



Tratamiento de la infección por *H pylori* en 2023.

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Profesor Titular de Medicina
Universidad Nacional de Colombia
Hospital Universitario Nacional de Colombia

1983



2023

Descubrimiento del agente causal de la mayoría de las gastritis

1983

THE LANCET

[Volume 321, Issue 8336](#), 4 June 1983, Pages 1273-1275

[doi:10.1016/S0140-6736\(83\)92719-8](https://doi.org/10.1016/S0140-6736(83)92719-8)  Cite or Link Using DOI

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Letters to the Editor

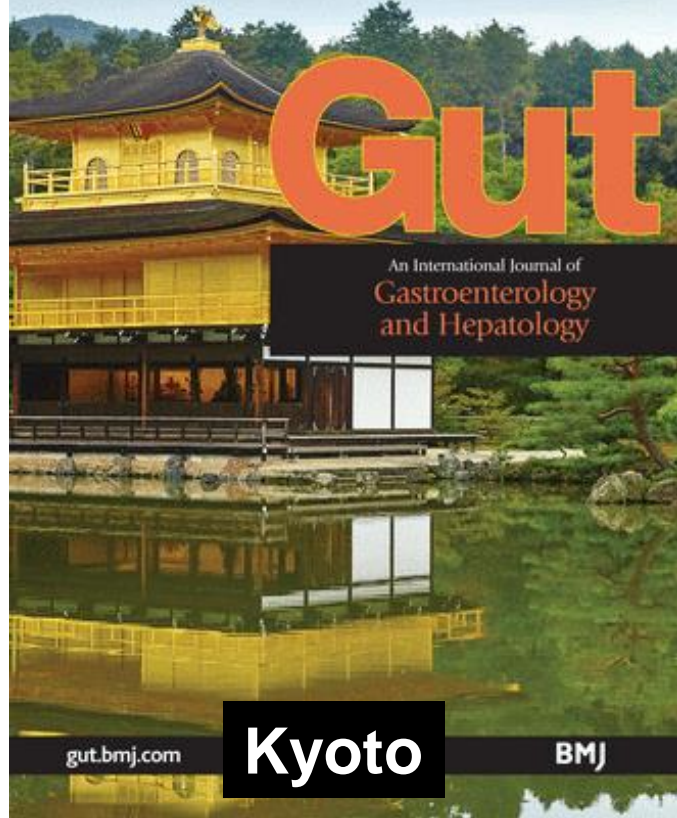
**Gastritis crónica
Una enfermedad infecciosa**

^a Department of Pathology, Royal Perth Hospital, Perth, Western Australia 6001, United Kingdom

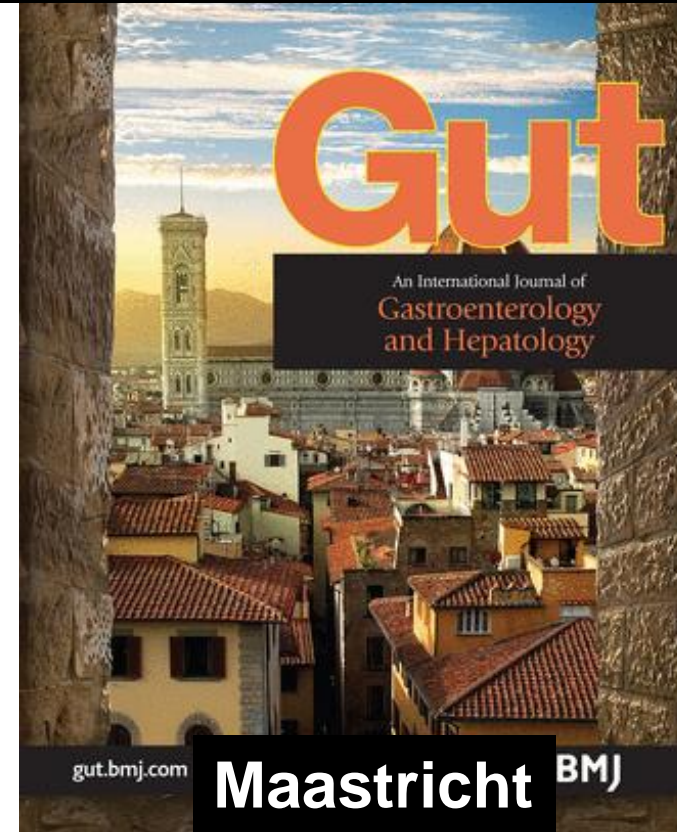
^b Department of Gastroenterology, Royal Perth Hospital, Perth, Western Australia 6001, United Kingdom

Available online 22 September 2003.

Sugano K, Gut 2015;64:1353-67



Malfertheiner P, et al. Gut 2022;71:1724-62



“La gastritis crónica por *H.pylori* es una enfermedad infecciosa”



ICD 11th (International Classification of Disease)

Konjetzny: A German Surgeon of the Past Century and his Pioneering Hypothesis of a Bacterial Aetiology for Gastritis, Peptic Ulcer and Gastric Cancer

1938 . Profecía de Konjetzny:
Cirujano alemán pionero de la hipótesis
Actual sobre la etiología del cáncer gástrico



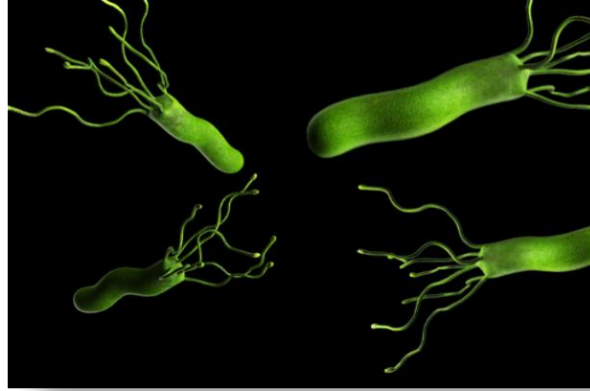
“... el cáncer gástrico...
a través de la mucosa
y no se sabe...
dará... benigna y cuál

Hipótesis absolutamente correcta

Rechazada

“... seamos capaces de prevenir y tratar la
gastritis, podremos prevenir la úlcera y el cáncer
gástrico: “la profilaxis contra la gastritis es la
profilaxis contra la úlcera y el cáncer gástrico”

40-50% mundo
Tiene *H.pylori*



H.pylori

OMS IARC1994/2009

Carcinógeno tipo I

Siempre debe recibir tratamiento













Houston Consensus Conference on Testing for *Helicobacter pylori* Infection in the United States

Hashem B. El-Serag,^{*,‡} John Y. Kao,[§] Fasiha Kanwal,^{*,‡,||} Mark Gilger,^{||,‡} Frank LoVecchio,^{**} Steven F. Moss,^{‡‡} Sheila Crowe,^{§§} Adam Elfant,^{|||} Thomas Haas,^{|||} Ronald J. Hapke,^{‡‡} and David Y. Graham^{*,‡} **Clin Gastroenterol Hepatol 2018;16:992–1002**

Kyoto global consensus report on *Helicobacter pylori* gastritis Sugano K, et al. Gut 2015;64:1353–1367.

Kentaro Sugano,¹ Jan Tack,² Ernst J Kuipers,³ David Y Graham,⁴ Emad M El-Omar,⁵ Soichiro Miura,⁶ Ken Haruma,⁷ Masahiro Asaka,⁸ Naomi Uemura,⁹ Peter Malfertheiner,¹⁰ on behalf of faculty members of Kyoto Global Consensus Conference

Screening and eradication of *Helicobacter pylori* for gastric cancer prevention: the Taipei global consensus

Jyh-Ming Liou ,^{1,2,3} Peter Malfertheiner,^{4,5} Yi-Chia Lee ,^{1,2,6} Bor-Shyang Sheu ,^{7,8} Kentaro Sugano,⁹ Hsiu-Chi Cheng,^{7,10} Khay-Guan Yeoh ,¹¹ Ping-I Hsu,¹² Khean-Lee Goh,¹³ Varocha Mahachai,¹⁴ Takuji Gotoda ,¹⁵ Wei-Lun Chang,⁷ Mei-Jyh Chen,^{1,2,16} Tsung-Hsien Chiang,^{1,2,16} Chieh-Chang Chen,^{1,2} Chun-Ying Wu ,^{17,18} Alex Hwong-Ruey Leow,¹³ Jeng-Yih Wu,⁸ Deng-Chyang Wu,⁸ Tzu-Chan Hong,^{1,2,19} Hong Lu ,²⁰ Yoshio Yamaoka ,^{21,22} Francis Megraud,²³ Francis K L Chan ,^{24,25} Joseph JY Sung,^{24,25} Jaw-Town Lin ,^{1,26} David Y Graham ,²² Ming-Shiang Wu ,^{1,2} Emad M El-Omar ,^{27,28} Asian Pacific Alliance on Helicobacter and Microbiota (APAHAM)

Liou J-M, et al. Gut 2020;69:2093–2112



Statement 1: We recommend that all patients with active H pylori infection be treated (100% agree/strongly agree, Grade 1A).

Received: 7 February 2019 | Revised: 8 April 2019 | Accepted: 14 April 2019
DOI: 10.1111/hel.12597


Helicobacter. 2019;24:e1259

Helicobacter WILEY

Guidelines for the management of *Helicobacter pylori* infection in Japan: 2016 Revised Edition

Mototsugu Kato¹  | Hiroyoshi Ota² | Masumi Okuda³  | Shogo Kikuchi⁴  | Kiichi Satoh⁵ | Tadashi Shimoyama⁶  | Hidekazu Suzuki⁷ | Osamu Handa⁸ | Takahisa Furuta⁹ | Katsuhiko Mabe¹ | Kazunari Murakami¹⁰ | Toshiro Sugiyama¹¹ | Naomi Uemura¹² | Shin'ichi Takahashi¹³

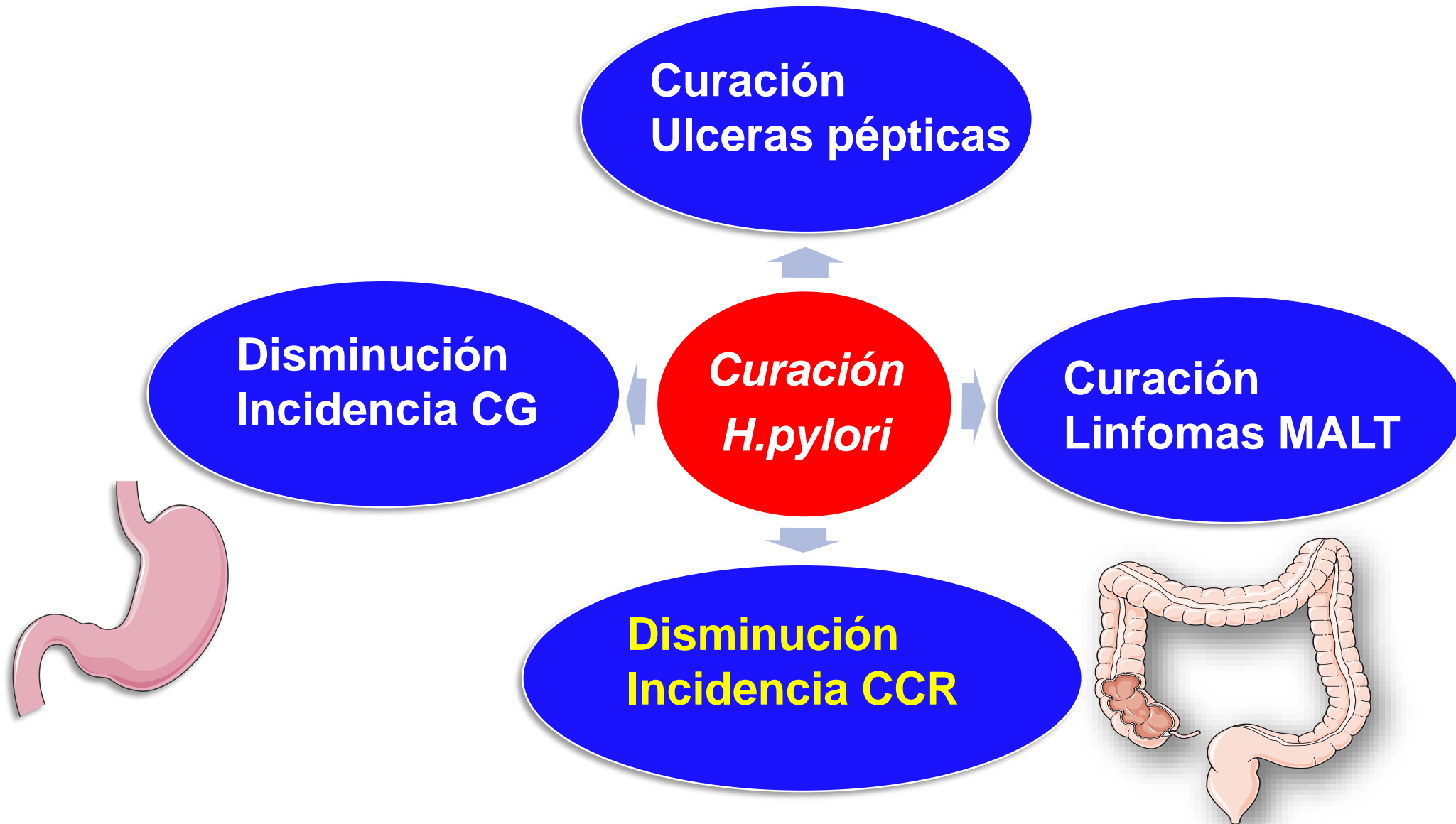
Fifth Chinese National Consensus Report on the management of *Helicobacter pylori* infection Helicobacter 2018;e12475

