

# ¿Cómo optimizar el diagnóstico de displasia en Esófago de Barrett?

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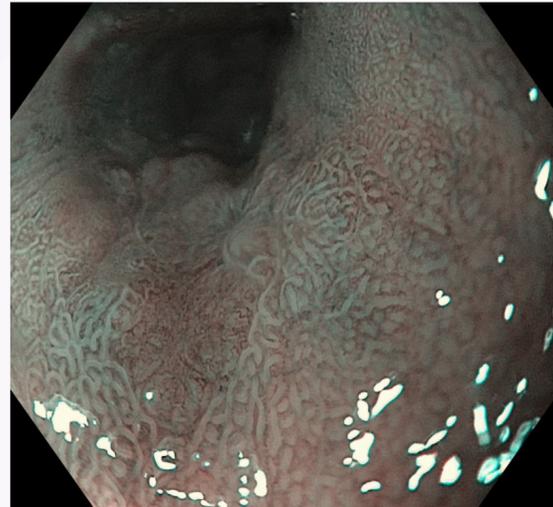
Gastroenteróloga Hospital Clínico Dra. Eloísa Díaz

# Esófago de Barrett (EB)

- El cambio metaplásico del esófago distal
- El epitelio escamoso normal es sustituido por un epitelio columnar con **células caliciformes** → denominado metaplasia columnar
- En la **endoscopia** se extiende por al menos 1 cm sobre la unión gastroesofágica (UGE)



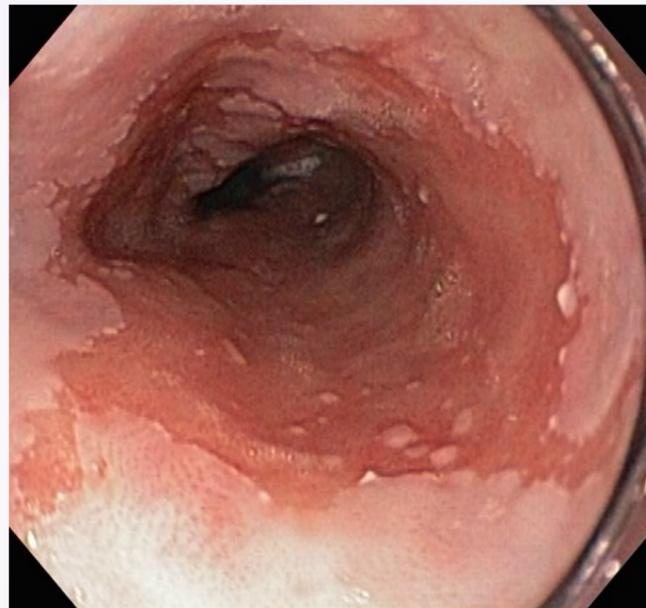
# Prevalencia



**EB**

- **1% de la población general**
- **Hasta en un 14% de los pacientes con enfermedad por reflujo gastroesofágico (ERGE)**

