

Los inhibidores de la bomba de protones reducen la precisión del test de sangre oculta en heces inmunológico

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INTRODUCCIÓN

- ü Test de sangre oculta en heces inmunológico (FIT)
- ü Cribado del cáncer colorrectal (CCR)
- ü Discriminar la población sintomática con un mayor riesgo de neoplasia

Allison et al. Gut and Liver, 2014

Cubiella et al, 2014

Rodríguez Alonso et al. Dig Dis. 2015

ü Test de sangre oculta en heces inmunológico (FIT)

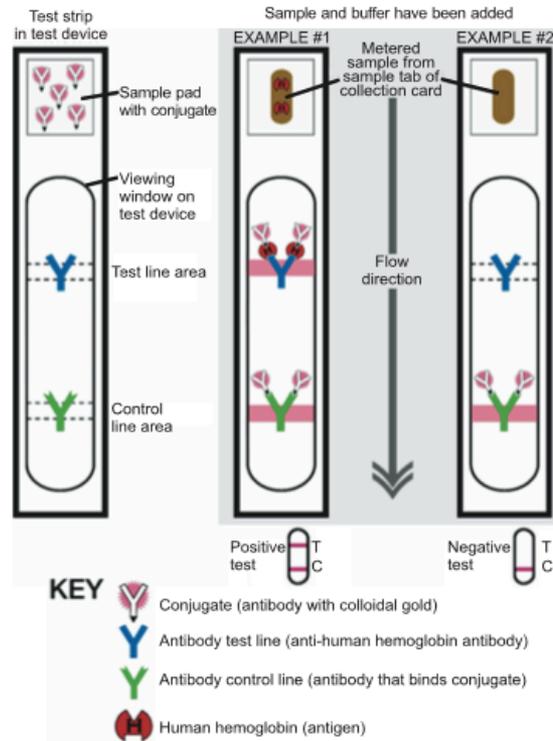


Fig. 1. Cartoon illustrating lateral flow immunochromatographic analysis principle of a fecal immunochemical test for hemoglobin.

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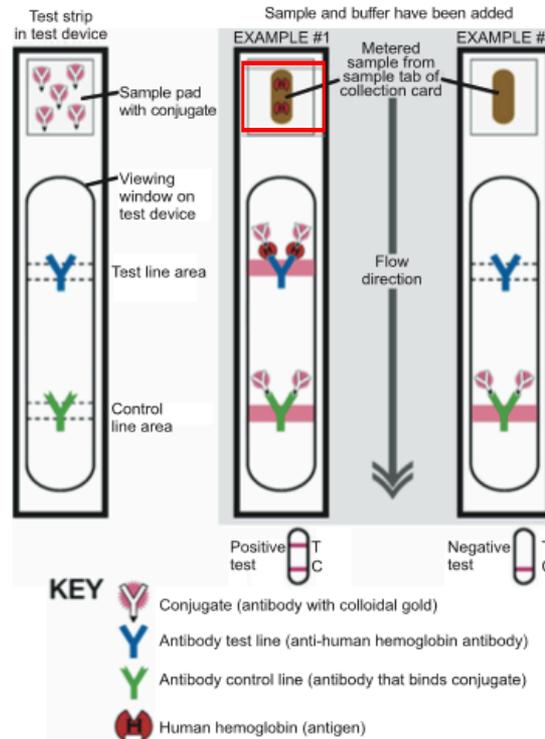


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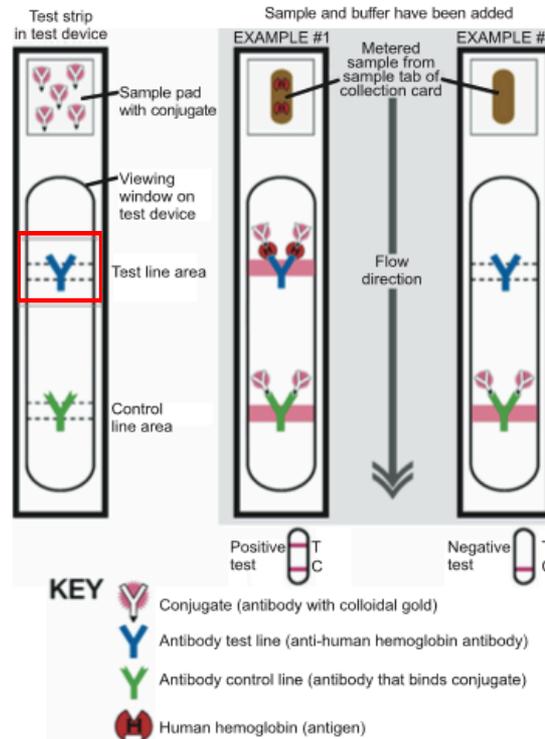