Wen Zhong Liu¹ | Yong Xie² | Hong Lu¹ | Hong Cheng³ | Zhi Rong Zeng⁴ | Li Ya Zhou⁵ | Ye Chen⁶ | Jiang Bin Wang⁷ | Yi Qi Du⁸ | Nong Hua Lu²  | on behalf of Chinese Society of Gastroenterology, Chinese Study Group on *Helicobacter pylori* and Peptic Ulcer

Management of *Helicobacter pylori* infection: the Maastricht VI/Florence consensus report

Peter Malfertheiner ,^{1,2} Francis Megraud ,³ Theodore Rokkas ,^{4,5} Javier P Gisbert ,^{6,7} Jyh-Ming Liou ,⁸ Christian Schulz ,^{1,9} Antonio Gasbarrini,¹⁰ Richard H Hunt,^{11,12} Marcis Leja ,^{13,14} Colm O'Morain,¹⁵ Massimo Rugge ,^{16,17} Sebastian Suerbaum,^{9,18} Herbert Tilg ,¹⁹ Kentaro Sugano ,²⁰ Emad M El-Omar ,²¹ On behalf of the European Helicobacter and

Malfertheiner P, et al. Gut 2022;71:1724–1762



Malfertheiner P, et al. *Nat Rev Dis Primers* 2023;9:19.
Ford AC, et al. *Cochrane Database Syst Rev.* 2020;7(7):Cd005583.
Ralser A, et al. *Gut* 2023;72:1258–1270
Boustany A, *Ann Gastroenterol* 2023;36: 1-5

H.pylori y riesgo de cáncer de colon

Meta-análisis (año)	Estudios incluidos	CCR OR (IC95%)	Adenomas OR (IC95%)
Wu (2013)	27	1.39 (1.18-1.64)	1.66 (1.39-1.97)
Zhao (2016)	14	1.33 (1.01-1.77)	
Yang (2019)	27	1.27 (1.17-1.37)	
Choi (2020)	48	1.44 (1.26-1.65)	1.49 (1.37-1.62)

Wu Q, et al *Colorectal Dis.* 2013;15:e352–64.

Zhao Y, *J Can Res Ther.* 2016;12:15-8

Yang F, *Minerva Med.* 2019;110:464-70

Choi DS, *Clin Transl Gastroenterol.* 2020;11:e00127

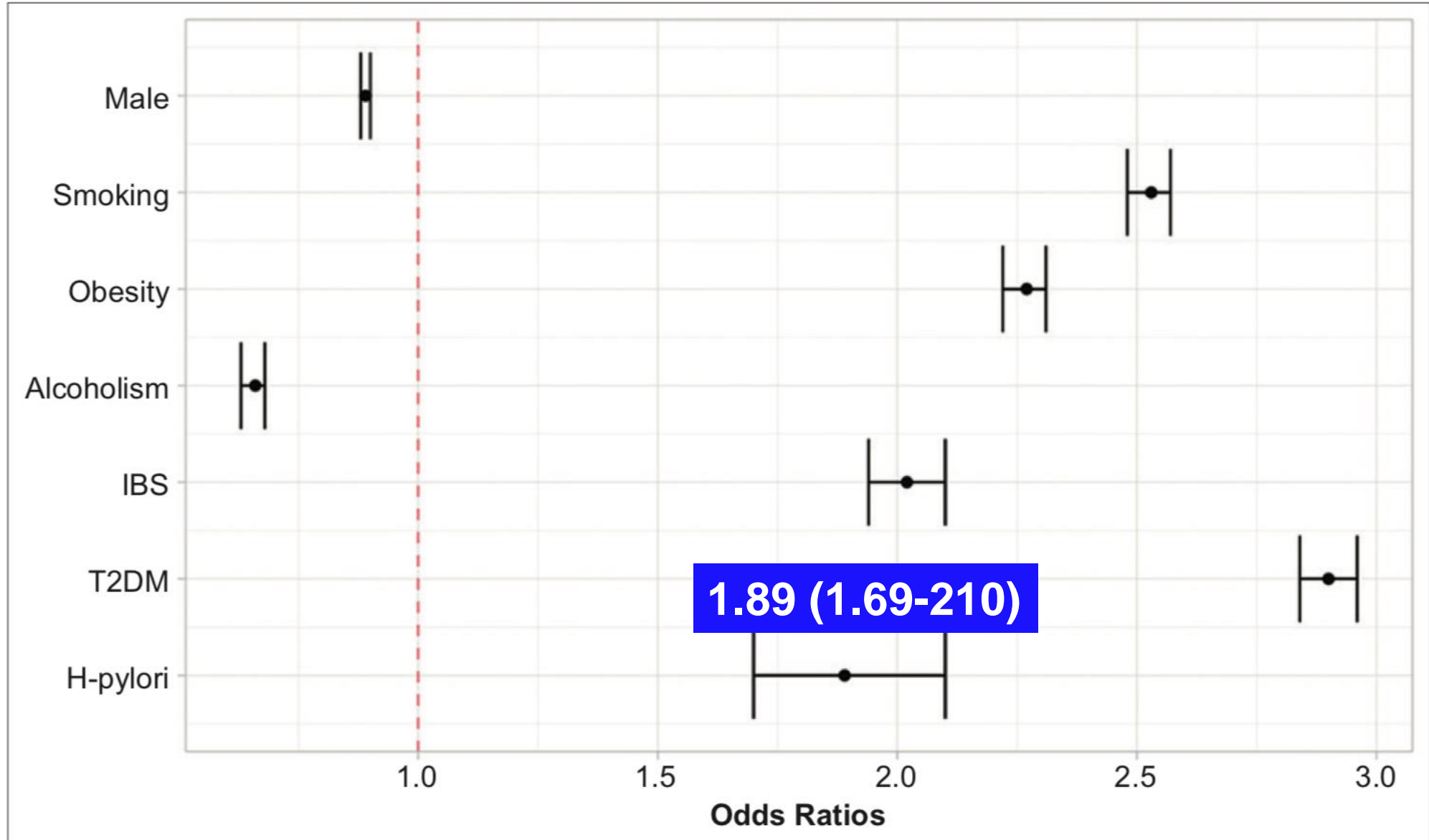
Epidemiology and risk of colorectal cancer in patients with a history of *Helicobacter pylori* infection: a population-based study

Antoine Boustany, Somtochukwu Onwuzo, Ashraf Almomani, Imad Asaad

Cleveland Clinic Foundation, Ohio, USA

Characteristics	Total	CRC (%)	No CRC (%)
		n=82,420	n=47,632,330
Sex	Male	35,410 (42.96)	21,354,920 (44.83)
	Female	46,840 (56.83)	25,954,180 (54.48)
Race	Caucasian	57,950 (70.31)	24,364,530 (51.15)
	African American	10,770 (13.06)	5,392,410 (11.32)
	Hispanic	1110 (1.34)	744,570 (1.56)
	Asian	2460 (2.98)	798,890 (1.67)
Comorbidities	Type 2 diabetes mellitus	14,050 (17.04)	2,179,130 (4.57)
	Hyperlipidemia	25,230 (30.61)	4,548,180 (9.55)
	Obesity	17,500 (21.23)	3,456,560 (7.26)
	<i>Helicobacter pylori</i>	280 (0.34)	52,980 (0.11)
	Irritable bowel syndrome	2810 (3.40)	578,560 (1.21)
Substance abuse	Smoking	13,450 (16.32)	2,765,380 (5.80)
	Cannabis	1560 (1.89)	485,860 (1.02)
	Alcohol	2260 (2.74)	413,340 (0.86)

H.pylori – Ca Colon



Helicobacter pylori promotes colorectal carcinogenesis by deregulating intestinal immunity and inducing a mucus-degrading microbiota signature

Anna Ralser,¹ Alisa Dietl,¹ Sebastian Jarosch,^{1,2} Veronika Engelsberger,¹ Andreas Wanisch,¹ Klaus Peter Janssen ,³ Moritz Middelhoff,⁴ Michael Vieth,⁵ Michael Quante ,^{4,6} Dirk Haller ,^{7,8} Dirk H Busch,^{1,9} Li Deng,^{10,11} Raquel Mejías-Luque ,^{1,9} Markus Gerhard ^{1,9}

Ralser A, et al. Gut 2023;72:1258-70

WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ *Helicobacter pylori* infection is the most prevalent bacterial infection worldwide and is the most important risk factor for gastric cancer development.
- ⇒ Infected individuals harbour a nearly twofold increased risk to develop colorectal cancer (CRC).

WHAT THIS STUDY ADDS

- ⇒ *H. pylori* infection accelerates intestinal tumour development in *Apc*-mutant mice.
- ⇒ *H. pylori* infection induces a pro-inflammatory and pro-carcinogenic environment in murine and human colon.
- ⇒ The observed phenotype was normalised upon eradication therapy and is strongly dependent on microbiota.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ We provide evidence that *H. pylori* infection is a strong causal promoter of colorectal carcinogenesis and should be included into an adapted risk score for CRC.
- ⇒ Eradication of *H. pylori* infection might be an effective measure to reduce this risk.

***H.pylori* 1983**



**Después de 40 años
No hay tratamiento universal**



helicobacter pylori



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October 16, 2023



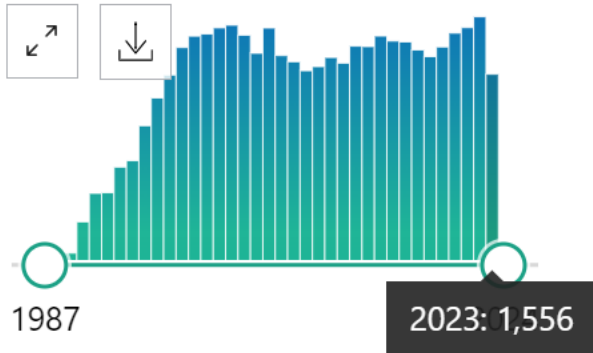
Page

1

of 5,062



RESULTS BY YEAR



The Effect of **Helicobacter pylori** Density on Serum Vitamin B12 and Folate Levels in Patients With Non-atrophic Gastritis.

1

Cite Pinar IE, Mavis O.

Share

Cureus. 2023 Sep 14;15(9):e45252. doi: 10.7759/cureus.45252. eCollection 2023 Sep.

PMID: 37842464 [Free PMC article.](#)

Introduction Chronic infection with **Helicobacter pylori** (Hp) is an essential cause of gastrointestinal pathologies in adults. ...



helicobacter pylori treatment



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October 16, 2023



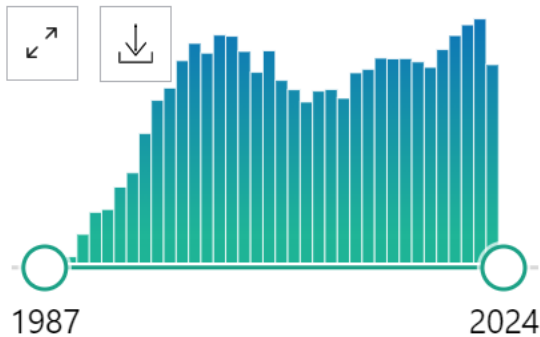
Page

1

of 2,314



RESULTS BY YEAR



The role of microbiota in the development and **treatment** of gastric cancer.

1

Wang Y, Han W, Wang N, Han M, Ban M, Dai J, Dong Y, Sun T, Xu J.

Cite

Front Oncol. 2023 Sep 29;13:1224669. doi: 10.3389/fonc.2023.1224669. eCollection 2023.