# Prevalencia



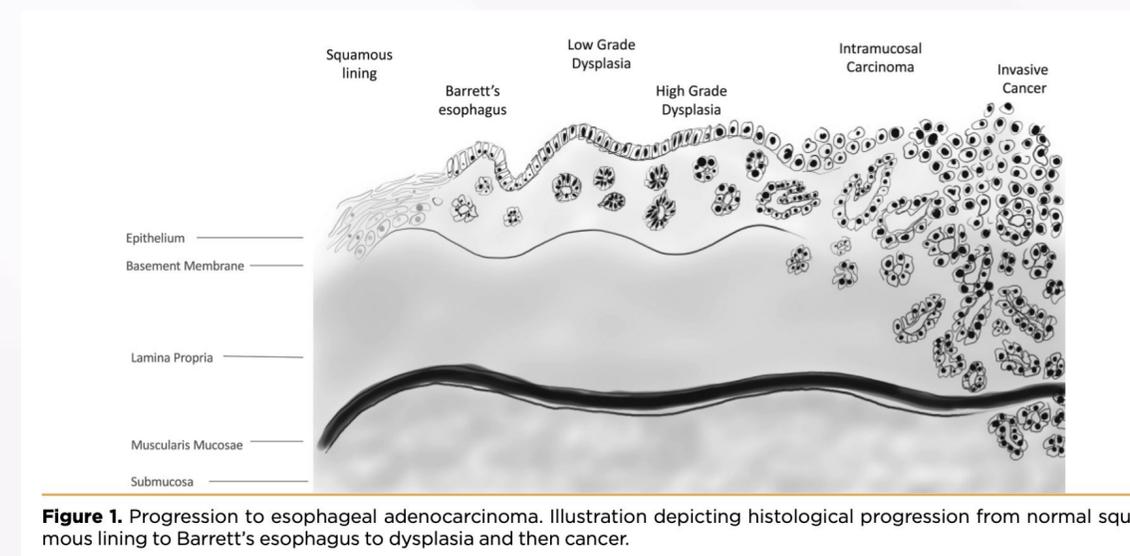
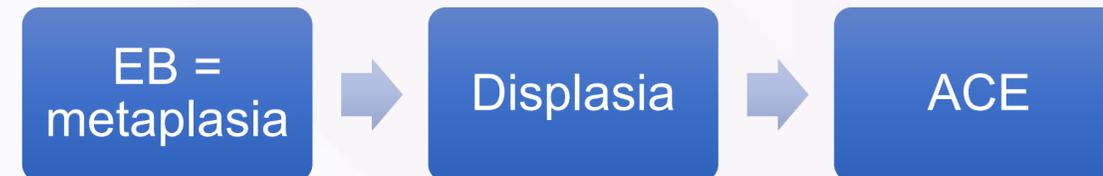
**EB**

