UC | Chile

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Lo mejor del DDW2024

Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

Esófago de Barrett y patología esofágica (EOE)

Dr. Alberto Espino
Profesor Clínico Asociado Dpto Gastroenterología
Pontificia Universidad Católica de Chile
Director Fellow Endoscopia Avanzada UC
Jefe Procedimientos Digestivos Hospital Clínico UC-CHRISTUS
Director Comité Esófago de Barrett SIED

aoespino@uc.cl

Sociedad Chilena de Gastroenterología

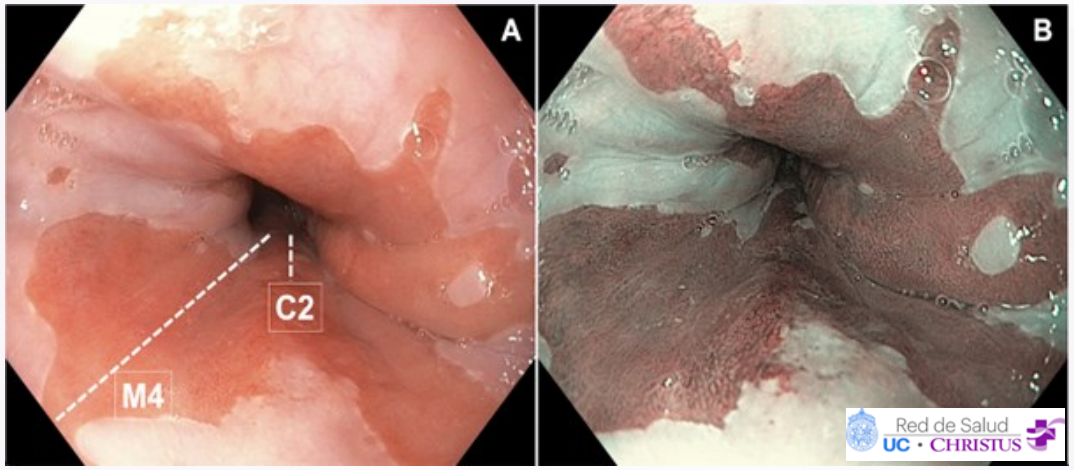
Sociedad Interamericana de Endoscopia Digestiva

