



FACULTAD DE MEDICINA
PONTIFICIA UNIVERSIDAD
CATÓLICA DE CHILE

Red de Salud
UC • **CHRISTUS**



Lo mejor del DDW 2024: “Nuevos esfuerzos en la prevención del cáncer gástrico”

Dr. Gonzalo Latorre Selvat

Gastroenterólogo

Pontificia Universidad Católica de Chile

Tópicos actuales en (prevención) cáncer gástrico

- Epidemiología:
 - Disparidades étnicas en riesgo y tamizaje.
 - EARLY ONSET.
 - Vigilancia endoscópica de CPMG.
- Ciencia básica:
 - Carcinogénesis y microbiota.
 - Organoides de Metaplasia Intestinal como modelo experimental.
- Detección no invasiva del CG y CPMG.
 - Firmas de microbiota.
 - AI en endoscopia.
- Extensión a occidente del tratamiento endoscópico del CG incipiente.

Think Tank on Advancing Gastric Cancer Prevention

NCI Shady Grove Campus
Joseph F. Fraumeni Jr. Conference Room (TE-406/8/10)
Friday, May 17, 2024, 8:00 AM - 5:30 PM



SESSION 1: Epidemiology in the US (45 min)

- Burden of gastric cancer – Constanza Camargo (US, NCI)
- Helicobacter pylori prevalence – Meira Epplein (US, Duke University)
- Prevalence and determinants of gastric premalignant lesions – Monika Laszkowska (US, Memorial Sloan Kettering Cancer Center)
- Gastric cancer risk factors, NCI Cohort Consortium – Harindra Jayasekara (Australia, Cancer Council Victoria)

SESSION 2: Primary prevention

Session 2A: H. pylori eradication (70 min)

- Evidence from randomized trials and observational studies – Paul Moayyedi (Canada, MacMaster University)
- High-risk populations – Peter Malfertheiner (Germany, Ludwig-Maximilians-Universität)
- Individual vs. family therapy – Yi-Chia Lee (Taiwan, National University)
- Best eradication regimens – David Graham (US, Baylor College of Medicine)
- H. pylori vaccine – Markus Gerhard (Germany, Technical University of Munich)
- Ongoing international initiatives on H. pylori eradication (EUROHELICAN) – Jin Park (France, International Agency for Research on Cancer)

Session 2B: Limitations of H. pylori eradication therapy (35 min)

- Reinfection, recrudescence, and resistance to antibiotics – Dan Li (US, Kaiser Northern California)
- Changes in the gastric/gut microbiome – Emad El-Omar (Australia, University of New South Wales)
- Potential adverse effects of eradication therapy – Martin Blaser (US, Rutgers University)

SESSION 3: Secondary and tertiary prevention (85 min)

- Biopsy collection protocols and atrophy classifications – Blanca Piazuelo (US, Vanderbilt University)
- Endoscopic follow-up of individuals with gastric intestinal metaplasia – Mario Dinis-Ribeiro (Portugal, Instituto Português de Oncologia do Porto)
- Autoimmune gastritis - Tamara Matysiak-Budnik (France, Centre Hospitalier Universitaire de Nantes)
- Prevention of metachronous gastric cancer – Il Ju Choi (South Korea, National Cancer Center)
- Ongoing international initiatives on gastric cancer screening (TOGAS) – Marcis Leja (Latvia, Riga East University Hospital)
- Cost-effectiveness of primary and secondary strategies (including CISNET) – Chin Hur (US, Columbia University)
- US Preventive Services Task Force – screening for H. pylori infection & endoscopic surveillance –Joo Ha Hwang (US, Stanford University)

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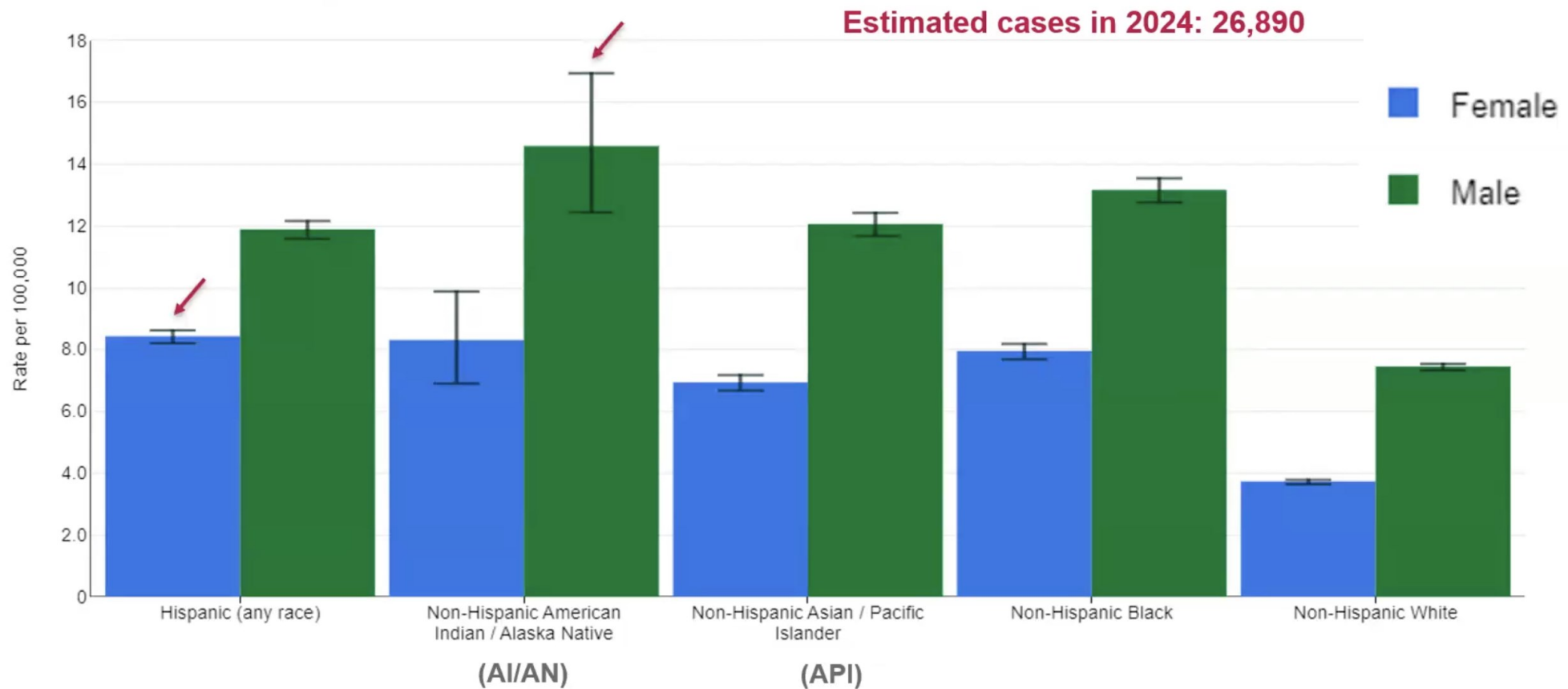


Disparidades étnicas del riesgo de CG en USA



M. Constanza Camargo

Stomach
SEER 5-Year Age-Adjusted Incidence Rates, 2017-2021
By Race/Ethnicity and Sex, All Ages, All Stages



Tendencia en las histologías de neoplasias gástricas



M. Constanza Camargo

	All	NH-White	NH-Black	NH-AI/AN	NH-API	Hispanic (all races)
Adenocarcinoma	-1.7*	-1.9*	-2.9*	-1.2*	-3.5*	-2.3*
GIST	6.7*	6.4*	6.6*		5.7*	6.8*
NET	4.2*	4.1*	3.2*	4.6*	2.8*	3.4*
Non-MALT	~	~	~	~	~	~
MALT	~	~	~	~	~	~
Non-adenocarcinoma, unknown	~	~	~	~	~	~
Unknown	-2.2*	-2.7*	-4.0*	-1.9	-3.7*	-1.9*
Other	-2.9*	-3.0*	-4.4*	-3.2	-2.3*	-2.8*

NH, non-Hispanic; GIST, Gastrointestinal stromal tumor; NET, Neuroendocrine tumors; MALT, mucosa-associated lymphoid tissue lymphoma

*Statistically significant APC at a p<0.05 level

El adenocarcinoma actualmente representa <90% de las neoplasias gástricas

Prevalence of Gastric Precursor Lesions in Countries With Differential Gastric Cancer Burden: A Systematic Review and Meta-analysis



Monika Laszkowska

Prevalence of Gastric Precursor Lesions in Countries with Differential Gastric Cancer Burden

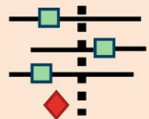
Systematic Review & Meta-Analysis



6,363 abstracts examined



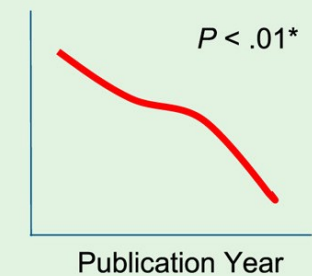
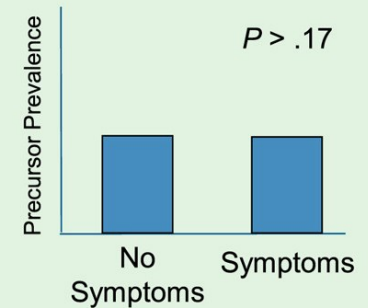
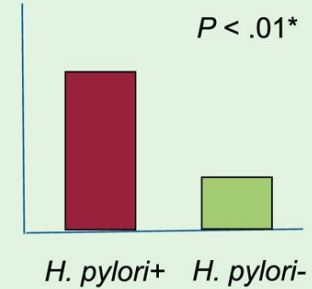
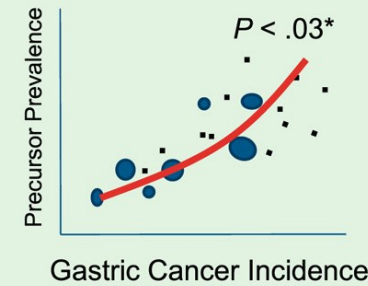
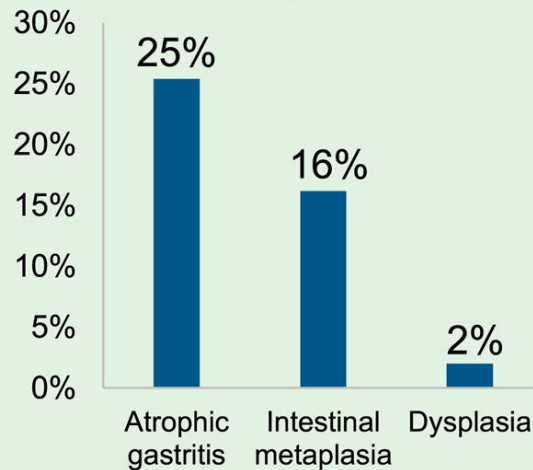
582 articles full-text review



166 included in meta-analysis

Findings

Global Prevalence



Clinical Gastroenterology and Hepatology

Riesgo de progresión de CPMG según incidencia de CG del país de origen



Monika Laszkowska

	GC Incidence	All Studies	
		Estimated Progression Rate per 1000 Person Years (95% CI)	P-value
Atrophic Gastritis	Overall	2.09 (1.46-2.99)	0.01
	Low-Incidence Countries	0.97 (0.86-1.10)	
	High-Incidence Countries	2.47 (1.70-2.99)	
Intestinal Metaplasia	Overall	2.89 (2.03-4.11)	0.29
	Low-Incidence Countries	2.37 (1.43-3.92)	
	High-Incidence Countries	3.47 (2.13-5.65)	
Dysplasia	Overall	10.09 (5.23-19.49)	0.08
	Low-Incidence Countries	5.51 (2.92-10.39)	
	High-Incidence Countries	14.80 (5.87-37.28)	

Riesgo de progresión independiente del país de origen

Encuesta a 72 patólogos-GI USA (n=72)

¿Es importante la clasificación de la Metaplasia Intestinal?