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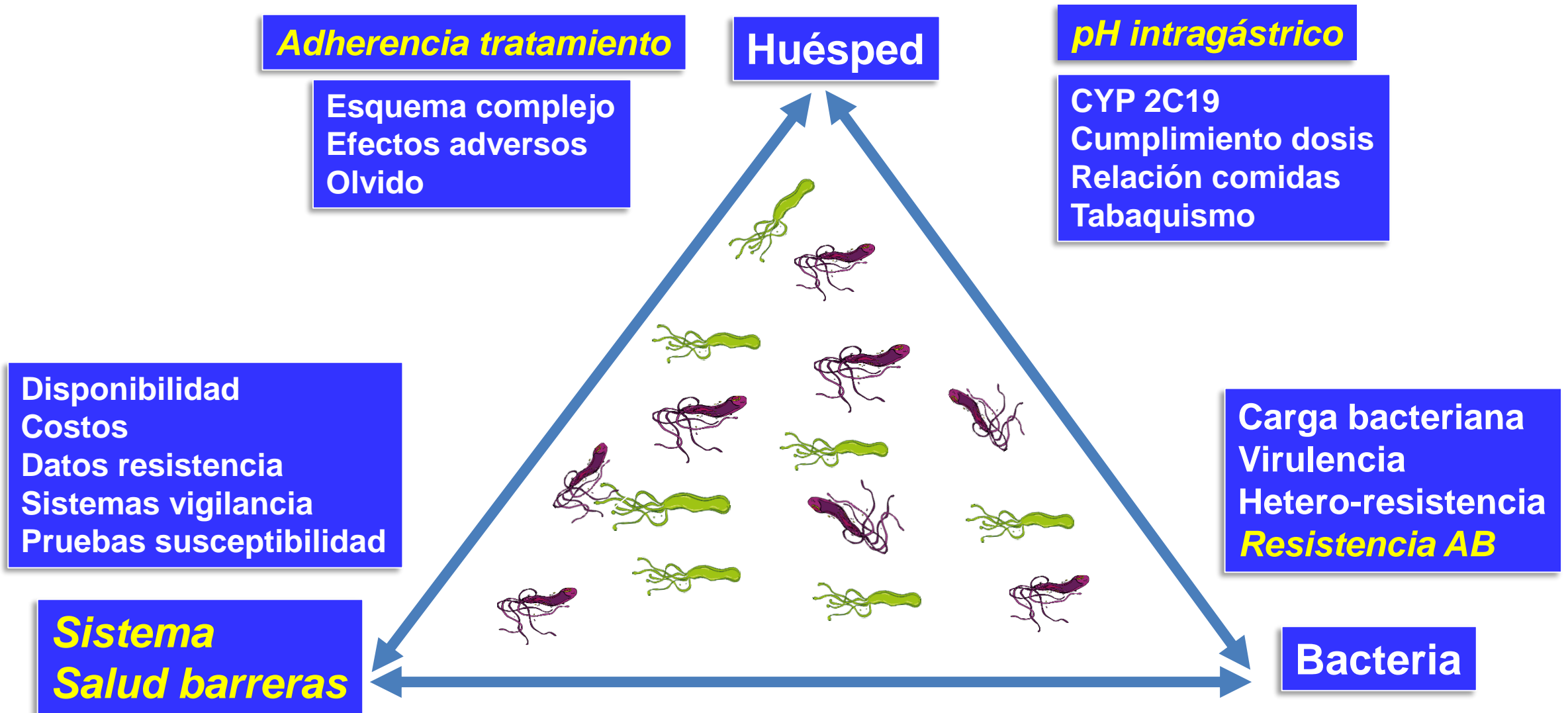
PMID: 37841431 [Free PMC article.](#) [Review.](#)

The stomach was once considered a sterile organ until the discovery of **Helicobacter pylori** (HP). With the application of high-throughput sequencing technology and macrogenomics, researchers have identified fungi and five major bacterial phyla within the stomachs of h ...

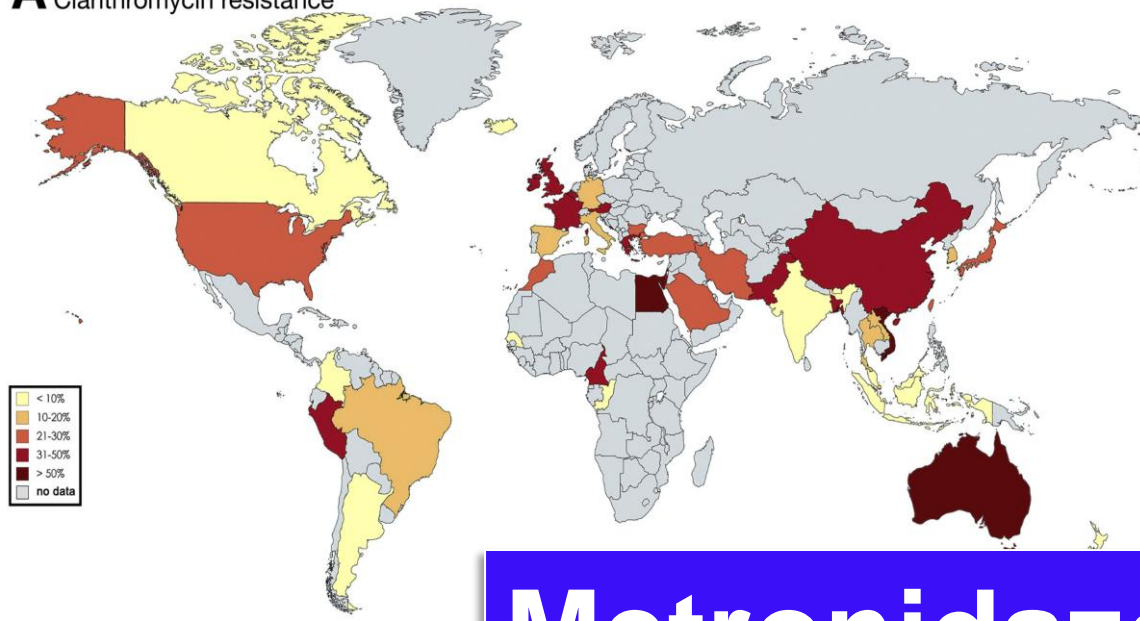
Difícil de erradicar



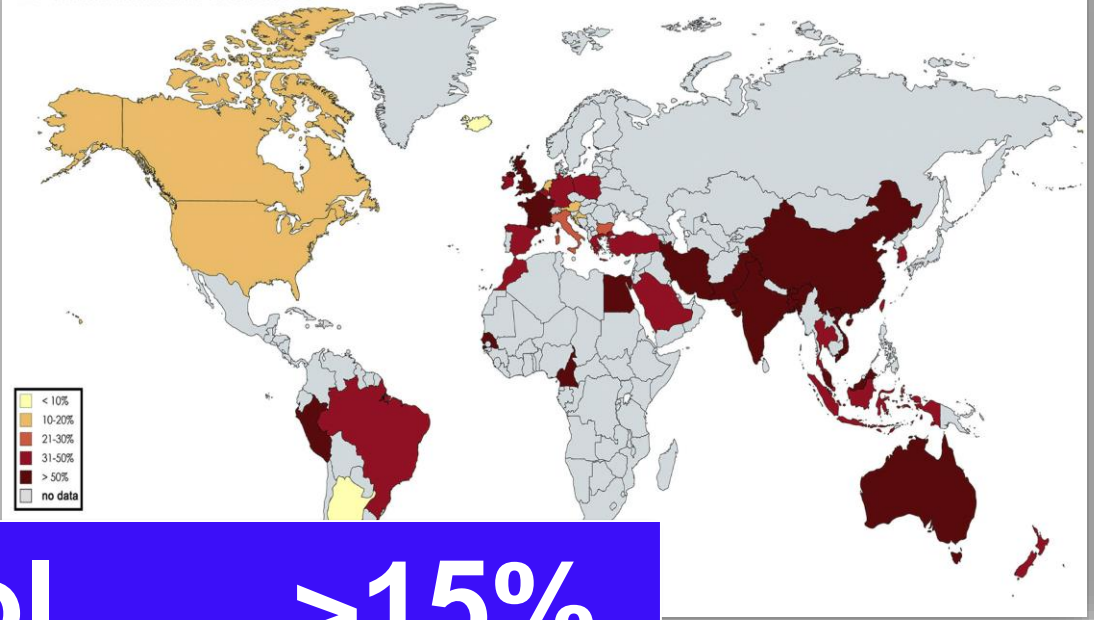
Factores impactan erradicación



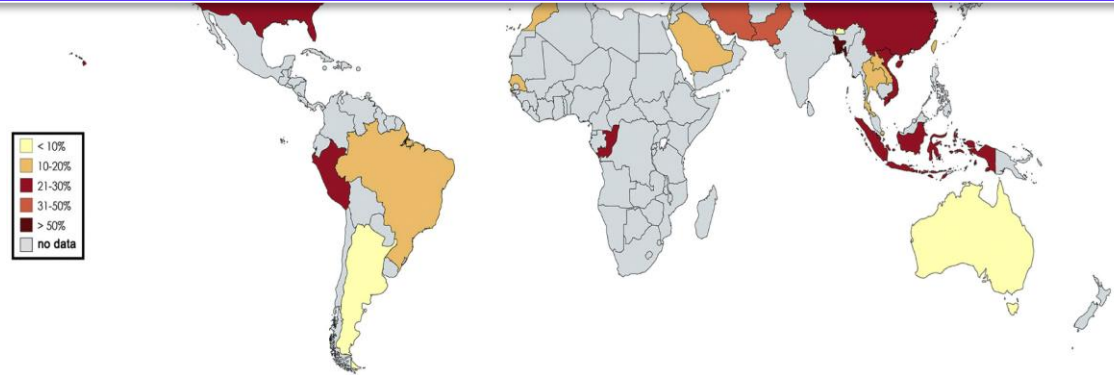
A Clarithromycin resistance



B Metronidazole resistance



Metronidazol >15%
Clarithromicina >15%
Levofloxacinina >15%




Prevalence of Antibiotic Resistance in *Helicobacter pylori*: A Systematic Review and Meta-analysis in World Health Organization Regions



Alessia Savoldi,¹ Elena Carrara,² David Y. Graham,³ Michela Conti,² and Evelina Tacconelli^{1,2}

Resistencia in vitro	Probabilidad falla Terapéutica
Claritromicina	7.0 (IC 95% 5.2-9.3)
Levofloxacina	8.2 (IC 95% 3.8-17.6)
Metronidazol	2.5 (IC 95%1.8-3.5)



