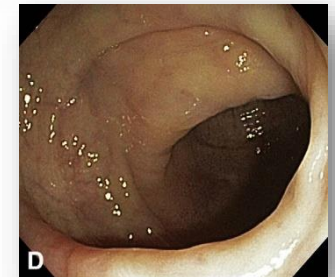
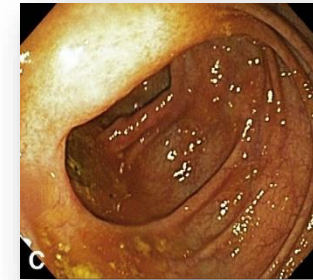
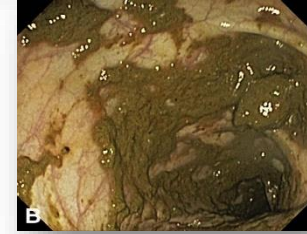
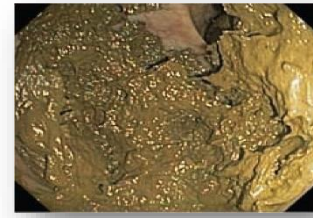


# Preparación para colonoscopia: La eficacia y seguridad ¿Qué dice la evidencia ?



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



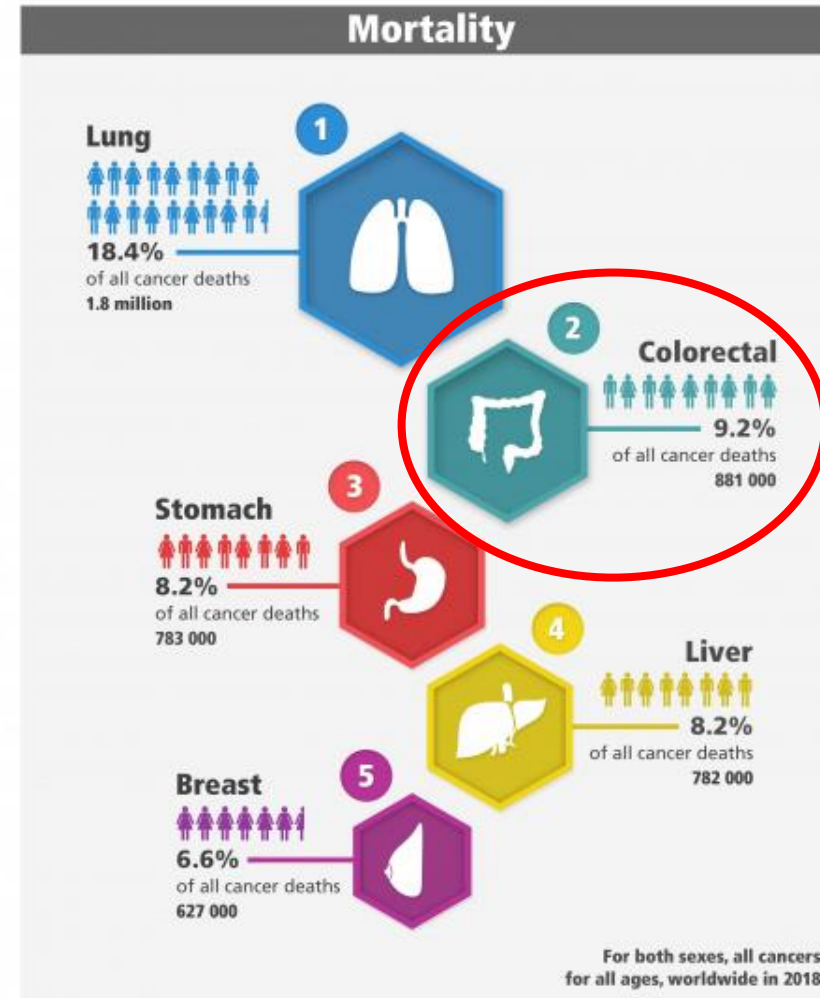
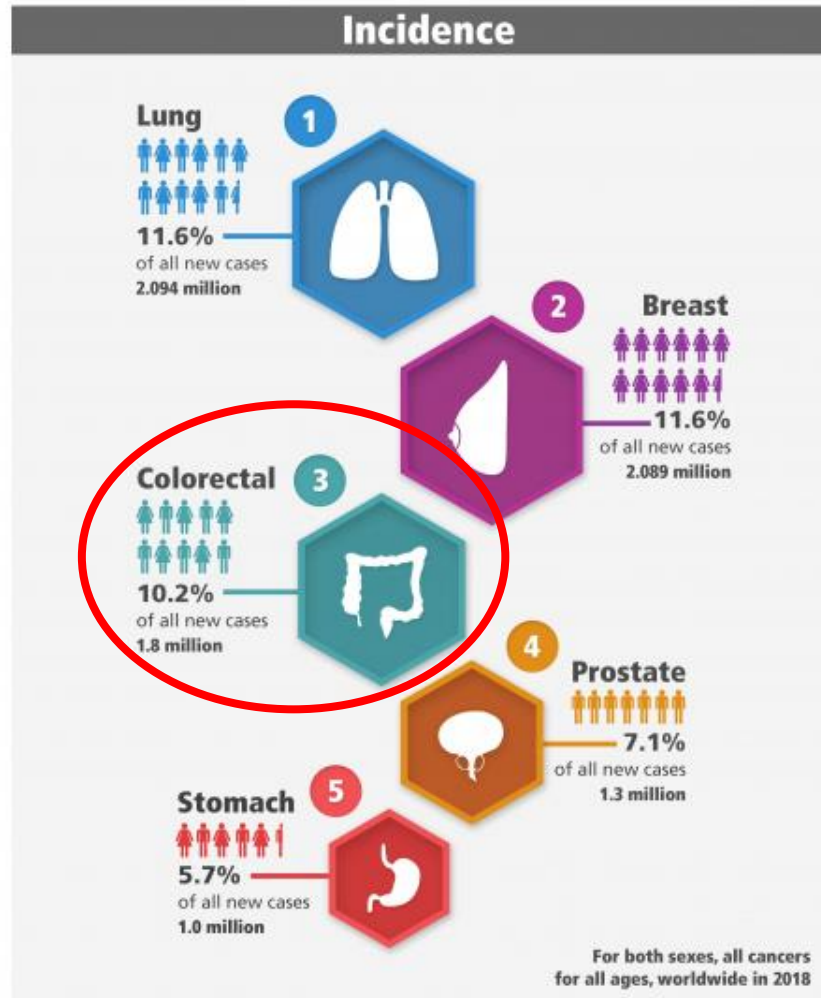
Youtube “William otero gastroenterólogo”



# CANCER TODAY

## The five most commonly diagnosed cancer types

### Percentages of new cancer cases and cancer deaths worldwide in 2018

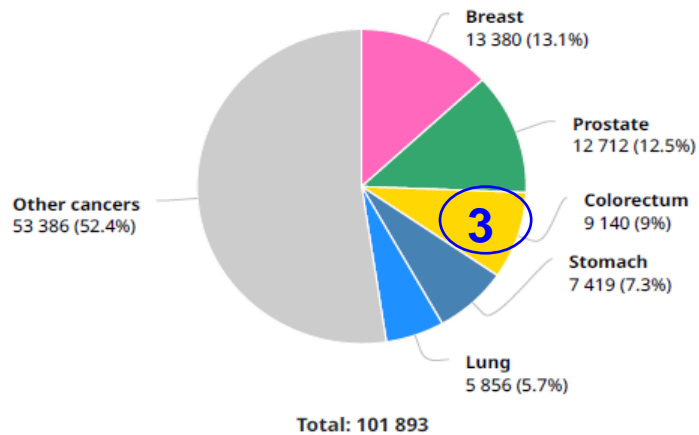


# Cáncer colorectal 2018

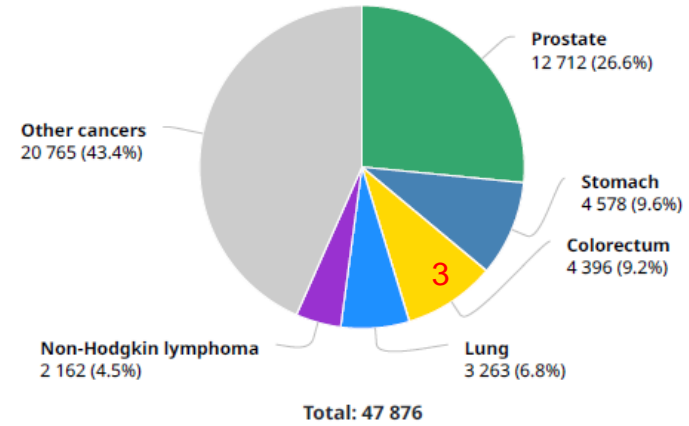
49 464 687



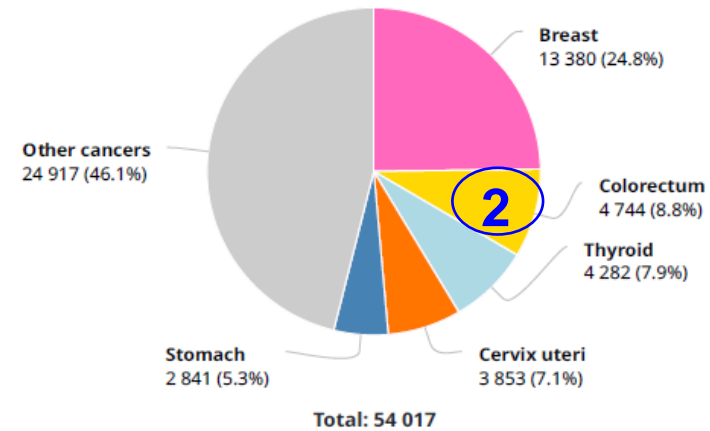
Number of new cases in 2018, both sexes, all ages



Number of new cases in 2018, males, all ages

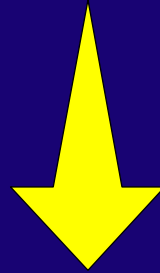


Number of new cases in 2018, females, all ages



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

**USA 6% población general**



**Tendrán CCR**

# Tamización 45 vs 50 años/1000 pacientes tamizados / vida

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

# Tamización “Screening”



46-63% de muertes  
por CCR se relacionan  
**No “escreening”**

# Colonoscopia

---

*No es un examen de rutina*

*No es un trabajo*

*Es una pasión!*

**W. Otero**

***Conocer la  
Historia clínica***

***Conocer la  
indicación***

***Colonoscopia  
Exitosa***

***Familiarizado  
Colonoscopio***

***Adecuada  
Preparación***

***Familiarizado  
Con enfermeras***

***Familiarizado  
Anestesiólogo***



***Todo el personal  
mirando la pantalla***



**Bourke M. Endoscopy Handbook. Gastroenterological Society of Australia, 2016**

# **Enfermera: fundamental!!!**

**Conocer los accesorios y usos  
Correcta posición etc etc**

***Participa activamente y ayuda  
A identificar lesiones !!!!***

# Nurse Observation During Colonoscopy Increases Polyp Detection: A Prospective Study

Harry R. Aslanian, MD<sup>1</sup>, Frederick K. Shiell,  
Priya A. Jamidar, MD<sup>1</sup> and Uzma D. Siddiqui

**OBJECTIVES:** To determine whether

**METHODS:** Consecutive patients undergoing colonoscopy or ph

**RESULTS:** Of 502 patients, 23% had adenoma detection during nurse observation vs. 1.03 polyps per colonoscopy without nurse observation. There was a 2.3-fold increase in the adenoma detection rate with nurse observation.

