



¿CUAL ES EL IBP IDEAL?

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Bogotá, Colombia*



IBP ideal 2023

Seguro

Eficaz

Disponibile

Rápida acción

Independiente de CYP2C19

Independiente de las comidas

**Primeros cinco más vendidos
USA, 2009:7 billones
Mundo, 13 billones**

**Más prescrito en
Gastroenterología**

IBP

**“Medicamentos
Esenciales” OMS**

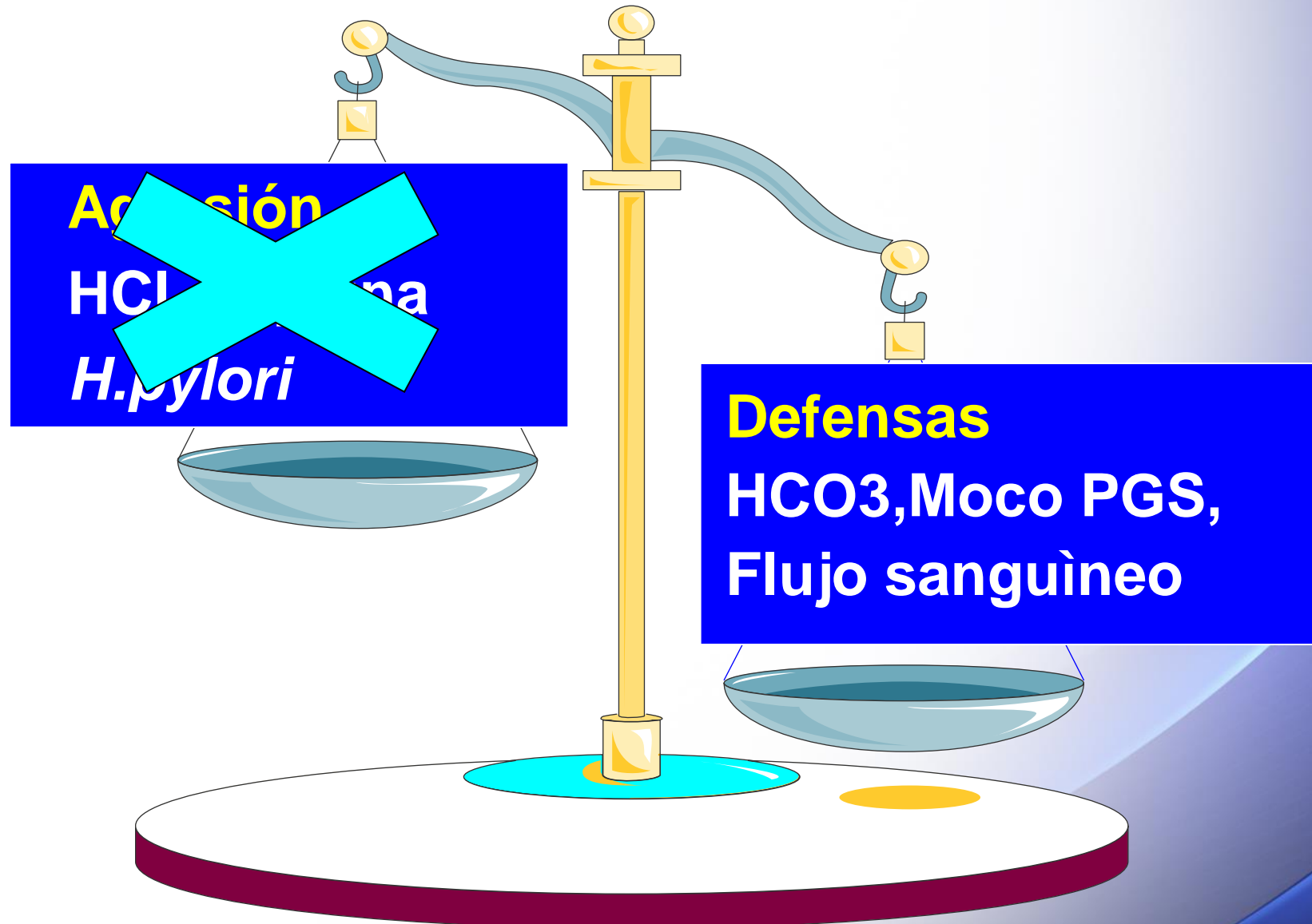
**Eficacia
Demostrada**

**Disminución
Mortalidad UP**

Mossner J, Dtsch Artztebl Int 2016;113:477-83
Targownik L, Am J Gastroenterol 2018;113:519-28
Otero W, “El estómago” Aristizabal G (edit):2022:20-98

Piedra angular
Disminuir HCl
IBP!

Enfermedad “acido péptica”



Los IBPs no son el antídoto para todas las enfermedades digestivas!

Indicaciones correctas de los IBPs



**Por períodos
Cortos <12 semanas**

Erradicación *H.pylori*
Úlceras pépticas
Úlcera péptica sangrante
Profilaxis úlceras estrés
Dispepsia funcional (“**Gastritis**”)
Esofagitis eosinofílica sin
respuesta



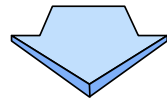
**Por períodos
Indefinidos**

Esofagitis C y D
Esófago de Barrett
Úlcera péptica idiopática
Profilaxis AINES
Profilaxis antiplaquetarios
Esofagitis eosinofílica (+)
Fibrosis Pulmonar
Zollinger Ellison

Herszényi L, Dig Dis 2020;38:104-11
Targownik LE, Gastroenterology 2022;162:1334-42

63% Wang J, Hepatol Int. 2020; 14:385-98

IBP no indicados



Pancreatitis aguda o crónica
Cirrosis Descompensada
Hospitalizados en sala general
“Polimedicados”
Reflujo Faringo-laríngeo

Herszényi L, Dig Dis 2020;38:104-11

Targownik LE, Gastroenterology 2022;162:1334-42

Use of proton pump inhibitors to treat persistent throat symptoms: multicentre, double blind, randomised, placebo controlled trial

James O'Hara,^{1,2} Deborah D Stocken,³ Gillian C Watson,⁴ Tony Fouweather,⁵ Julian McGlashan,⁶ Kenneth MacKenzie,⁷ Paul Carding,⁸ Yakubu Karagama,⁹ Ruth Wood,⁴ Janet A Wilson¹⁰


O'Hara J, BMJ 2021;372:4903.

Table 2 | Questionnaire outcome scores for compliant intention-to-treat group

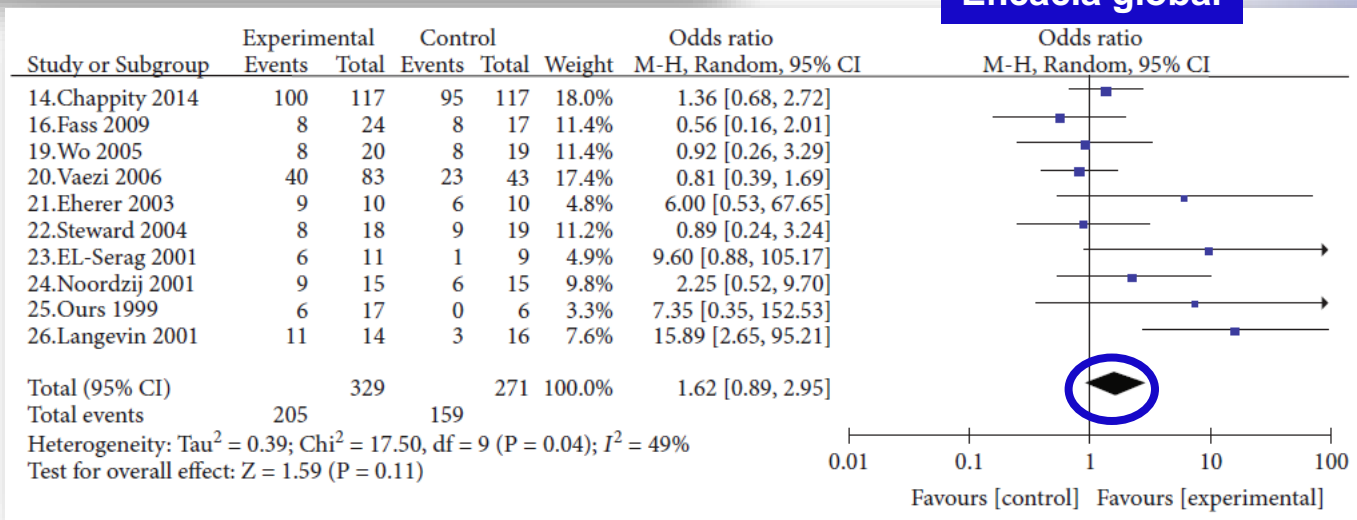
Questionnaires and intervention	No in group	Mean score at follow-up (95% CI)		
		Baseline	16 weeks*	12 months
RSI*: Índice de síntomas de reflujo				
Lansoprazole	102	22.0 (20.4 to 23.6)	17.4 (15.5 to 19.4)	16.0 (13.6 to 18.4)
Placebo	118	21.7 (20.5 to 23.0)	15.6 (13.8 to 17.3)	13.6 (11.7 to 15.5)
Differencet		0.3 (-1.7 to 2.3)	1.8 (-0.8 to 4.4)	2.4 (-0.6 to 5.4)
RSI-HB:				
Lansoprazole	102	20.3 (18.8 to 21.7)	16.3 (14.5 to 18.1)	14.7 (12.4 to 16.9)
Placebo	118	19.8 (18.6 to 21.0)	13.9 (12.2 to 15.5)	11.9 (10.1 to 13.7)
Differencet		0.5 (-1.4 to 2.4)	2.4 (-0.0 to 4.8)	2.8 (0.5 to 5.1)
CReSS:				
Lansoprazole	102	50.3 (44.9 to 55.7)	38.9 (33.4 to 44.3)	36.6 (29.8 to 43.5)
Placebo	118	51.1 (46.4 to 55.8)	34.7 (29.6 to 39.9)	31.8 (26.6 to 36.9)
Differencet		-0.8 (-7.9 to 6.3)	4.2 (-3.2 to 11.6)	4.8 (-3.5 to 13.1)
LPR-HRQL: Calidad de vida				
Lansoprazole	102	28.9 (24.5 to 33.3)	20.5 (16.1 to 25.0)	18.8 (13.7 to 23.8)
Placebo	118	26.5 (22.5 to 30.5)	17.1 (13.3 to 21.0)	13.9 (10.0 to 17.8)
Differencet		2.4 (-3.5 to 8.3)	3.4 (-2.4 to 9.2)	4.9 (-1.3 to 11.1)

O'Hara J, BMJ 2021;372:4903.

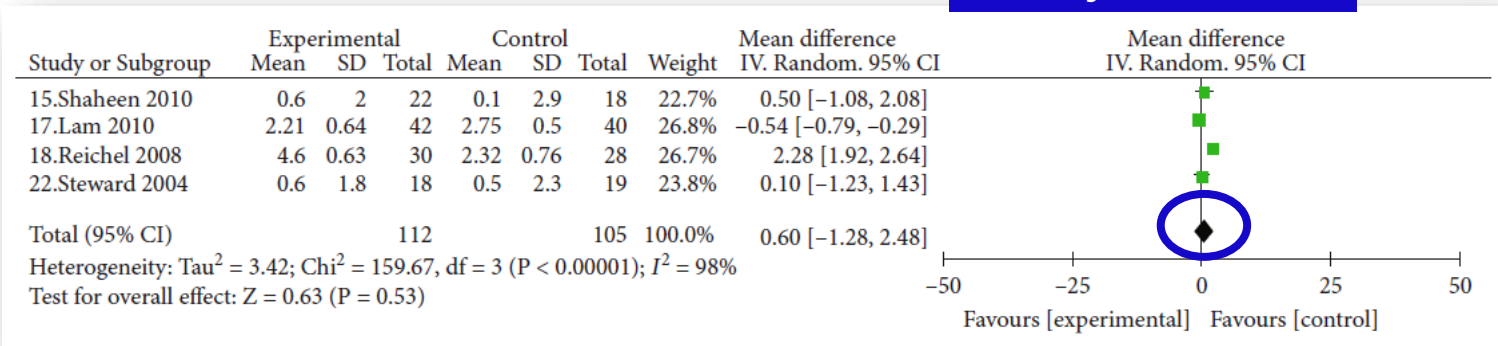
Meta-analysis of Proton Pump Inhibitors in the Treatment of Pharyngeal Reflux Disease

