

Preparación para colonoscopia

Qué hay de nuevo en 2020 y 2021?

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



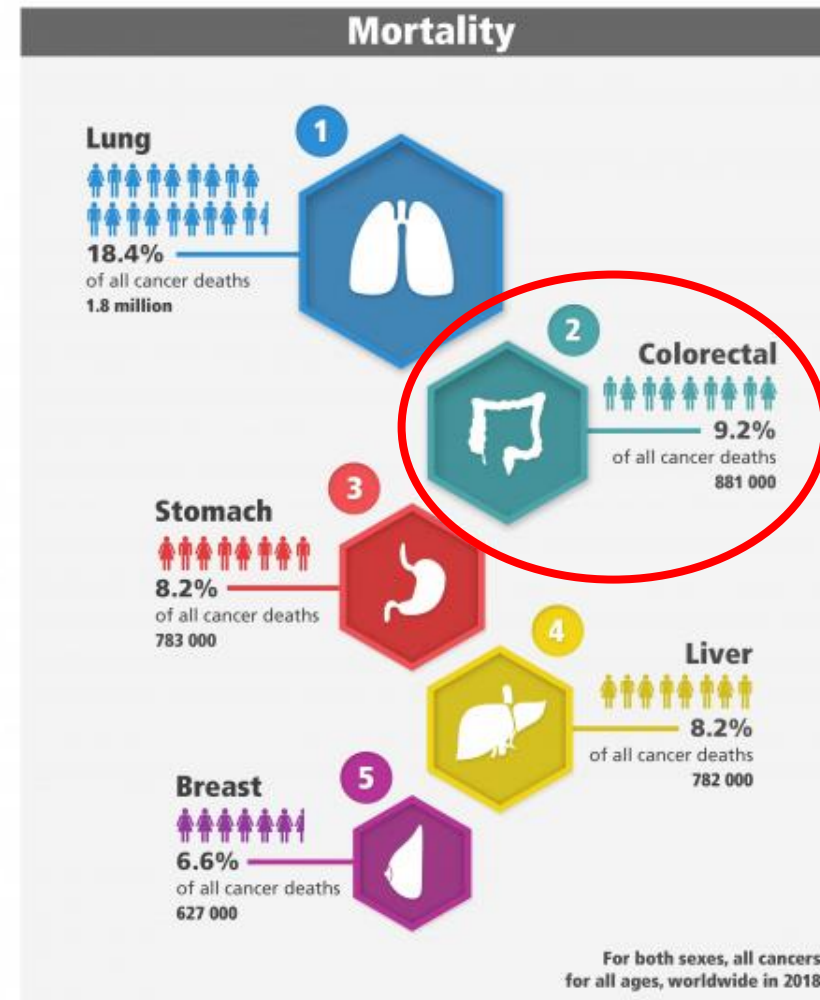
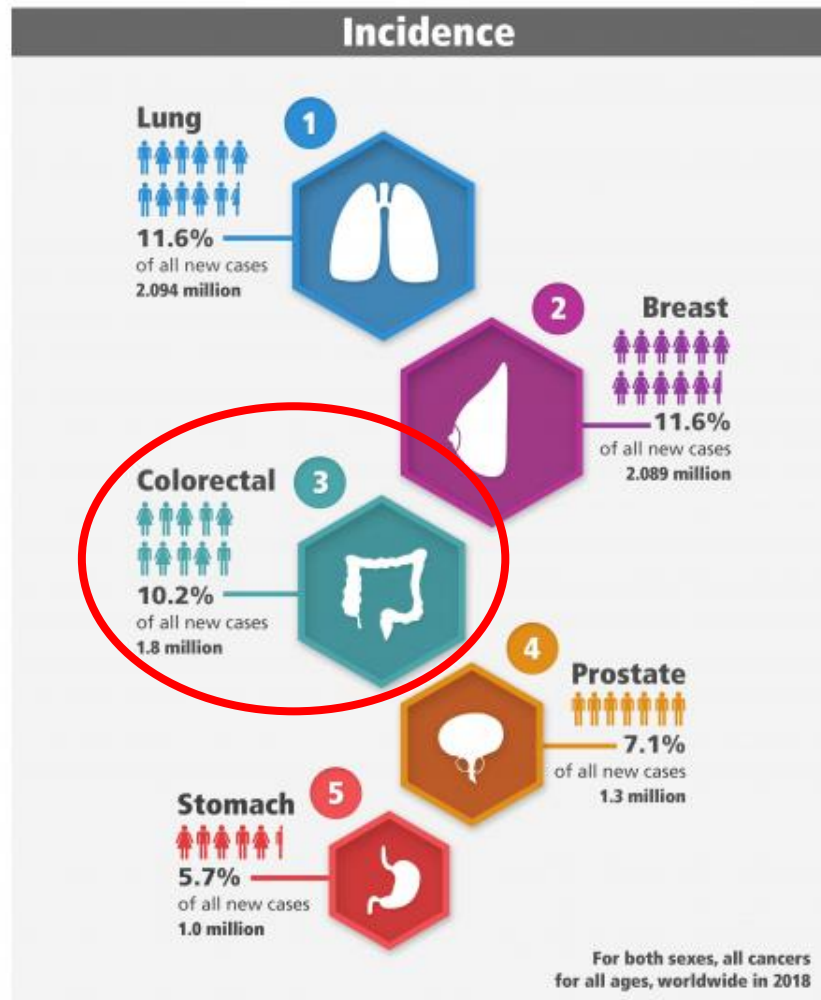
Congreso de Gastroenterología y Nutrición Adulta y Pediátrica
Noviembre 11, 2021

Preparación óptima para Colonoscopia: el impacto de los “bajos volúmenes”

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



Percentages of new cancer cases and cancer deaths worldwide in 2018

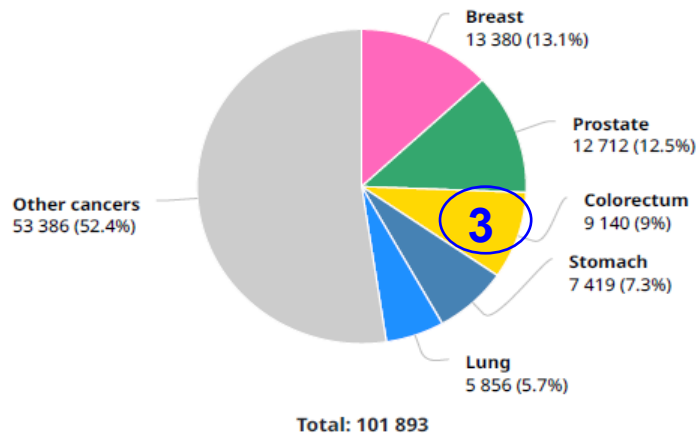


Cáncer colorectal 2018

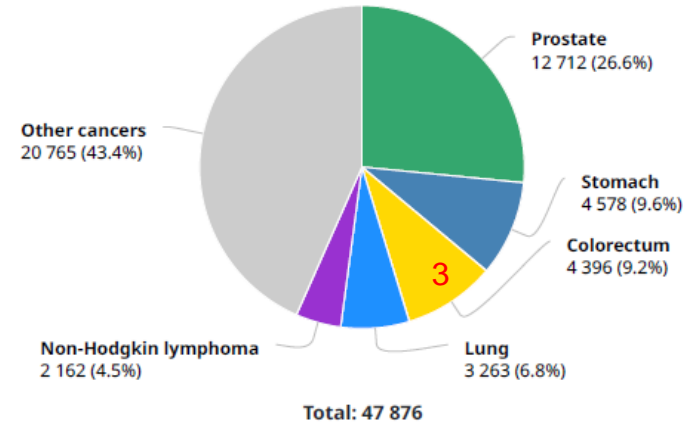
49 464 687



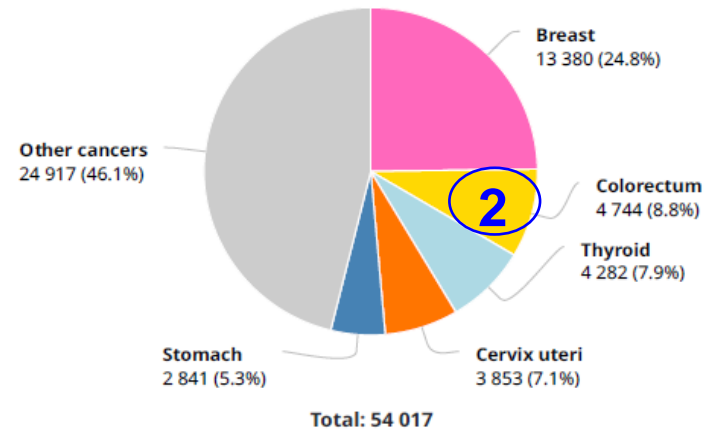
Number of new cases in 2018, both sexes, all ages



Number of new cases in 2018, males, all ages



Number of new cases in 2018, females, all ages



<https://gco.iarc.fr/today/data/factsheets/populations/170-colombia-fact-sheets.pdf>

USA
6% población general



Tendrán CCR

**33% de americanos
Elegibles para
screening no se
lo han realizado**

**Tamización
“Screening”**

**46-63% de
muertes por CCR
Por no screening**

Edad de tamización

Tamización 45 vs 50 años/1000 pacientes tamizados / vida

LYG: Años salvados	SCREENING TEST	LYG	NO. OF CSY	MODEL RECOMMENDABLE
CSY Colonoscopia	CSY every 10 y, 45-75	429	5646	Yes
	CSY every 10 y, 50-75	404	4836	No
CTC Colonografía TAC	CTC every 5 y, 45-75	390	2666	Yes
	CTC every 5 y, 50-75	368	2430	No
FSIG Sigmoidoscopia Flexible	FSIG every 5 y, 45-75	403	3761	Yes
	FSIG every 5 y, 50-75	380	3426	No
FIT Test fecal Inmunoquímico	FIT yearly, 45-75	403	2698	Yes
	FIT yearly, 50-75	377	2402	No
HSgFOBT Guayaco alta Sensibilidad	HSgFOBT yearly, 45-75	403	3364	No
	HSgFOBT yearly, 50-75	377	2956	No
Mt-sDNA Multi blanco DNA fecal	mt-sDNA every 3 y, 45-75	376	2640	No
	mt-sDNA every 3 y, 50-75	350	2331	No

Colonoscopia



***“Gold standard”
Para visualizar
La mucosa del colon***

***Método más utilizado
tamización (“screening”)
Más utilizado (90% USA)***

***Brenner H, Gastroenterology 2014;146:709-17
Clark BT, Am J Gastroenterol 2014;109:1714-23***

Valor mínimo aceptable

Tasa adecuada
Preparación del
colon

85-90%

ADR

20% Global

30% Hombres

25% Mujeres

Tasa intubación
Del ciego

95 %

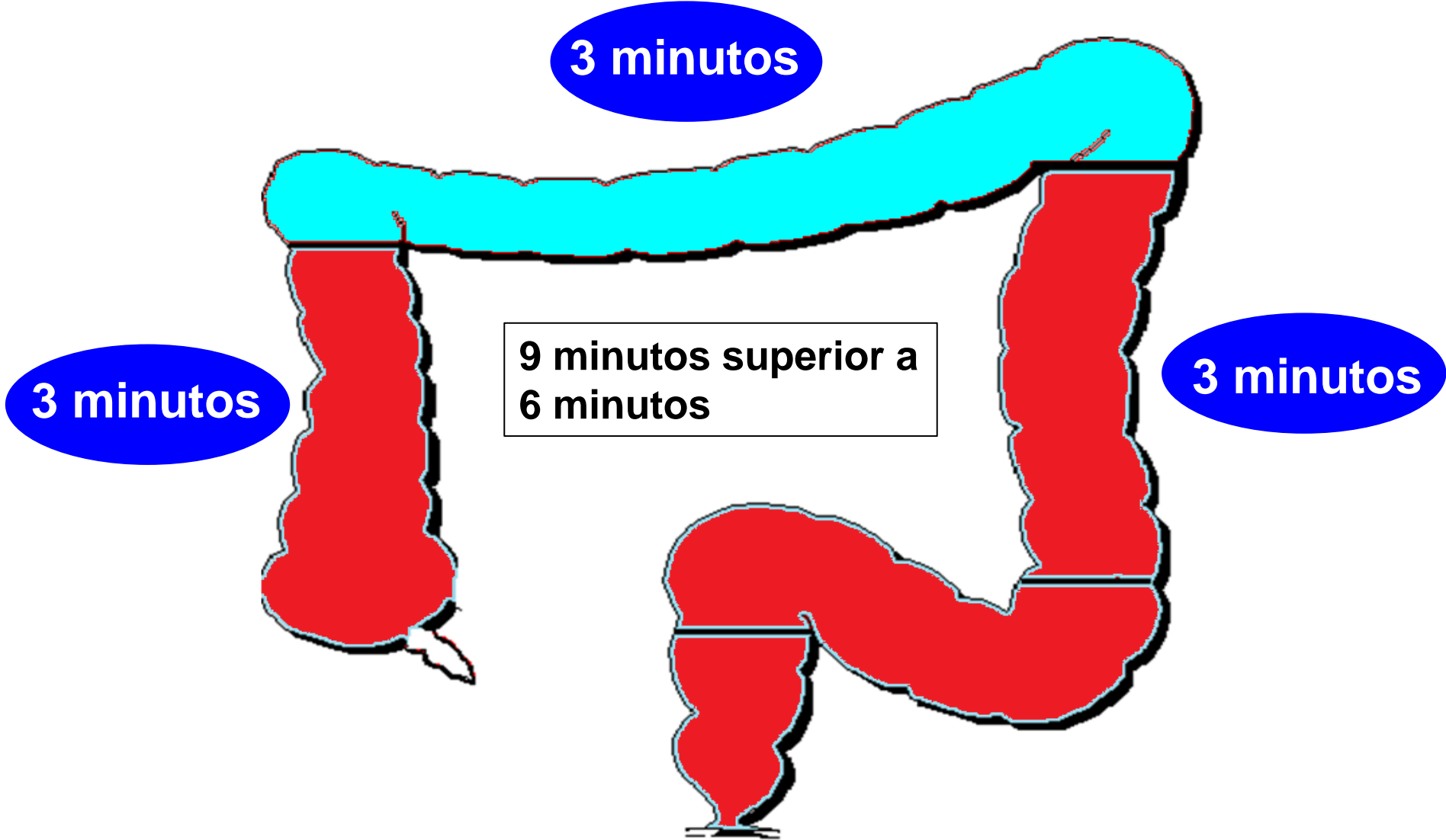
0 20 40 60 80 100

Tiempo de retirada



9 minutos

ASGE/AGA 2015
ESGE 2019



Tiempo de retirada

Fellow



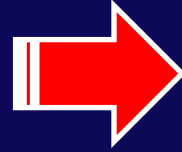
10 minutos

Gromoski MA, Surg End 2012;26:1337-42



Rees CJ, et al. Gut 2016;65:1923–1929
Kaminski MF, ueg Journal 2017;5:309-34
EDGE 2019

**Colon mal
Preparado**



“Catástrofe”