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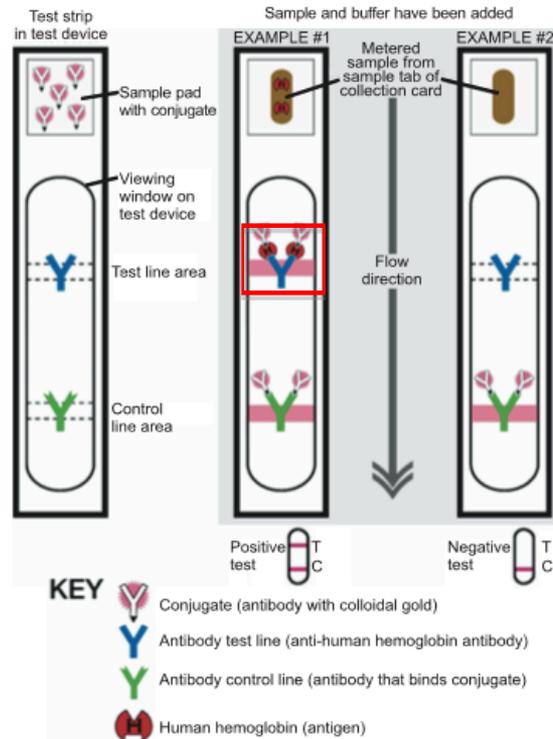


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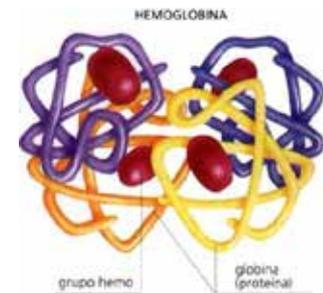
- ü FIT utiliza anticuerpos específicos anti globina humana
- ü Sensible a bajas concentraciones de hemoglobina
- ü No interferencia con otros constituyentes de las heces
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- ü Degradación por parte de las proteasas GI

- ü Órgano-especificidad

- ü Menor tasa de FP respecto a los test previos (guayaco)

ü Inhibidores de la bomba de protones (IBP) son fármacos de uso ampliamente extendido

ü Indicaciones

ü Dispepsia

ü ERGE

ü Gastroprotección frente a antiagregantes/AINEs

ü Seguridad

Adverse Effects Associated With Proton Pump Inhibitors

Adam Jacob Schoenfeld, MD; Deborah Grady, MD, MPH

Proton pump inhibitors (PPIs) have been among the most widely prescribed medications in the United States for decades. This is largely due to 2 very common uses of PPIs:



[Related article](#)

treatment of dyspepsia and prevention of gastrointestinal bleeding among patients prescribed antiplatelet therapy, coupled with the belief that PPIs have few adverse effects. However, mounting evidence demonstrates that PPIs are associated with a number of adverse effects and are overprescribed. This issue was highlighted in *JAMA Internal Medicine's* launch of the Less Is More series in 2010.^{1,2} Since then, additional evidence of adverse effects of PPIs has accumulated. In this issue of *JAMA Internal Medicine*, Lazarus et al³ add chronic kidney disease to the list of possible harms of PPIs.

To collate data on the adverse effects of PPIs, we surveyed recent studies focusing on systematic reviews. Most

Table. Evidence Supporting the Potential Adverse Effects of Proton Pump Inhibitor Drugs

Source	Adverse Effect	Adjusted OR (95% CI)
Lazarus et al, ³ 2015	Chronic kidney disease	1.50 (1.11-1.90)
Antoniou et al, ⁴ 2015	Acute kidney disease	2.52 (2.27-2.79)
Antoniou et al, ⁴ 2015	Acute interstitial nephritis	3.00 (1.47-6.14)
Cheungpasitporn et al, ⁵ 2015	Hypomagnesemia	1.43 (1.08-1.88)
Kwok et al, ⁶ 2012	<i>Clostridium difficile</i>	1.74 (1.47-2.85)
Eom et al, ⁷ 2011	Community-acquired pneumonia	1.34 (1.14-1.57)
Filion et al, ⁸ 2014	Community-acquired pneumonia	1.05 (0.89-1.25)
Zhou et al, ⁹ 2015	Bone fracture	1.33 (1.15-1.54)

Abbreviation: OR, odds ratio.