Xiulin Jin, Xufeng Zhou, Zongxian Fan, Yingchun Qin, and Junjie Zhan 

Eficacia global



Puntaje sintomas

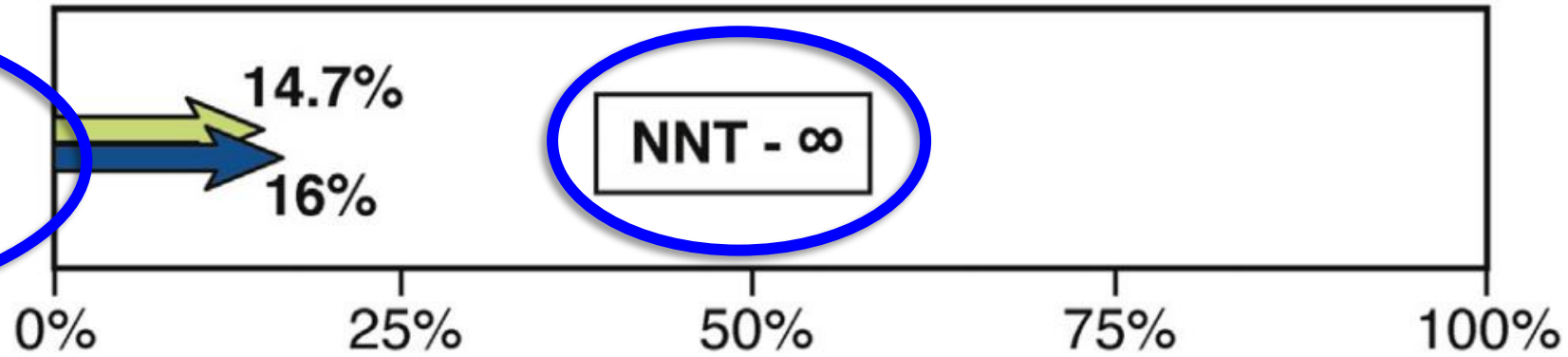


Síntomas extraesofágicos

C

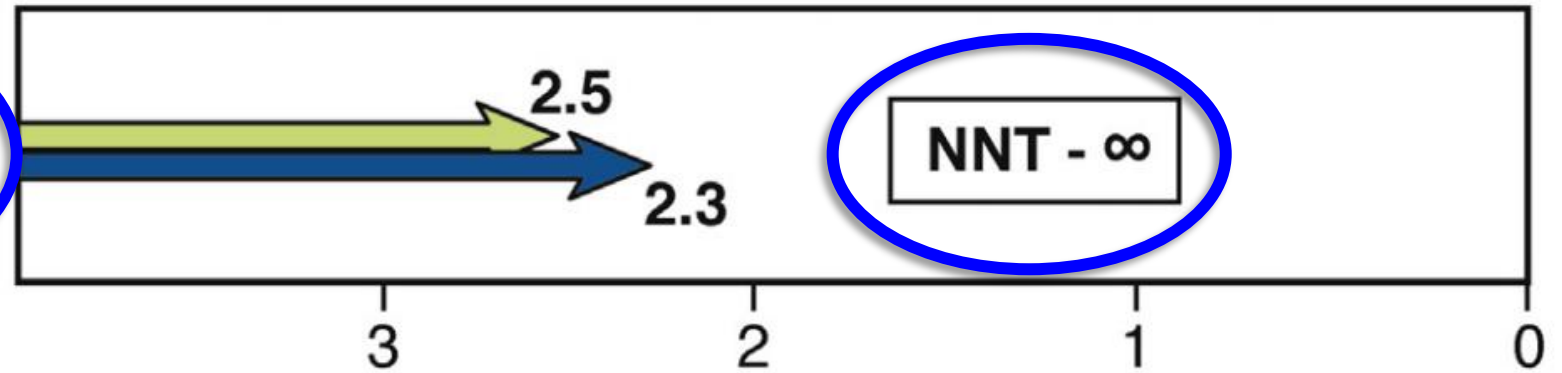
Reflux laryngitis⁴⁸

*No frequent heartburn-
complete resolution*



Poorly controlled asthma⁴⁹

*Without frequent heartburn
Exacerbations per year*



Katzka DA, Clin Gastroenterol Hepatol 2020;18:767-76

En indicaciones correctas

Para cada enfermedad un objetivo de pH



Úlcera no
Sangrante >3



ERGE: > 4

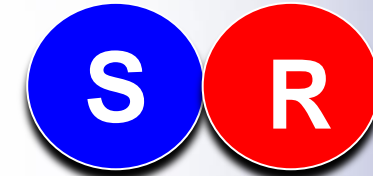


Úlcera
Sangrante > 6

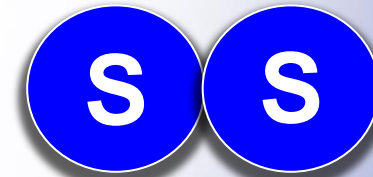


H.pylori > 6

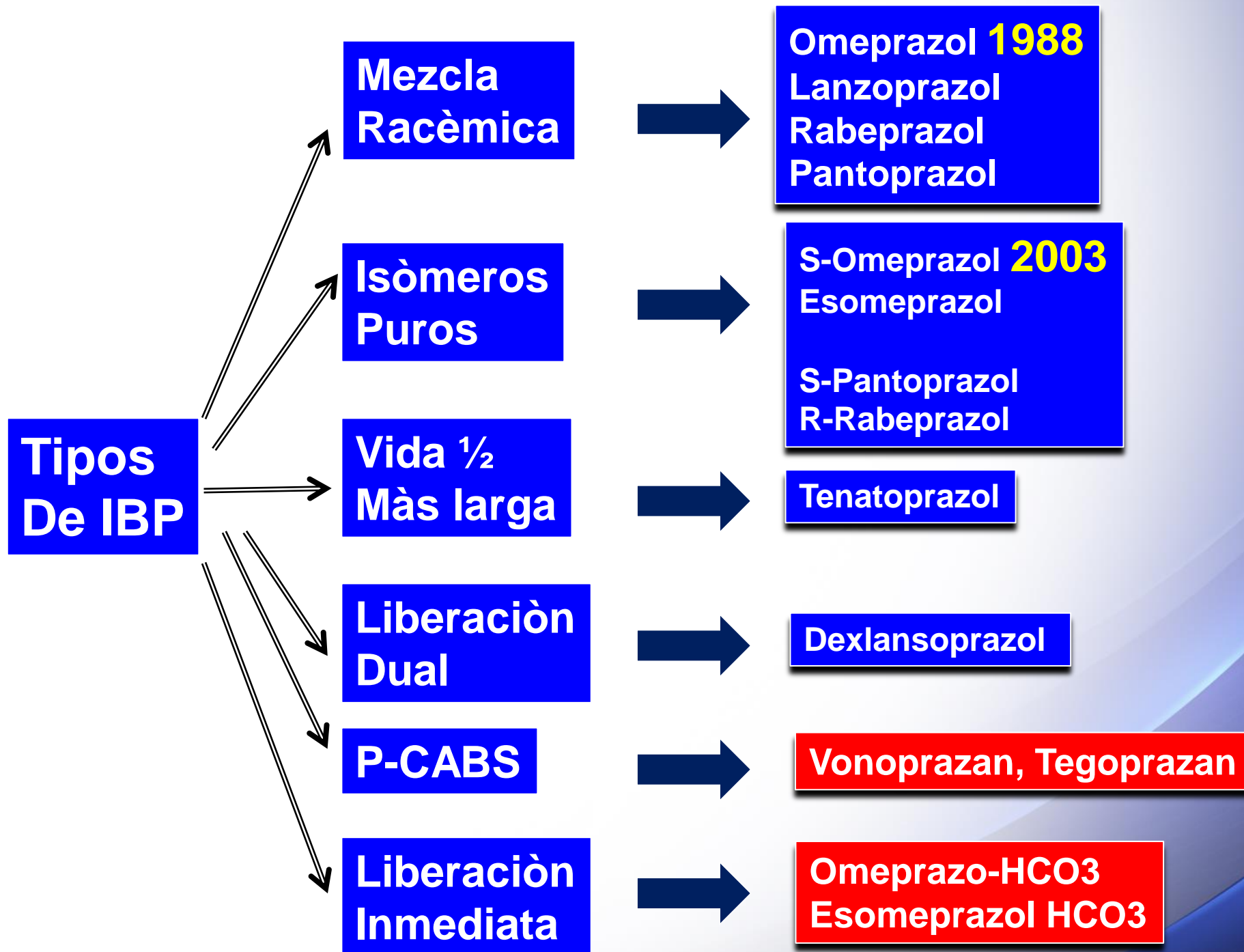
Omeprazol 1988

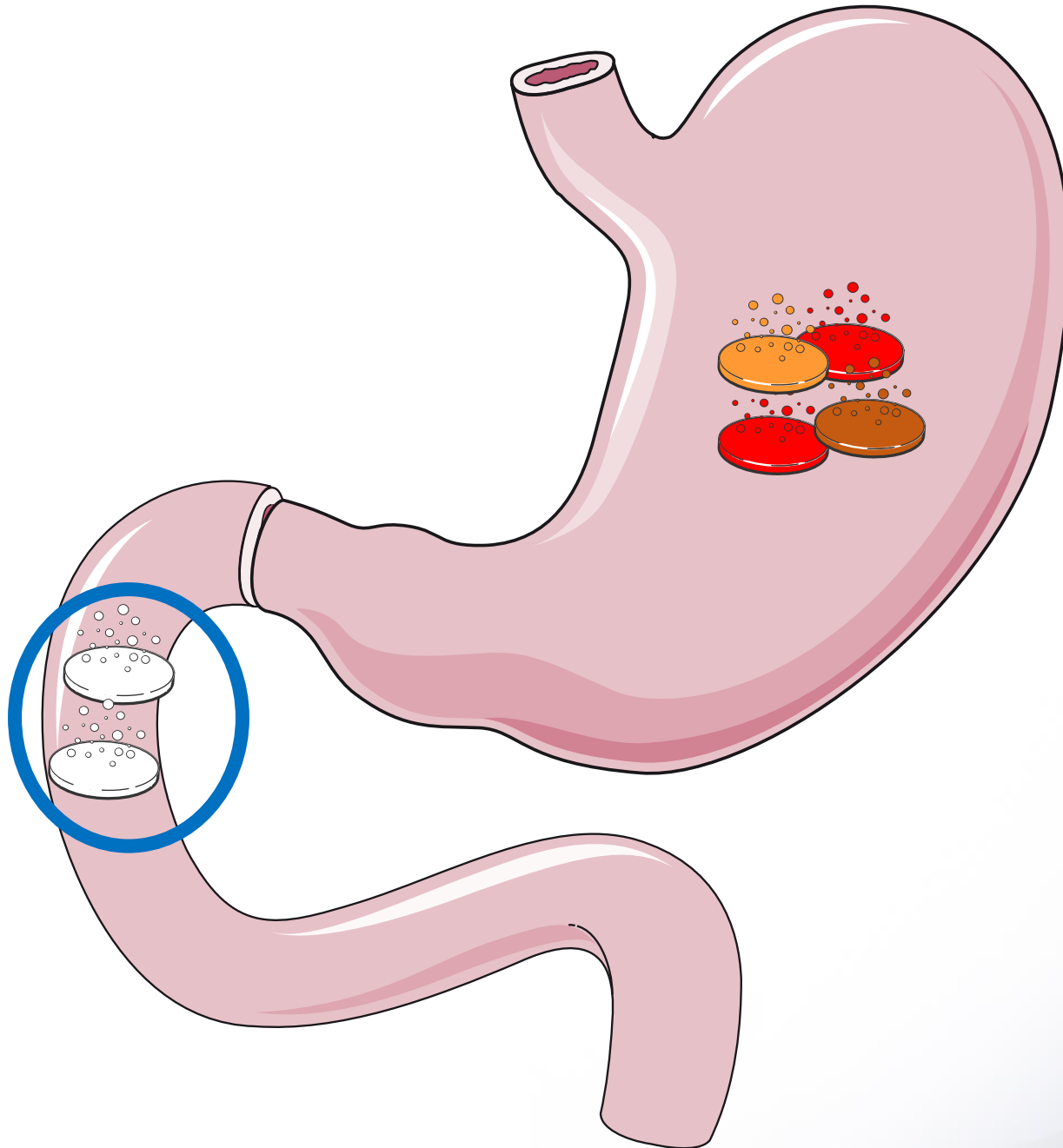


Esomeprazol 2003



Scarpignato C, Curr Opin Pharmacol 2008;8:677-84





Liberación Inmediata

IBP No son iguales



Potencia



Farmacognètica

Potencia de los IBPs comparados con omeprazol

Diferentes IBPs	Omeprazol mg
Rabeprazol 20 mg	36 mg
Esomeprazol 20 mg	32 mg <u>1.6 veces</u>
Omeprazol 20 mg	20 mg
Lansoprazol 20 mg	18 mg
Pantoprazol 20 mg	

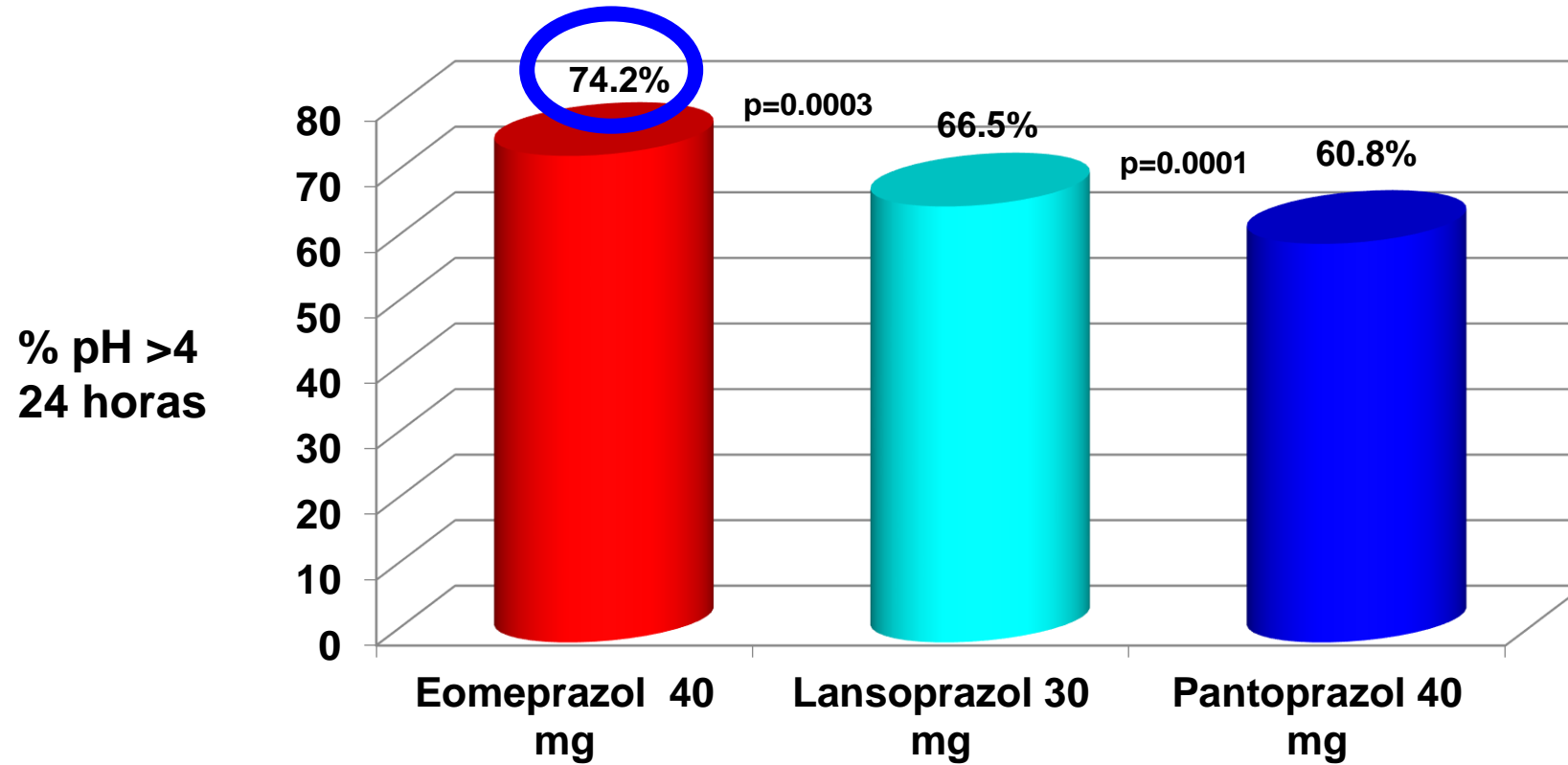
Más potente



Menos potente

Graham DY, Clin Gastroenterol Hepatol. 2018;16:800-8

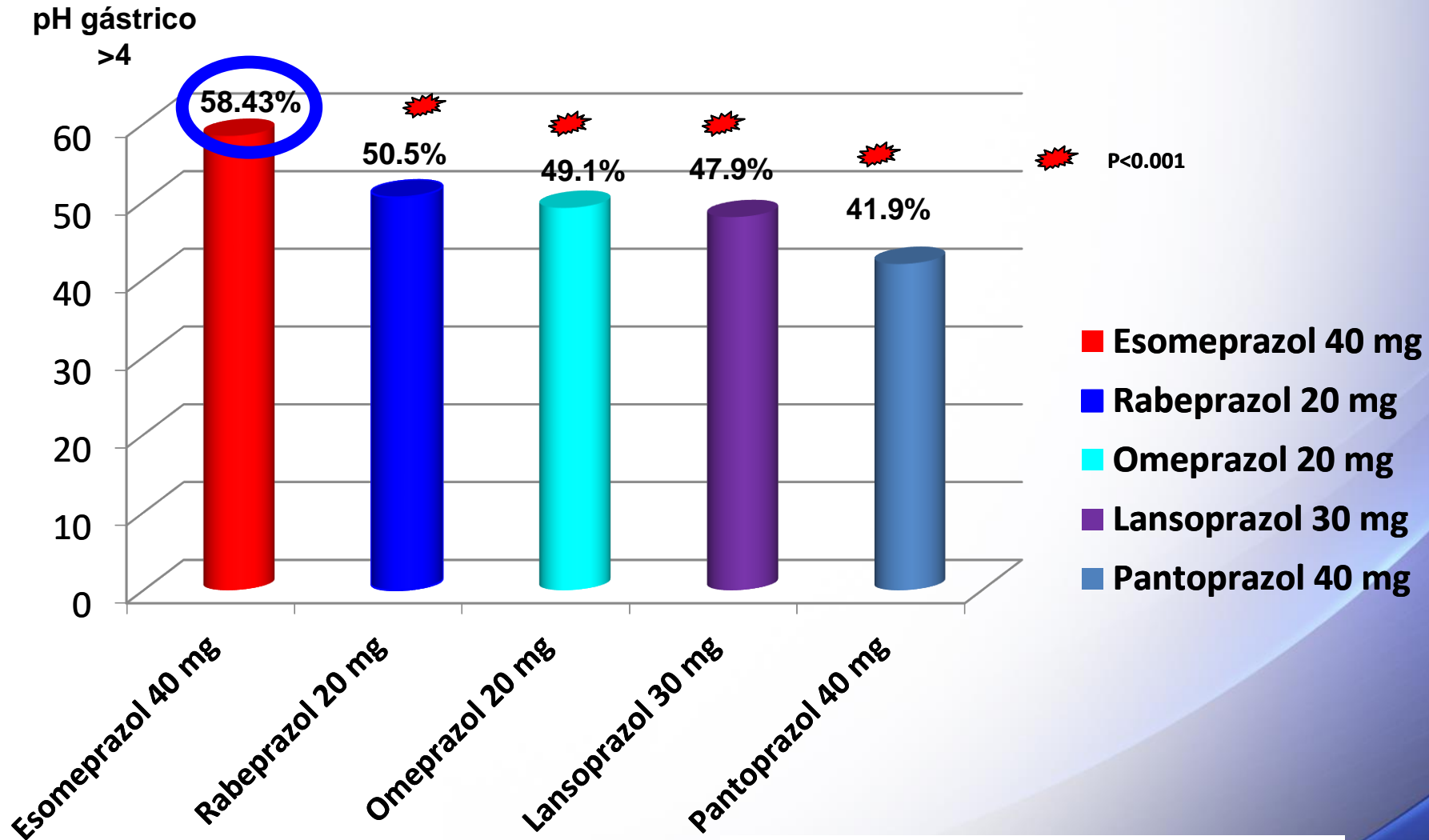
pH intragástrico > 4 consumidores AINES



Godstein JL, Aliment Pharmacol Ther 2006;23:1189-96

Gastric Acid Control With Esomeprazole, Lansoprazole, Omeprazole, Pantoprazole, and Rabeprazole: A Five-Way Crossover Study

