H.pylori y otras causas de cáncer gástrico

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Universidad Nacional de Colombia
Hospital Universitario Nacional de Colombia

Cáncer Gástrico

Rudolph Virchow

Pelayo Correa

Robin Warren

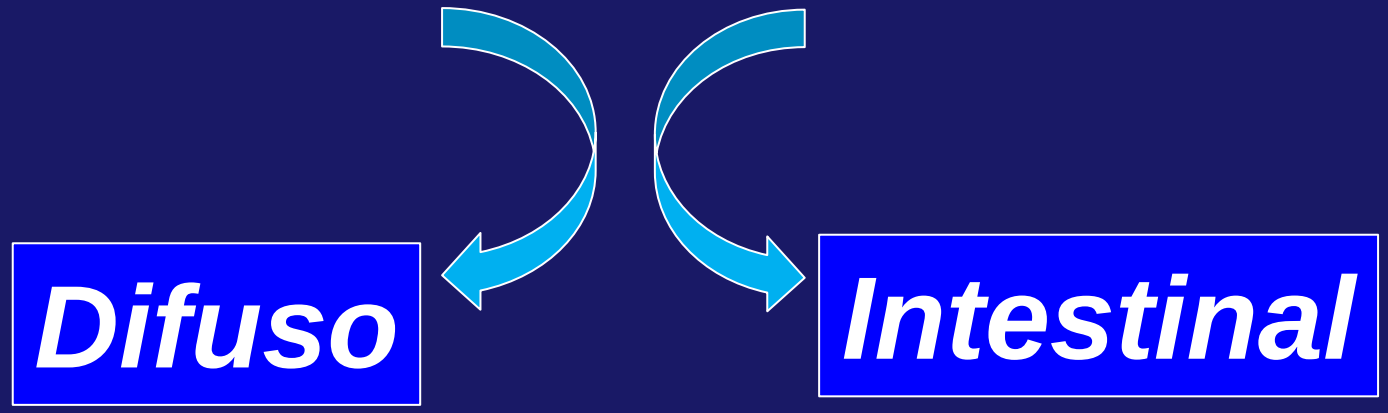
Cáncer gástrico

2018 > 1.000.000 nuevos casos
5º cáncer más común
3ª causa muerte por cáncer
Llegan avanzados

Globocan. Available from: https://gco.iarc.fr/. 2018

Cancer gàstrico

90% adenocarcinomas

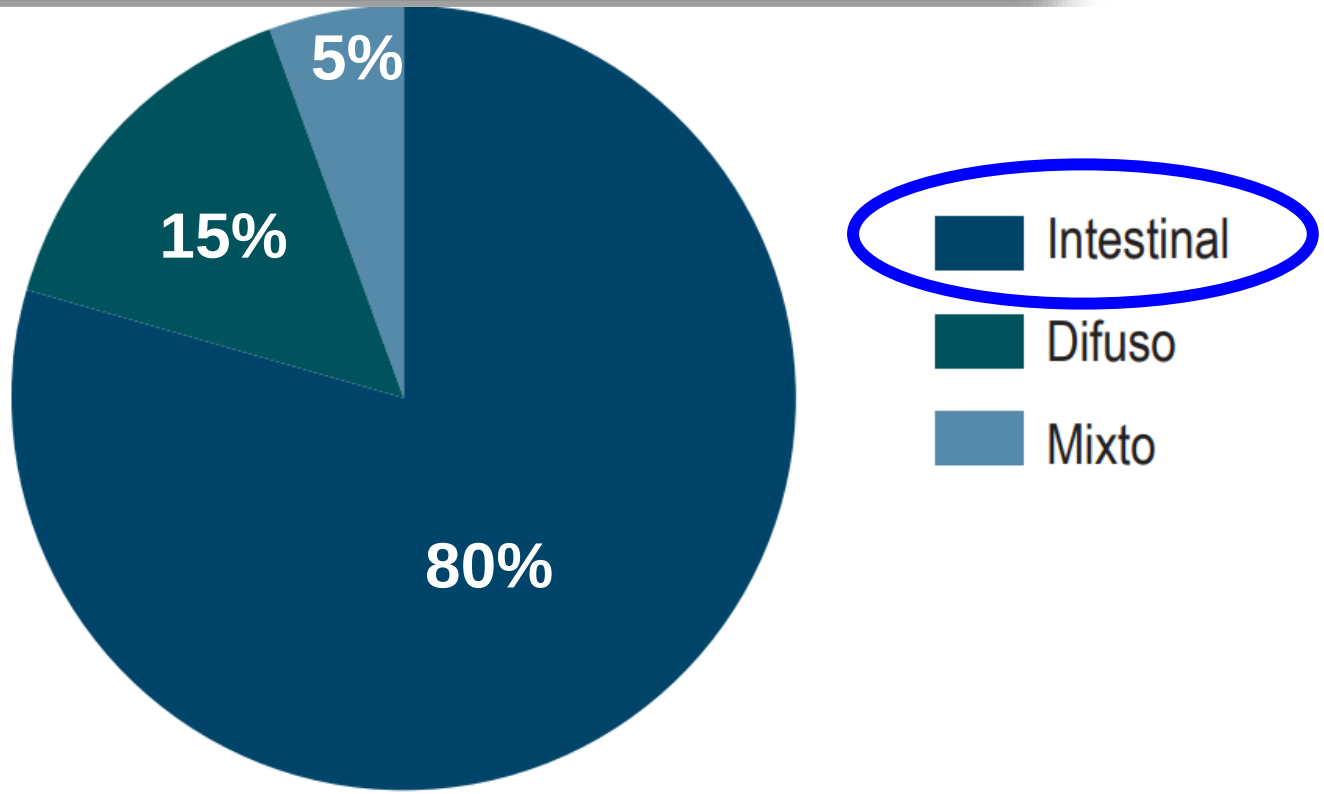


Lauren P, Acta Pathol,Microbiol Scand 1965;64:31-49

Características sociodemográficas e histopatológicas en pacientes con cáncer gástrico en una población con alto riesgo en Colombia

Sociodemographic and histopathological characteristics of patients with gastric cancer in a high-risk population in Colombia

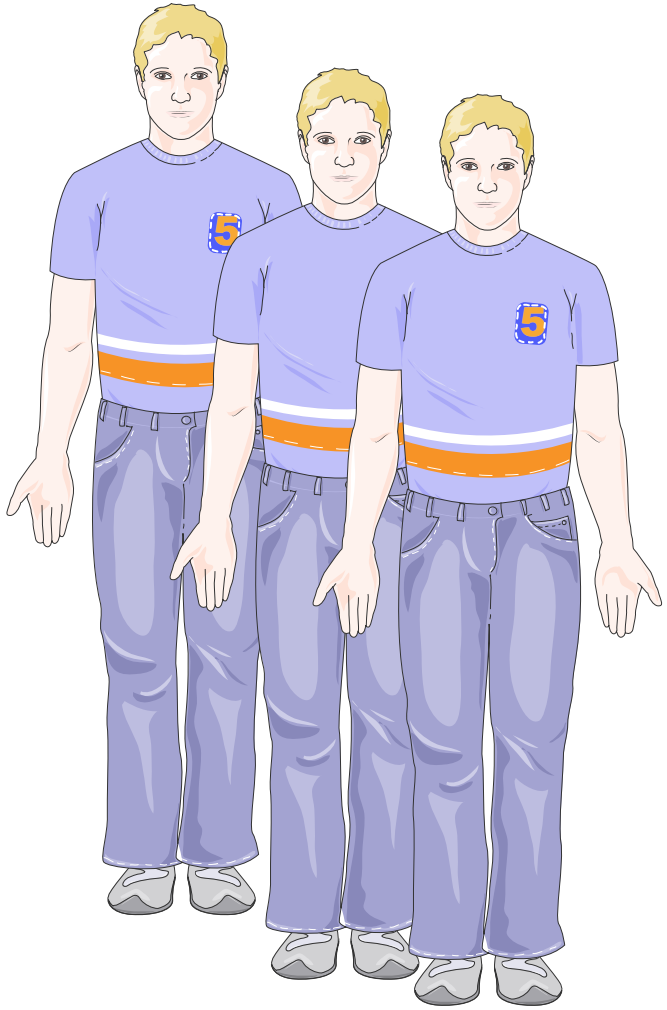
José Darío Portillo-Miño,[1*] Laura María Araújo-Prado,[2] Jorge Mauricio Melo,[3] Yeison Harvey Carlosama-Rosero.[4]



Portillo-Muño JD, Rev Col Gastroenterol 2021;36:18-23

Cáncer gástrico

2-3



1

Adenocarcinoma gástrico

↓

Tumores Epiteliales Heterogéneos

↓

Clínica, Biológica, Genética, Histología

↓

Causas Medio-Ambientales, Genéticas

Cáncer gástrico

Esporádicos 80-90%

Familiares 7-10%

- **CG familiar intestinal**
- **Adenocarcinoma con Pólipos Proximales**

Genéticos 1-3%

- **CG difuso hereditario E Cadherina (CDH1)**
- **Riesgo CG 80 años 70%**
- **Gastrectomía profiláctica**

Olivieria C, Lancet Oncol 2015;16:e60

Cáncer gástrico

Diagnóstico endoscópico

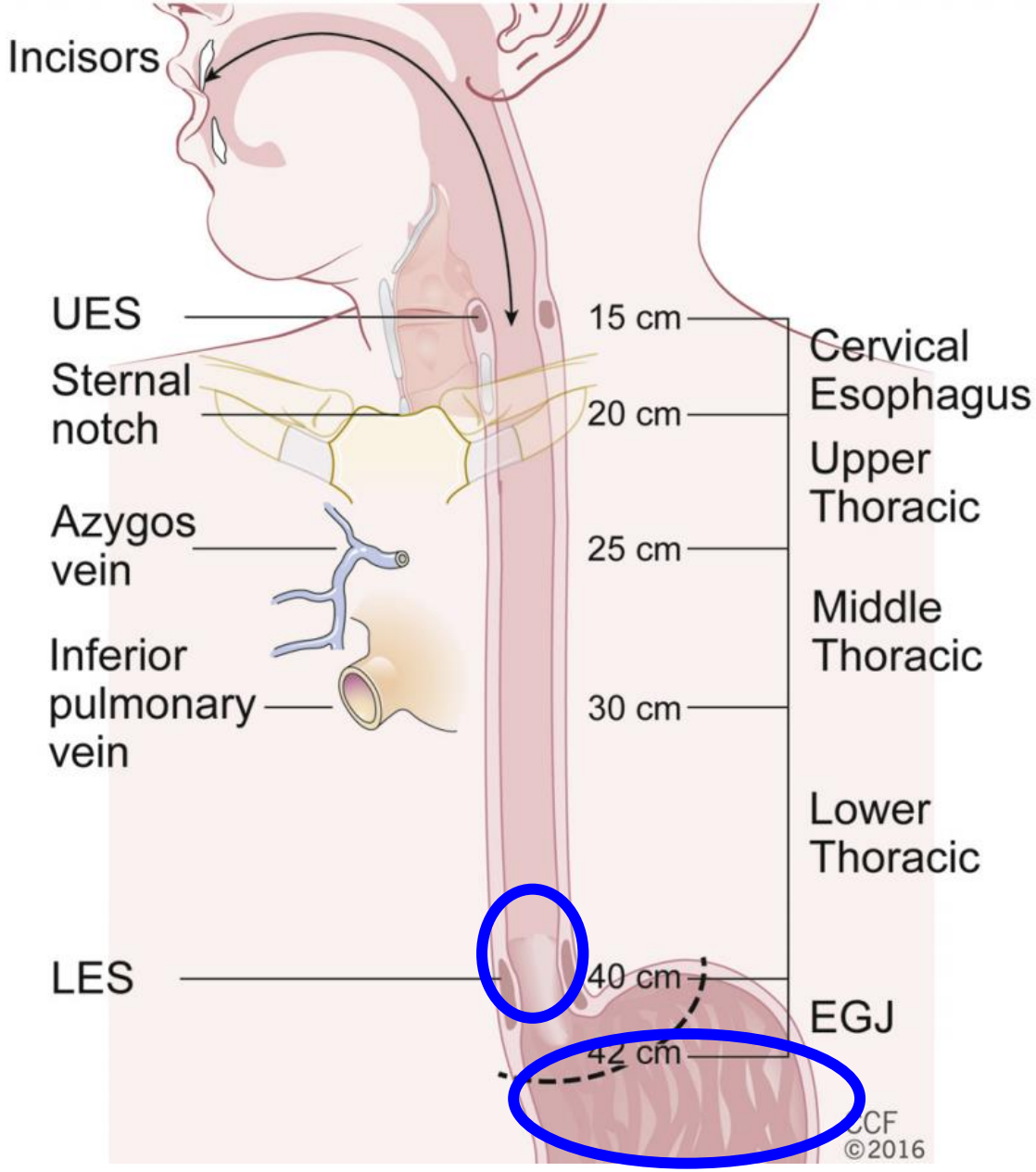
Cancer of the Esophagus and Esophagogastric Junction: An Eighth Edition Staging Primer

Thomas W. Rice, MD,[a,*] Hemant Ishwaran, PhD,[b] Mark K. Ferguson, MD,[c] Eugene H. Blackstone, MD,[a] Peter Goldstraw, MD[d]

[a]*Cleveland Clinic, Cleveland, Ohio*
[b]*University of Miami, Miami, Florida*
[c]*The University of Chicago, Chicago, Illinois*
[d]*National Heart and Lung Institute, Imperial College, London, United Kingdom*

Esófago:
Epicentro 2 cm más proximales al estómago, Afectan unión esófago- gástrica

Estómago:
Epicentro 2-5 cm proximales del estómago, no cruzan unión esófago- gástrica



