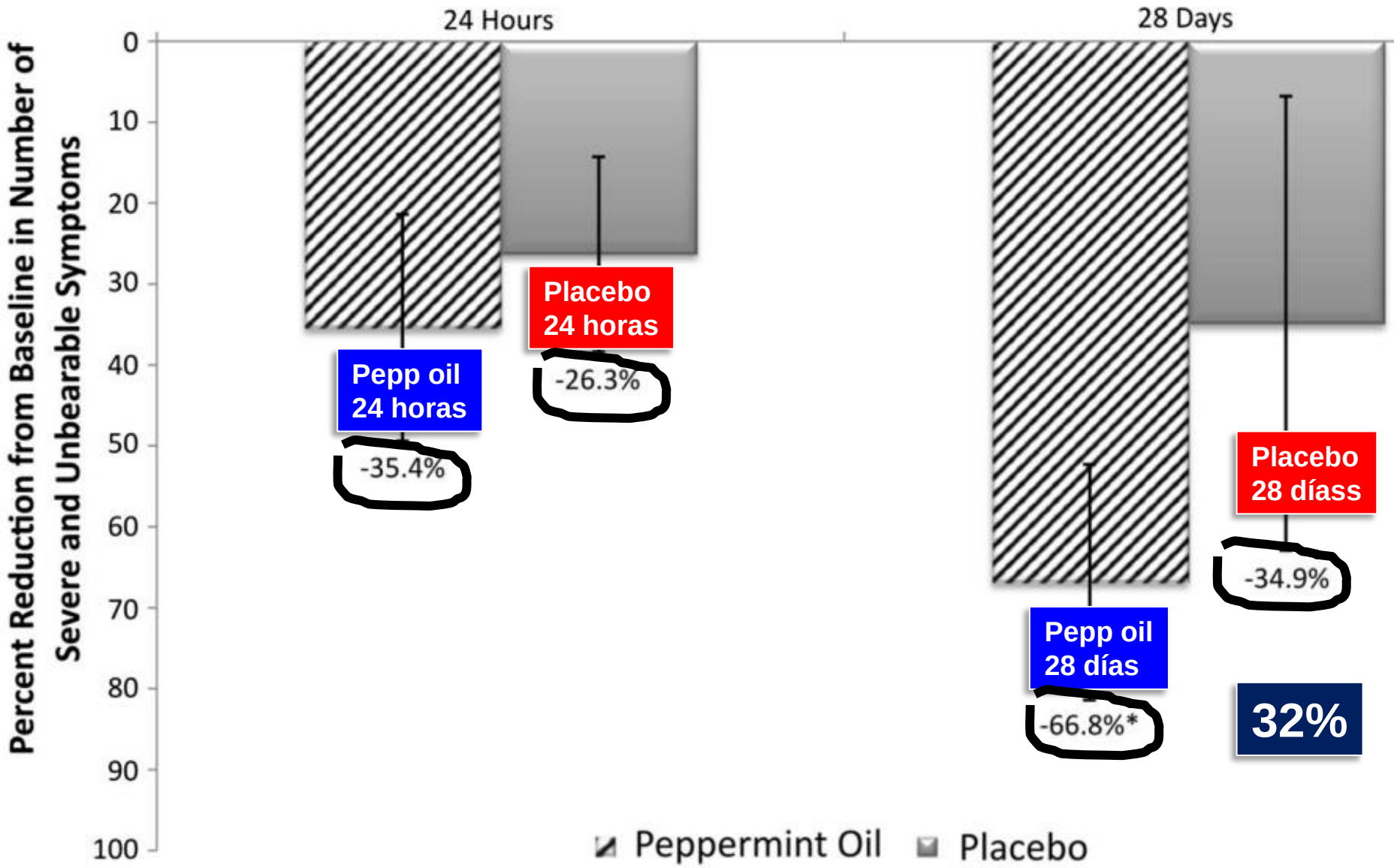


Cash BD, Dig Dis sci 2016;61:560-71



Cash BD, Dig Dis sci 2016;61:560-71

Reducción de síntomas severos inaguantables



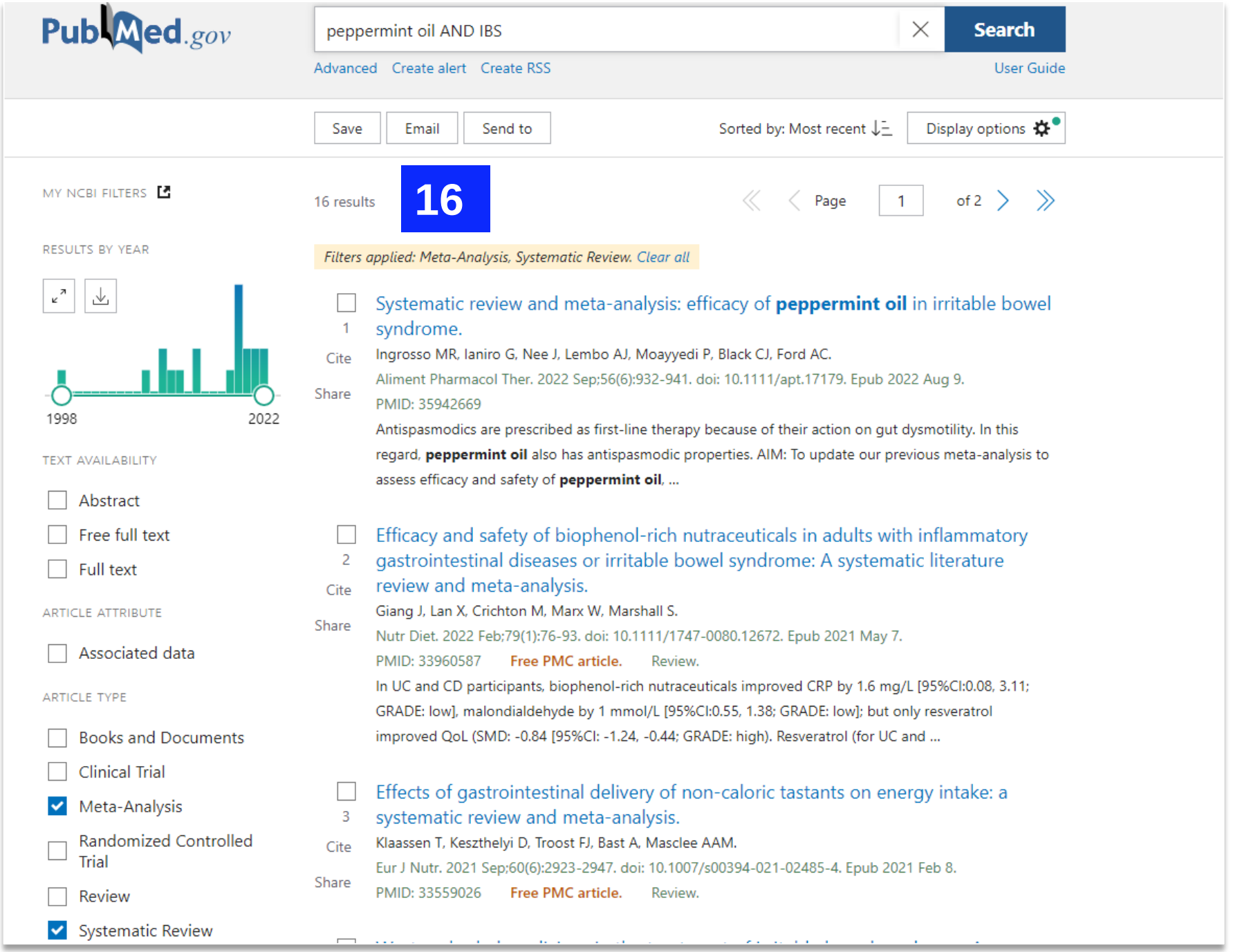
Cash BD, Dig Dis sci 2016;61:560-71

Efectos adversos

	PO ($n = 35$) n (%)	Placebo ($n = 37$) n (%)	All subjects ($n = 72$) n (%)
Total TEAEs	2 (5.7)	4 (10.8)	6 (8.3)
Dyspepsia	1 (2.9)	0	1 (1.4)
Flatulence	0	1 (2.7)	1 (1.4)
Gastroesophageal reflux disease	0	1 (2.7)	1 (1.4)
Gastroenteritis (viral)	0	1 (2.7)	1 (1.4)
Upper respiratory tract infection	1 (2.9)	0	1 (1.4)
Back pain	0	1 (2.7)	1 (1.4)
TEAEs > grade 1	0	1 (2.7)	1 (1.4)
Serious TEAEs and deaths	0	0	0
TEAEs that led to discontinuation	0	0	0

Cash BD, Dig Dis sci 2016;61:560-71

Meta-análisis



Effect of fibre, antispasmodics, and peppermint oil in the treatment of irritable bowel syndrome: systematic review and meta-analysis

Alexander C Ford, clinical fellow,[1] Nicholas J Talley, professor of medicine,[2] Brennan M R Spiegel, assistant professor of medicine,[3] Amy E Foxx-Orenstein, associate professor of medicine,[4] Lawrence Schiller, clinical professor,[5] Eamonn M M Quigley, professor of medicine and human physiology,[6] Paul Moayyedi, professor of gastroenterology[1]

Ford AC,. BMJ. 2008;337:a2313.