**Impacta negativamente
los principales
Indicadores de calidad**

< Tasa intubación cecal

> Más cáncer de intervalo

> Tiempo de retirada

> Colonoscopias

Más costos

**< Tasa de detección
de adenomas, ADR**

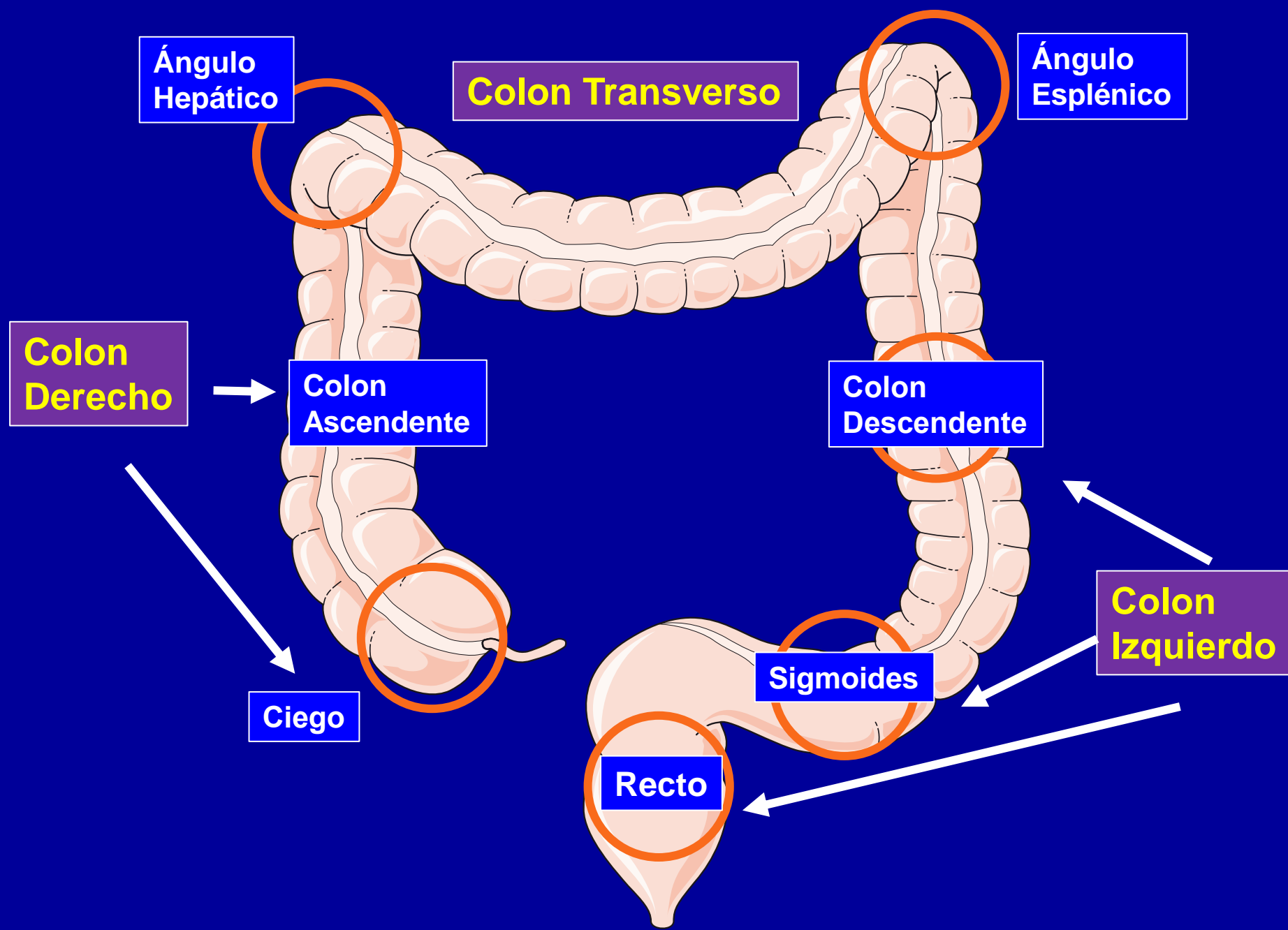
CME

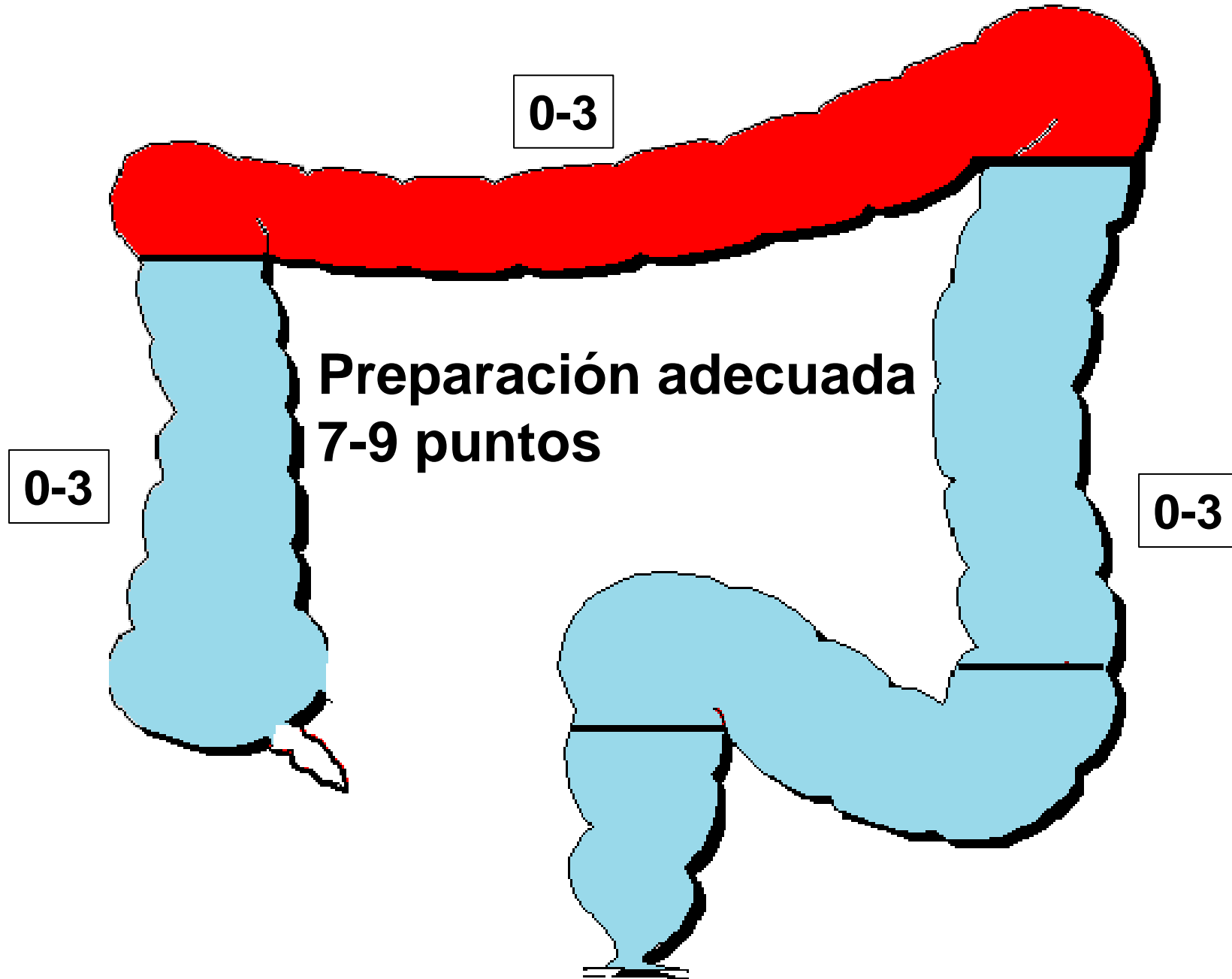
Validated Scales for Colon Cleansing: A Systematic Review

Robin Parmar, MD¹, Myriam Martel, BSc¹, Alaa Rostom, MD, MSc² and Alan N. Barkun, MD, MSc^{1,3}

To conclude, all the published scales displayed limitations. The BBPS is the most thoroughly validated scale and should be used in a clinical setting. Between-scale comparisons for repeat colonoscopy time interval, ease, and pertinence of use for auditing are needed.

Am J Gastroenterol 2016; 111:197–204;





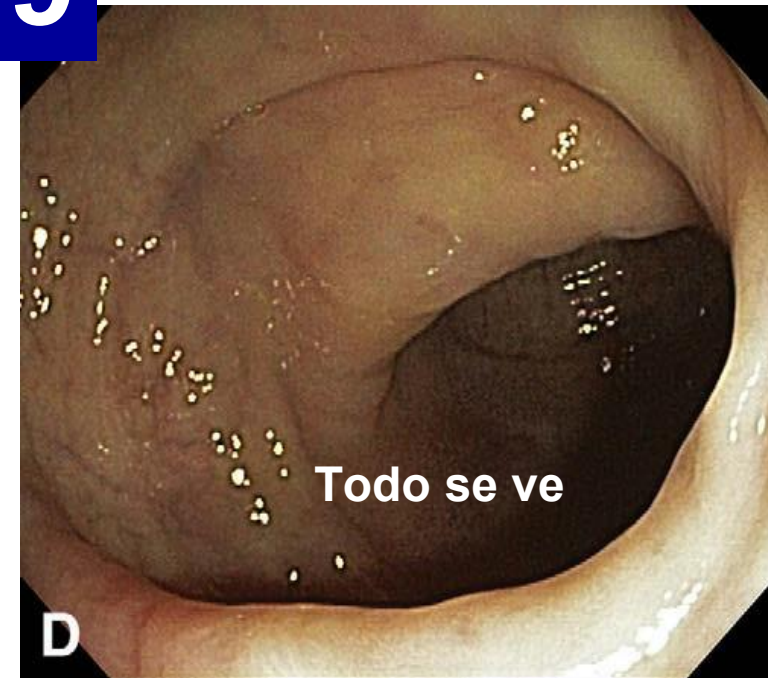
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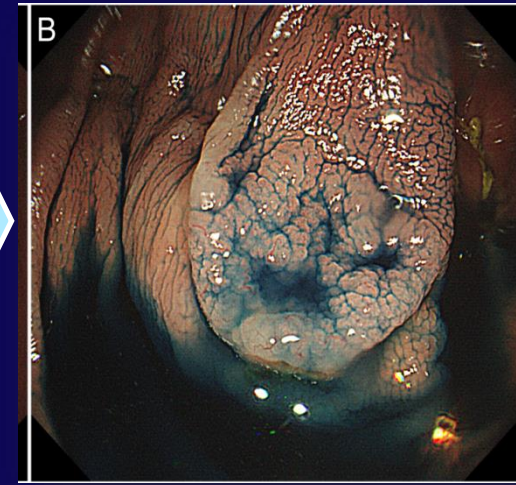
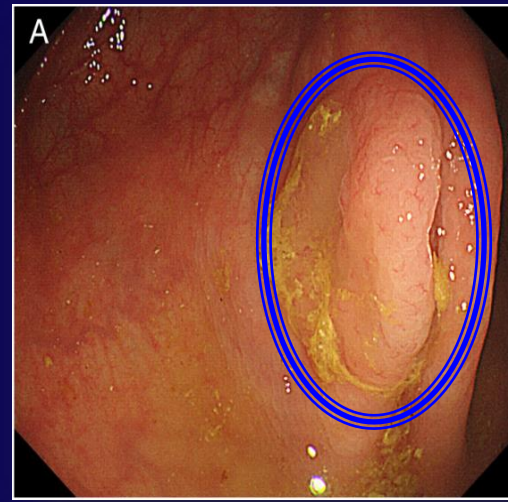
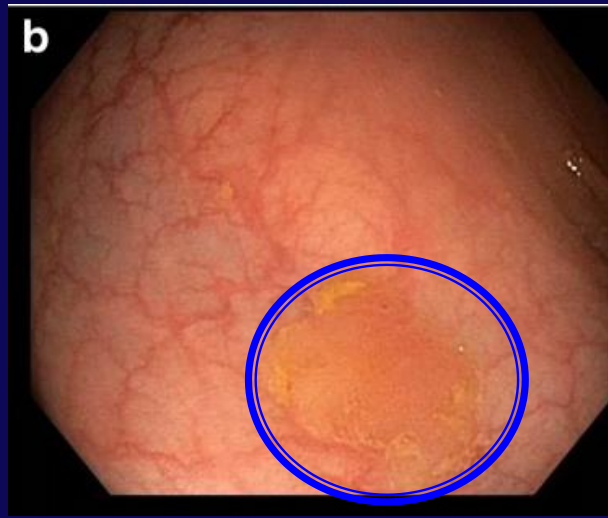
1

0-9

2



3

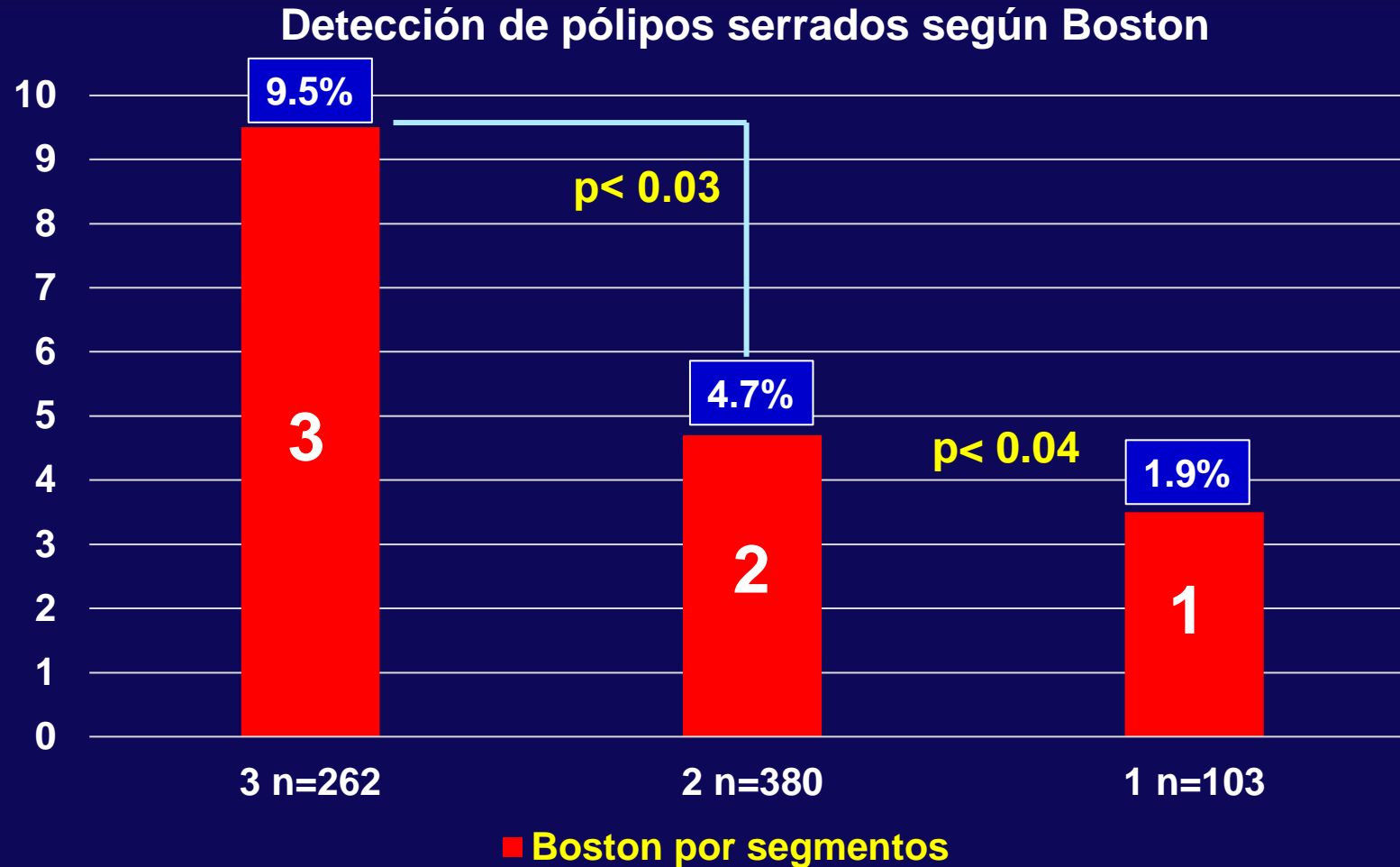


15-30% Cánceres colon
30% CI pólipos serrados

East JE, et al. Gut 2017;66:1181–96

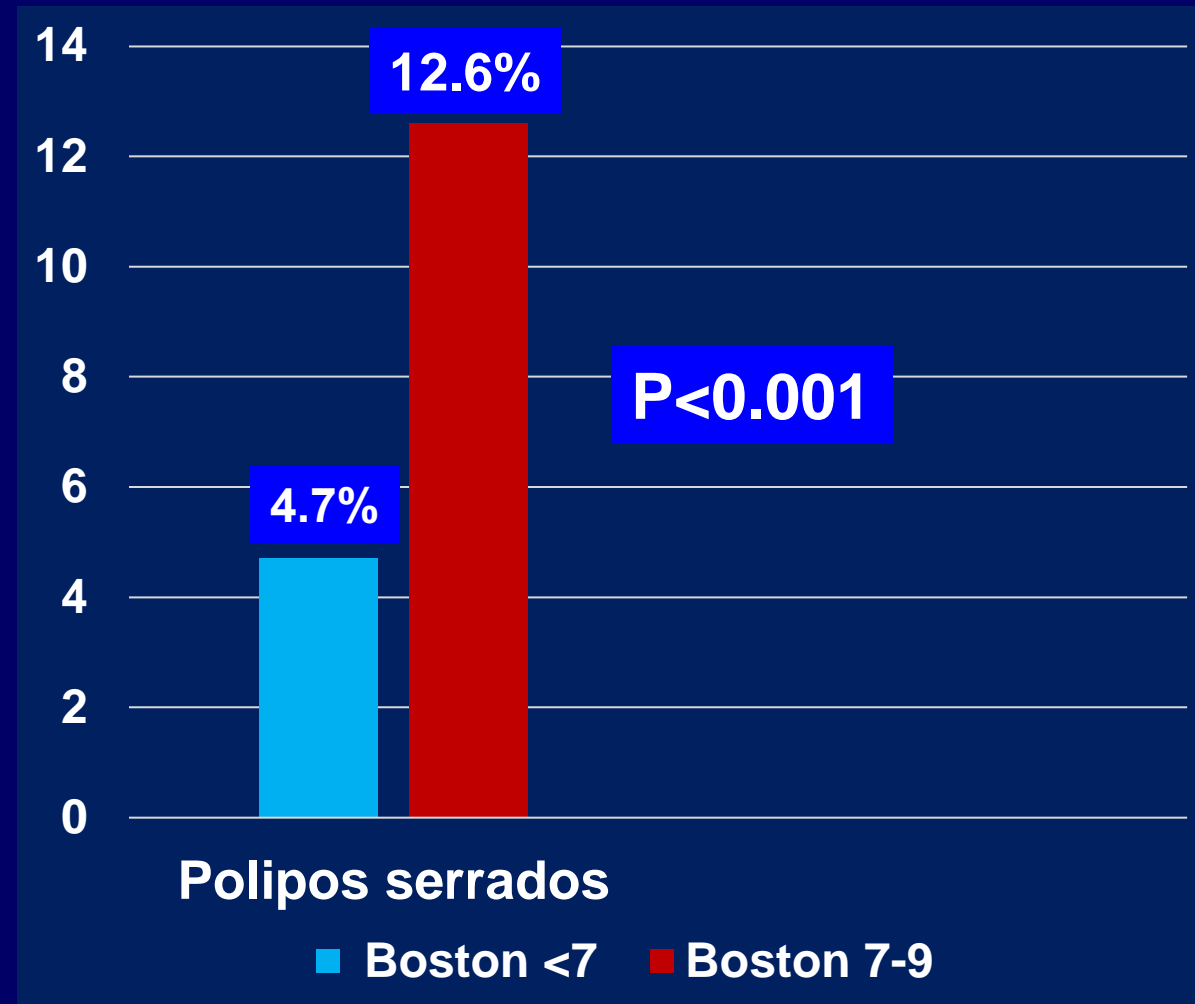
Thorlacius H, Scand J Gastroenterol 2017 ;52:654-66

High-Quality Bowel Preparation Is Required for Detection of Sessile Serrated Polyps



High-Quality Bowel Preparation Is Required for Detection of Sessile Serrated Polyps