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RESEARCH ARTICLE

Proton Pump Inhibitors Inhibit Pancreatic Secretion: Role of Gastric and Non-Gastric H⁺/K⁺-ATPases

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ORIGINAL RESEARCH

An assessment of human gastric fluid composition as a function of PPI usage

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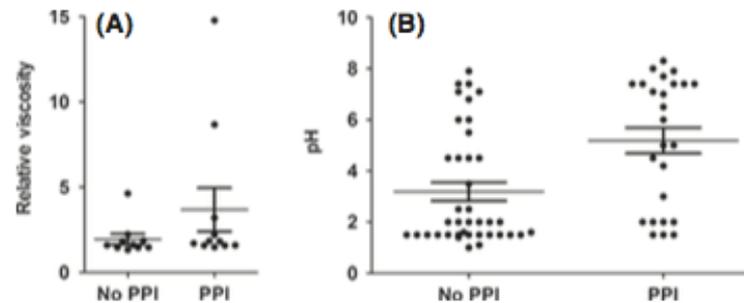


Figure 4. (A) pH of gastric fluid versus PPI usage (No PPI, $n = 10$; PPI, $n = 11$). (B) Relative viscosity of gastric fluid versus PPI usage (No PPI, $n = 39$; PPI, $n = 25$). Relative viscosity was calculated using a sucrose standard curve. The means and standard errors are indicated by the bars.

Gastric Fluid Composition

E. Foltz et al.

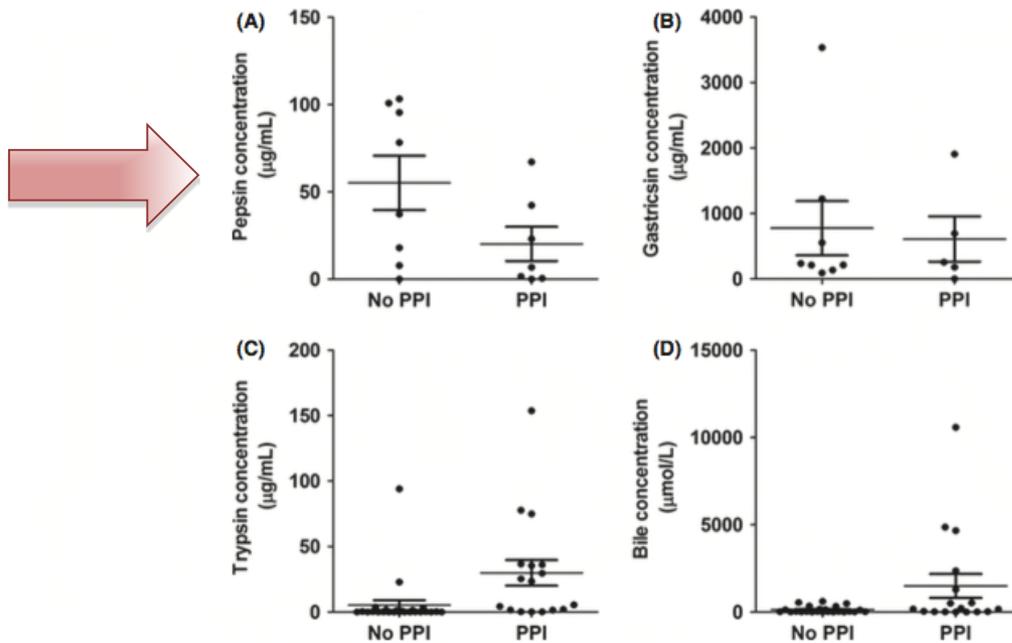
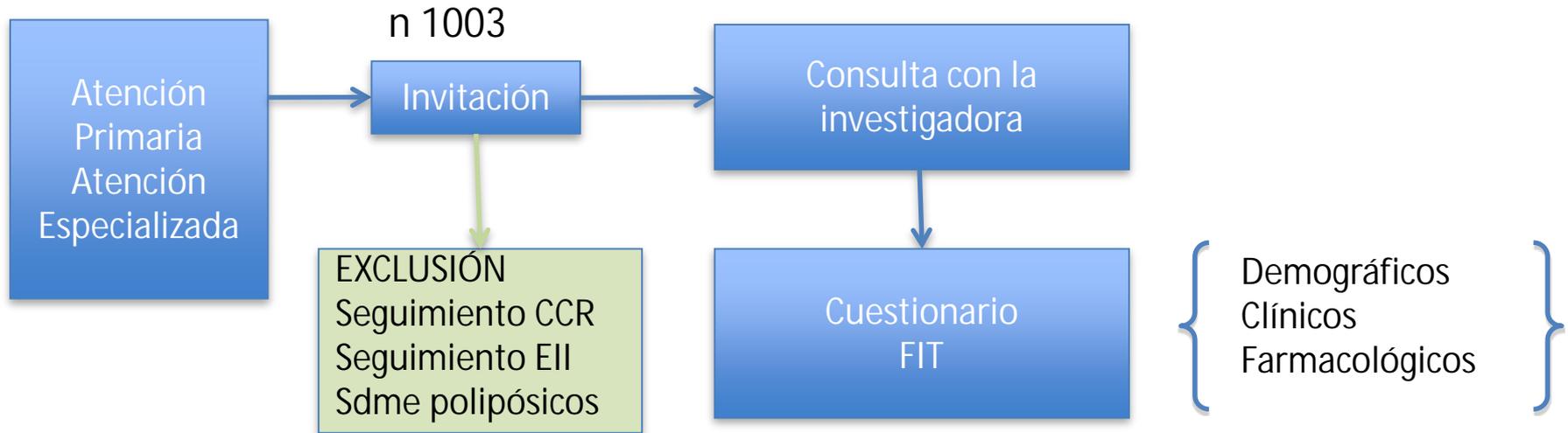