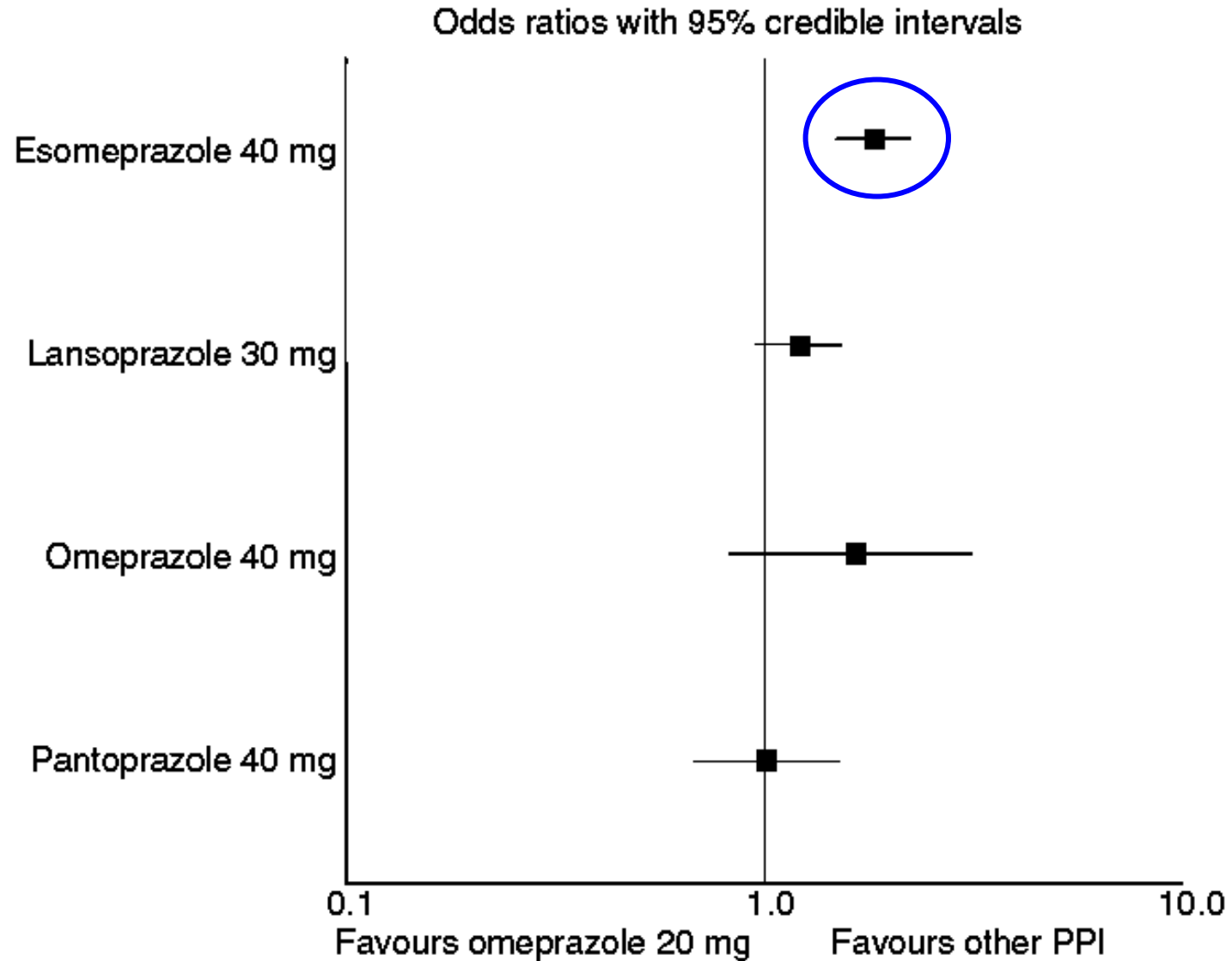
Philip Miner, Jr., M.D., Philip O. Katz, M.D., Yusong Chen, Ph.D., and Mark Sostek, M.D.



Am J Gastroenterol 2003;98:2616-20

Edwards SJ, Aliment Pharmacol Ther 2009;30:547-56

Revisión sistemática



Farmacogenética

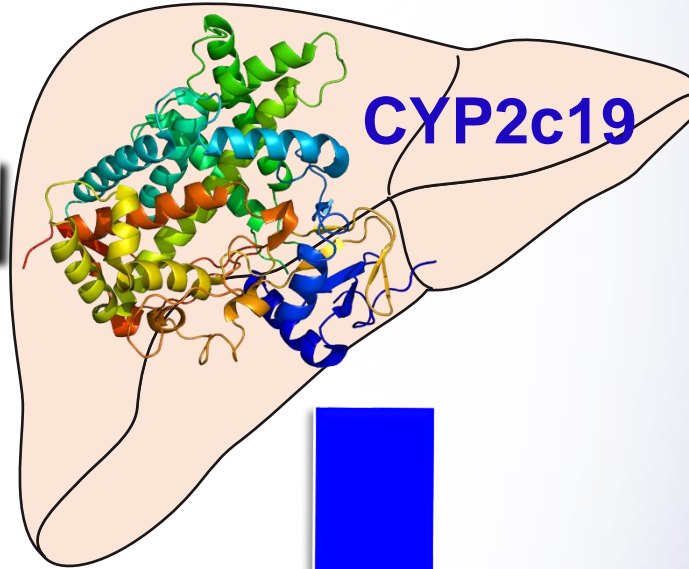
Primera Generación

Omeprazol

Lansoprazol

Pantoprazol

Dependientes

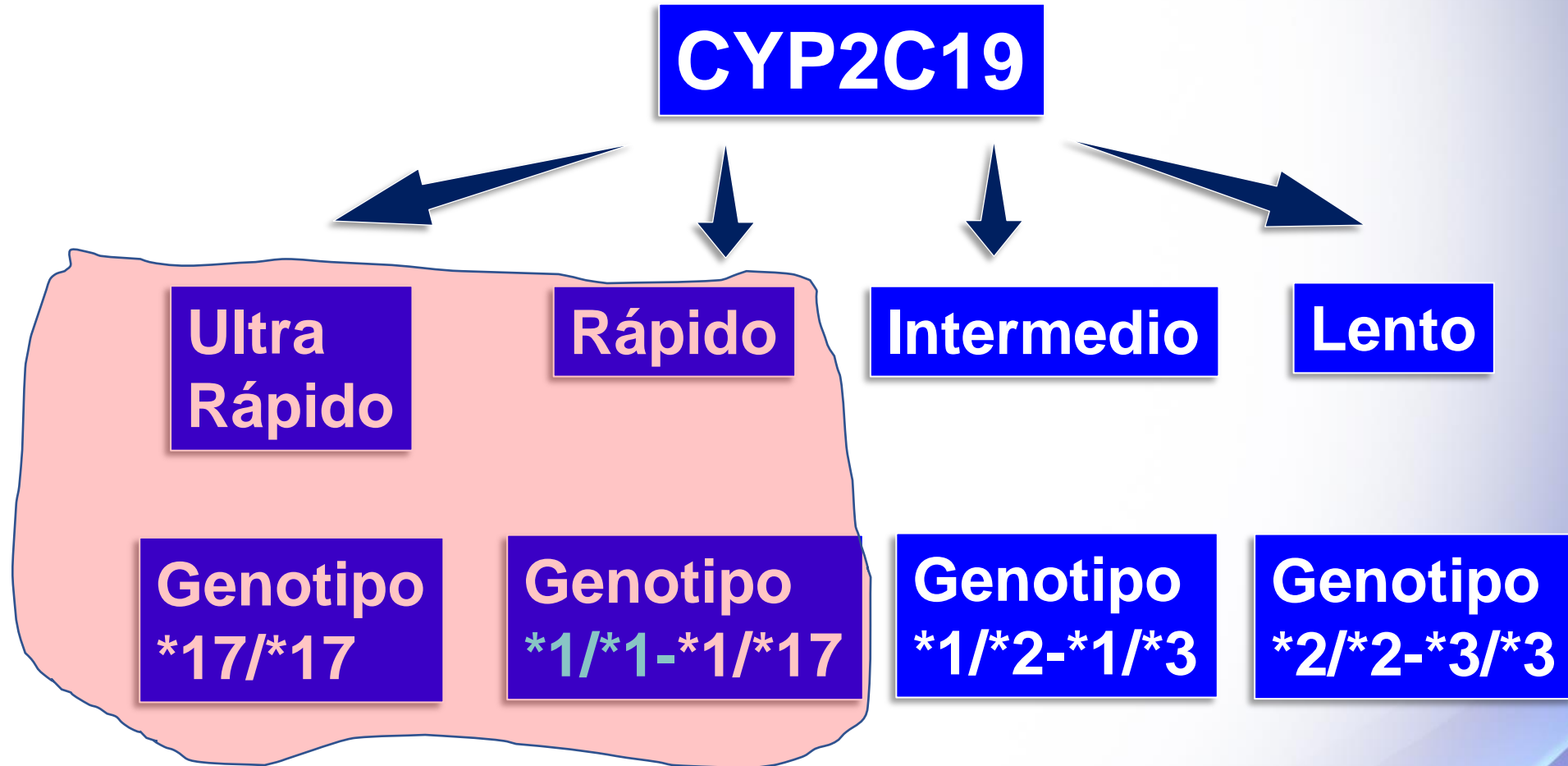


Menos dependientes

Segunda Generación

Esomeprazol

Rabeprazol



Arevalo A, Otero W, Trespalacios AA, et al. PLoS One 2021;16:e0245401

Cyp2C19

**Rápido,
Ultrarrápido
80-84%**

***Esomeprazol* Rabeprazol
menos Influidos por el CYP
70% vs 90% OME**

Isaza C, BMC Clin Pharmacol. 2007;7:6.

Arévalo A, Tresplacios A, Otero W, Helicobacter 2019;24:e12574

Arevalo A, Otero W PLoS One. 2021;16:e0245401

Impacto de la Farmacogenética

Host Genetic Determinants Associated With *Helicobacter pylori* Eradication Treatment Failure: A Systematic Review and Meta-analysis

Shailja C. Shah,^{1,2,3,4} Adam Tepler,⁵ Cecilia P. Chung,^{6,7} Giovanni Suarez,³
Richard M. Peek Jr,³ Adriana Hung,^{8,9} Christianne Roumie,^{8,10} and Neeraj Narula¹¹

57 estudios

Pacífico Asiático (Japón 24, Taiwan 6, Korea 5, Tailandia 1)

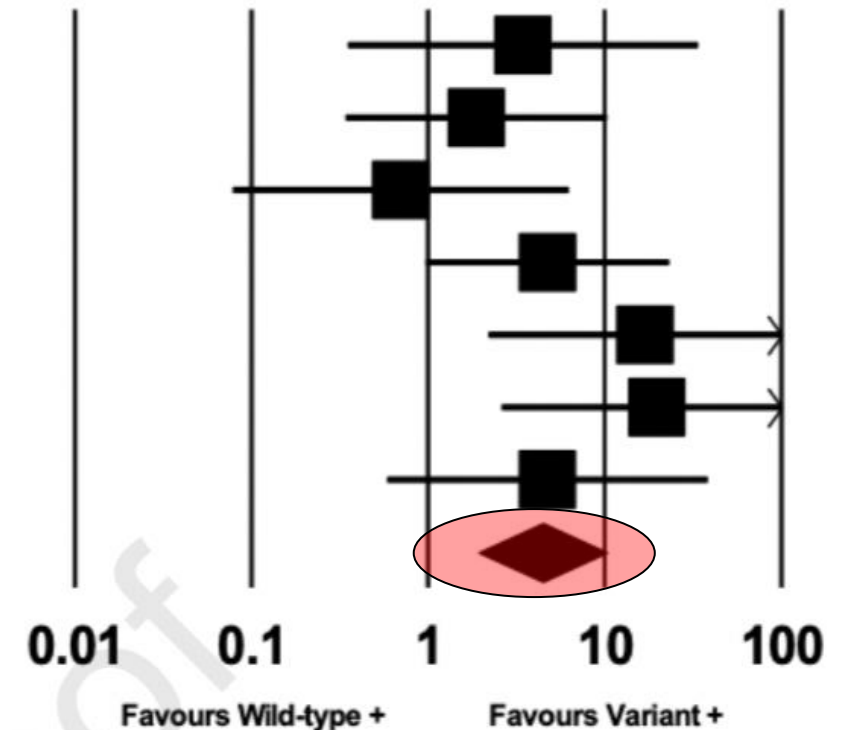
Europa (Alemania 3, Polonia 3, Italia 1)

Sur américa (Brazil 2)

***Hpylori* sensible a claritromicina o resistencia < 15% IBP
Primera Generaciòn Lansoprazol, Omeprazol Pantoprazol
Metabolizadores ràpids**

Study name	Statistics for each study				
	Odds ratio	Lower limit	Upper limit	Z-Value	p-Value
Isomoto, 2003	3.438	0.352	33.612	1.061	0.289
Kawabata, 2004	1.875	0.342	10.269	0.725	0.469
Miki, 2003	0.700	0.079	6.224	-0.320	0.749
Sheu, 2005	4.742	0.975	23.062	1.929	0.054
Furuta, 2001	16.875	2.202	129.312	2.720	0.007
Furuta, 2004	19.753	2.617	149.103	2.893	0.004
Kang, 2008	4.738	0.589	38.140	1.462	0.144
	4.443	1.944	10.157	3.535	0.000

Odds ratio and 95% CI



**Riesgo de
Falla terapèutica**

Ràpids versus Pobres metabolizadors

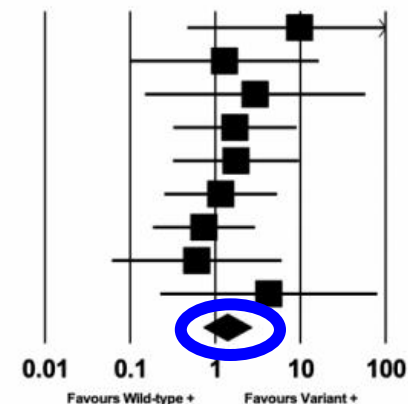
**Esomeprazol
9 estudis**

**Rabeprazol
18 estudis**

2B. Study name

Study name	Statistics for each study				
	Odds ratio	Lower limit	Upper limit	Z-Value	p-Value
Pan, 2010	9.783	0.473	202.374	1.475	0.140
Pan*, 2010	1.286	0.101	16.340	0.194	0.846
Miehlke, 2008	2.941	0.150	57.555	0.711	0.477
Sheu, 2005	1.705	0.323	9.007	0.628	0.530
Wu, 2011	1.750	0.321	9.554	0.646	0.518
Song, 2016	1.159	0.253	5.304	0.191	0.849
Okimoto, 2016	0.735	0.186	2.908	-0.438	0.661
Liou, 2011	0.606	0.061	5.985	-0.429	0.668
Kang, 2008	4.248	0.227	79.518	0.968	0.333
	1.387	0.723	2.662	0.984	0.325

Odds ratio and 95% CI



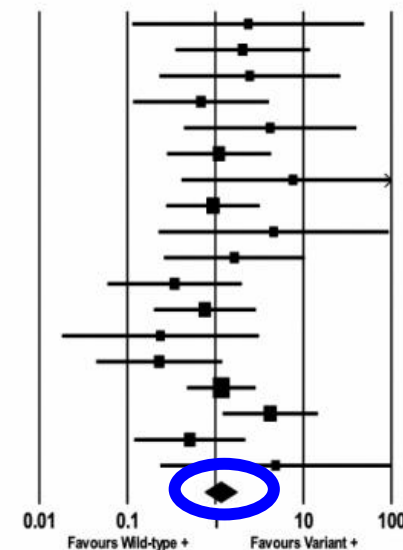
2C.