Peppermint Oil for the Treatment of Irritable Bowel Syndrome

A Systematic Review and Meta-analysis

Reena Khanna, MD, John K. MacDonald, MA,* and Barrett G. Levesque, MD, MS†*

Khanna R, J Clin Gastroenterol 2014;48:505–512

Alammar *et al. BMC Complementary and Alternative Medicine* (2019) 19:21
https://doi.org/10.1186/s12906-018-2409-0

BMC Complementary and Alternative Medicine

RESEARCH ARTICLE Open Access

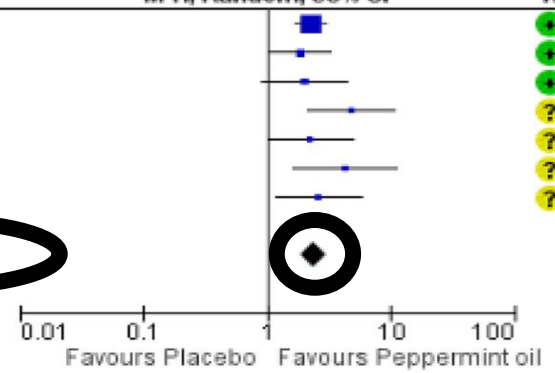
The impact of peppermint oil on the irritable bowel syndrome: a meta-analysis of the pooled clinical data

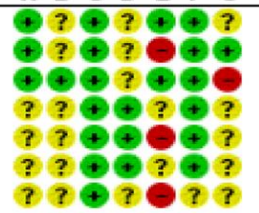
N. Alammar[1,2], L. Wang[3], B. Saberi[4], J. Nanavati[1], G. Holtmann[5], R. T. Shinohara[6] and G. E. Mullin[1*]

A

Study or Subgroup	Peppermint oil Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Capanni. 2005	73	91	31	87	51.5%	2.25 [1.67, 3.04]
Cappello. 2007	18	28	10	29	14.2%	1.86 [1.05, 3.31]
Cash. 2016	13	34	7	37	7.4%	2.02 [0.92, 4.46]
Dew. 1984	24	29	5	29	7.0%	4.80 [2.13, 10.84]
Lech. 1988	13	23	6	24	7.6%	2.26 [1.04, 4.93]
Rees. 1979	17	30	4	30	5.0%	4.25 [1.62, 11.15]
Weiss. 1988	13	18	5	18	7.3%	2.60 [1.17, 5.78]
Total (95% CI)		**253**		**254**	**100.0%**	**2.39 [1.93, 2.97]**
Total events	171		68			

Heterogeneity: Tau² = 0.00; Chi² = 5.46, df = 6 (P = 0.49); I² = 0%
Test for overall effect: Z = 7.93 (P < 0.00001)





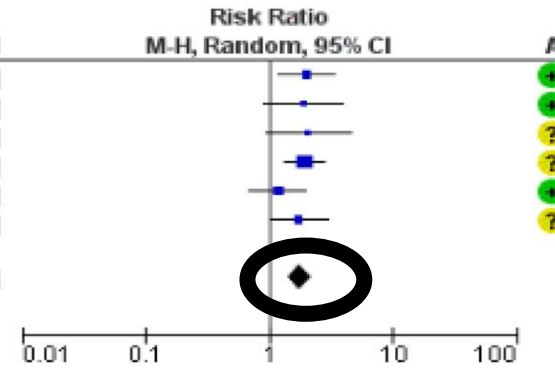
Síntomas Globales

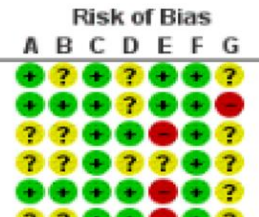
NNT 3

B

Study or Subgroup	Peppermint oil Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Capanni. 2005	34	91	16	87	17.4%	2.03 [1.21, 3.41]
Cash. 2016	14	34	8	37	8.6%	1.90 [0.91, 3.96]
Lech. 1988	12	23	6	24	7.3%	2.09 [0.94, 4.63]
Liu. 1997	41	55	21	55	33.9%	1.95 [1.35, 2.83]
Merat. 2010	19	45	16	45	17.1%	1.19 [0.71, 2.00]
Schneider. 1990	19	30	11	30	15.7%	1.73 [1.00, 2.97]
Total (95% CI)		**278**		**278**	**100.0%**	**1.78 [1.43, 2.20]**
Total events	139		78			

Heterogeneity: Tau² = 0.00; Chi² = 3.01, df = 5 (P = 0.70); I² = 0%
Test for overall effect: Z = 5.23 (P < 0.00001)





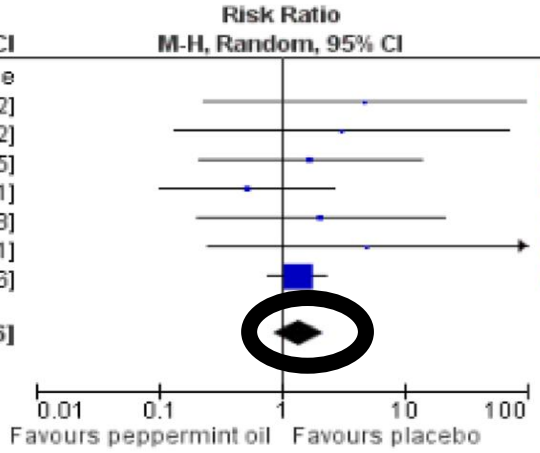
Dolor

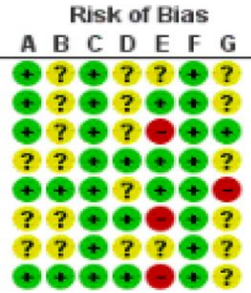
NNT 4

C

Study or Subgroup	Peppermint oil Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Alam. 2013	0	37	0	37		Not estimable
Capanni. 2005	2	91	0	87	2.5%	4.78 [0.23, 98.22]
Cappello. 2007	1	28	0	29	2.3%	3.10 [0.13, 73.12]
Carling. 1988	4	30	1	13	5.2%	1.73 [0.21, 14.05]
Cash. 2016	2	35	4	37	8.6%	0.53 [0.10, 2.71]
Lech. 1988	2	23	1	24	4.2%	2.09 [0.20, 21.48]
Liu. 1997	2	55	0	55	2.5%	5.00 [0.25, 101.81]
Merat. 2010	19	45	14	45	74.7%	1.36 [0.78, 2.36]
Total (95% CI)		**344**		**327**	**100.0%**	**1.40 [0.87, 2.26]**
Total events	32		20			

Heterogeneity: Tau² = 0.00; Chi² = 3.13, df = 6 (P = 0.79); I² = 0%
Test for overall effect: Z = 1.39 (P = 0.16)





Seguridad Igual a placebo

Alammar et al. BMC Compl Alt Med 2019;19:21

AP&T Alimentary Pharmacology & Therapeutics WILEY

Systematic review and meta-analysis: efficacy of peppermint oil in irritable bowel syndrome

Maria Rosa Ingrosso[1,2] | Gianluca Ianiro[1,2] | Judy Nee[3] | Anthony J. Lembo[3] | Paul Moayyedi[4] | Christopher J. Black[5,6] | Alexander C. Ford[5,6]

Ingrosso MR, et al. Aliment Pharmacol Ther. 2022;56:932–941.