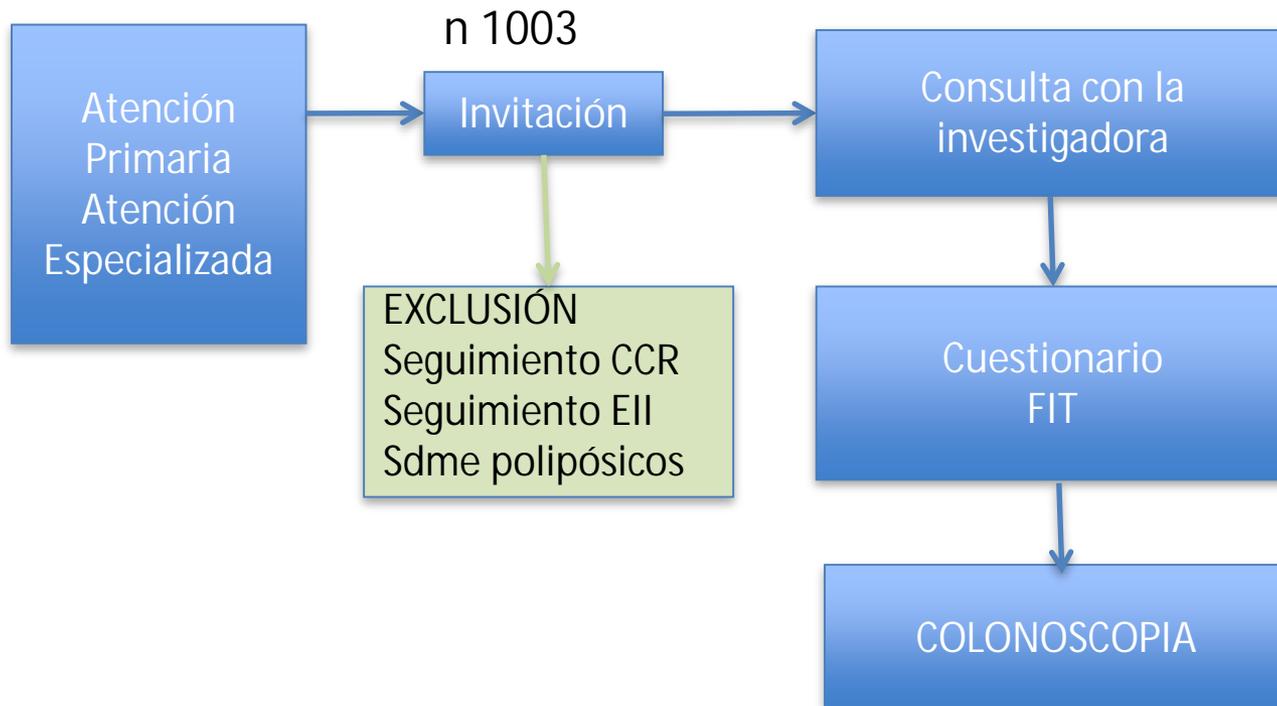
Figure 6. (A) Pepsin concentration in gastric fluid as a function of PPI usage (No PPI, $n = 8$; PPI, $n = 7$). (B) Gastricsin concentration in gastric fluid as a function of PPI usage (No PPI, $n = 8$; PPI, $n = 5$). (C) Trypsin concentration in gastric fluid as a function of PPI usage (No PPI, $n = 25$; PPI, $n = 17$). (D) Bile concentration in gastric fluid as a function of PPI usage (No PPI, $n = 24$; PPI, $n = 17$). Samples from patients on PPIs with a pH less than 3.0 and samples from patients not taking PPIs with a pH greater than 3.0 was excluded from the analysis ($n = 21$ samples excluded). The means and standard errors are indicated by the bars.