M. Blanca Piazuelo

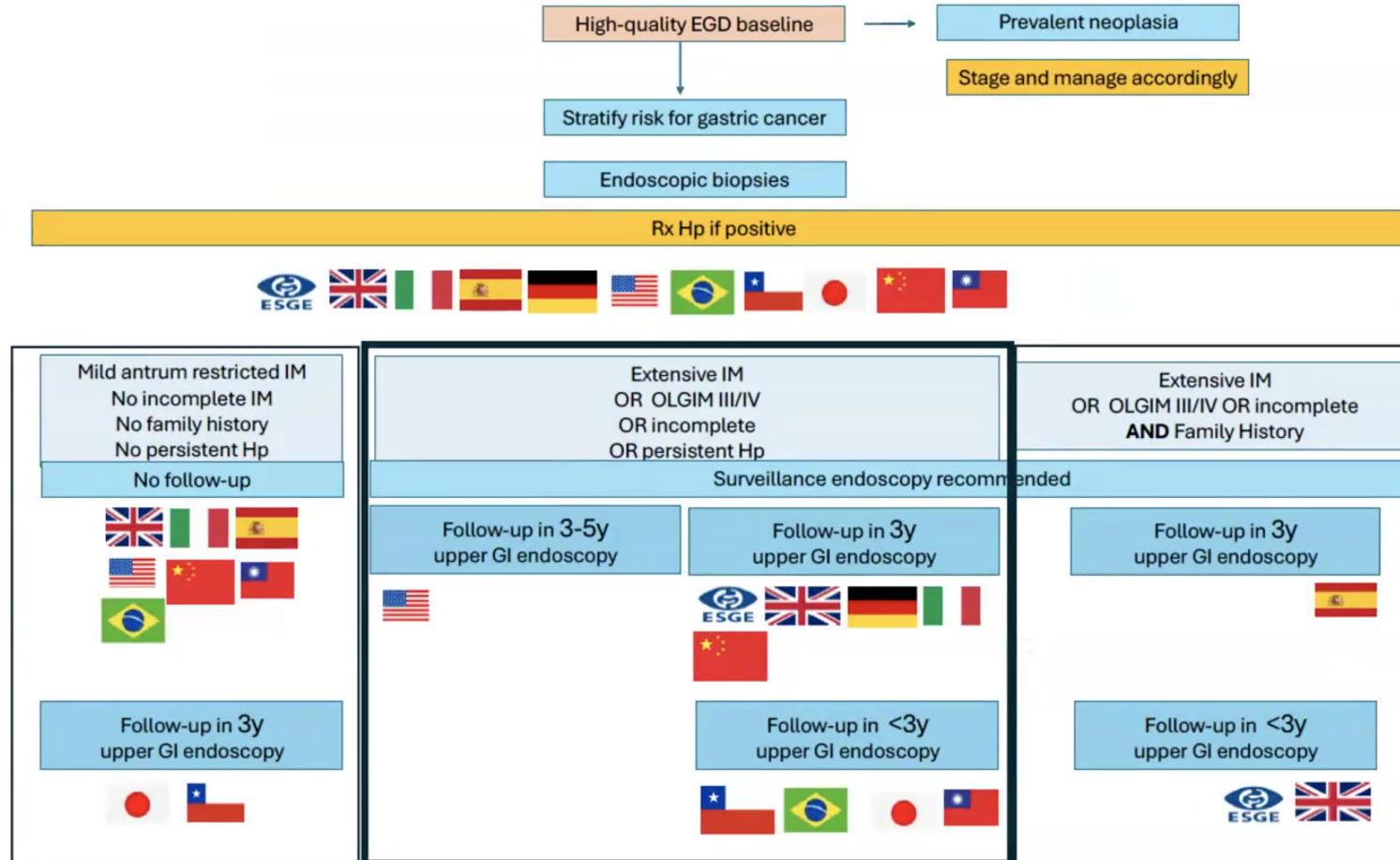
	Yes	No	Not sure
Do you subtype IM into complete and incomplete types?	29% (sometimes, always, upon clinical request)	71%	0%
Do you think subtyping of IM is clinically useful?	8%	64%	28%
Have you been asked by clinicians to subtype IM on gastric biopsies?	36% (often n=2/72, sometimes n=24/72)	64%	0%

Baja aplicación de las clasificaciones de MI

Guías clínicas de vigilancia endoscópica en el mundo



Mario Dinis-Ribeiro

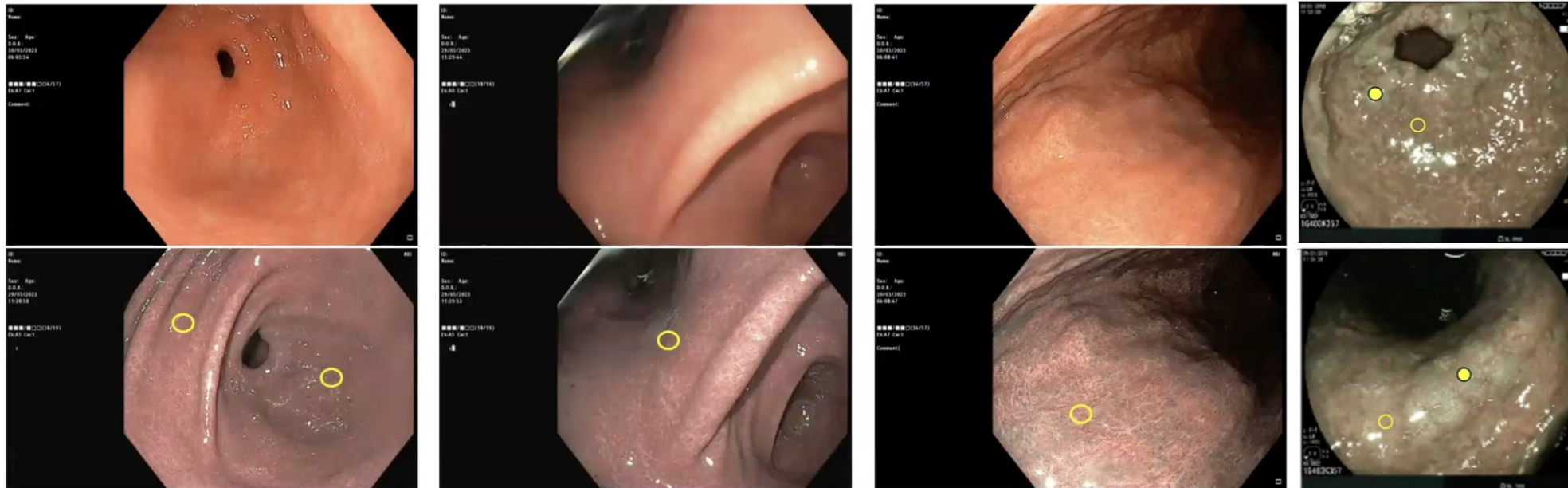


Chile aun recomienda un seguimiento estricto aun en bajo riesgo de CG

Estrategias de biopsias gástricas



Mario Dinis-Ribeiro



Evitar biopsias aleatorias, dirigir por área según sospecha de MI

Calidad en endoscopia






Shailja C. Shah

CLINICAL PRACTICE UPDATES

AGA Clinical Practice Update on High-Quality Upper Endoscopy: Expert Review



Satish Nagula,¹ Sravanthi Parasa,² Loren Laine,^{3,4} and Shailja C. Shah^{5,6}

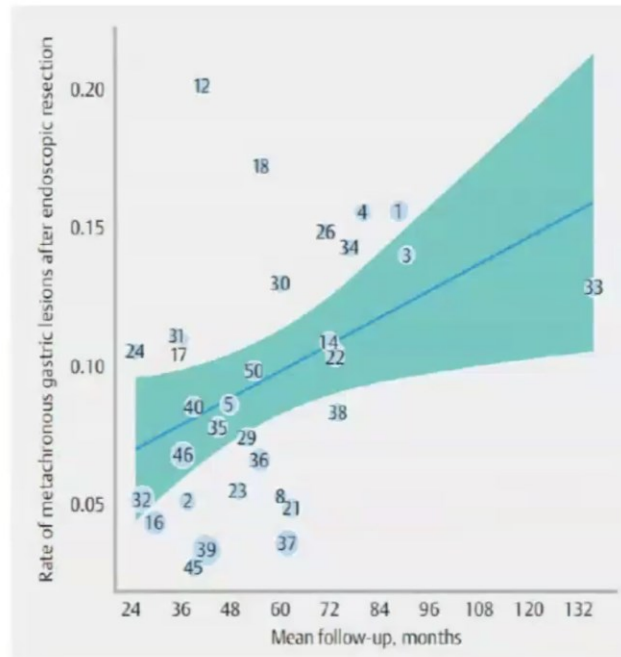
		
<p>Wash and aspirate all fluid and debris from the luminal surface +/- use defoaming, mucolytic, or proteolytic agents</p>	<p>Use high-definition white light endoscopy system +/- image enhancement technologies</p>	<p>Ensure sufficient inspection time once adequate mucosal visualization is achieved</p>

Riesgo de CG metacrónicos



Il Ju Choi

A meta-analysis of 33 cohort studies



Incidence of metachronous gastric cancer

- Pooled incidence 9.3% (95% CI 7.7%-11.0%)
- 9.5% at 5 years (95% CI 8.2%-10.8%)
- 14.9% at 10 years (95% CI 11.0%-18.9%)

(Approximately 1.5%~2% per year)



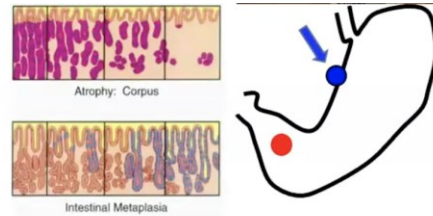
Il Ju Choi

Regresión de CPMG tras tratamiento H. pylori

Metachronous gastric cancer prevention trial (NCC)