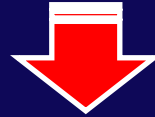
Boston total



Preparación del colon

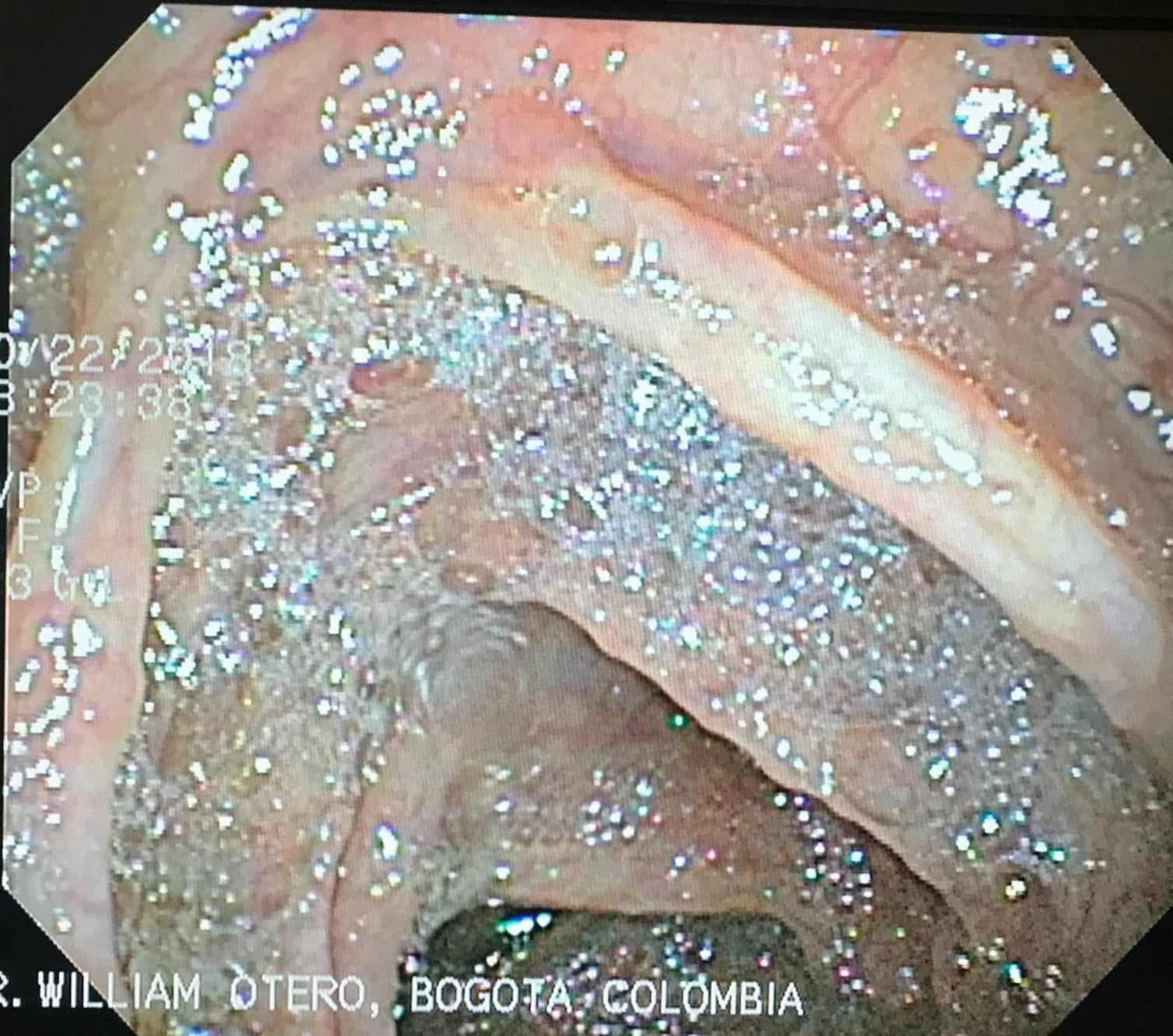


**Mal preparados
20-40%**



Tasa de error: 35-42%

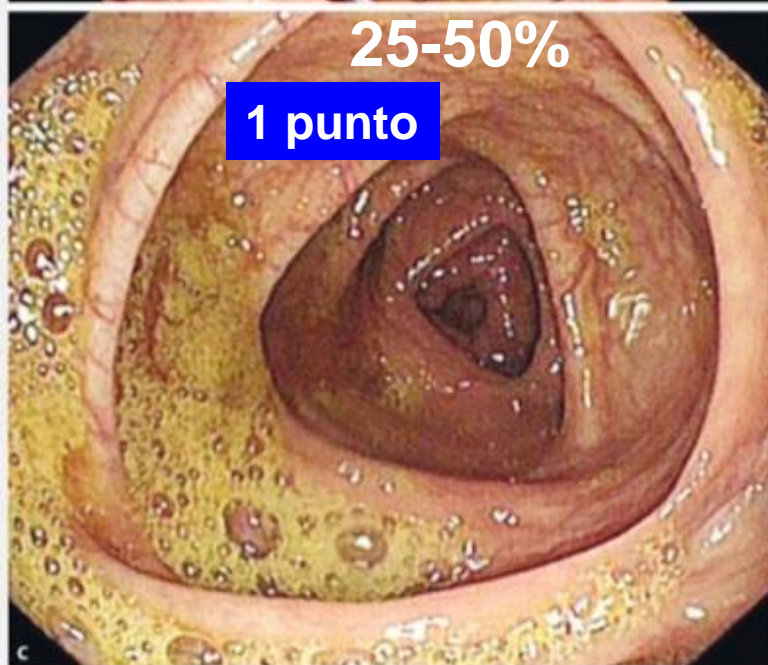
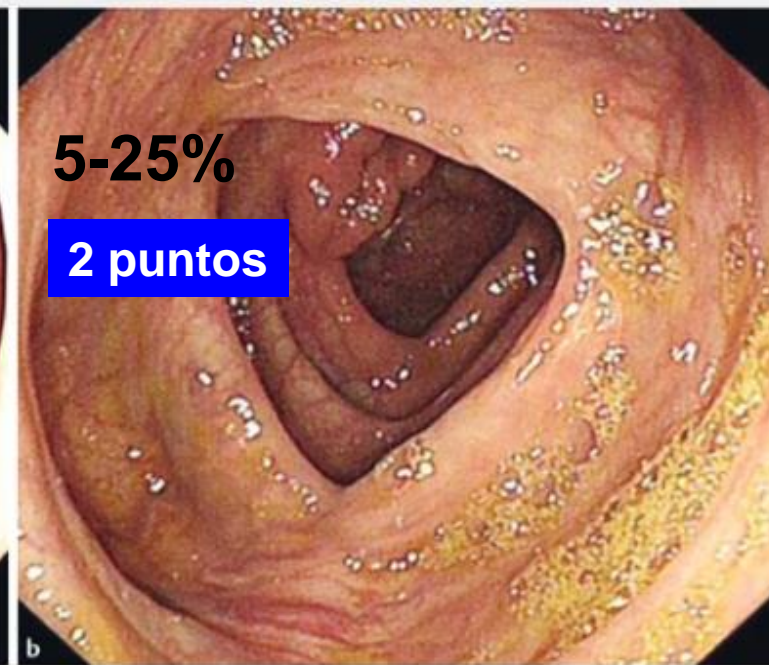
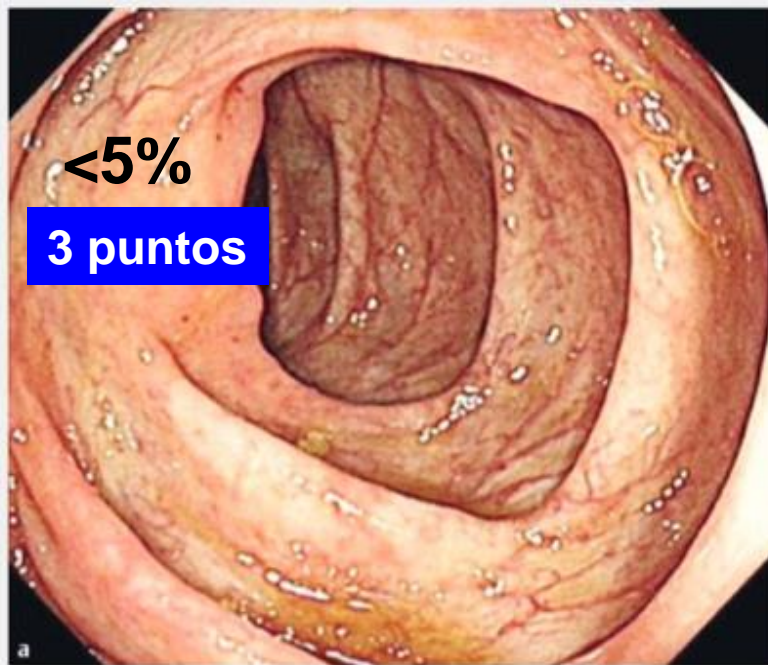
Rex D. Clin Gastroenterol Hepatol 2014;12:458-62
Lebwohl B, Gastrointest Endos 2011;73:1207-14
Frohlich F, Gastrointest Endosc 2005;61:378-84



10/22/2018
08:23:38

CVP
D. F.
Et: 3 Gr

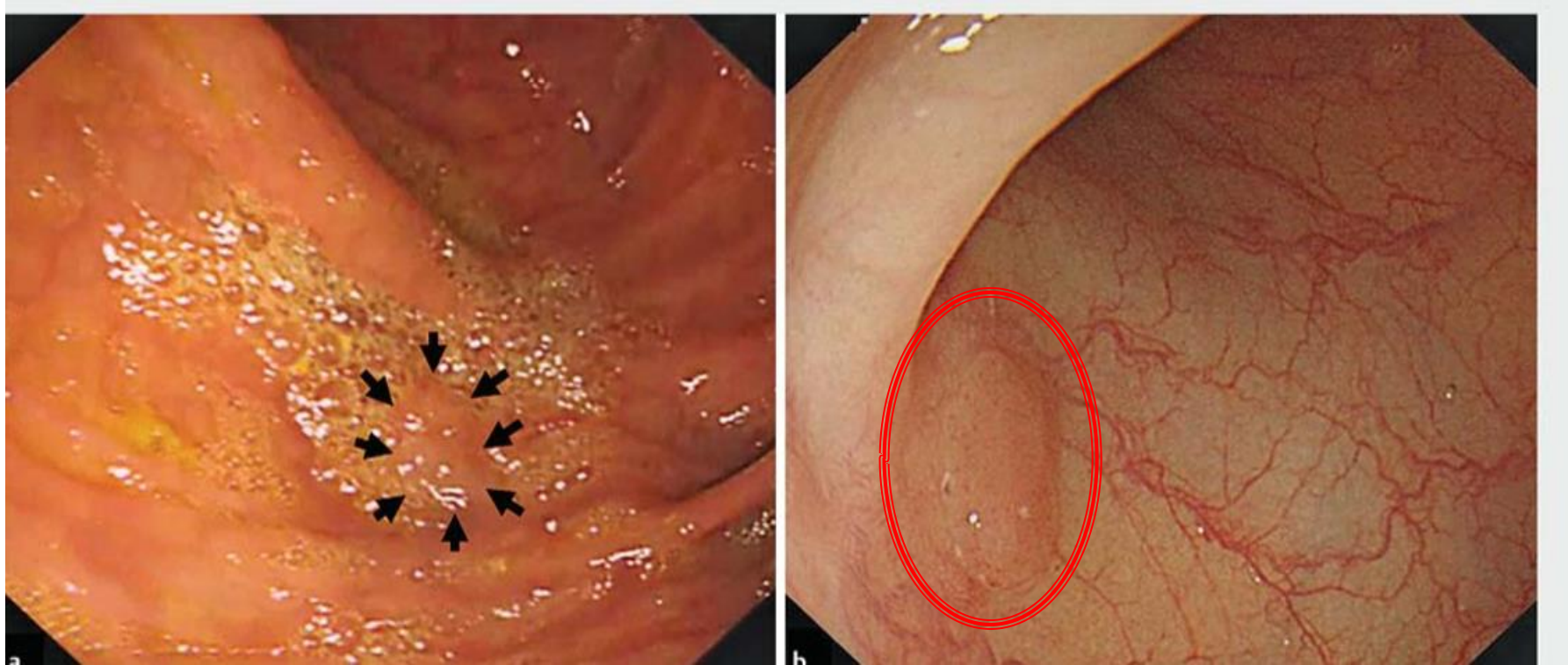
DR. WILLIAM OTERO, BOGOTA, COLOMBIA



Impact of preprocedure simethicone on adenoma detection rate during colonoscopy: a multicenter, endoscopist-blinded randomized controlled trial

Authors

Yu Bai^{1,*}, Jun Fang^{1,2,*}, Sheng-Bing Zhao¹, Dong Wang¹, Yan-Qing Li³, Rui-Hua Shi⁴, Zi-Qin Sun⁵, Ming-Jun Sun⁶, Feng Ji⁷, Jian-Min Si⁸, Zhao-Shen Li¹



Simethicone improves bowel cleansing with low-volume polyethylene glycol: a multicenter randomized trial

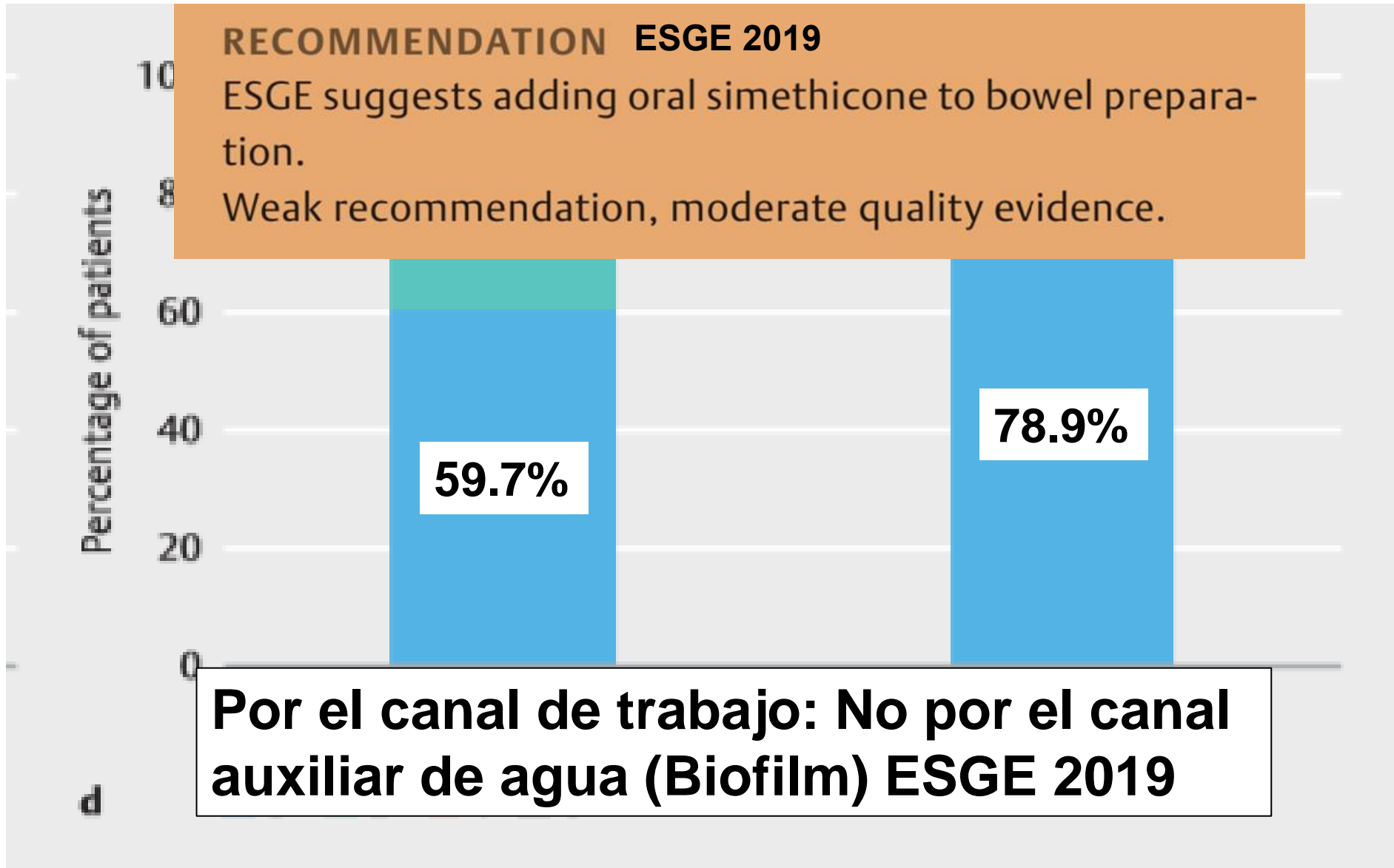
Authors

Shenghong Zhang^{1,*}, Danping Zheng^{1,*}, Jinping Wang¹, Jianwei Wu², Pingguang Lei³, Qi Luo⁴, Liping Wang⁵, Beiping Zhang⁶, Hong Wang⁷, Yi Cui¹, Minhu Chen¹

Simeticona 30 ml/1200 mg + PEG	291
PEG Solo	291

Zhang S, et al. Endoscopy 2018;50:412-422.

Burbujas



Zhang S, et al. Endoscopy 2018;50:412-422.

META ANALYSIS AND SYSTEMATIC REVIEW

The benefit of adding oral simethicone in bowel preparation regimen for the detection of colon adenoma: A systematic review and meta-analysis

Jen-Hao Yeh,^{*,†} Ming-Hung Hsu,^{*} Chao-Ming Tseng,^{*} Tzu-Haw Chen,^{*} Ru-Yi Huang,[‡] Ching-Tai Lee,^{*} Chi-Wei Lin[‡] and Wen-Lun Wang^{*}

Divisions of ^{*}Gastroenterology and Hepatology, Department of Internal Medicine, [†]Gastroenterology and Hepatology, Department of Family Medicine, E-DA Hospital/I-shou University and [‡]Division of Gastroenterology and Hepatology, Department of Internal Medicine, E-DA Hospital/I-shou University, Da-Chung Branch, Kaohsiung, Taiwan

META ANALYSIS AND SYSTEMATIC REVIEW

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**ADR alta ($\geq 25\%$) (RR= 0,95, ic del 95% = 0,87-1,04)
estudios generales (RR= 1,15, IC del 95% = 0,77-1,72)**



**ADR bajo ($< 25\%$) (RR = 1.44, 95% CI = 1.14-1.81)
NNT 15 (reducción riesgo: 0.067, 95% CI 0.025–
0.109).**

Análisis de subgrupos

Yeh JH, J Gastroenterol Hepatol. 2019;34:830-6.