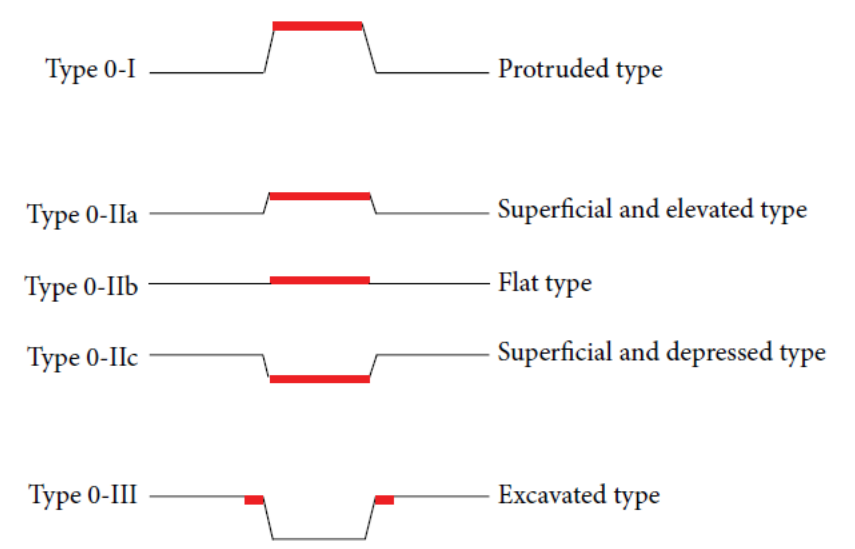
Rice TW, J Thor Oncol 2017;12:36-42

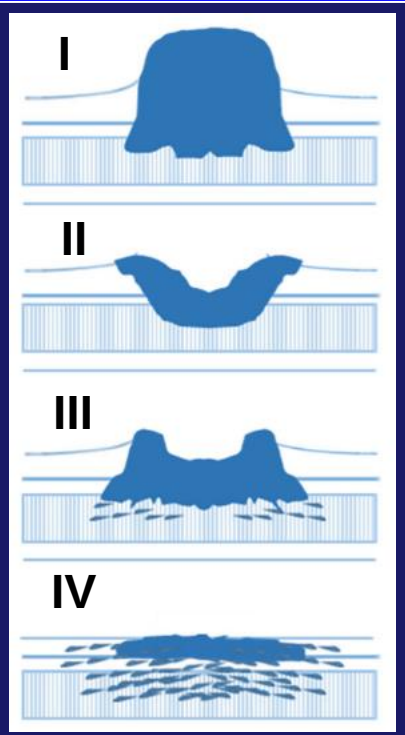
Cáncer Gástrico endoscopia

Temprano
Mucosa, submucosa
Con o sin ganglios
Sobrevida 5 años 100%

37 meses

Avanzado
Sobrevida 5 años 5-10%





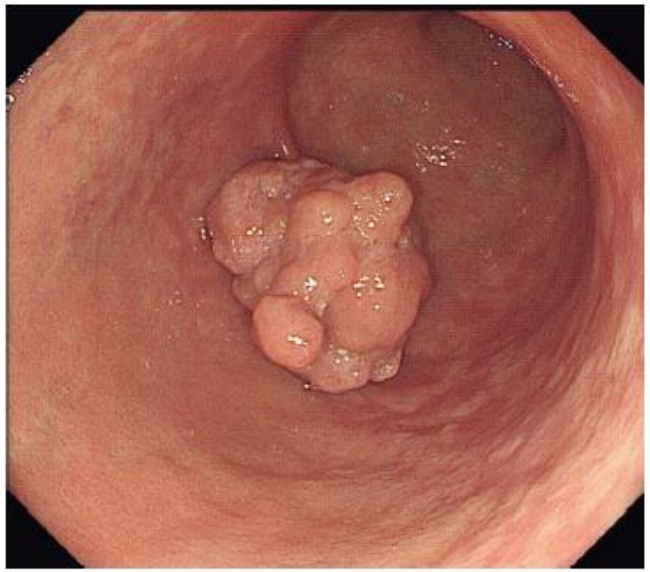
Elevado
Masa

Ulcerado

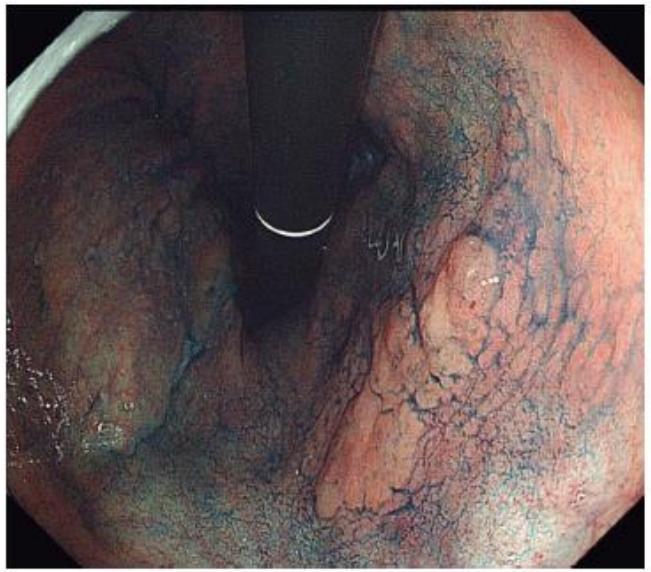
Infiltrante,
Ulcerado

Linitis
Plástica

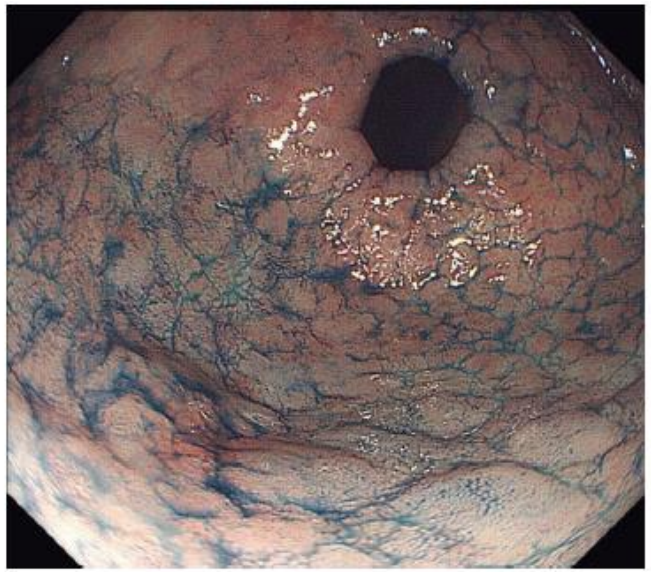
Agnes A, World J Surg Oncol 2017;15:123



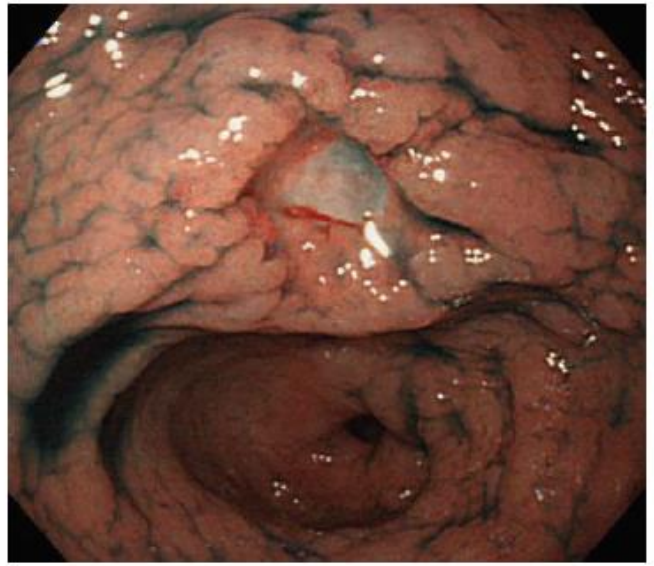
(a)



(b)

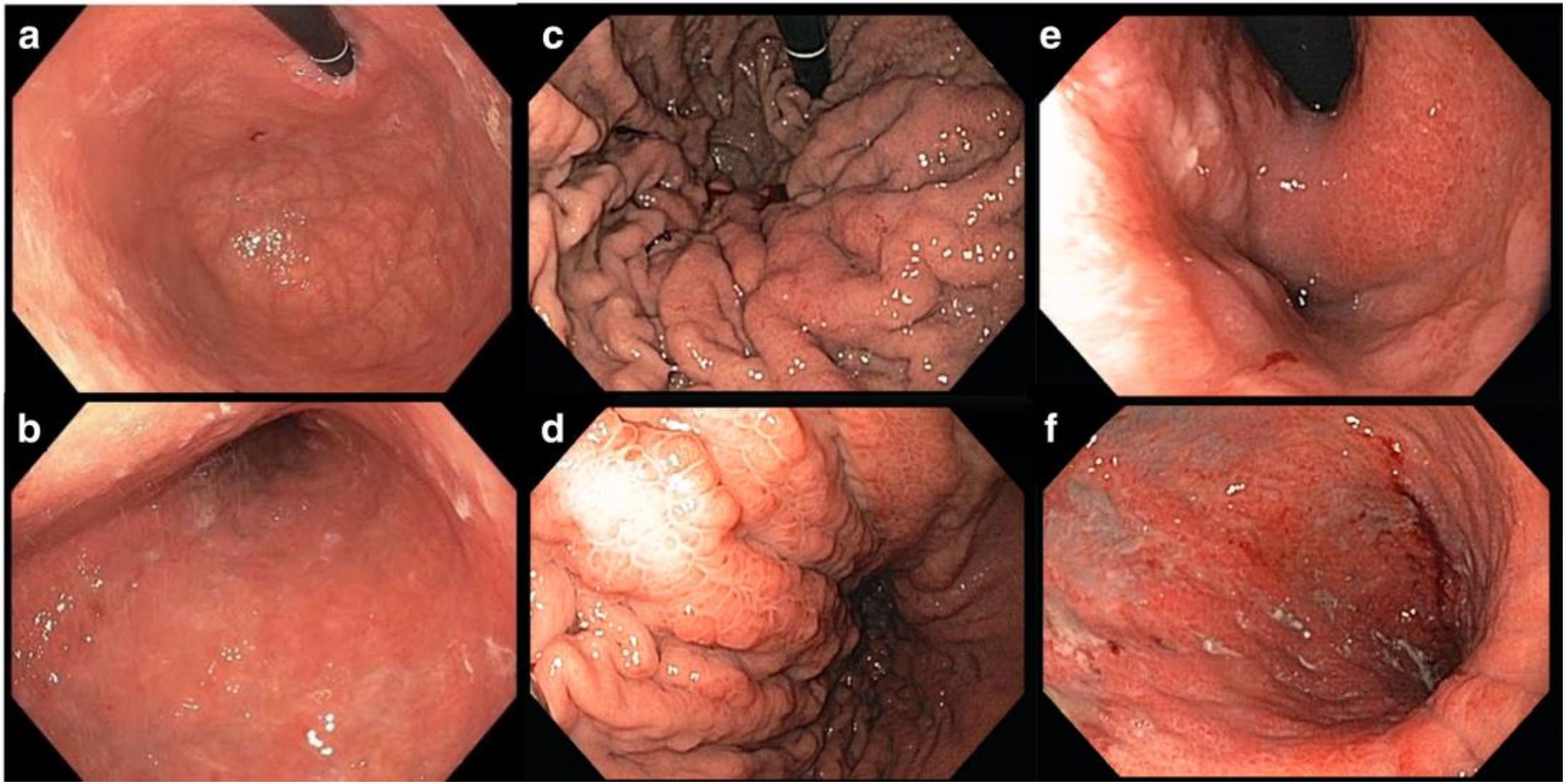


(c)

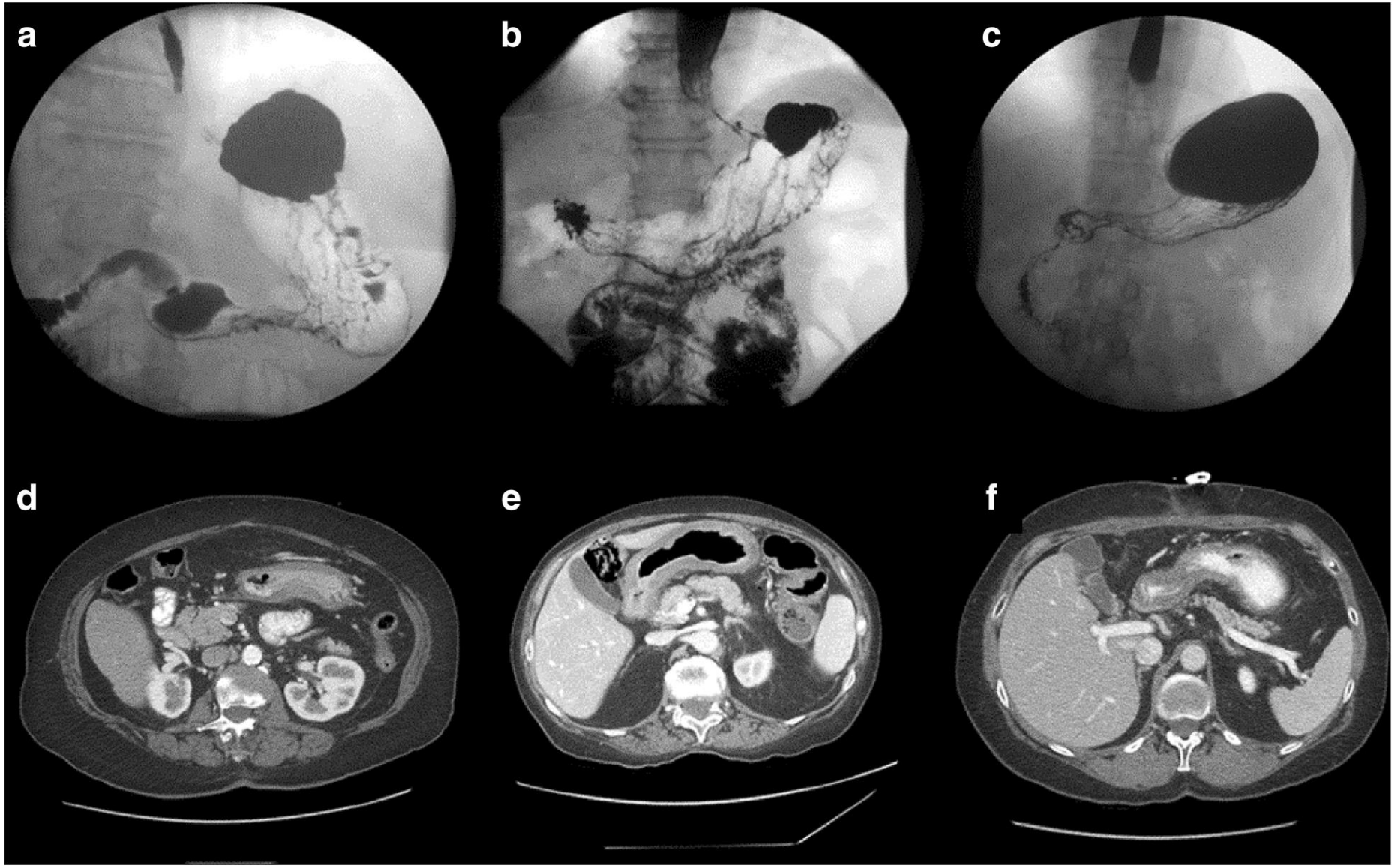


Yada T, Diag Ther Endosc 2013; 2013: Article ID 241320,

Linitis plástica



Agnes A, World J Surg Oncol 2017;15:123



Ecoendoscopia, Tomografía emisora de positrones

Agnes A, World J Surg Oncol 2017;15:123

Diagnóstico definitivo

"Estándar de oro"

Ulceras gástricas
5% Malignas ≈ Benignas

1 Biopsia	*70% S*
5 Biopsias	*98% S*

Graham DY, Gastroenterology 1982;82:228-35

Càncer gàstrico

Histologìa

+

Inmunoquìmica

Expresiòn (HER2) Receptor 2, Factor de Crecimiento humano

Error de replicaciòn RER

Drogas Anti HER2
Inmunoterapia RER+
Inestabilidad Microsatelie

Ptryssyn P, Dig Dis 2020;38:280-5

Curr. Treat. Options in Oncol. (2020) 21:70
DOI 10.1007/s11864-020-00774-4

Upper Gastrointestinal Cancers (JD Berlin, Section Editor)

Check for updates

Targeted Therapies in Advanced Gastric Cancer

Timil H. Patel, MD
*Michael Cecchini, MD**

Anti HER2

Anti EGFR

Anti VEGF

Anti MTOR

Inhibidores PARP

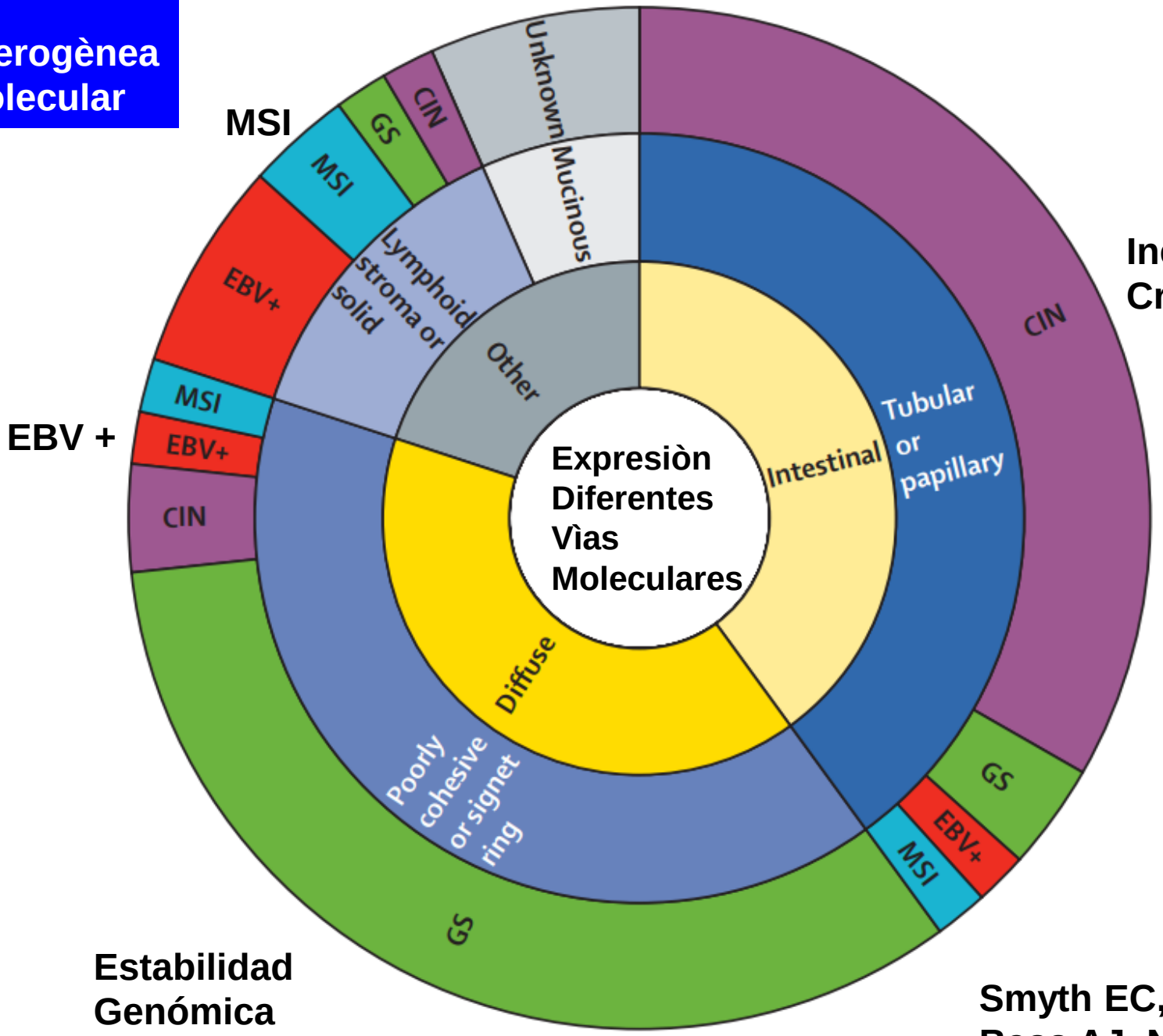
Immunotherapy

In the past several years, the ICIs have revolutionized the treatment for many cancers. One such checkpoint is programmed death 1 (PD1), which is an inhibitory receptor expressed mainly on activated T cells [67]. In tumor cells, inhibition of PD-1 prevents PD-1 from binding to its ligands, PD-L1 and PD-L2, thus restoring anti-tumor immunity [68]. Studies have shown overexpression of PD-L1 in gastric cancer, making the inhibition of PD-1 an exciting target in this disease group [5].