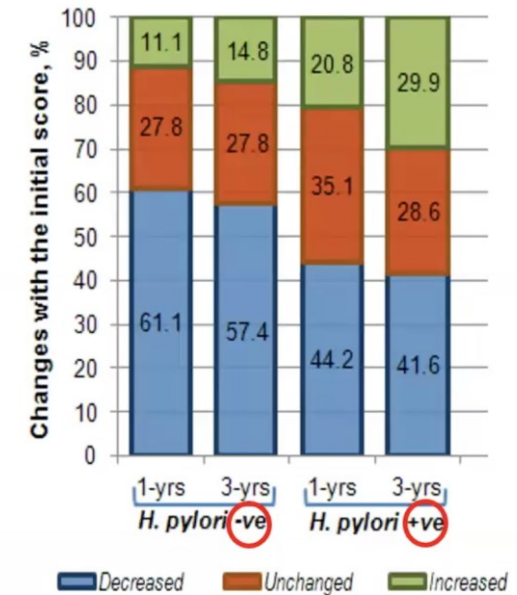
→ **Co-primary outcome**: atrophy improvement

- Improvement : if any change to lower grade from baseline to 3-yr f/u at body lesser curvature



Variable	Hp treatment (n=162)		Placebo (N=165)		p-value
	freq.	%	freq.	%	
Atrophy_body LC (base->3yrs f/u)	76/157	48.4	23/153	15.0	<.001
IM_body LC (base->3yrs f/u)	59/161	36.6	30/164	18.3	<.001
Atrophy_antrum (base->3yrs f/u)	39/151	25.8	30/160	18.8	0.13
IM_antrum (base->3yrs f/u)	42/160	26.3	38/160	23.2	0.52

➤ Atrophy and IM score **improved** at body lesser curvature



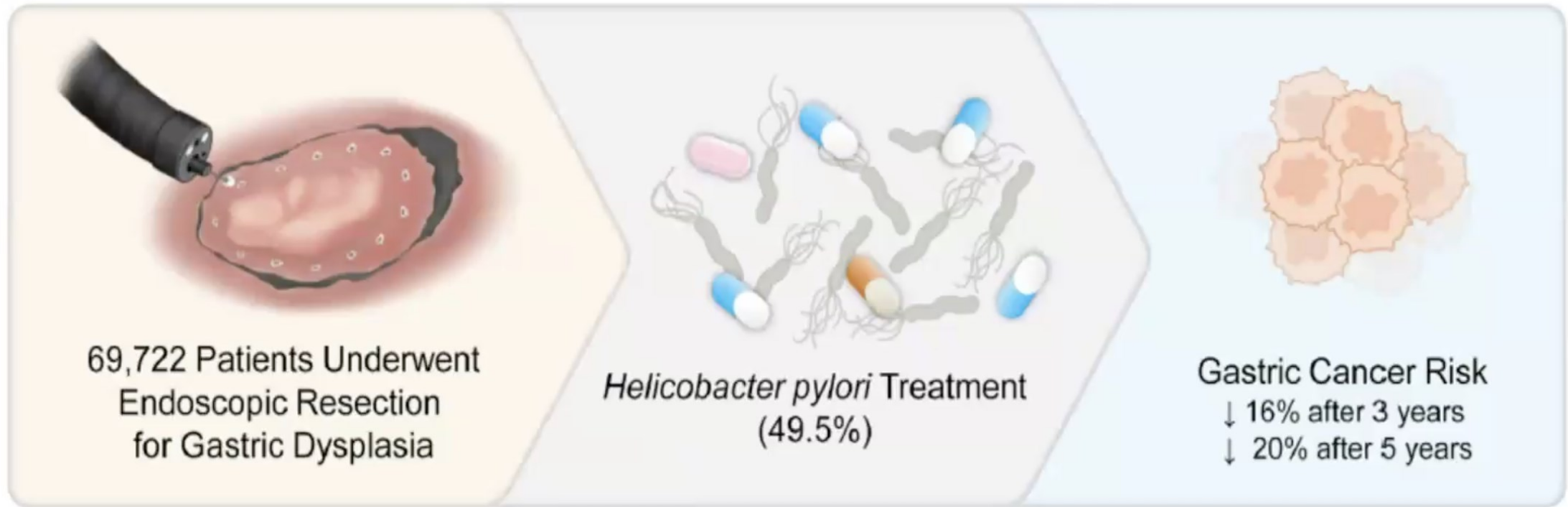
mean atrophy score at 3yr
(Hp eradicated vs non-eradicated)
→ 0.55 vs.1.05 (p=0.0046)

Mejoría de la Atrofia y Metaplasia corporal a 3 años de tratamiento de H. pylori



Il Ju Choi

Reducción de riesgo con tratamiento de H pylori en displasia

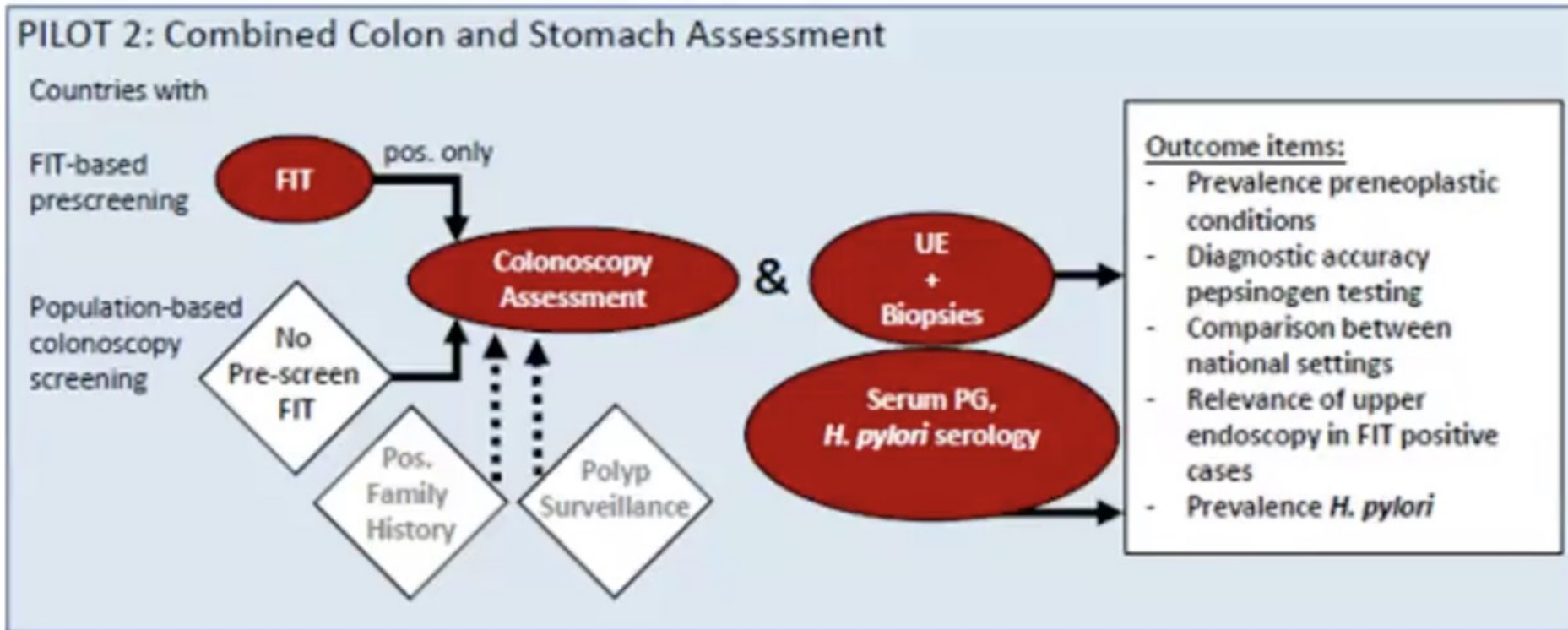


Gastroenterology

Cotesting: Estrategias de prevención combinadas



Marcis Leja

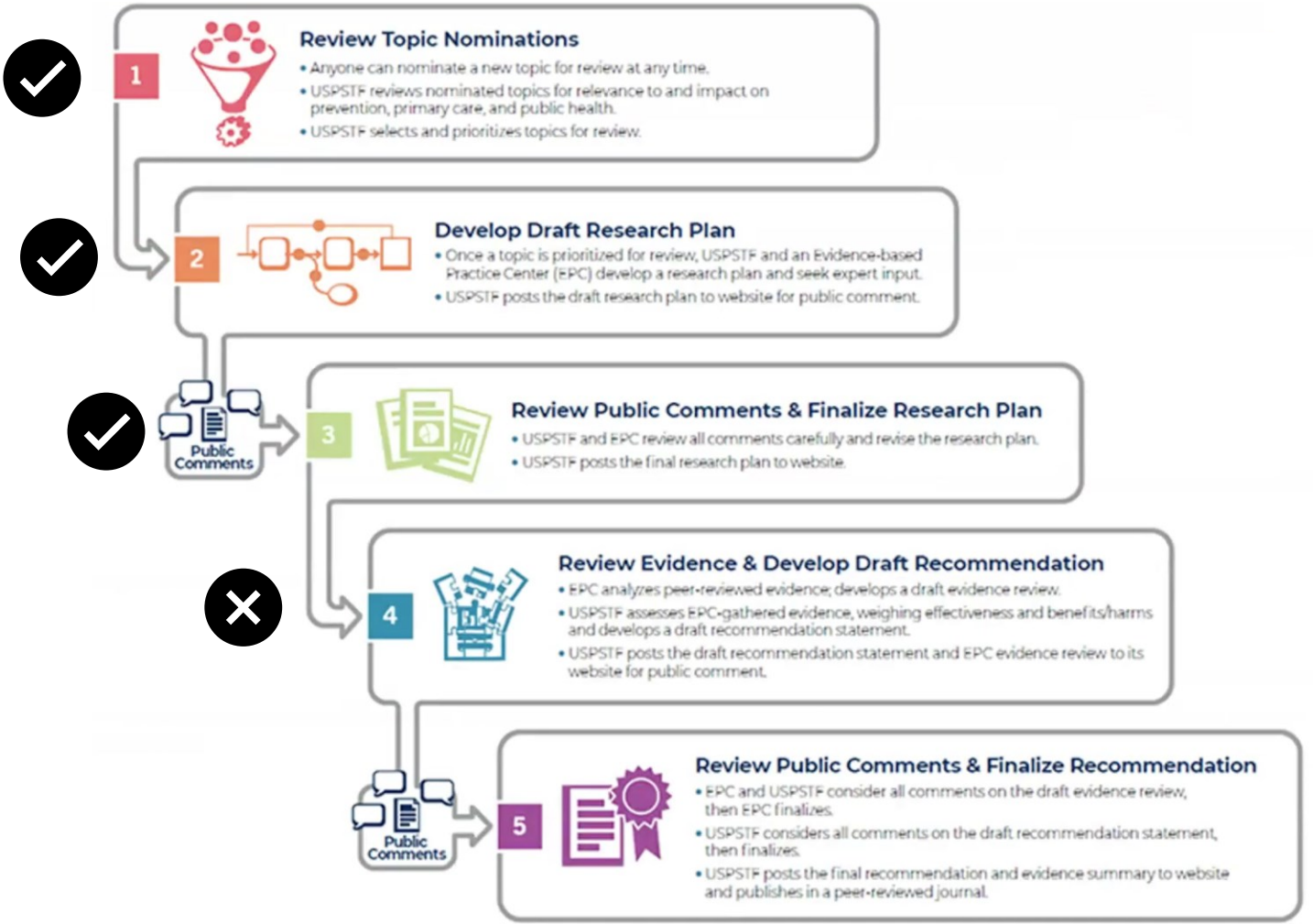


Considerar la combinación de FIT+H. pylori en deposiciones para tamizaje



Joo Ha Hwang

Postulación a la U.S. Preventive Task Force (USPSTF)