Estrategias para mejorar la preparación

Journal of Digestive Diseases 2017; 18; 84–91

doi: 10.1111/1751-2980

Review article

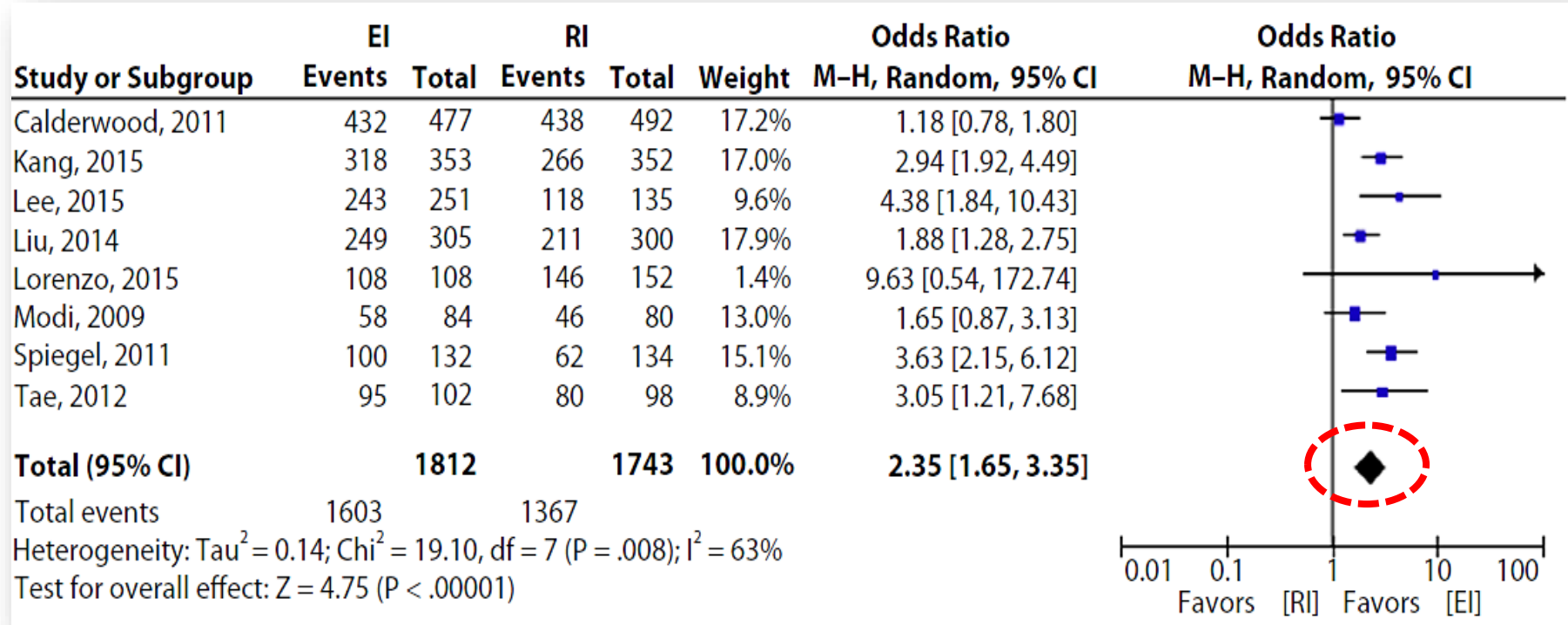
Enhanced education for bowel preparation before
colonoscopy: A state-of-the-art review

Zhu LIU, Ming Ming ZHANG, Yue Yue LI, Li Xiang LI & Yan Qing LI

Enhanced instructions improve the quality of bowel preparation for colonoscopy: a meta-analysis of randomized controlled trials

Xiaoyang Guo, MD,^{1,*} Zhiping Yang, MD,^{1,*} Lina Zhao, MD,^{2,*} Felix Leung, MD,^{3,4} Hui Luo, MD,¹
 Xiaoyu Kang, MD,¹ Xin Li, MD,⁵ Hui Jia, MD,¹ Shengye Yang, MD,¹ Qin Tao, MD,¹ Yanglin Pan, MD,¹
 Xuegang Guo, MD¹

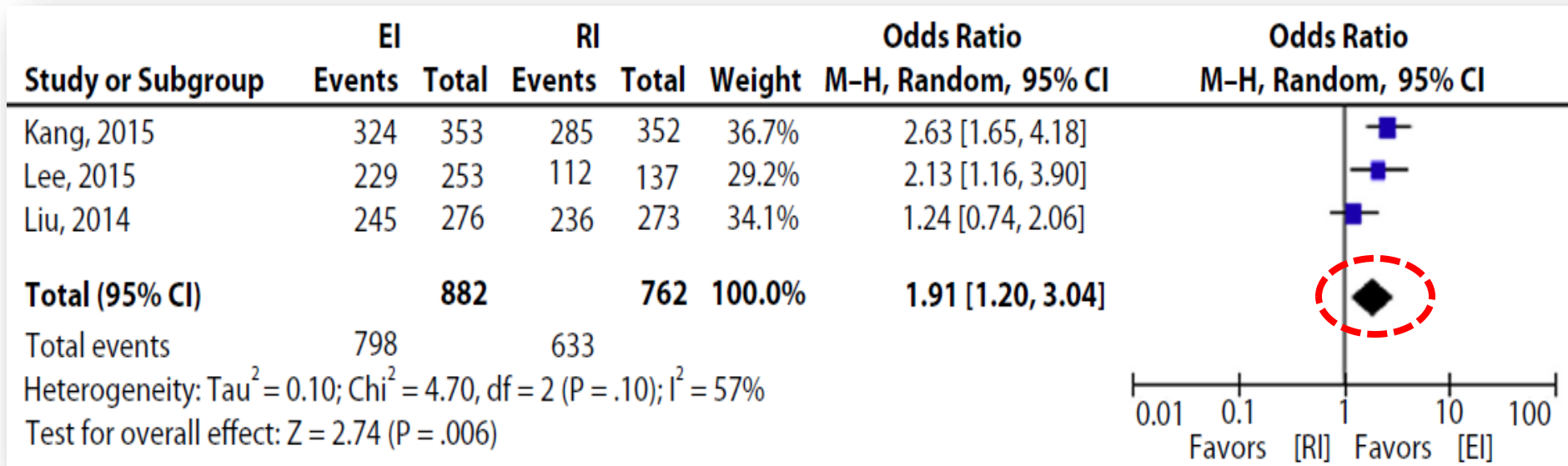
Calidad de la preparación



Enhanced instructions improve the quality of bowel preparation for colonoscopy: a meta-analysis of randomized controlled trials

Xiaoyang Guo, MD,^{1,*} Zhiping Yang, MD,^{1,*} Lina Zhao, MD,^{2,*} Felix Leung, MD,^{3,4} Hui Luo, MD,¹
 Xiaoyu Kang, MD,¹ Xin Li, MD,⁵ Hui Jia, MD,¹ Shengye Yang, MD,¹ Qin Tao, MD,¹ Yanglin Pan, MD,¹
 Xuegang Guo, MD¹

Evitar Repetir la Colonoscopia



Reinforced education improves the quality of bowel preparation for colonoscopy: An updated meta-analysis of randomized controlled trials

Xiaoyang Guo^{1,2}, Xin Li³, Zhiyan Wang³, Junli Zhai³, Qiang Liu¹, Kang Ding¹,
Yanglin Pan^{2*}

PLoS One 2020;15:e0231888

**Instrucciones
Escritas, verbales
Audiovisual**

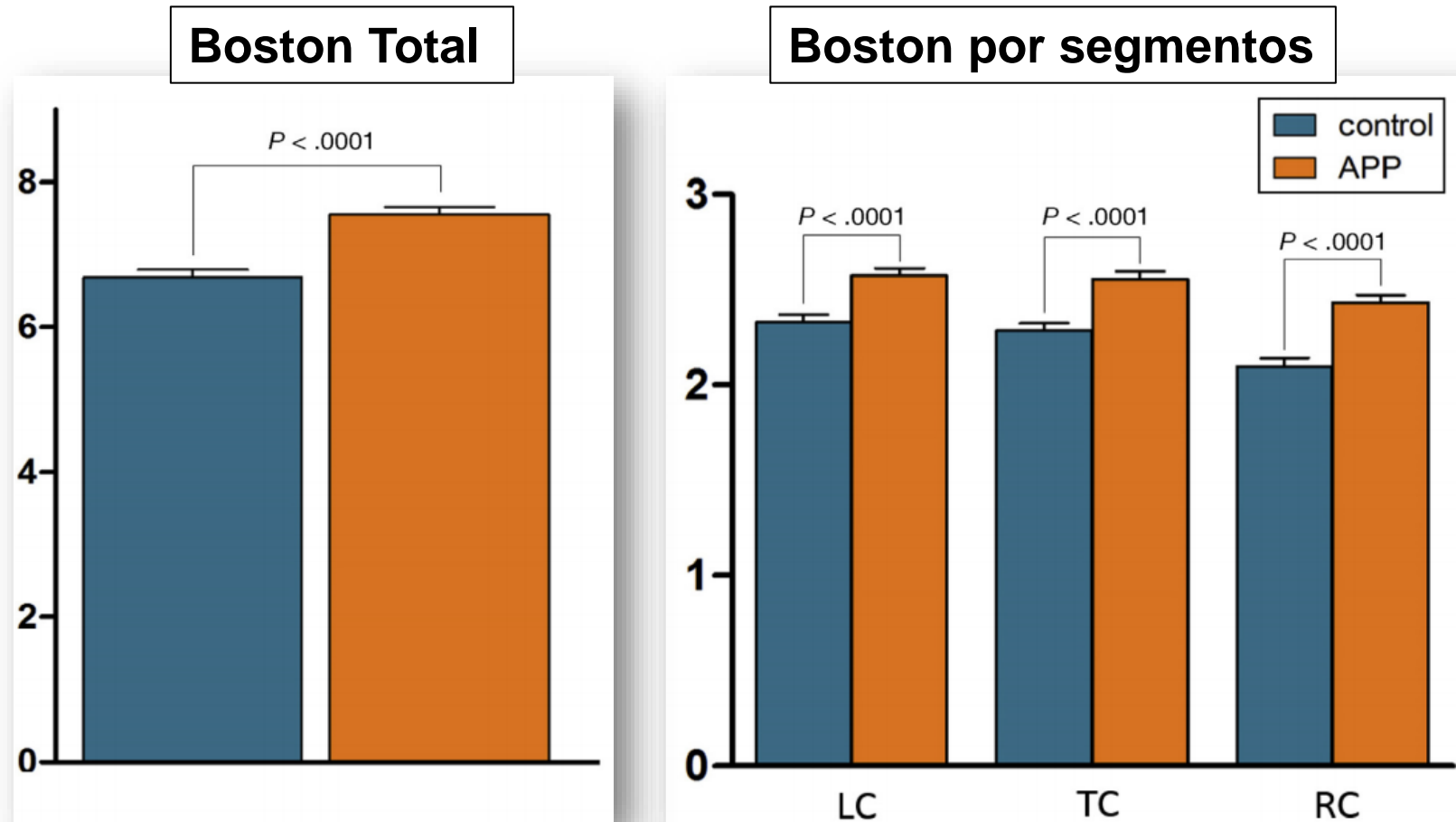


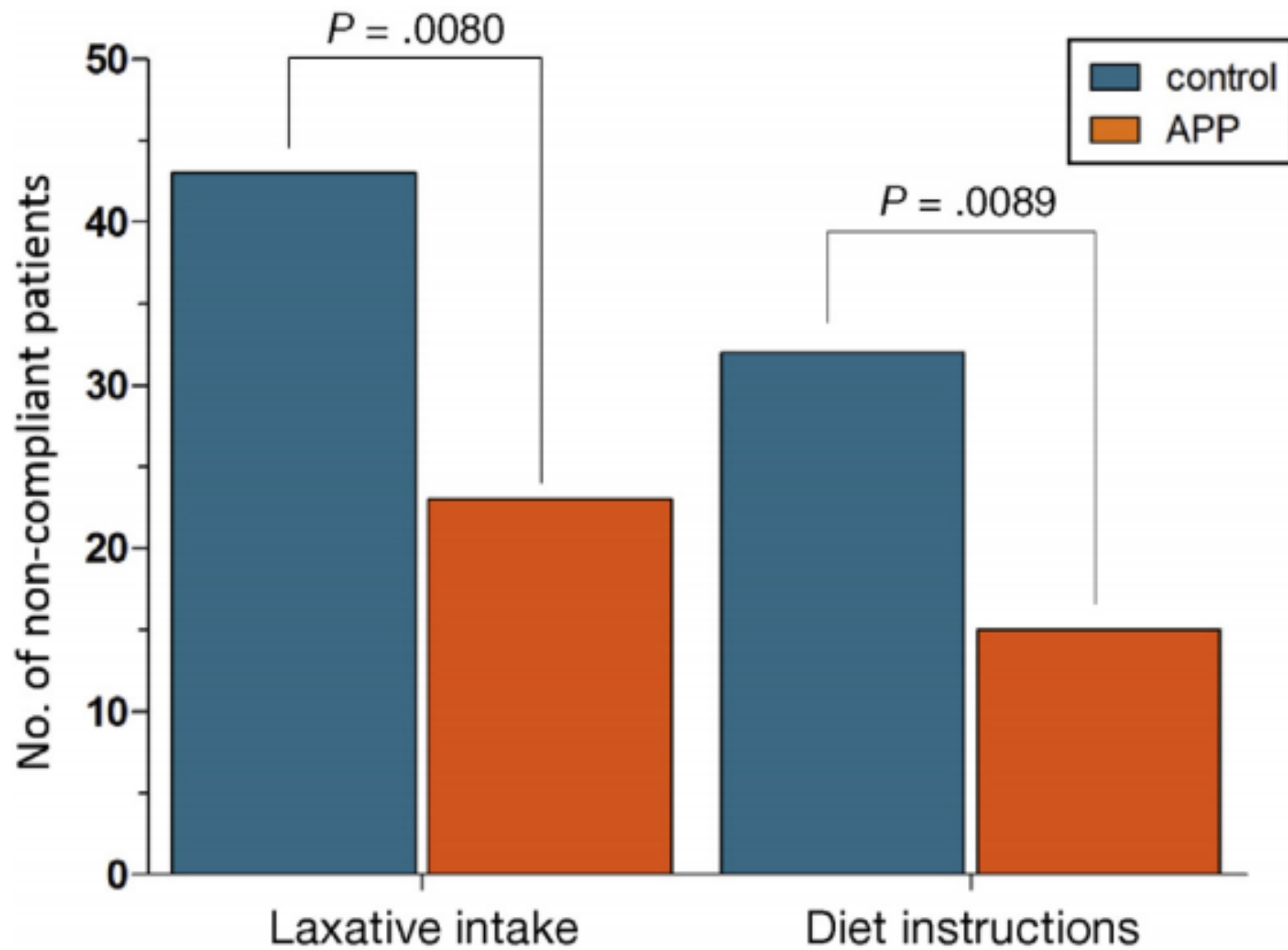


Smartphone Application to Reinforce Education Increases High-Quality Preparation for Colorectal Cancer Screening Colonoscopies in a Randomized Trial

Benjamin Walter,^{*} Rena Frank,^{*} Leopold Ludwig,[‡] Nektarios Dikopoulos,[‡] Martina Mayr,[§] Bruno Neu,[§] Benjamin Mayer,^{||} Alexander Hann,^{||} Benjamin Meier,[#] Karel Caca,[#] Thomas Seufferlein,^{*} and Alexander Meining^{||}

N=500 Instrucciones Orales, Escritas, aleatoriamente APP versus no





Predictores de mala preparación

```
graph TD; A[Predictores de mala preparación] --> B[Médicos]; A --> C[Otros factores]; B --> D["Estreñimiento<br/>Diabetes mellitus<br/>Obesidad<br/>Cirugía de colon<br/>Mala preparación previa<br/>Medicamentos<br/>Opioides<br/>Tricíclicos"]; C --> E["Seguro médico<br/>Nivel educativo<br/>Poca motivación<br/>No entender la importancia"];
```

Médicos

Estreñimiento
Diabetes mellitus
Obesidad
Cirugía de colon
Mala preparación previa
Medicamentos
Opioides
Tricíclicos

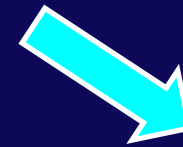
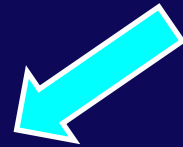
Otros factores

Seguro médico
Nivel educativo
Poca motivación
No entender la importancia

**Factores modificables
Que mejoran la calidad**



**Relacionados
Producto**



Tolerabilidad
Bajo volumen
Adecuado sabor

Dosificación
Dosis divididas

Administración
Última dosis
Terminarla 2h
Antes examen

Calidad de la preparación



Dark and murky.

NOT OK

Brown and murky.

NOT OK

Dark orange and semi-clear.

NOT OK

Light orange and clear.

ALMOST THERE!

Yellow and clear, like urine.

YOU'RE READY!



Preparaciones aprobadas FDA

Iso-osmóticos



PEG
4 litros
2 litros
No dosis
Divididas
NER 1006
(Plenvu®)

Combinados



Citrato Mg con
Pico So4 Na

Hiper-osmóticos



Fosfatos (Travad)
Sulfato (Na-Mg-K)
Suprep-Izinova

2020

Fosfato de sodio

Edad >55 años
IECA
Enfermedad Renal
Falla cardíaca
Enfermedad hepática
Diuréticos

Lesión renal
Por fosfatos

ASGE . Gastrointest Endosc 2015;81:781-93

Oral sodium phosphate (OSP)

ESGE 2019

RECOMMENDATION

ESGE recommends against the routine use of oral sodium phosphate for bowel preparation.

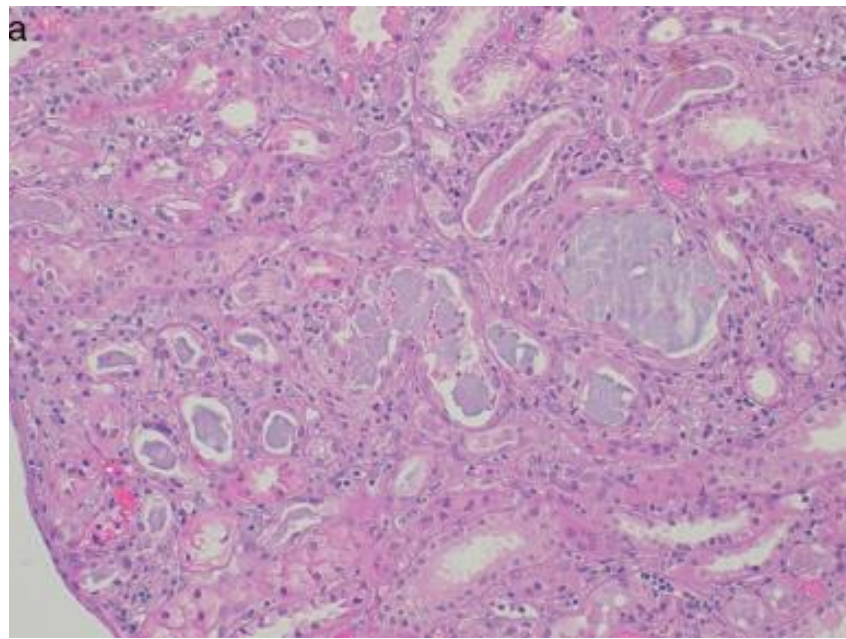
Strong recommendation, low quality evidence.