AP&T Alimentary Pharmacology & Therapeutics WILEY

Systematic review and meta-analysis: efficacy of peppermint oil in irritable bowel syndrome

Maria Rosa Ingrosso[1,2] | Gianluca Ianiro[1,2] | Judy Nee[3] | Anthony J. Lembo[3] | Paul Moayyedi[4] | Christopher J. Black[5,6] | Alexander C. Ford[5,6]

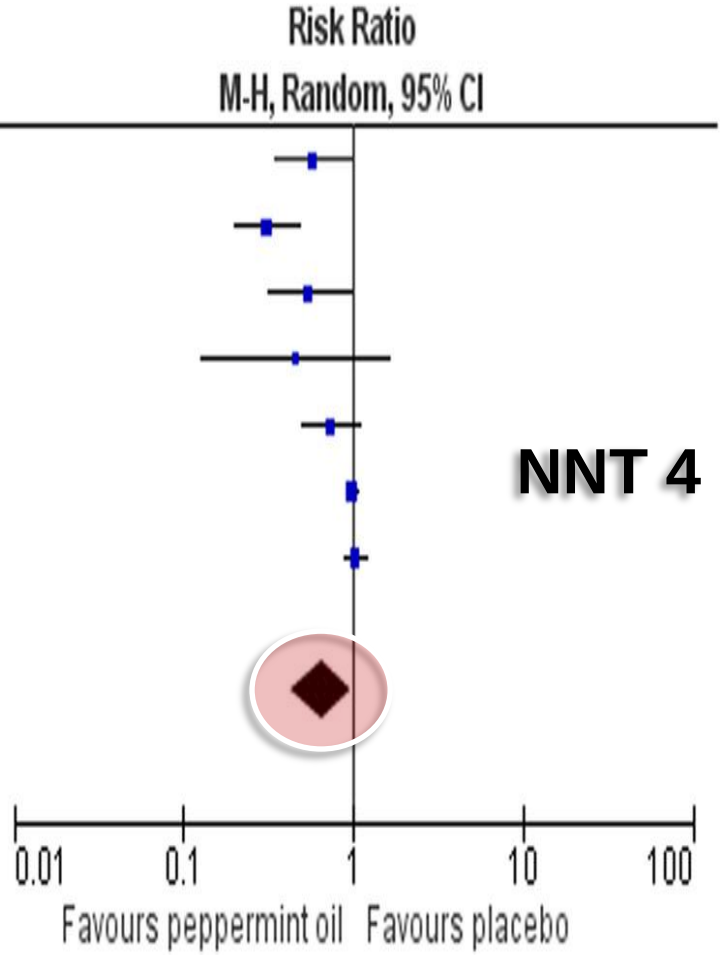
Ingrosso MR, et al. Aliment Pharmacol Ther. 2022;56:932–941.

Menta oleosa Síntomas Globales

Study or Subgroup	Favours peppermint oil Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI	Year
Lech 1988	10	23	18	24	14.0%	0.58 [0.34, 0.98]	1988
Capanni 2005	18	91	56	87	14.9%	0.31 [0.20, 0.48]	2005
Cappello 2007	10	28	19	29	13.5%	0.55 [0.31, 0.96]	2007
Cash 2016	3	35	7	37	6.6%	0.45 [0.13, 1.62]	2016
Mosaffa-Jahromi 2016	19	40	26	40	15.4%	0.73 [0.49, 1.09]	2016
Weerts 2020	118	125	61	64	17.9%	0.99 [0.92, 1.06]	2020
Nee 2021	39	46	72	87	17.6%	1.02 [0.88, 1.20]	2021
Total (95% CI)		**388**		**368**	**100.0%**	**0.65 [0.43, 0.98]**	
Total events	217		259				

Heterogeneity: $Tau^2 = 0.24$; $Chi^2 = 100.32$, $df = 6$ ($P < 0.00001$); $I^2 = 94\%$

Test for overall effect: $Z = 2.06$ ($P = 0.04$)



NNT 4

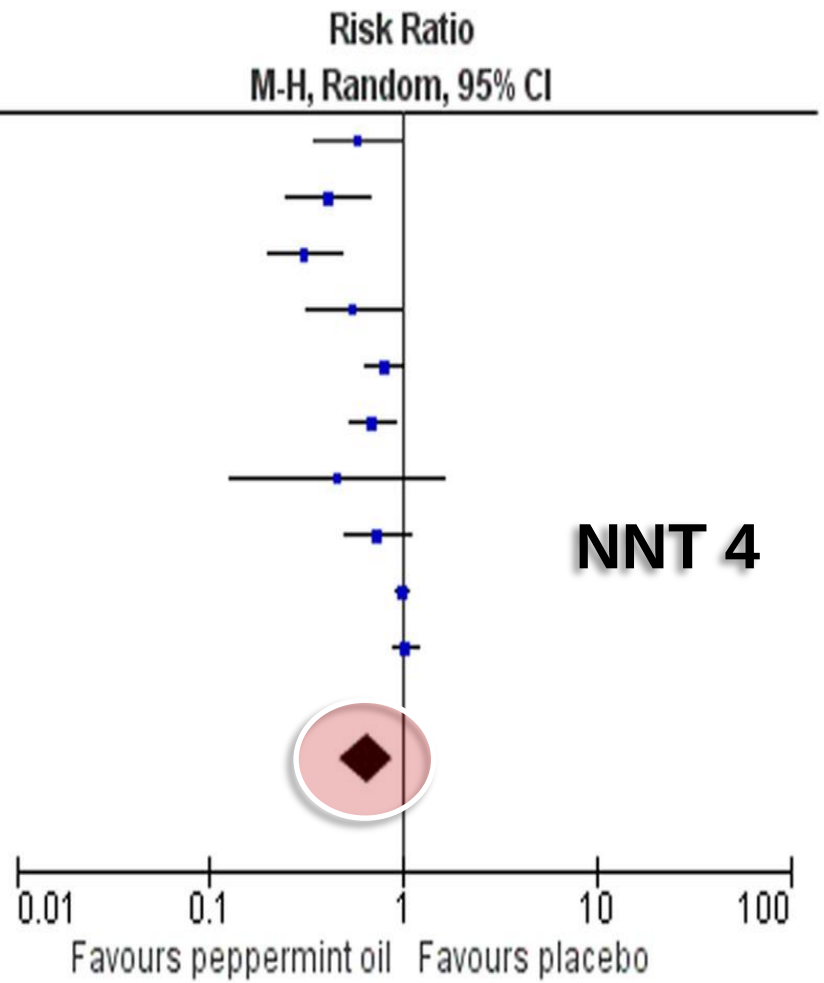
Ingrosso MR, et al. Aliment Pharmacol Ther. 2022;56:932–941.

Menta oleosa Síntomas abdominales o dolor abdominal

Study or Subgroup	Peppermint oil Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI	Year
Lech 1988	10	23	18	24	9.3%	0.58 [0.34, 0.98]	1988
Liu 1997	14	55	34	55	9.5%	0.41 [0.25, 0.68]	1997
Capanni 2005	18	91	56	87	10.0%	0.31 [0.20, 0.48]	2005
Cappello 2007	10	28	19	29	8.9%	0.55 [0.31, 0.96]	2007
Merat 2010	31	45	39	45	11.8%	0.79 [0.63, 1.00]	2010
Alam 2013	23	37	33	37	11.4%	0.70 [0.53, 0.92]	2013
Cash 2016	3	35	7	37	4.1%	0.45 [0.13, 1.62]	2016
Mosaffa-Jahromi 2016	19	40	26	40	10.4%	0.73 [0.49, 1.09]	2016
Weerts 2020	118	125	61	64	12.5%	0.99 [0.92, 1.06]	2020
Nee 2021	39	46	72	87	12.2%	1.02 [0.88, 1.20]	2021
Total (95% CI)		**525**		**505**	**100.0%**	**0.65 [0.47, 0.88]**	
Total events	285		365				

Heterogeneity: $Tau^2 = 0.20$; $Chi^2 = 128.55$, $df = 9$ ($P < 0.00001$); $I^2 = 93\%$

Test for overall effect: $Z = 2.76$ ($P = 0.006$)