**CONCLUSIONS:** Nurse observation during colonoscopy increases the number of polyps found per colonoscopy.



Yigang Deng, MPH<sup>2</sup>, Jason N. Rogart, MD<sup>1</sup>,  
and Robert H. Fletcher, MD<sup>1</sup>

**OBJECTIVES:** To determine whether

**METHODS:** Consecutive patients undergoing colonoscopy or ph

**Con el ojo de la enfermera 20-30% más!!!**

**RESULTS:** Of 502 patients, 23% had adenoma detection during nurse observation vs. 1.03 polyps per colonoscopy without nurse observation. There was a 2.3-fold increase in the adenoma detection rate with nurse observation.

**CONCLUSIONS:** Nurse observation during colonoscopy increases the number of polyps found per colonoscopy.

*Gastroenterology* 2013;108:166–172;

# Enfermeras entrenadas concentradas y atentas



# 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

6 min

9 minutos

ASGE/AGA 2015  
ESGE 2019

# Potenciales nuevos indicadores de calidad

**Cáncer colorrectal, perdido pos-colonoscopia**

**Tasa de adenomas avanzados perdidos**

**Tasa de adenomas perdidos**

**Tasa de detección de adenomas avanzados**

**Adenomas por colonoscopia**

**Tasa sde detección de pólipos**



# Travad PIK

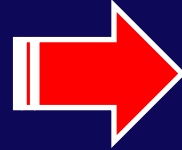
Picosulfato de Sodio 10 mg  
Óxido de Magnesio liviano 3,5 g  
Ácido Cítrico 12 g