Study name

Statistics for each study

Study name	Statistics for each study				
	Odds ratio	Lower limit	Upper limit	Z-Value	p-Value
Isomoto*, 2003 - 7 days	2.368	0.114	49.041	0.558	0.577
Isomoto*, 2003 - 14 days	2.045	0.354	11.820	0.800	0.424
Yang, 2009	2.462	0.232	26.114	0.748	0.455
Pan, 2010	0.688	0.117	4.056	-0.414	0.679
Inaba, 2002	4.200	0.442	39.943	1.249	0.212
Miyoshi, 2001	1.100	0.283	4.282	0.137	0.891
Lay, 2010	7.638	0.414	140.829	1.367	0.172
Okimoto, 2016	0.942	0.278	3.189	-0.096	0.924
Lin, 2017	4.600	0.227	93.032	0.995	0.320
Dojo, 2001	1.647	0.262	10.359	0.532	0.595
Miki, 2003	0.345	0.060	1.993	-1.190	0.234
Lee, 2003	0.762	0.201	2.884	-0.400	0.689
Phiphatpalthamaamphan, 2016	0.238	0.018	3.121	-1.093	0.274
Kawabata, 2003	0.231	0.045	1.197	-1.746	0.081
Lee, 2010*	1.169	0.478	2.862	0.343	0.732
Kuwayama, 2007	4.211	1.216	14.585	2.268	0.023
Hokari, 2001	0.513	0.120	2.190	-0.902	0.367
Jiang, 2005	4.846	0.237	98.960	1.025	0.305
	1.153	0.761	1.748	0.674	0.501

Odds ratio and 95% CI



**Influence of *Cytochrome P450 2C19*
Genotype on *Helicobacter pylori*
Proton Pump
Inhibitor-Amoxicillin-Clarithromycin
Eradication Therapy: A Meta-Analysis**

Yuko Morino¹, Mitsushige Sugimoto^{2}, Naoyoshi Nagata², Ryota Niikiura², Eri Iwata²,
Mariko Hamada², Yusuke Kawai², Tatsuhiro Fujimiya³, Hironori Takeuchi⁴, Sakae Unezaki³
and Takashi Kawai²*

25 ensayos clínicos controlados aleatorizados

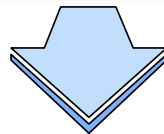
**24 ASIA, 1 Suramérica (Colombia), 5318 pacientes,
Tasa resistencia: Amoxi 8.9%, Claritromicina 13%**

Morino Y, Front Pharmacol 2021;12:759240

Influence of *Cytochrome P450 2C19* Genotype on *Helicobacter pylori* Proton Pump Inhibitor-Amoxicillin-Clarithromycin Eradication Therapy: A Meta-Analysis

Yuko Morino¹, Mitsushige Sugimoto^{2*}, Naoyoshi Nagata², Ryota Niikiura², Eri Iwata²,
Mariko Hamada², Yusuke Kawai², Tatsuhiro Fujimiya³, Hironori Takeuchi⁴, Sakae Unezaki³
and Takashi Kawai²

Extensos metabolizadores



**Lansoprazol y omeprazol
Menor tasa erradicación**

**Esomeprazol y rabeprazol
No son influidos**

CLINICAL PRACTICE UPDATE

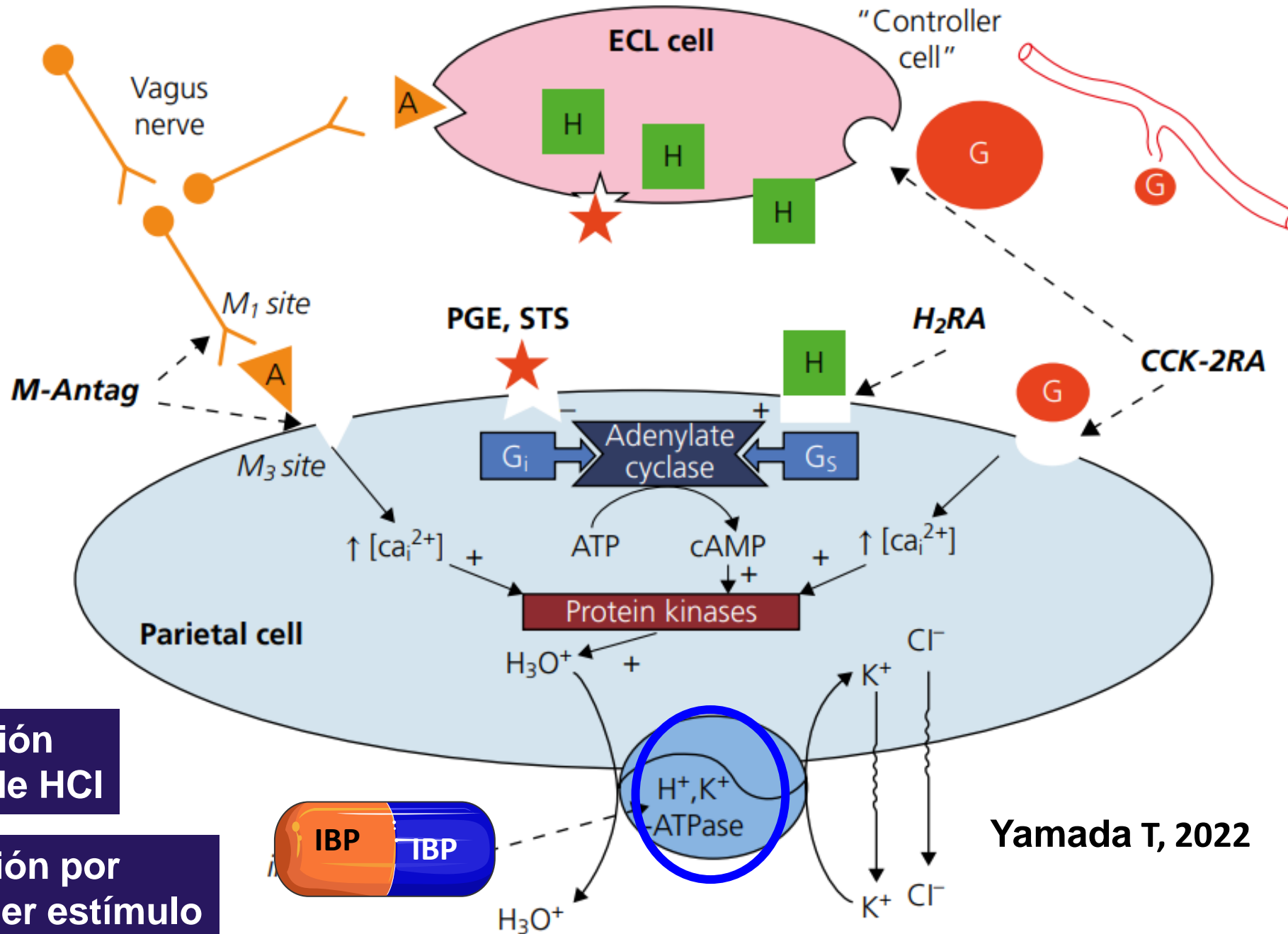
AGA Clinical Practice Update on the Management of Refractory *Helicobacter pylori* Infection: Expert Review



Shailja C. Shah,^{1,2,3} Prasad G. Iyer,⁴ and Steven F. Moss⁵

Best Practice Advice 7: Inadequate acid suppression is associated with *H pylori* eradication failure. The use of high-dose and more potent PPIs, PPIs not metabolized by *CYP2C19*, or potassium-competitive acid blockers, if available, should be considered in cases of refractory *H pylori* infection.

**Opció Rabeprazol, Esomeprazol, Vonoprazan, Tegoprazan
o aumentar dosis de IBP 1era generaci3n**



Secreción Basal de HCl

Secreción por cualquier estímulo

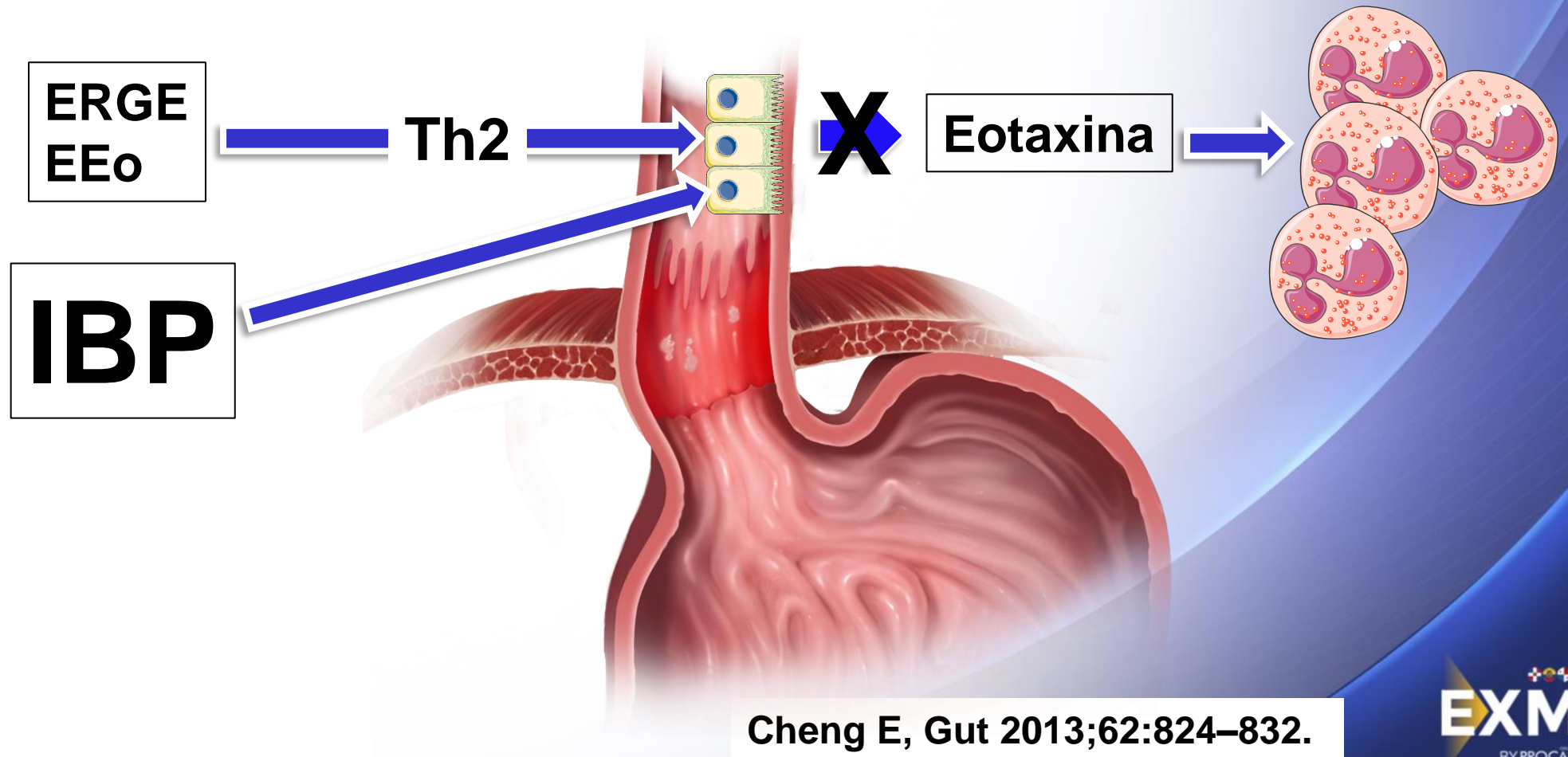
Yamada T, 2022

IBP

Efectos sistémicos anti inflamatorios

Omeprazole blocks eotaxin-3 expression by oesophageal squamous cells from patients with eosinophilic oesophagitis and GORD

Edaire Cheng,¹ Xi Zhang,² Xiaofang Huo,² Chunhua Yu,² Qiuyang Zhang,² David H Wang,² Stuart Jon Spechler,² Rhonda F Souza²

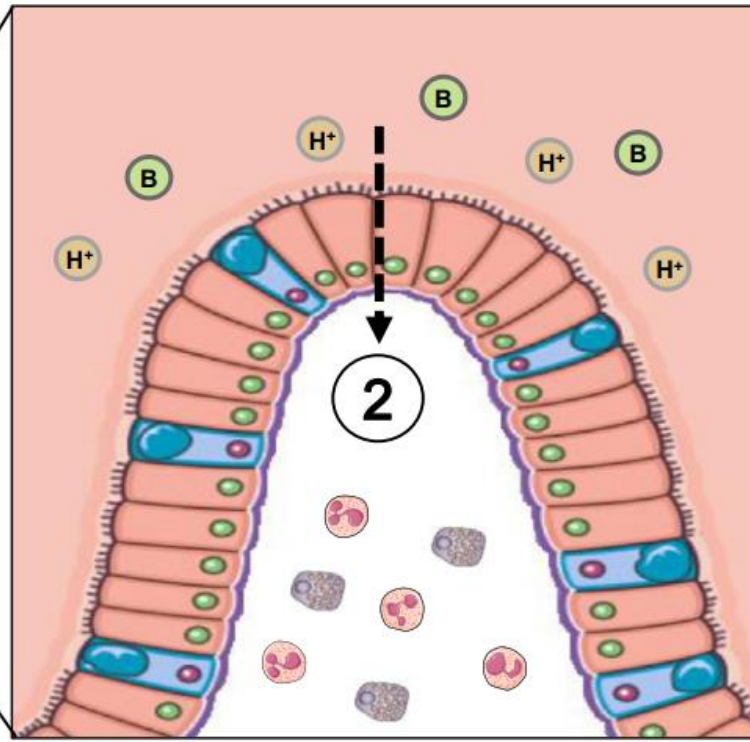


IBP y Dispepsia Funcional

Off-PPI:

duodenal luminal & mucosal alterations

systemic & stress responses



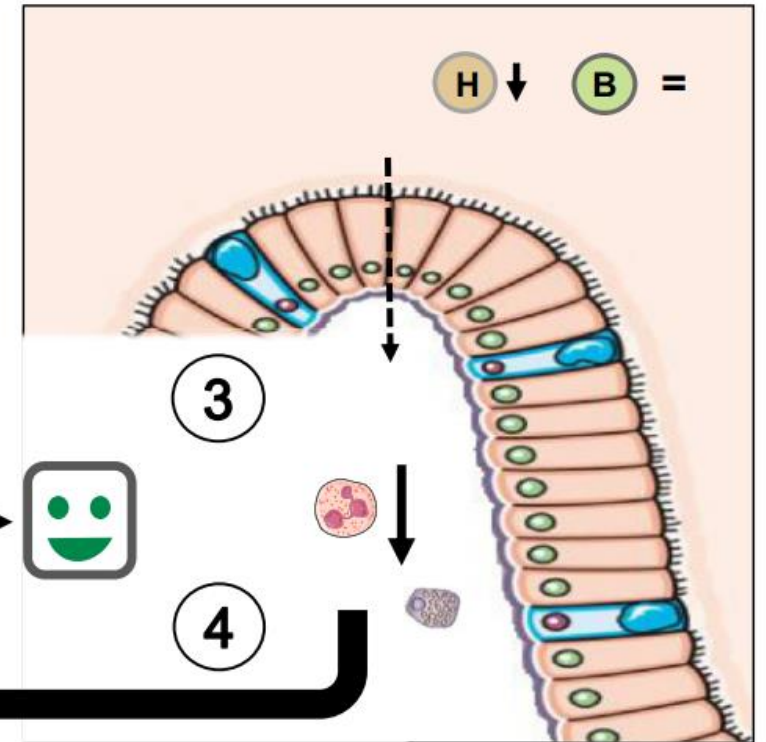
- H^+ Acid (pH)
- B Bile salts
- Eosinophil
- Mast cell

On-PPI:

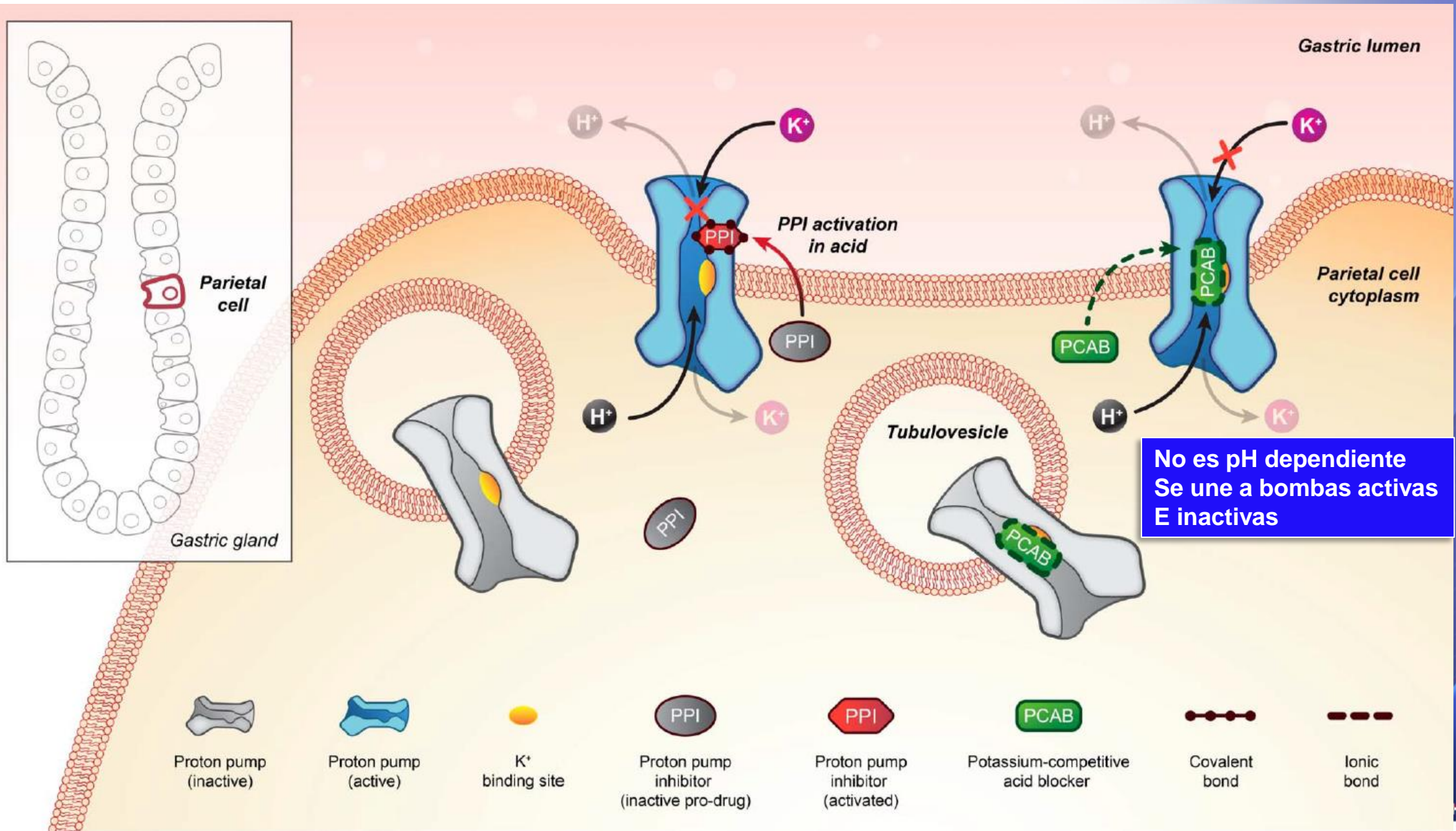
↓ symptoms

= stress

↓ cortisol

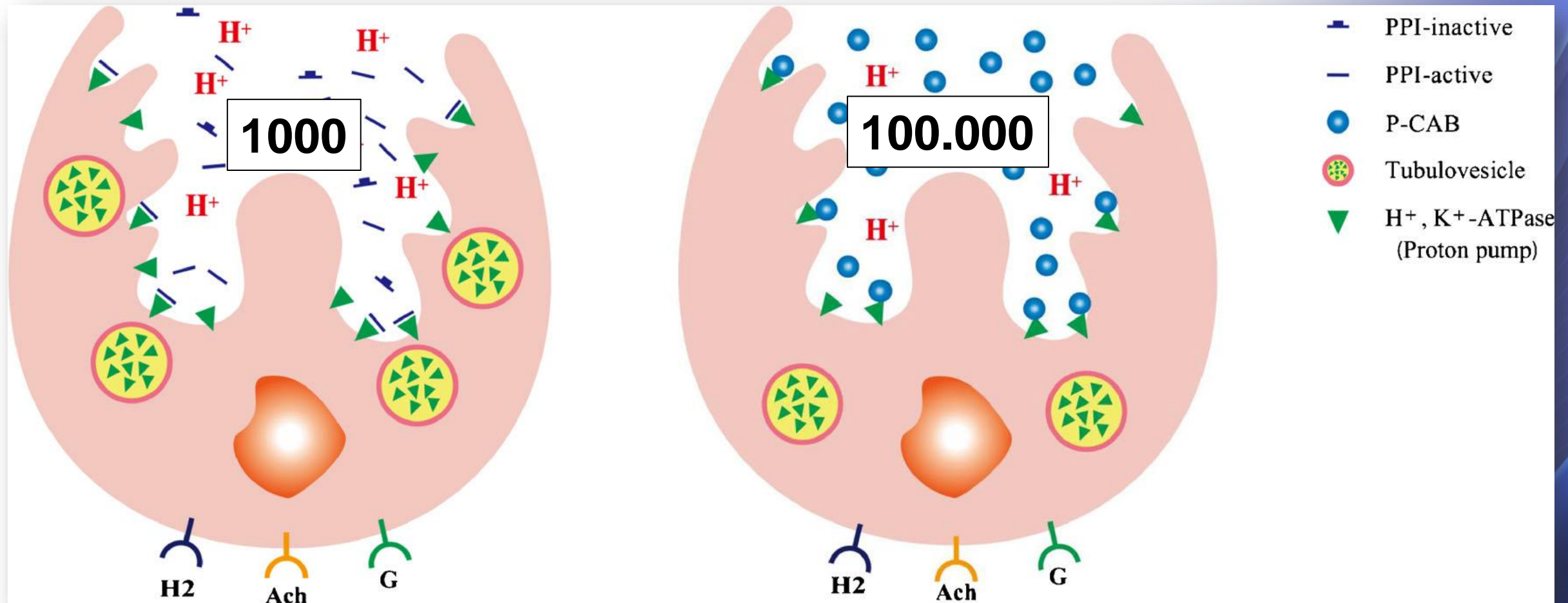


Wauters L, Gastroenterology 2021;160:1521-31

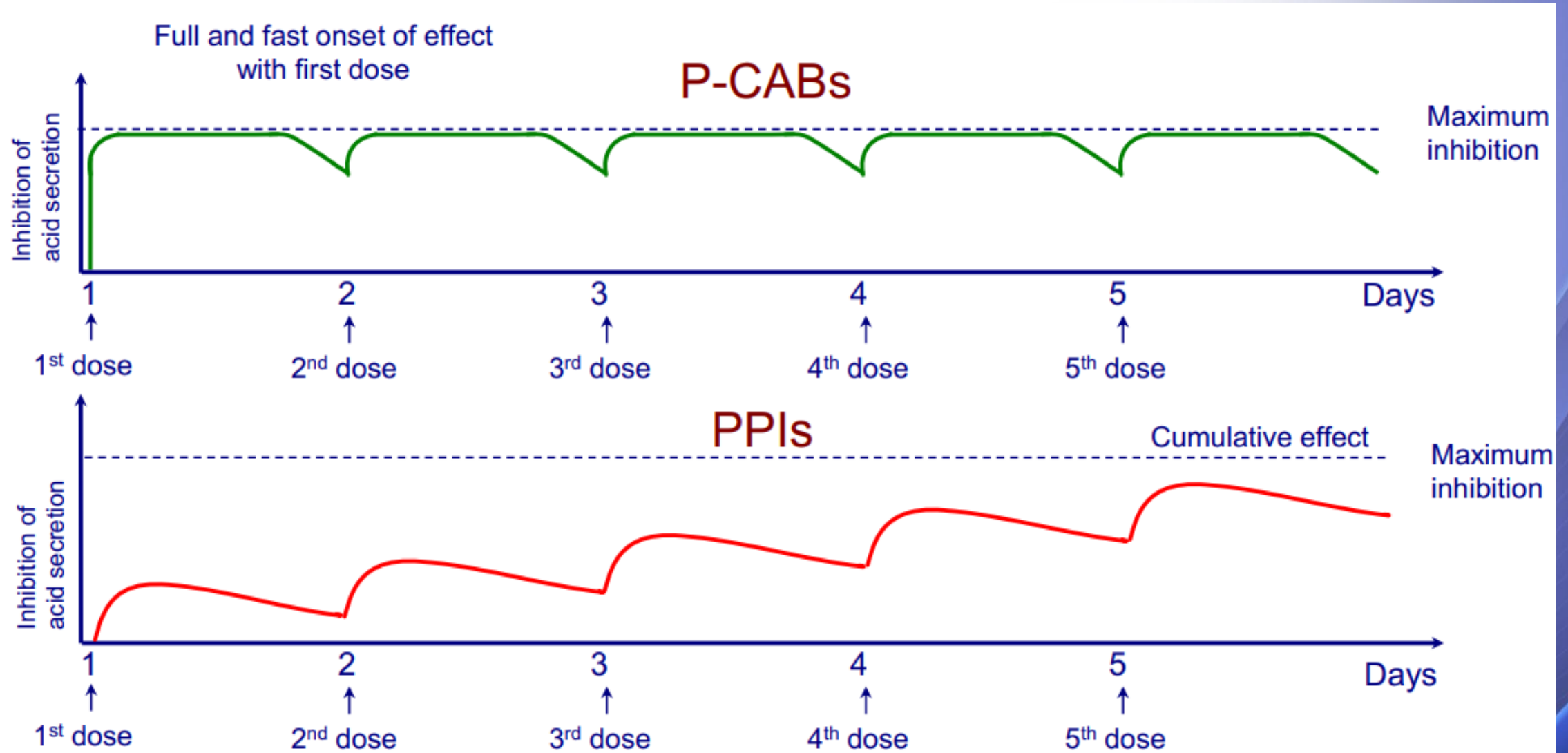


No es pH dependiente
 Se une a bombas activas
 E inactivas

IBP 3^a Generación competitivos de K: *P-CABs*



Shibli F, Curr Gastroenterol Rep 2020; 22:16
Hunt RH, Curr Opt Treat Gastroenterol 2018;16:57-90



Hunt RH, Curr Opt Treat Gastroenterol 2018;16:57-90.

P-CAB

Vonoprazan

Tegoprazan

**Japón
Filipinas
Singapur
Tailandia
Malasia**

**Corea del
Sur**

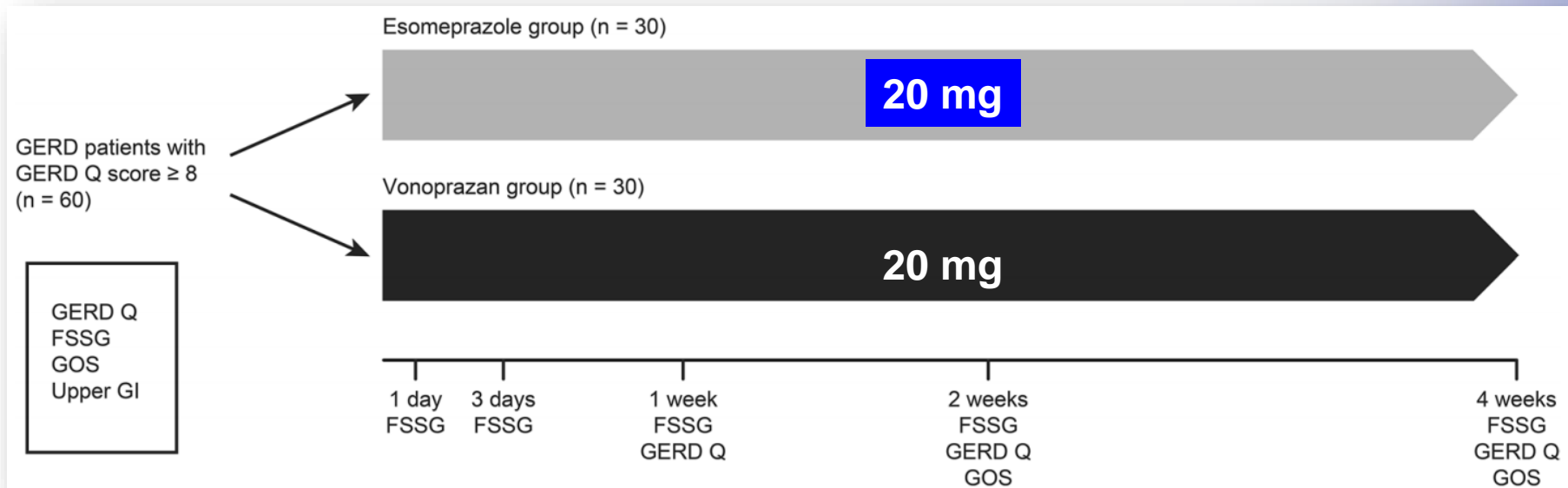
**Estudio USA Europa
2021-2023**

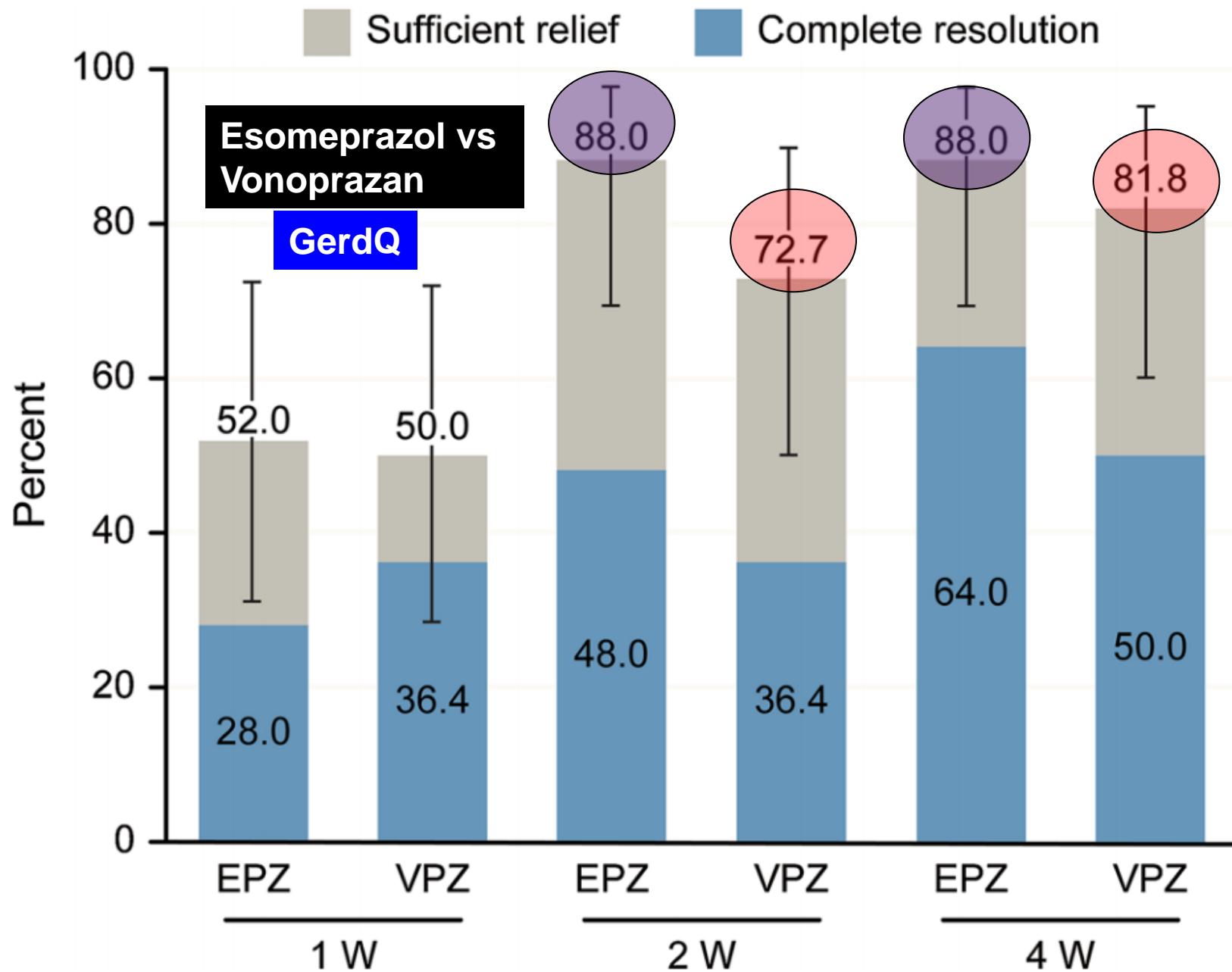
Oshima T, *J Neurogastroenterol Motil.* 2018;24:334–44.
Scarpignato C, *Aliment Pharmacol Ther.* 2019;50:960–62.