- 13,9% Displasia
  - 81% DBG y 19% DAG
- ACE 1,2%

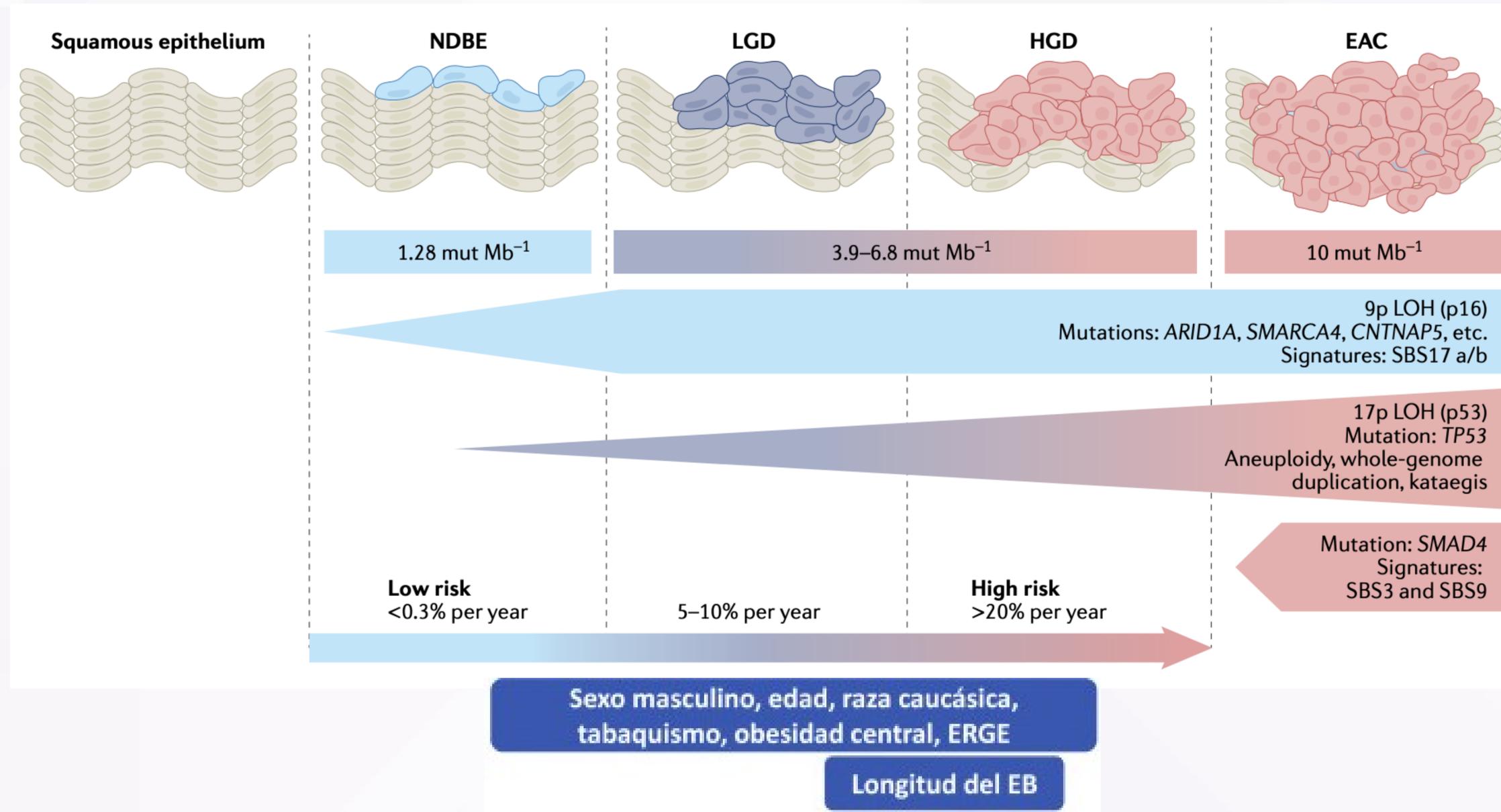
# Progresión

El EB es el **único precursor** conocido del adenocarcinoma esofágico (ACE)

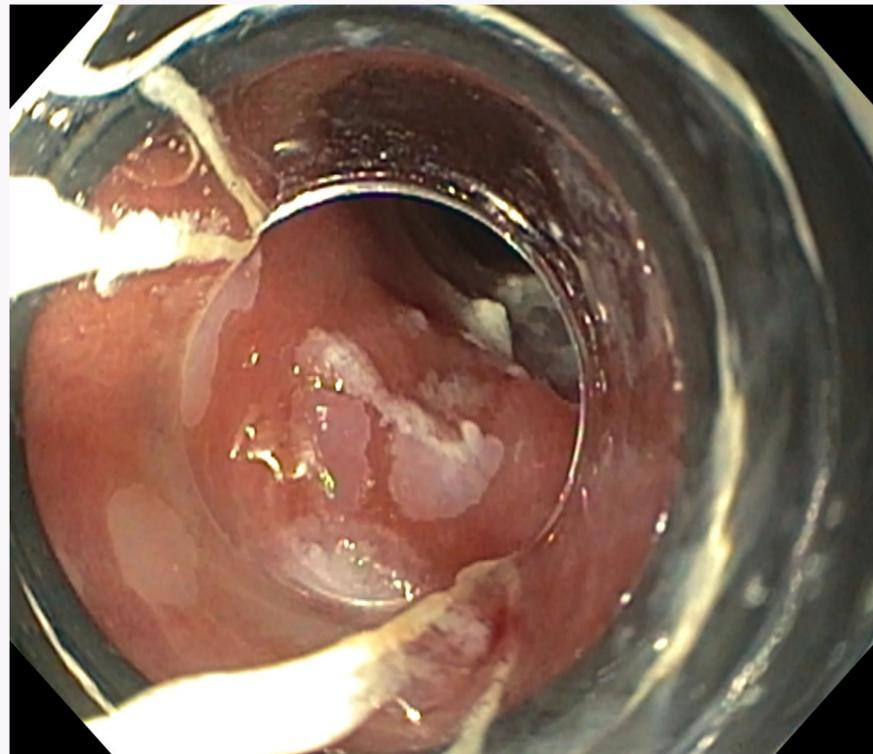
Neoplasia **en aumento** en países occidentales



# Progresión



# Tratamiento del EB con displasia o cáncer



Erradicación endoscópica  
→ resección y ablación  
muestra un éxito cercano al  
90%