Polvo para reconstituir a  
solución oral  
2 sobres



**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**

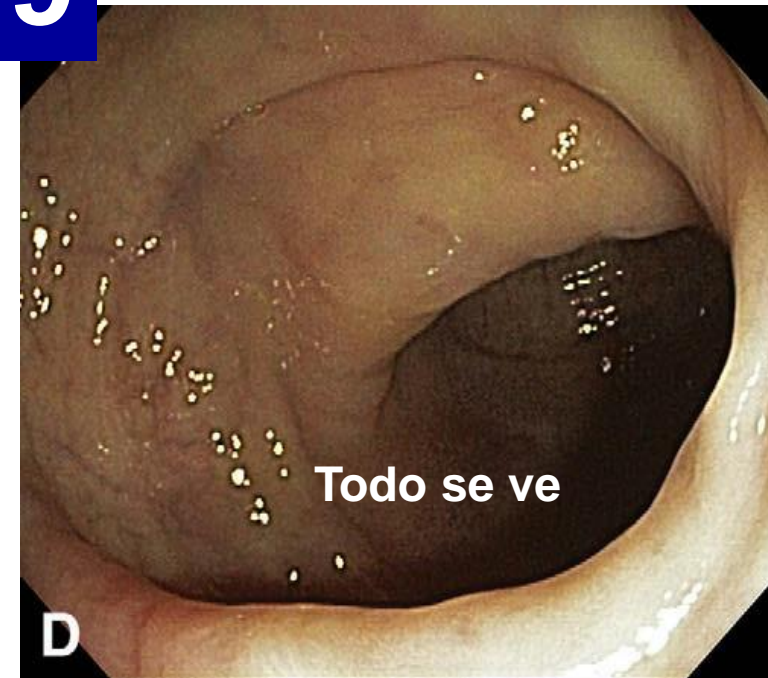
**0**



**1**

**0-9**

**2**

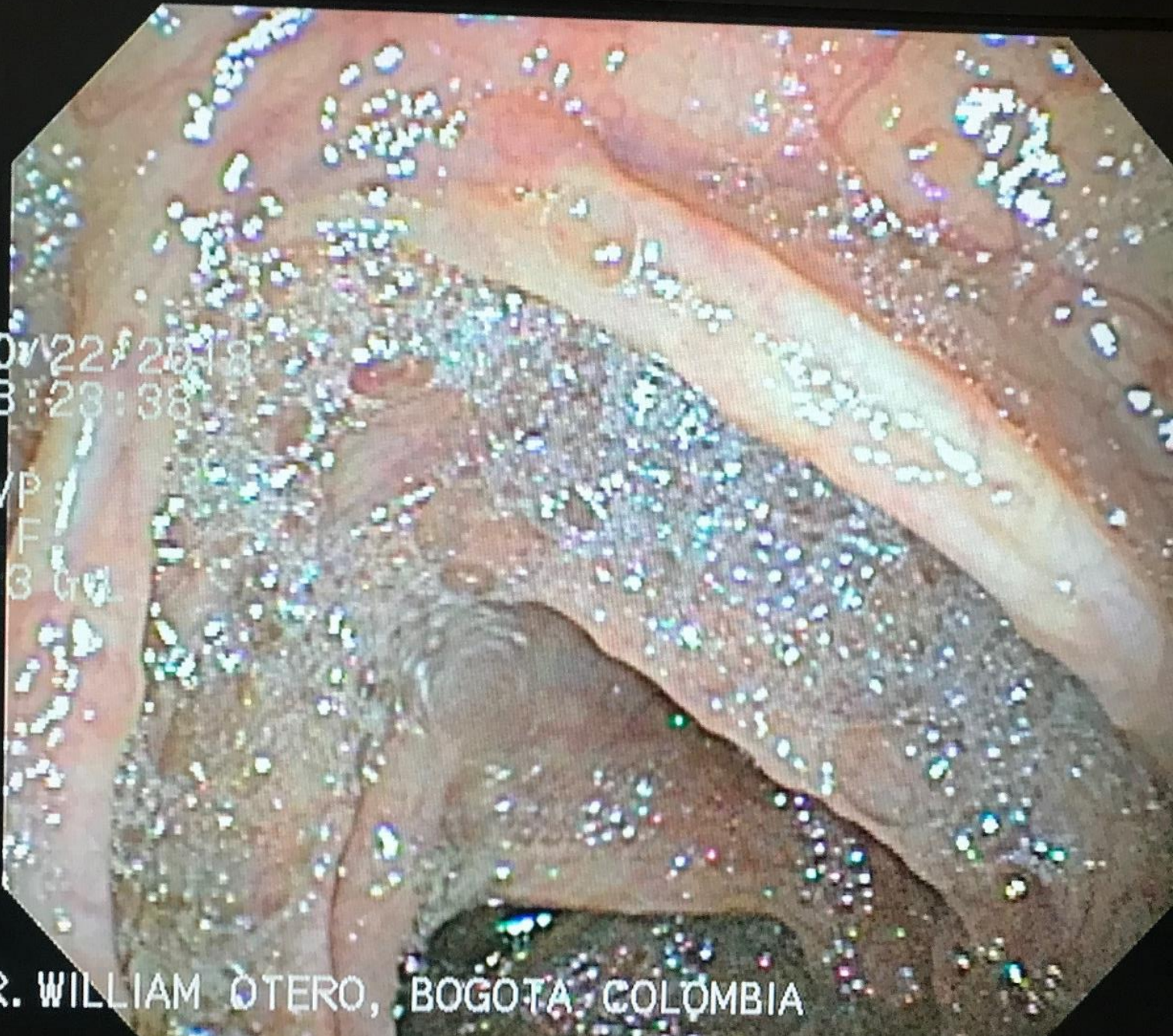


**3**

# Hospital Universitario Nacional, Programa: calidad en colonoscopia



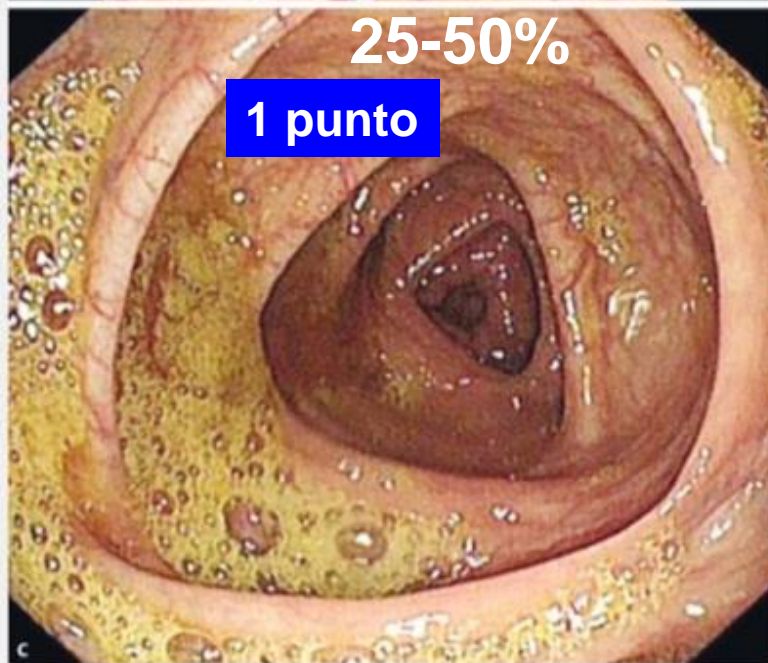
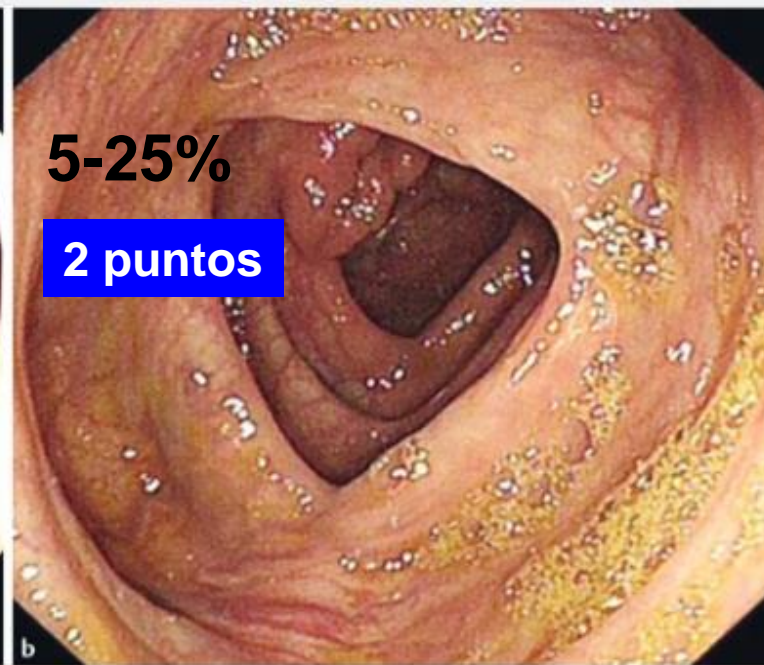
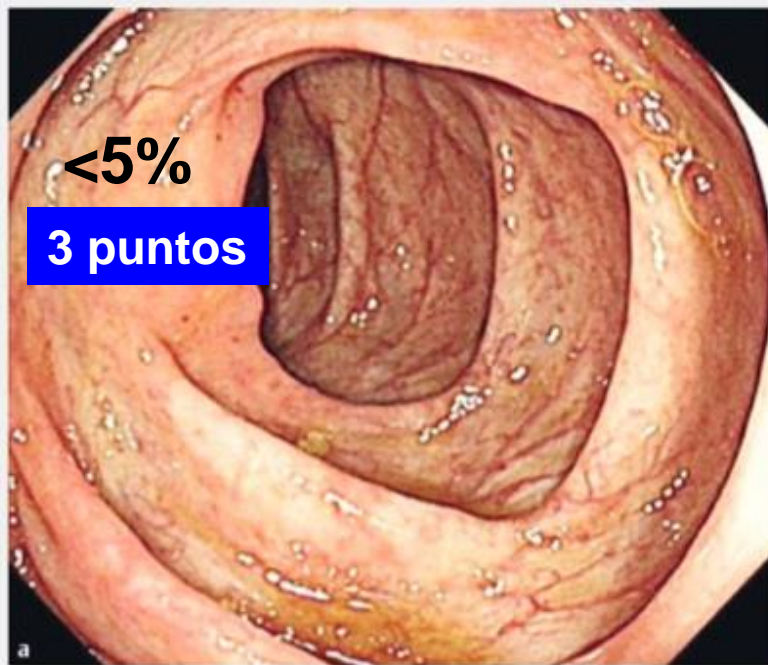
**Cortesía profesor Martín Gómez**

An endoscopic view of the gastrointestinal tract showing a mucosal surface. A large, dark, lobulated polypoid lesion is visible, extending from the mucosal wall. The surrounding mucosa appears normal. The image is overlaid with white text in the lower-left corner.

10/22/2018  
08:23:38

CVP  
D. F.  
Et: 3 Gr

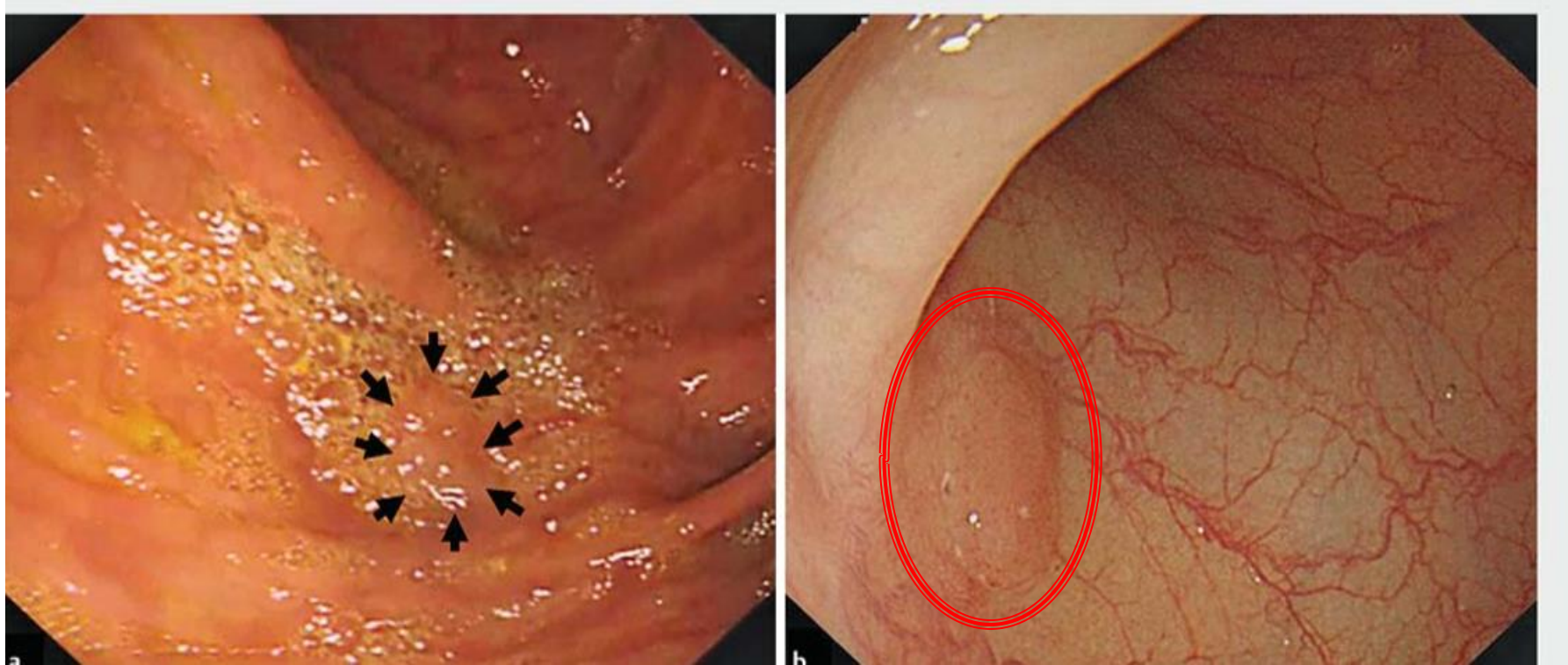
DR. WILLIAM OTERO, BOGOTA, COLOMBIA

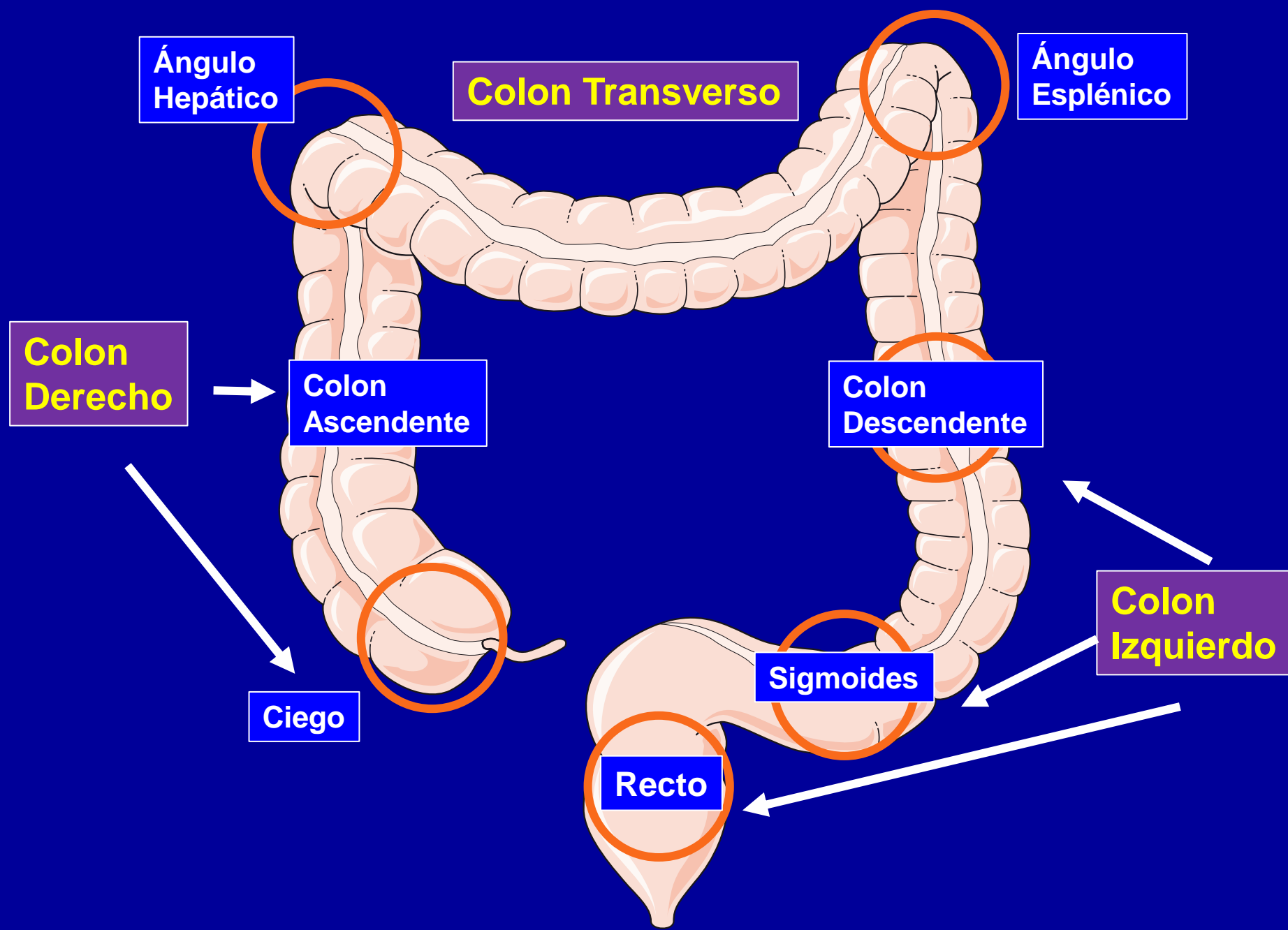


# Impact of preprocedure simethicone on adenoma detection rate during colonoscopy: a multicenter, endoscopist-blinded randomized controlled trial