**Terapia empírica
Contra *H.pylori***

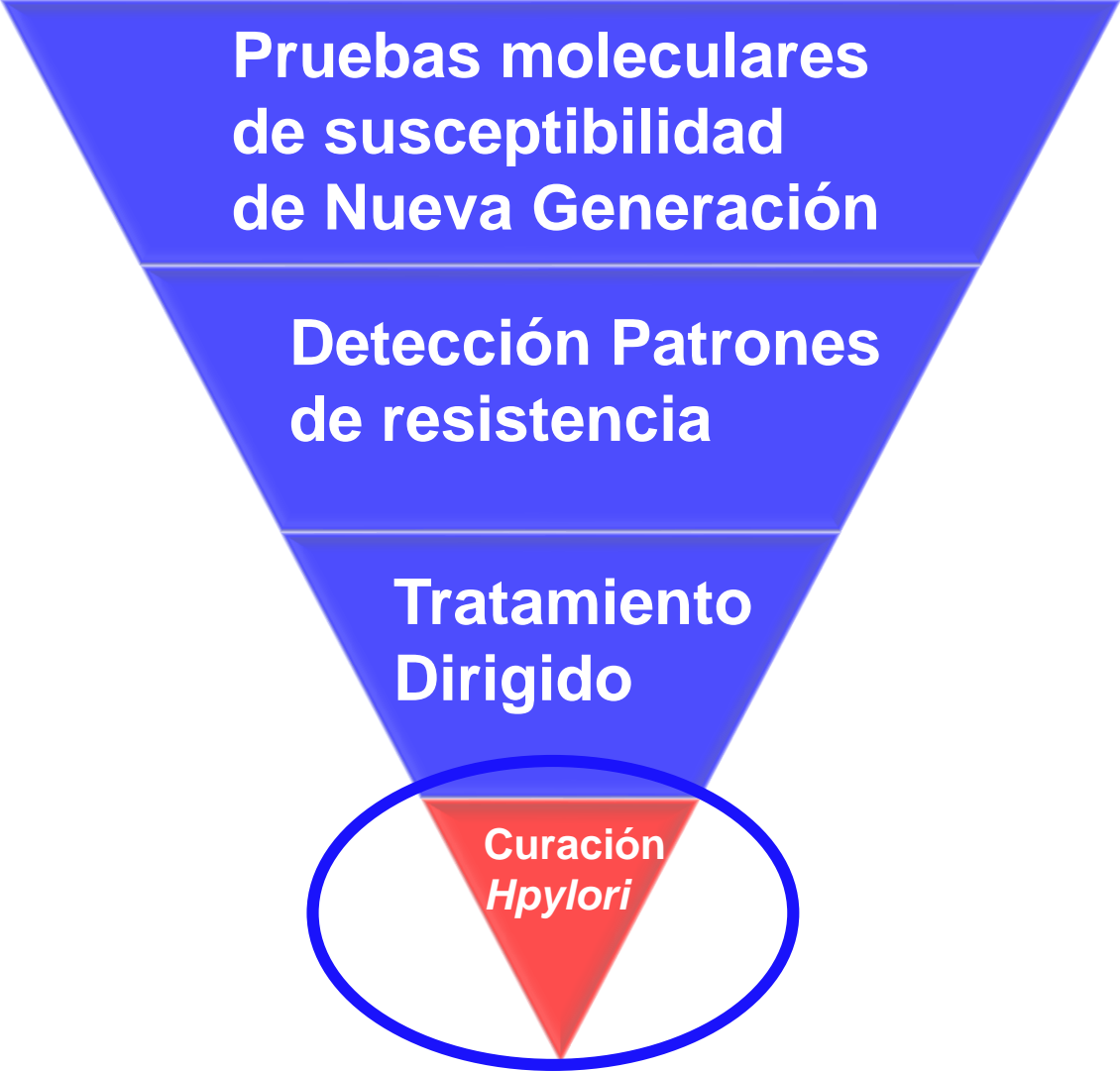


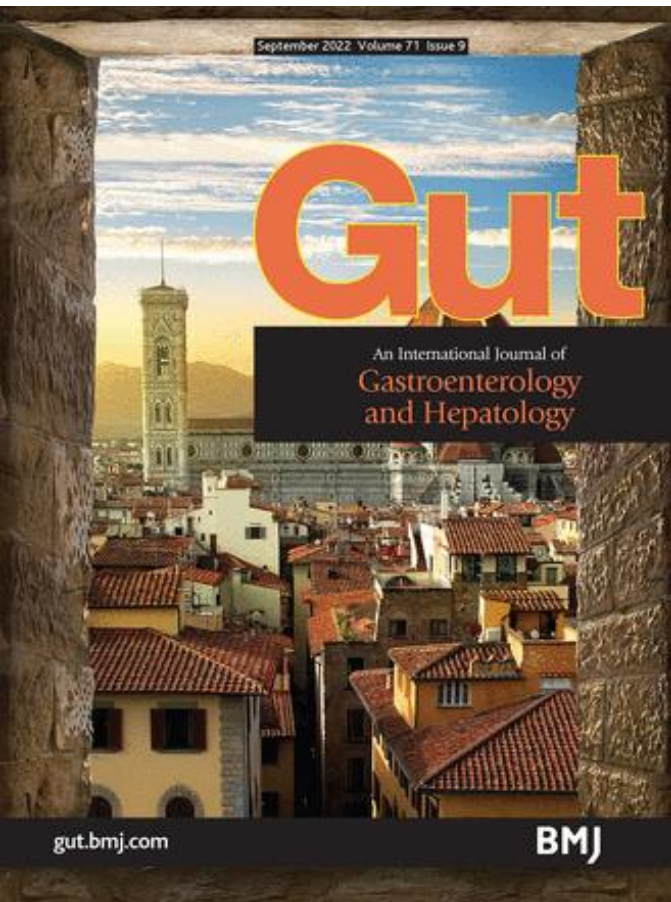
**Prevalencias resistencias
Antibióticos previos utilizados
Eficacia terapias locales
Antibióticos sin resistencias**



< 40% USA

Nuevo paradigma





Statement 1: It is reasonable to recommend that susceptibility tests (molecular or after culture) are routinely performed, even before prescribing first-line treatment, in respect to antibiotic stewardship. However, the generalised use of such a susceptibility-guided strategy in routine clinical practice remains to be established.

Agreement 91%

Grade D2

Malfertheiner P, Maastricht VI, Gut 2022, Online agosto 8

Randomised controlled trial: susceptibility-guided therapy versus empiric bismuth quadruple therapy for first-line *Helicobacter pylori* treatment

Qi Chen¹ | Xiaohua Long¹  | Yingjie Ji¹  | Xiao Liang¹ | Dongping Li¹ | Hong Gao¹ | Beili Xu¹ | Ming Liu¹ | Ying Chen¹ | Yunwei Sun¹ | Yan Zhao¹ | Gang Xu¹ | Yanyan Song¹ | Lou Yu¹ | Wei Zhang¹  | Wenzhong Liu¹ | David Y. Graham²  | Hong Lu¹ 

Empírica	
Bismuto	220 mg 2v/d
Esomeprazol	20 mg 2v/d
Amoxicilina	1g 2v/d
Metronidazol	400 mg 3v/d

Analysis	Susceptibility-guided therapy	Empiric therapy	Difference	P value
ITT (% , n/N)	91.6% (262/286)	85.4% (82/96)	6.2%	0.12 ^a
95% CI	88.4%-94.8%	78.4%-92.5%	-0.3% to 12.7%	
PP (% , n/N)	97.7% (250/256)	97.6% (81/83)	0.1%	1.00 ^b
95% CI	95.8%-99.5%	94.3%-100%	-3.1% to 3.2%	
MITT (% , n/N)	97.0% (262/270)	94.3% (82/87)	2.8%	0.32 ^b
95% CI	95.0%-99.1%	89.4%-99.1%	-1.7% to 7.2%	

Susceptibility-guided versus empirical treatment for *Helicobacter pylori* infection: A systematic review and meta-analysis

Rachel Gingold-Belfer,^{*,†}  Yaron Niv,[‡] Hemda Schmilovitz-Weiss,^{*,†} Zohar Levi^{*,†} and Doron Boltin^{*,†} 

16 estudios
2374 pacientes

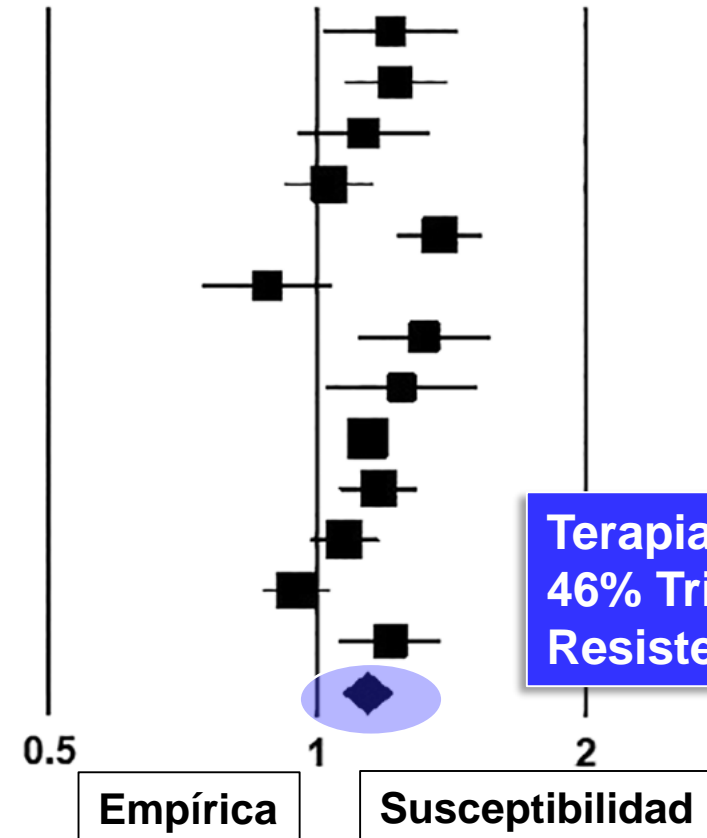
Statistics for each study

		Risk ratio	Lower limit	Upper limit	Z-Value	p-Value
Toracchio S.	2000	1.208	1.014	1.438	2.119	0.034
Romano M.	2003	1.224	1.071	1.399	2.963	0.003
Neri M.	2003	1.128	0.950	1.339	1.379	0.168
Marzio L.	2006	1.030	0.919	1.155	0.516	0.606
Furuta T.	2007	1.371	1.229	1.530	5.641	0.000
Bontems P.	2011	0.878	0.742	1.040	-1.508	0.131
Park CS.	2014	1.317	1.107	1.566	3.114	0.002
Dong F.	2015	1.242	1.019	1.515	2.144	0.032
Zhou L.	2016	1.139	1.077	1.204	4.579	0.000
Delchier JC.	2019	1.170	1.059	1.293	3.087	0.002
Chen Q.	2019	1.072	0.980	1.173	1.528	0.127
Ong S.	2019	0.946	0.868	1.032	-1.255	0.210
Pan J.	2020	1.205	1.055	1.377	2.752	0.006
		1.136	1.065	1.211	3.859	0.000


I² 75%



Risk ratio and 95%CI



Susceptibility-guided versus empirical treatment for *Helicobacter pylori* infection: A systematic review and meta-analysis

Rachel Gingold-Belfer,^{*,†}  Yaron Niv,[‡] Hemda Schmilovitz-Weiss,^{*,†} Zohar Levi^{*,†} and Doron Boltin^{*,†} 

**Tiple terapia con
Claritro resistencia <15%**



Similares

Terapia cuádruple



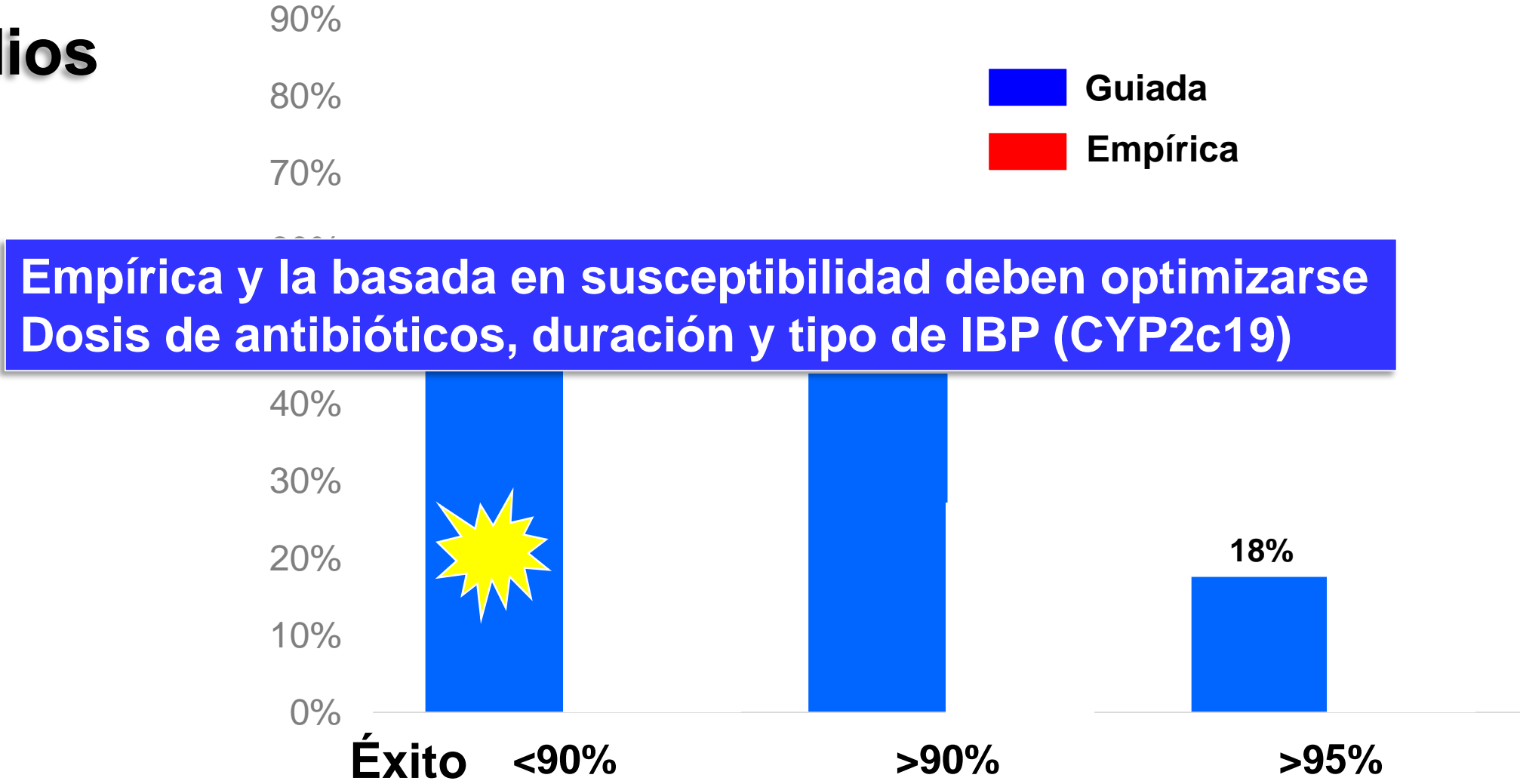
Similares

Current role of tailored therapy in treating *Helicobacter pylori* infections. A systematic review, meta-analysis and critical analysis