OBJETIVO

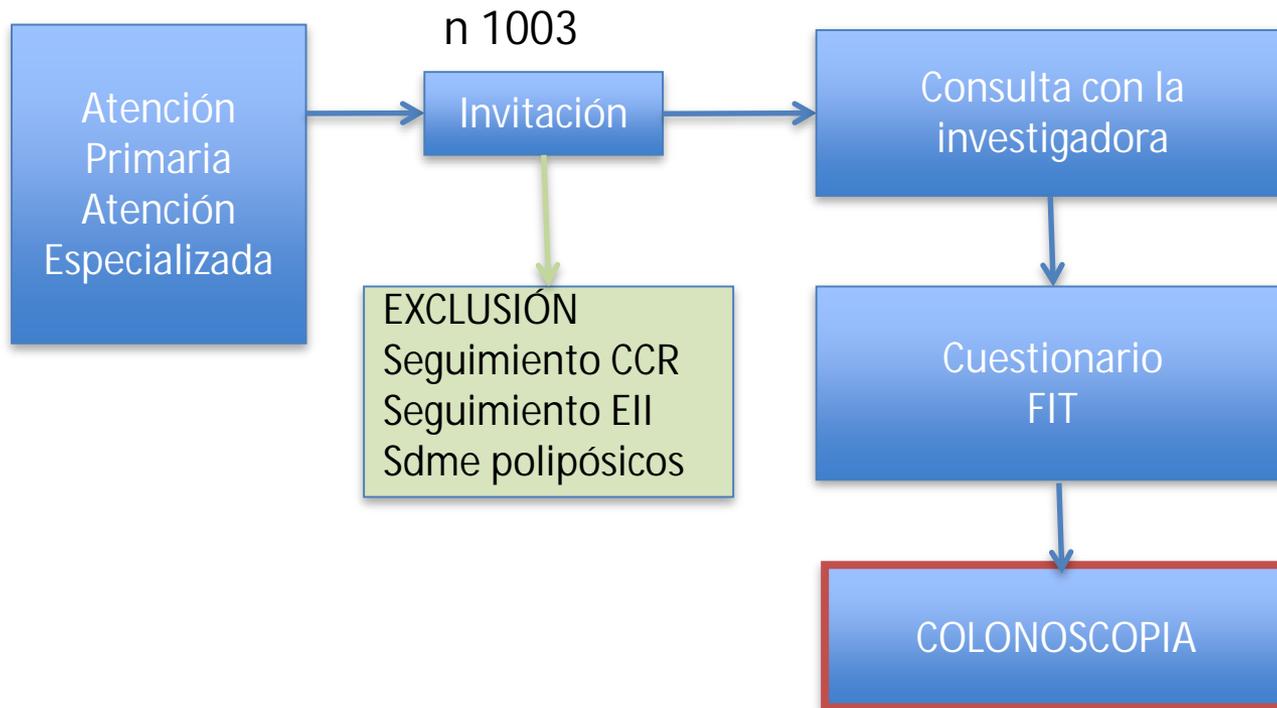
Evaluar el impacto del consumo de IBP en la
precisión del FIT