## Authors

Yu Bai<sup>1,\*</sup>, Jun Fang<sup>1,2,\*</sup>, Sheng-Bing Zhao<sup>1</sup>, Dong Wang<sup>1</sup>, Yan-Qing Li<sup>3</sup>, Rui-Hua Shi<sup>4</sup>, Zi-Qin Sun<sup>5</sup>, Ming-Jun Sun<sup>6</sup>, Feng Ji<sup>7</sup>, Jian-Min Si<sup>8</sup>, Zhao-Shen Li<sup>1</sup>





**Preparación del colon**



**Mal preparados  
20-40%**



**Tasa de error: 35-42%**

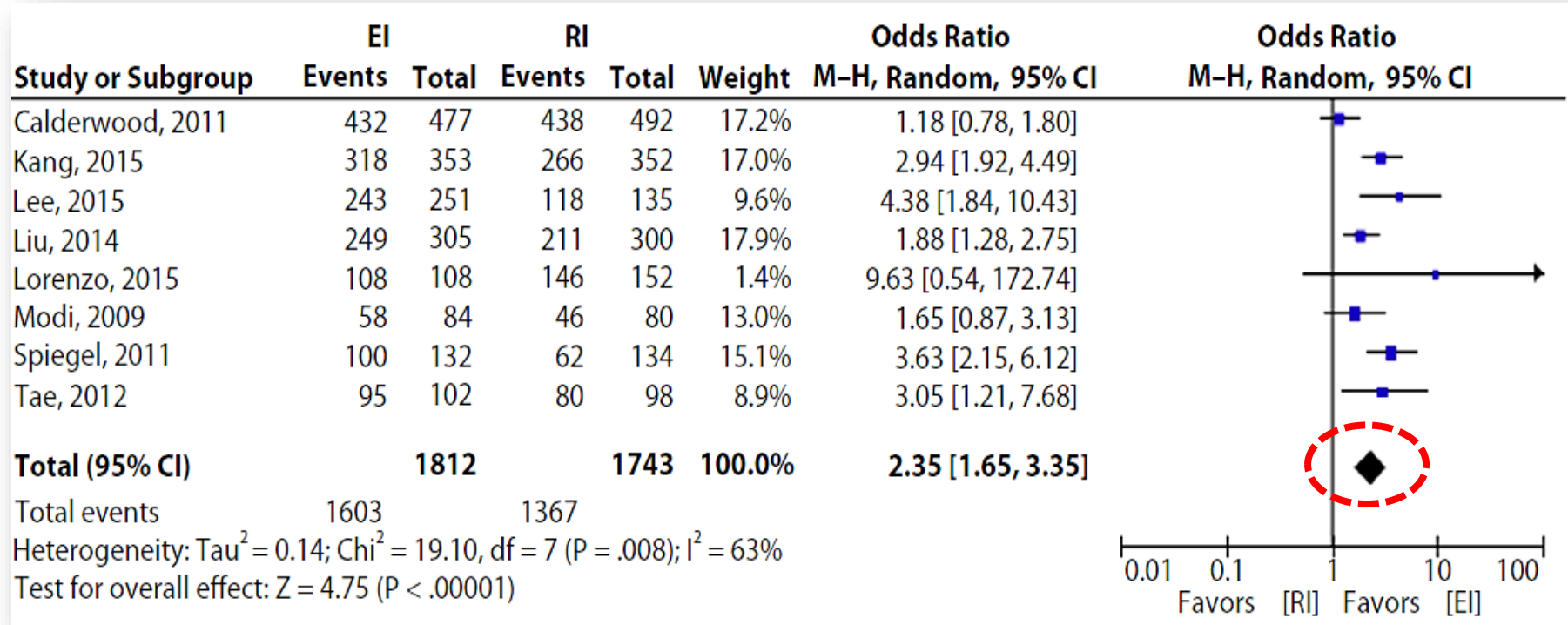
Rex D. Clin Gastroenterol Hepatol 2014;12:458-62  
Lebwohl B, Gastrointest Endos 2011;73:1207-14  
Frohlich F, Gastrointest Endosc 2005;61:378-84

# **Estrategias para mejorar la preparación**

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

Xiaoyang Guo, MD,<sup>1,\*</sup> Zhiping Yang, MD,<sup>1,\*</sup> Lina Zhao, MD,<sup>2,\*</sup> Felix Leung, MD,<sup>3,4</sup> Hui Luo, MD,<sup>1</sup>  
 Xiaoyu Kang, MD,<sup>1</sup> Xin Li, MD,<sup>5</sup> Hui Jia, MD,<sup>1</sup> Shengye Yang, MD,<sup>1</sup> Qin Tao, MD,<sup>1</sup> Yanglin Pan, MD,<sup>1</sup>  
 Xuegang Guo, MD<sup>1</sup>

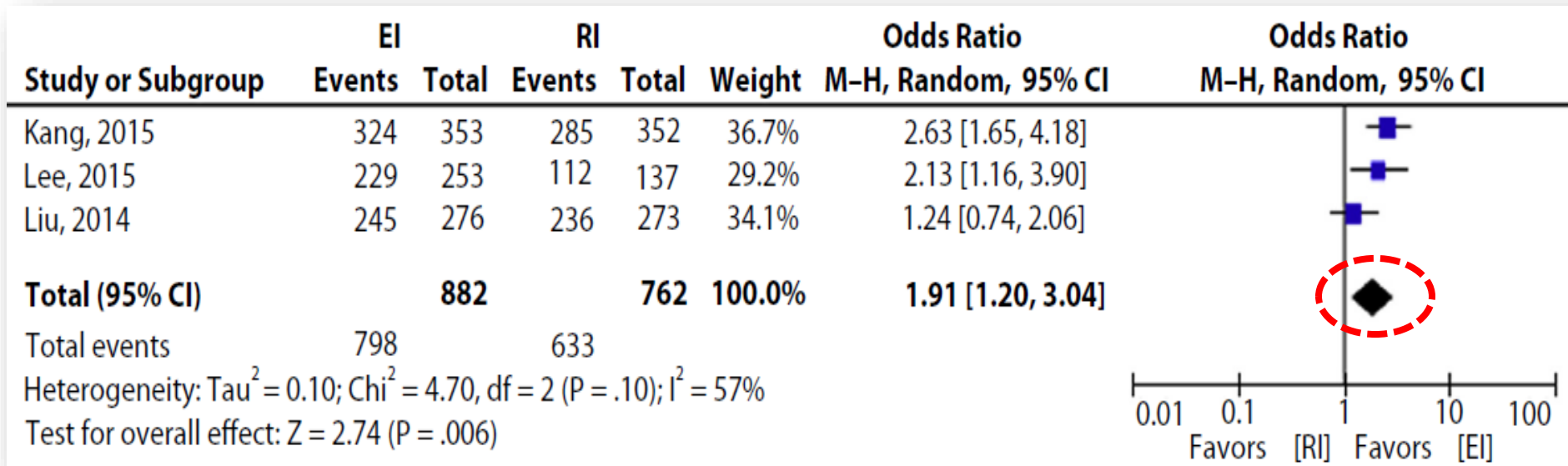
## Calidad de la preparación



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

Xiaoyang Guo, MD,<sup>1,\*</sup> Zhiping Yang, MD,<sup>1,\*</sup> Lina Zhao, MD,<sup>2,\*</sup> Felix Leung, MD,<sup>3,4</sup> Hui Luo, MD,<sup>1</sup>  
 Xiaoyu Kang, MD,<sup>1</sup> Xin Li, MD,<sup>5</sup> Hui Jia, MD,<sup>1</sup> Shengye Yang, MD,<sup>1</sup> Qin Tao, MD,<sup>1</sup> Yanglin Pan, MD,<sup>1</sup>  
 Xuegang Guo, MD<sup>1</sup>

## Evitar Repetir la Colonoscopia



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

Xiaoyang Guo<sup>1,2</sup>, Xin Li<sup>3</sup>, Zhiyan Wang<sup>3</sup>, Junli Zhai<sup>3</sup>, Qiang Liu<sup>1</sup>, Kang Ding<sup>1</sup>, Yanglin Pan<sup>2</sup>\*

**Instrucciones  
Escritas, verbales  
Audiovisual**



## *Preparación del colon*

# **ESGE y ASGE**

**Recomiendan la utilización de ayudas visuales  
Digitales (Celulares, Tablets, páginas web)  
Para aumentar la eficacia de las preparaciones**