Rokkas T, Helicobacter 2023;28:e12936

Theodore Rokkas^{1,2} | Konstantine Ekmektzoglou^{1,2} | David Y. Graham³

34 estudios



Tratamiento *Helicobacter pylori*

**Susceptibilidad
in vitro**

≠

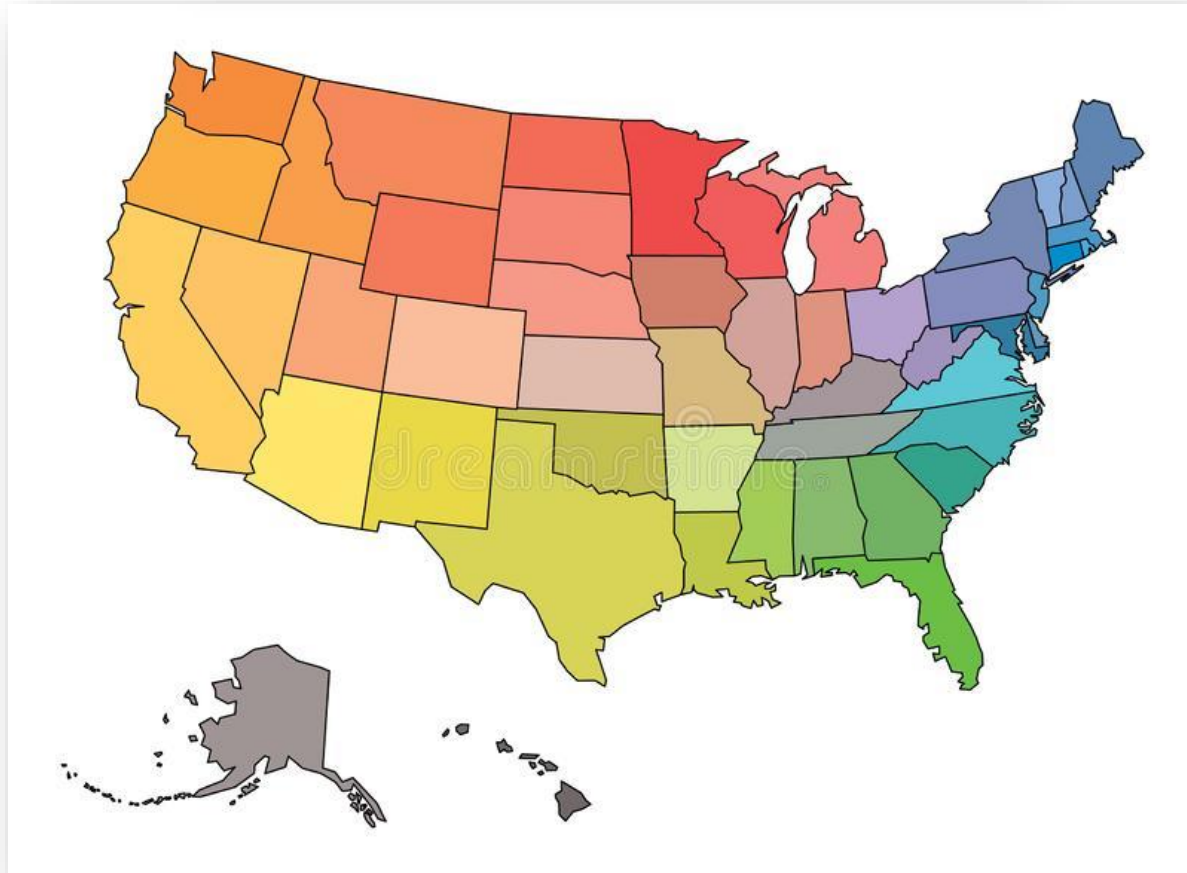


Falla 10-20%

Niveles antibiótico
Dosis antibiótico
Duración
Heteroresistencia
Inadecuada supresión HCL
Tipo de IBP, Farmacogenética
Tabaco

Shah SC, Gastroenterology 2021;161:1443–1459
Gisbert JP, Ther Adv Gastroenterol 2020;13:1-16
Graham DY, Helicobacter 2023;28:e12936
Nyssen OP, Front Microbiol. 2022;13:913436.

Helicobacter pylori pruebas susceptibilidad

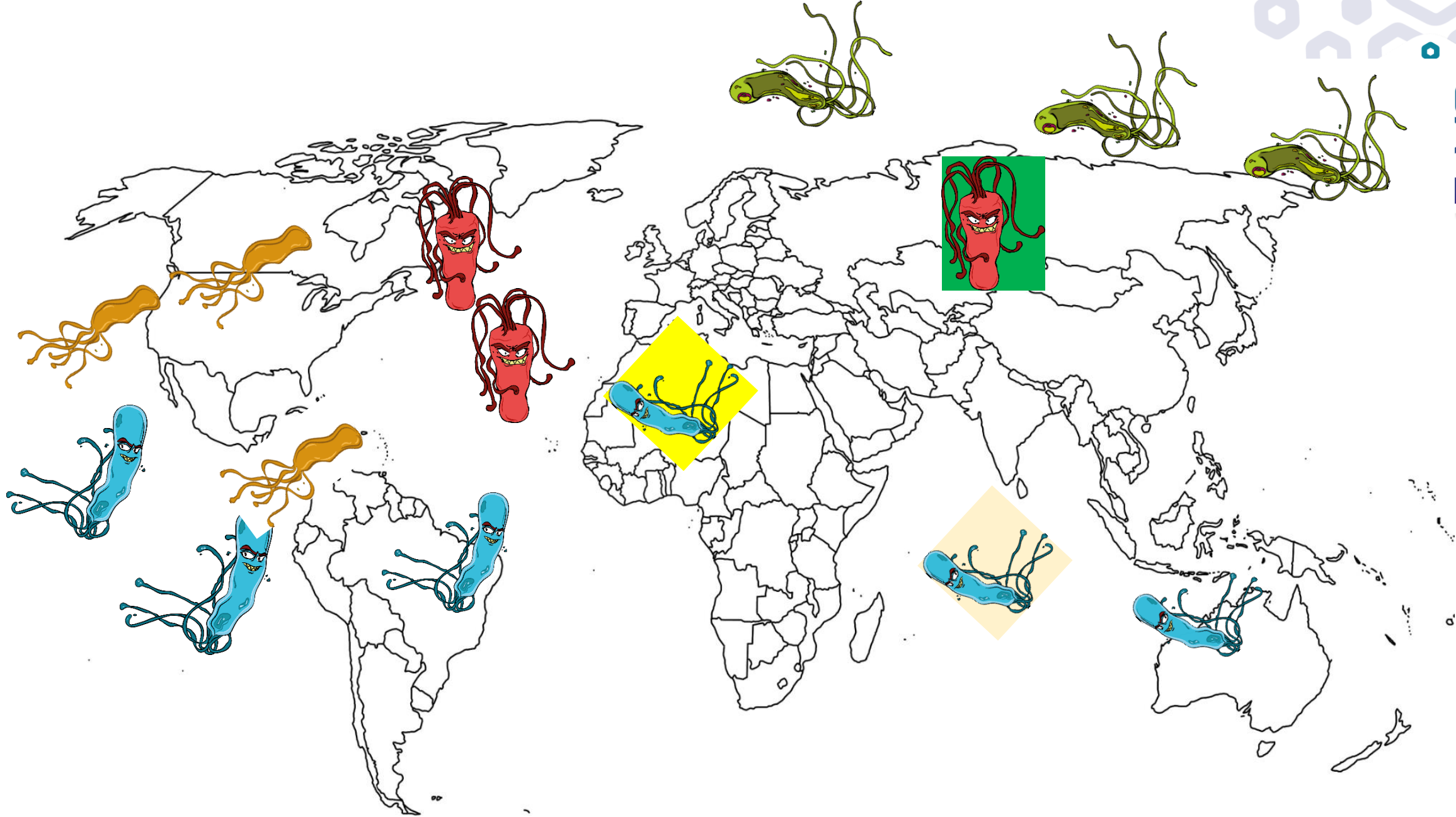


Guías

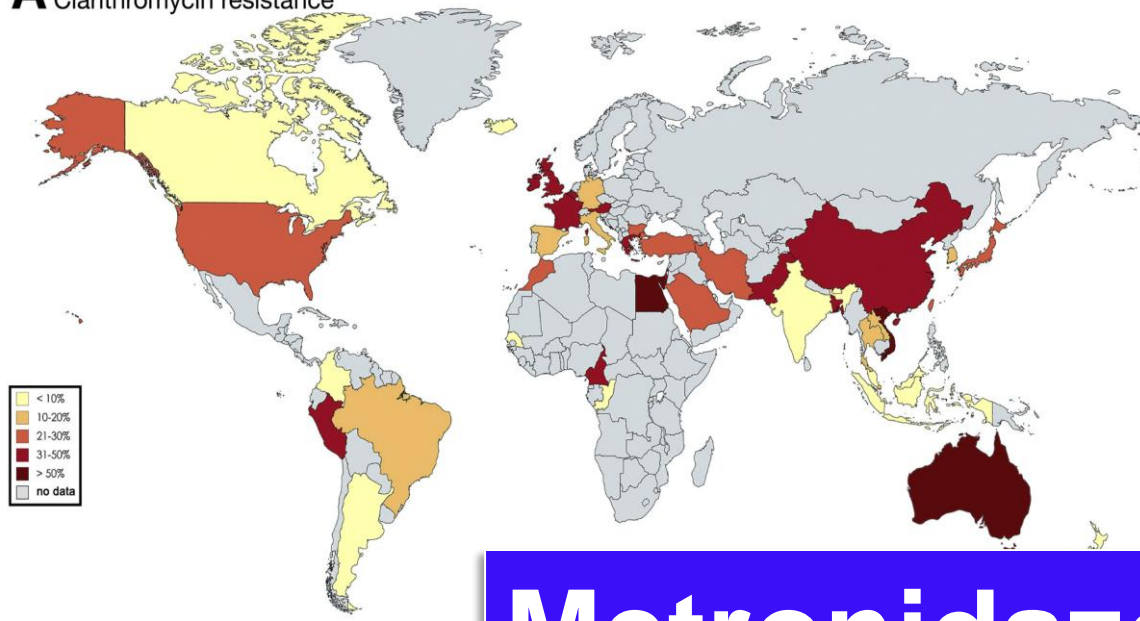
Guías	Primera línea	Rescate
Maastricht 2022	<p>Claritromicina <15% Triple terapia 14 d</p> <p>Claritromicina > 15%</p>	<p>Cuádruple bismuto 14 días</p> <p>Triple o cuádruple 14d</p> <p>Resistencia a claritromicina o susceptibilidad</p>
ACG 2016	<p>Triple terapia 14 d</p> <p>Claritromicina \geq 15% Cuádruple bismuto Cuádruple concomitante 14 d</p>	<p>Cuádruple bismuto 14 d</p> <p>Quinolona Triple o cuádruple 14d</p> <p>Cuádruple concomitante 14d</p> <p>Rifabutina triple 10 d</p> <p>Dual altas dosis 14 d</p>
Corea 2021	<p>Triple terapia 14 d</p> <p>Concomitante cuádruple 1d</p> <p>Secuencial cuádruple 14 d</p>	<p>Cuádruple bismuto 14 d</p> <p>Quinolona triple 14 d.</p>

Guías generales

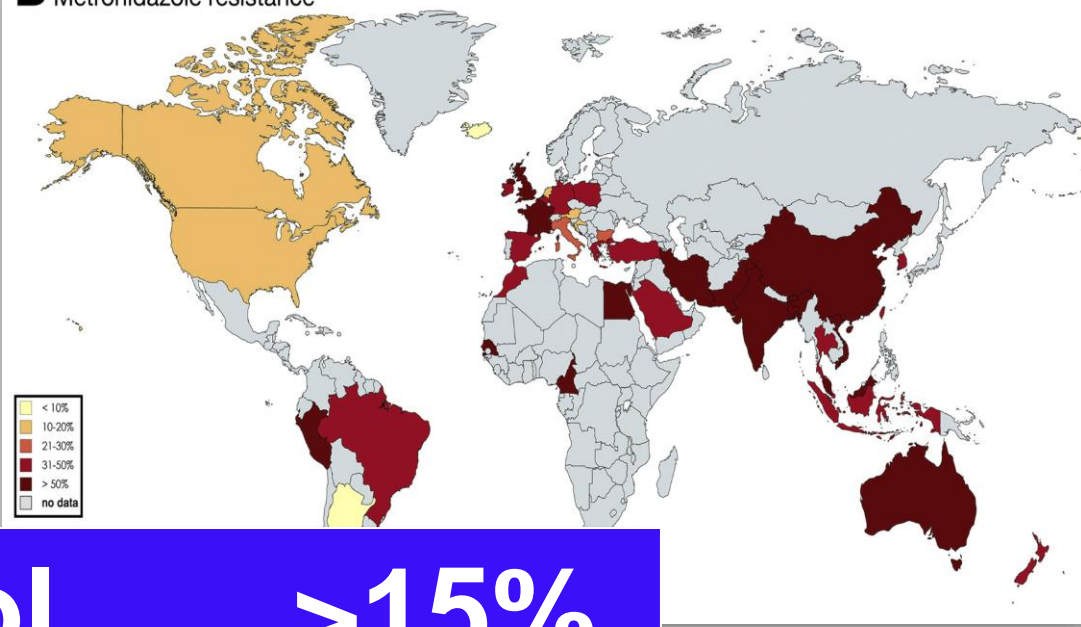
**Difícil aplicar
Textualmente las guías
Investigar Terapias locales
Continental en el mundo real**



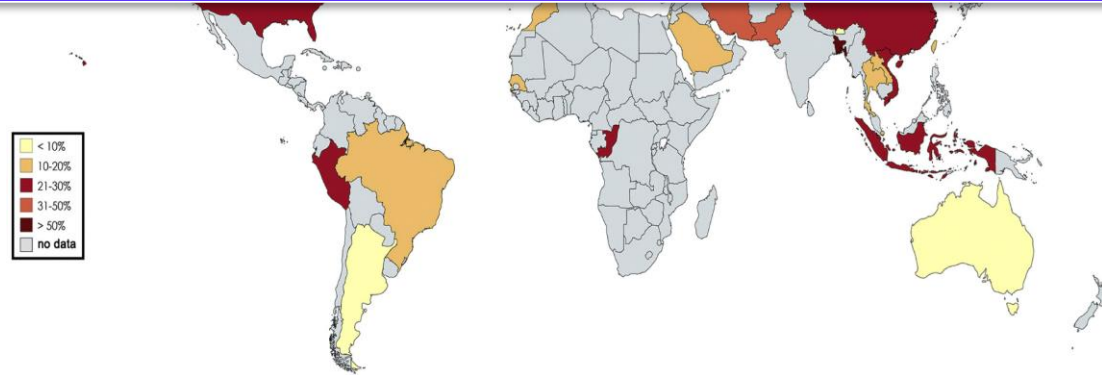
A Clarithromycin resistance



B Metronidazole resistance



Metronidazol >15%
Clarithromicina >15%
Levofloxacinina >15%





Hp-EuReg



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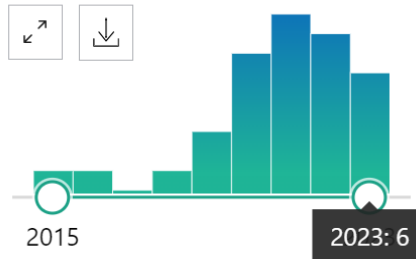
Malfertheiner P, et al. Gut 2022;71:1724–1762

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RESULTS BY YEAR



TEXT AVAILABILITY

Abstract

Management of *Helicobacter pylori* infection: the Maastricht VI/Florence consensus report

Peter Malfertheiner ^{1,2} Francis Megraud ³ Theodore Rokkas ^{4,5}
Javier P Gisbert ^{6,7} Jyh-Ming Liou ⁸ Christian Schulz ^{1,9}
Antonio Gasbarrini ¹⁰ Richard H Hunt ^{11,12} Marcis Leja ^{13,14} Colm O'Morain ¹⁵
Massimo Rugge ^{16,17} Sebastian Suerbaum ^{9,18} Herbert Tilg ¹⁹
Kentaro Sugano ²⁰ Emad M El-Omar ²¹ On behalf of the European
Helicobacter and Microbiota Study group

EuReg Investigators.