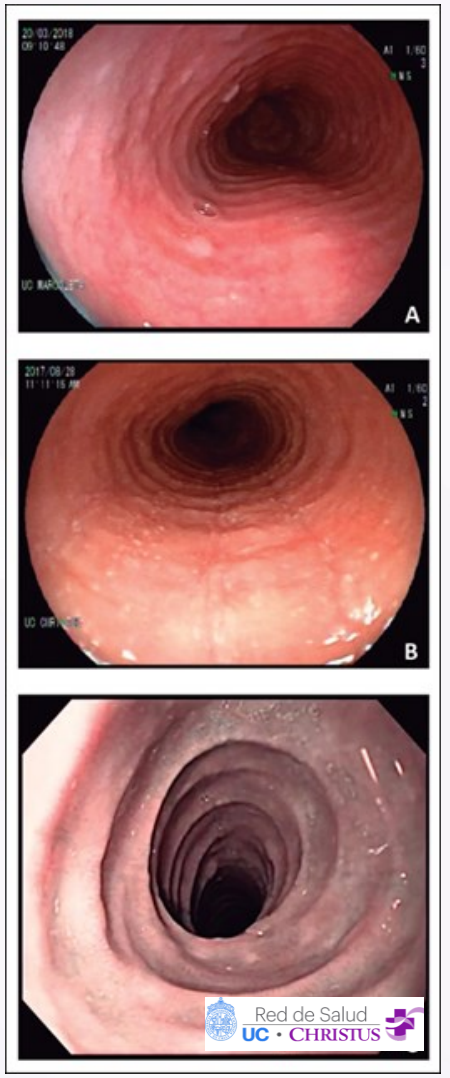
Agenda

DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

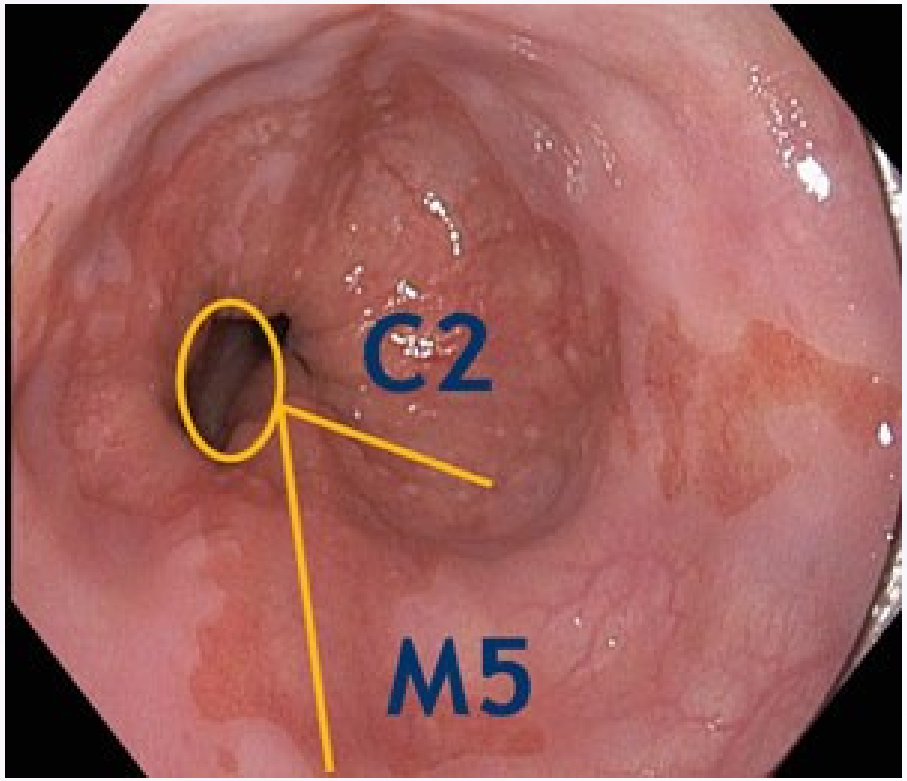
CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

- **Esófago de Barrett**
- **Esofagitis eosinofílica**
- **ERGE, acalasia → Dr. Christián Von Mühlenbrock**
- **Terapéutica esofágica → Dr. Rodrigo Mansilla**





Esófago de Barrett: Resumen Estado del Arte en el DDW2024



- **Epidemiología:** 10-15% (13% Latam) de los pacientes con ERGE. Es más común en hombres, >50 años. Prevalencia aumentando, posiblemente por la obesidad y el tabaquismo.
- **Diagnóstico:** Endoscopia de alta calidad **(incluye IA),** con biopsias múltiples para confirmar la presencia de MI. Se clasifica según la presencia de displasia, un factor de riesgo para la progresión a ACE. **Estudios no invasivos con biomarcadores (p53) y formas de identificar mejor el riesgo de progresión**
- **Tratamiento:** Controlar el ERGE con cambios en el estilo de vida (dieta, pérdida de peso, evitar fumar) y medicamentos como IBP. En casos seleccionados con displasia se considera el tratamiento endoscópico (resección y/o ablación) como la primera opción para prevenir la progresión a ACE. **Requiere seguimiento de largo plazo.**

Clave del manejo: Endoscopia de Alta Calidad

Editorial

Thieme

High quality Barrett's endoscopy: inspection time is a critical component

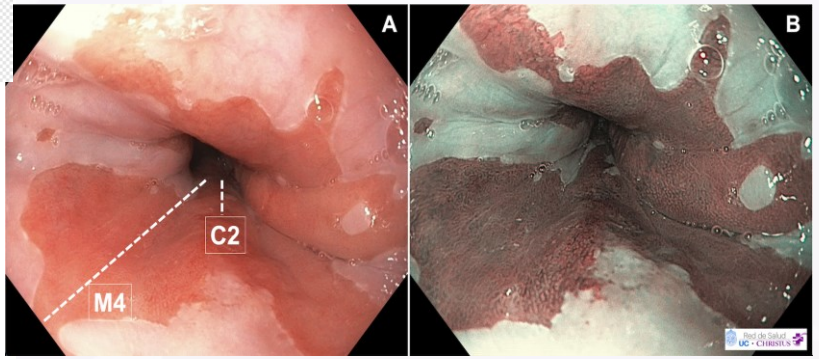
Referring to Vithayathil M et al. p.491–498