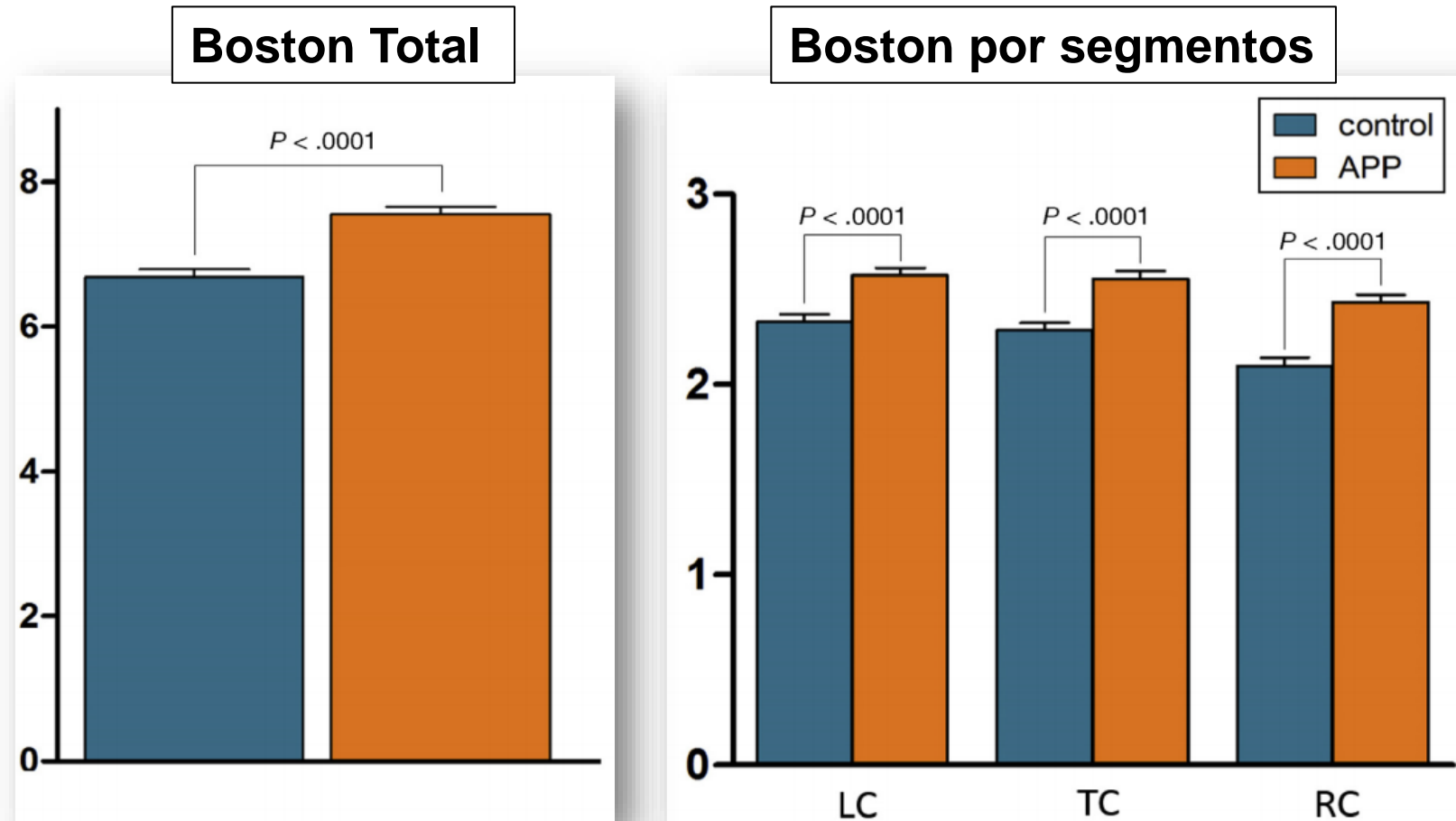
**ESGE 2019  
ASGE 2015**

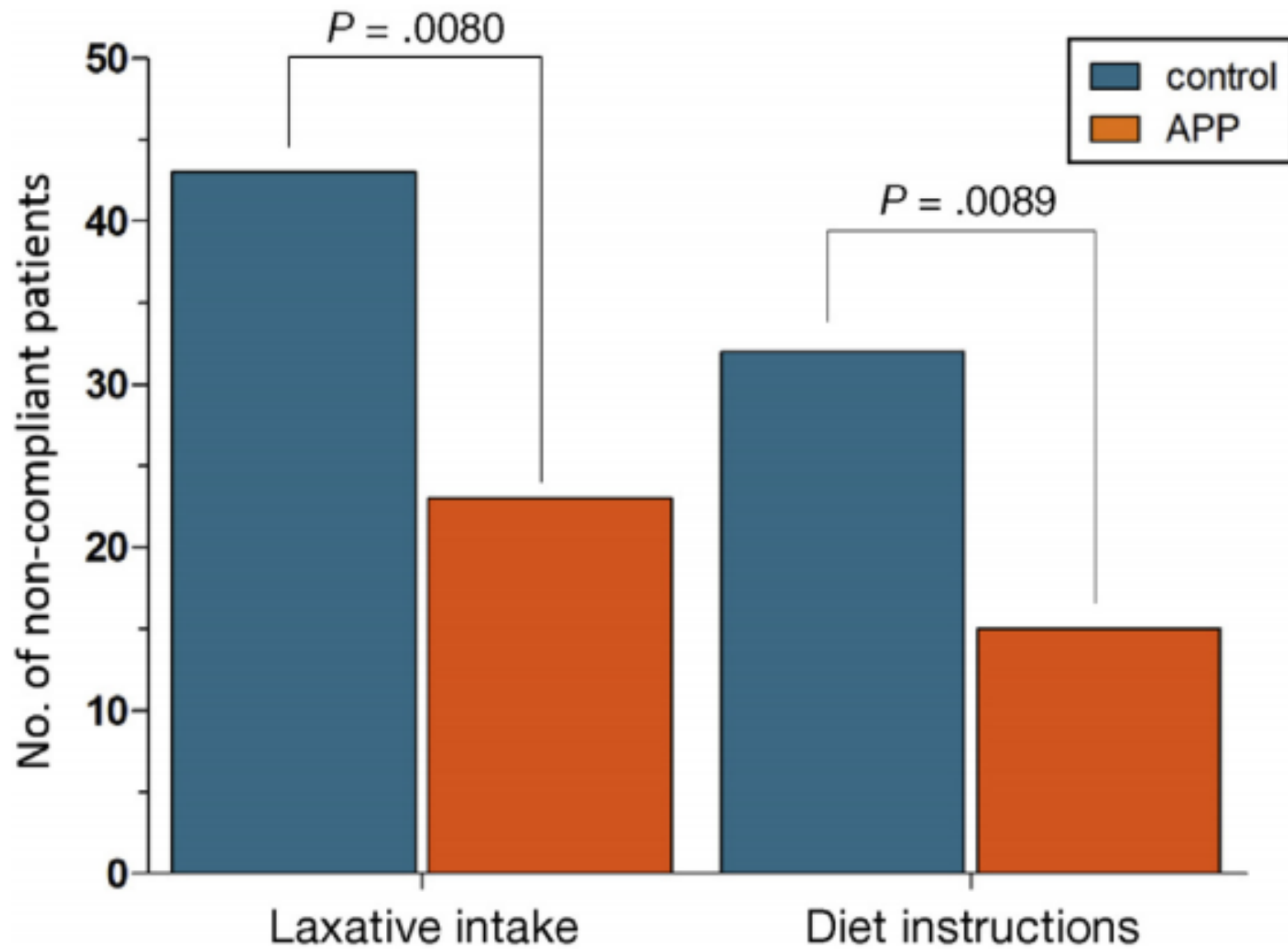


# Smartphone Application to Reinforce Education Increases High-Quality Preparation for Colorectal Cancer Screening Colonoscopies in a Randomized Trial

Benjamin Walter,<sup>\*</sup> Rena Frank,<sup>\*</sup> Leopold Ludwig,<sup>‡</sup> Nektarios Dikopoulos,<sup>‡</sup> Martina Mayr,<sup>§</sup> Bruno Neu,<sup>§</sup> Benjamin Mayer,<sup>||</sup> Alexander Hann,<sup>||</sup> Benjamin Meier,<sup>#</sup> Karel Caca,<sup>#</sup> Thomas Seufferlein,<sup>\*</sup> and Alexander Meining<sup>||</sup>

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





# Ward nurses-focused educational intervention improves the quality of bowel preparation in inpatients undergoing colonoscopy

## A CONSORT-compliant randomized controlled trial

Aihong Liu, PhD<sup>a</sup>, Shuhong Yan, MD<sup>a</sup>, Huashe Wang, MD<sup>a</sup>, Yijia Lin, MD<sup>a</sup>, Junkui Wu, PhD<sup>b</sup>, Liping Fu, PhD<sup>b</sup>, Qining Wu, MD<sup>b</sup>, Yi Lu, MD<sup>b</sup>, Yanan Liu, MD<sup>b,\*</sup>, Honglei Chen, MD<sup>c,\*</sup>

### Comparison of patient's subjective feelings and compliance during bowel preparation.

| Characteristics                          | Educated group<br>(n = 89) | Control group<br>(n = 101) | P-value |
|--|----------------------------|----------------------------|---------|
| Sleep disturbance, No. (%)               | 17 (19.1)                  | 32 (31.7)                  | .048    |
| Nausea, No. (%)                          | 16 (18.0)                  | 21 (20.8)                  | .625    |
| Vomiting No. (%)                         | 10 (11.2)                  | 9 (8.9)                    | .594    |
| Abdominal pain, No. (%)                  | 13 (14.6)                  | 17 (15.8)                  | .675    |
| Abdominal bloating, No. (%)              | 20 (22.5)                  | 29 (27.1)                  | .456    |
| Compliance to bowel preparation, No. (%) | 79 (88.8)                  | 68 (67.3)                  | <.001   |

### Comparison of bowel preparation quality (n = 190).

| Characteristics                                   | Educated group<br>(n = 89) | Control group<br>(n = 101) | P-value |
|---|----------------------------|----------------------------|---------|
| Boston Bowel Preparation Scale scores (mean ± SD) | 6.61 ± 1.23                | 6.01 ± 1.32                | .002    |
| Total   |                            |                            |         |
| Left colon  | 2.15 ± 0.51                | 1.89 ± 0.63                | .003    |
| Trans-colon                                       | 2.14 ± 0.50                | 1.95 ± 0.57                | .014    |
| Right colon                                       | 1.91 ± 0.41                | 2.03 ± 0.60                | .089    |
| Adequate bowel preparation, No. (%)               | 74 (83.1)                  | 70 (69.3)                  | .026    |

# 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!**



# Conceptos básicos 2021

---

**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  
Según la hora del examen**



**Colonoscopia PM**

# Momento de la preparación

---

**Terminar la Preparación**



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



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

# 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

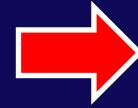


Impide ver la  
Mucosa

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**

# 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

# Perspectiva del Gastroenterólogo

---



# 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.

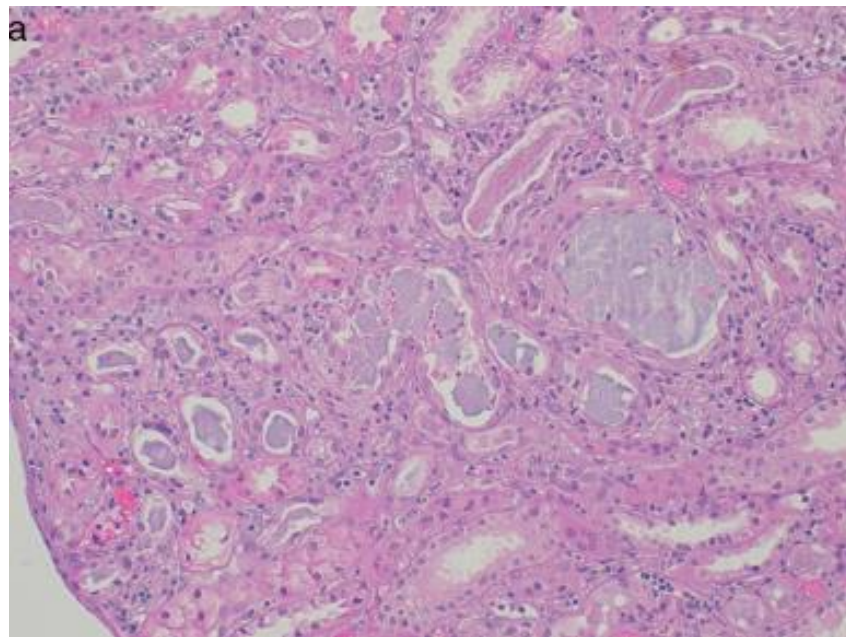
Strong recommendation, low quality evidence.