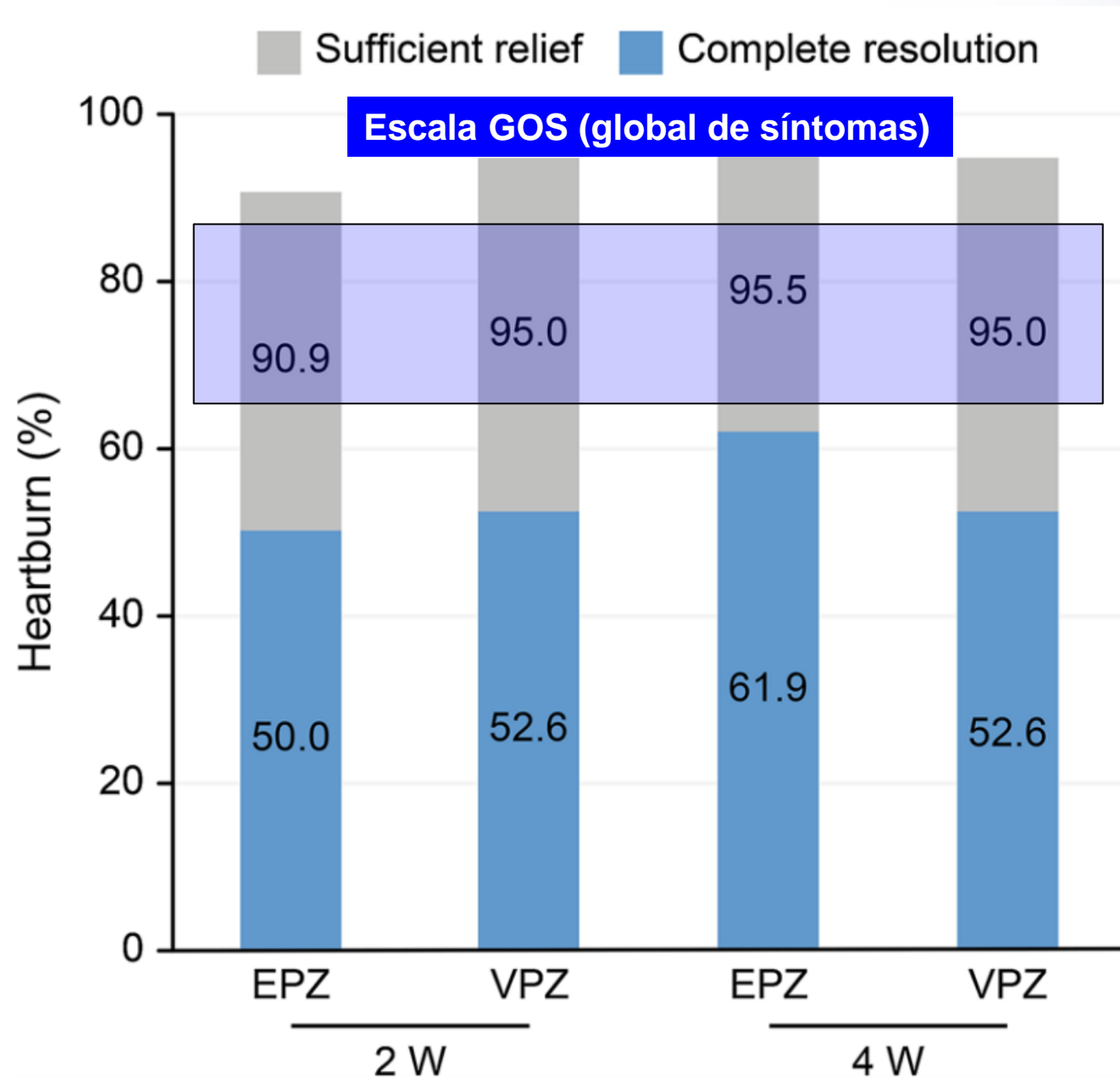
ORIGINAL ARTICLE

Short-Term Symptomatic Relief in Gastroesophageal Reflux Disease: A Comparative Study of Esomeprazole and Vonoprazan

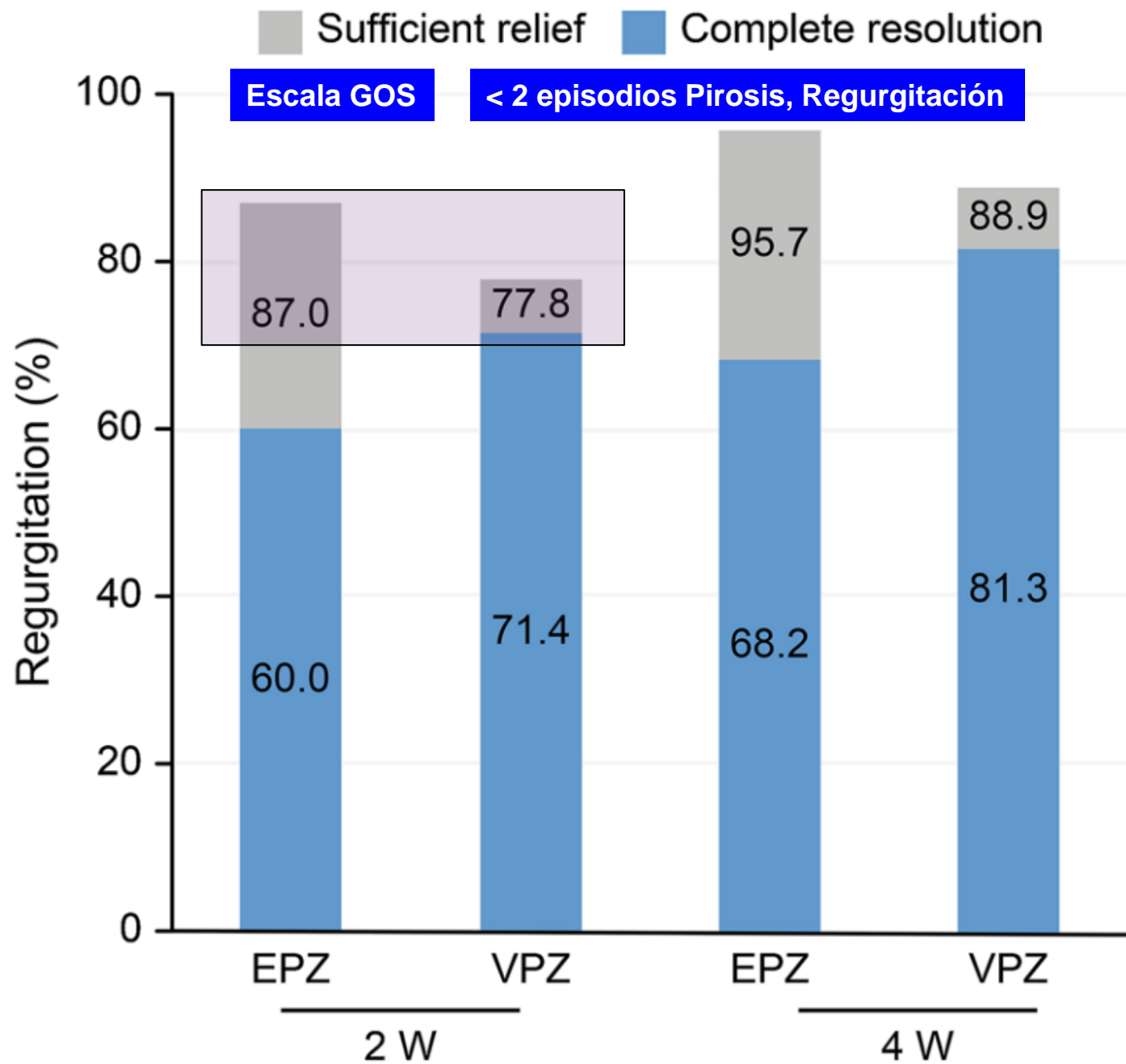
Kouichi Sakurai¹ · Hiroko Suda¹ · Satomi Fujie¹ · Takayuki Takeichi¹ · Ayako Okuda¹ · Tetsuya Murao¹ · Kiwamu Hasuda¹ · Masahiro Hirano² · Kiyoharu Ito³ · Katsuie Tsuruta⁴ · Masahiro Hattori¹







Sakurai K, Dig Dis Sci 2019; 64:815–22



Randomized clinical trial: A double-blind, proof-of-concept, phase 2 study evaluating the efficacy and safety of vonoprazan 20 or 40 mg versus esomeprazole 40 mg in patients with symptomatic gastro-esophageal reflux disease and partial response to a healing dose of a proton-pump inhibitor

Jan Tack¹ | Borislav Vladimirov² | Ivo Horny³ | Chui Fung Chong⁴ | Jessica Eisner⁵ | Richard Czerniak⁶ | Yohei Takanami⁶

Conclusions: No statistically significant difference in efficacy and safety was observed among treatment groups, and vonoprazan was well tolerated. The trial is registered with the National Board of Health (EudraCT: 2015-001154-14) database.

ERGE Vonoprazan versus Esomeprazol

**Esomeprazol
Convencional**



Vonoprazan

**Esomeprazol
Liberación inmediata ?**

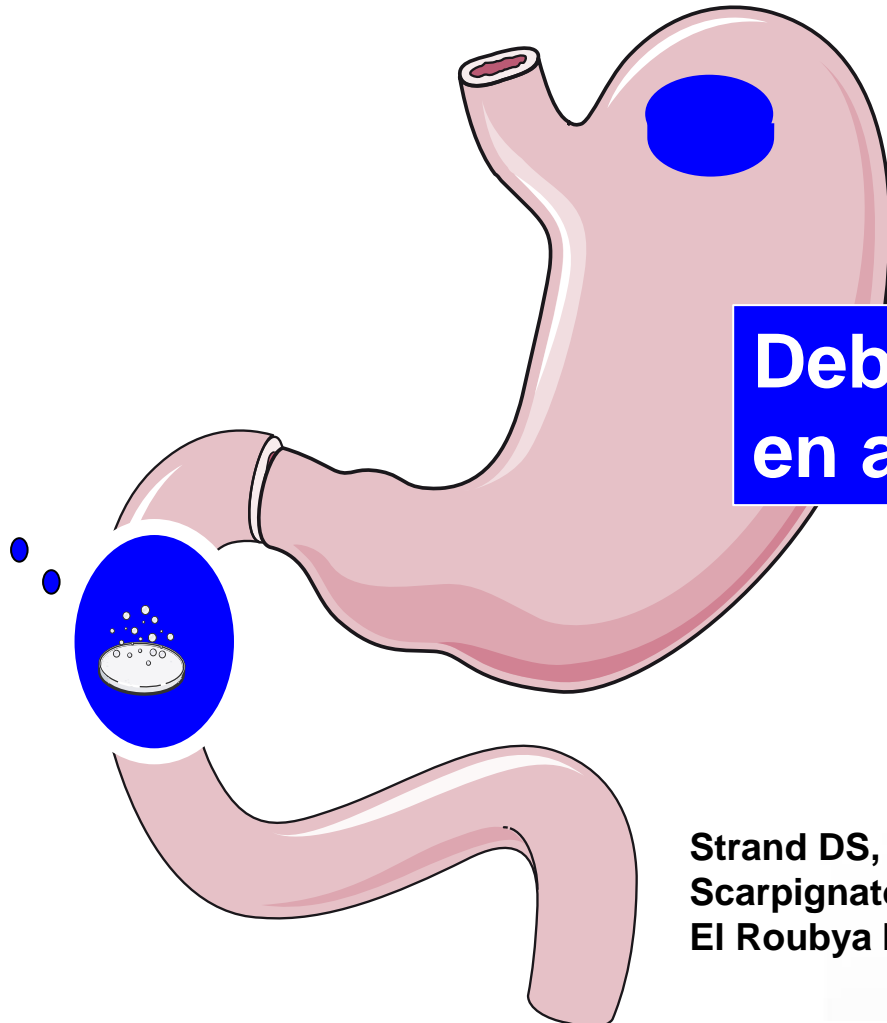
Novedad

**IBP liberación
Inmediata
Varios países
Latinoamérica**



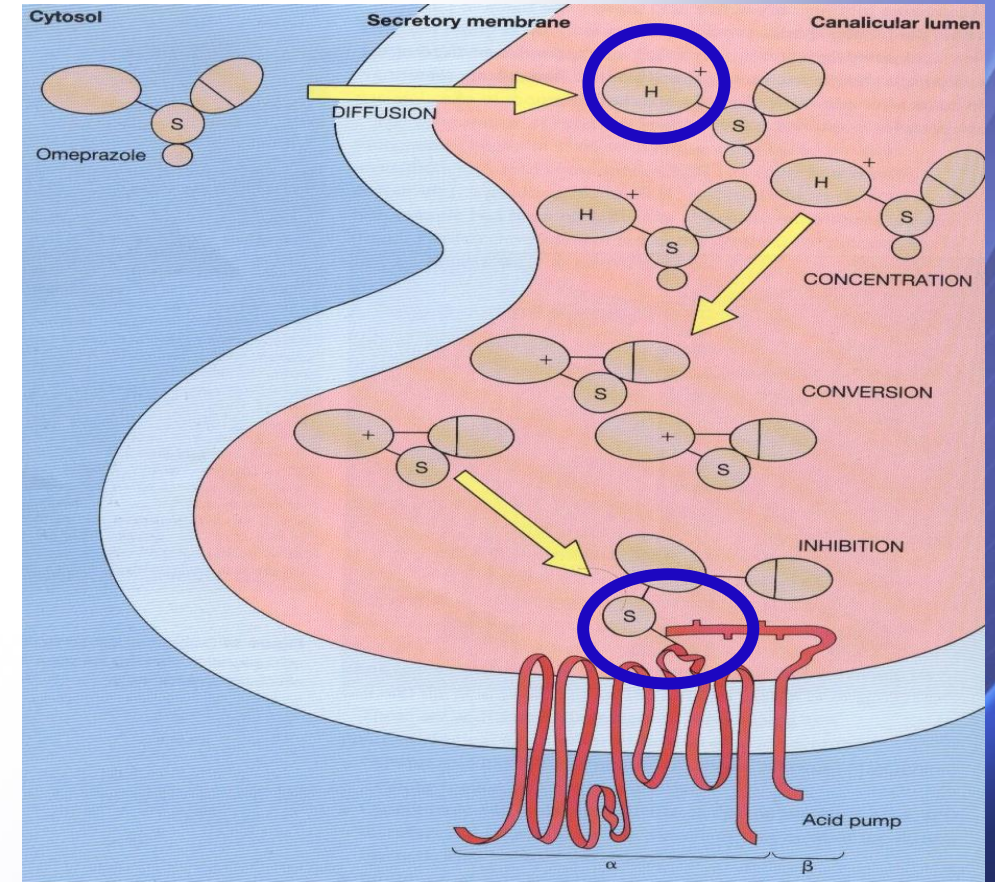
IBPs convencionales 1era y 2da Generación