Fosfosoda

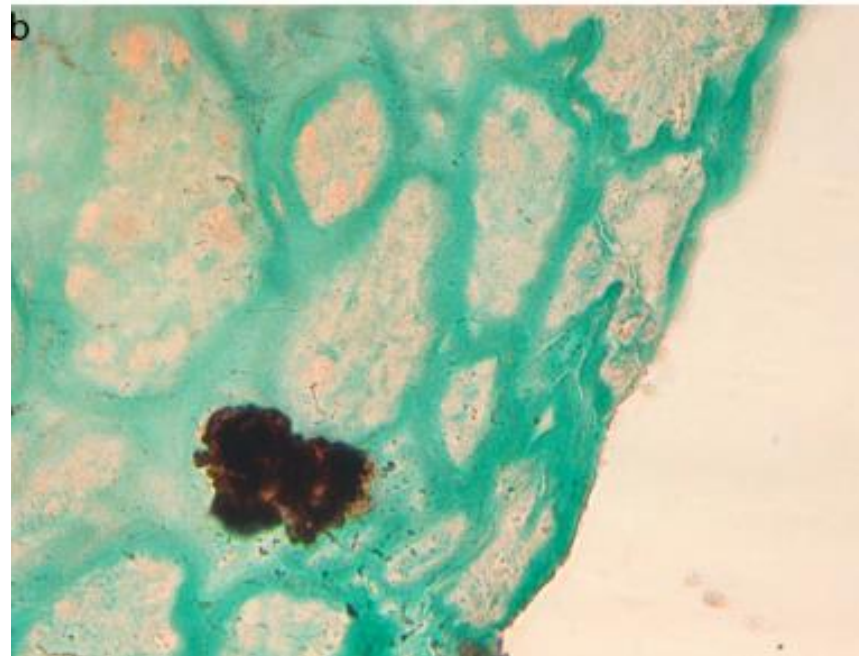


**Ha sido virtualmente
Abandonado en USA**

Rex D K, Nat Rev Gastroenterol Hepatol 2014;



Lesión Renal por Fosfato de Sodio



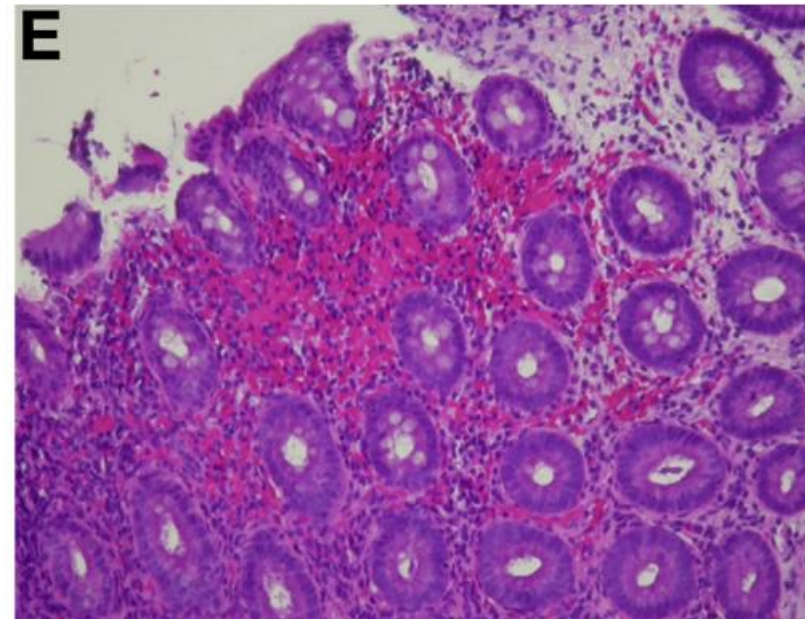
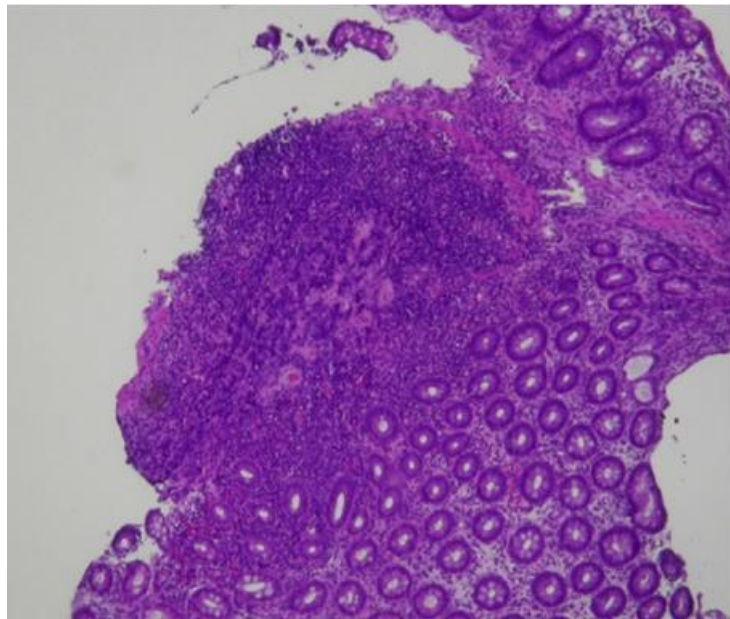
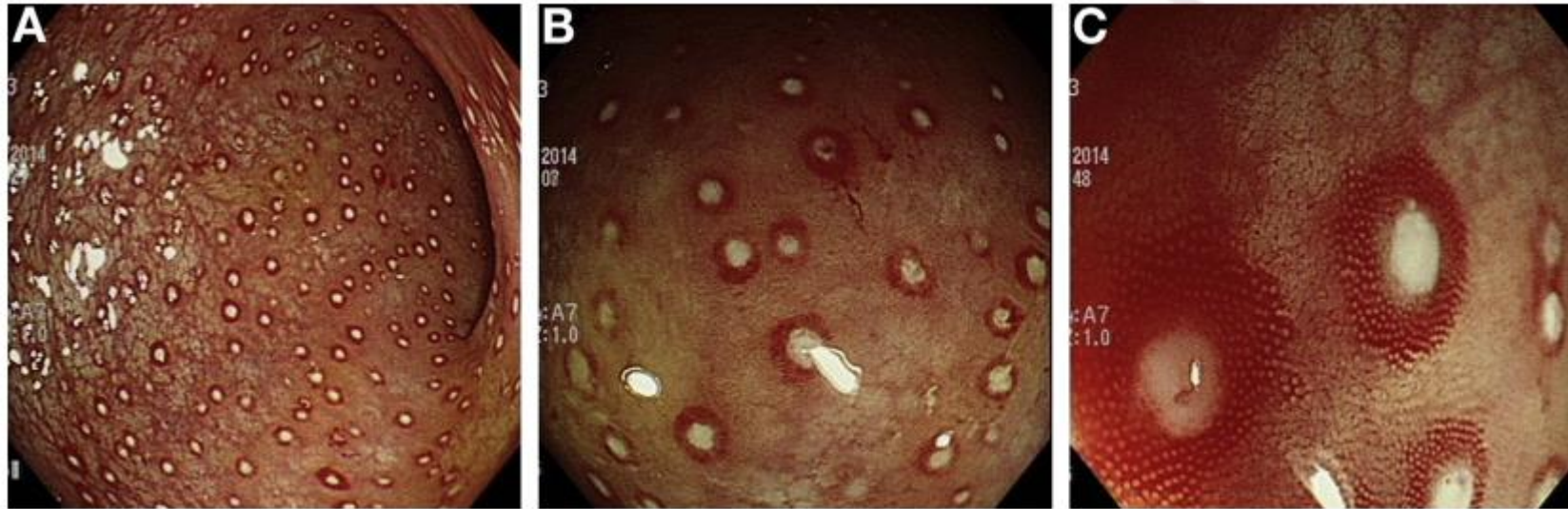
Kidney injury after sodium phosphate solution beyond the acute renal failure

Gema Fernández-Juárez^{a,*}, Leticia Parejo^a, Javier Villacorta^a, Ana Tato^a, Ramiro Cazar^a, Carmen Guerrero^b, Isabel Martinez Marin^a, Javier Ocaña^a, Angel Mendez-Abreu^a, Katia López^a, Enrique Gruss^a, Eduardo Gallego^a

Table 1 – Baseline clinical characteristics of 12 patients with phosphate nephropathy.

	Age (years)	Gender	eGFR (ml/min/1.73 m ²) [©]	Hypertension	Diabetes mellitus	ACEi-ARB	Diuretics	Renal biopsy	Course
Case 1	61	Man	63.6	No	No	No	No	Yes	Acute
Case 2	85	Female	41.3	Yes	Yes	No	Yes	–	Chronic
Case 3	71	Man	70.7	Yes	Yes	Yes	Yes	Yes	Acute
Case 4	73	Female	73.2	Yes	Yes	Yes	Yes	–	Chronic
Case 5	84	Man	59.6	Yes	No	Yes	Yes	–	Chronic
Case 6	59	Female	137.9	Yes	No	Yes	Yes	–	Chronic
Case 7	70	Female	95.6	Yes	Yes	Yes	Yes	Yes	Chronic
Case 8	72	Man	54.5	Yes	No	Yes	Yes	–	Chronic
Case 9	72	Man	54.5	Yes	No	Yes	Yes	–	Acute
Case 10	73	Female	65.6	Yes	No	Yes	No	Yes	Chronic
Case 11	75	Man	54.0	Yes	No	Yes	No	–	Chronic
Case 12	92	Man	35.2	Yes	No	Yes	No	–	Chronic

Lesiones aftoides en recto por fosfato de sodio



Conceptos básicos 2020

Dosis divididas (“split”): PM-AM
Terminar dos horas antes del examen
Instrucciones escritas, verbales, digitales
Preparación es individualizada

ESGE 2019
ASGE 2015

Colonoscopia AM



**Individualizar preparación
Depende hora del examen**



Colonoscopia PM

ASGE, ESGE, ASIA

Hora de la colonoscopia

1era dosis: Noche anterior al examen
2da dosis: 4-6 horas antes del examen
2-3 AM: sin inconvenientes

Antes de 12 M



Toda la dosis la Noche anterior



Quimo del ID



Se acumula
En el colon



Impide ver la
Mucosa

Jonhson DA, Gastroenterology 2014;147:903-24
Saltzman JR, ASGE GIE 2015;4:781-93

Hora de la colonoscopia

Por la tarde



Preparación
por la mañana



Dosis única
No “*split*”

ASGE, ESGE
Expertos

Momento de la preparación

Terminar la Preparación



**Dos horas antes del
Procedimiento
“Runway time”**



***Por cada hora antes
Del examen
10% mal preparados***

**La parte más difícil de la Colonoscopia
Es la preparación!!!**

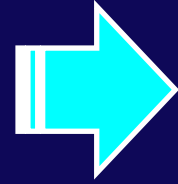
**10-25% no la terminan
por el gran volumen**

ASGE . Gastrointest Endosc 2015;81:781-93



Horrible!!!!

PEG 4L
Más seguro
Efecrivo



Menor cumplimiento
Volumen, sabor



Innovaciones



Eficacia
Tolerabilidad
Seguridad

PEG 2L AA
PEG 1L NER 1006
Picosulfato sodio
Sales de sulfato



Sulfato
Na:17.5g
K: 3.1 g
Mg:3.2g

176 ml

IZINOVA

+



330 ml
16 onzas

=

500 ml

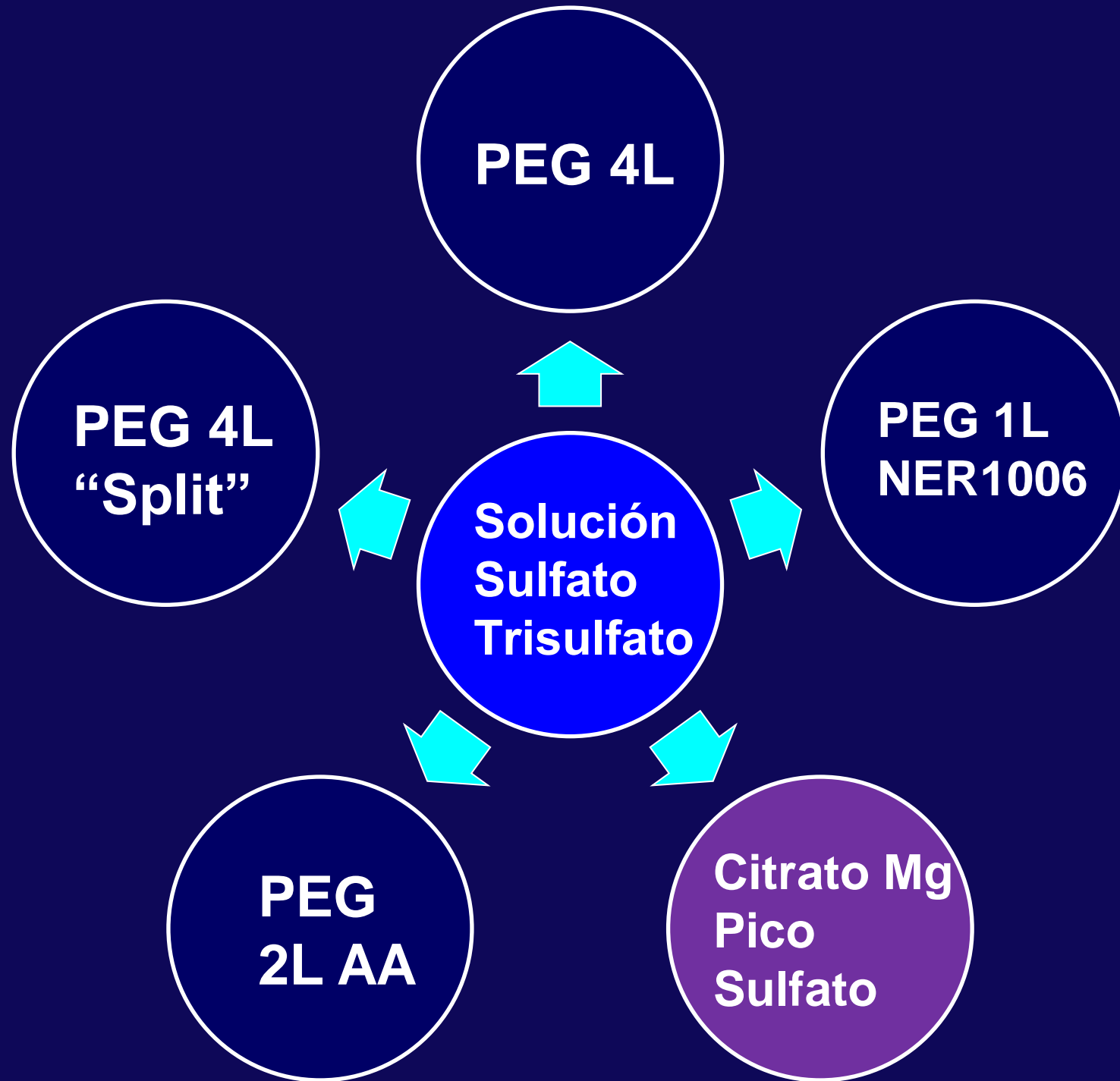
+

1000 ml

Colonoscopia por la mañana "Split"
Iniciar 1era dosis 6 pm
Repetir por la mañana 5h antes
Terminar 2h antes de la colonoscopia

Colonoscopia por la tarde
Preparación por la mañana
1era dosis Repetir en 2 horas

Agua. Te, café
Gaseosas
Jugos de frutas
Sin pulpa, no rojos
Caldos
NO: leche



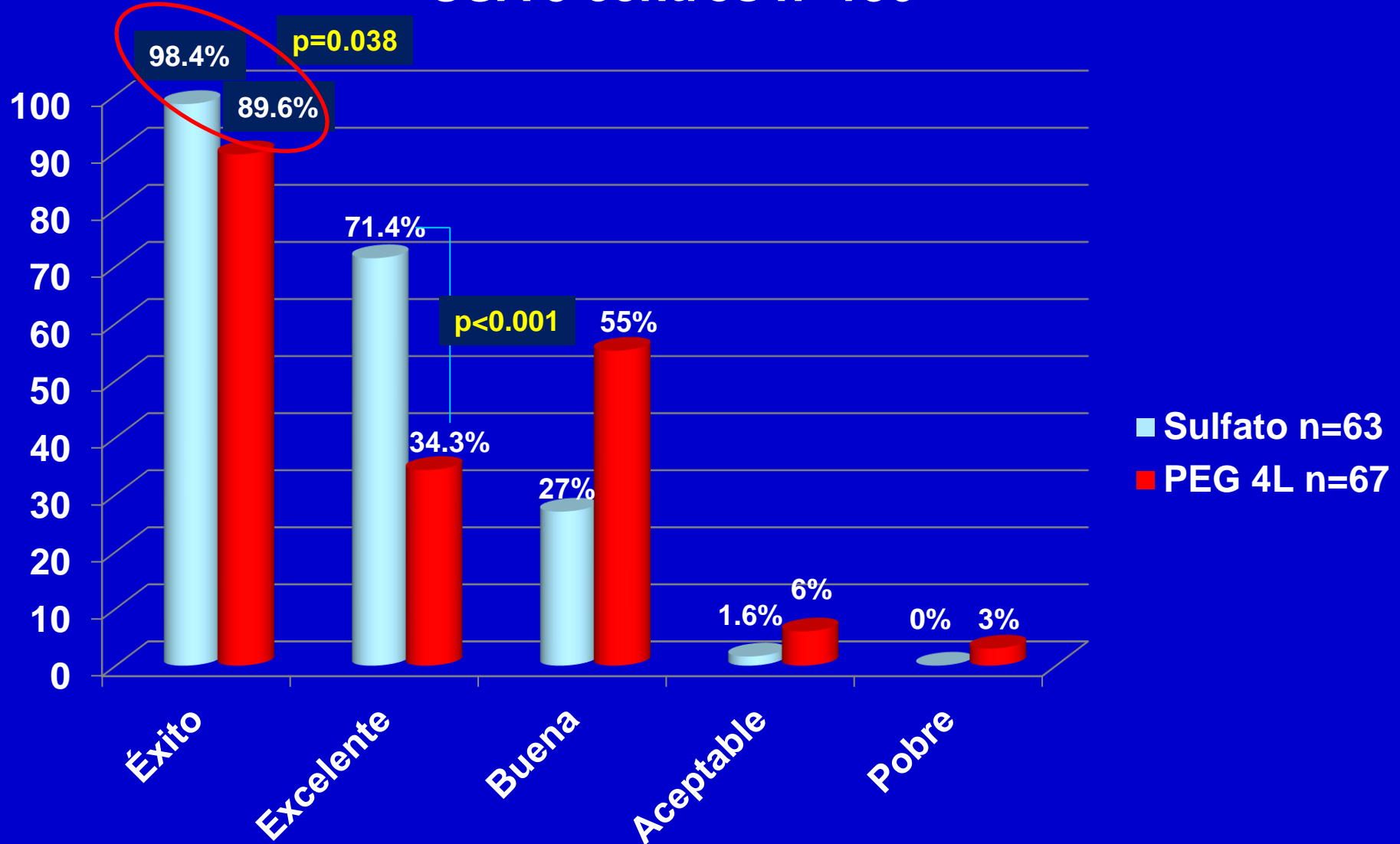
PEG dosis estándar de 4 L, dosis única

A randomized clinical study comparing reduced-volume oral sulfate solution with standard 4-liter sulfate-free electrolyte lavage solution as preparation for colonoscopy