Nivolumab and ipilimumab

Nivolumab is a fully human IgG4 monoclonal antibody inhibitor of PD-1. In 2017, the phase 3 ATTRACTION-2 trial evaluated the efficacy of third-line nivolumab versus placebo in Asian patients with advanced gastric or GEJ cancer regardless of PD-L1 expression [69]. Patients were randomly assigned 2:1 to receive nivolumab or placebo, and the results revealed improved mOS with nivolumab of 5.26 months vs 4.14 months with placebo (HR 0.63; 95% CI 0.51–0.78; $P < 0.001$). Furthermore, the nivolumab 12-month OS was 26.2% vs 10.9% with placebo. These results led to the approval of nivolumab in Japan regardless of PD-L1 status. Nivolumab is not currently approved for gastric cancer in the USA.

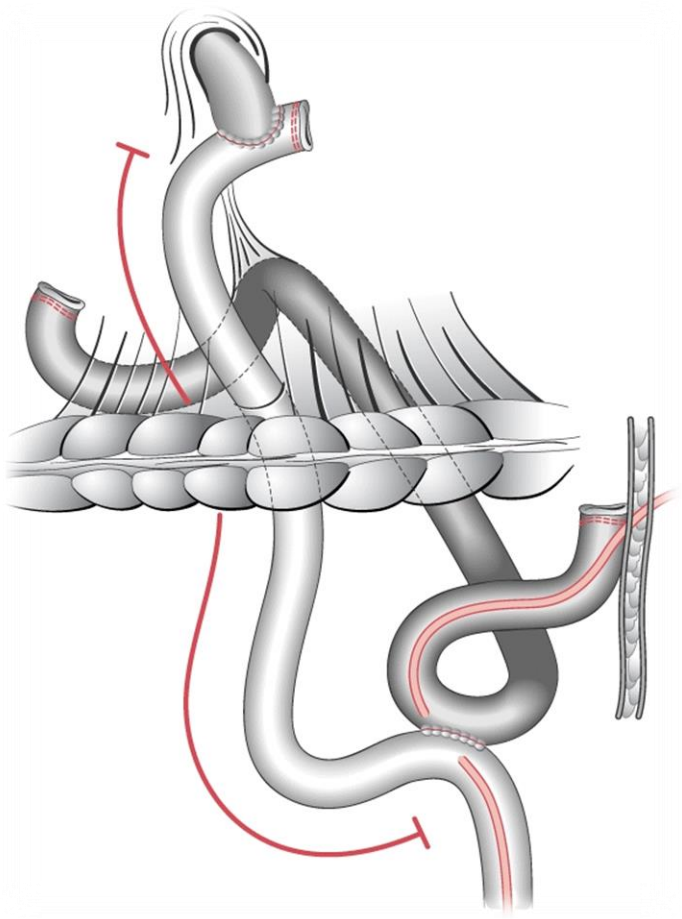
Cancer Gàstrico
Enfermedad heterogènea
Clasificaciòn Molecular



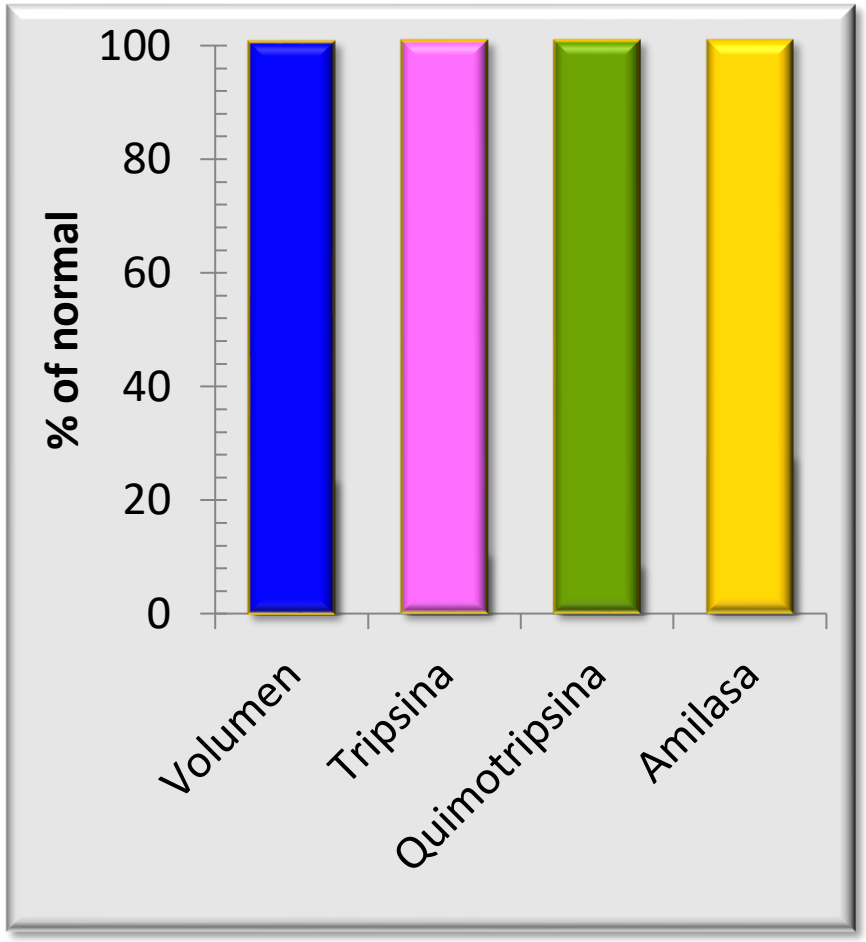
Smyth EC, Lancet 2020;396:635–48
Bass AJ, Nature 2014;513:202-9

Insuficiencia pancreática Exocrina pos cirugía Cáncer gastrico

Secreciòn pancreàtica pos gastrectomìa



IPE 6 meses: Parcial 80%, Total 100%

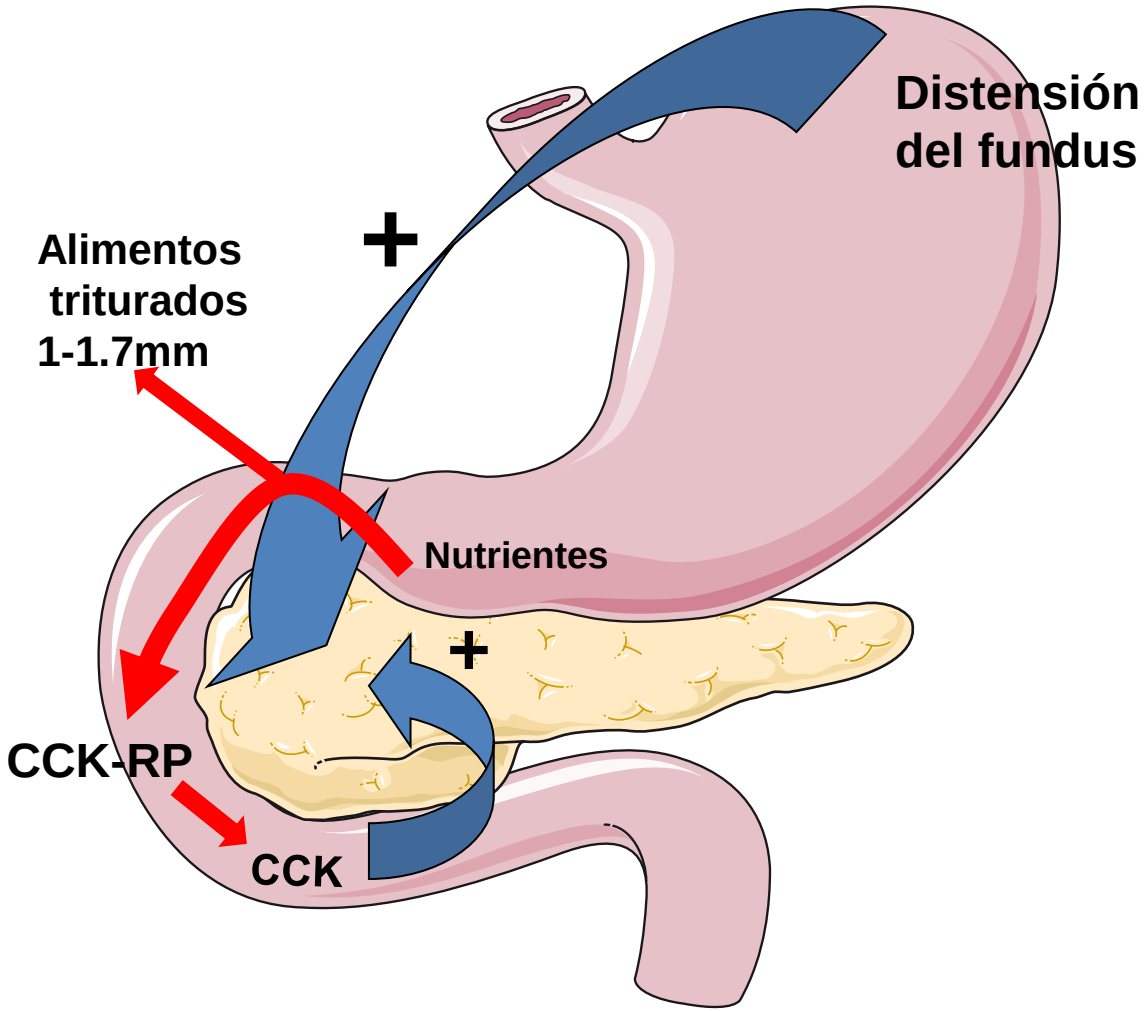


Cortesía Dr Domínguez-Muñoz

Friess et al, Am J Gastroenterol 1996

Keller J, Gut 2005;54 (Suppl.6):vi1-vi28,

Fisiología pancreática



Otero W, PLM, 2021

IPE Manifestaciones clínicas

Otero W, PLM Perú 2021

Gastric Cancer
DOI 10.1007/s10120-017-0757-y

ORIGINAL ARTICLE

Pancreatic enzyme supplementation after gastrectomy for gastric cancer: a randomized controlled trial

Marco Catarci[1,3] · Manuele Berlanda[1] · Giovanni Battista Grassi[1] · Francesco Masedu[2] · Stefano Guadagni[2]

Gastric Cancer 2018;21:542-51

Càncer gàstrico

Histologìa

+

Inmunoquìmica

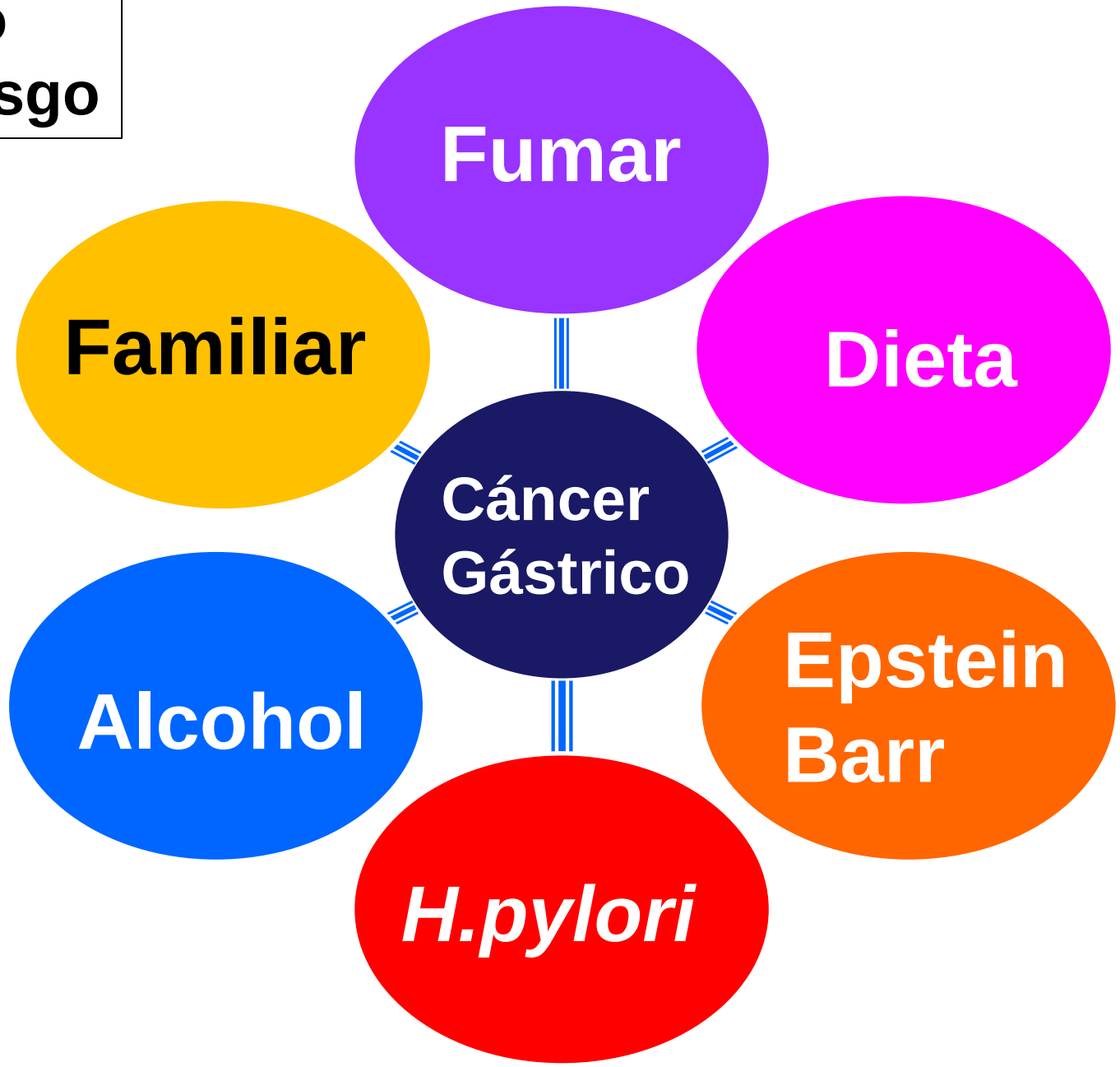
Expresiòn (HER2) Receptor 2, Factor de Crecimiento humano