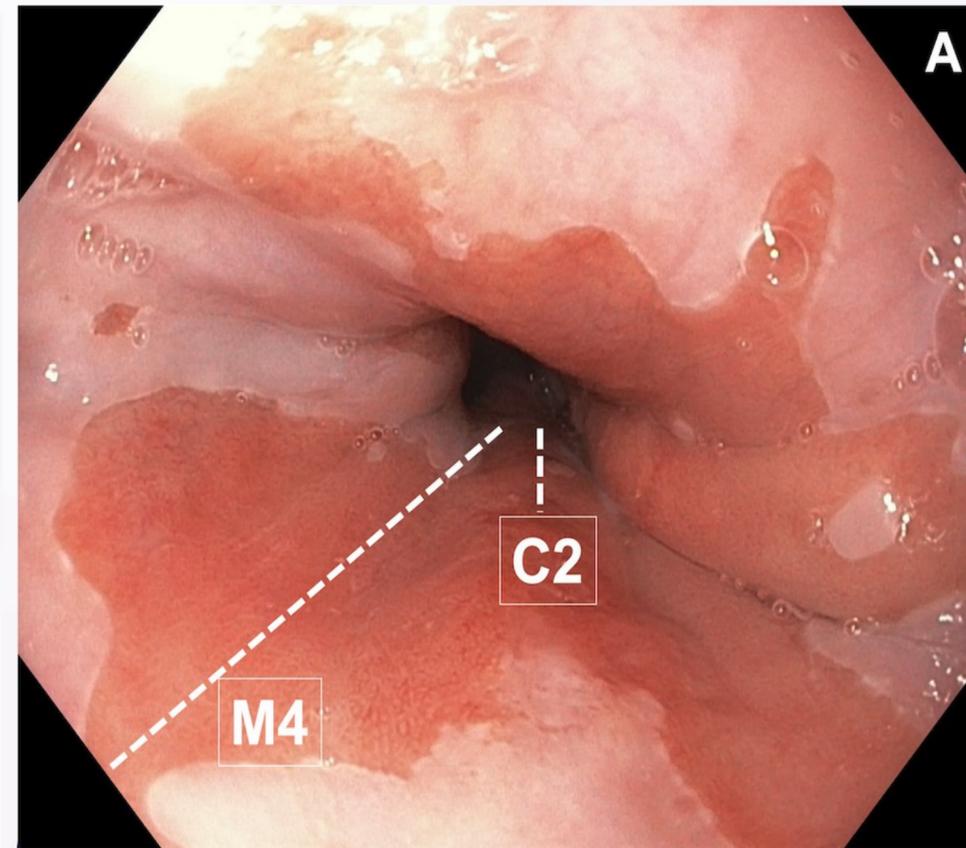
# Endoscopía de alta calidad

- Adecuada sedación
- Limpieza
- Insuflación
- Inspección
- ❖ Ergonomía 😊



# Endoscopía de alta calidad

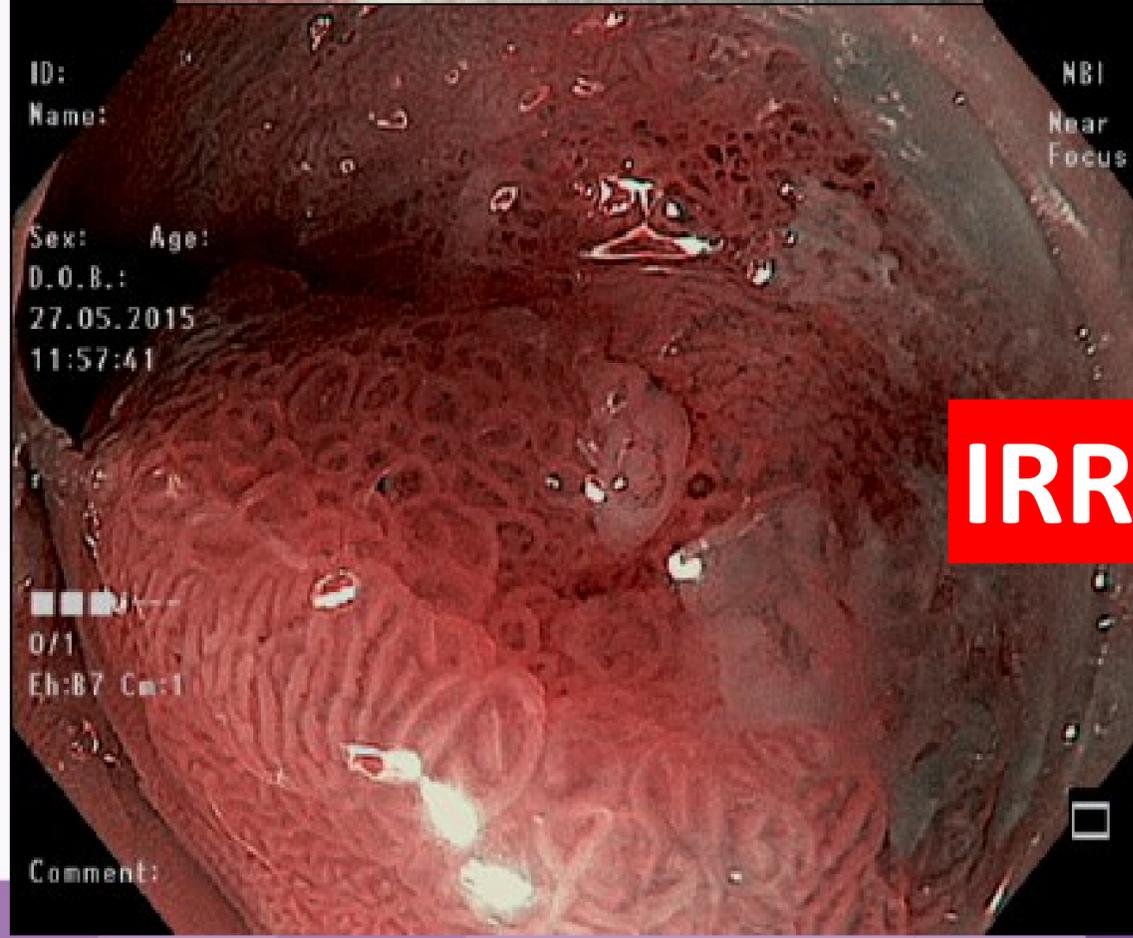