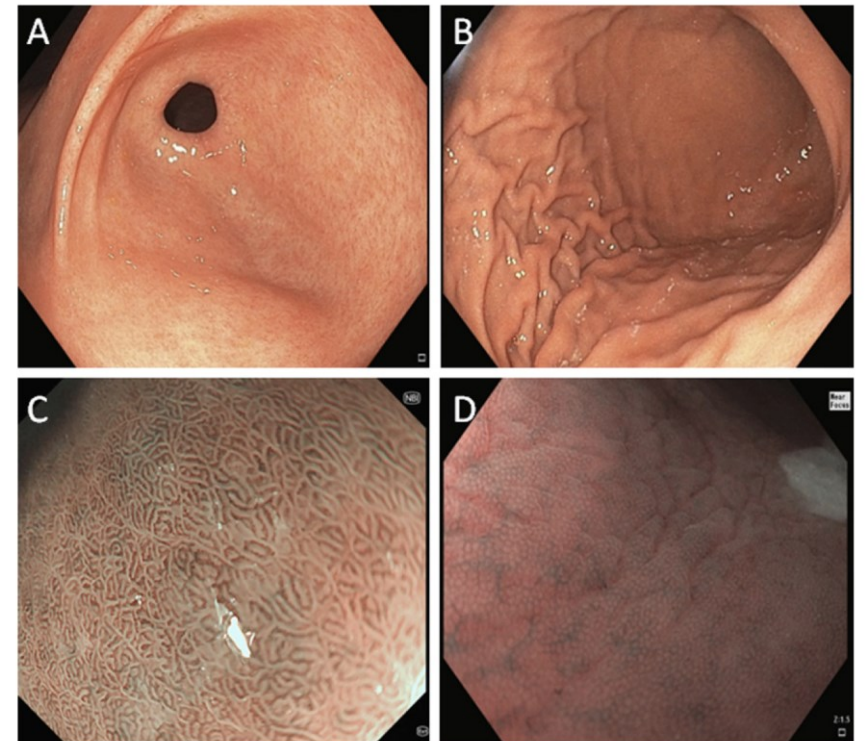
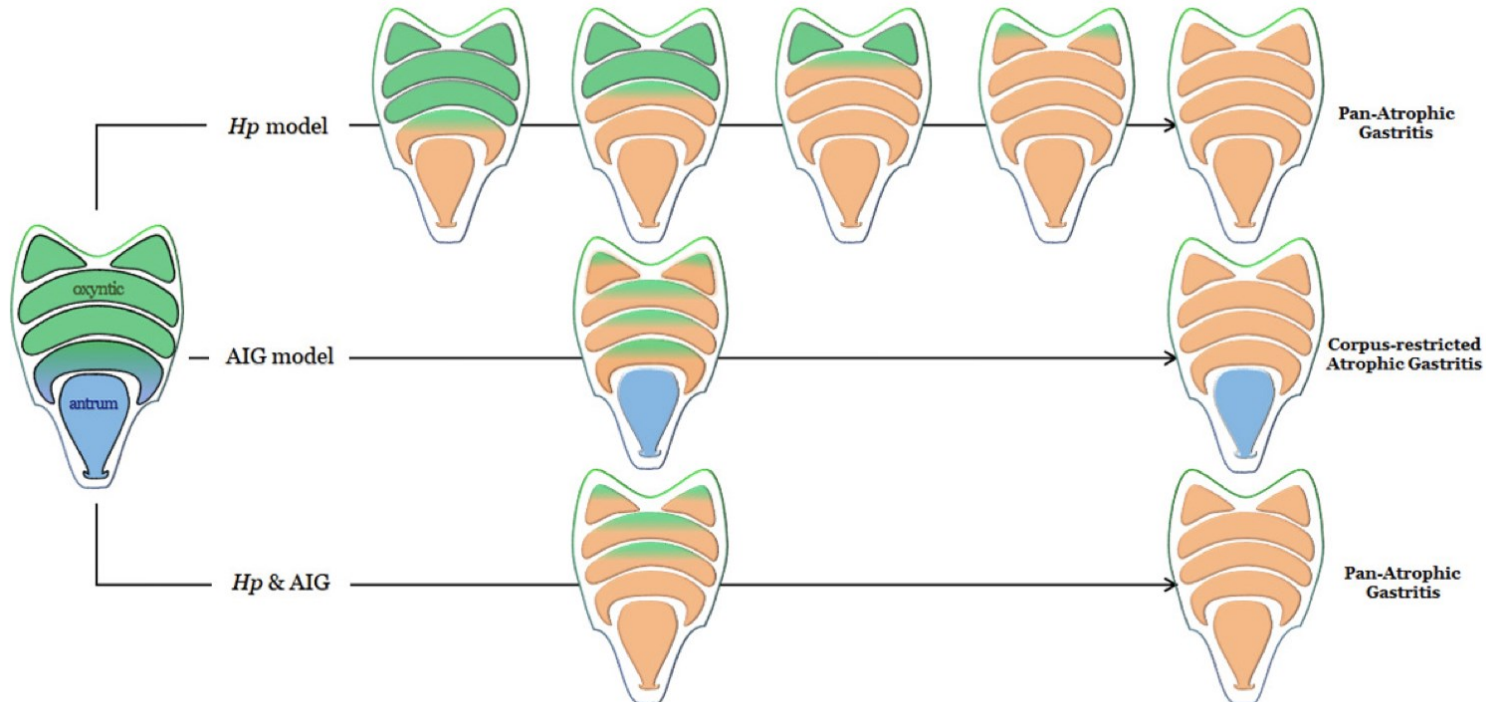


- *H. pylori: Screening y tratamiento*
- *Screening endoscópico y vigilancia de premalignidad*

Original research

RE.GA.IN.: the Real-world Gastritis Initiative— updating the updates

Massimo Rugge ^{1,2} Robert M Genta ^{3,4} Peter Malfertheiner,^{5,6}
 Mario Dinis-Ribeiro,^{7,8} Hashem El-Serag,^{9,10} David Y Graham ¹¹
 Ernst J Kuipers ¹² Wai Keung Leung,¹³ Jin Young Park,¹⁴ Theodore Rokkas ¹⁵
 Christian Schulz,¹⁶ Emad M El-Omar ¹⁷ RE.GA.IN



Think Tank on Advancing Gastric Cancer Prevention



SESSION 4: Guided 60-min group discussion (brainstorming and generation of 3-5 specific scientific opportunities).

- **Group #1: Biomarkers and precision interventions**

Moderators: Asad Umar (US, NCI), Robert Huang (US, Stanford University), Haejin In (US, Rutgers University), and Luz Maria Rodriguez (US, NCI)

- **Group #2: H. pylori vaccine**

Moderators: Markus Gerhard (Germany, TU of Munich), Wael El-Rifai (University of Miami), Steven Czinn (University of Maryland), and Yoshio Yamaoka (Japan, Oita University)

- **Group #3: Quality of esophagogastroduodenoscopy (EGD) and opportunistic EGD during colonoscopy**

Moderators: Bechien Wu (US, Kaiser) and Andrew Wang (US, University of Virginia)

- **Group #4: Biopsy collection**

Moderators: Monika Laszkowska (US, Memorial Sloan Kettering Cancer Center) and Arnoldo Riquelme (Chile, Pontificia Universidad Católica)

- **Group #5: Upcoming US Gastric Premalignant Conditions (GPMC) guidelines**

Moderators: Douglas Morgan (US, University of Alabama at Birmingham) and Juanita Merchant (US, University of Arizona)

- **Group #6: Histopathology reporting guidelines for gastric intestinal metaplasia in the US**

Moderators: Kay Washington (US, Vanderbilt University), Blanca Piazuelo (US, Vanderbilt University), and Robert Genta (US, Baylor College)

- **Group #7: New resources, cohorts**

Moderators: Constanza Camargo (US, NCI), Cecilia Monge (US, NCI), and Jeremy Davis (US, NCI)

- **Group #8: New resources, surveys and registries**

Moderators: Leticia Moreira (Spain, Hospital Clinic Barcelona), Shailja Shah (US, University of California San Diego), and Francis Megraud (France, U. de Bordeaux)

- **Group #9: Community engagement strategies**

Moderators: Tiffany Wallace (US, NCI), Karen Goodman (Canada, Alberta University), and Karen Miernyk (US, Centers of Disease Control and Prevention).

This group will include patient advocates from Hope For Stomach Cancer, No Stomach For Cancer, and Debbie's Dream Foundation

- **Group #10: From basic science to precision prevention**

Moderators: James G Fox (US, Massachusetts Institute of Technology), Xiangsheng







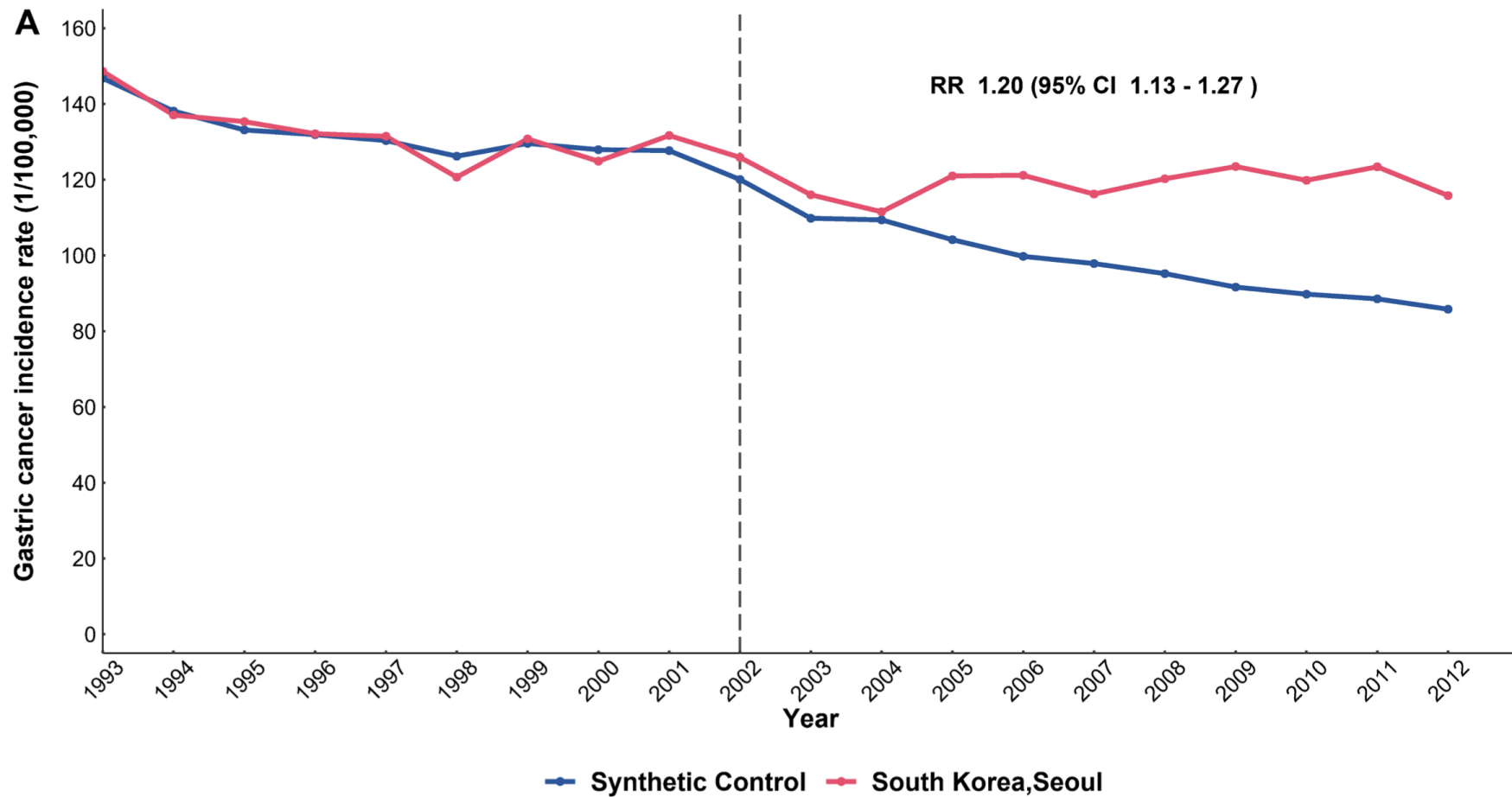
DDW2024

Digestive Disease Week[®]