**Fosfosoda**

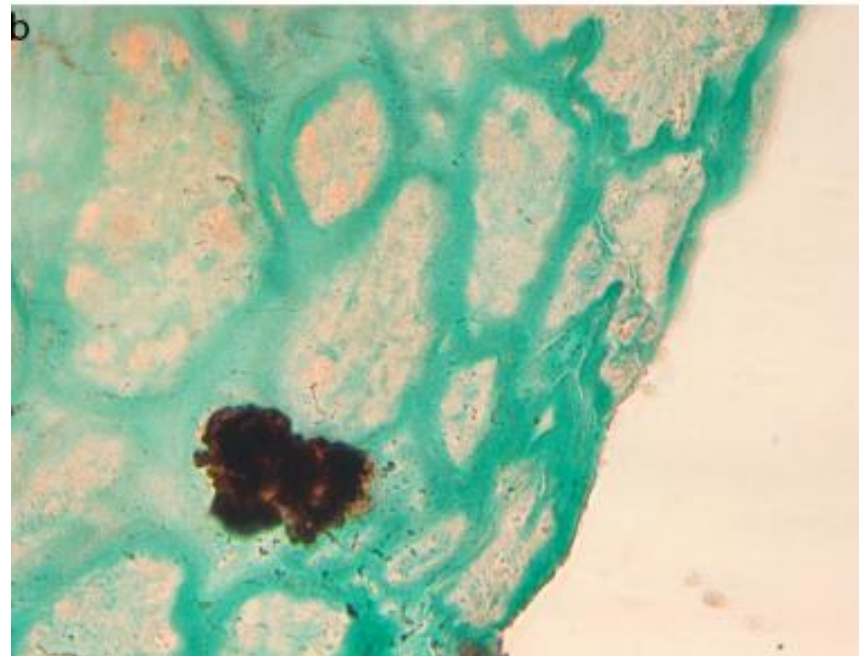


**Ha sido virtualmente  
Abandonado en USA**

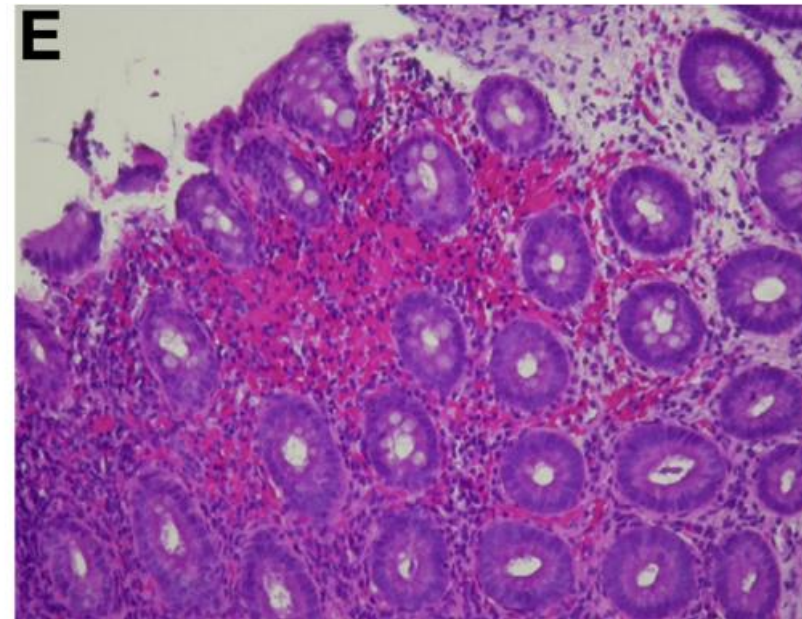
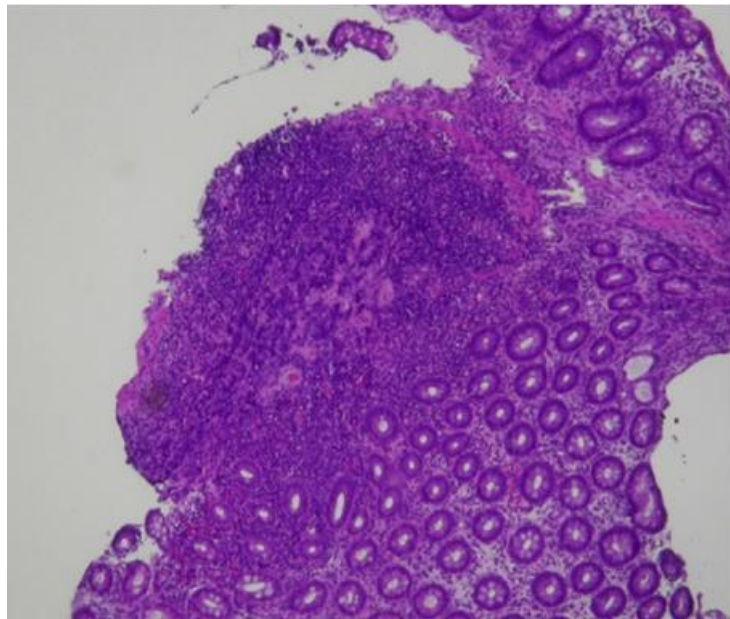
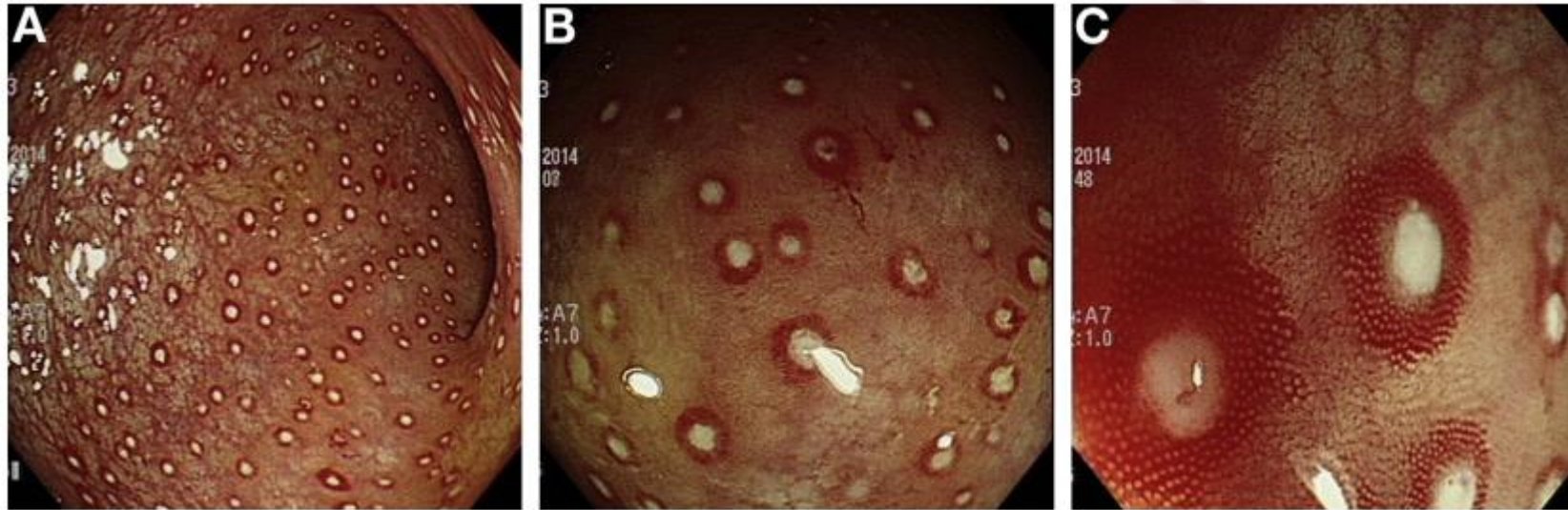
**Rex D K, Nat Rev Gastroenterol Hepatol 2014;**



## Lesión Renal por Fosfato de Sodio



# Lesiones aftoides en recto por fosfato de sodio



**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!!!!**



**IZINOVA**

**+**



**=**

**500 ml**

**+**

**1000 ml**

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

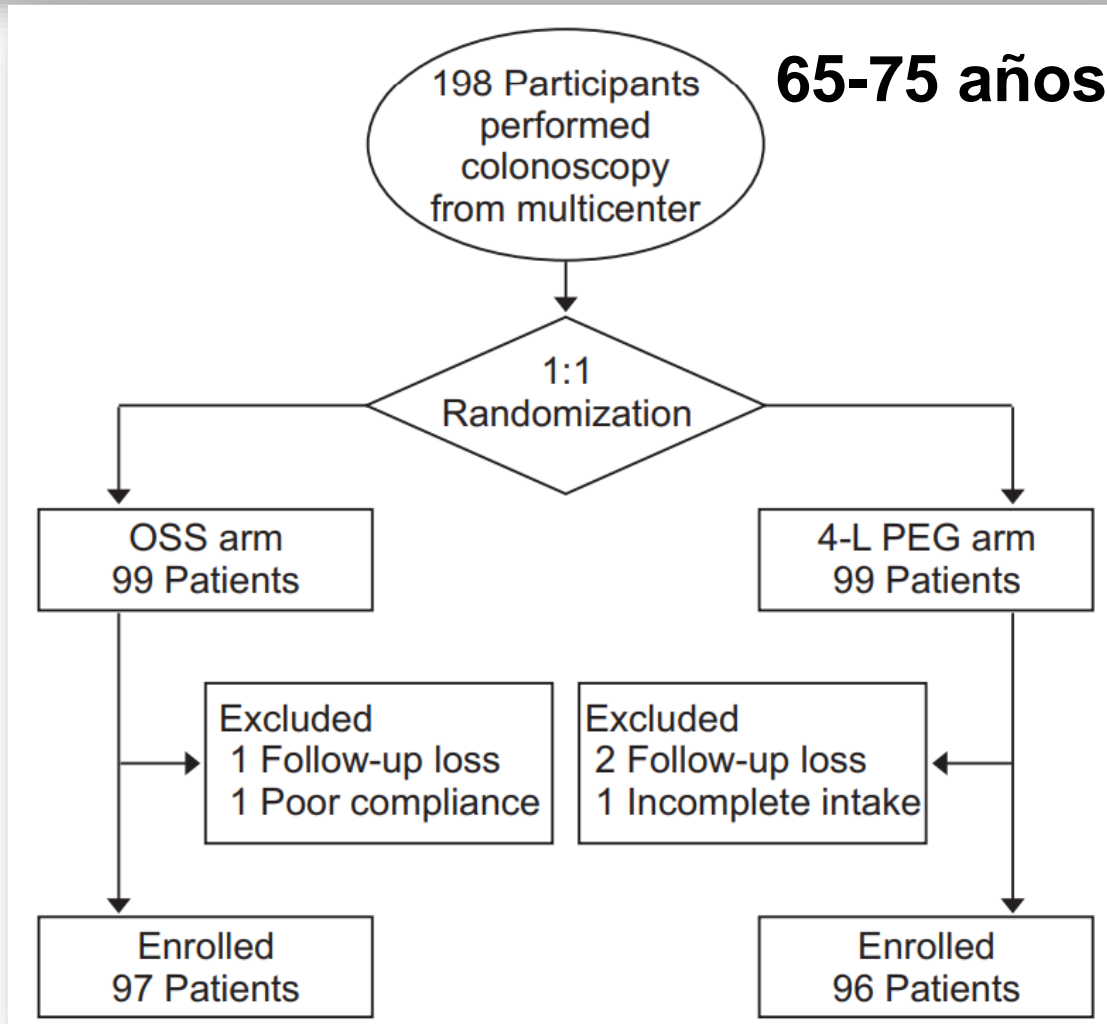
**Colonoscopia por la mañana "Split"  
Iniciar 1era dosis 6 pm  
Repetir por la mañana 5h antes  
Terminar 2h antes de la colonoscopia**