METODOLOGÍA

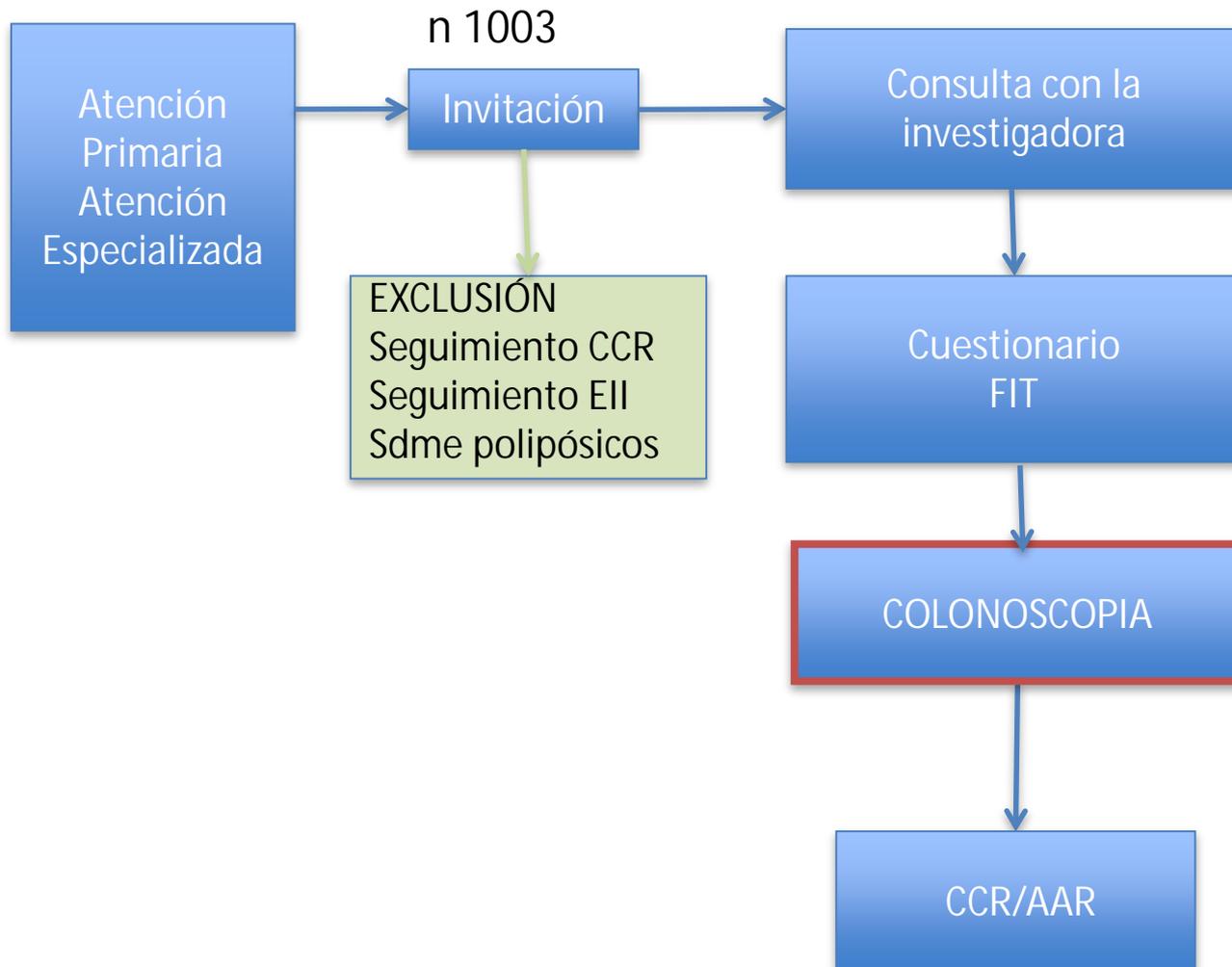




OC Sensor®
Eiken Chemical



OC Sensor®
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Positivo $\geq 100\text{ng/mL}$
($\geq 20\text{ug/g}$)