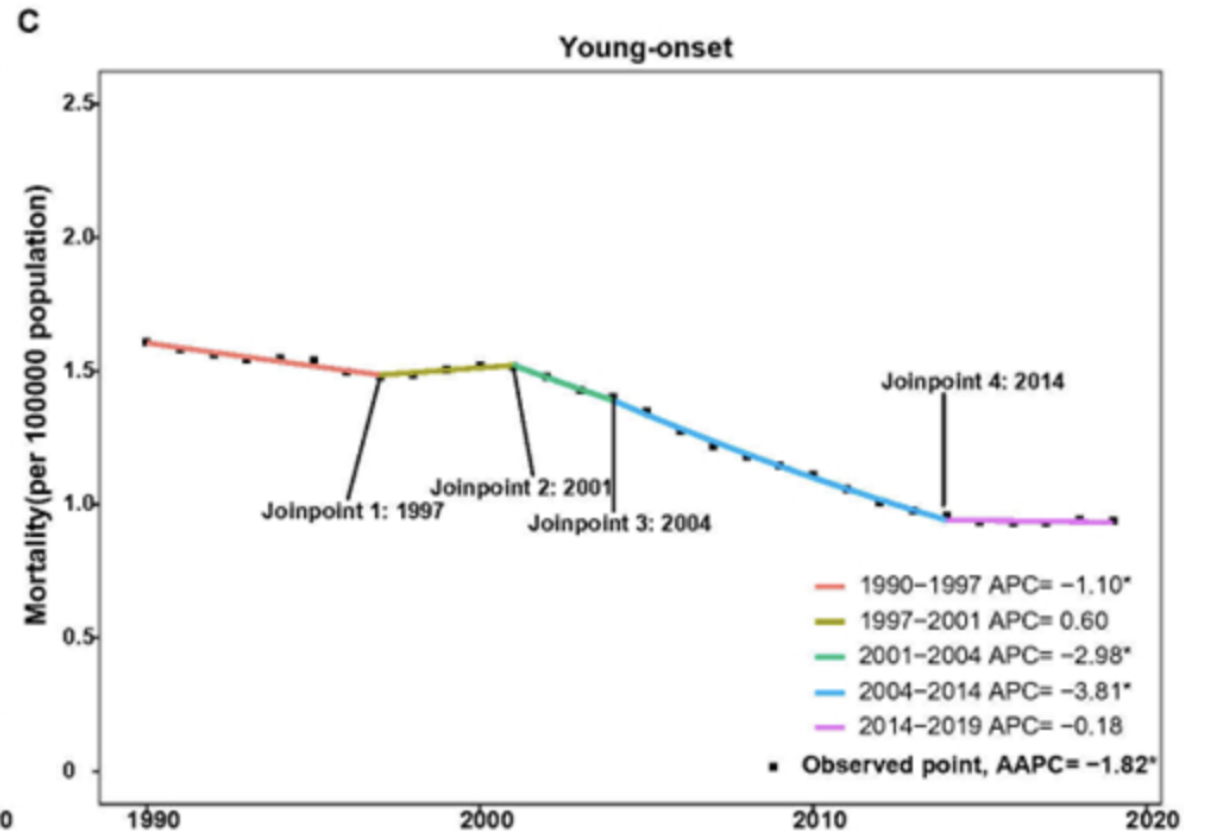
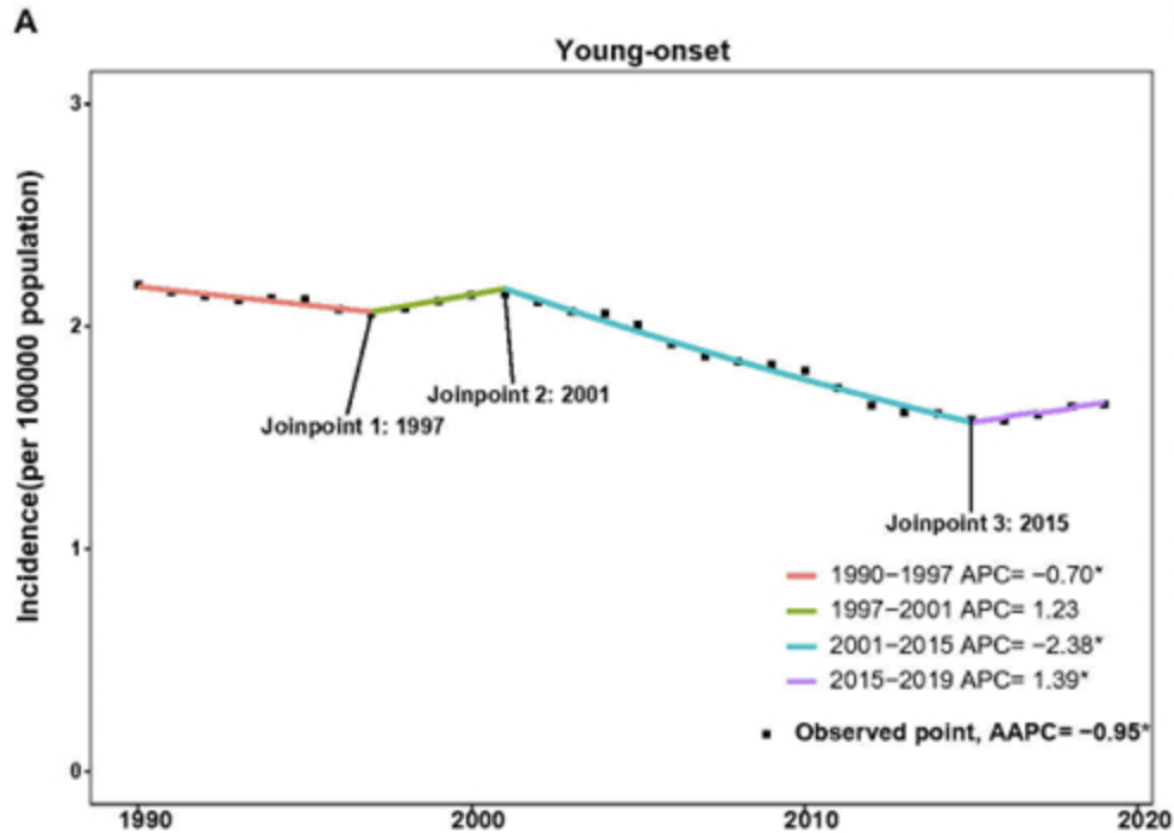
MAY 18-21, 2024 | WASHINGTON, D.C.

EXHIBIT DATES: MAY 19-21, 2024

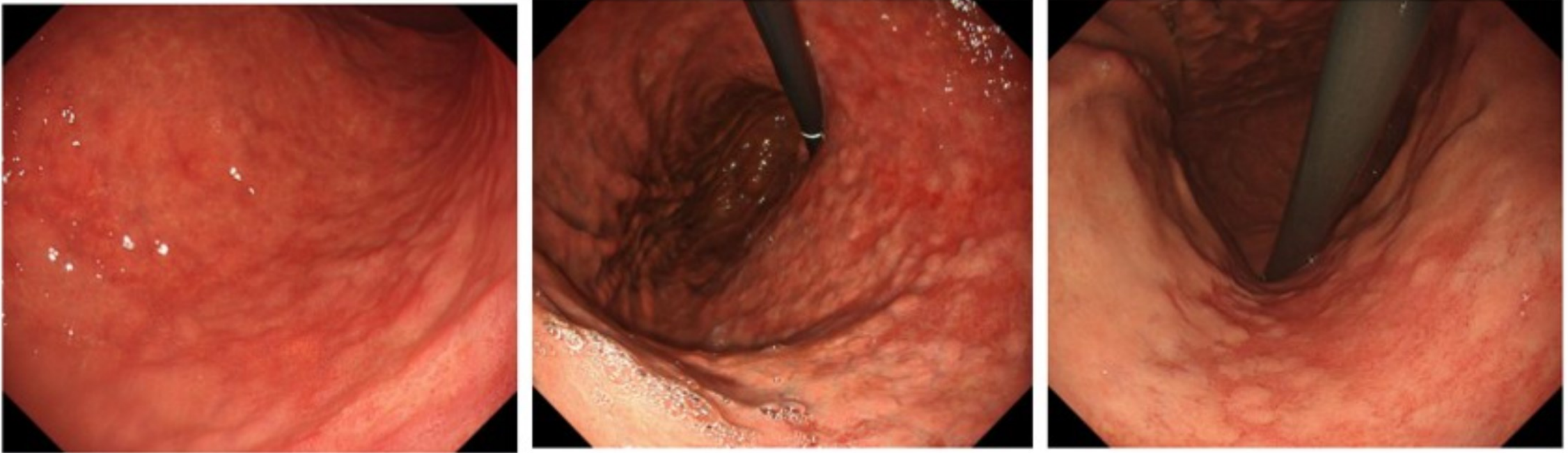
977 - THE IMPACT OF AN ORGANIZED CANCER SCREENING PROGRAM ON GASTRIC CANCER INCIDENCE IN SEOUL, SOUTH KOREA: A SYNTHETIC CONTROL STUDY



230 - GLOBAL BURDEN OF YOUNG-ONSET GASTRIC CANCER: A SYSTEMATIC TREND ANALYSIS OF THE GLOBAL BURDEN OF DISEASE STUDY 2019