- Usar Clasificaciones:
  - París
  - Praga



# Criteria BING - NBI



**REGULAR**



**IRREGULAR**



# Endoscopía de alta calidad

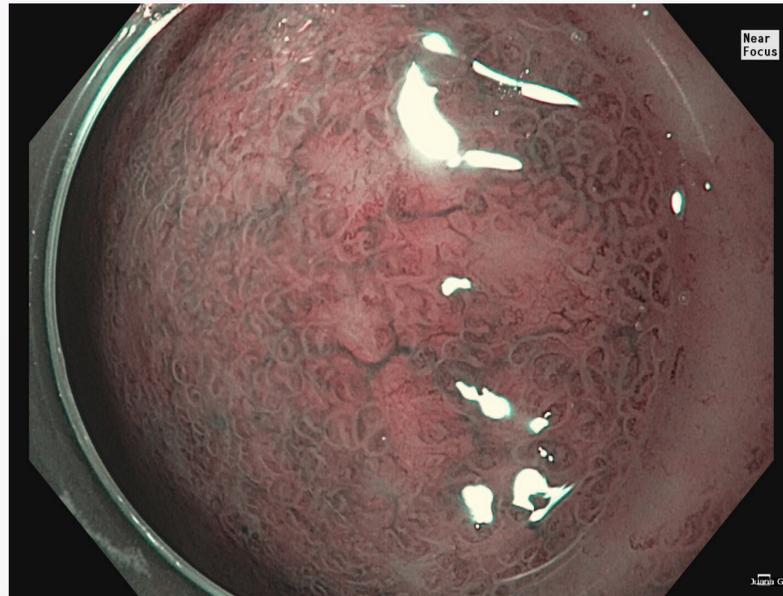
- BIT (Barrett's inspection time)