Error de replicaciòn RER

Drogas Anti HER2
Inmunoterapia RER+
Inestabilidad Microsatelie

Ptryssyn P, Dig Dis 2020;38:280-5

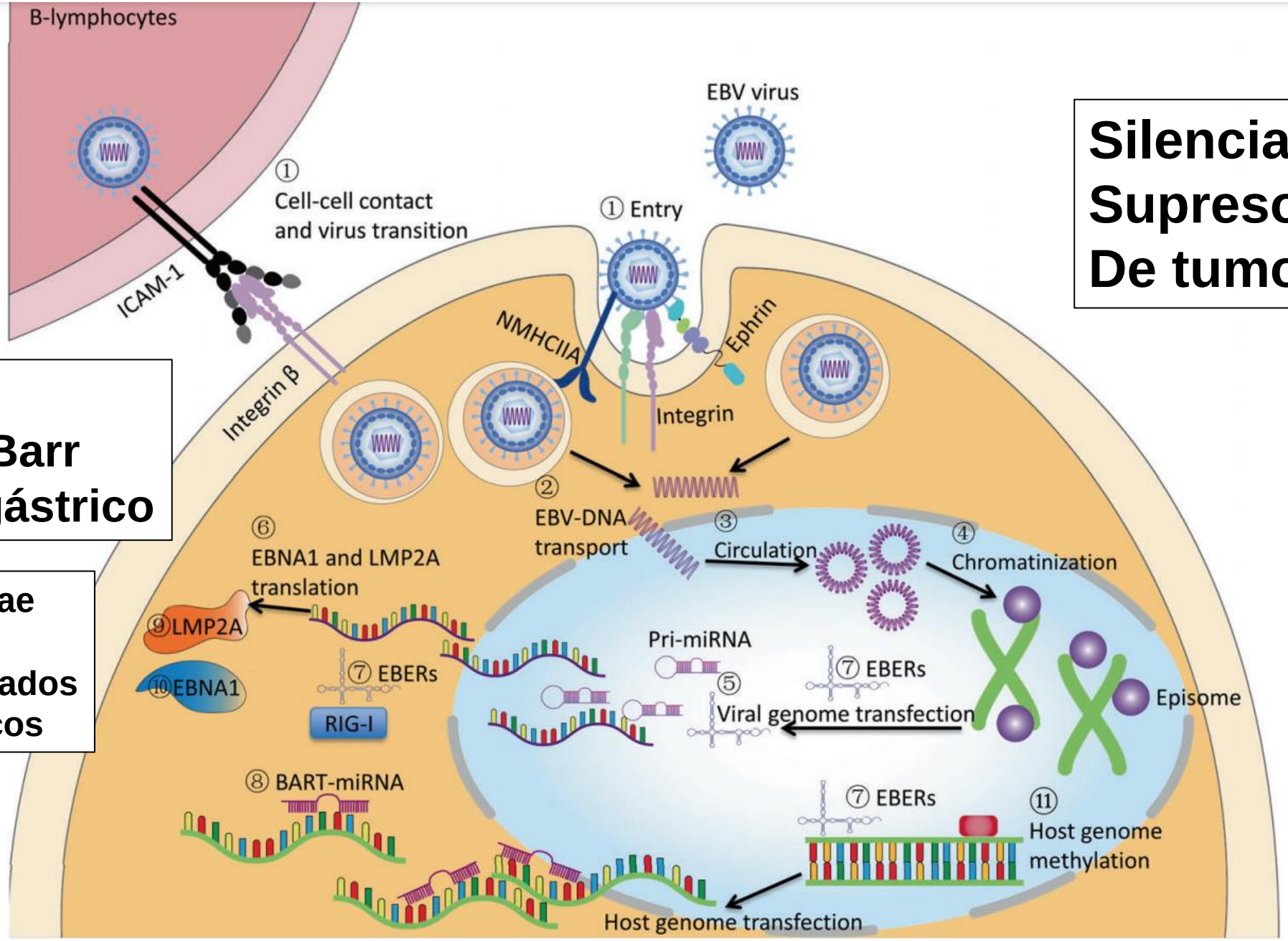
Cáncer Gástrico
Factores de Riesgo



Silencia genes
Supresores
De tumores

Virus
Epstein Barr
Cáncer gástrico

Herpesviridae
DNA
>90% infectados
Asintomáticos



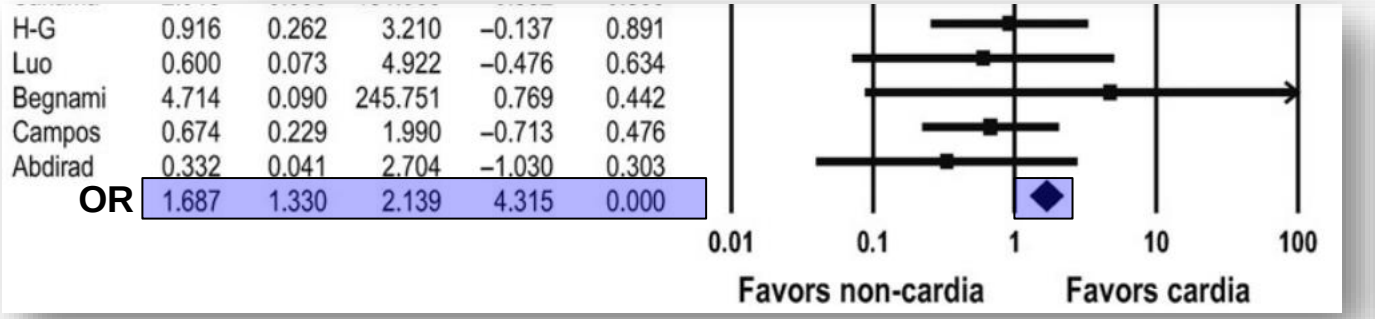
Azhao Y Oncogene 2020; 39:3427-42
Stanland IJ, Viruses 2020;12.1222

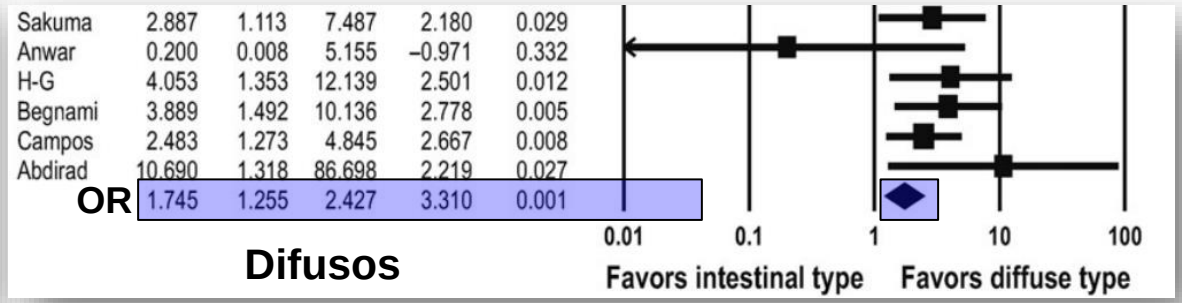
REVIEW

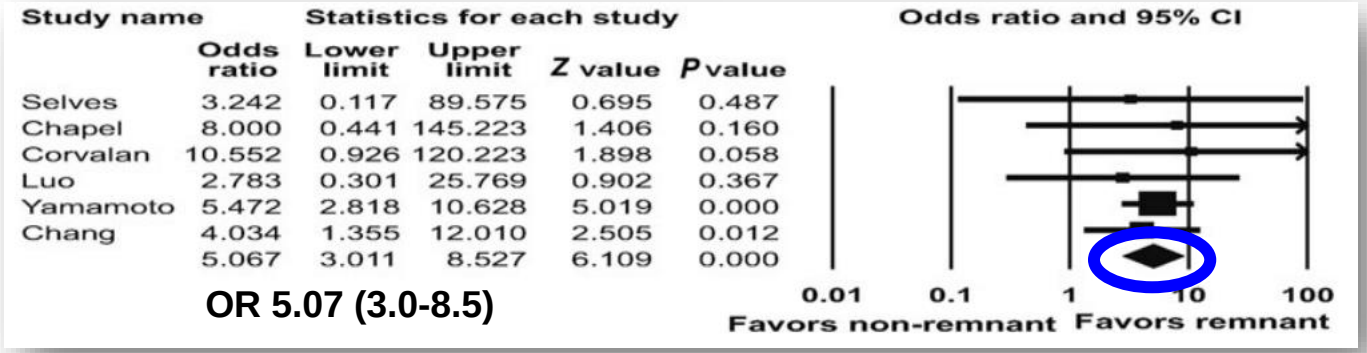
Clinicopathological and molecular characteristics of Epstein–Barr virus-associated gastric carcinoma: A meta-analysis

Ju-Han Lee, Seo-Hee Kim, Sun-Hee Han, Jung-Suk An, Eung-Seok Lee and Young-Sik Kim

Department of Pathology, Bioinformatics Interest Group, Korea University Ansan Hospital, Ansan, Korea







OR 5.07 (3.0-8.5)

Difusos
Estroma linfoide
Linfo-epitelioma “like”

Lee JH, J Gastroenterol Hepatol 2009;24:354–65

Dieta

Dieta y reducción riesgo CG

IARC

Alto consumo de frutas

“Probablemente”

Alto consumo de vegetales

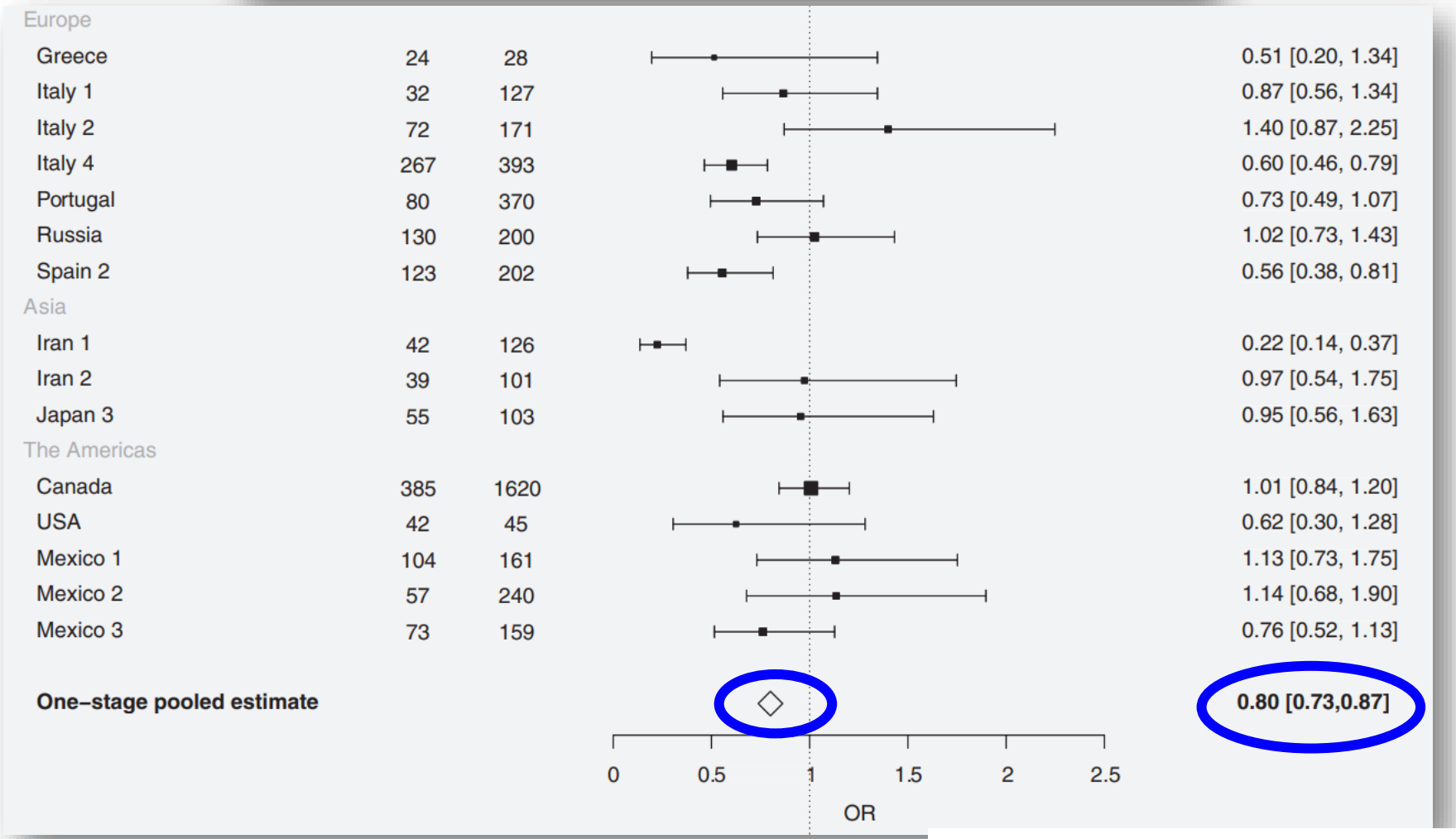
“Posiblemente”

IARC *Handbooks of Cancer Prevention* IARC Lyon, France 2003;Vol 8

Frutas

Citrus fruit intake and gastric cancer: The stomach cancer pooling (StoP) project consortium

Paola Bertuccio[1], Gianfranco Alicandro[1], Matteo Rota[1], Claudio Pelucchi[1], Rossella Bonzi[1], Carlotta Galeone[1], Francesca Bravi[1], Kenneth C. Johnson[2], Jinfu Hu[3], Domenico Palli[4], Monica Ferraroni[1], Lizbeth López-Carrillo[5], Nuno Lunet[6,7], Ana Ferro[7], Reza Malekzadeh[8], David Zaridze[9], Dmitry Maximovitch[9], Jesus Vioque[10,11], Eva M. Navarrete-Munoz[10,11], Mohammadreza Pakseresht[8,12,13], Raúl U. Hernández-Ramírez[5,14], Malaquias López-Cervantes[15], Mary Ward[16], Farhad Pourfarzi[8,17], Shoichiro Tsugane[18], Akihisa Hidaka[18], Zuo-Feng Zhang[19], Robert C. Kurtz[20], Pagona Lagiou[21,22], Areti Lagiou[23], Paolo Boffetta[24], Stefania Boccia[25,26], Eva Negri[27] and Carlo La Vecchia[1]



Bertuccio P, Int. J. Cancer 2019;144:2936-44

Food Research International 123 (2019) 567–589

Contents lists available at ScienceDirect

Food Research International

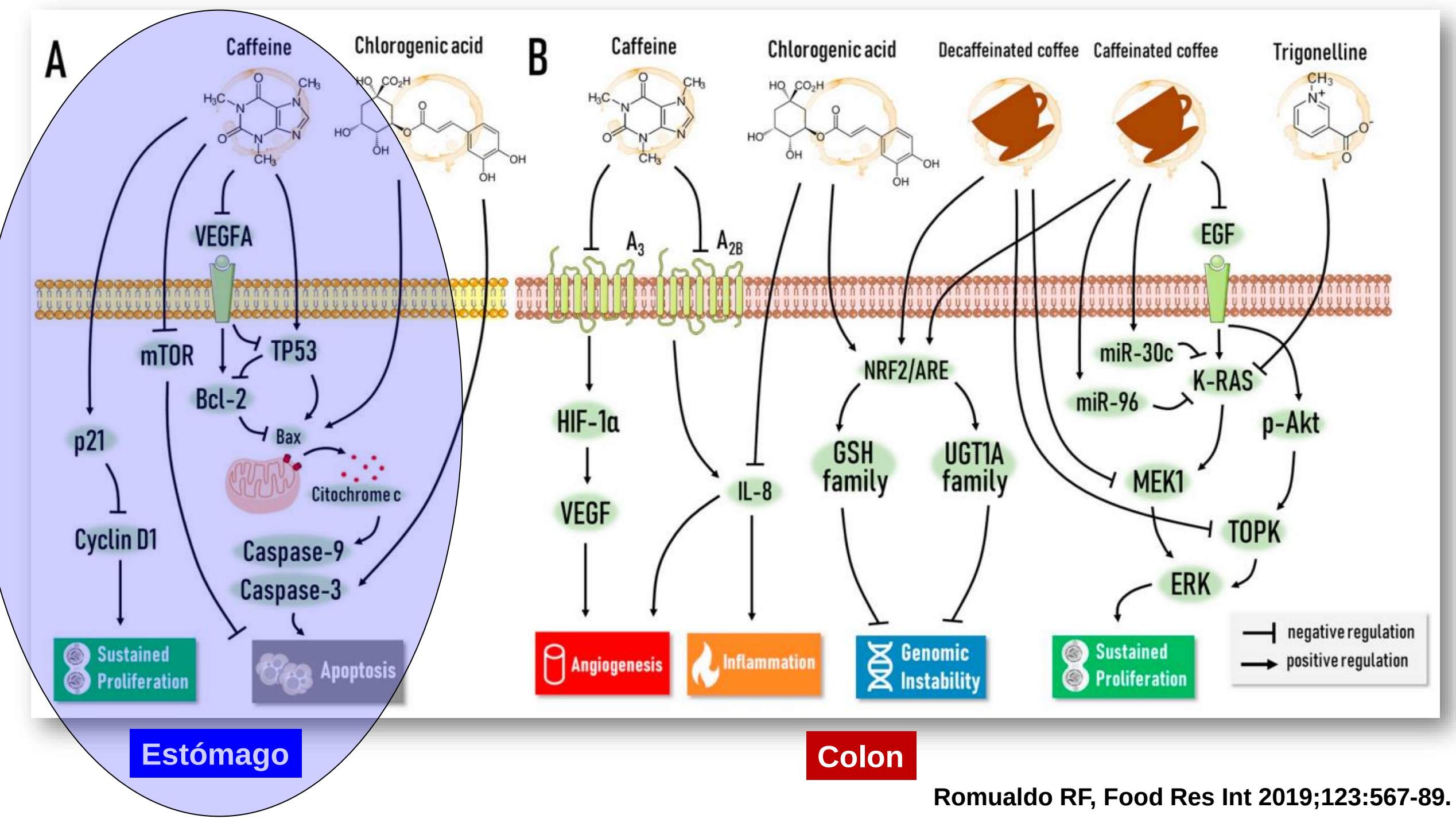
journal homepage: www.elsevier.com/locate/foodres