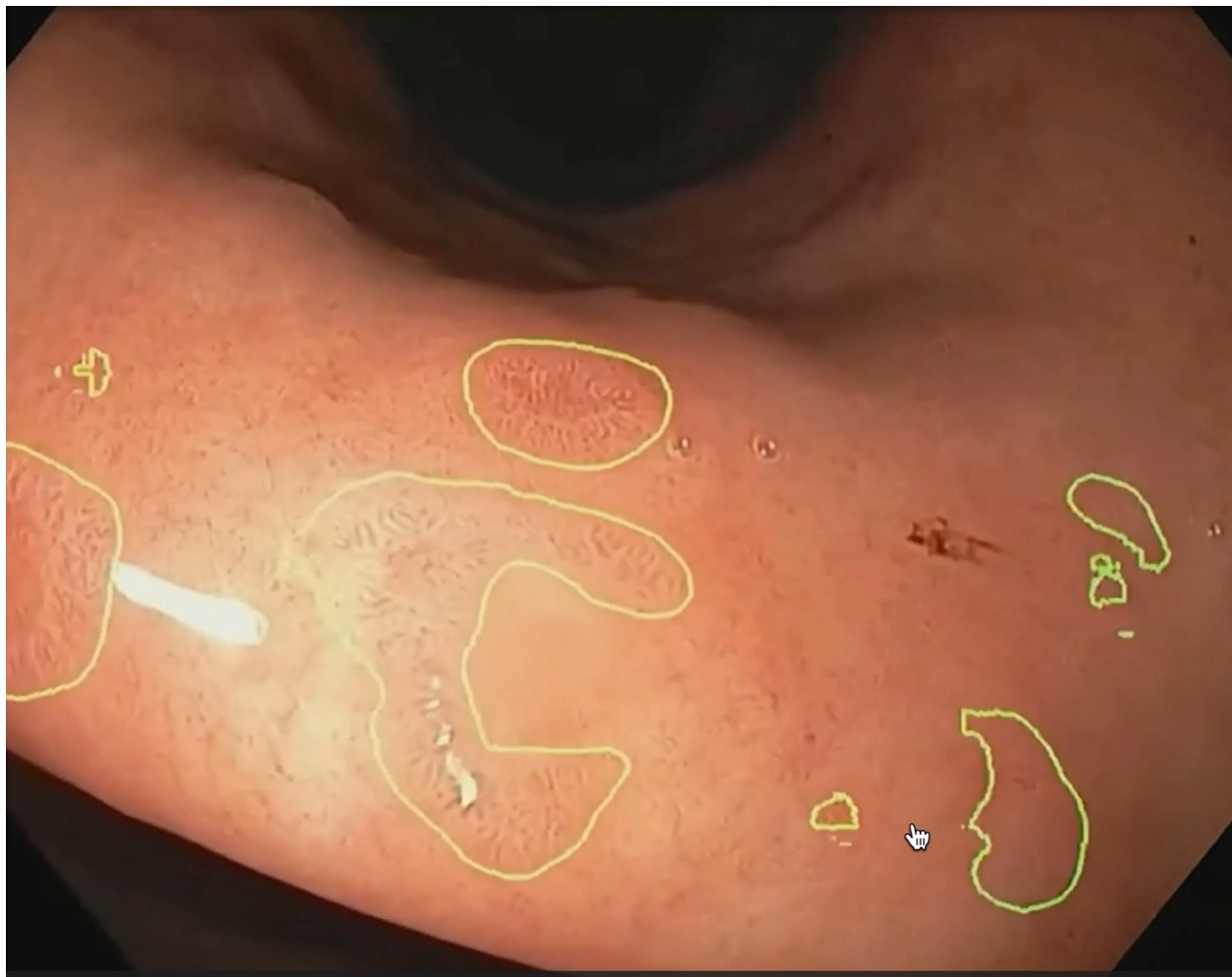


RISK OF MAP-LIKE REDNESS DEVELOPMENT, MAJOR RISK FACTOR OF GASTRIC CANCER, AFTER ERADICATION THERAPY FOR HELICOBACTER PYLORI INFECTION

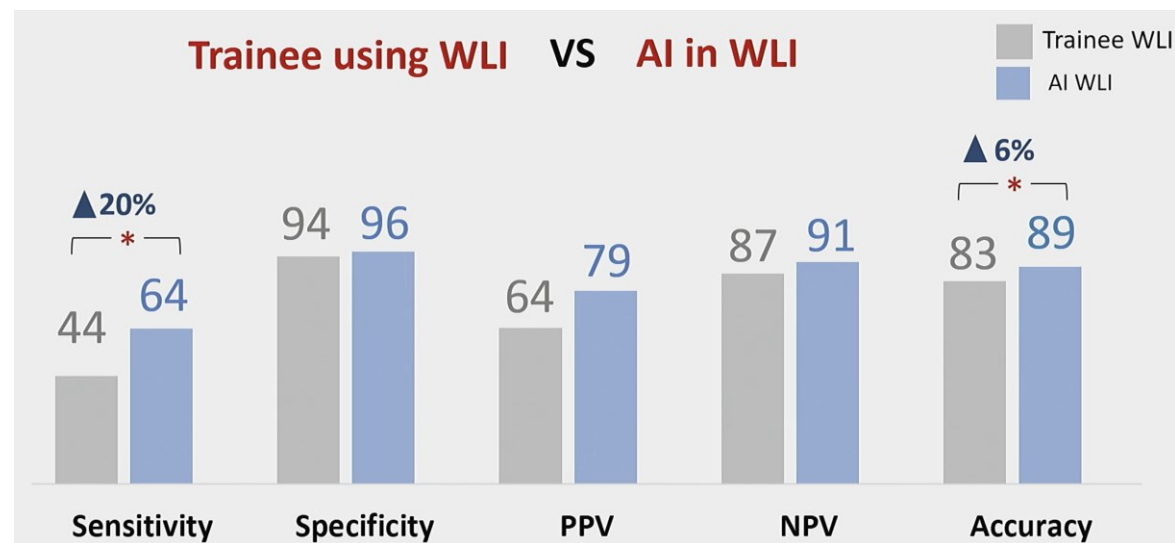
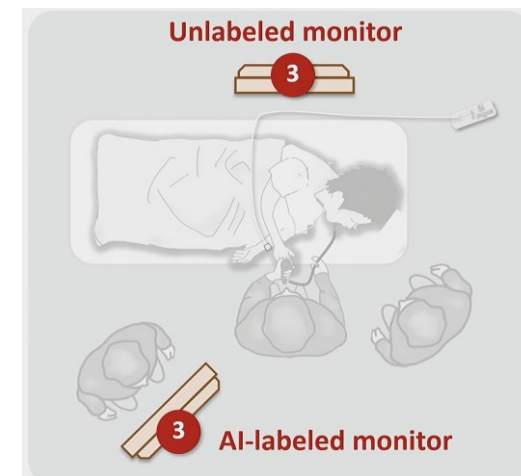


El desarrollo de patrón rojo-geográfico se asoció a mayor riesgo de CG (OR 2.4 IC 1.3-4.7) después del tratamiento de H. pylori

THE PERFORMANCE OF TRAINEE ENDOSCOPISTS IN DIAGNOSING AND SEGMENTING GASTRIC INTESTINAL METAPLASIA WITH AND WITHOUT ARTIFICIAL INTELLIGENCE GUIDANCE: A PRELIMINARY RESULT



Unpublished data



673 - EFFECT OF AN ARTIFICIAL INTELLIGENCE-ASSISTED ENDOSCOPY IN THE DIAGNOSIS OF SUPERFICIAL GASTRIC NEOPLASMS: A MULTICENTER PROSPECTIVE RANDOMIZED CONTROL TRIAL(GASTRO-AI-STUDY)



CADx System

Aumento Sensibilidad 7% (NS)

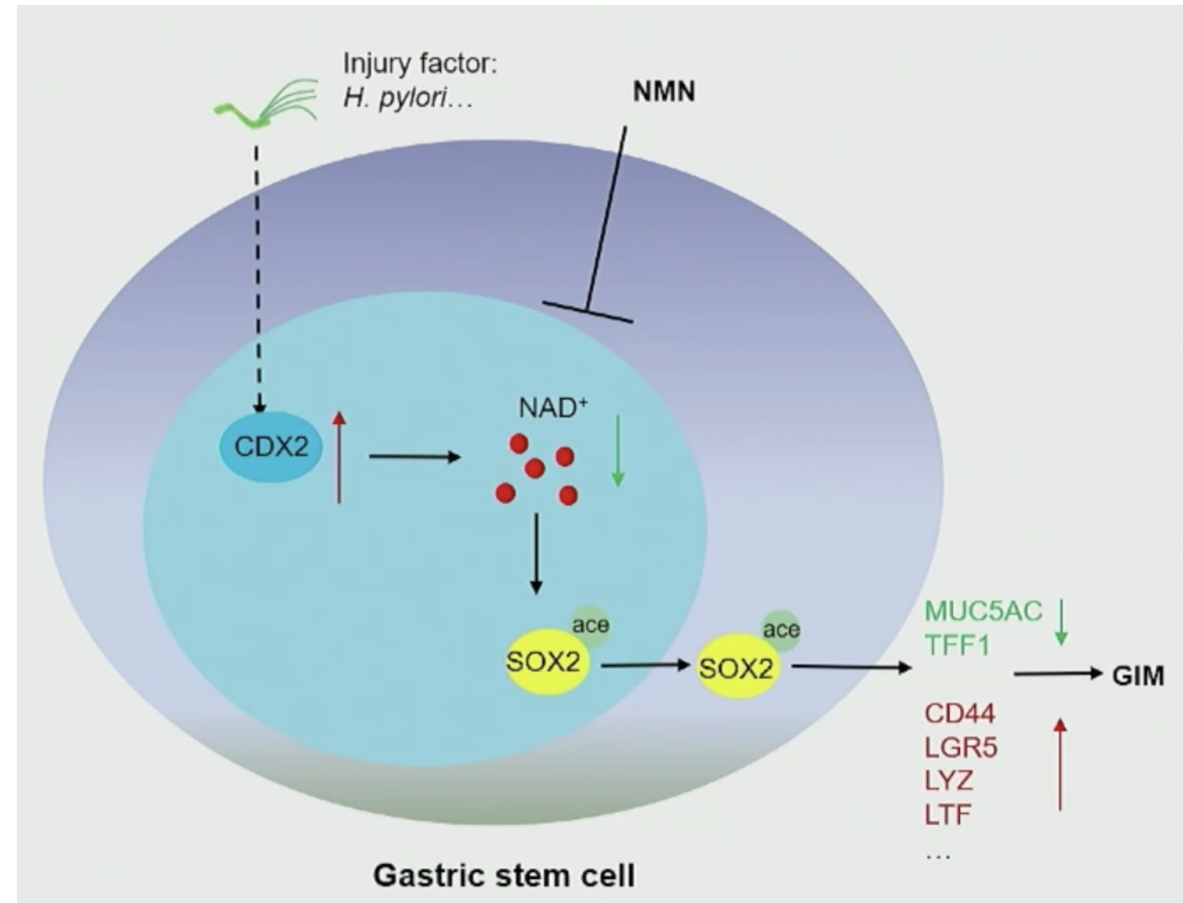
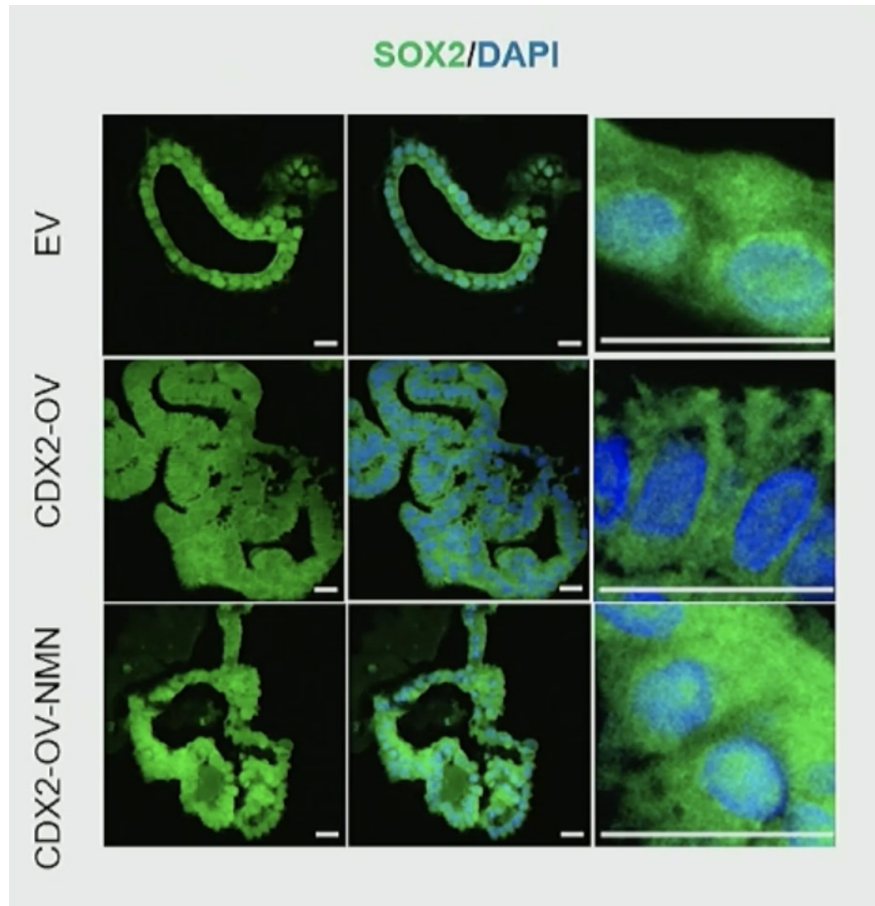
Cambio del diagnóstico de lesiones en un 5%