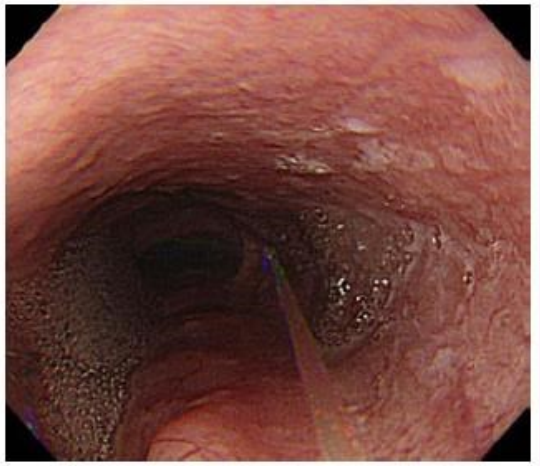
Madhav Desai

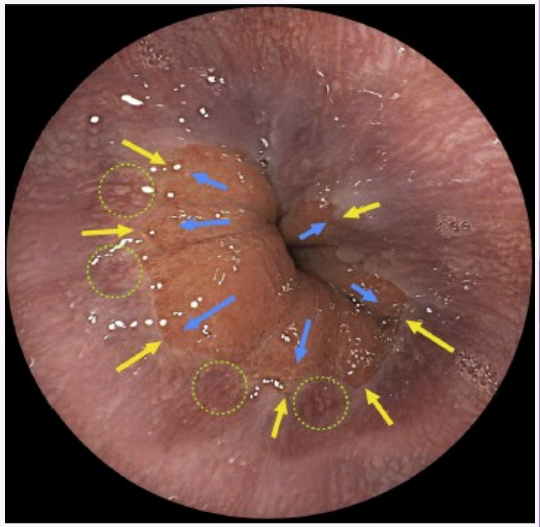
Prateek Sharma

Authors
Madhav Desai[1], Prateek Sharma[2,3]

Institutions
1 Division of Gastroenterology, Hepatology and Nutrition, Department of Medicine, University of Minnesota Medical Center, Minneapolis, Minnesota, United States
2 Division of Gastroenterology, Hepatology and Motility, Department of Internal Medicine, University of Kansas School of Medicine, Kansas City, Kansas, United States
3 Department of Gastroenterology, Kansas City VA Medical Center, Kansas City, Missouri, United States







1	2	3	4	5
Clean Clear debris/saliva from esophagus	**Define** Prague (C&M) class	**Perform** High quality HDWLE and IEE exam	**Measure** BIT 1min/cm	**Report** NDR

▶ **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.

Endoscopy 2023; 55: 499–500

Amsterdam UMC
Universitair Medische Centra

DOMAIN-SPECIFIC DATA AUGMENTATION FOR ROBUST DEEP-LEARNING SYSTEMS IN ENDOSCOPY

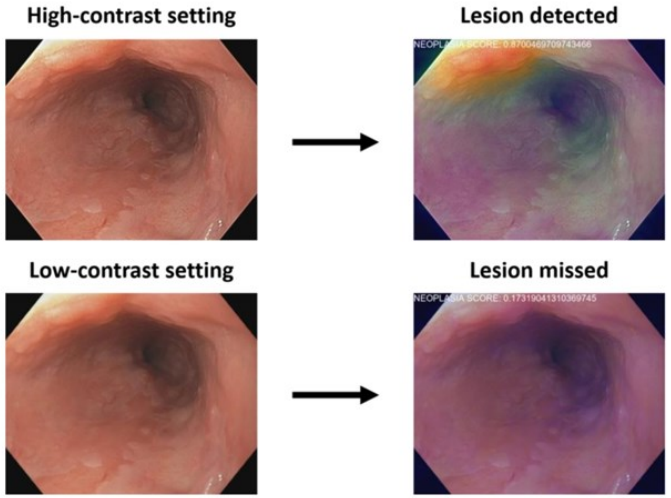
M.R. Jong[1], C.H.J. Kusters[2], Q.N.E. van Bokhorst[1], J.B. Jukema[1], R.A.H. van Eijck van Heslinga[1], K.N. Fockens[1], B. Houwen[1], B T.J.M. Jaspers[2], T.G.W. Boers[2], M. van der Vlugt[1], E. Dekker[1], F. van der Sommen[2], P.H. de With[2], A.J. de Groof[1], J.J. Bergman[1] on behalf of the BONSAI Consortium