Antibiotics (Basel). 2023 Sep 10;12(9):1427. doi: 10.3390/antibiotics12091427.

A large, semi-transparent globe of the Earth is centered in the background. The continents of South America and Central America are highlighted in a solid green color, while the rest of the globe is in shades of grey and white. A white rectangular box with a black border is superimposed over the center of the globe, containing the title text.

**Registro Latinoamericano de
Helicobacter pylori (Hp-LATAM-Reg)**

Dr Arnoldo Riquelme

First description of the data from the Latin American Registry on the Management of *Helicobacter pylori* Infection (Hp-LATAMReg)

Diego Reyes Placencia¹, José María Remes-Troche², Oscar Laudanno³, William Otero^{4,5}, Alejandro Piscocoy⁶, Juan Ramírez García⁷, Guillermo Otoyá⁸, Gonzalo Latorre S.¹, Javier Chahuán A.¹, Alex Arenas^{9,10}, Margarita Pizarro¹, Francisca Martínez¹, María Victoria Binder¹, Patricio Medel¹¹, Eduardo Fuentes-López¹², Anna Cano-Catalá¹³, Leticia Moreira¹⁴, Olga P. Nyssen¹⁵, Javier P. Gisbert¹⁵, Arnoldo Riquelme^{1,16}, on behalf of the Hp-LATAMReg investigators.

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Introduction

- *Helicobacter pylori* (*H. pylori*): gram-negative bacteria (1).
- Association with **prevalent diseases**: chronic gastritis, peptic ulcer, MALT lymphoma and gastric cancer (1).
- **Gastric cancer**: one of the main causes of death for cancer in men and women in Latin America (5).

In Latin America, the *H. pylori* infection is a common problem (prevalence of 47-63%) (2,3) and there is limited information regarding *H. pylori* management. The indication of the eradication, diagnostic tests and the schemes used by countries have a high heterogeneity and could be different compared to the international recommendations (4, 6).



Results

681 patients were registered. 599 (88%) were treatment-naïve (Figure 1). Table 1 shows the main characteristics of the patients and the most frequent indication. The most commonly diagnostic tests before eradication were invasive test (n=542, 80%) (Table 2). The mITT, frequency of the length of treatment and PPI dose were obtained in the most commonly prescribed first-line therapies (n=492) (Table 3).

Table 1. Main characteristics of patients

Characteristics	Descriptive statistics (n=681)
Average age	51 years (SD 15.2)
Sex	459 women (67%)

Indication of treatment % (n)

Non-investigated Dyspepsia	44 (296)
Dyspepsia with normal endoscopy	22 (147)
Duodenal Ulcer	3.2 (22)
Gastric Ulcer	4.1 (28)
Preneoplastic lesions	1 (7)
MALT Lymphoma	0.7 (5)
First-degree relatives of patients with gastric cancer	0.3 (2)
Unexplained iron deficiency anaemia	0.1 (1)
Idiopathic thrombocytopenic purpura	0.6 (4)
No data	0.1 (1)

Table 2. Diagnostic tests before eradication % (n)

Non-invasive tests	20 (138)
¹³ C UBT	15 (102)
¹⁴ C UBT	2.3 (16)
Serology	0
SA Monoclonal Test	2.1 (14)
SA Polyclonal Test	0.9 (6)
Invasive tests	80 (542)
Histology	55.9 (381)
RUT	24 (161)
Culture	0
No tests performed	0.1 (1)

The number of tests is not equal as the number of patients because more than one test could be conducted. UBT= Urea Breath Test; SA=Stool Antigen; RUT= Rapid Urease Test.

Aim: To describe the main characteristics of the *H. pylori* eradication treatment in Latin America.

Methods

A **retrospective observational study** based on patient registry including diagnosis, indication of treatment and adverse events in Chile, Argentina, Mexico, Peru and Colombia from 2015 to 2023. The data was registered in an e-CRF AEG-REDCap database.

Statistical analysis:

- Average and median for the continuous variables

- R
- M
- m
- F
- d
- to
- b.

Inclusion criteria

- Patients >18 years
- Diagnosed with *H. pylori* infection
- With eradication therapy defined by treating physician

Exclusion criteria

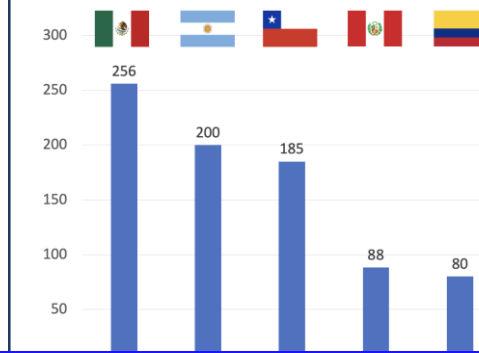


Table 3. Most commonly used first-line eradication therapies for *H. pylori* infection in Latin America, by length of treatment and proton pump inhibitor dose.

Prescriptions, n (%)	PPI-C-A	PPI-C-A-M	PPI-A	PPI-C-A-B	PPI-A-L
	272 (46%)	107 (18%)	44 (7%)	36 (6%)	33 (6%)
Length of treatment					
7 days	6 (2.2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
10 days	17 (6.3%)	1 (0.9%)	1 (2.3%)	0 (0%)	5 (15.2%)
14 days	246 (91.4%)	106 (99.1%)	43 (97.7%)	36 (100%)	28 (84.8%)
PPI dose*					
Low	167 (61.6%)	42 (39.3%)	1 (2.3%)	13 (36.1%)	14 (45.2%)
Standard	34 (12.5%)	10 (9.3%)	3 (6.8%)	9 (25%)	1 (3.2%)
High	70 (25.8%)	55 (51.4%)	40 (90.9%)	14 (38.9%)	16 (51.6%)
mITT effectiveness	79.8% of 272	80.7% of 107	85.4% of 44	80.6% of 36	77.7% of 33

Terapia cuàdruple màs efectiva que terapis triples
Terapia Dual es prometedora

- Quadruple therapies could have more effectiveness than triple therapies. Dual therapy is promising.

References

1. McCall K. Helicobacter pylori infection. N Engl J Med. 2010;362:1597-604.
2. Li Y, Choi H, Leung K, Jiang F, Graham DY, Leung WK. Global prevalence of Helicobacter pylori infection between 1980 and 2022: a systematic review and meta-analysis. Lancet Gastroenterol Hepatol. 2023 Jun;8(6):553-64.
3. Curato NP, de Oliveira MM, de Araújo Figueres M. Prevalence of Helicobacter pylori infection in Latin America and the Caribbean populations: A systematic review and meta-analysis. Cancer Epidemiol. 2019 Jun;60:141-8.
4. Valladales-Restrepo LF, Correa-Sánchez Y, Aristizábal-Carmona BS, Machado-Alba JE. Treatment regimens used in the management of Helicobacter pylori in Colombia. Braz J Infect Dis. 2022 Feb 16;26(1):102331.
5. World Health Organization. Cancer Today. International Agency for Research on Cancer, 2020.
6. Malfertheiner P, Megraud F, Rokkas T, Gisbert JP, Liou JM, Schulz C, et al. Management of Helicobacter pylori infection: the Maastricht VI/Florence consensus report. Gut [Internet]. 2022 Aug 8; Available from: <http://dx.doi.org/10.1136/gutjnl-2022-327745>

Acknowledgments

Public policy: "Strategies for Gastric Cancer Prevention in Chile" UC (AR); FONIS SA19/0188 (AR) «Cost-effectiveness of new population screening strategies for gastric cancer control in Chile»; FONDECYT 1230504 (AR) «Role of the genomic and microbiome profile in gastric carcinogenesis: prospective endoscopic follow-up»; ANID FONDAPI 152220002 (AR) «CECAN: Centro para la prevención y el control del cáncer», and LEGACY «CeLac and European consortium for a personalized medicine approach to Gastric Cancer»; no 825832 of the Horizon 2020 programme of European Union (AR & TF).

Resistencias

**Claritromicina
> 15%**

**Levofloxacin
>15%**

**Metronidazol
>60%**

**No hay pruebas
Susceptibilidad**

**No hay disponibilidad
Todos los antibióticos**



LATAM

Mientras llegan más

Resultados Regionales

Terapias para curar *H.pylori*

IBP +

Claritromicina

Metronidazol

Levofloxacina

Sitafloxacina

Furazolidona

Amoxicilina

Tetraciclina

Rifabutina

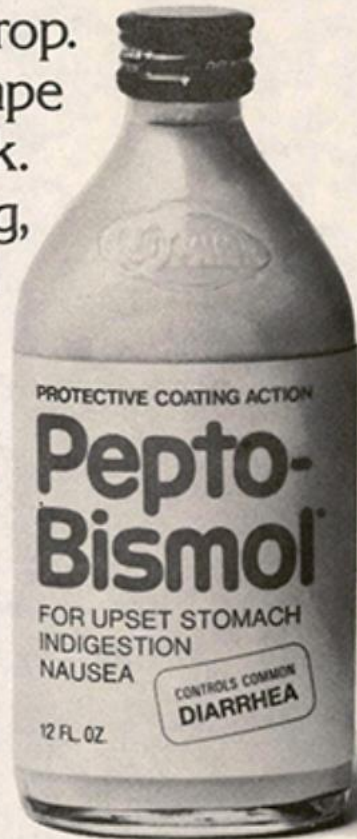
12-oz. Pepto-Bismol:
It outsells every breath freshener.

Every nose drop.

Every adhesive tape
and lipstick.

Every surgical dressing,
face lotion, hand
cream. Cotton ball,
nail polish remover,
permanent wave kit,
sanitary belt/pant,
talcum powder,
and tension reliever.

In fact, it outsells 94%
of all H&BA items*.



The point is: 12-ounce Pepto-Bismol belongs
on your shelf. Place your order before October 30, 1971,
to earn better-than-ever advertising/promotional
allowances and to capitalize on Pepto-Bismol's
peak fall/winter selling period.

Norwich Products Division, The Norwich Pharmacal Company.

*SOURCE: Towne-Oller & Associates Sequential Report, June 1971.