22 - EXPLORING GOBLET CELL-ENRICHED GASTRIC INTESTINAL METAPLASIA (GIM) ORGANOID CULTURE: A PLATFORM FOR THERAPEUTIC DRUG SCREENING



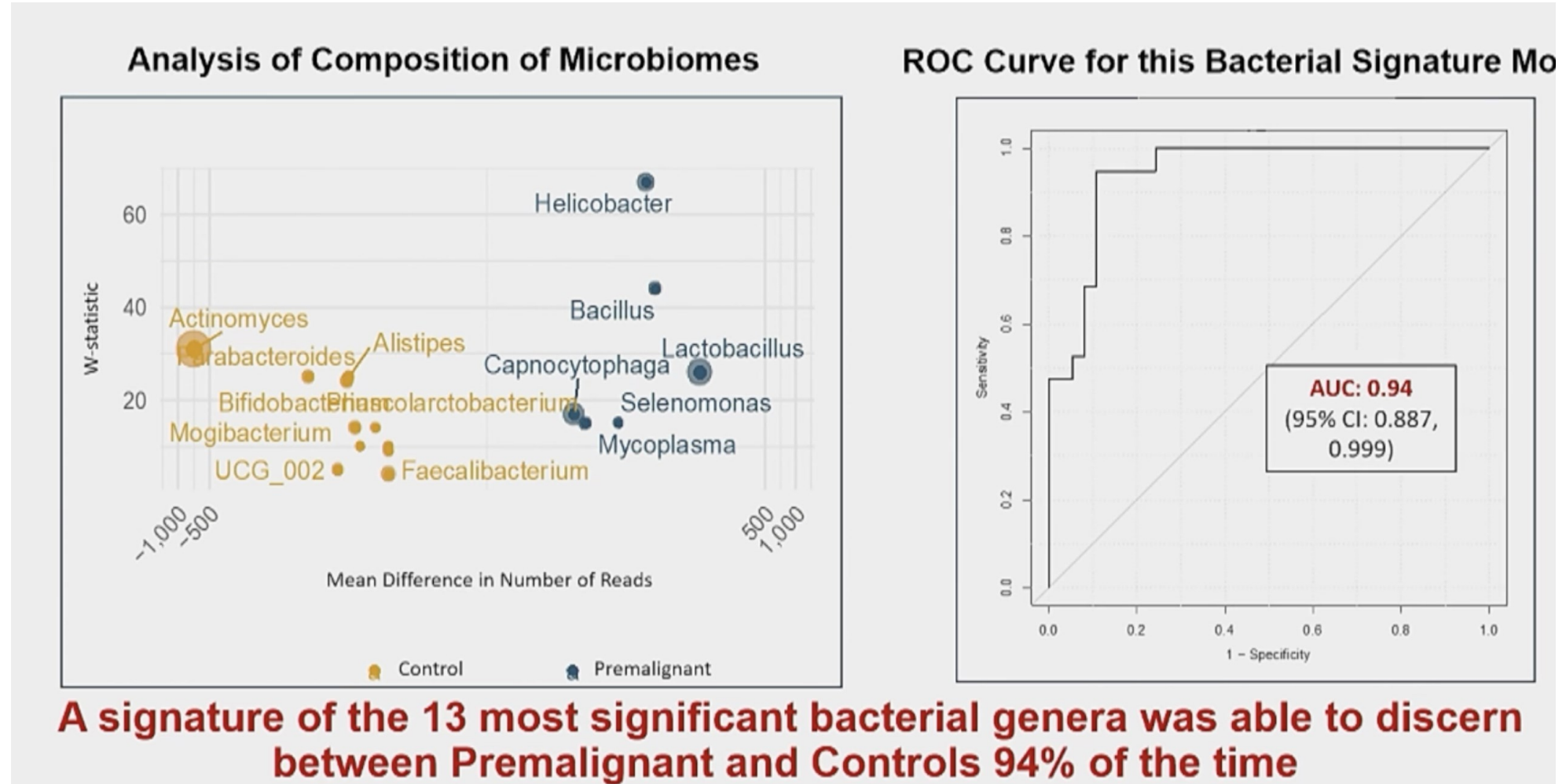
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22 - EXPLORING GOBLET CELL-ENRICHED GASTRIC INTESTINAL METAPLASIA (GIM) ORGANOID CULTURE: A PLATFORM FOR THERAPEUTIC DRUG SCREENING

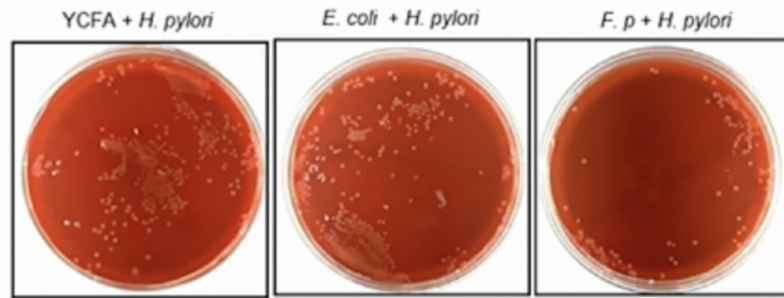


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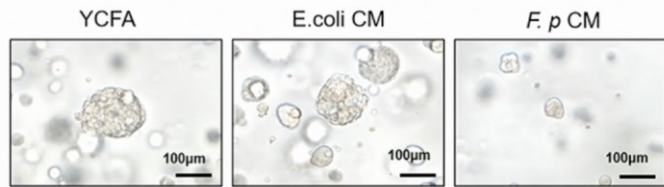
2115- ORAL MICROBIOME SIGNATURES AS POTENTIAL BIOMARKERS FOR GASTRIC CANCER RISK ASSESSMENT



2095- FAECALIBACTERIUM PRAUSNITZII INHIBITS GASTRIC CANCER AND ANTAGONIZES HELICOBACTER PYLORI COLONIZATION

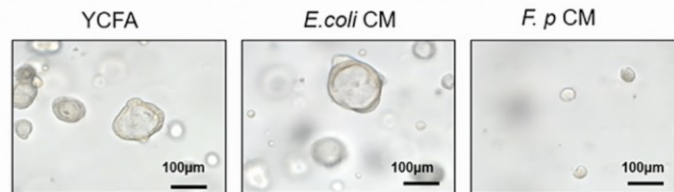


GC-organoid (G9T)



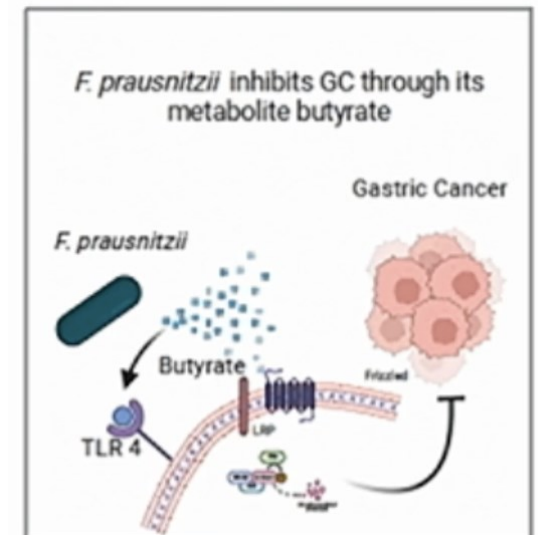
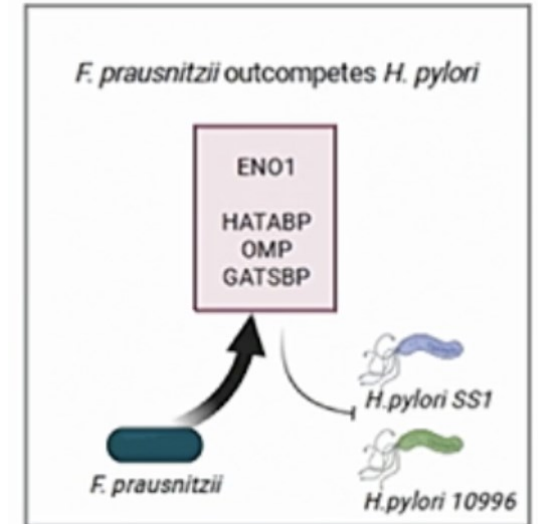
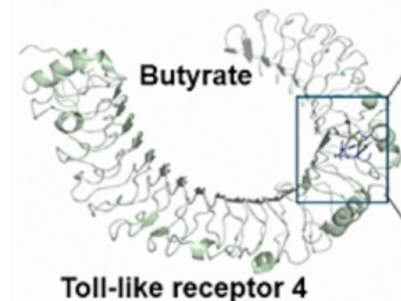
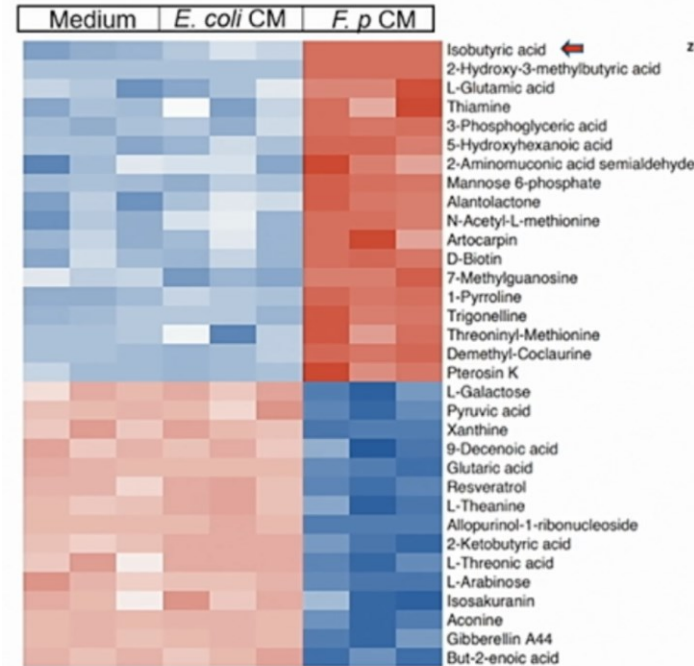
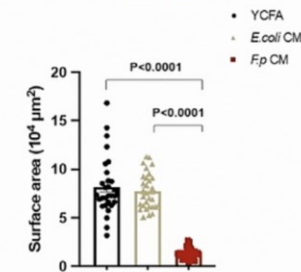
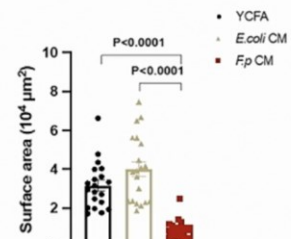
Day 5 (x200)