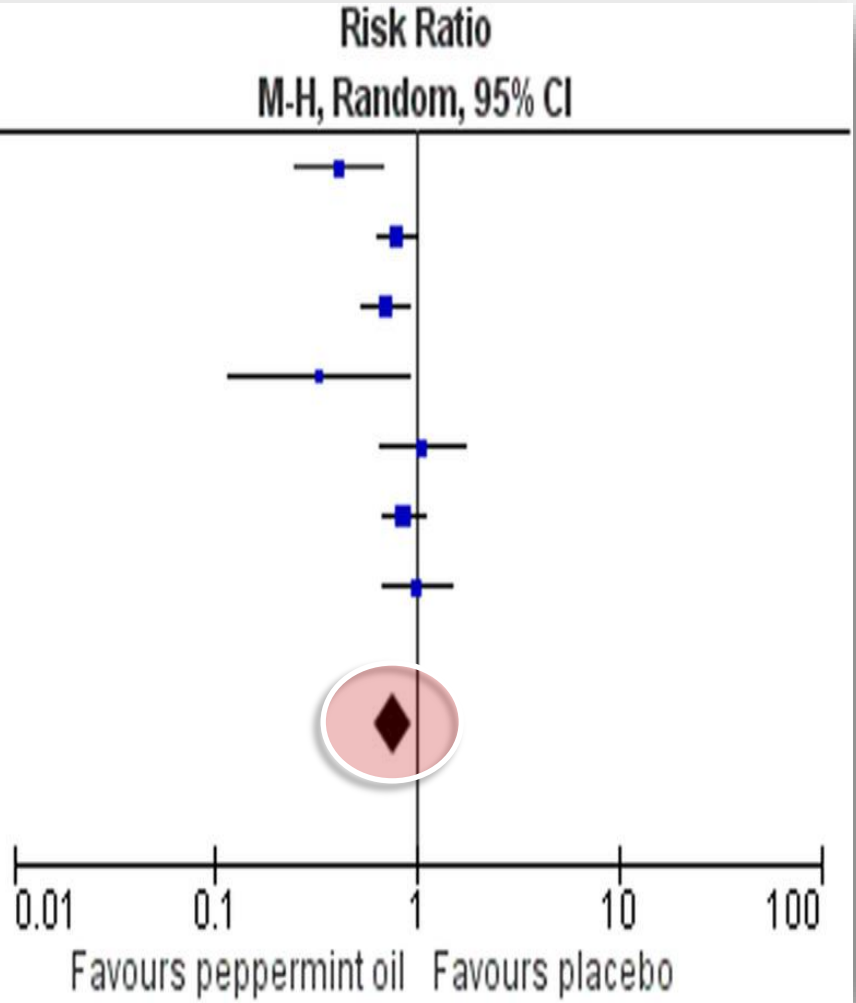
NNT 4

Menta oleosa dolor abdominal

Study or Subgroup	Peppermint oil Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI	Year
Liu 1997	14	55	34	55	10.7%	0.41 [0.25, 0.68]	1997
Merat 2010	31	45	39	45	21.2%	0.79 [0.63, 1.00]	2010
Alam 2013	23	37	33	37	18.9%	0.70 [0.53, 0.92]	2013
Cash 2016	4	35	13	37	3.5%	0.33 [0.12, 0.90]	2016
Mosaffa-Jahromi 2016	18	40	17	40	10.7%	1.06 [0.64, 1.74]	2016
Weerts 2020	70	125	42	64	20.8%	0.85 [0.67, 1.08]	2020
Nee 2021	21	46	40	87	14.1%	0.99 [0.67, 1.47]	2021
Total (95% CI)		**383**		**365**	**100.0%**	**0.76 [0.62, 0.93]**	
Total events	181		218				

Heterogeneity: $Tau^2 = 0.04$; $Chi^2 = 13.58$, df = 6 (P = 0.03); $I^2 = 56\%$

Test for overall effect: Z = 2.67 (P = 0.008)



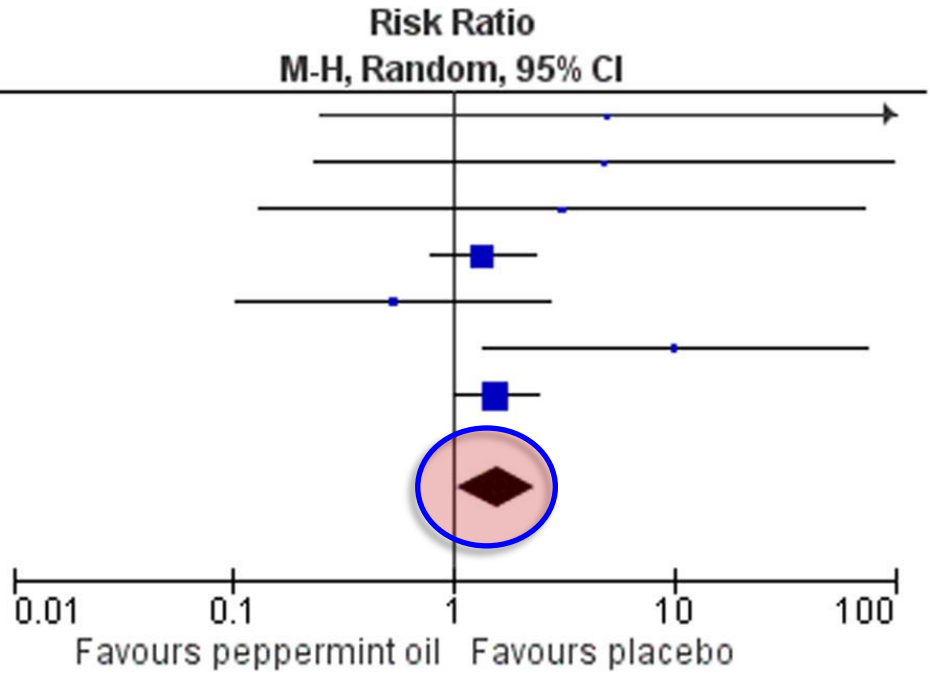
Ingrosso MR, et al. Aliment Pharmacol Ther. 2022;56:932–941.

Menta oleosa efectos adversos

Study or Subgroup	Peppermint oil Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI	Year
Liu 1997	2	55	0	55	1.8%	5.00 [0.25, 101.81]	1997
Capanni 2005	2	91	0	87	1.8%	4.78 [0.23, 98.22]	2005
Cappello 2007	1	28	0	29	1.7%	3.10 [0.13, 73.12]	2007
Merat 2010	19	45	14	45	36.3%	1.36 [0.78, 2.36]	2010
Cash 2016	2	35	4	37	6.0%	0.53 [0.10, 2.71]	2016
Mosaffa-Jahromi 2016	10	40	1	40	4.0%	10.00 [1.34, 74.51]	2016
Nee 2021	22	46	27	87	48.4%	1.54 [1.00, 2.38]	2021
Total (95% CI)		**340**		**380**	**100.0%**	**1.57 [1.04, 2.37]**	
Total events	58		46				

Heterogeneity: Tau² = 0.04; Chi² = 6.86, df = 6 (P = 0.33); I² = 13%

Test for overall effect: Z = 2.15 (P = 0.03)



Reflujo

Menta oleosa NNT 14.5

Placebo NNT 19.4

Ingrosso MR, et al. Aliment Pharmacol Ther. 2022;56:932–941.

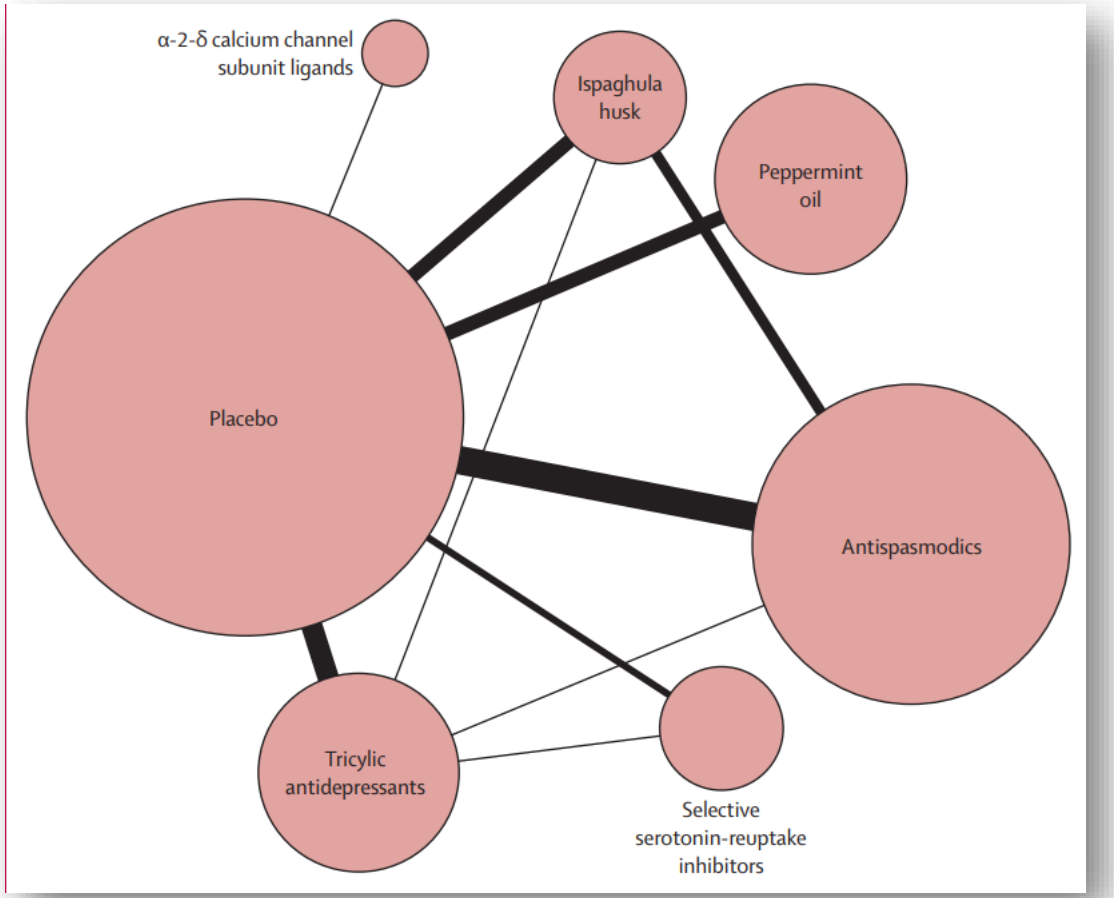
TABLE 1 Efficacy of peppermint oil in irritable bowel syndrome according to trial duration