**Gran
Protagonista
Actual**



Bismuto

Fundamental

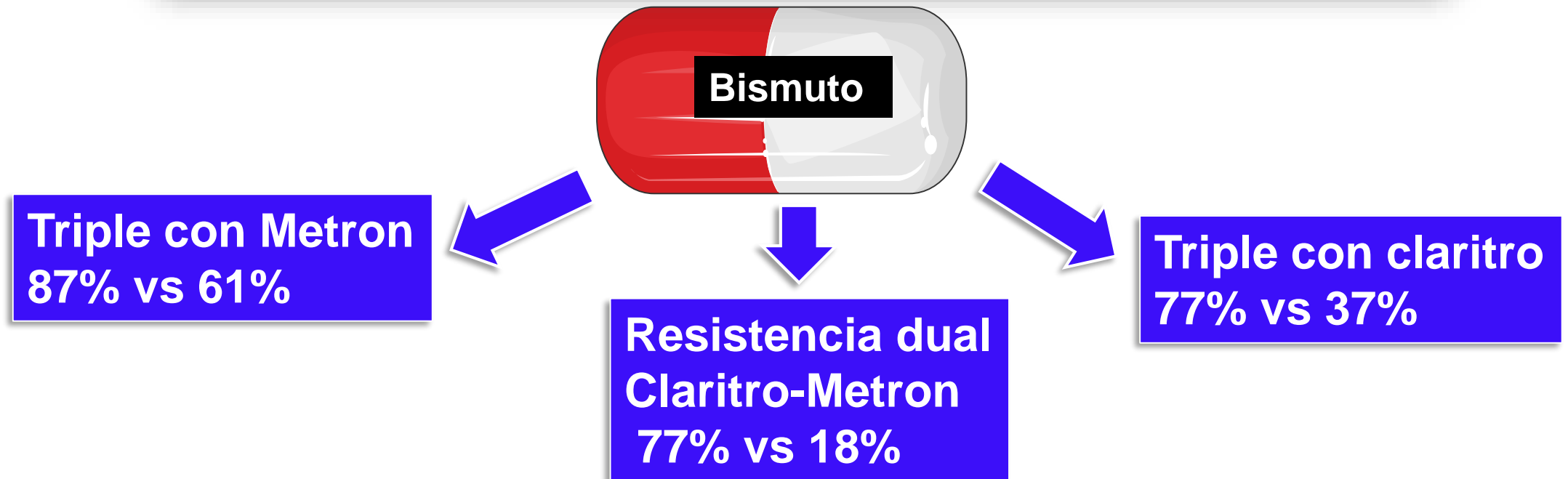
Terapia cuádruple Clásica

**Terapias cuádruples con
Rifabutina**

**Terapias triples clásicas
IBP + Amoxicilina +
Claritro O Metro O Levo**

Efficacy of bismuth for antibiotic-resistant *Helicobacter pylori* strains eradication: A systematic review and meta-analysis

Zhongxue Han^{1,2,3} | Yueyue Li^{1,2,3} | Qingzhou Kong^{1,2,3} | Jing Liu^{1,2,3} | Juan Wang^{1,2,3}
Meng Wan^{1,2,3} | Minjuan Lin^{1,2,3} | Boshen Lin^{1,2,3} | Wenlin Zhang^{1,2,3} |
Yuming Ding^{1,2,3} | Shaotong Wang^{1,2,3} | Yijun Mu^{1,2,3} | Miao Duan^{1,2,3} |
Xiuli Zuo^{1,2,3}  | Yan-qing Li^{1,2,3} 



Combination of Bismuth and Standard Triple Therapy Eradicates *Helicobacter pylori* Infection in More than 90% of Patients

Adrian G. McNicholl,^{*} Dmitry S. Bordin,[‡] Alfredo Lucendo,[§] Galina Fadeenko,^{||} Manuel Castro Fernandez,[¶] Irina Voynovan,[#] Natalia Valerievna Zakharova,^{**} Aiman Silkanovna Sarsenbaeva,^{‡‡} Luis Bujanda,^{§§} Ángeles Perez-Aisa,^{|||} Liudmila Vologzhanina,^{¶¶} Oleg Zaytsev,^{##} Tatiana Ilchishina,^{***} Cristobal de la Coba,^{‡‡‡} Jorge Perez Lasala,^{§§§} Sergey Alekseenko,^{||||} Ines Modolell,^{¶¶¶} Javier Molina-Infante,^{###} Rafael Ruiz-Zorrilla Lopez,^{****} Horacio Alonso-Galan,^{§§} Nuria Fernandez Moreno,^{|||} Jen Hinojosa,^{|||} Inmaculada Santaella,^{|||} Pilar Varela,^{‡‡‡} Pedro Luis Gonzalez-Cordero,^{###} Jesus Barrio,^{‡‡‡‡} Jose Luis Dominguez-Jimenez,^{§§§§} Oscar Nuñez,^{||||||} Javier Alcedo,^{¶¶¶¶} Olga P. Nyssen,^{*} Maria Caldas,^{*} Maria G. Donday,^{*} Oleg Shvetz,^{####} Francis Megraud,^{*****} Colm O'Morain,^{‡‡‡‡‡} and Javier P. Gisbert^{*}

1141 pacientes “naive”

Amoxicilina+ claritromicina+ Bismuto+ IBP 14 días

90%

Clin Gastroenterol Hepatol 2020;18:89-98

H.pylori LATAM

1ª línea

Cuádruple 14 días

IBP 2v/d (ESO 40mg)
Amoxicilina 50 mg /kg 3v/d
Metronidazol 500 mg 3v/dia
Bismuto 2-3 v/dia

Dual 14 días

Amoxicilina 50 mg/kg 3v/d
IBP (ESO 40 mg 3v/d)

2ª línea




Cuádruple Furazolidona 14 días

Furazolidona 100 mg 2v/d
Amoxicilina 50 mg/kg 3v/d
Bismuto 2-3 v/dia
IBP 2v/d (Eso 40 mg)

Concomitante modificada 14d

IBP 2v/dia
Furazolidona 100 g 2v/dia
Amoxicilina 50 mg/kg 3v/d
Tetraciclina 500 ng 4/vd (Minoc 100 mg2v/d)

Efficacy and safety of a 14-day modified concomitant therapy for refractory *Helicobacter pylori* infection: a pilot study

Shu-yan Zeng,^{*,†1} Juan Wang,^{*,†,‡1} Jing Liu,^{*,†} Min-Juan Lin,^{*,†} Bo-Shen Lin,^{*,†} Yu-Ming Ding,^{*,†} Qing-Zhou Kong,^{*,†} Wen-Lin Zhang,^{*,†} Miao Duan,^{*,†} Zhong-Xue Han,^{*,†} Yue-yue Li,^{*,†}  Xiu-Li Zuo^{*,†}  and Yan-Qing Li^{*,†} 

Concomitante modificada

Furazolidona 100 mg 2v/día

Tetraciclina 500 mg 4 v/día

Amoxicilina 1gr 2v/día

Esomeprazol 40 mg 2v/día

Eficacia

ITT 84.7 % (59/59)

PP 89.3% (50/56)

Zeng S, J Gastroenterol Hepatol 2023, Sept 27

Helicobacter pylori refractario ≥ 3 tratamiento previos 9 pacientes PP

Concomitante modificada

Furazolidona 100 mg 2v/día













Tetraciclina 500 mg 4 v/día

Amoxicilina 1gr 3v/día

Esomeprazol 40 mg 2v/día

**Test de aliento seis semanas pos tratamiento
NEGATIVO 8/9 (88.8%)**

Experience with Rifabutin-Containing Therapy in 500 Patients from the European Registry on *Helicobacter pylori* Management (Hp-EuReg)

Olga P. Nyssen ¹, Dino Vaira ², Ilaria Maria Saracino ², Giulia Fiorini ², María Caldas ¹, Luis Bujanda ³, Rinaldo Pellicano ⁴, Alma Keco-Huerga ⁵, Manuel Pabón-Carrasco ⁵, Elida Oblitas Susanibar ⁶, Alfredo Di Leo ⁷, Giuseppe Losurdo ⁷, Ángeles Pérez-Aísa ⁸, Antonio Gasbarrini ⁹, Doron Boltin ¹⁰, Sinead Smith ¹¹, Perminder Phull ¹², Theodore Rokkas ¹³, Dominique Lamarque ¹⁴, Anna Cano-Català ^{15,16}, Ignasi Puig ^{15,16}, Francis Mégraud ¹⁷, Colm O'Morain ¹¹ and Javier P. Gisbert ^{1,*}

500 pacientes 2013-2021

Cultivo 63%

Resistencia dual (CLA, MET): 46%

Resistencia triple (CLA, MET, LEVO) 39%

Rifabutina

2da línea 32%

3ª línea 25%

4ª línea 20%

Cumplimiento

Eficacia ITTm

78%




80%

66%

89%

**1 Paciente
Leucopenia,
Trombocitopenia
Fiebre
Hospitalizado**

Efficacy and safety of low-dose rifabutin-based 7-day triple therapy as a third- or later-line *Helicobacter pylori* eradication regimen

Kazumi Inokuchi¹ | Hideki Mori^{1,2}  | Juntaro Matsuzaki^{1,3} | Kenro Hirata¹ |
Yosuke Harada¹ | Yoshimasa Saito^{1,3,4} | Hidekazu Suzuki^{1,5}  | Takanori Kanai¹ |
Tatsuhiko Masaoka^{1,6} 

2^a - 6^a línea 66 pacientes

Vonoprazan 20 mg 2v/d + Amoxi 500 mg 4v/día+ Rifabutina 150 mg 1v/dia

	7-day VAR therapy	10-day EAR therapy ^a	p-value	14-day EAR therapy ^a	p-value
ITT analysis	91.2% (52/57)	83.3% (10/12)	0.60 ^b	94.1% (16/17)	1.00 ^b
PP analysis	92.7% (51/55)	81.8% (9/11)	0.26 ^b	91.7% (11/12)	1.00 ^b

Efectos adversos 31%
2 suspendieron tratamiento

Inokuchi K, et. Al, *Helicobacter*. 2022;27:e12900

Evitar errores frecuentes



Verificación de la erradicación

Verificación de la erradicación

Métodos infección activa

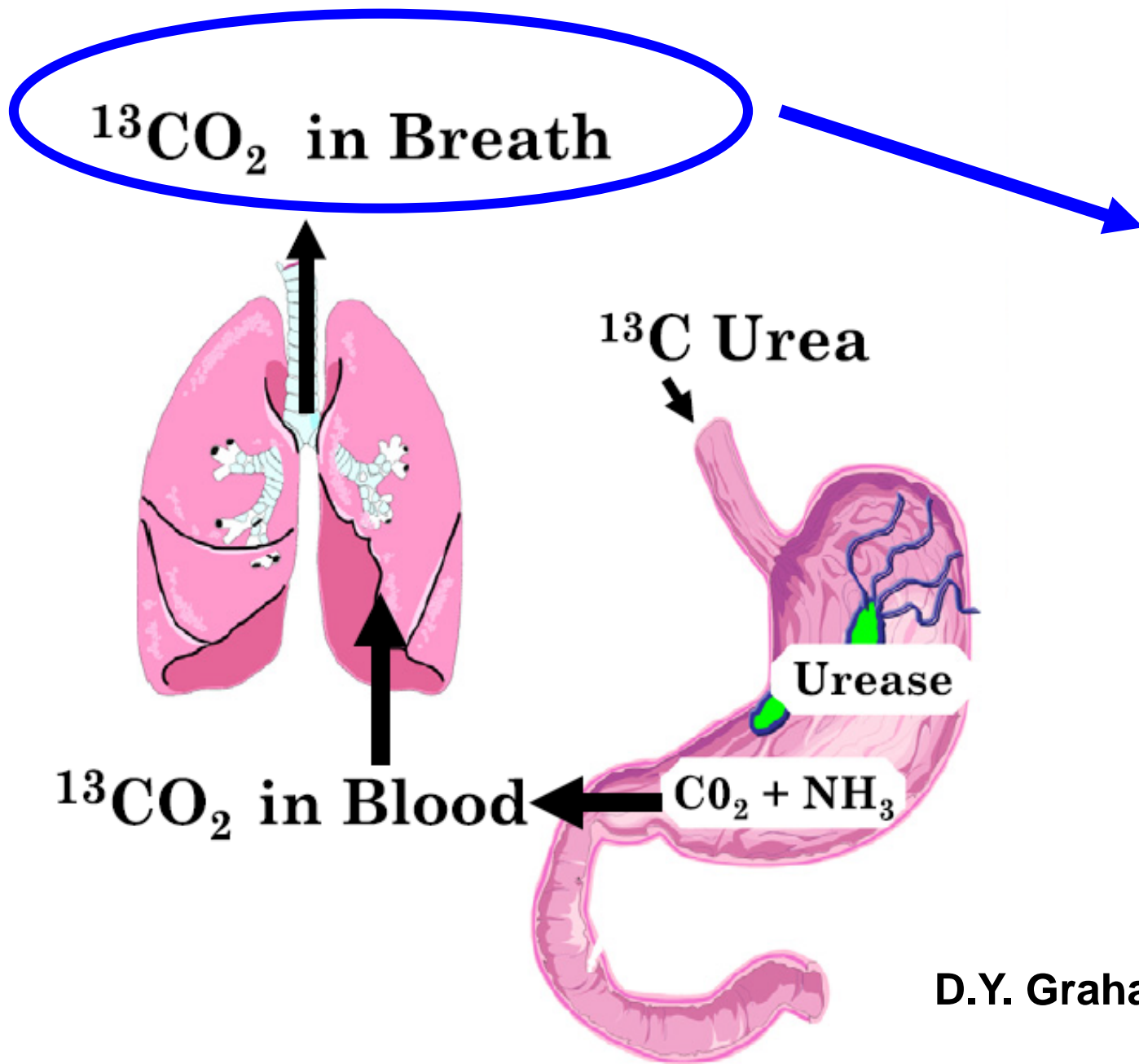
Serología No identifica Infección activa

EVDA NO!