RESULTADOS

Características

Variables	n 1003
Sexo Mujer, n (%)	533 (53)
Edad años,	Media 61 (rango 18-91, DS 13,3)
Exposición tábaquica, n (%)	464 (46)
Enolismo, n (%)	216 (22)
IBP, n (%)	461 (47)
Anticoagulante, n (%)	50 (5)
Gastrolesivos (AINES/AAS), n (%)	245 (24)

Resultados de la endoscopia

RESULTADO	FRECUENCIA	PORCENTAJE (%)
CCR	30	2,9
ADENOMA AVANZADO	103	10,1
ADENOMA NO AVANZADO	169	16,8
NORMAL	600	59,8
OTROS	101	10,1
TOTAL	1003	100

NEOPLASIA AVANZADA
133 (13%)

Colonoscopia sin NA

GASTROPROTECCIÓN	FIT	IC 95%	P
IBP	108,3ng / mL	(13,7-107,5)	0,011
NO IBP	59,8ng / mL	(23,9-60,7)	

Colonoscopia sin NA

GASTROPROTECCIÓN	FIT >100; n (%)	FIT <100; n (%)	TOTAL; n (%)
IBP CRÓNICO	45 (13.3)	293 (86.7)	338 (100)
IBP ESPÓRADICO	13 (12.3)	10.3 (87.7)	106(100)
NO GASTROPROTECCIÓN	30 (7.4)	373 (92.6)	403 (100)

Análisis Univariado

Variable	Neoplasia Avanzada						
	Sens	Espec	VPP	VPN	VG	RVP	RVN
FIT GLOBAL ≥100 ng/ml buffer	53.4	89.4	43.6	92.6	84.6	5.0	0.5
FIT CON IBP ≥100 ng/ml buffer	46.5	87.4	34.8	92.4	82.0	2.5	0.6
FIT SIN IBP ≥100 ng/ml buffer	59.1	92.4	57.7	93.2	87.0	7.3	0.4

Análisis Univariado

Variable	Cáncer colorrectal						
	Sens	Espec	VPP	VPN	VG	RVP	RVN
FIT GLOBAL ≥100 ng/ml buffer	93.3	86.1	17.2	99.8	86.3	6.7	0.1
FIT CON IBP ≥100 ng/ml buffer	99.9	84.9	13.9	99.7	85.0	6.6	0.1
FIT SIN IBP ≥100 ng/ml buffer	99.9	87.5	20.7	99.8	87.8	7.6	0.1

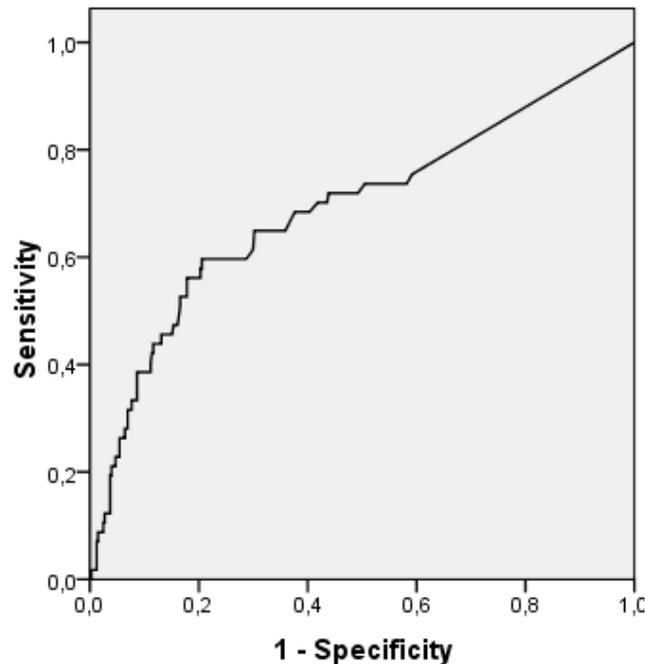
Análisis multivariado

Factores de riesgo			
	β coefficient	OR (95% CI)	p Value
Sexo	0,313	0,731 (0.468-1.143)	0.169
Edad	0.003	1.003 (0.985-1.021)	0.738
AINEsAAS	0,062	1.064 (0.814-1.064)	0.814
Gastroprotección	0,661	1.937 (1.180-3.182)	0.009