- A mayor tiempo de inspección, mayor detección de lesiones
- Hay correlación directa entre el tiempo de inspección por cm de Barrett y la detección de neoplasia
- 1 minuto por cm de Barrett al menos (54.2 % vs. 13.3 %; P = 0.04)

# Endoscopía de alta calidad

- NDR (neoplasia detection rate)
  - ACE y DAG en EDA índice
- Revisiones sistemáticas y metaanálisis 27.894
- 5-7%



# IA?

## AI for evaluation of Barrett's neoplasia – a randomized study

557 patients → 51 273 images → AI-based clinical decision support system



Tandem, randomized video trial:  
• 22 endoscopists  
• 96 video cases

96 videos of Barrett's esophagus

**Group A**  
1. Without AI  
2. With AI

**Group B**  
1. With AI  
2. Without AI



### Stand-alone AI performance

|             |     |
|-------------|-----|
| Sensitivity | 92% |
| Specificity | 69% |

### Performance Barrett's nonexperts (group A)

|                    | Without AI | With AI    |
|--------------------|------------|------------|
| <b>Sensitivity</b> | <b>70%</b> | <b>78%</b> |
| Specificity        | 67%        | 73%        |

AI, artificial intelligence.

**AI improved the performance of nonexpert endoscopists**

**Endoscopy**



# PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA



Received: 20 January 2021 | First decision: 17 February 2021 | Accepted: 29 June 2021  
DOI: 10.1111/apt.16531

AP&T Alimentary Pharmacology & Therapeutics WILEY

**Systematic review with meta-analysis: neoplasia detection rate and post-endoscopy Barrett's neoplasia in Barrett's oesophagus**

Nour Hamade<sup>1</sup> | Amrit K. Kamboj<sup>2</sup> | Rajesh Krishnamoorthi<sup>3</sup> | Siddharth Singh<sup>4</sup> | Leslie C. Hassett<sup>5</sup> | David A. Katzka<sup>2</sup> | Charles J. Kahi<sup>1</sup> | Hala Fatima<sup>1</sup> | Prasad G. Iyer<sup>2</sup>

Oesophagus

ORIGINAL ARTICLE

**Estimating neoplasia detection rate (NDR) in patients with Barrett's oesophagus based on index endoscopy: a systematic review and meta-analysis**

Sravanthi Parasa<sup>1</sup>,<sup>\*</sup> Madhav Desai,<sup>2</sup> Anusha Vittal,<sup>3</sup> Viveksandeep T Chandrasekar,<sup>3</sup> Asad Pervez,<sup>3</sup> Kevin F Kennedy,<sup>4</sup> Neil Gupta,<sup>5</sup> Nicholas J Shaheen,<sup>6</sup> Prateek Sharma<sup>7</sup>

ORIGINAL ARTICLE

**Artificial intelligence using convolutional neural networks for real-time detection of early esophageal neoplasia in Barrett's esophagus (with video)**

Rintaro Hashimoto, MD,<sup>1</sup> James Requa,<sup>2</sup> Dao Tyler,<sup>2</sup> Andrew Ninh,<sup>2</sup> Elise Tran,<sup>1</sup> Daniel Mai,<sup>1</sup> Michael Lugo,<sup>1</sup> Nabil El-Hage Chehade, MD,<sup>1</sup> Kenneth J. Chang, MD,<sup>1</sup> Williams E. Karnes, MD,<sup>1</sup> Jason Samarasena, MD<sup>1</sup>

Orange, Irvine, California, USA

CLINICAL GASTROENTEROLOGY AND HEPATOLOGY 2013;11:1562-1570

## SYSTEMATIC REVIEWS AND META-ANALYSES

Fasiha Kanwal, Section Editor

**Advanced Imaging Technologies Increase Detection of Dysplasia and Neoplasia in Patients With Barrett's Esophagus: A Meta-analysis and Systematic Review**