Endpoint	Trial duration (weeks)	Relative risk (95% confidence interval)	I^2 (%)
Global IBS symptoms or abdominal pain	≤4	0.57 (0.45–0.72)	0
	>4	0.79 (0.61–1.02)	95
Global IBS symptoms	≤4	0.63 (0.48–0.82)	0
	>4	0.81 (0.58–1.11)	96
Abdominal pain	≤4	0.55 (0.26–1.18)	77
	>4	0.81 (0.72–0.92)	0

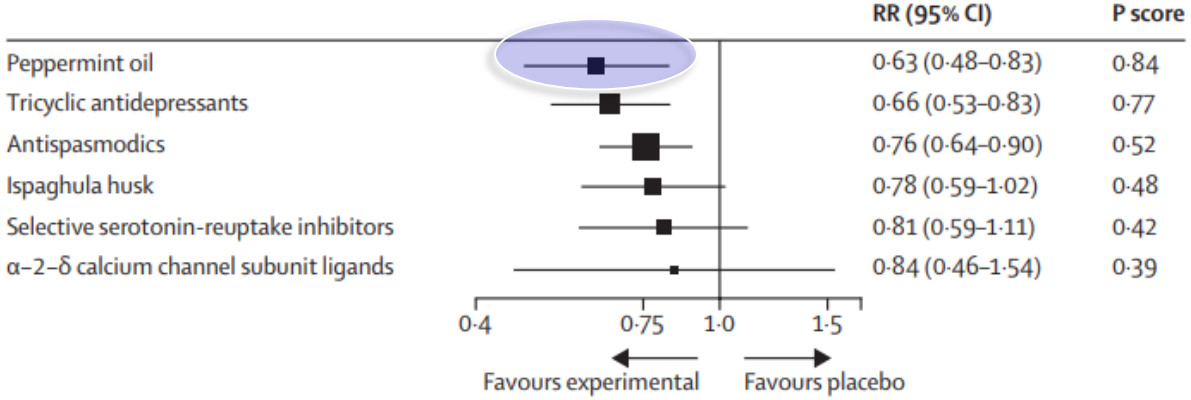
Ingrosso MR, et al. Aliment Pharmacol Ther. 2022;56:1217–1218.

Efficacy of soluble fibre, antispasmodic drugs, and gut–brain neuromodulators in irritable bowel syndrome: a systematic review and network meta-analysis

Christopher J Black, Yuhong Yuan, Christian P Selinger, Michael Camilleri, Eamonn M M Quigley, Paul Moayyedi, Alexander C Ford



A — Falla para Mejoría global 4-12 semanas



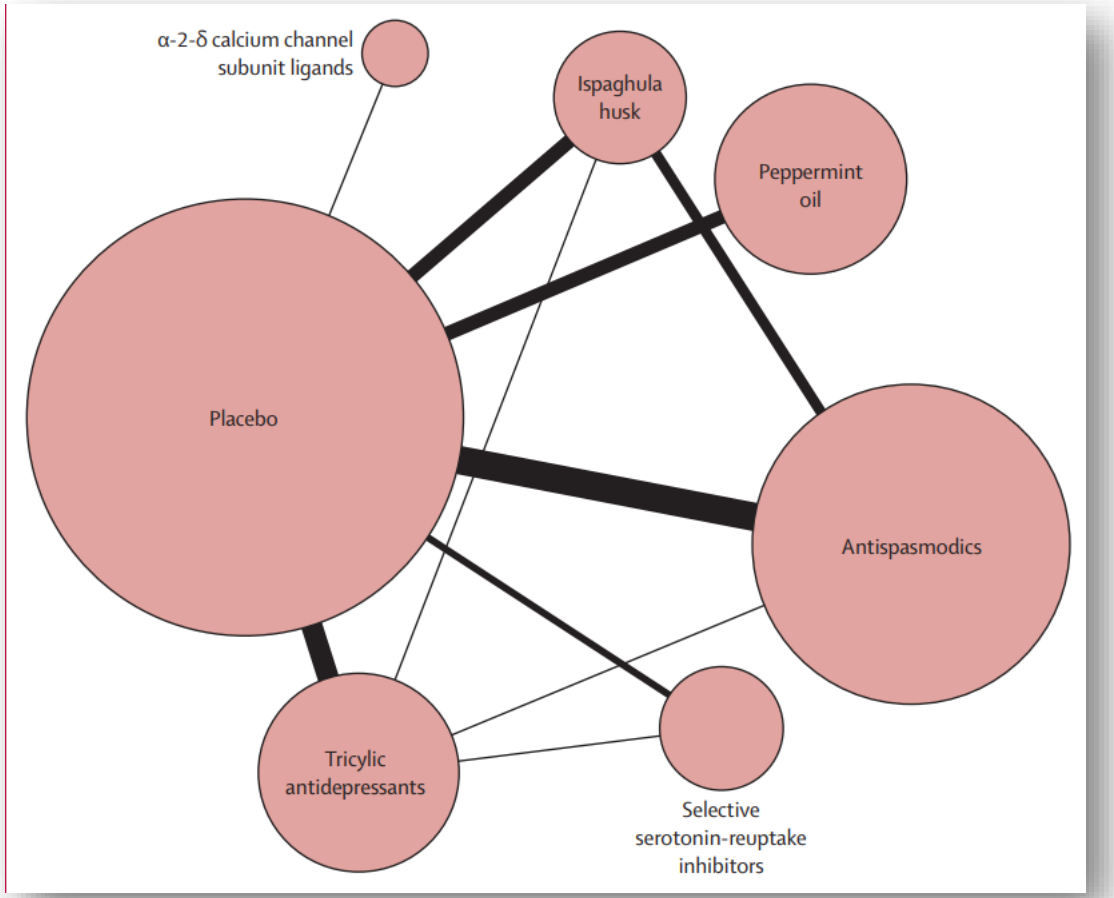
B

Peppermint oil	NA	NA	NA	NA	NA	0·63 (0·48–0·83
0·95 (0·67–1·35)	**Tricyclic anti-depressants**	1·26 (0·63–2·51)	1·07 (0·56–2·06)	0·09 (0·00–1·50)	NA	0·65 (0·51–0·81)
0·83 (0·60–1·15)	0·88 (0·66–1·16)	**Antispas-modics**	0·97 (0·58–1·63)	NA	NA	0·75 (0·63–0·90)
0·81 (0·55–1·19)	0·85 (0·61–1·20)	0·97 (0·71–1·33)	**Ispaghula husk**	NA	NA	0·77 (0·58–1·02)
0·78 (0·51–1·18)	0·82 (0·56–1·21)	0·94 (0·65–1·35)	0·96 (0·63–1·46)	**Selective serotonin-reuptake inhibitors**	NA	0·80 (0·58–1·10)
0·75 (0·39–1·45)	0·79 (0·41–1·50)	0·90 (0·48–1·69)	0·92 (0·48–1·79)	0·96 (0·49–1·90)	**α-2-δ calcium channel sub-unit ligands**	0·84 (0·46–1·54)
0·63 (0·48–0·83)	0·66 (0·53–0·83)	0·76 (0·64–0·90)	0·78 (0·59–1·02)	0·81 (0·59–1·11)	0·84 (0·46–1·54)	**Placebo**