Review

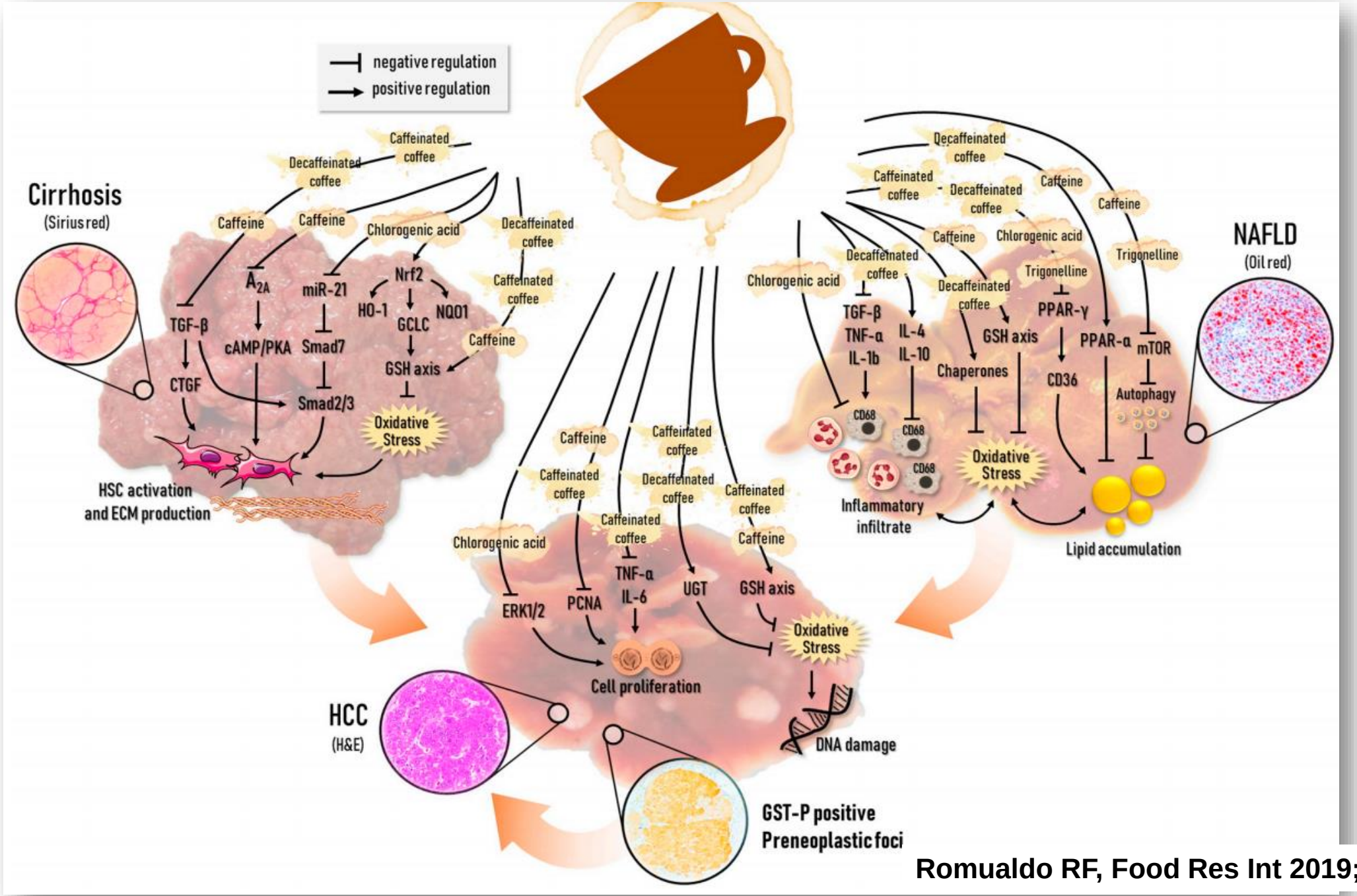
Drinking for protection? Epidemiological and experimental evidence on the beneficial effects of coffee or major coffee compounds against gastrointestinal and liver carcinogenesis

Guilherme Ribeiro Romualdo[a], Ariane Bartolomeu Rocha[a], Mathieu Vinken[b], Bruno Cogliati[c], Fernando Salvador Moreno[d], María Angel García Chaves[e], Luis Fernando Barbisan[f,*]

Romualdo RF, Food Res Int 2019;123:567-89.

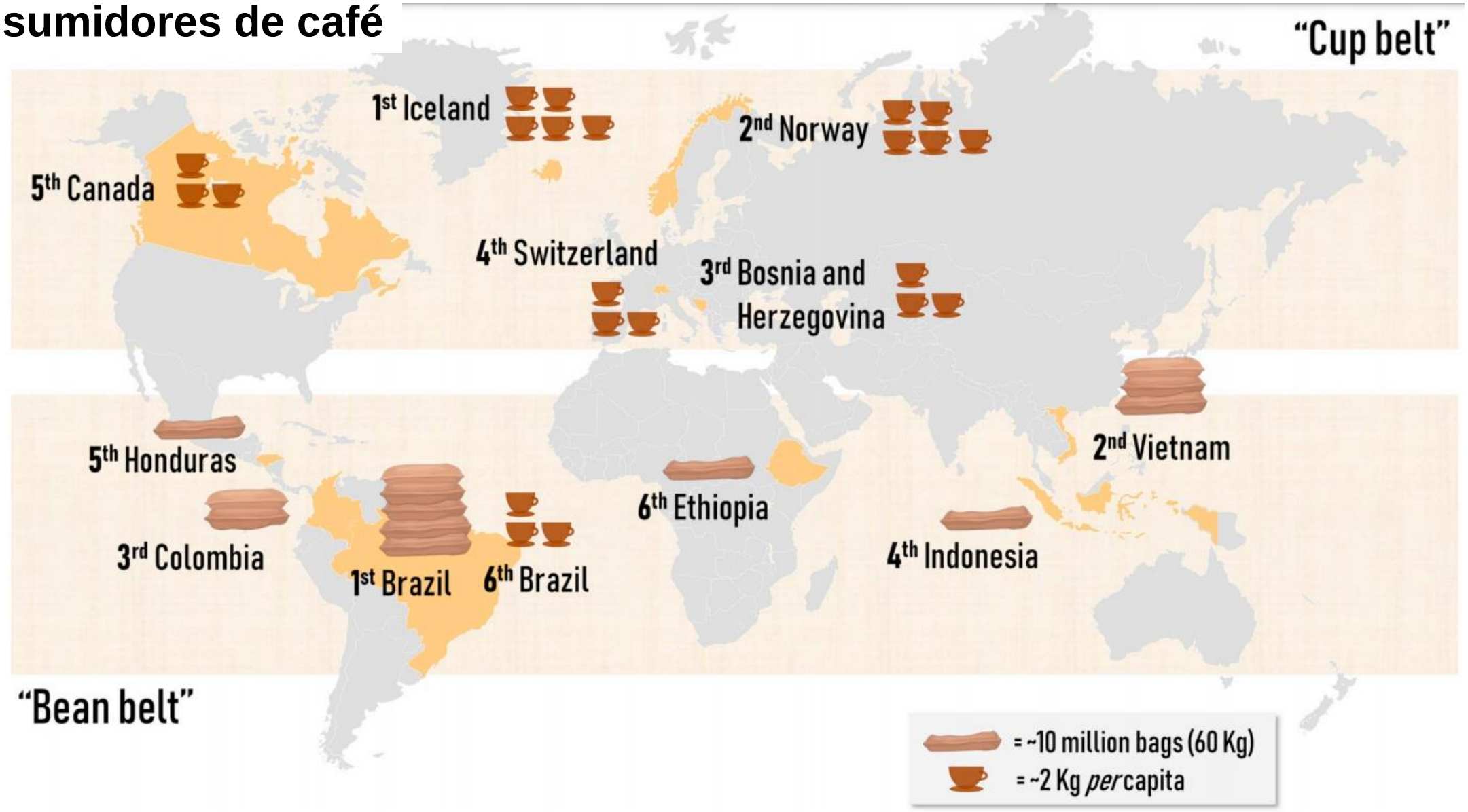


Romualdo RF, Food Res Int 2019;123:567-89.



Romualdo RF, Food Res Int 2019;123:567-89.

6 consumidores de café

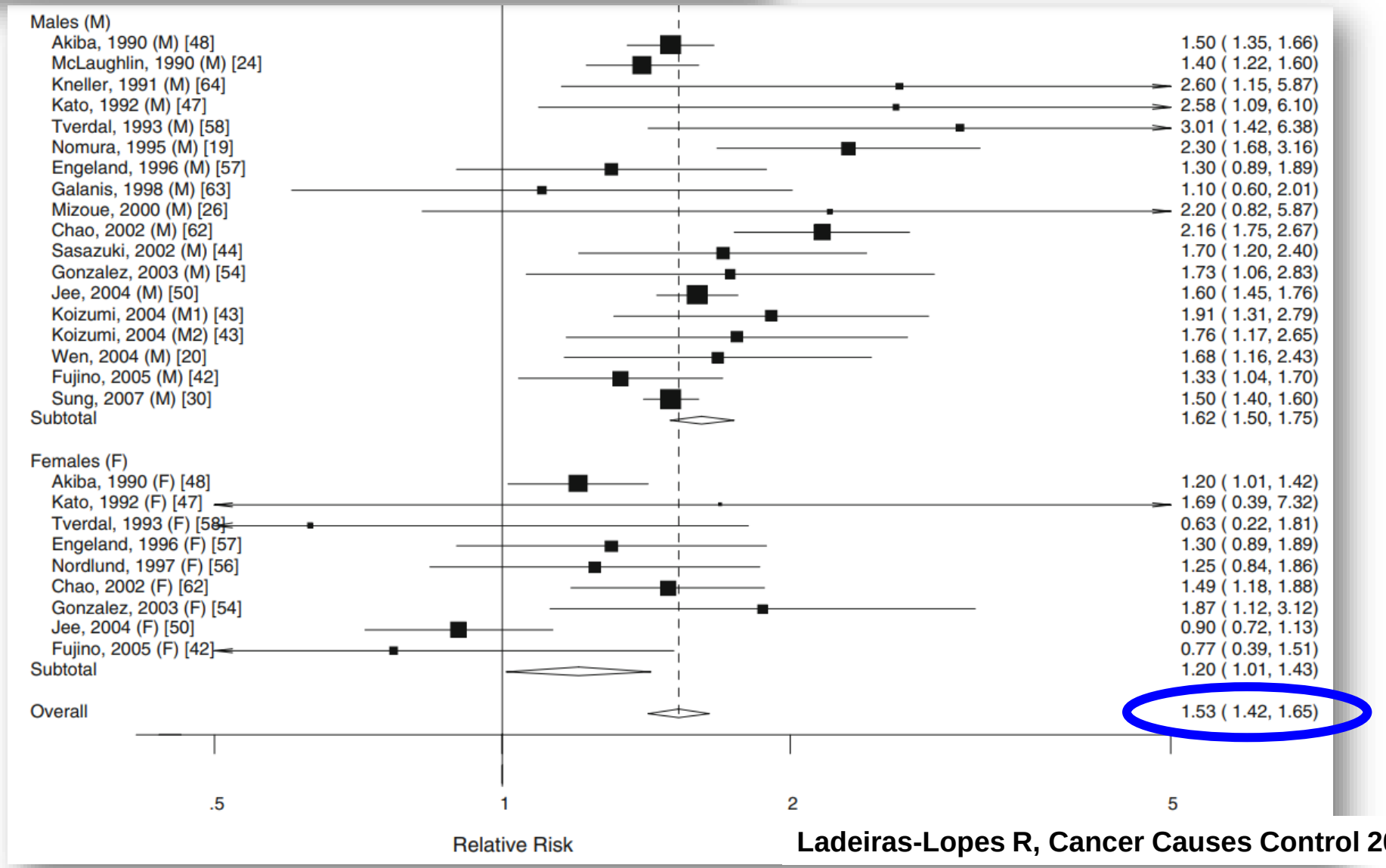


International Coffee Organization 2018

Smoking and gastric cancer: systematic review and meta-analysis of cohort studies

Ricardo Ladeiras-Lopes · Alexandre Kirchhofer Pereira · Amanda Nogueira · Tiago Pinheiro-Torres · Isabel Pinto · Ricardo Santos-Pereira · Nuno Lunet

Fumar

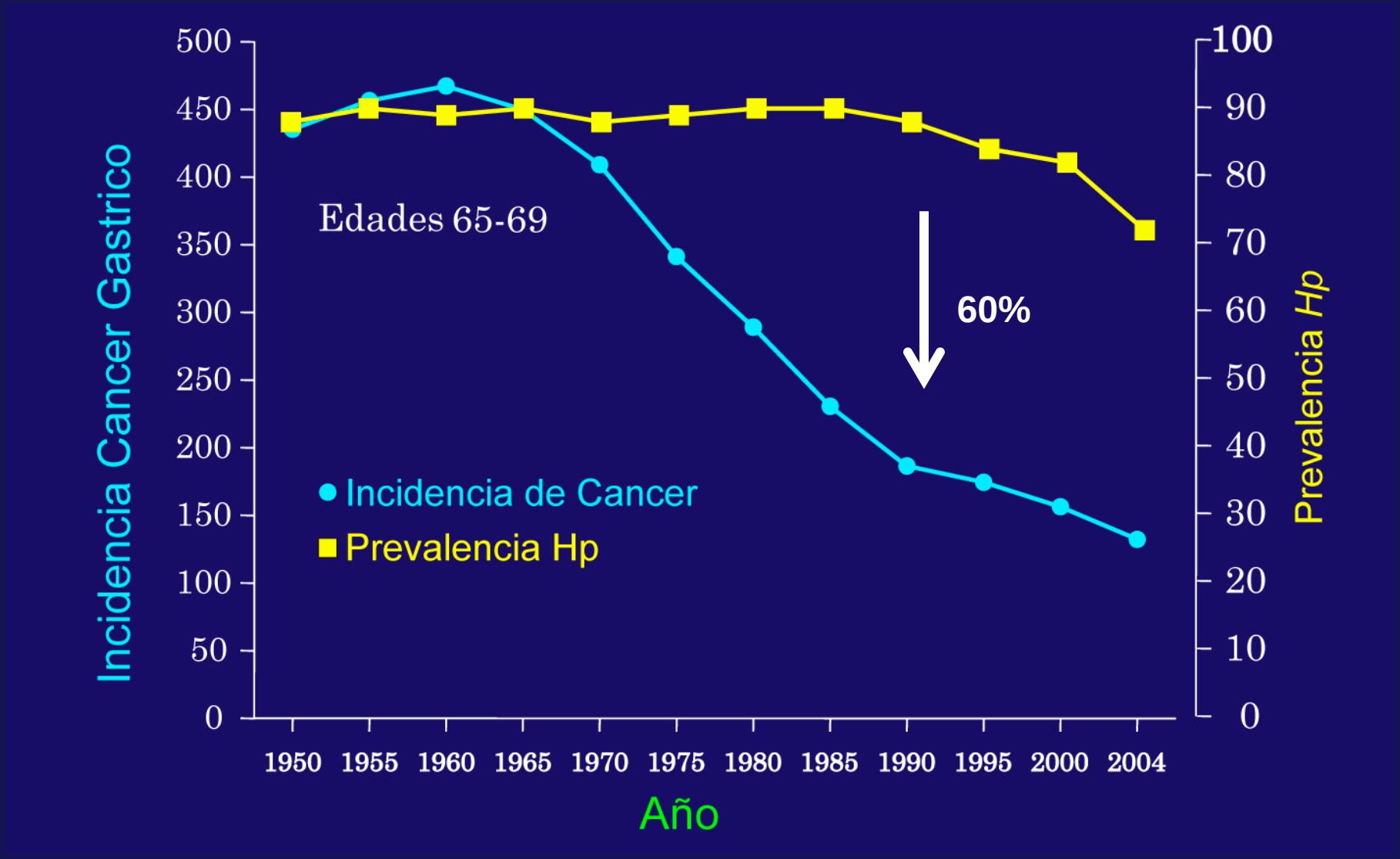


Ladeiras-Lopes R, Cancer Causes Control 2008;19:689–701

Sal

“Tremendo veneno Para el estómago”

H. pylori-Cáncer Gástrico en Japón



Graham DY, J Dig Dig 2009;10:77-84

Concentración de sal y expresión Cag A y UreB por *Helicobacter pylori*

Grupo	Cag A (%)	Ure B
NaCl 3%	*3.21*	*72.73*
NaCl 15%	*3.99**	*74.81*
NaCl 30%	*10.09**	*70.20*

**p<0.05*

Xu Y, et al *As Pac J Cancer Prevent 2011; 12:2637-41*

Low sodium diet for gastric cancer prevention in the United States: Results of a Markov model

Judith Kim[1] | Aaron Oh[2] | Han Truong[2] | Monika Laszkowska[3] | M. Constanza Camargo[4] | Julian Abrams[1] | Chin Hur[1,2]

Riesgo de CG

24.8% Hombres 27casos 10^5
21.2% Mujeres 14 casos 10^5

Cancer Medicine 2021;10:684-92

ORIGINAL PAPER

Risk factors for gastric cancer in Latin America: a meta-analysis

Patricia Bonequi · Fernando Meneses-González · Pelayo Correa · Charles S. Rabkin · M. Constanza Camargo

Factor de riesgo	OR(IC95%)
IL 1RN*2	1.51 (1.15-1.99)
Tabaquismo	1.47 (I.19-1.81)
Alcohol	1.61 (1.26-2.05)
Carne procesada	1.64 (1.08-2.48)
Sal	2.24 (1.53-3.29)

Bonequi P, Cancer Causes Control 2013;24:217-31

Helicobacter pylori riesgo atribuible 85-90%

Causa necesaria,pero insuficiente

Graham DY, Gastroenterology 2015;148:719-31

Dejarlo y
No tratarlo

Dejarlo y No tratarlo

Lento proceso
Décadas

Atrofia
Metaplasia

Cáncer Gástrico

Hipótesis

Erradicar H.pylori reduce
El riesgo de cáncer gástrico

Ha sido comprobada!