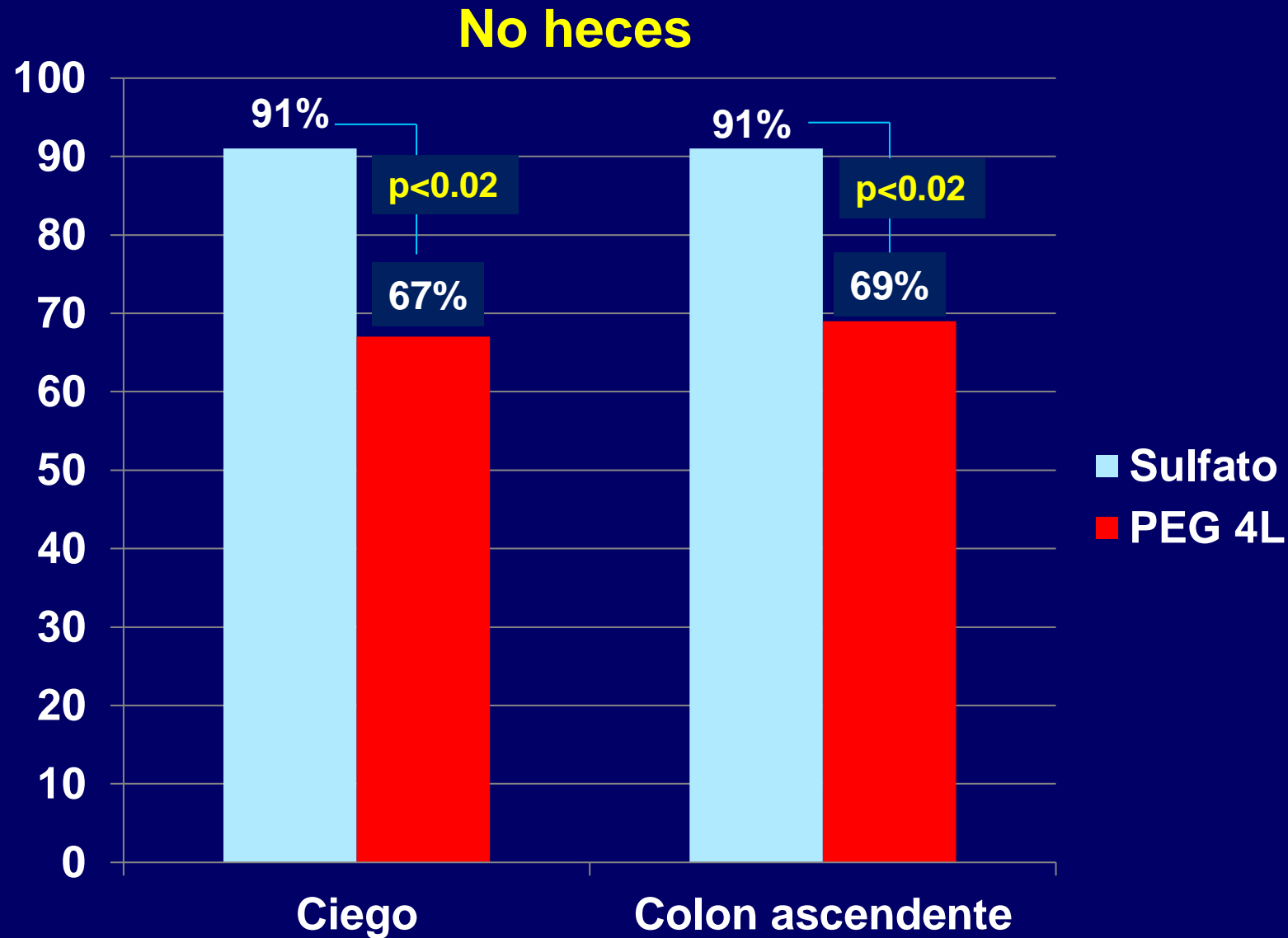
Douglas K. Rex, MD,* Jack A. Di Palma, MD,* Reynaldo Rodriguez, DO, John McGowan, MPH,
Mark Cleveland, PhD

Gastrointest Endosc 2010;72:328-36

Sulfato oral dividido ("split") Vs PEG 4L dosis única PM USA 5 centros n=136

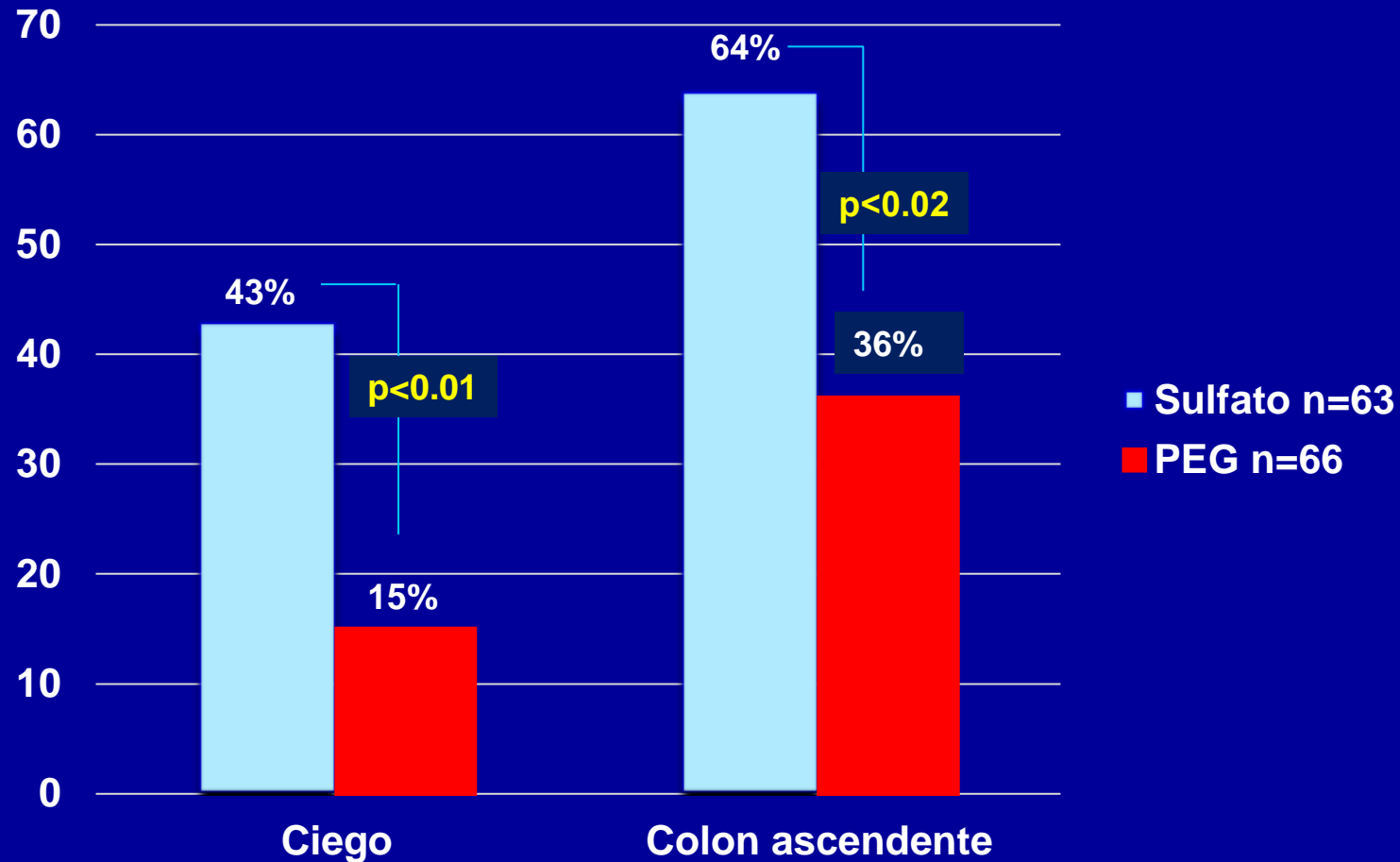


Sulfato oral dividido ("split") Vs PEG 4L dosis única PM USA 5 centros n=136



Sulfato oral dividido ("split") Vs PEG 4L dosis única PM USA 5 centros n=136

No líquido residual



Safety and Efficacy of Low-Volume Preparation in the Elderly: Oral Sulfate Solution on the Day before and Split-Dose Regimens (SEE SAFE) Study

Min Seob Kwak¹, Jae Myung Cha¹, Hyo-Joon Yang², Dong Il Park², Kyeong Ok Kim³, Jun Lee⁴, Jeong Eun Shin⁵, Young-Eun Joo⁶, Jongha Park⁷, Jeong-Sik Byeon⁸, Hyun Gun Kim⁹, Intestinal Cancer Study Group of the Korean Association for the Study of Intestinal Diseases (KASID)

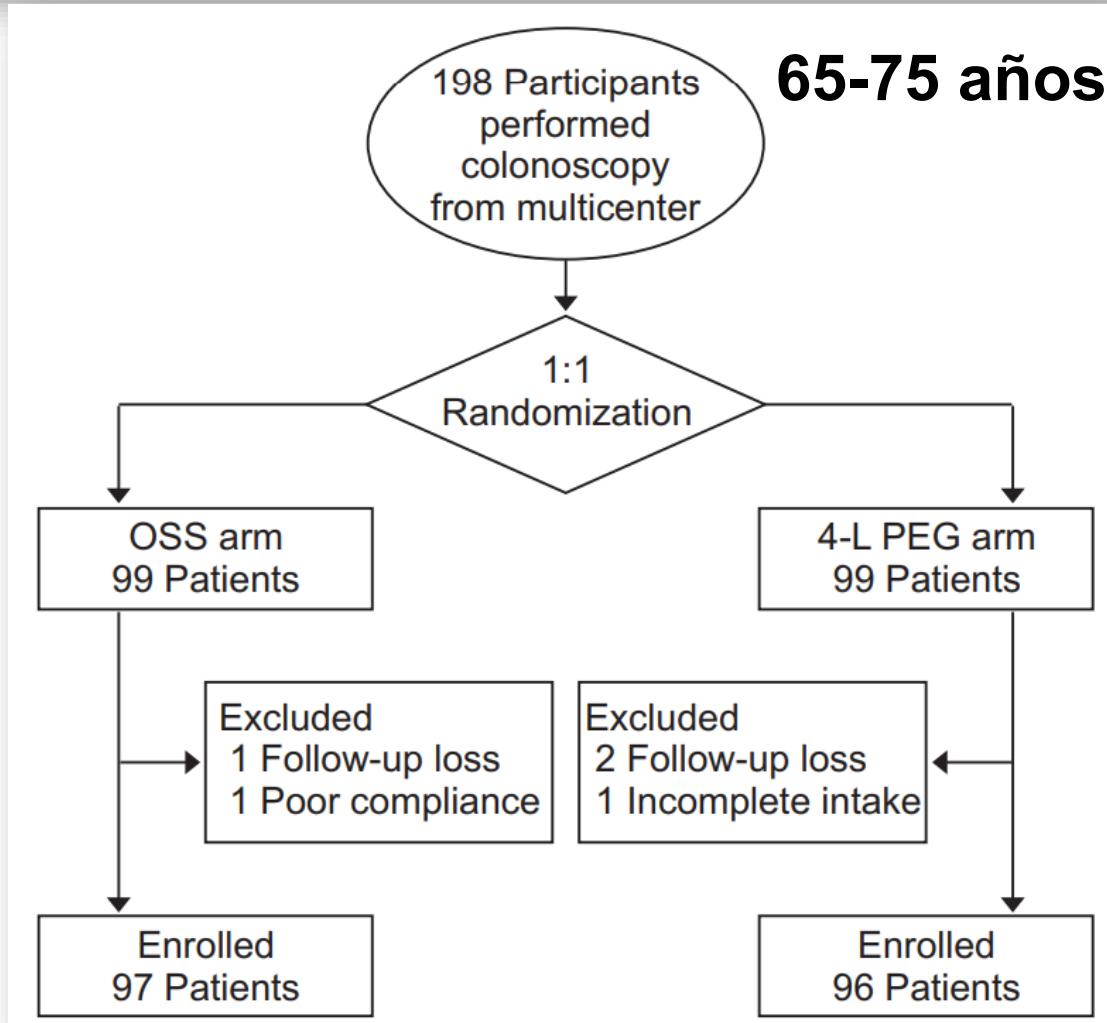


Table 2. Bowel Cleansing Efficacy as Assessed by the Boston Bowel Preparation Scale

Bowel cleansing	OSS	4-L PEG	p-value
Boston Bowel Preparation Scale			
Total	7.9±1.3	7.4±1.3	0.010
Right colon*	2.6±0.5	2.3±0.5	0.001
Transverse colon [†]	2.7±0.5	2.6±0.5	0.177
Left colon [‡]	2.7±0.5	2.6±0.7	0.210
Primary efficacy success			0.747
Adequate	93 (95.9)	91 (94.8)	
Inadequate	4 (4.1)	5 (5.2)	

Table 5. Tolerability and Acceptability of the Preparation Agents

Acceptability	OSS	4-L PEG	p-value
Satisfaction for the preparation			
Taste	6.2±1.9	5.9±2.2	0.328
Amount	7.7±2.1	6.4±2.8	<0.001
Feeling	6.7±2.1	5.8±2.5	0.007
Willingness to repeat same preparation			<0.001
Acceptable	90 (92.8)	65 (67.7)	
Not acceptable	7 (7.2)	31 (32.3)	
Amount of solution actually taken			1.000
Complete	97 (100.0)	96 (100.0)	
Incomplete	0	0	
Overall satisfaction	7.7±1.5	6.8±2.1	0.001

Table 3. Clinical Safety Profiles

Clinical adverse events	OSS	4-L PEG	p-value
Gastrointestinal event			
Nausea	0.8±1.9	0.6±1.7	0.358
Vomiting	0.1±0.8	0.3±1.3	0.170
Abdominal pain	0.7±1.7	0.5±1.7	0.634
Abdominal distension	0.5±1.7	0.5±1.7	0.634
Fecal incontinence	0.0±0.0	0.0±0.0	0.634
Aphthous ulcers	0.0±0.0	0.0±0.0	1.000
Neurologic event			
Sleep disturbance	0.5±1.6	0.6±1.7	0.864
Numbness	0.0±0.1	0.1±0.5	0.434
General weakness	0±0.0	0±0.0	NA
Seizure	0±0.0	0±0.0	NA
Mental change	0±0.0	0±0.0	NA
Thirstiness	0.8±1.9	0.6±1.7	0.358

Similar perfil de seguridad

Table 4. Laboratory Safety Profiles

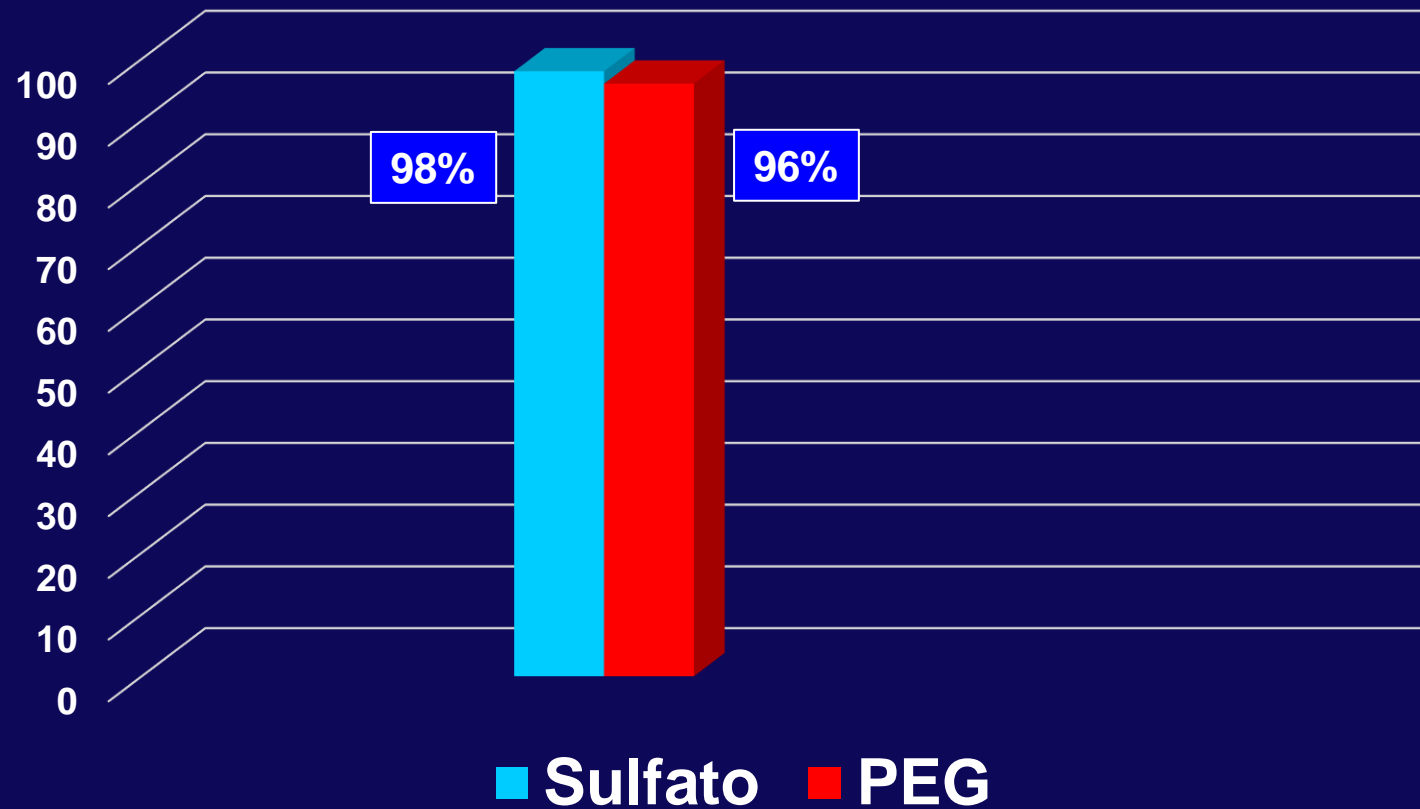
Variable	OSS			p-value	4-L PEG	
	Before	p-value	After		Before	p-value
Laboratory results						
Renal function profiles						
BUN, mg/dL	16.9±5.9	<0.001	14.5±4.6		14.9±5.0	<0.001
Creatinine, mg/dL	0.9±0.2	0.205	0.9±0.2		0.9±0.3	0.684
MDRD GFR, mL/min	84.4±23.7	0.57	84.4±23.7		84.9±24.8	0.187
AKI						
Electrolyte profiles						
Calcium, mg/dL	9.1±0.5		9.1±0.5		9.1±0.6	0.037
Phosphate, mg/dL	3.5±0.6	0.177	3.5±0.6		3.5±0.5	0.909
Magnesium, mg/dL	2.2±0.2	0.068	2.2±0.2		2.2±0.3	0.490
Sodium, mg/dL	141.3±3.0	0.021	140.4±3.2		140.9±2.4	0.002
Potassium, mmol/L	4.8±4.2	0.829	4.6±3.8		4.7±4.2	0.216
Chloride, mmol/L	105.0±10.4	0.030	102.6±3.4		103.0±10.9	0.285

**Similar : No alteraciones
Importantes**

Sulfato (Na, Mg, K) *versus*
PEG 4 litros dosis divididas (*“split”*)
Boston

Randomized trial comparing oral sulfate solution with 4-L polyethylene glycol administered in a split dose as preparation for colonoscopy

Preparación adecuada



Yangg HJ, J Gastroenterol Hepatol 2017;32: 12–18

Randomized trial comparing oral sulfate solution with 4-L polyethylene glycol administered in a split dose as preparation for colonoscopy