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

**Eficacia 98.4%**

# 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 Kwak<sup>1</sup>, Jae Myung Cha<sup>1</sup>, Hyo-Joon Yang<sup>2</sup>, Dong Il Park<sup>2</sup>, Kyeong Ok Kim<sup>3</sup>, Jun Lee<sup>4</sup>, Jeong Eun Shin<sup>5</sup>, Young-Eun Joo<sup>6</sup>, Jongha Park<sup>7</sup>, Jeong-Sik Byeon<sup>8</sup>, Hyun Gun Kim<sup>9</sup>, 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 <sup>†</sup>  | 2.7±0.5   | 2.6±0.5   | 0.177   |
| Left colon <sup>‡</sup>        | 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**



# 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**

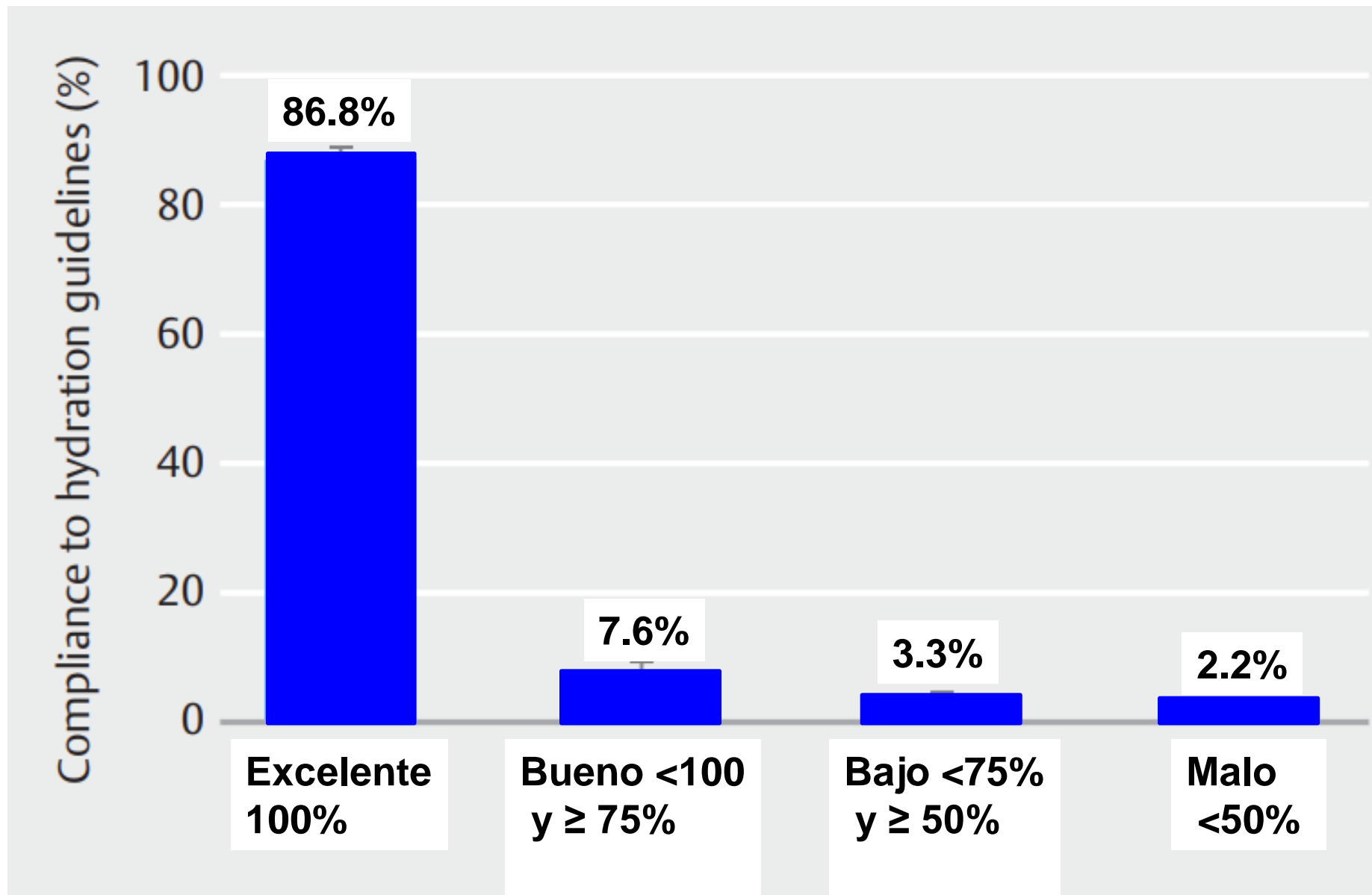
# A European, multicentre, observational, post-authorisation safety study of oral sulphate solution: compliance and safety



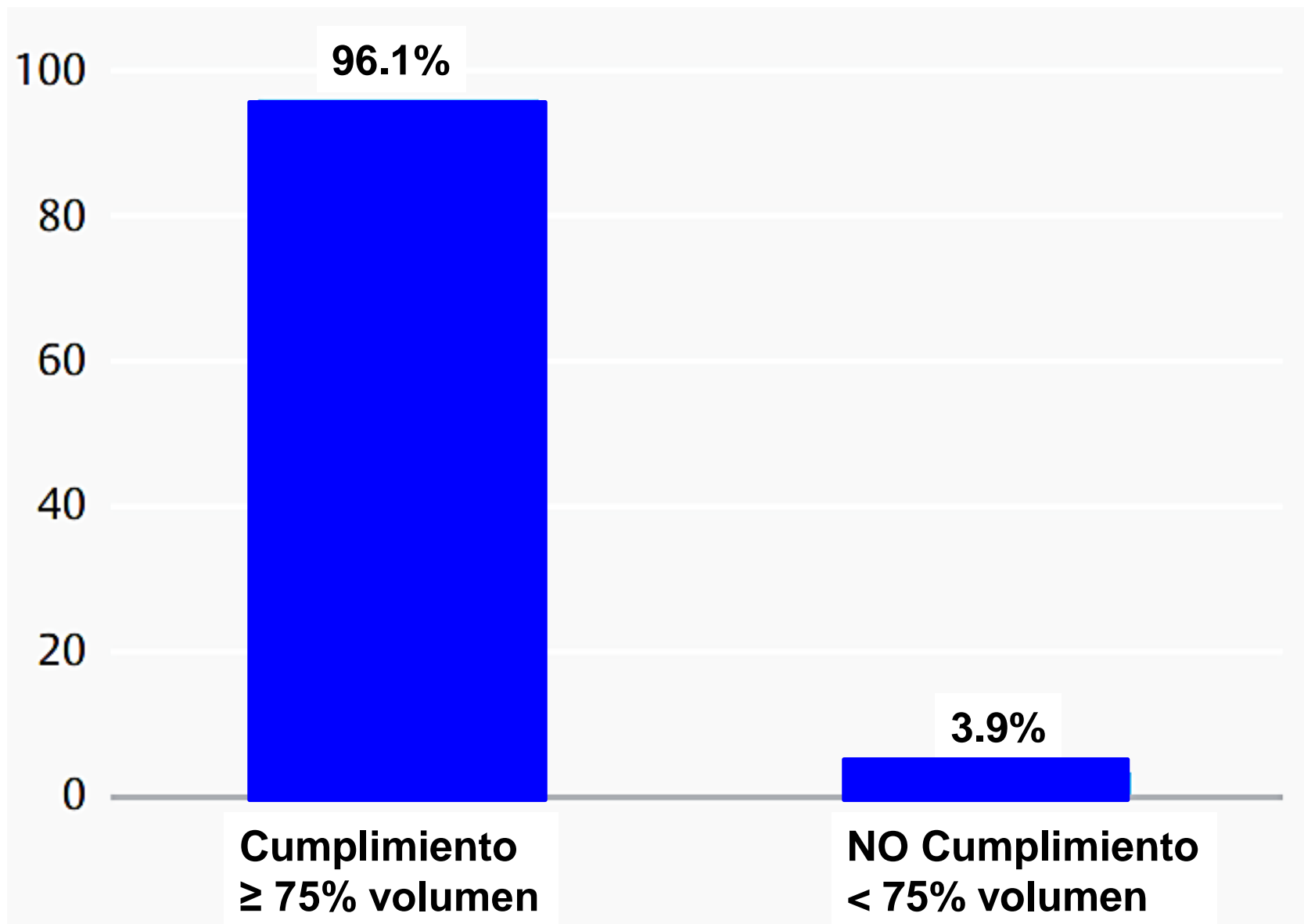
Authors

Jaroslav Regula<sup>1</sup>, Manon C.W. Spaander<sup>2</sup>, Stepan Suchanek<sup>3</sup>, Anne Kornowski<sup>4</sup>, Valerie Perrot<sup>4</sup>, Wolfgang Fischbach<sup>5</sup>, the DUS investigators