Black CJ, Lancet Gastroenterol Hepatol. 2020;5:117-31

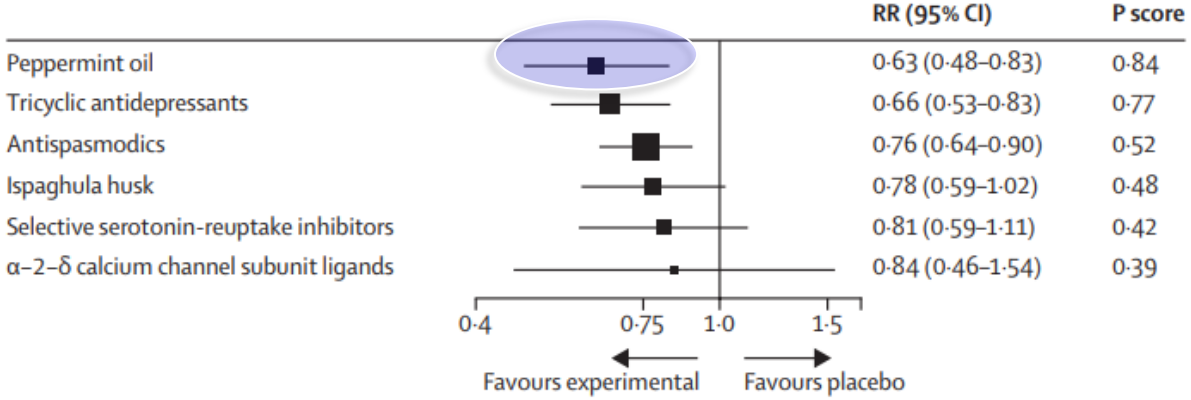
Efficacy of soluble fibre, antispasmodic drugs, and gut–brain neuromodulators in irritable bowel syndrome: a systematic review and network meta-analysis

Christopher J Black, Yuhong Yuan, Christian P Selinger, Michael Camilleri, Eamonn M M Quigley, Paul Moayyedi, Alexander C Ford



Mejoría global 4-12 semanas

A

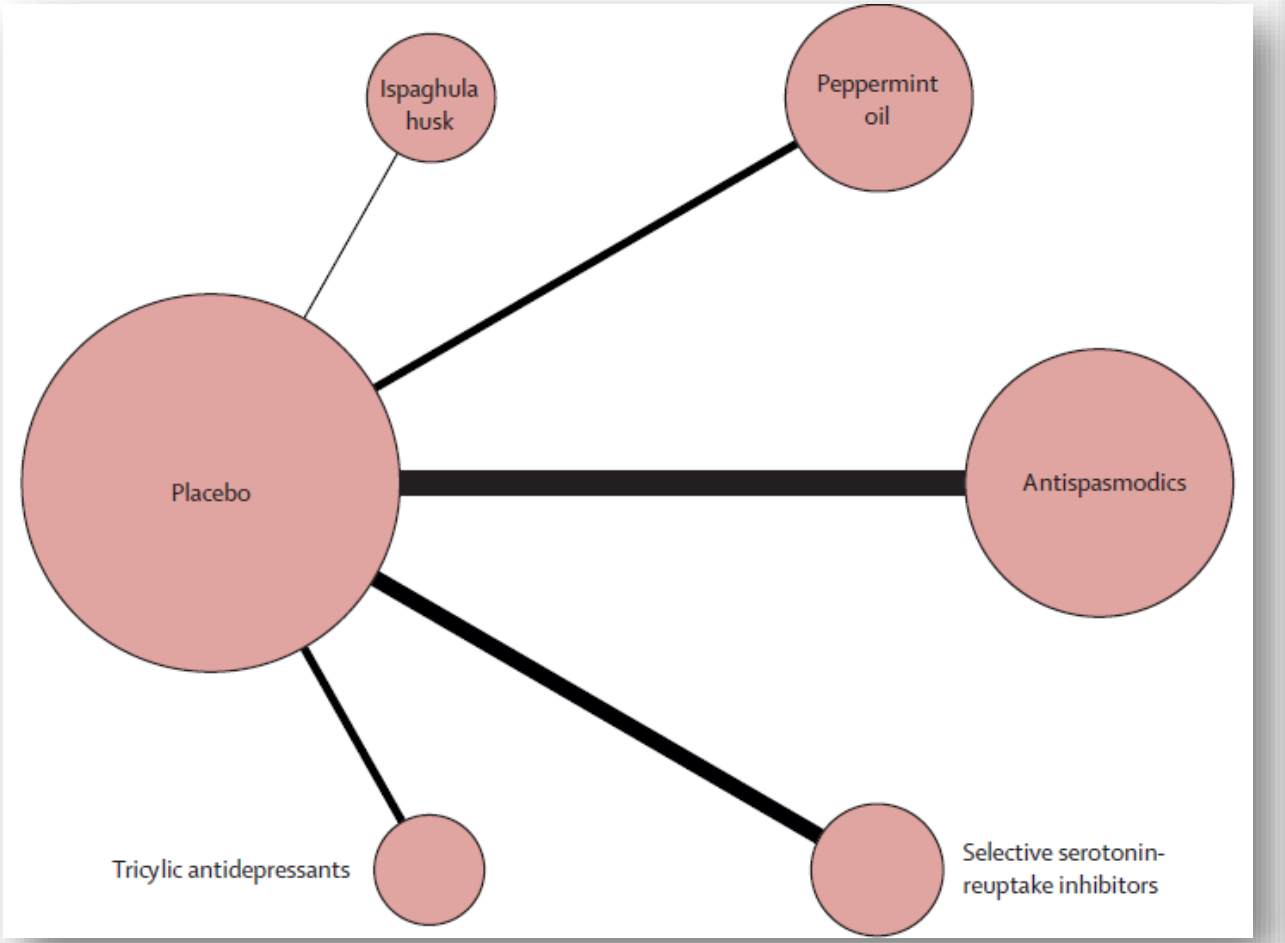


B

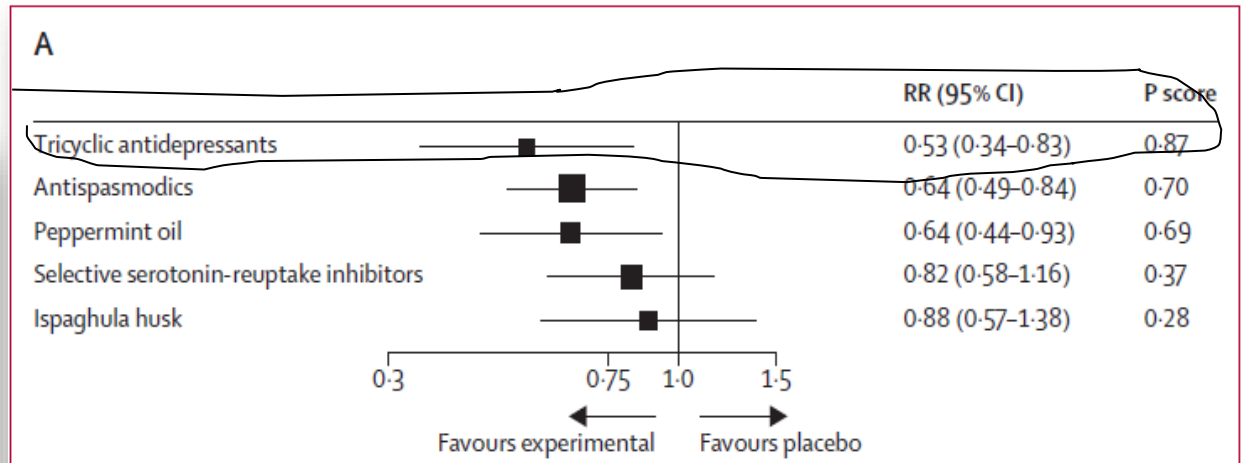
Peppermint oil	NA	NA	NA	NA	NA	0·63 (0·48–0·83
0·95 (0·67–1·35)	**Tricyclic anti-depressants**	1·26 (0·63–2·51)	1·07 (0·56–2·06)	0·09 (0·00–1·50)	NA	0·65 (0·51–0·81)
0·83 (0·60–1·15)	0·88 (0·66–1·16)	**Antispas-modics**	0·97 (0·58–1·63)	NA	NA	0·75 (0·63–0·90)
0·81 (0·55–1·19)	0·85 (0·61–1·20)	0·97 (0·71–1·33)	**Ispaghula husk**	NA	NA	0·77 (0·58–1·02)
0·78 (0·51–1·18)	0·82 (0·56–1·21)	0·94 (0·65–1·35)	0·96 (0·63–1·46)	**Selective serotonin-reuptake inhibitors**	NA	0·80 (0·58–1·10)
0·75 (0·39–1·45)	0·79 (0·41–1·50)	0·90 (0·48–1·69)	0·92 (0·48–1·79)	0·96 (0·49–1·90)	**α-2-δ calcium channel sub-unit ligands**	0·84 (0·46–1·54)
0·63 (0·48–0·83)	0·66 (0·53–0·83)	0·76 (0·64–0·90)	0·78 (0·59–1·02)	0·81 (0·59–1·11)	0·84 (0·46–1·54)	**Placebo**