Boston por segmentos %

Colon izquierdo	Sulfato	PEG
3	53.5%	50%
2	44.4%	46%
1	1%	2%
0	1%	2%
Colon Transverso		
3	89.9%	84.0%
2	9.1%	15.0
1	0%	0%
0	1%	1%
Colon Derecho		
3	72.7%	66%
2	26.3%	34.0%
1	0%	0%
0	0%	0%

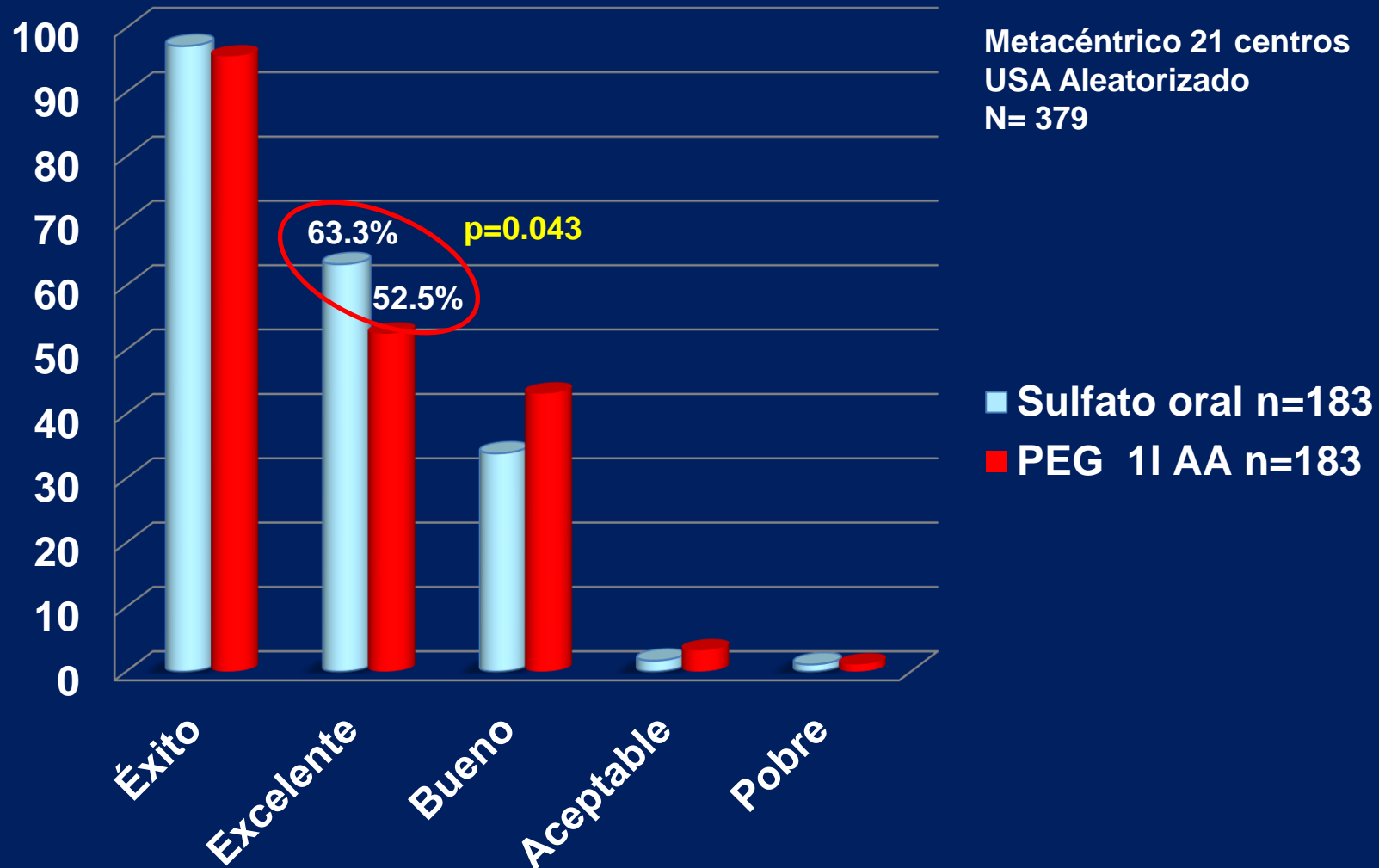
Randomized trial comparing oral sulfate solution with 4-L polyethylene glycol administered in a split dose as preparation for colonoscopy

Hyo-Joon Yang,* Soo-Kyung Park,* Jee Hyun Kim,[†] Jong Pil Im,[†] Dong Han Yeom,[‡] Geom Seog Seo[‡] and Dong Il Park*

Mejor tolerancia	OSS group (n = 99) n (%)	PEG group (n = 100) n (%)	P value
Acceptance (difficulty in taking study agent)			0.039
1 Ninguna dificultad	54 (54.5)	40 (40.0)	
2 Alguna dificultad	39 (39.4)	45 (45.0)	
3 Mucha dificultad	6 (6.1)	15 (15.0)	
Compliance			0.038
Optimal (100%)	97 (98.0)	93 (93.0)	
Good (≥75%)	1 (1.0)	7 (7.0)	
Poor (<75%)	1 (1.0)	0 (0.0)	
Satisfaction, mean (SD)	7.2 (1.9)	6.1 (2.5)	<0.001

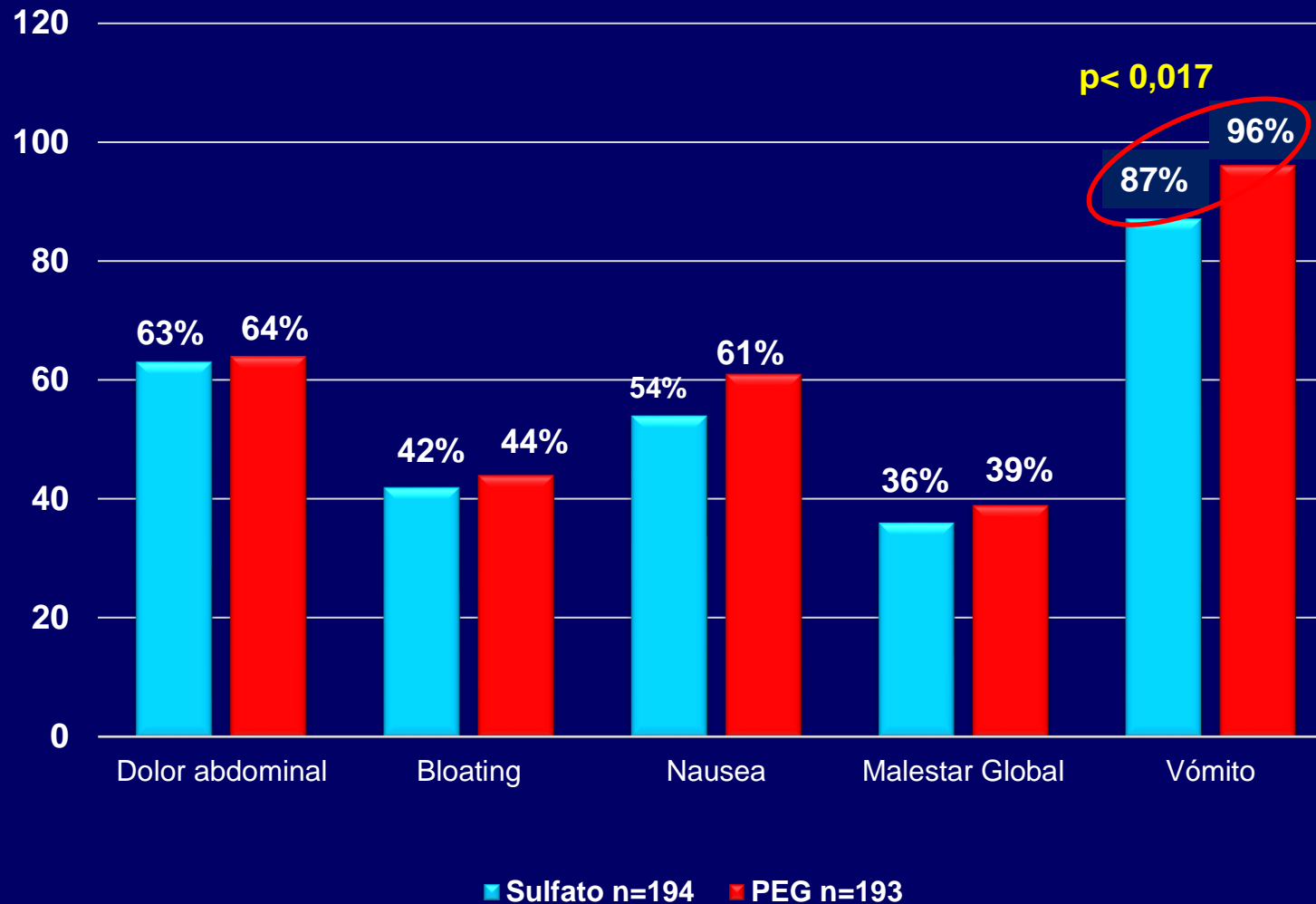
Sulfato (Na, Mg, K) Versus PG 2L Acido Ascórbico

Dosis divididas (Split): PM-AM

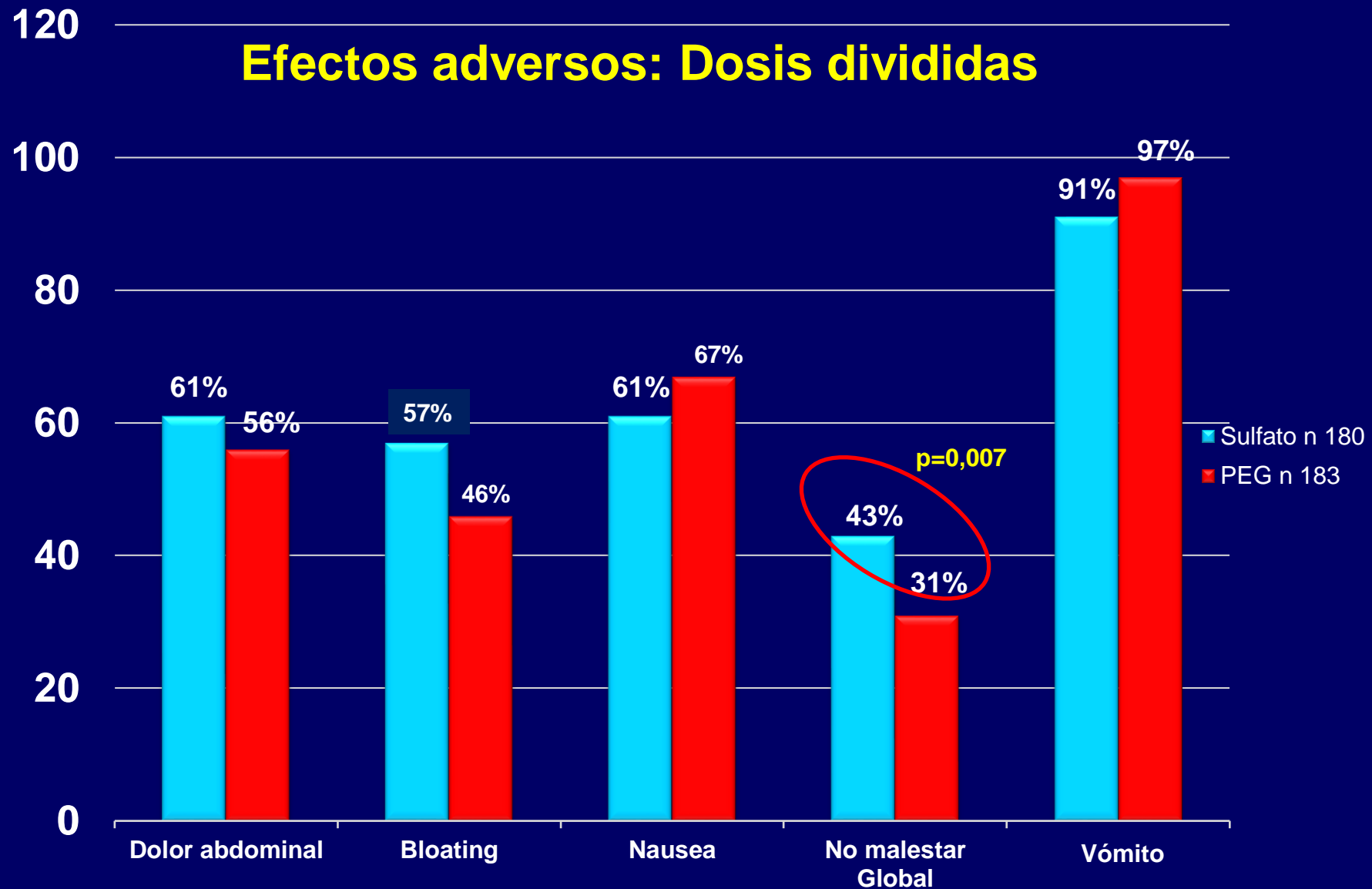


Sulfato (Na, Mg, K) Versus PG 2L AA

Efectos adversos: Dosis única PM antes del examen



Sulfato (Na, Mg, K) Versus PG 2L AA





Solución de Sulfato

Menos frecuente preparación inadecuada

Más rápida llegada al ciego

Ji Hyung Nam*, Seok Bo Hong*, Yun Jeong Lim, Seongju Lee, Hyoun Woo Kang, Jae Hak Kim and Jin Ho Lee

Department of Internal Medicine, Dongguk University Ilsan Hospital, Goyang, Korea

	Total (n=167)	OSS (n=106)	PEG-AA (n=61)	p-value
Age (yr), mean±SD	55.3±14.2	55.1±13.8	59.1±14.0	0.008
Male, n (%)	86 (51.5)	58 (54.7)	28 (45.9)	0.272
Hospitalization, n (%)	34 (20.4)	14 (13.2)	20 (32.8)	0.002
Morning colonoscopy, n (%)	25 (15.0)	16 (15.1)	9 (14.8)	0.953
Split-dose, n (%)	115 (68.9)	106 (100)	9 (14.8)	<0.001
Inadequate bowel preparation	33 (19.8)	13 (12.3)	20 (32.8)	0.001
Cecal intubation time (min), mean±SD	6.7±5.3	4.9±3.9	9.8±6.0	<0.001
Adenoma detection rate, n (%)	49 (29.3)	30 (28.3)	19 (31.1)	0.697

OSS, oral sulfate solution; PEG-AA, polyethylene glycol plus ascorbic acid; SD, standard deviation.

Inadecuada preparación Sulfato Vs PEG AA

Subgrupos

Variables	Subgroups	n	Inadequate preparation, n (%)		OR (95% CI)	p-value
			OSS	PEG-AA		
Age	<50 yr	57	7/40 (17.5)	2/17 (11.8)	0.96 (0.16–5.70)	0.959
	≥50 yr	110	6/66 (9.1)	18/44 (40.9)	0.13 (0.04–0.41)	0.001
Sex	Male	86	11/58 (19.0)	9/28 (32.1)	0.58 (0.19–1.79)	0.339
	Female	81	2/48 (4.2)	11/33 (33.3)	0.06 (0.01–0.34)	0.002
Colonoscopy timing	Morning	25	0/16 (0)	1/9 (11.1)	N/A	
	Afternoon	142	13/90 (14.4)	9/52 (36.5)	0.28 (0.11–0.70)	0.006
Hospitalization	Outpatient	133	12/92 (13.0)	2/41 (29.3)	0.30 (0.11–0.77)	0.013
	Inpatient	34	1/14 (7.1)	8/20 (40.0)	0.14 (0.01–1.97)	0.145

Superior a PEG AA

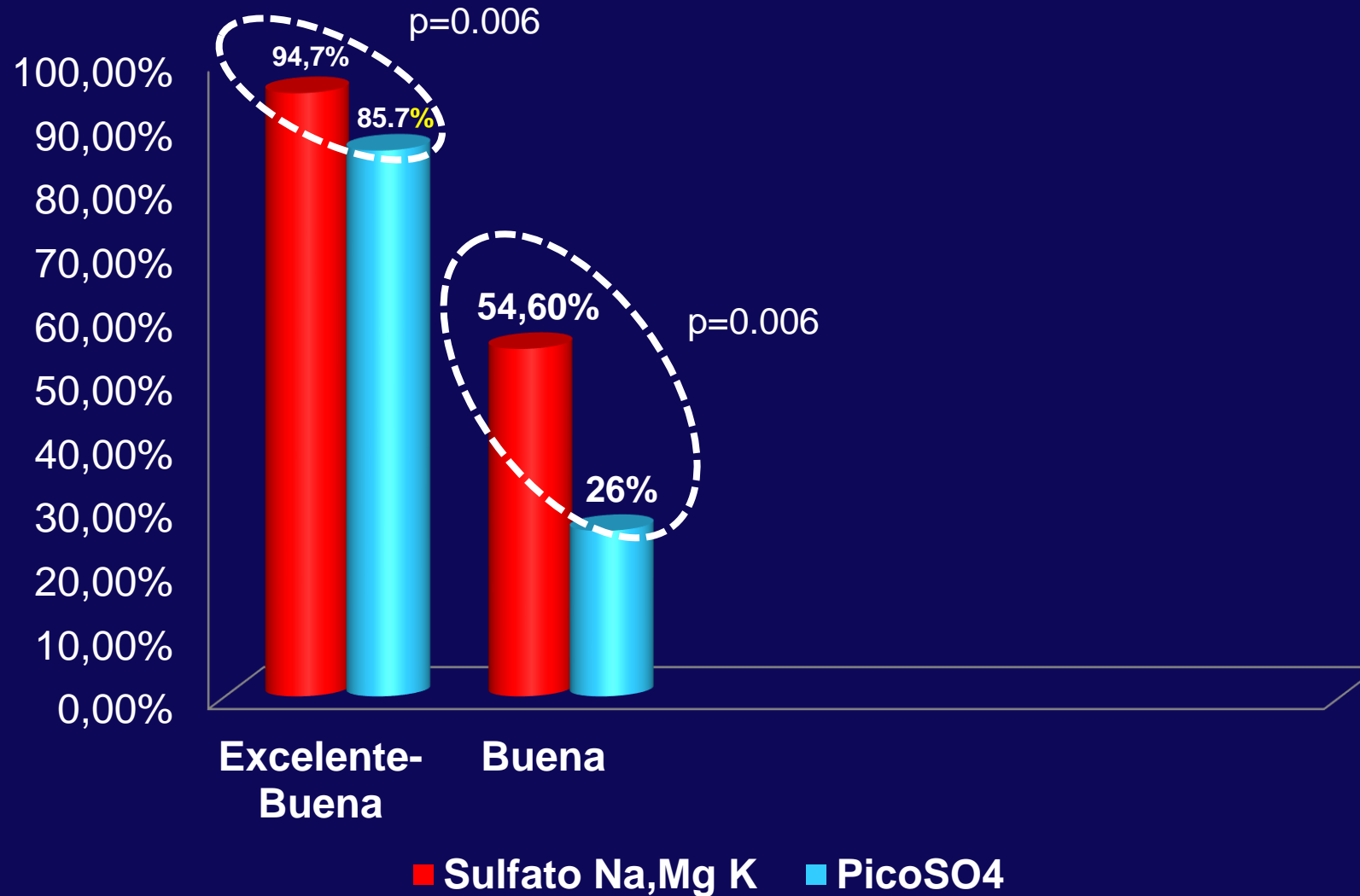
**Mayores de 50 años, Mujeres, Ambulatorios
Colonoscopia por la tarde**