**Solo si necesita EVDA de control
H.pylori histología**

>4 semanas métodos infección activa
Antígenos fecales (Acs Monoclonales)
Test respiratorio con urea (UBT) C¹³ C¹⁴

Malfertheiner P, Gut 2022 on line agosto 20
Chey WD, Am J Gastroenterol 2017;112:212-39
Gisbert JP, Gastroenterol Hepatol 2016;39:697-721





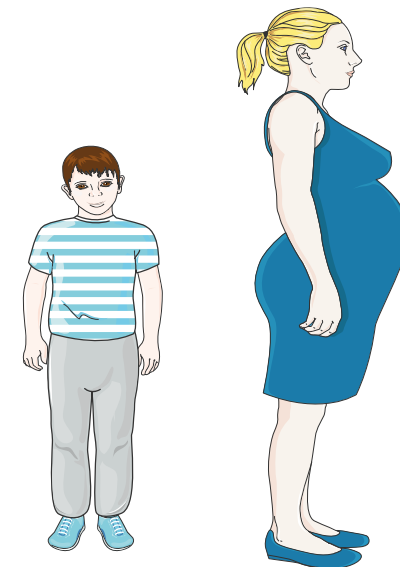
UBT C¹³ No radiactivo



Del Escaneo a los Resultados en 3 Pasos

2 minutos para diagnosticar *H. pylori*

		
1 Escanee el código de barras de la bolsa	2 Prepare el lote	3 Presione de el botón de iniciar



Board Review Gastroenterology 202
Maastricht 2022, Belgica 23

Maastricht VI

WG 2: DIAGNOSTICS

Statement 1: In young dyspeptic patients (age below 50) with no specific risk and no alarm symptoms, non-invasive testing for *H. pylori* infection is recommended.

Agreement 97%

Grade A1

include ¹³C urea breath test (UBT), stool antigen tests (SAT), and serological tests for IgG anti-*H. pylori* antibodies. IgG antibody tests do not differentiate between active and prior infections and are therefore not suitable to evaluate the success of eradication treatments. All tests have specific limitations in certain groups of












Belga

<i>H. pylori</i> Non-invasive Tests	Sensitivity % (95%CI)	Number of patients (Number of studies)	Advantages	Disadvantages
Stool antigen test	83 (73-90)	2988 (29)	Easy to perform and inexpensive Possible at home	Low acceptance
C13 UBT	94 (89-97)	3139 (34)	More sensitive Recommended	At the hospital More expensive
Serology	84 (74-91)	4242 (34)	Easy and inexpensive Epidemiological studies	Does not differentiate between past or active infection

Table 2. — Comparison of invasive diagnostic methods for *H. pylori* before eradication

<i>H. pylori</i> Invasive Tests	Sensitivity (%)	Specificity (%)	Advantages	Disadvantages
RUT	91-98.5	90.9-100	Effective, fast and cheap Possible in emergency room	No diagnosis of gastritis or preneoplastic lesions Less available
Culture	68-98	100	AST to all antibiotics Research	Sensitivity depends on preanalytic conditions Time consuming
Histology (Hematoxylin-Eosin)	92-98.8	89- 00	<i>Gold standard</i> before eradication Diagnosis of chronic gastritis and early gastric neoplastic lesions	More expensive if immunohistochemistry Sensitivity depends on bacterial load
Molecular diagnosis (PCR)	97-100	98	AST Better sensitivity	Kits for AST for 1 or 2 antibiotics only Less available

Management of *Helicobacter pylori* infection: the Maastricht VI/Florence consensus report

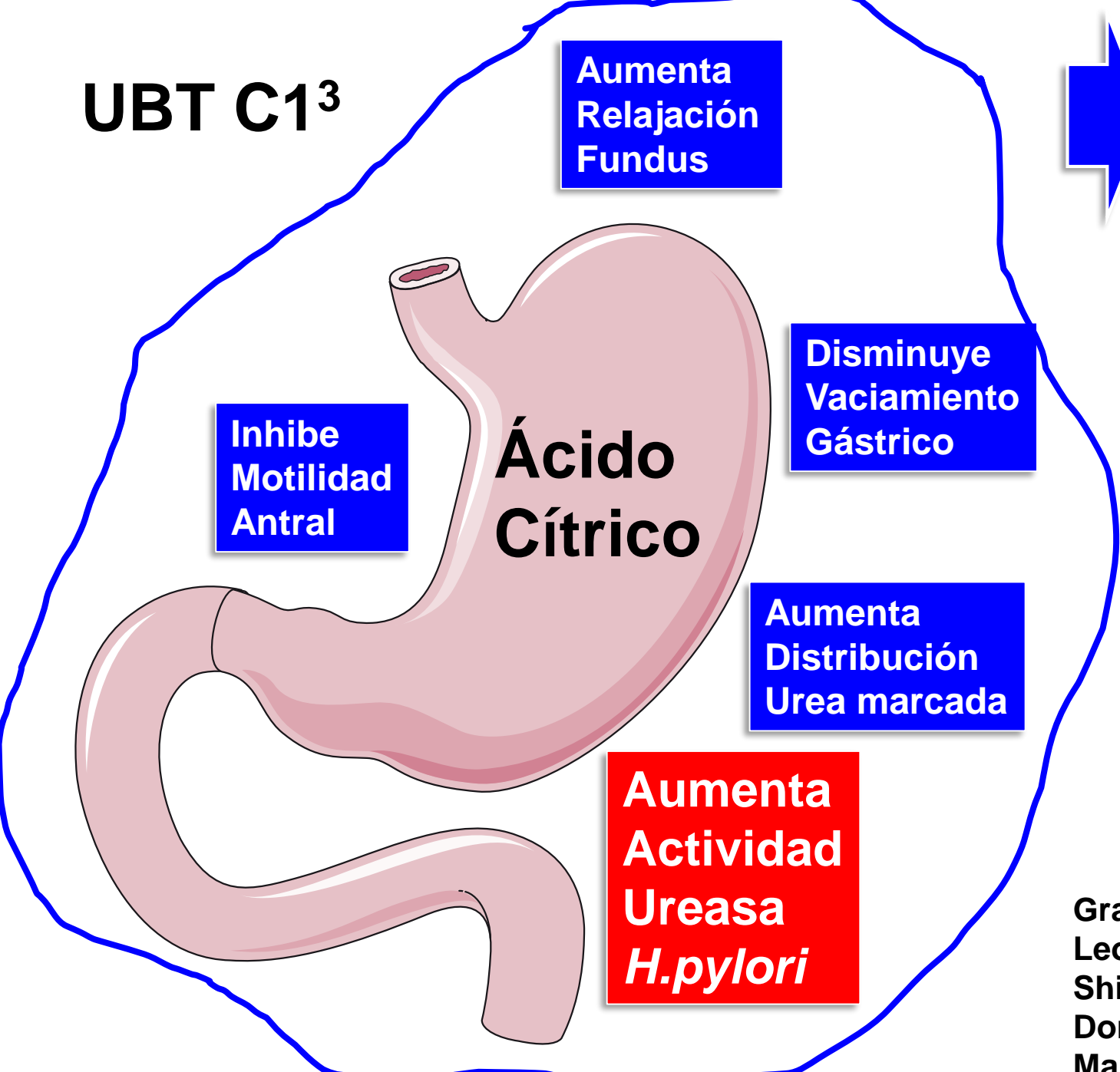
Peter Malfertheiner ,^{1,2} Francis Megraud ,³ Theodore Rokkas ,^{4,5}
Javier P Gisbert ,^{6,7} Jyh-Ming Liou ,⁸ Christian Schulz ,^{1,9}
Antonio Gasbarrini,¹⁰ Richard H Hunt,^{11,12} Marcis Leja ,^{13,14} Colm O'Morain,¹⁵
Massimo Rugge ,^{16,17} Sebastian Suerbaum,^{9,18} Herbert Tilg ,¹⁹
Kentaro Sugano ,²⁰ Emad M El-Omar ,^{21,22} On behalf of the European
Helicobacter and Microbiota Study group

Statement 4: UBT remains an important tool for *H. pylori* diagnosis before and after eradication therapy. **Citric acid (CA)** is an essential component of the protocol.

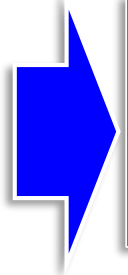
Agreement 87%

Grade A1

UBT C1³



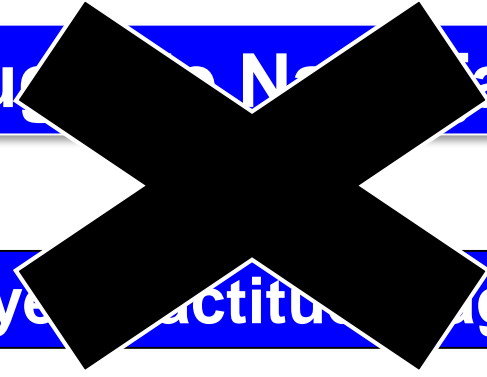
**Aumenta
Tiempo contacto
Urea con Ureasa
*H.pylori***



**Cuando hay
Atrofia gástrica
*Aumenta sensibilidad***

Juicio No Valioso

Disminuye Efectividad Diagnóstica



Graham DY, Am J Gastroenterol 1999;94:1214–7.
Leodolter A, Aliment Pharmacol Ther 1999;13:1057–62.
Shiotani A, Aliment Pharmacol Ther 2001;15:1763–7.
Dominguez-Munoz JE, Gut 1997;40:459–62.
Malfertheiner P, Gut 2022 Online agosto 15

Mensajes para la casa

No hay tratamiento universal

Mayoría Terapias guiadas < 90%

Guiadas y empíricas similares

CLART, QUINOL, MTND susceptibilidad

Cuàdruple (IBP +AMOX+Metronidazol + Bi)

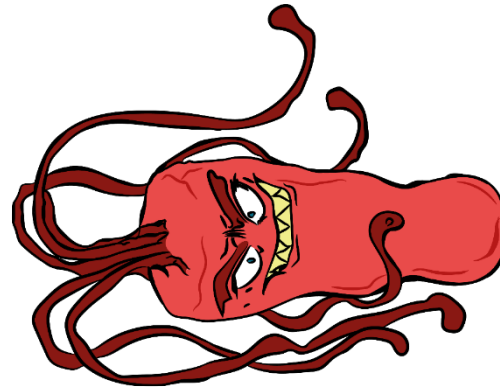
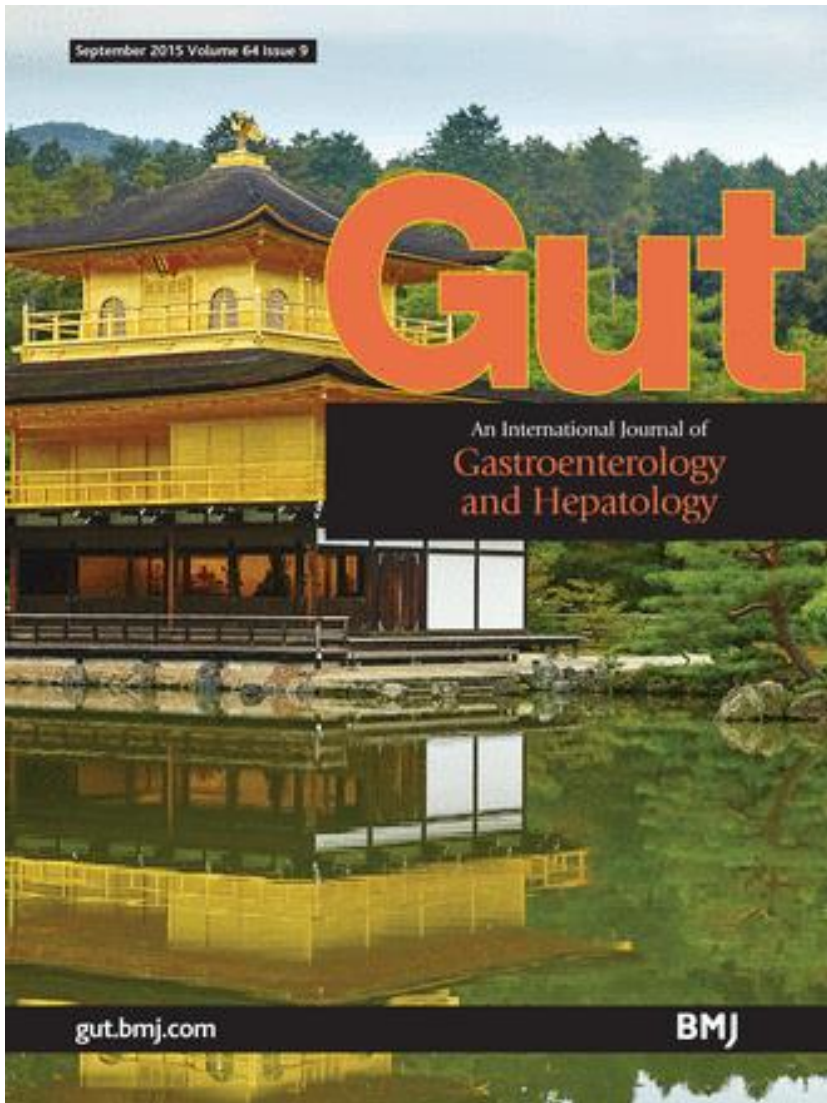
Concomitante modificada (AMO, TETR, FURZ IBP)

Utilizar terapias locales eficaces

Vincularse a Hp-LATAM Reg

“Solo llega más rápido, unido llega más lejos”

***H.pylori* encontrado = *H.pylori* erradicado**
Sugano K, Kyoto Consensus. Gut 2015;64:1353-67



Muchas gracias!