Cochrane Library

Cochrane Database of Systematic Reviews

6 ECC
ASIA
1 Colombia

Helicobacter pylori eradication for the prevention of gastric neoplasia (Review)

Ford AC, Yuan Y, Forman D, Hunt R, Moayyedi P.

Helicobacter pylori eradication for the prevention of gastric neoplasia.
Cochrane Database of Systematic Reviews 2020, Issue 7. Art. No.: CD005583.

Incidencia

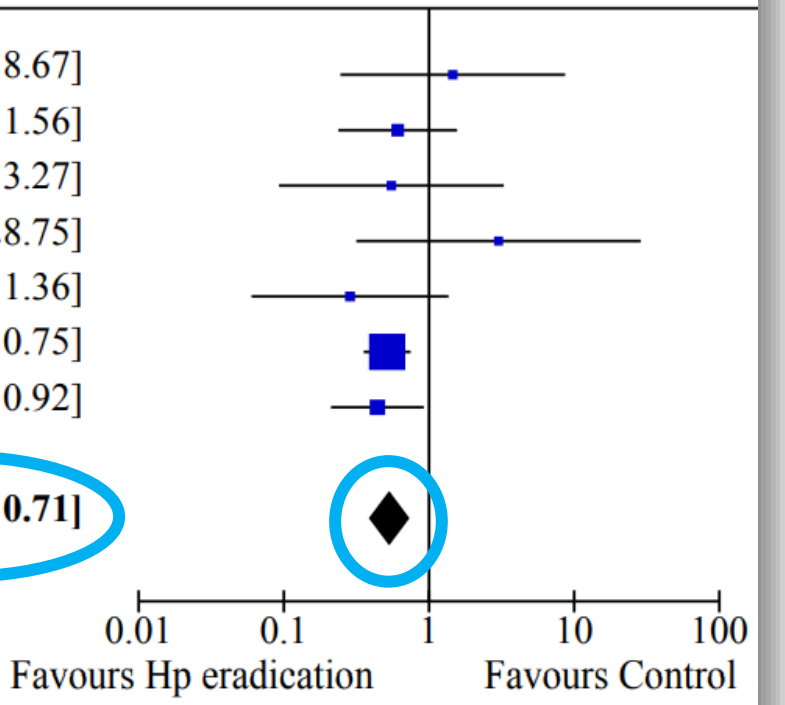
Analysis 1.2. Comparison 1: *H. pylori* eradication vs control - main analyses, Outcome 2: Incidence of gastric cancer - complete case analysis

Study or Subgroup	Hp eradication Events	Hp eradication Total	Control Events	Control Total	Weight	Risk Ratio M-H, Random, 95% CI
Correa 2000-Correa 2001	3	320	2	311	2.8%	1.46 [0.25 , 8.67]
Wong 2004	7	735	11	703	9.9%	0.61 [0.24 , 1.56]
Saito 2005	2	379	3	313	2.8%	0.55 [0.09 , 3.27]
Wong 2012a	3	233	1	234	1.7%	3.01 [0.32 , 28.75]
Leung 2004-Zhou 2014	2	276	7	276	3.6%	0.29 [0.06 , 1.36]
You 2006 - Li 2019	40	1119	78	1123	63.2%	0.51 [0.35 , 0.75]
Choi 2020	10	832	23	844	16.1%	0.44 [0.21 , 0.92]
Total (95% CI)		**3894**		**3804**	**100.0%**	**0.53 [0.40 , 0.71]**
Total events:	67		125			

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 4.47$, $df = 6$ ($P = 0.61$); $I^2 = 0\%$

Test for overall effect: $Z = 4.19$ ($P < 0.0001$)

Test for subgroup differences: Not applicable



Ford AC, Yuan Y, Forman D, Hunt R, Moayyedi P.
Helicobacter pylori eradication for the prevention of gastric neoplasia.
Cochrane Database of Systematic Reviews 2020, Issue 7. Art. No.: CD005583.

Muerte

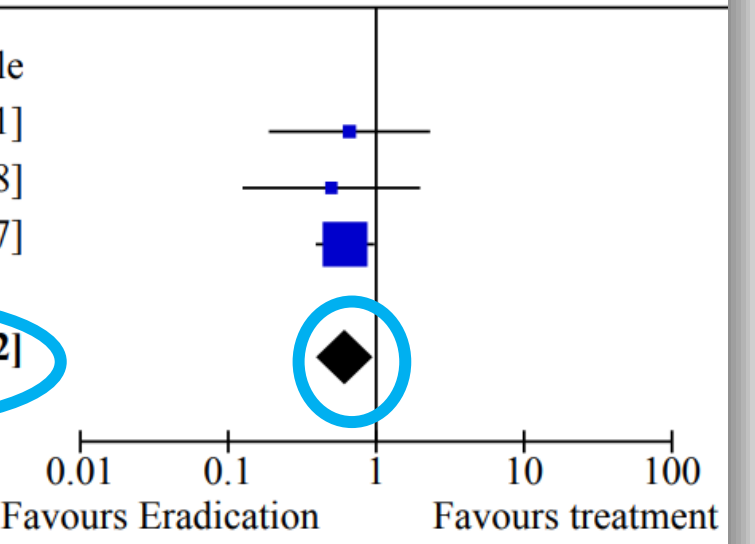
Analysis 1.3. Comparison 1: *H. pylori* eradication vs control - main analyses, Outcome 3: Death from gastric cancer - modified ITT analysis

Study or Subgroup	Hp eradication Events	Hp eradication Total	Control Events	Control Total	Weight	Risk Ratio M-H, Random, 95% CI
Choi 2020	0	912	0	914		Not estimable
Leung 2004-Zhou 2014	4	295	6	292	10.6%	0.66 [0.19 , 2.31]
Wong 2004	3	817	6	813	8.7%	0.50 [0.12 , 1.98]
You 2006 - Li 2019	29	1130	47	1128	80.6%	0.62 [0.39 , 0.97]
Total (95% CI)		**3154**		**3147**	**100.0%**	**0.61 [0.40 , 0.92]**
Total events:	36		59			

Heterogeneity: Tau² = 0.00; Chi² = 0.10, df = 2 (P = 0.95); I² = 0%

Test for overall effect: Z = 2.38 (P = 0.02)

Test for subgroup differences: Not applicable



Ford AC, Yuan Y, Forman D, Hunt R, Moayyedi P.
Helicobacter pylori eradication for the prevention of gastric neoplasia.
Cochrane Database of Systematic Reviews 2020, Issue 7. Art. No.: CD005583.

Mass eradication of *Helicobacter pylori* to reduce gastric cancer incidence and mortality: a long-term cohort study on Matsu Islands

Tsung-Hsien Chiang,[1,2,3] Wei-Jung Chang,[4] Sam Li-Sheng Chen,[5] Amy Ming-Fang Yen ,[5] Jean Ching-Yuan Fann,[6] Sherry Yueh-Hsia Chiu ,[7,8] Yi-Ru Chen,[9] Shu-Ling Chuang,[4,10] Chun-Fu Shieh,[11] Cheng-Ying Liu,[12] Han-Mo Chiu ,[1,4] Hung Chiang,[13] Chia-Tung Shun,[14,15] Ming-Wei Lin,[16] Ming-Shiang Wu ,[1] Jaw-Town Lin ,[1,17] Chang-Chuan Chan,[18,19] David Y Graham ,[20] Hsiu-Hsi Chen ,[4,19] Yi-Chia Lee [1,4,10,19]

Prevención primaria

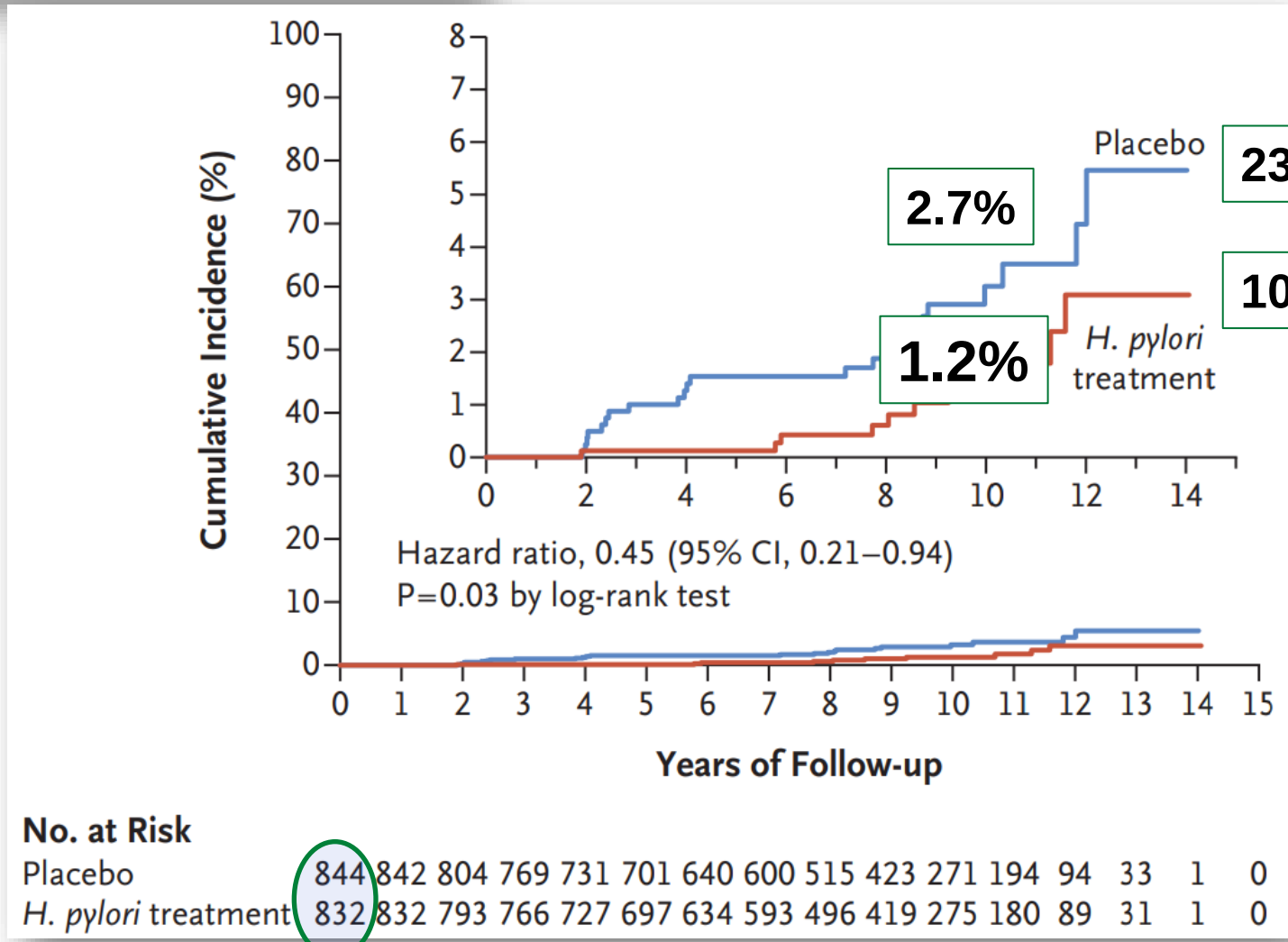
Incidencia	**<< 50%**
Mortalidad	**<< 25%**
Cáncer esófago	***No cambió***
Cáncer de colon	***NO cambió***

Chiang T-H, et al. Gut 2020, agosto 15

Family History of Gastric Cancer and *Helicobacter pylori* Treatment

Il Ju Choi, M.D., Ph.D., Chan Gyoo Kim, M.D., Ph.D., Jong Yeul Lee, M.D., Young-Il Kim, M.D., Myeong-Cherl Kook, M.D., Ph.D., Boram Park, Ph.D., and Jungnam Joo, Ph.D.

HR 0.45 (IC95% 0.21-0.94)
P=0.03



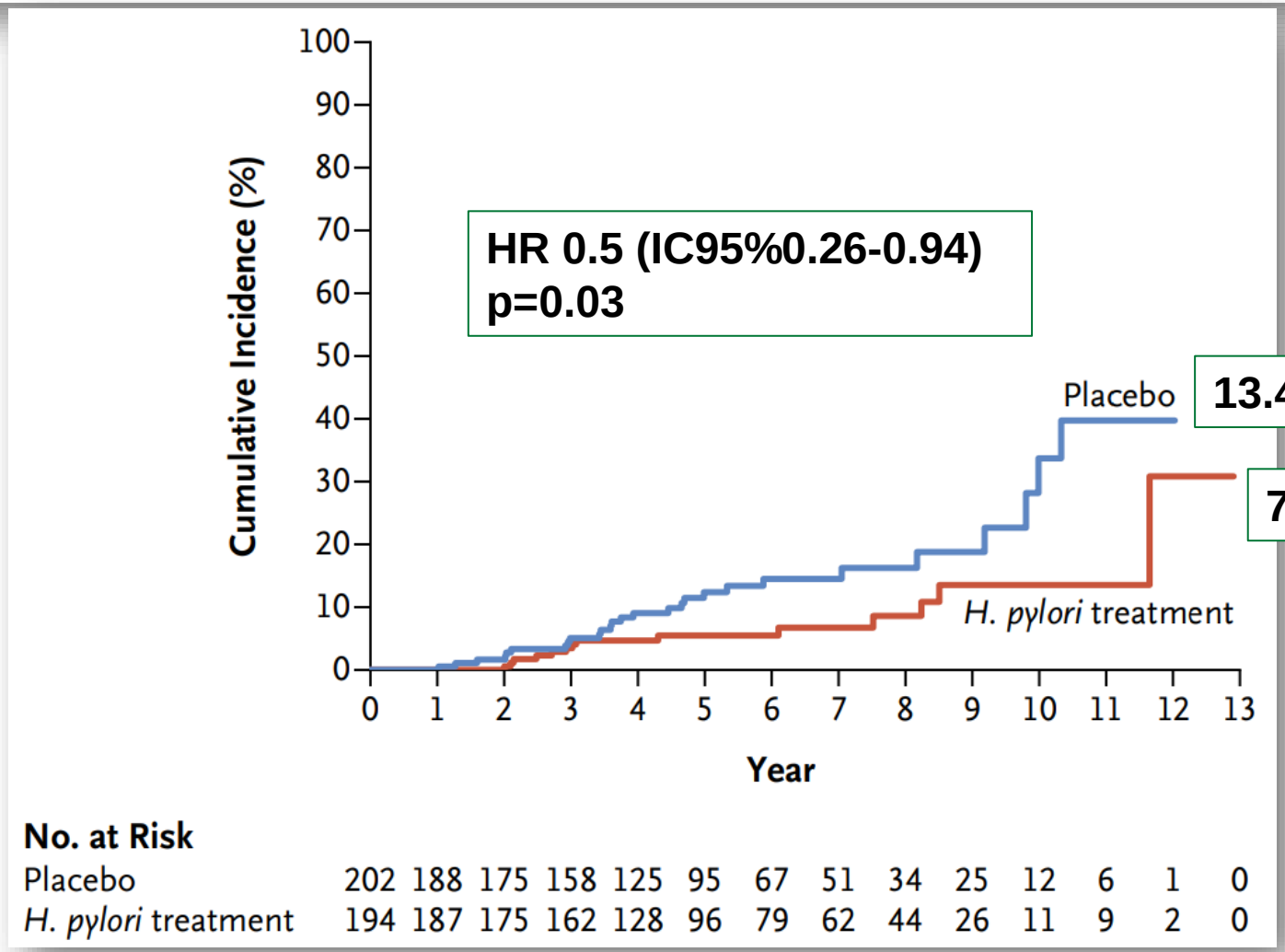
23 pacientes

10 pacientes

Choi IJ, N Engl J Med 2020;382:427-36

Helicobacter pylori Therapy for the Prevention of Metachronous Gastric Cancer

Il Ju Choi, M.D., Ph.D., Myeong-Cherl Kook, M.D., Ph.D., Young-Il Kim, M.D., Soo-Jeong Cho, M.D., Ph.D., Jong Yeul Lee, M.D., Chan Gyoo Kim, M.D., Ph.D., Boram Park, M.S., and Byung-Ho Nam, Ph.D.