A comparison of oral sulfate solution with sodium picosulfate: magnesium citrate in split doses as bowel preparation for colonoscopy

Douglas K. Rex, MD,¹ Jack A. DiPalma, MD,² John McGowan, MPH,³ Mark vB. Cleveland,

Gastrointest Endosc 2014;80:1113-23

Sulfato oral vs Citrato de Mg con Picosulfato de sodio en dosis divididas



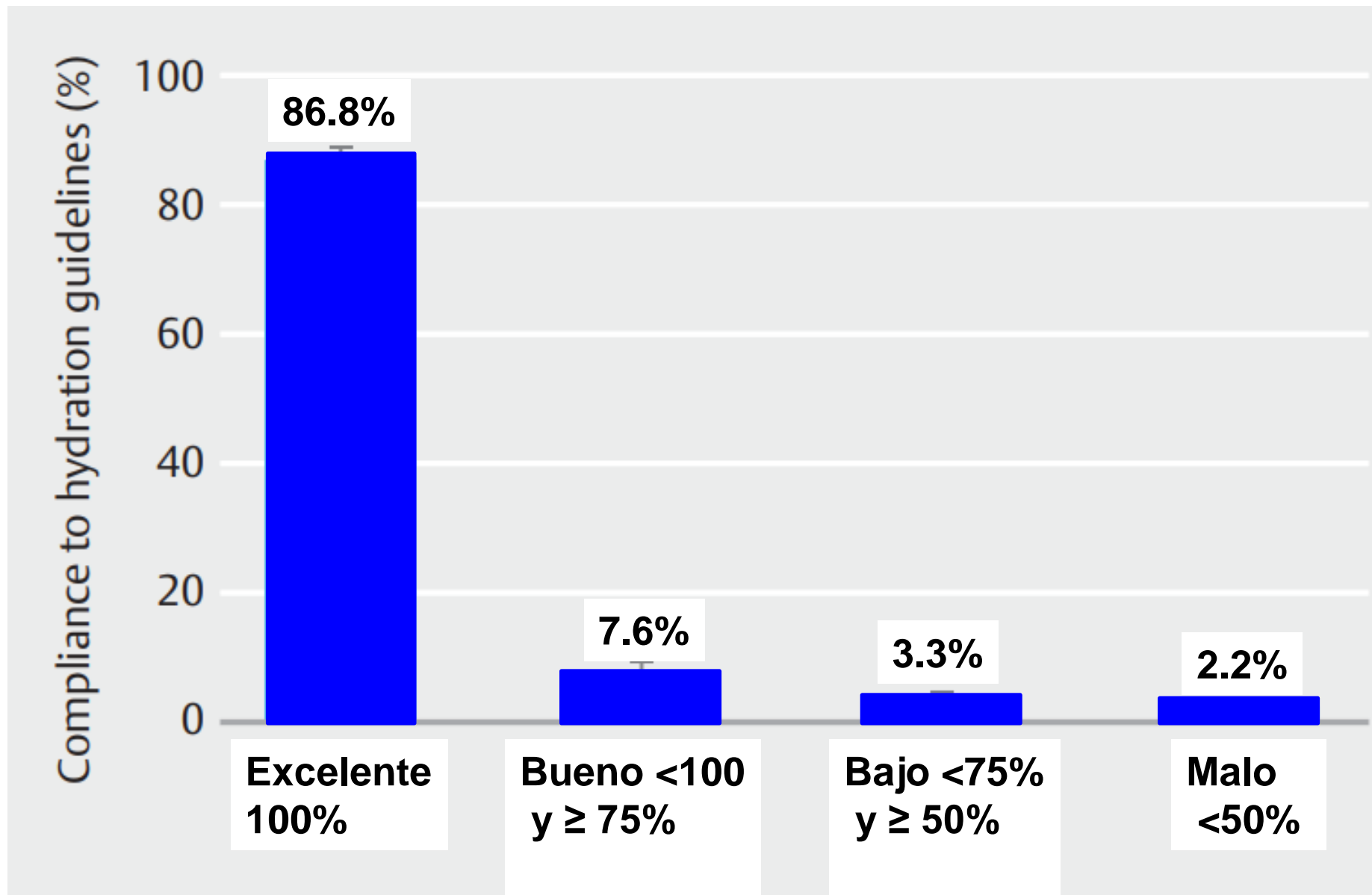
A European, multicentre, observational, post-authorisation safety study of oral sulphate solution: compliance and safety



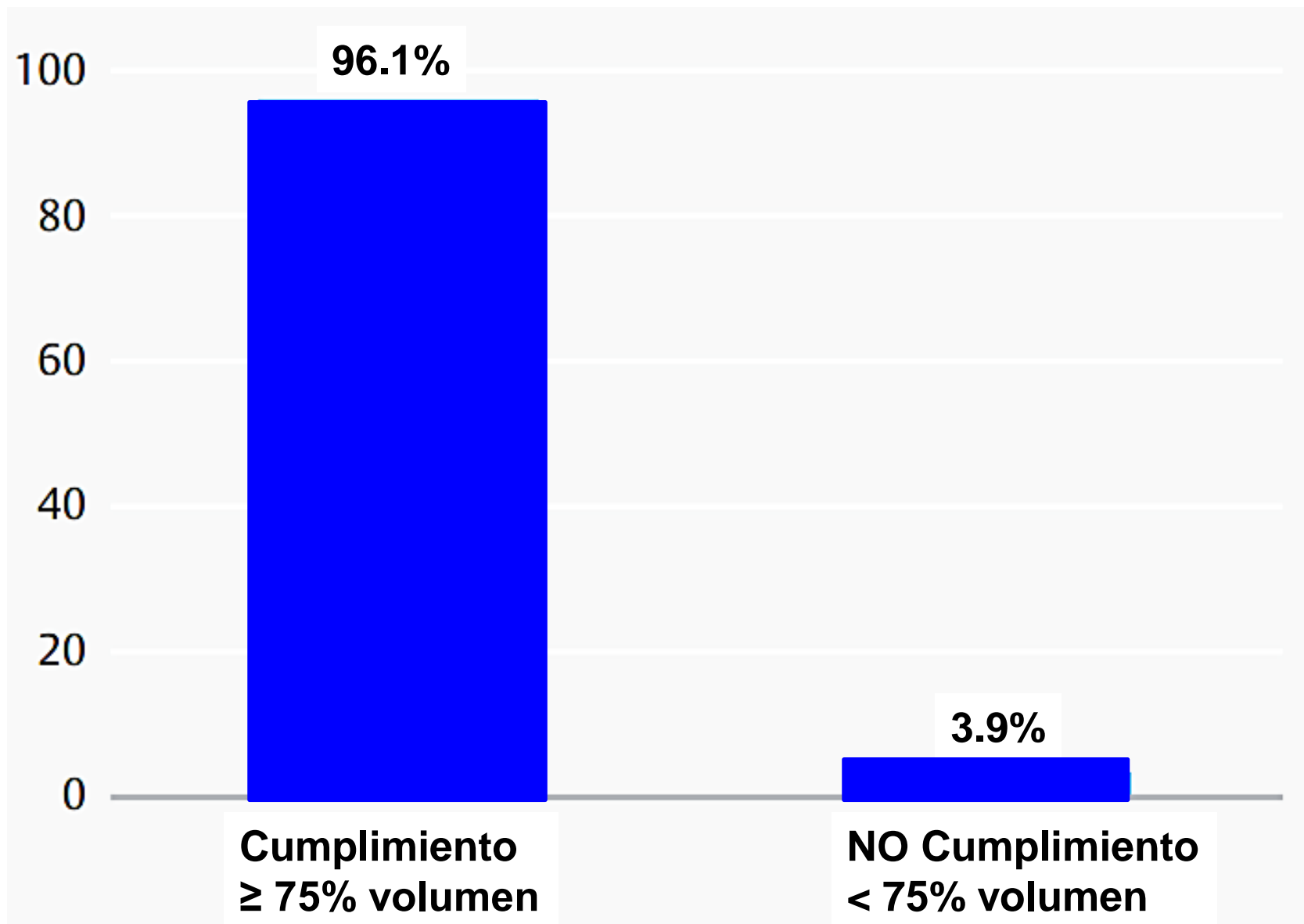
Authors

Jaroslav Regula¹, Manon C.W. Spaander², Stepan Suchanek³, Anne Kornowski⁴, Valerie Perrot⁴, Wolfgang Fischbach⁵, the DUS investigators

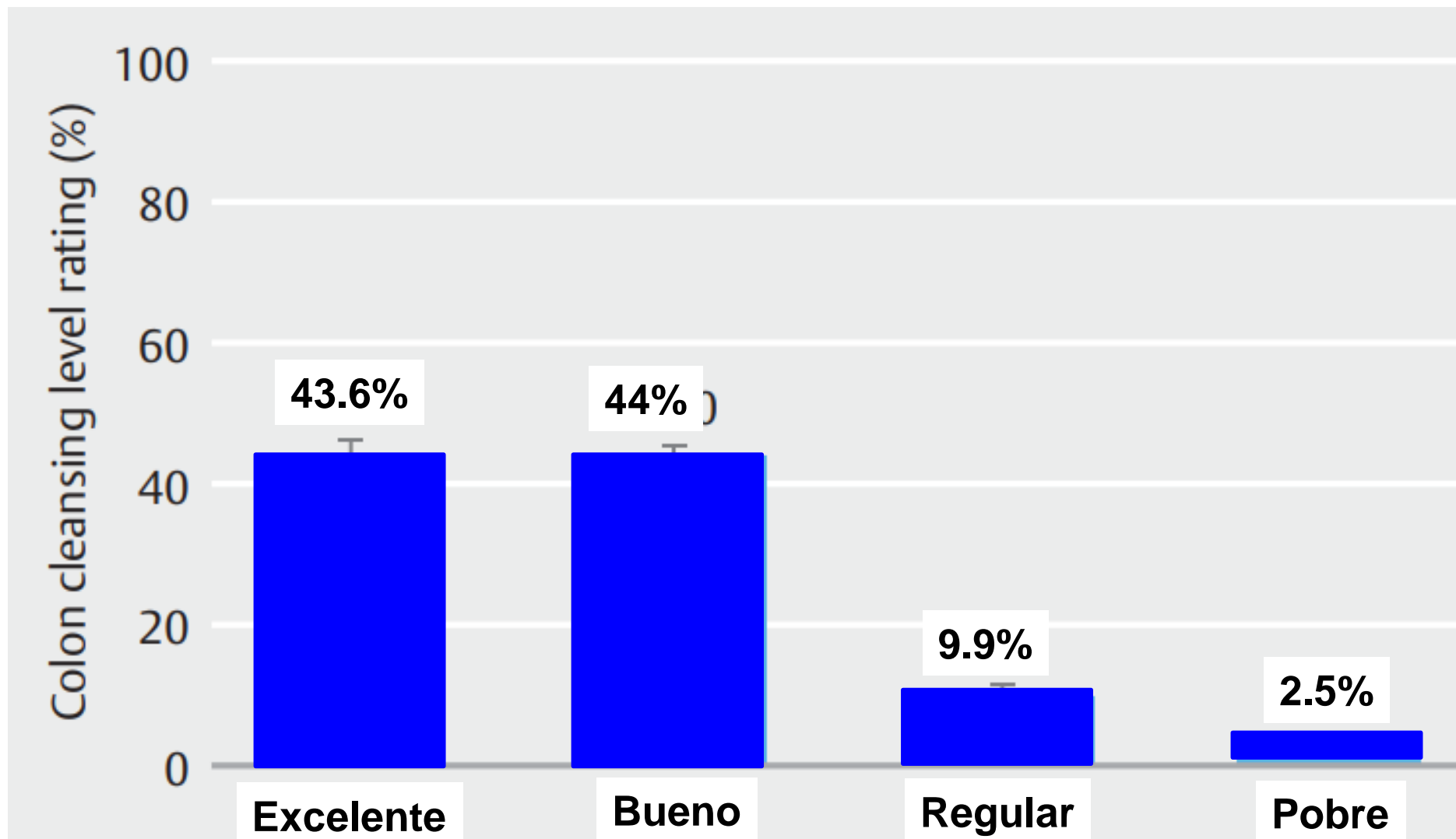
Regula J, Endosc Int Open 2020;8:247–56



Soluciones de sulfato, Cumplimiento



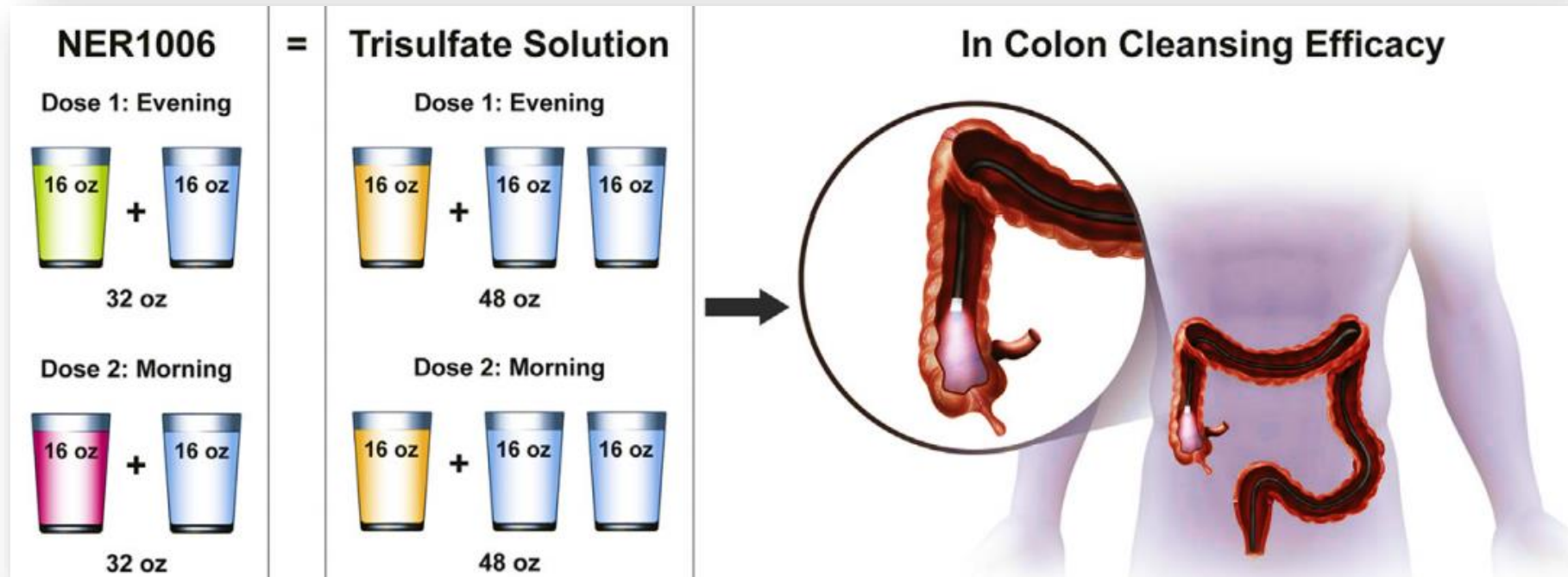
Calidad de la limpieza evaluada por el médico



Novel 1 L polyethylene glycol-based bowel preparation NER1006 for overall and right-sided colon cleansing: a randomized controlled phase 3 trial versus trisulfate

Michael P. DeMicco, MD, FACP, ABAM,¹ Lucy B. Clayton, MSc, FRSC,² Jeff Pilot, BSc, PhD,²
Michael S. Epstein, MD, FACP, AGAF,³ NOCT Study Group

Anaheim, California, USA; Harefield, United Kingdom; Annapolis, Maryland, USA



n=310

n=311

1L producto activo
2L liquido Na: 160.9
297.6 mEq

DeMicco MP, Gastrointest Endosc 2018;87:677-87

Efectos adversos

	NER1006 Trisulfate	
Patients, n	262	265
TEAEs, number of events	118	67
Patients with related TEAEs, n (%)	39 (14.9)	25 (9.4)
Patients with specific related TEAEs, n (%)*		
Nausea	16 (6.1)	4 (1.5)
Vomiting	13 (5.0)	5 (1.9)
Dehydration	6 (2.3)	1 (0.4)
Patients with related severe TEAEs, n (%)†	3 (1.1)	1 (0.4)
Patients with related serious TEAEs, n (%)	0	0
Deaths, n (%)	0	0
Sodio elevado	103 (39.3%)	3 (1.1%)

Hyperosmotic low-volume bowel preparations: Is NER1006 safe?

To the Editor: **Rex D. Gastrointest Endosc 2019;89:656-8**

NER1006 is clinically safe



To the Editor: **Repicci A, Gastrointest Endosc 2019;89:908-9**

We thank Dr Rex¹ for his interest in NER1006 and would like to take this opportunity to address his concerns.

The hypothesis that “the rise in Na⁺ most likely results

Situaciones especiales

Insuficiencia cardíaca

Insuficiencia renal avanzada

<30 ml/min/1.73m²

Cirrosis con ascitis

EII activa

PEG con electrolitos

Rex D K, Clin Gastroenterol Hepatol 2014;12:458-62

Embarazadas

**PEG con electrolitos?
Enemas con agua**

<http://www.drugs.com/pregnancy-categories.html>

Mala preparación previa

*Siguió instrucciones?
Tolerancia ? Cambiar a otro*

*Dieta liquida 2 días
Examen AM
PEG 2 días ?*

Perspectiva del Gastroenterólogo



Mensajes para la casa

Calidad en colonoscopia inicia con el colon limpio

Por cada hora de atraso 10% mal preparados

La tolerabilidad facilita la eficacia

Colonoscopia AM: dosis divididas

Colonoscopias PM: preparación por la mañana

Instrucciones verbales y escritas

Simeticona siempre ?

Solución de sulfato alta eficacia 98%

Excelente tolerancia

Muchas gracias!

Low-residual diet versus clear-liquid diet for bowel preparation before colonoscopy: meta-analysis and trial sequential analysis of randomized controlled trials



Xubing Zhang, MD,^{1,*} Qingbin Wu, MD,^{1,*} Mingtian Wei, MD,^{1,*} Yanling Ding, BS,^{2,*} Chaoyang Gu, MD,¹
Sheng Liu, MM,³ Ziqiang Wang, MD, PHD¹

Chengdu, Anqing, Jiangyou, China

GRAPHICAL ABSTRACT