GC-organoid (POA 145)



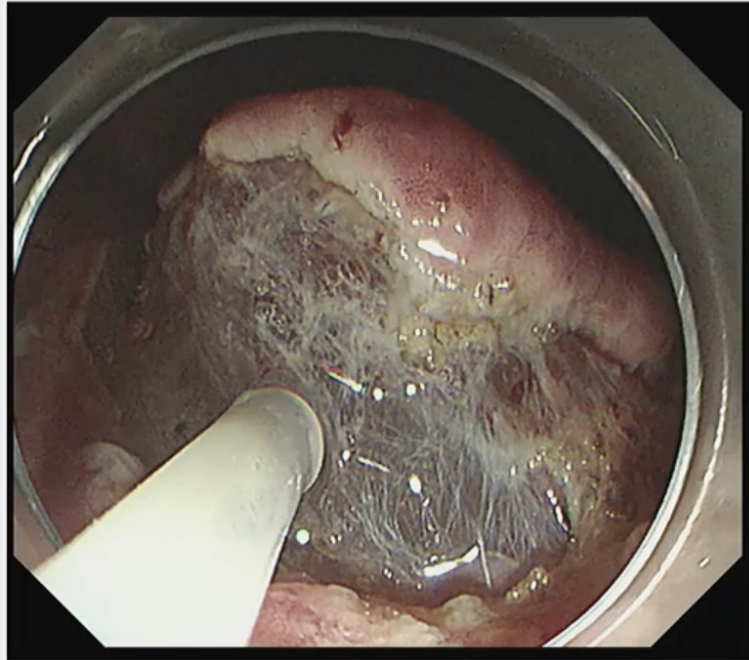
Day 5 (x200)

Inpublished data



Unpublished data

267 - EFFICACY AND SAFETY OF SODIM ALGINATE SOLUTION FOR ENDOSCOPIC MUCOSAL AND SUBMUCOSAL RESECTION: A PROSPECTIVE, MULTICENTER, RANDOMIZED, TRIPLE-BLINED, PARALEEL-GROUP, PHASE 3 STUDY



(at standard concentration of 0.2ml 1:1000 into each 20ml of injection solution) → 1:100,000

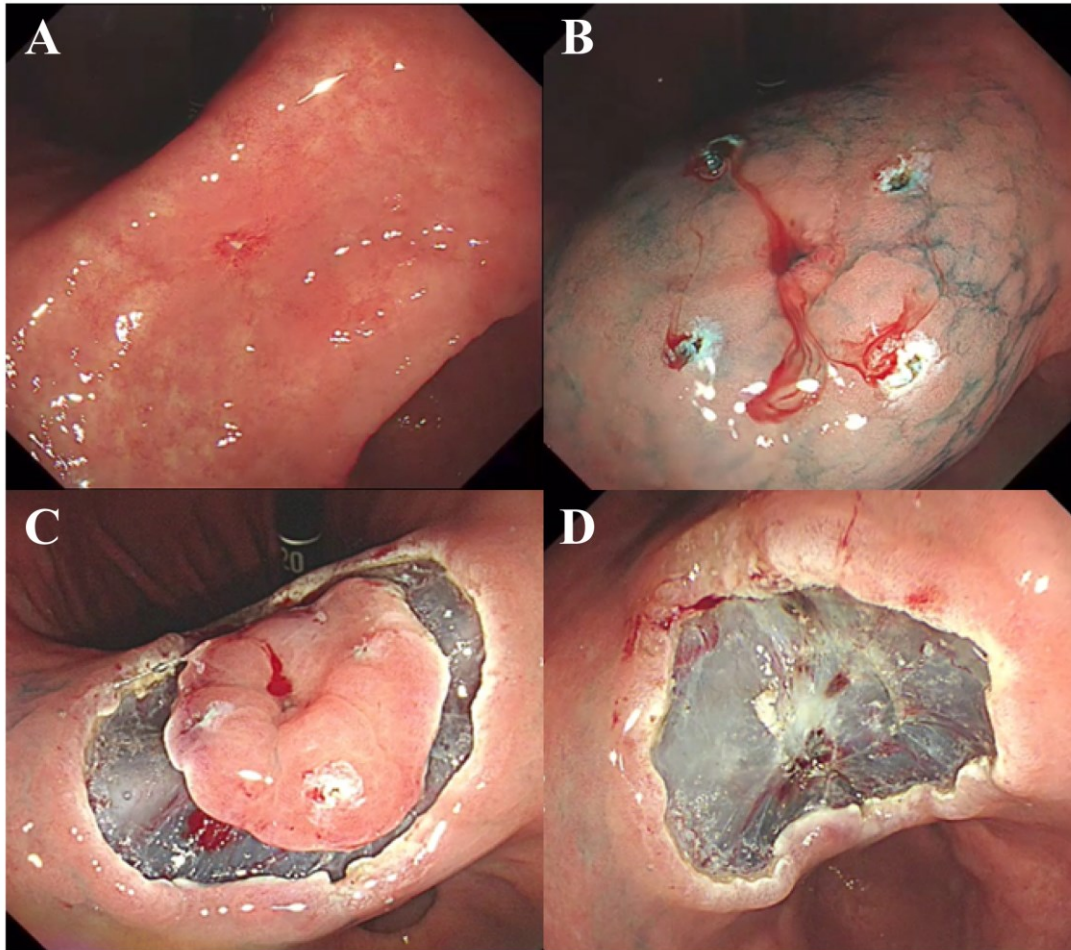
N= 800

The addition of epinephrine significantly **shortened procedure time** for gastric ESD **by ~10%**

- From reduced need for intra-procedural hemostasis and possibly clearer dissection view

	Mean	Non-Adjusted Rate ratio [95%CI]	Adjusted Rate ratio [95%CI]	P-value
Treatment (N=385)	1.76	0.58	0.59	<0.001
Control (N=388)	3.02	[0.53, 0.64]	[0.54, 0.65]	

267 - EFFICACY AND SAFETY OF SODIM ALGINATE SOLUTION FOR ENDOSCOPIC MUCOSAL AND SUBMUCOSAL RESECTION: A PROSPECTIVE, MULTICENTER, RANDOMIZED, TRIPLE-BLINED, PARALEEL-GROUP, PHASE 3 STUDY



- MC-003 menos inyecciones en:
- Lesiones >15 mm (P Z .037)
 - Lesiones distales (P Z .007),
 - ESD (P Z .001).



Original research

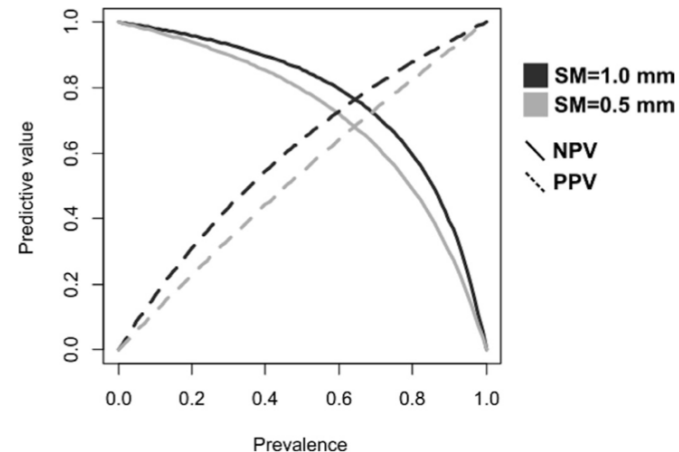
Predicting residual neoplasia after a non-curative gastric ESD: validation and modification of the eCura system in the Western setting: the W-eCura score

(A)				
Riesgo MTT Linfática	Total points	Patients (n=1,101)	LNM (n=94)	Rate of LNM (%)
Bajo	0	62	1	1.6
	1	341	9	2.6
Medio	2	185	9	4.9
	3	148	11	7.4
	4	132	11	8.3
Alto	5	141	28	19.9
	6	77	21	27.3
	7	15	4	26.7

(B)				
Risk category	Total points	Patients (n=1,101)	LNM (n=94)	Rate of LNM (%)
Low	0–1	403	10	2.5
Intermediate	2–4	465	31	6.7
High	5–7	233	53	22.7

LNM, lymph node metastasis.

Criterio		
Tamaño del tumor	Negativo = 0 puntos	Positivo = 1 punto
Profundidad	M/SM1 (<500 μm) = 0 punto	SM2 (≥500 μm) = 1 punto
Permeación linfática	Negativo = 0 puntos	Positivo = 3 puntos
Permeación vascular	Negativo = 0 puntos	Positivo = 1 punto
Margen vertical	Negativo = 0 puntos	Positivo = 1 punto



eCura → W-eCura

Profundidad <500 μm

Aumento AUC 0.9 a 0.92

Menos gastrectomías innecesarias

Tópicos actuales en (prevención) cáncer gástrico

- Epidemiología:
 - Disparidades étnicas en riesgo y tamizaje.
 - EARLY ONSET.
 - Vigilancia endoscópica de CPMG.
- Ciencia básica:
 - Carcinogénesis y microbiota.
 - Organoides de Metaplasia Intestinal como modelo experimental.
- Detección no invasiva del CG y CPMG.
 - Firmas de microbiota.
 - AI en endoscopia.
- Extensión a occidente del tratamiento endoscópico del CG incipiente.
 - Validación de criterios de resección curstiva (W-eCura)

Lo mejor de DDW 2024...





Asociación
Chilena de
Endoscopia
Digestiva



PONTIFICIA
UNIVERSIDAD
CATÓLICA
DE CHILE

¡Muchas gracias por su atención!
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