William Otero

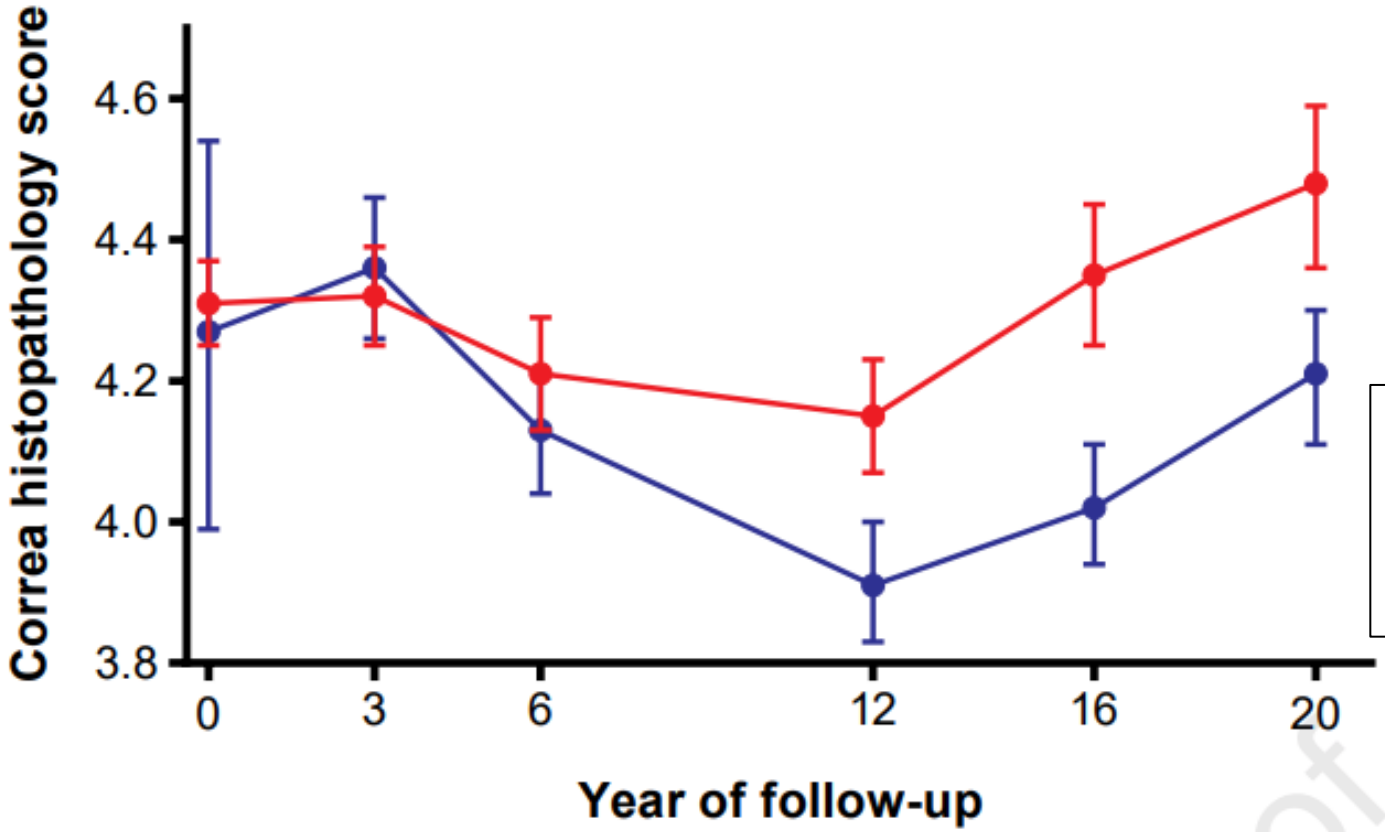
Choi IJ, N Engl J Med 2018;378:1085-95

Gastroenterology 2021;160:1106–1117

The Colombian Chemoprevention Trial: 20-Year Follow-Up of a Cohort of Patients With Gastric Precancerous Lesions

M. Blanca Piazuelo,[1,2] Luis E. Bravo,[3] Robertino M. Mera,[1] M. Constanza Camargo,[4] Juan C. Bravo,[3] Alberto G. Delgado,[1] M. Kay Washington,[5] Alicia Rosero,[6] Luz S. Garcia,[3] Jose L. Realpe,[7] Sandra P. Cifuentes,[7] Douglas R. Morgan,[1,8] Richard M. Peek Jr,[1,2,5] Pelayo Correa,[1] and Keith T. Wilson[1,2,5,9]

Estudio más largo en población Hispana

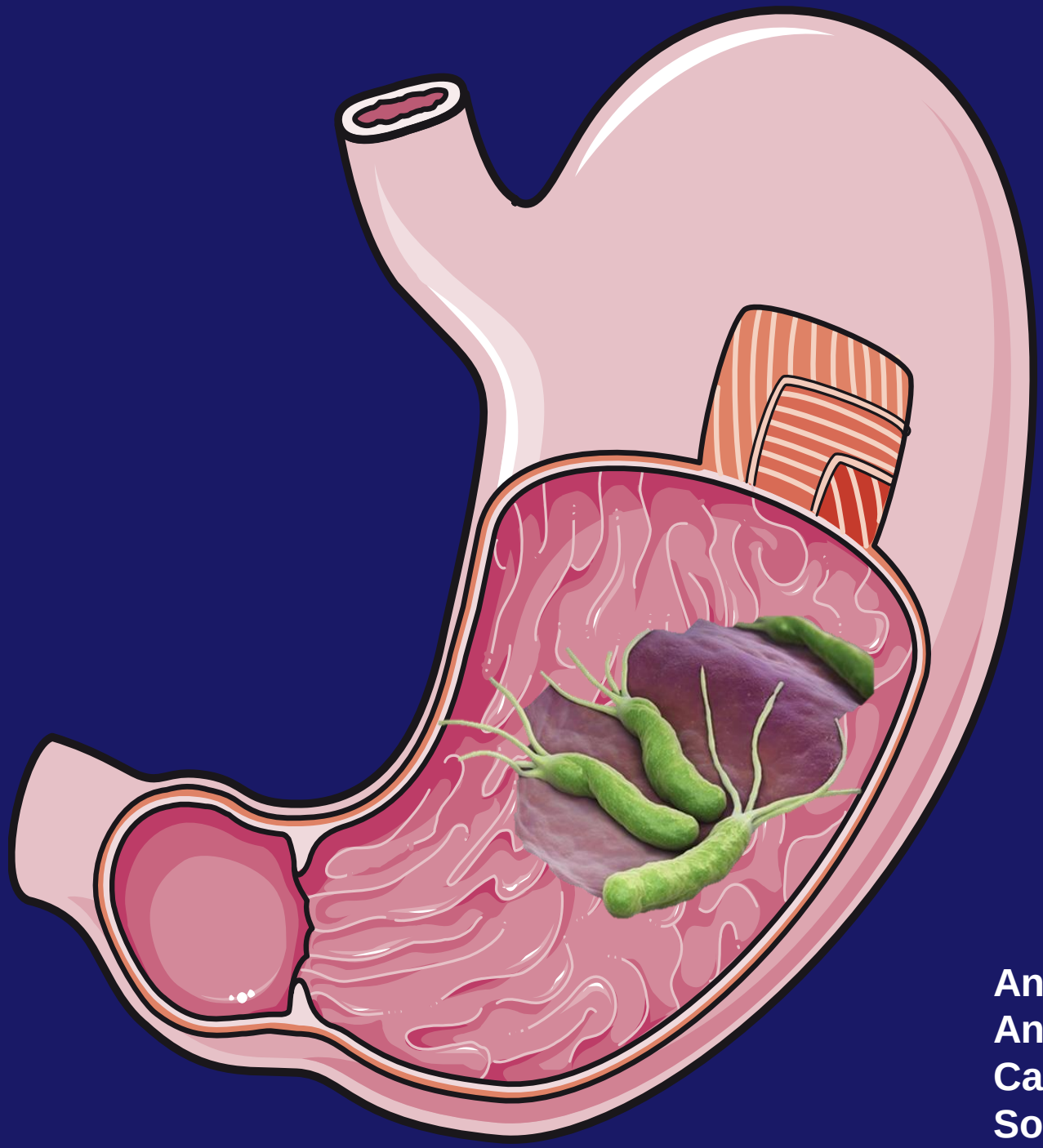


Nariño

6 años sin *H.pylori*
Regresión atrofia
OLGA/OLGIM III/IV
OR 20 CG

Year of follow-up	0	3	6	12	16	20
H. pylori (+) score mean (95% CI)	4.31 (4.25-4.37)	4.32 (4.25-4.39)	4.21 (4.13-4.29)	4.15 (4.07-4.23)	4.35 (4.25-4.45)	4.48 (4.36-4.59)
H. pylori (-) score mean (95% CI)	4.27 (3.99-4.54)	4.36 (4.26-4.46)	4.13 (4.04-4.21)	3.91 (3.83-4.0)	4.02 (3.94-4.11)	4.21 (4.11-4.3)
P value	.76	.48	.12	< .0001	< .0001	.0001

Piazuelo BM, et al. Gastroenterology 2020, Nov 12



Nuevo patrón de Cáncer gástrico

Mujeres jóvenes, cuerpo *(“CYF”)*

Anderson WF, JNCI J Natl Cancer Inst 2018;110: djx262
Anderson WF, JAMA 2010;303:1723-8
Camargo MC, Gut 201160:1644-9
Somg H, Clin Gastroenterol Hepatol 2015;13:1592-600

OXFORD

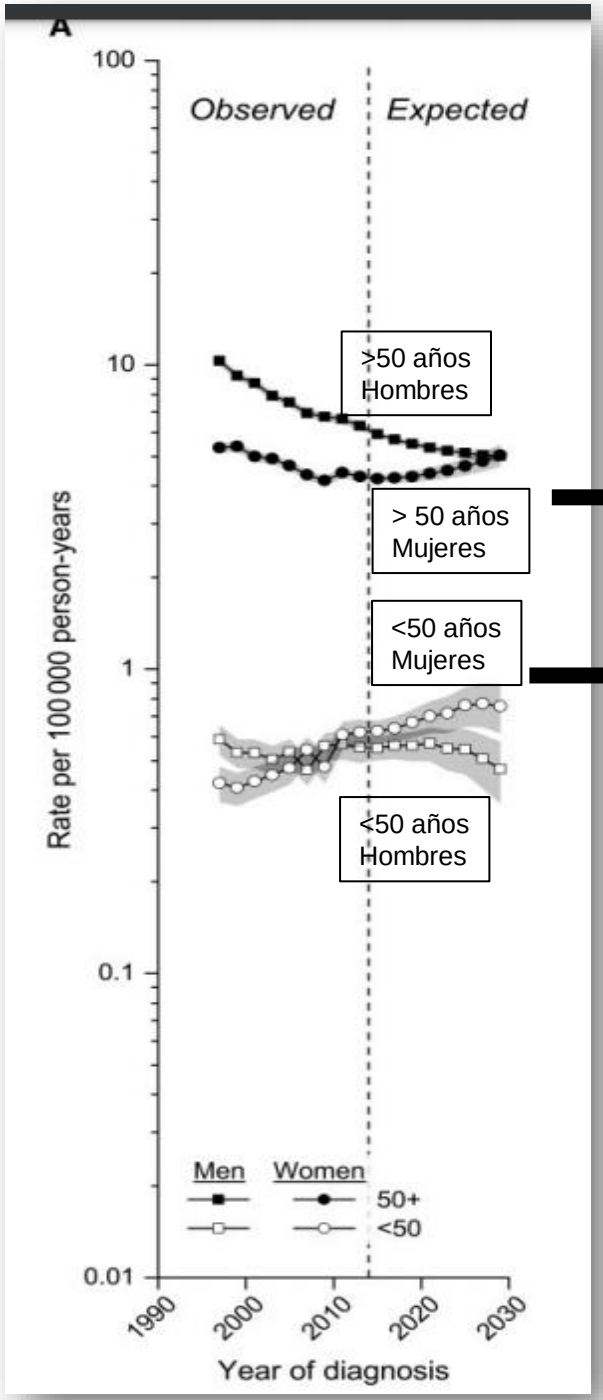
JNCI J Natl Cancer Inst (2018) 110(6): djx262

doi: 10.1093/jnci/djx262
First published online January 19, 2018
Article

ARTICLE

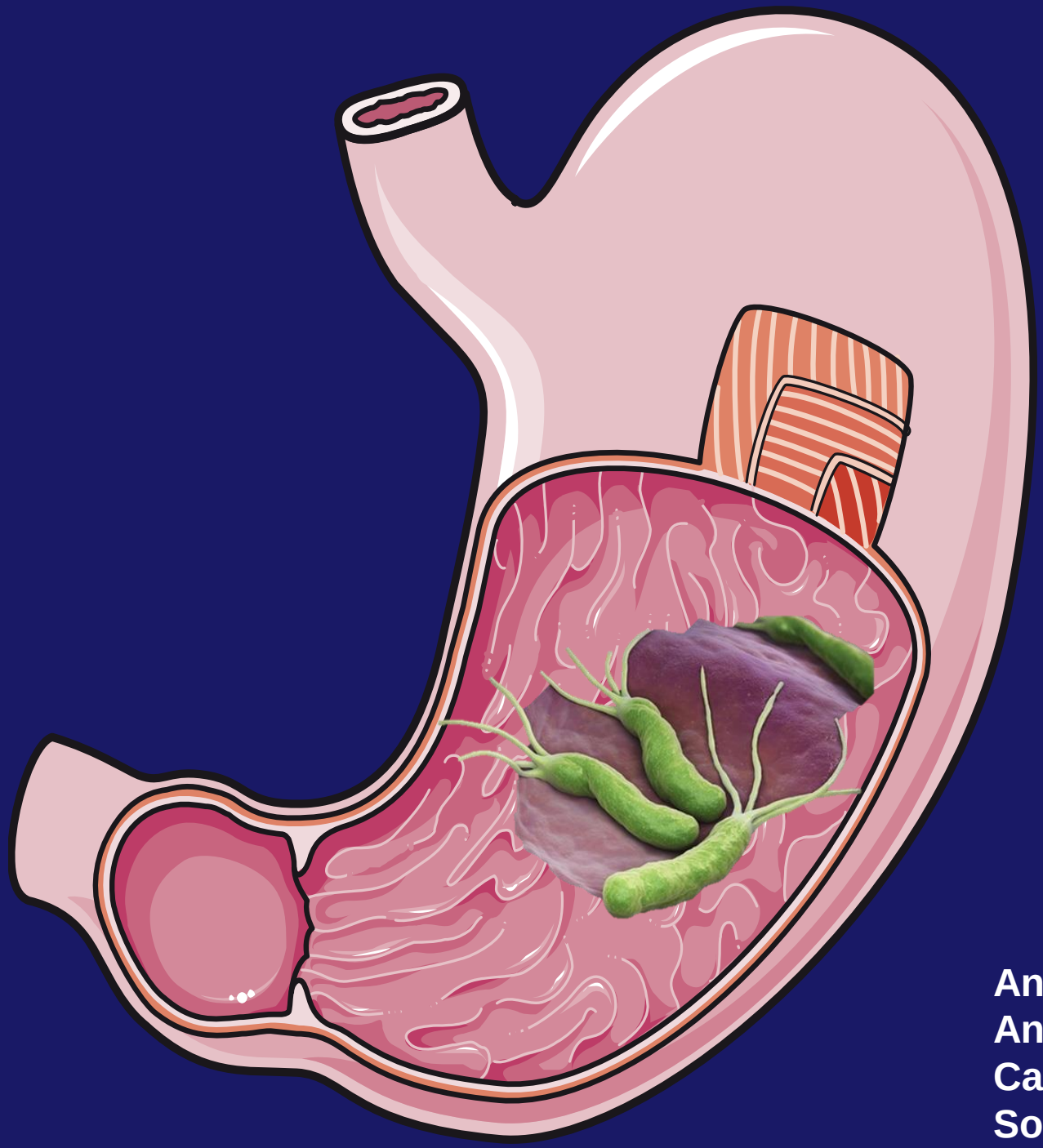
The Changing Face of Noncardia Gastric Cancer Incidence Among US Non-Hispanic Whites