Black CJ, Lancet Gastroenterol Hepatol. 2020;5:117-31

SII- dolor



A

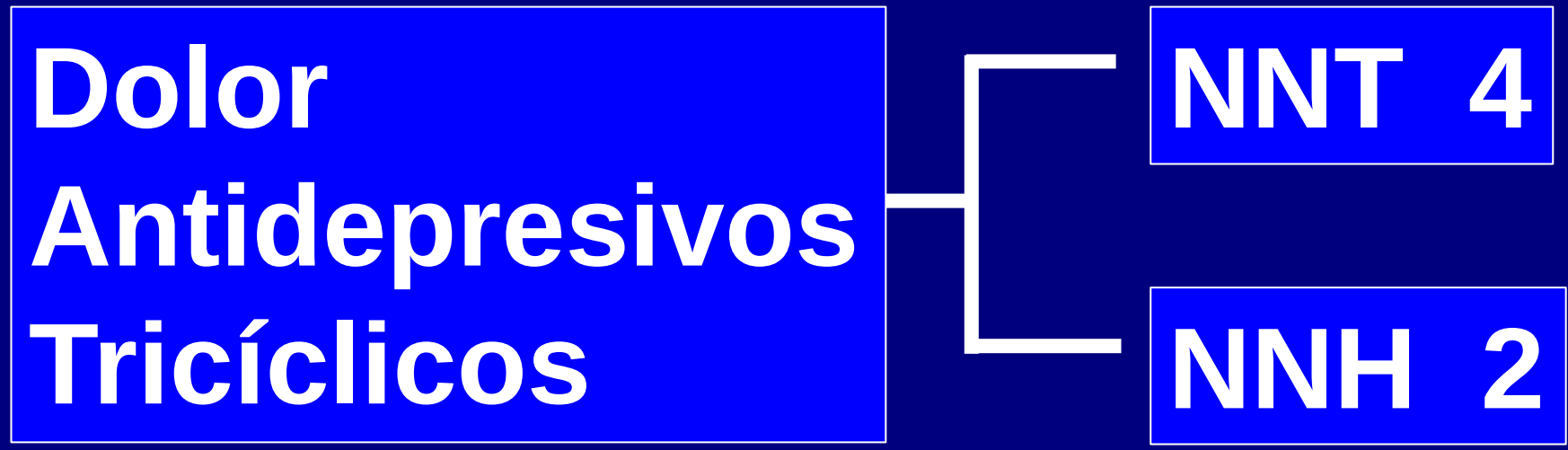


B

Tricyclic anti-depressants				
0·83 (0·49–1·39)	Antispasmodics			
0·83 (0·47–1·49)	1·01 (0·63–1·59)	Peppermint oil		
0·65 (0·37–1·14)	0·78 (0·51–1·21)	0·78 (0·47–1·30)	Selective serotonin-reuptake inhibitors	
0·60 (0·32–1·13)	0·73 (0·43–1·22)	0·72 (0·41–1·30)	0·93 (0·53–1·64)	Ispaghula husk
0·53 (0·34–0·83)	0·64 (0·49–0·84)	0·64 (0·44–0·93)	0·82 (0·58–1·16)	0·88 (0·57–1·38)

Black CJ, Lancet Gastroenterol Hepatol. 2020;5:117-31

In summary, the results of this systematic review and network meta-analysis show that peppermint oil, TCAs, and antispasmodic drugs are more efficacious than placebo for improving both global IBS symptoms and abdominal pain in patients with IBS. Based on data from all RCTs included in our analysis, peppermint oil was ranked first for improving global IBS symptoms and TCAs were ranked first for improving abdominal pain. After restricting the analysis to RCTs done in western countries only, TCAs were ranked second to peppermint oil for improving abdominal pain. Out of all therapies analysed, only TCAs were significantly more likely to cause adverse events than placebo, a

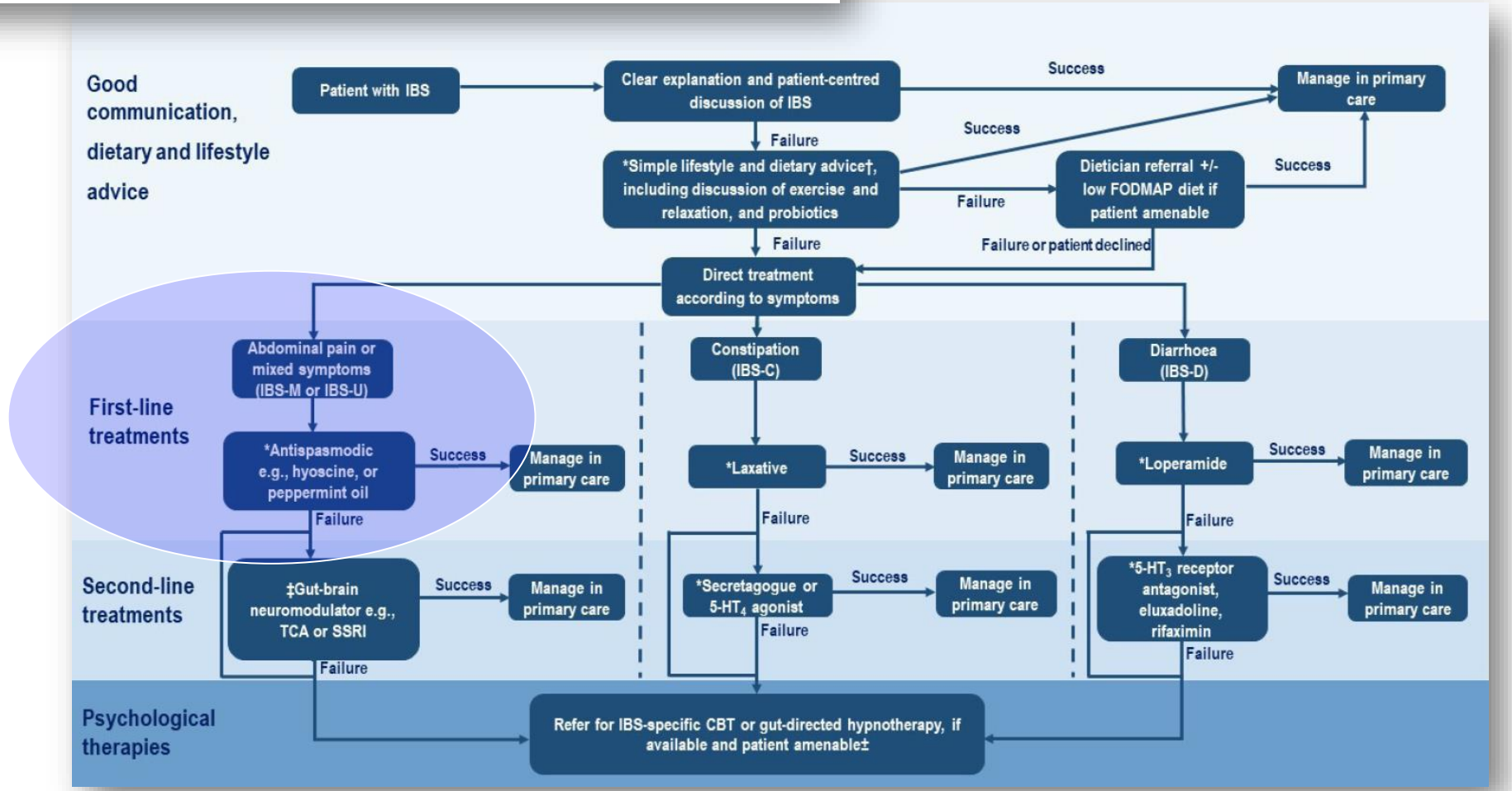


Stone J, BMJ 2002;325:1449-50

British Society of Gastroenterology guidelines on the management of irritable bowel syndrome

Dipesh H Vasant ,[1,2] Peter A Paine,[3] Christopher J Black ,[4] Lesley A Houghton ,[5,6] Hazel A Everitt,[7] Maura Corsetti,[8] Anurag Agrawal,[9] Imran Aziz ,[10] Adam D Farmer,[11,12] Maria P Eugenicos,[13] Rona Moss-Morris,[14] Yan Yiannakou,[15] Alexander C Ford [16]

Vasant DH, Gut 2021;70:1214-1240



CLINICAL GUIDELINES

ACG Clinical Guideline: Management of Irritable Bowel Syndrome

Brian E. Lacy, PhD, MD, FACG[1], Mark Pimentel, MD, FACG[2], Darren M. Brenner, MD, FACG[3], William D. Chey, MD, FACG[4], Laurie A. Keefer, PhD[5], Millie D. Long, MDMPH, FACG[6] and Baha Moshiree, MD, MSc, FACG[7]

Recommendation

We suggest the use of peppermint to provide relief of global IBS symptoms.

Conditional recommendation; low quality of evidence.