BONSAI CONSORTIUM

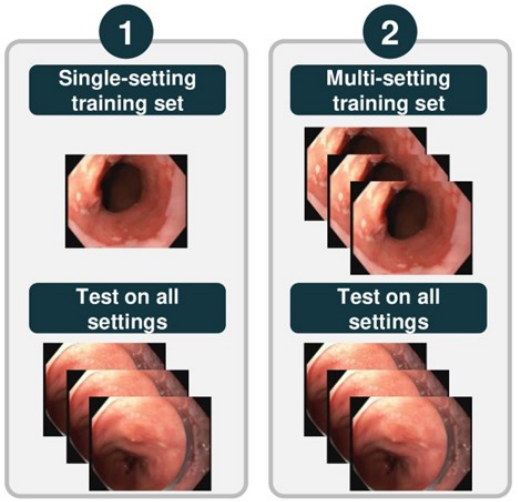
1. Department of Gastroenterology and hepatology, Amsterdam UMC, Amsterdam, The Netherlands
2. Department of electrical engineering, TU Eindhoven, Eindhoven, The Netherlands

Background

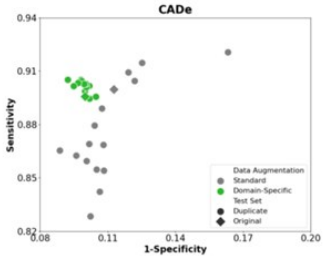
- Endoscopic AI systems are often developed in standardized expert centers. In routine practice, image heterogeneity is common.
- A primary source of this variability is the diversity of post-processing enhancement settings of modern endoscopy platforms. Current AI systems may be poorly adapted to these settings.
- This study aims to assess the influence of various enhancement settings on accuracy of endoscopic AI applications and to evaluate strategies to improve performance stability.



Methods



Results



Trained with	Metric	Performance variability, Range (min-max)
Single-setting training set	Sensitivity	9% (83-92)
	Specificity	7% (84-91)
Multi-setting training set	Sensitivity	2% (89-91)
	Specificity	1% (90-91)

Conclusion

- Performance of existing AI systems in endoscopy may vary significantly based on the post-processing enhancement settings used in different endoscopy units.
- Domain-specific data augmentation, encompassing a range of enhancement settings, can effectively mitigate this variability, ensuring consistent and robust AI performance across diverse endoscopic centers.

Mail: m.jong3@amsterdamumc.nl

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo.
SChGE

DDW2024
Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

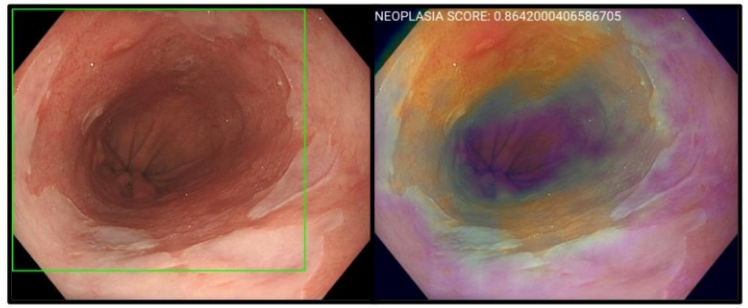
EVALUATING GRAPHICAL USER INTERFACES FOR COMPUTER-AIDED DETECTION OF BARRETT'S NEOPLASIA

J.B. Jukema[1], M.R. Jong[1], C.H.J. Kusters[2], R.A.H. van Eijck van Heslinga[1], T.G.W. Boers[2], B T.J.M. Jaspers[2], K.N. Fockens[1], J.A. van der Putten[2], R.E. Pouw[1], L.C. Duits[1], F. van der Sommen[2], P.H. de With[2], A.J. de Groof[1], J.J. Bergman[1] on behalf of the BONSAI Consortium.

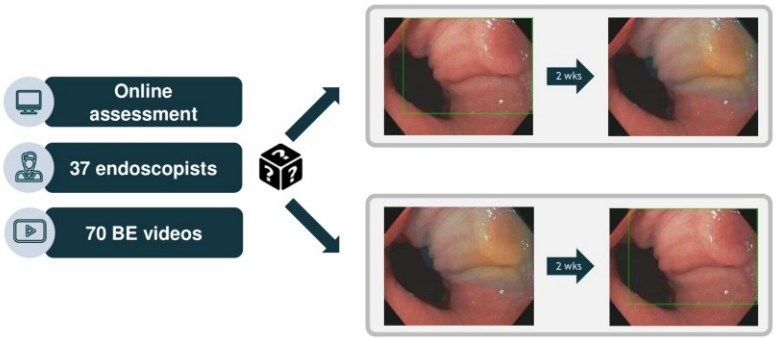
1. Department of Gastroenterology and hepatology, Amsterdam UMC, Amsterdam, The Netherlands
2. Department of electrical engineering, TU Eindhoven, Eindhoven, The Netherlands