Liberación Retardada



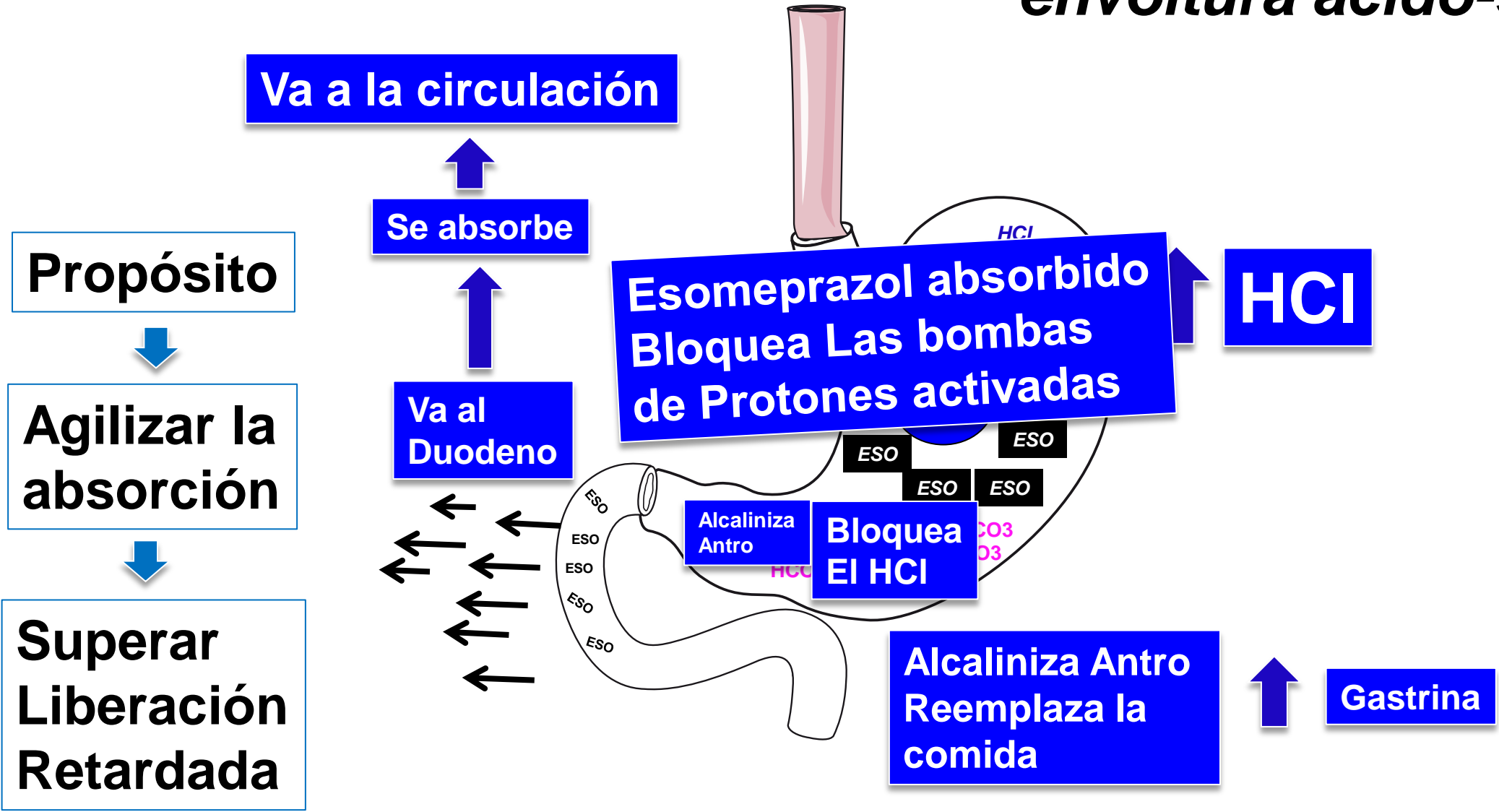
Deben darse en ayunas

Activación



Strand DS, Gut Liver 2017;11:27-37
Scarpignato C, Curr Opin Pharmacol 2008;;8:677-84
El Roubya N, Exp Opin Drug Met Toxicol 2018;14:447-60

IBP Liberación Inmediata: envoltura ácido-sensible



Adv Ther (2021) 38:1660–1676

<https://doi.org/10.1007/s12325-021-01644-7>

ORIGINAL RESEARCH

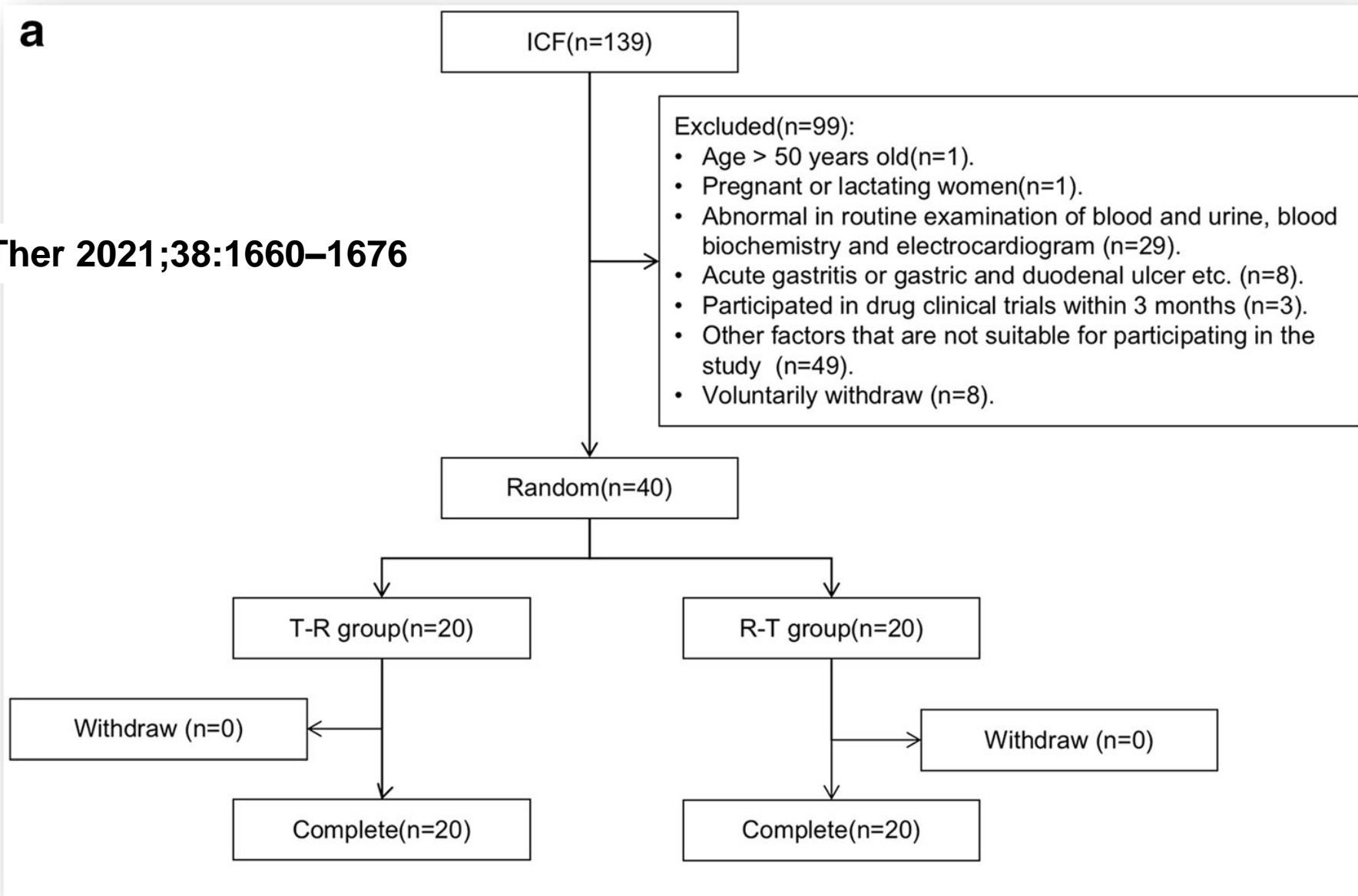
Changchun Haiyue Pharmaceutical have developed IR-ESO

Pharmacokinetics and Pharmacodynamics of **Esomeprazole/Sodium Bicarbonate Immediate-Release Capsules** in Healthy Chinese Volunteers: A Cross-Over, Randomized Controlled Trial

Shan Jing · Yue Zhu · Wenfang Liu · Kexu Yang · Lili Hu ·

Dan Deng · Chunyan Lu · Yang Lin

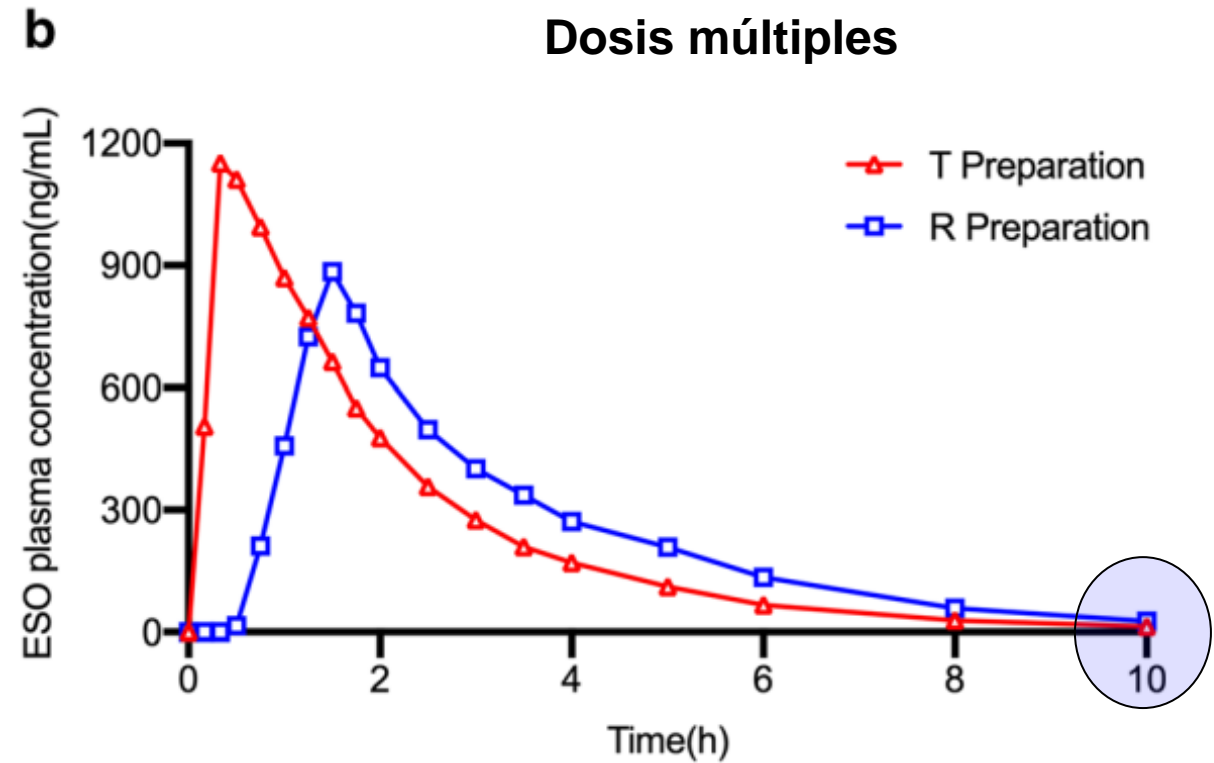
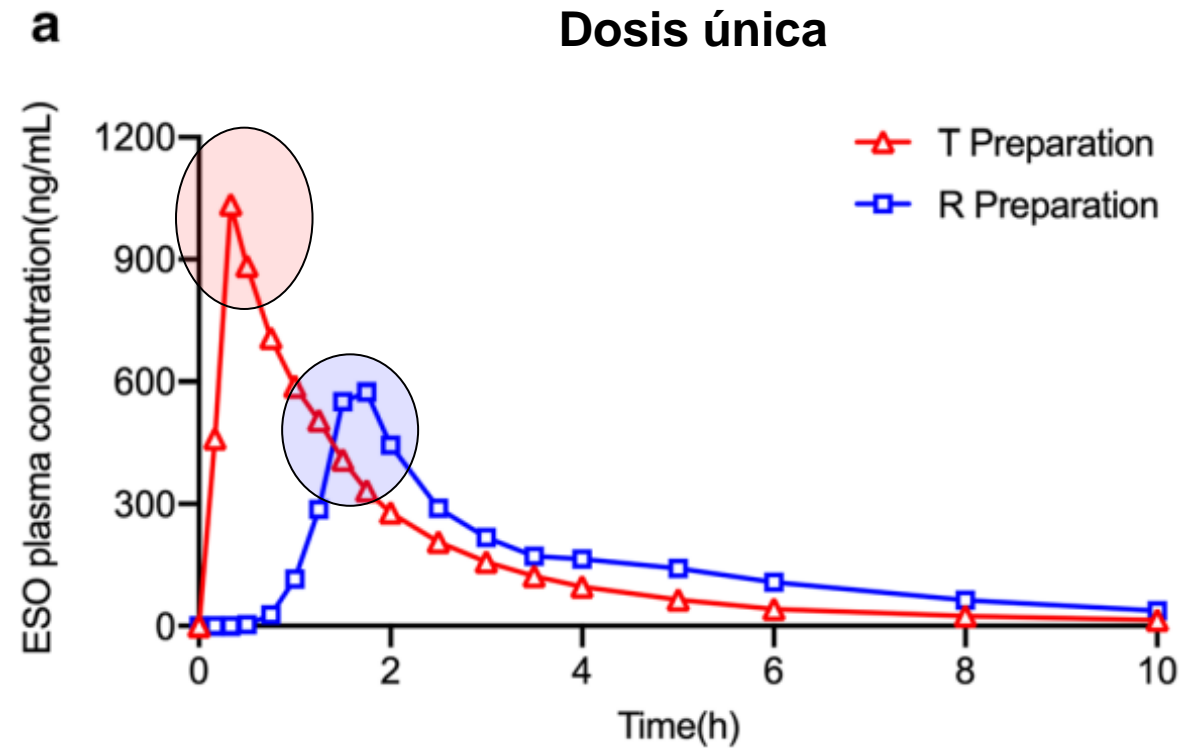
Jing S, Adv Ther 2021;38:1660–1676



ESO 20 mg + Sodium bicarbonate 1100 mg Changchun Haiyue Pharmaceutical

ESO 1 tableta 20 mg Astrazeneca (Nexium)

Esomeprazol liberación inmediata vs Liberación retardada



The safety, pharmacodynamics, and pharmacokinetics of immediate-release formulation containing esomeprazole 20 mg/sodium bicarbonate 800 mg in healthy adult male