Lacy BE, Am J Gastroenterol. 2021;116:17-44.

Original Article

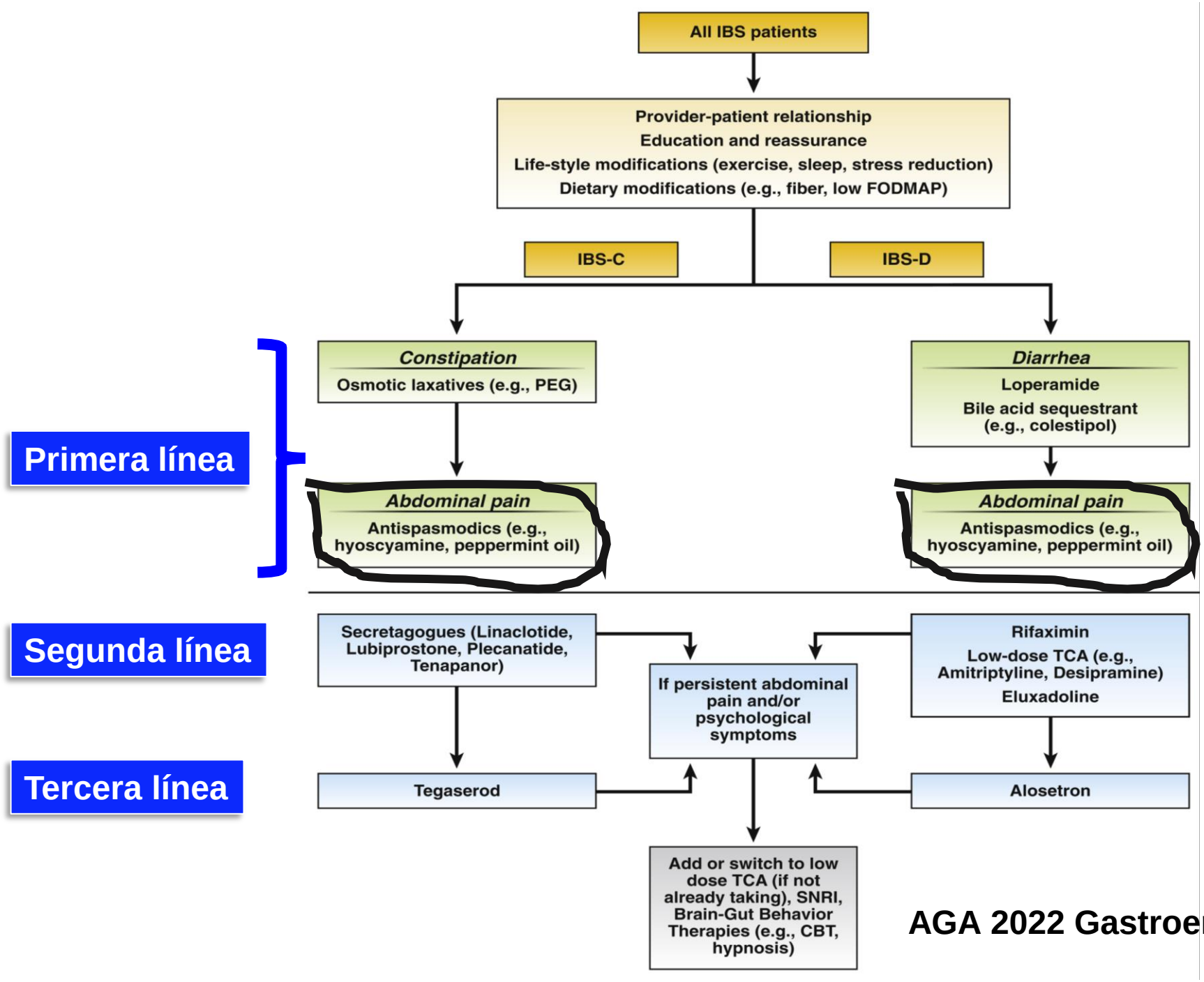
Canadian Association of Gastroenterology Clinical Practice Guideline for the Management of Irritable Bowel Syndrome (IBS)

Paul Moayyedi MD[1], Christopher N. Andrews MD[2], Glenda MacQueen MD[3], Christina Korownyk MD[4], Megan Marsiglio MD[5], Lesley Graff MD[6], Brent Kvern MD[7], Adriana Lazarescu MD[8], Louis Liu MD[9], William G. Paterson MD[10], Sacha Sidani MD[1], Stephen Vanner MD[10]

Statement 16: We suggest offering IBS patients peppermint oil to improve IBS symptoms.

GRADE: Conditional recommendation, low-quality evidence. Vote: strongly agree, 17%; agree, 83%

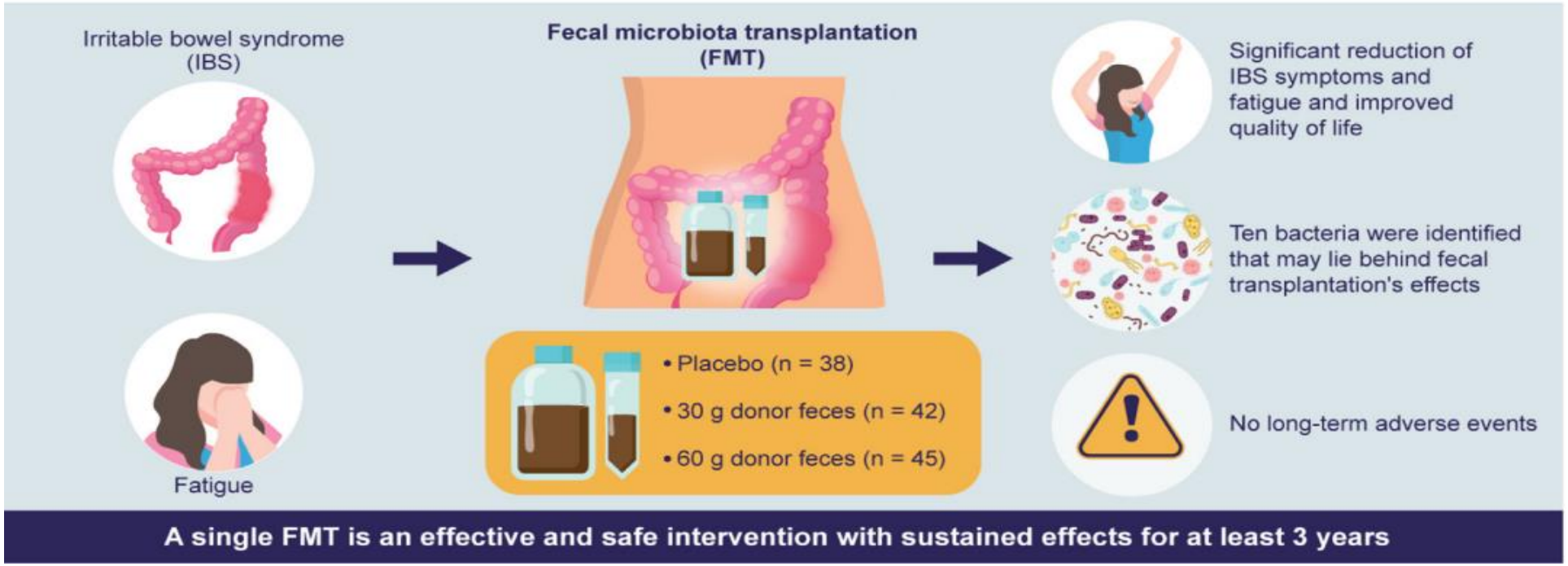
Moayyedi P, J Can Assoc Gastroenterol. 2019;2:6-29



AGA 2022 Gastroenterology 2022;163:152

Efficacy of Fecal Microbiota Transplantation for Patients With Irritable Bowel Syndrome at 3 Years After Transplantation

Magdy El-Salhy,[1,2] Renate Winkel,[1] Christina Casen,[3] Trygve Hausken,[2,4] Odd Helge Gilja,[2,4] and Jan Gunnar Hatlebakk[2]



	Placebo	30 gr	60 gr
2 años	26%	69%	78%
3 años	27%	65%	72%

NNT 4-5

El-Salhy M, et al. Gastroenterology 2022;163:982–994

Mensajes para la casa

SII enfermedad orgánica
No es una enfermedad sicológica
Altera la calidad de vida
Diagnostico Roma IV VPP > 98%
Tratamiento depende del síntoma principal
Trasplante fecal es prometedor
Menta oleosa: Segura dolor, síntomas globales

Todo Claro al final de la consulta
El paciente con SII está feliz

Este es el paciente con SII que ve el Ginecólogo y le *llama dolor pelvico crónico*

Muchas gracias!

SII Tratamiento