Background

- The surge of artificial intelligence (AI) applications has currently not been matched with thorough investigation of endoscopist-AI interaction.
- Our recently developed computer aided detection (CADe) system for Barrett's neoplasia1 improved detection rates of endoscopists in an ex-vivo study.
- However, endoscopists with CADe assistance did not reach the level of the CADe system in a stand-alone setting. This may be due to lack of onboarding and suboptimal endoscopist-AI interaction.
- The aim of this study was to compare two graphical user interfaces (GUI) for a CADe system for Barrett's neoplasia.



Methods



Results

Classification performance

Metric	Bounding box	Heatmap	p-value
Sensitivity (IQR)	83% (74-89)	83% (71-89)	0.29
Specificity (IQR)	86% (74-94)	86% (74-91)	0.09

Localization performance

Metric	Bounding box	Heatmap	p-value
Soft spot (IQR)	97% (93-97)	97% (95-100)	0.09
Plausible spot (IQR)	93% (90-96)	94% (91-96)	0.62
Sweet spot (IQR)	72% (68-77)	75% (70-80)	0.11

Conclusion

- No differences found for classification and localization performance.
- Majority of endoscopists (23/37) preferred heatmap.
- Possible reasons for outcome include small sample size of subtle lesions, lack of onboarding or simply no difference between GUIs

Mail: m.jong3@amsterdamumc.nl

DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Biomarker Risk Stratification Using the Capsule Sponge for the Surveillance of Barrett's Esophagus: Interim Results from UK real-world implementation pilots

W. Keith Tan*, Massimiliano di Pietro, Maria O'Donovan, Craig Vickery, Nicola Gogin, Ita Boyle, Evelyn Caspillo, Jacquelyn Harvey, Kim Shaw, Danielle Morris, Rebecca C. Fitzgerald

*Cancer Research UK Clinical PhD Fellow & Honorary Fellow in Gastroenterology, Early Cancer Institute, University of Cambridge, Cambridge, UK

Early Cancer Institute

UNIVERSITY OF CAMBRIDGE

CANCER RESEARCH UK | CAMBRIDGE CENTRE

DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

Introduction

- Endoscopic surveillance with the Seattle biopsy protocol is recommended for Barrett's Esophagus (BE)[1,2]
- Seattle protocol is time consuming, prone to sampling error and expensive
- Capsule sponge devices can sample the entire esophagus quickly and be used for screening for BE[2,3,4]
- Whether capsule sponge devices could be used for surveillance has not been extensively evaluated