Detección de Neoplasia Avanzada

Consumidores de IBP

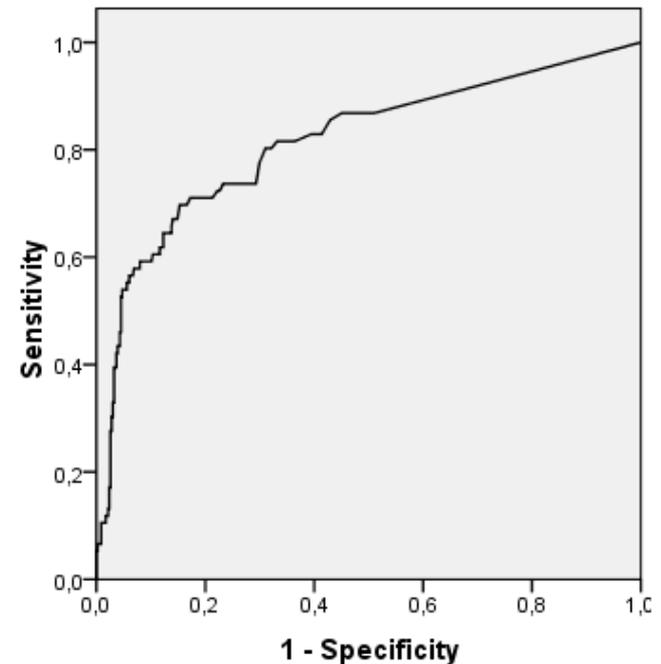
ROC Curve



Area Under the Curve 0,692

No consumidores de IBP

ROC Curve



Area Under the Curve 0,815

Subanálisis en Anemia Ferropénica

ü Hombres/ mujeres en edad post menopáusica

ü FIT

N 122

ü Estudio endoscópico

ü Gastroscoopia

ü Colonoscopia

Análisis Univariado

Variable	Neoplasia Avanzada en anemia ferropénica						
	Sens	Espec	VPP	VPN	VG	RVP	RVN
FIT GLOBAL ≥100 ng/ml buffer	66.7	89.4	46.2	93.8	83.7	6.3	0.4
FIT CON IBP ≥100 ng/ml buffer	50.4	82.4	28.6	92.1	79.2	2.9	0.6
FIT SIN IBP ≥100 ng/ml buffer	88.2	97.3	88.1	97.2	95.1	32.7	0.1

Anemia ferropénica

Variable, n (%)	FIT >100, n (%)	Con lesión colónica, n (%)	p
IBP, n 84 (68,8)	18 (21,4)	9 (50,0)	<0.001
No IBP, n 38 (31,2)	8 (21,0)	7 (87,5)	
Total, n 122 (100)	26 (21,3)	24 (19,7)	

Anemia ferropénica

Variable, n (%)	FIT >100, n (%)	Con lesión colónica, n (%)	p	Con lesión gástrica, n (%)	p
IBP, n 84 (68,8)	18 (21,4)	9 (50,0)	<0.001	9 (50,0)	0.036
No IBP, n 38 (31,2)	8 (21,0)	7 (87,5)		0 (0)	
Total, n 122 (100)	26 (21,3)	24 (19,7)		9 (7,3)	

CONCLUSIÓN

- ü Elevado consumo de IBP en nuestro medio
- ü El consumo de IBP se asocia con una reducción de la precisión del FIT en la detección de neoplasia colorrectal
- ü Nuevos estudios

HIPÓTESIS

Mecanismo desconocido



Mecanismo desconocido

ÜIBP inhibe la secreción pancreática



Mecanismo desconocido

Ü IBP inhibe la secreción pancreática

Ü Impida la degradación de la globina ?



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ü FIT pierda su órgano-especificidad ?



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ü Tasa de FP en relación a sangrados altos ?



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ü IBP inhibe la secreción pancreática

ü Impida la degradación de la globina ?

ü FIT pierda su órgano-especificidad ?

ü Tasa de FP en relación a sangrados altos ?

ü Endoscopia digestiva alta??



Muchas gracias por su atención