William F. Anderson, Charles S. Rabkin, Natalie Turner,
Joseph F. Fraumeni Jr., Philip S. Rosenberg, M. Constanza Camargo



>50 años *Disminuyó*
2.6% Anualmente

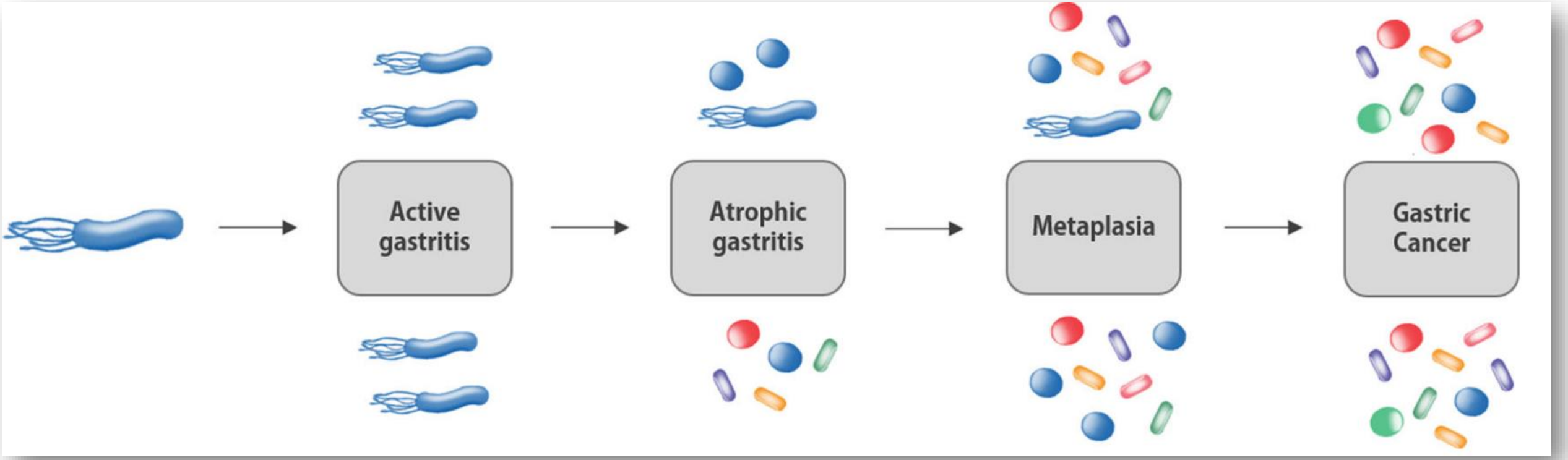
< 50 años Aumentó
1.3% Anualmente



Autoinmunidad ?
Microbiota ?

Anderson WF, JNCI J Natl Cancer Inst 2018;110: djx262
Anderson WF, JAMA 2010;303:1723-8
Camargo MC, Gut 201160:1644-9
Somg H, Clin Gastroenterol Hepatol 2015;13:1592-600

Suicidio de *H.pylori* y microbiota oncogénica



Pimentel de Assumpção P, Eur J Clin Microbiol Infect Dis 2019;38:1591-7.

Increase in the Prevalence of Atrophic Gastritis Among Adults Age 35 to 44 Years Old in Northern Sweden Between 1990 and 2009

Huan Song,[*] Maria Held,[‡] Sven Sandin,[*] Hilpi Rautelin,[§,‖] Mats Eliasson,[¶] Stefan Söderberg,[#] Göran Hallmans,[**] Lars Engstrand,[‡‡] Olof Nyrén,[*] and Weimin Ye[*]

Clin Gastroenterol Hepatol 2015;13:1592–1600

J Gastroenterol (2020) 55:281–288
https://doi.org/10.1007/s00535-019-01639-w

The Japanese Society of Gastroenterology

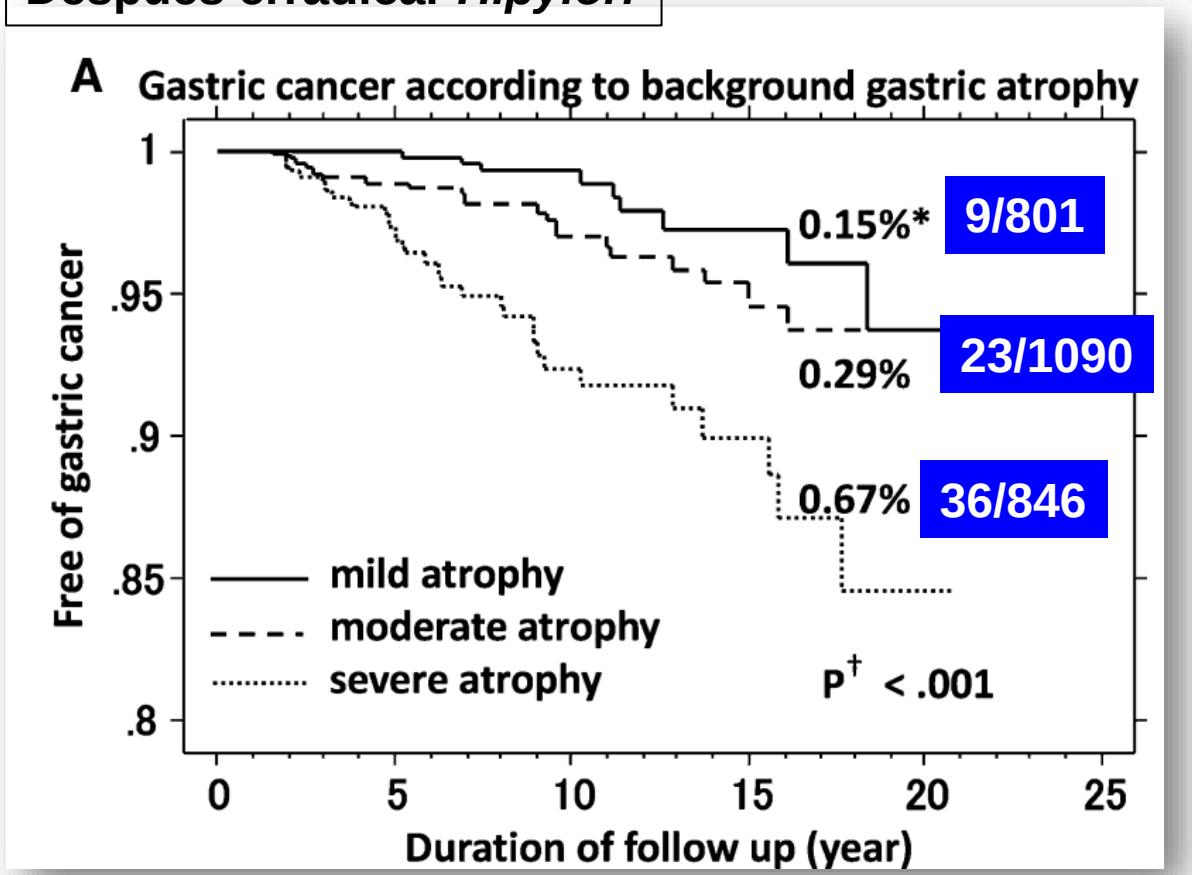
ORIGINAL ARTICLE—ALIMENTARY TRACT

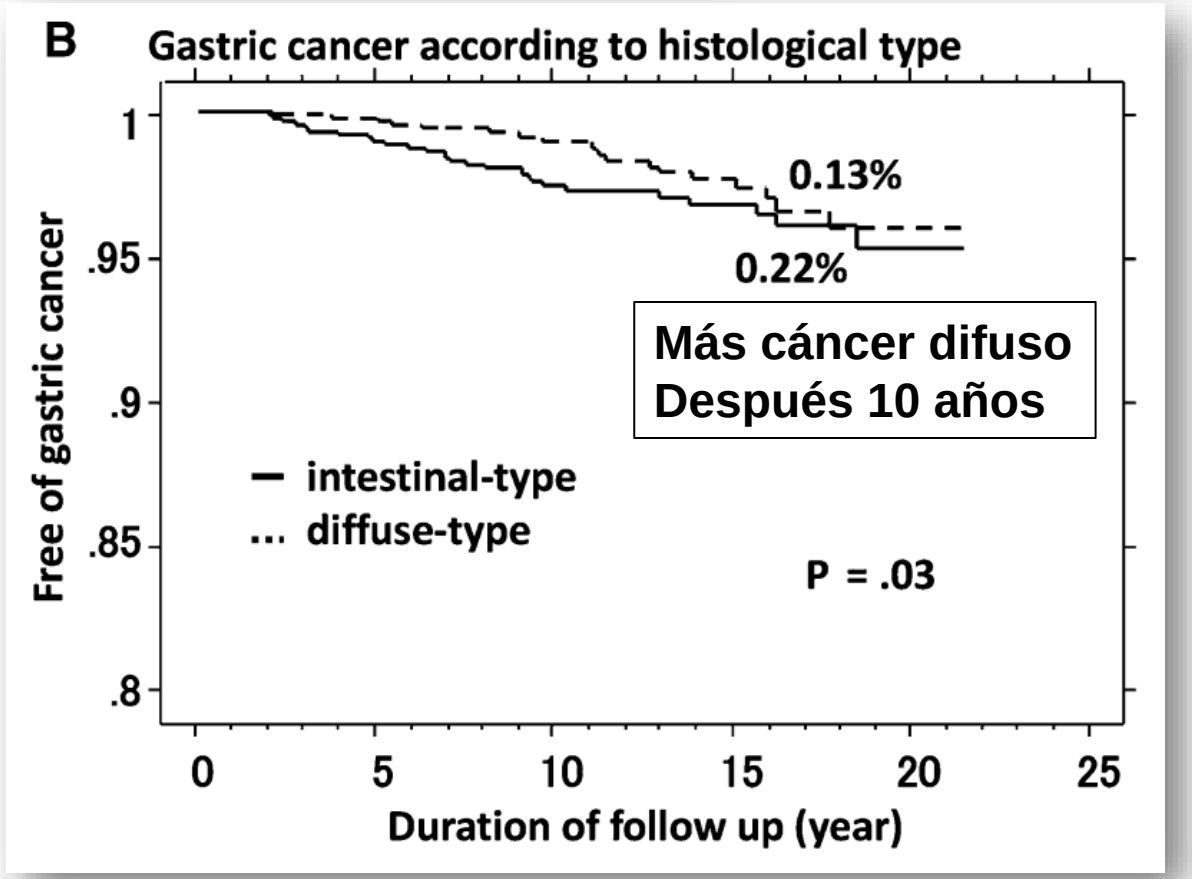
Risk of gastric cancer in the second decade of follow-up after *Helicobacter pylori* eradication

Susumu Take[1,3] · Motowo Mizuno[2] · Kuniharu Ishiki[3] · Chiaki Kusumoto[3] · Takayuki Imada[3] · Fumihiro Hamada[4] · Tomowo Yoshida[3] · Kenji Yokota[5] · Toshiharu Mitsuhashi[6] · Hiroyuki Okada[7]

21.4 años

Libre de cáncer
Después erradicar *H.pylori*





Riesgo de CG en la segunda década de seguimiento

	Mild[a] $n = 801$				Moderate $n = 1090$				Severe $n = 846$			
	Observed[b]	Expected[c]	SIR	95% CI	Observed	Expected	SIR	95% CI	Observed	Expected	SIR	95% CI
Total cancer	6	1.23	4.89	2.19–10.8	6	5.40	1.11	0.50–2.47	6	7.29	0.82	0.37–1.83
Intestinal[d]	2	1.71	1.17	0.29–4.68	1	6.26	0.16	0.02–1.13	4	5.25	0.76	0.29–2.03
Diffuse	4	0	∞	n/a	5	0.46	10.9	4.53–26.1	2	2.12	0.94	0.24–3.77

Vigilancia endoscópica Más allá de 10 años por erradicación

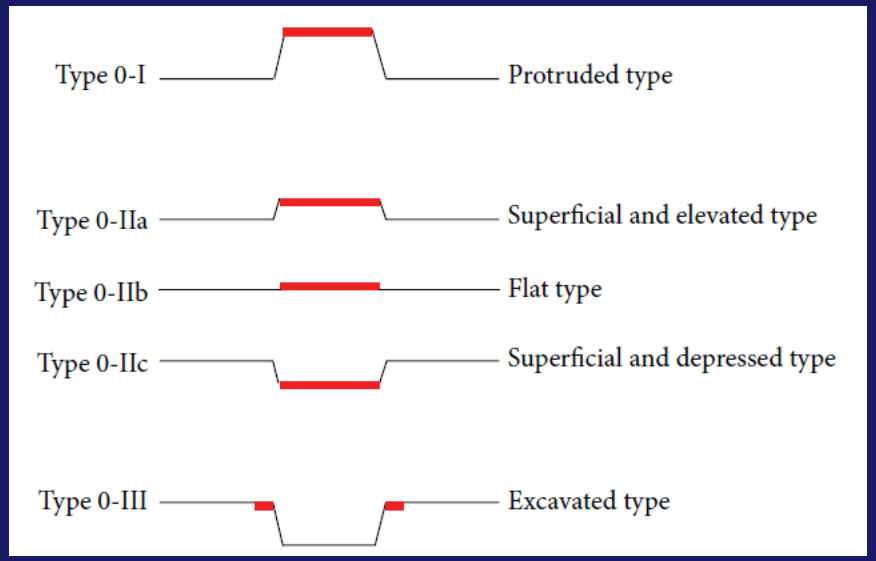
Take S, J Gastroenterol 2020;55:281-8

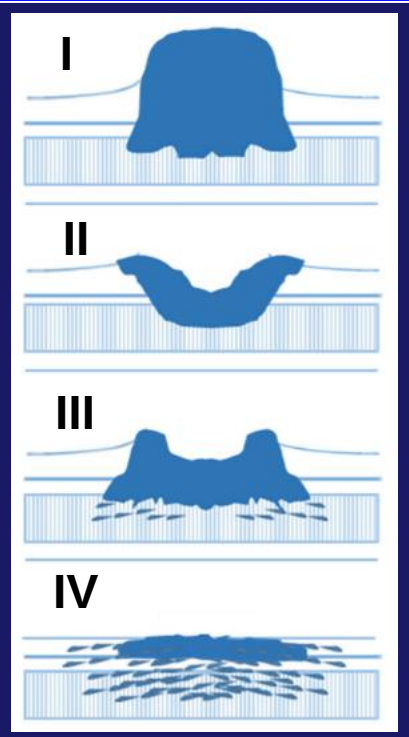
CG endoscopia prevención secundaria

Temprano
Mucosa, submucosa
Con o sin ganglios
Sobrevida 5 años 100%

37 meses

Avanzado
Sobrevida 5 años 5-10%





Elevado
Masa

Ulcerado

Infiltrante,
Ulcerado

Linitis
Plástica

Agnes A, World J Surg Oncol 2017;15:123
Yag L, Chin J Cancer res 2020;32:695-704

Refrigerar

Prevención
Primaria
Cáncer Gástrico

Erradicar
H.pylori

Licor

OMS 2020
Yang L, Chin J Cancer Res 2020;32:695-704

Mensajes para la casa

Mayoría CG intestinal esporádico
***H.pylori* explica 85-90% CG intestinal**
Nuevo CG poco *H.pylori* y altos ingresos
Microbiota y autoinmunidad
Prevención primaria dieta, no alcohol, tabaco
Erradicar *H.pylori* disminuye el CG
Después de erradicar vigilar endoscópicamente

“Cuando creíamos que teníamos todas las respuestas, cambiaron las preguntas”

Mario Benedetti
Escritor, poeta, dramaturgo y periodista uruguayo, 1920-2009

Muchas gracias !