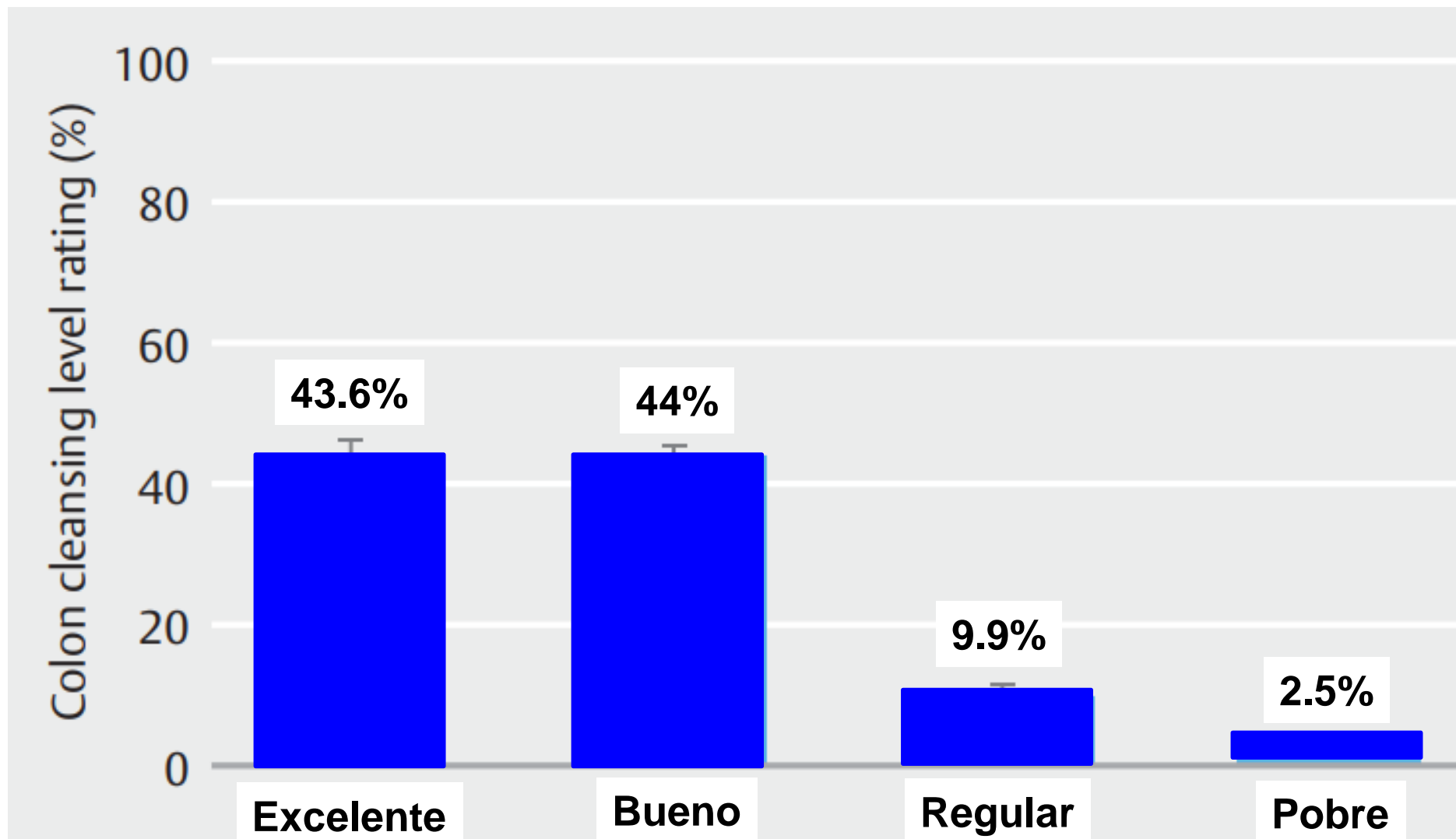
Regula J, Endosc Int Open 2020;8:247–56



## Soluciones de sulfato, Cumplimiento



## Calidad de la limpieza evaluada por el médico



RESEARCH ARTICLE

## Impact of bowel preparation type on the quality of colonoscopy: a multicenter community-based study

Daniel Martin, MD<sup>1</sup>, Saqib Walayat, MD<sup>1</sup>, Zohair Ahmad, MD<sup>2</sup>,  
Sonu Dhillon, MD<sup>1</sup>, Carl V. Asche, PhD<sup>2,3,4</sup>, Srinivas Puli, MD<sup>1</sup> and  
Jinma Ren, PhD<sup>2,3\*</sup>

**28 780. colonoscopias /Screening, vigilancia, Illinois**

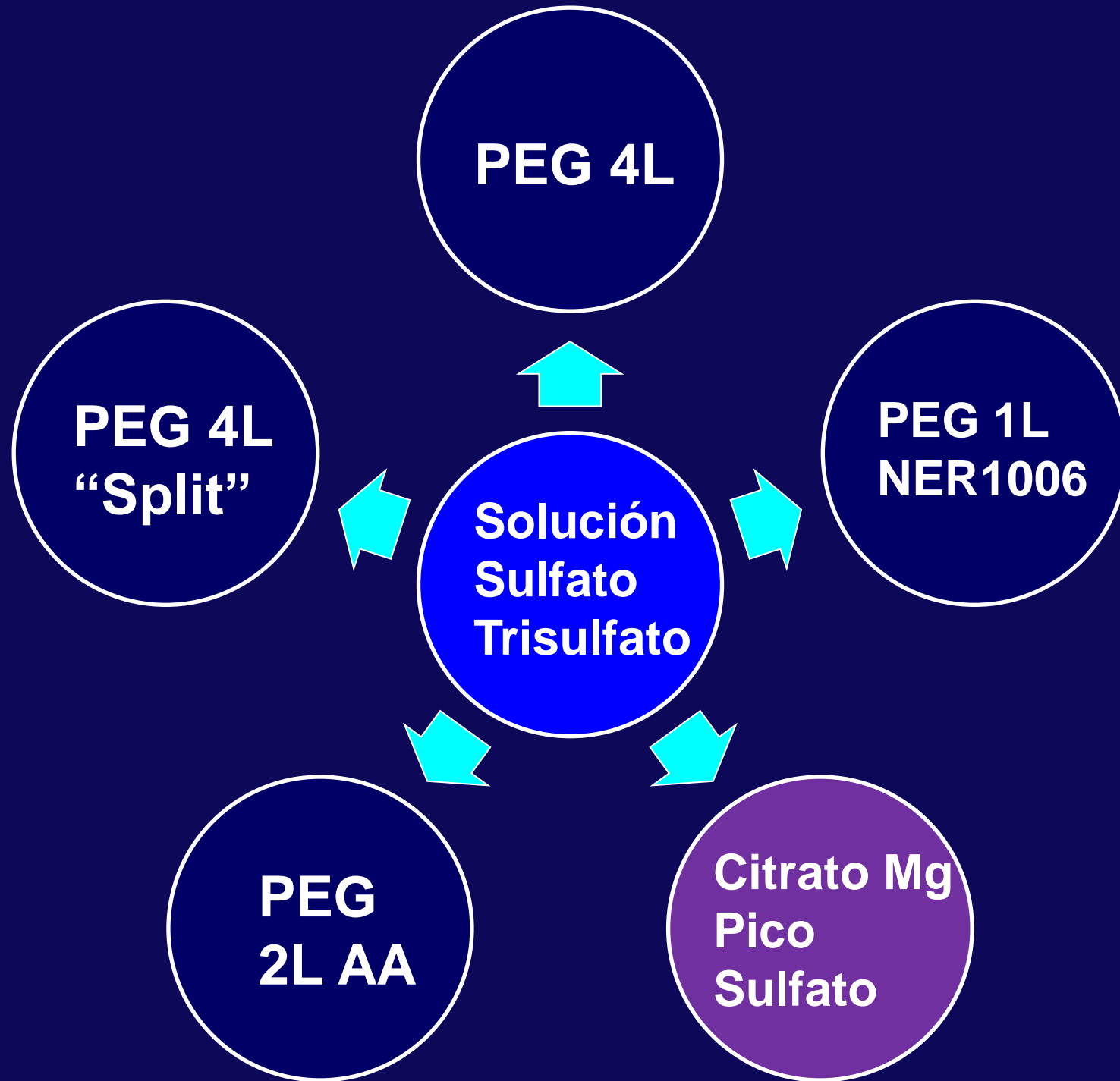
**J Comm Hosp Intern Med Persp 2016;6: 31074sww**

*Table 2.* Influence of bowel preparations type on the quality of preparations

| Bowel preparations type             | N      | Bowel prep assessment (%) |      |      |      |
|-------------------------------------|--------|---------------------------|------|------|------|
|                                     |        | Excellent                 | Good | Fair | Poor |
| PEG-based preparations              | 19,912 | 14.5                      | 71.4 | 12.1 | 1.9  |
| Magnesium-based preparations        | 107    | 11.2                      | 65.4 | 21.5 | 1.9  |
| Sodium phosphate-based preparations | 707    | 31.8                      | 58.1 | 8.1  | 2.0  |
| Sodium sulfate-based preparations   | 6,081  | 55.8                      | 37.4 | 5.4  | 1.4  |
| Other preparations                  | 322    | 26.7                      | 52.2 | 17.1 | 4.0  |
| Not recorded                        | 1,257  | 33.2                      | 50.0 | 13.3 | 3.5  |

**Conclusión:**

**“Siempre que sea posible utilizar solución de sulfato”**



# PEG con electrolitos

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**Insuficiencia cardíaca**

**Insuficiencia renal avanzada**

**Dep Cr <30 ml/min**

**Cirrosis con ascitis**

**Colitis ulcerativa activa**

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

**Instrucciones**  
**De acuerdo a la**  
**hora Colonoscopia**  
**Y si es AM o PM**



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# Mensajes para la casa

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## *Enfermera fundamental Colonoscopia*

Calidad en colonoscopia empieza colon limpio

Por cada hora de atraso 10% mal preparados

Colonoscopia AM: dosis divididas

Colonoscopias PM: preparación por la mañana

Instrucciones verbales y escritas

Solución de sulfato excelente tolerancia eficacia 98%

***Muchas gracias!***