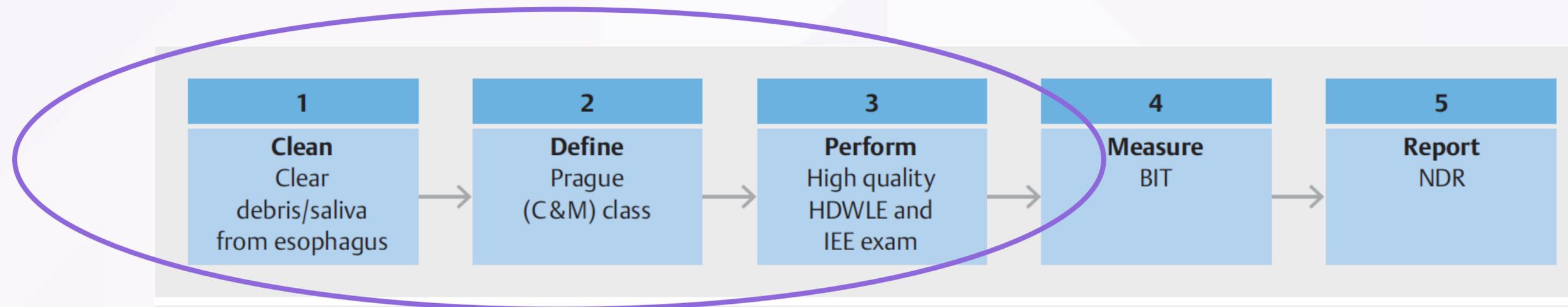
BASHAR J. QUMSEYA,<sup>\*</sup> HAIBO WANG,<sup>†</sup> NICOLE BADIE,<sup>§</sup> ROSEMARY N. UZOMBA,<sup>||</sup> SRAVANTHI PARASA,<sup>¶</sup> DONNA L. WHITE,<sup>\*\*</sup> HERBERT WOLFSEN,<sup>\*\*</sup> PRATEEK SHARMA,<sup>\*\*</sup> and MICHAEL B. WALLACE<sup>\*\*</sup>

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# PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA



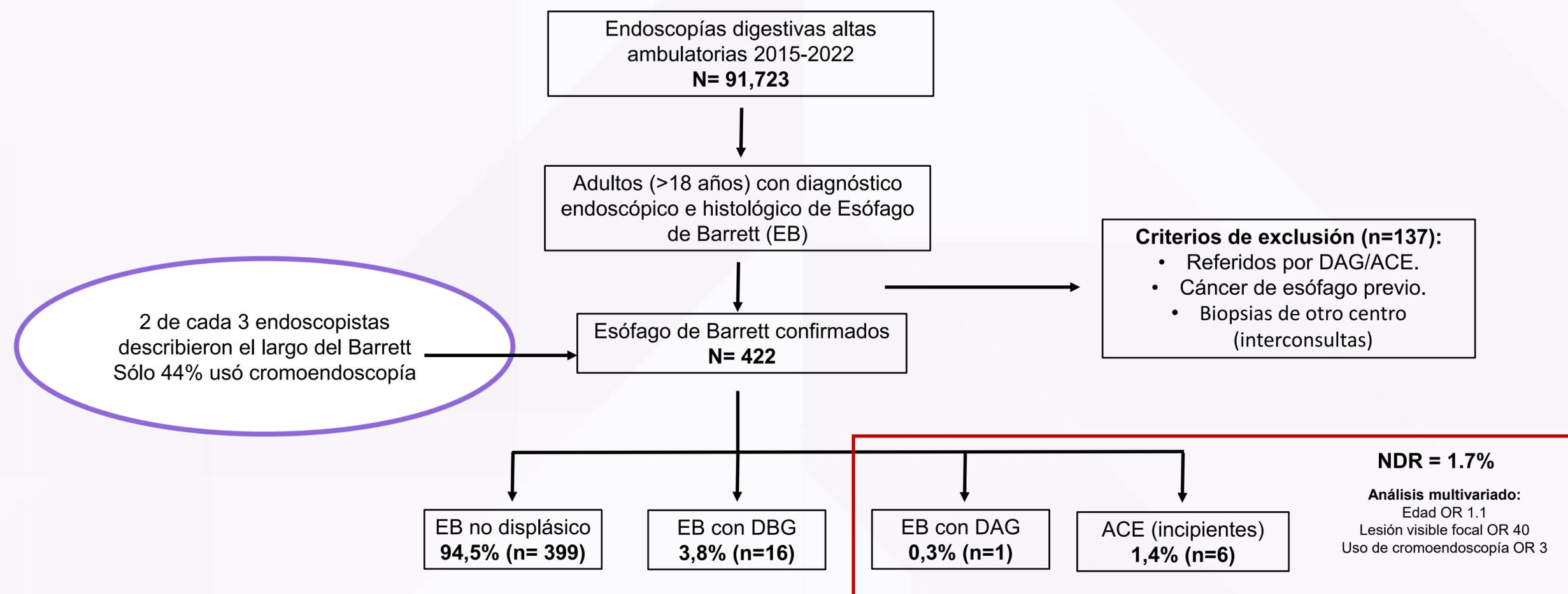
# Endoscopia de alta calidad



► **Fig. 1** Components of a high quality Barrett's endoscopy. C&M, maximum circumferential length and maximum Barrett's length; HDWLE, high definition white-light endoscopy; IEE, image-enhanced endoscopy; BIT, Barrett's inspection time; NDR, neoplasia detection rate.

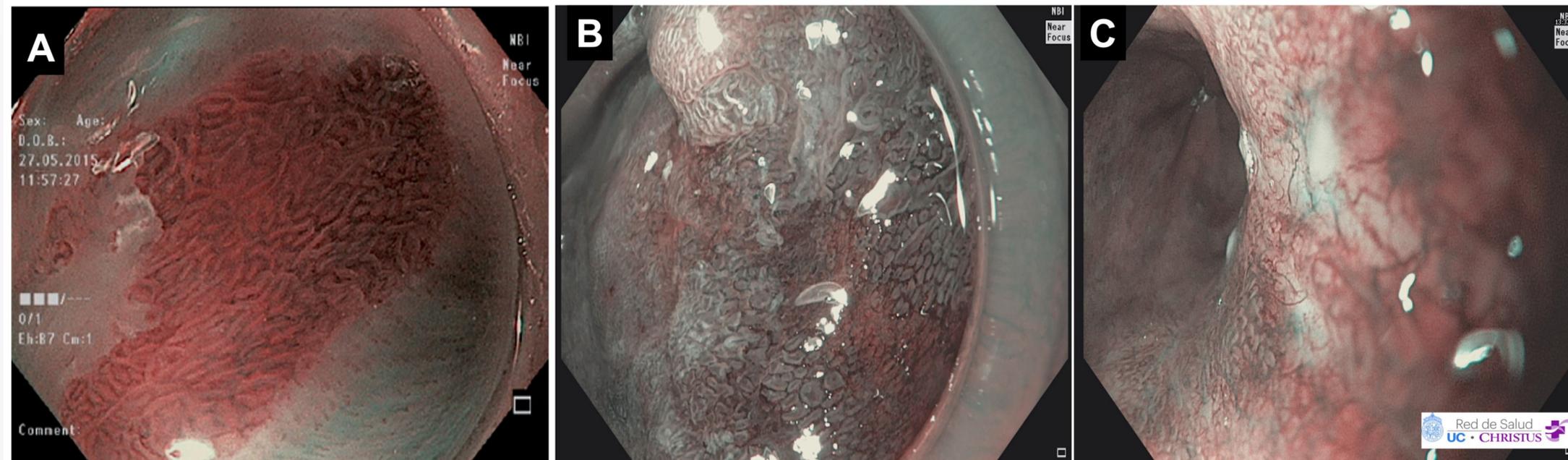


# Esófago de Barrett en Chile: Caracterización de una cohorte endoscópica y factores de riesgo asociados con detección de displasia y cáncer



# Mensajes para la casa

- Praga, BING, París, NDR, IA
- Sin la calidad endoscópica básica no podemos asegurar un adecuado diagnóstico y seguimiento a los pacientes, por lo tanto es necesario poner énfasis en la **oportunidad de la primera endoscopia de calidad**



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