40 voluntarios sanos

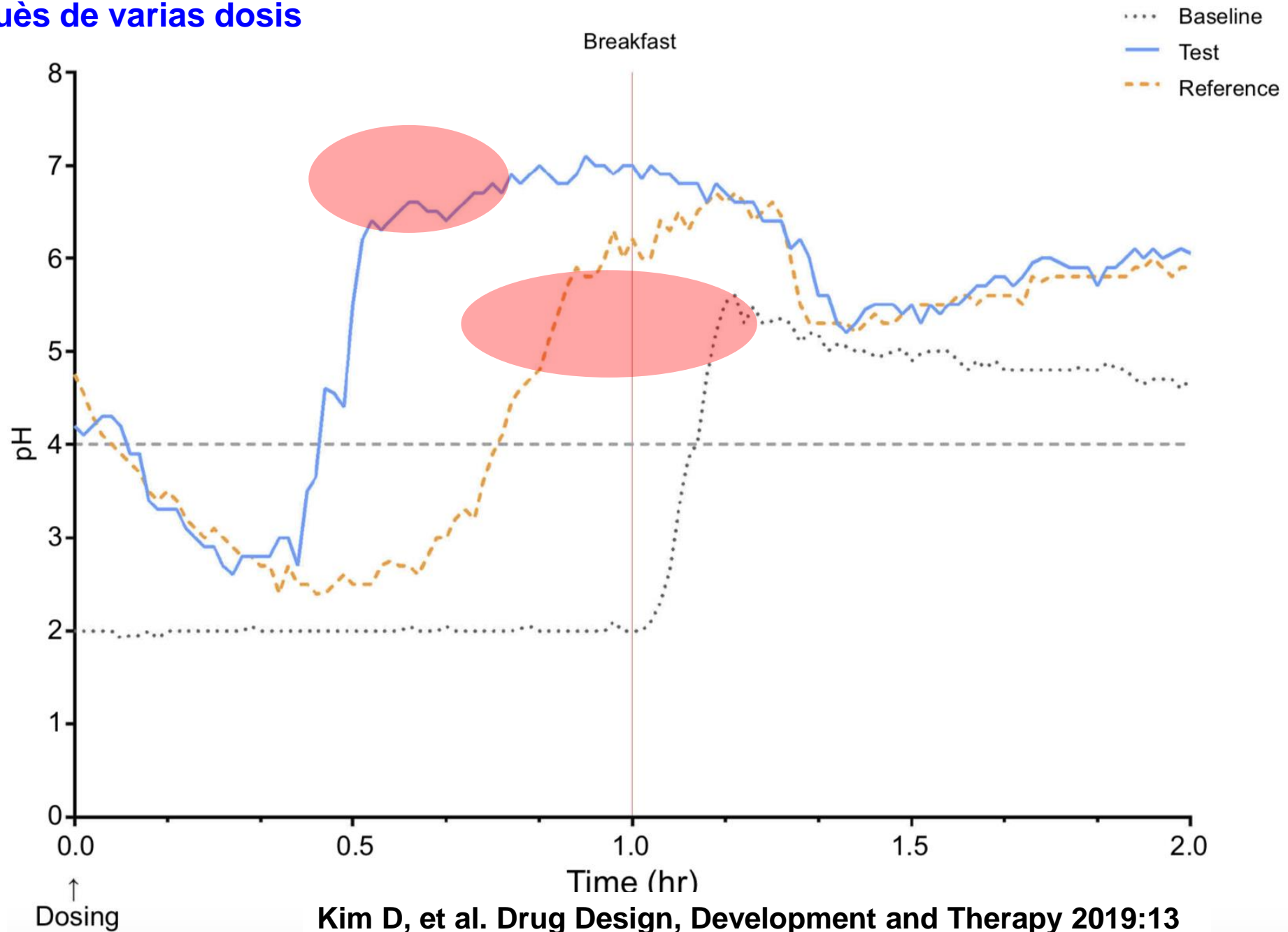
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This article was published in the following Dove Press journal:
Drug Design, Development and Therapy

Background: Esomeprazole is the most effective treatment for acid-related disorders and is widely used with enteric coating due to rapid degradation in the acidic environment. However, the enteric-coated formulation delays absorption and onset of action. To overcome this limitation, an immediate-release formulation containing esomeprazole 20 mg and sodium bicarbonate 800 mg (IR-ESO) was developed.

Purpose: To evaluate the safety, pharmacokinetics (PK), and pharmacodynamics of IR-ESO compared to those of esomeprazole 20 mg (ESO).

Dia 7, despuès de varias dosis



Kim D, et al. Drug Design, Development and Therapy 2019:13

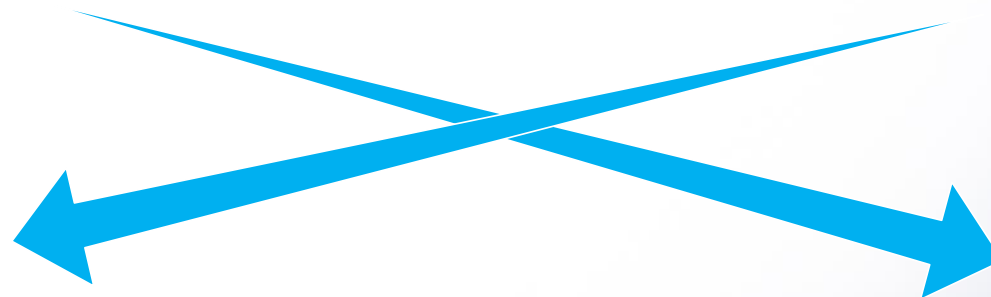
Oral buffered esomeprazole is superior to i.v. pantoprazole for rapid rise of intragastric pH: A wireless pH metry analysis

Rupa Banerjee,* D Nageshwar Reddy,* Nalini M Guda,[†] Rakesh Kalpala,* Swapna Mahurkar,* Santosh Darisetty* and G Venkat Rao*

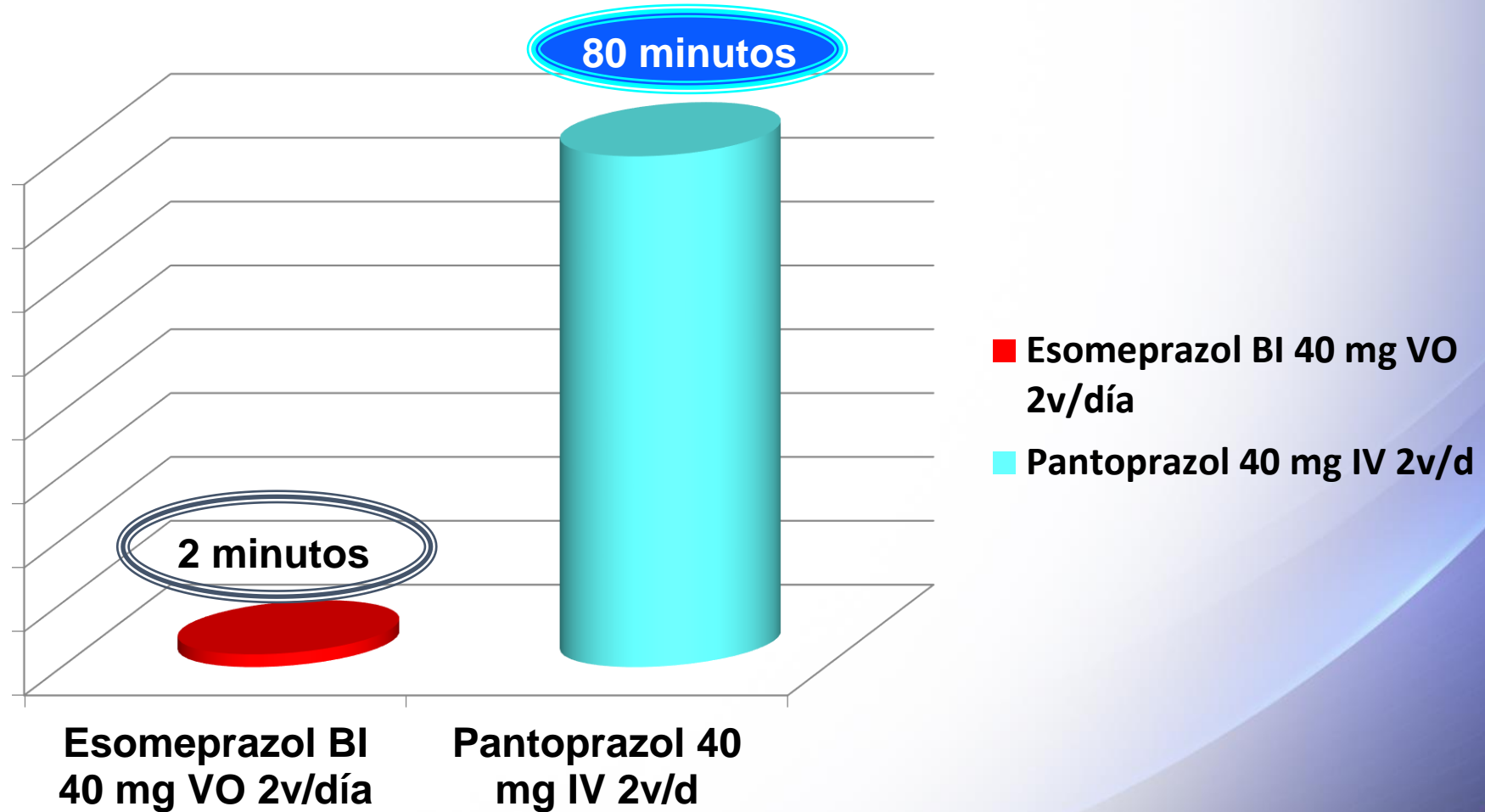
10 Voluntarios sanos (8H, 2M), 31 años, IMC 21kg/m², No anemia, *H.pylori* (-), perfil hepático normal. Dos dosis en 24 h “washout” 2 semanas Crossover

**Esomeprazol BI
2v/día**

**Pantoprazol 40 mg IV
2v/día**

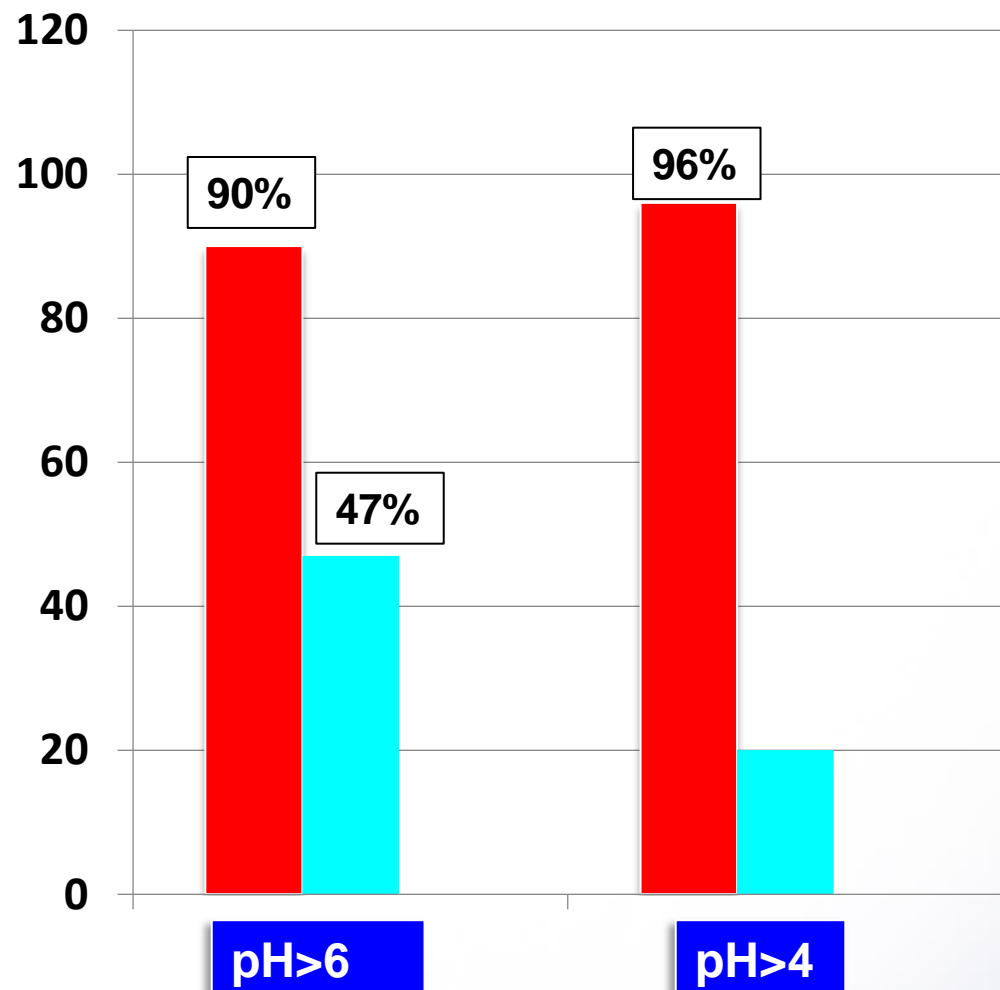


Tiempo para lograr pH > 6: Esomeprazol BI vs Pantoprazol IV/ 2v/día



% de 24 Horas con pH > 4 y >6
ESO BI 40 mg VO 2v/d VS Pantoprazol 40 mg IV/ 2v/dìa

pH
24 horas



La elevación del pH
Persistió después de 6h
de la 1era dosis: No es
por efecto local del HCO3!

■ Esomeprazol BI
■ Pantoprazol

Banerjee R, J Gastroenterol Hepatol 2010; 25:43-47

Abstract

Background and Aims: A pH of more than 6 is required for clot stability and hemostasis. Intravenous proton pump inhibitors have a rapid onset of action compared to oral and have been preferred for management of non-variceal bleeding. Intravenous pantoprazole has

**Por su rapidez de acción y
Elevación de pH >6,
Sería una excelente opción
En en hemorragia por
ulceras pépticas**

tration. It was significantly superior to i.v. pantoprazole in equivalent dosing. This finding could have implications in the management of non-variceal bleed where a rapid and sustained pH of more than 6 is desirable.

A Randomized, Double-Blind, Active-Control, Noninferiority, Multicenter, Phase 4 Study to Evaluate the Efficacy and Safety of Esomeprazole/Sodium Bicarbonate 20/800 mg in Patients with Nonerosive Gastroesophageal Reflux Disease

Su Hyun Park¹, Kang Nyeong Lee¹, Oh Young Lee¹, Myung Gyu Choi², Jie-Hyun Kim³, In-Kyung Sung⁴, Jae Young Jang⁵, Kyung Sik Park⁶, Hoon Jai Chun⁷, Eun Young Kim⁸, Jun Kyu Lee⁹, Jin Seok Jang¹⁰, Gwang Ha Kim¹¹, Su Jin Hong¹², Yong Chan Lee¹³, Suck-Chei Choi¹⁴, Hyun Soo Kim¹⁵, Tae Oh Kim¹⁶, Gwang Ho Baik¹⁷, and Yong Cheol Jeon¹⁸

Table 3. Proportions of Patients with Symptoms for More Than 3 Days among Those Patients with Complete Resolution of Heartburn at Week 4

Variable	Total (n=125)	Esoduo [®] group (n=62)	Nexium [®] group (n=63)	p-value*
Heartburn				
Daytime (>3 days)	25 (20.0)	17 (27.4)	8 (12.7)	0.040

Mas pacientes no tenían pirosis más de 3 veces/día

Esomeprazol Liberación inmediata Resuelve desventajas IBPs 1ª Generación

Esomeprazol
Independiente Cyp2C19
Más potente > inhibición HCl

**Acción
Inmediata**

Bicarbonato

**No necesita darse
Antes de comida**

**Supera actividad
Esomeprazol original**

CME

Katz PO, Am J Gastroenterol. 2022;117:27-56

ACG Clinical Guideline for the Diagnosis and Management of Gastroesophageal Reflux Disease

Philip O. Katz, MD, MACG¹, Kerry B. Dunbar, MD, PhD^{2,3}, Felice H. Schnoll-Sussman, MD, FACG¹, Katarina B. Greer, MD, MS, FACG⁴, Rena Yadlapati, MD, MSHS⁵ and Stuart Jon Spechler, MD, FACG^{6,7}

An omeprazole-sodium bicarbonate combination that is not enteric-coated provides good control of intragastric pH in the first 4 hours of sleep when dosed at bedtime (57).

There is little rationale for switching (almost all PPIs are similarly effective at equiactive antisecretory doses) unless the switch is toward a more effective antisecretory compound (e.g. esomeprazole,^{15,16} rabeprazole^{17,18}) or immediate release-omeprazole²⁰).

Optimizaciòn IBP en ERGE

IBP 1v/D
Medidas
Generales

IBP en ayunas
IBP 2v/D?

Otro IBP
Esomeprazol
Rabeprazol
Vonoprazan

IBP
Liberaciòn
Inmediata

Hungin APS Aliment Pharmacol Ther 2022;55;1492
Katz PO, Am J Gastroenterol. 2022;117:27-56

Colombia, Serie de casos

**68 pacientes síntomas nocturnos, ERGE 2-5 años,
28-60 años, 35 mujeres, Esofagitis B y C, IBP 2v/día**

No mejoría, pirosis 3-4 v/semana

**Esomeprazol-Bicarbonato 40 mg (Ezolium®)
Por la mañana o al acostarse 8 semanas**

**Persistencia
Síntomas 8%**

**Mejoría
Síntomas 10%**

**No síntomas
80%**



En ayunas



Con el estómago vacío



En la Tarde



A demanda

IBP ideal 2023

Seguro

Eficaz

Disponibile

Rápida acción

Independiente de CYP2C19

Independiente de las comidas

Muchas gracias !