Cytosponge

Endosign

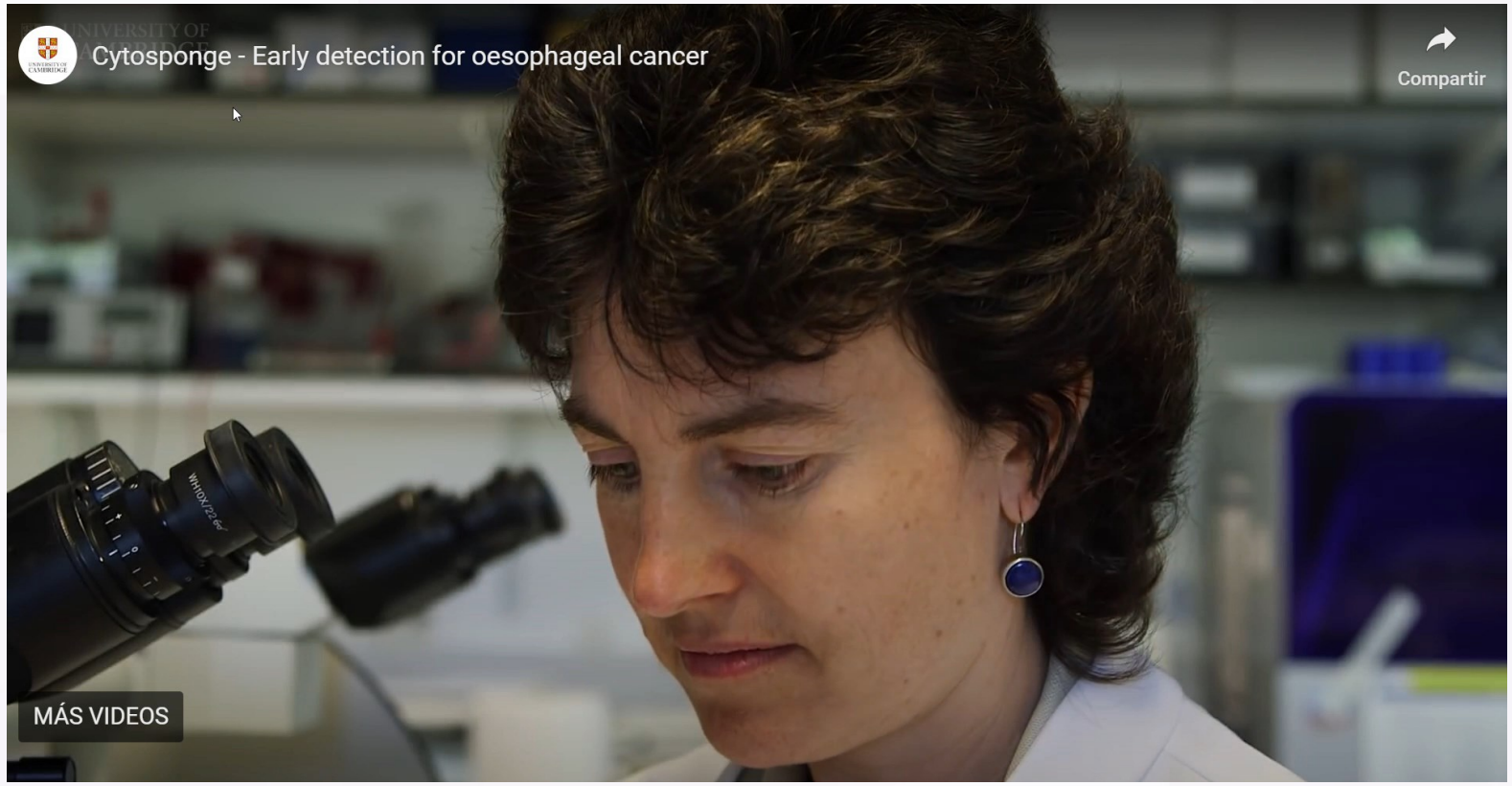
Early Cancer Institute

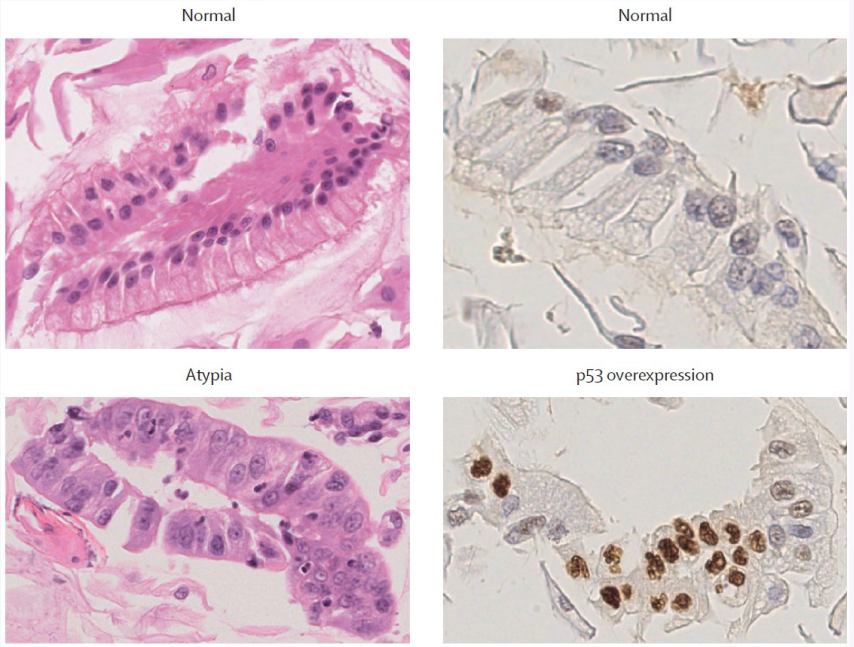
1) Fitzgerald et al. Gut 2014
2) Shaheen et al. ACG 2022
3) Kadri et al. BMJ 2010
4) Fitzgerald et al. Lancet 2020

Cytosponge

DDW2024
Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE





Prof Rebecca C Fitzgerald
MRC Cancer Unit, Hutchison-MRC Research Centre, University of Cambridge, Cambridge CB2 0XZ, UK
rcf29@cam.ac.uk

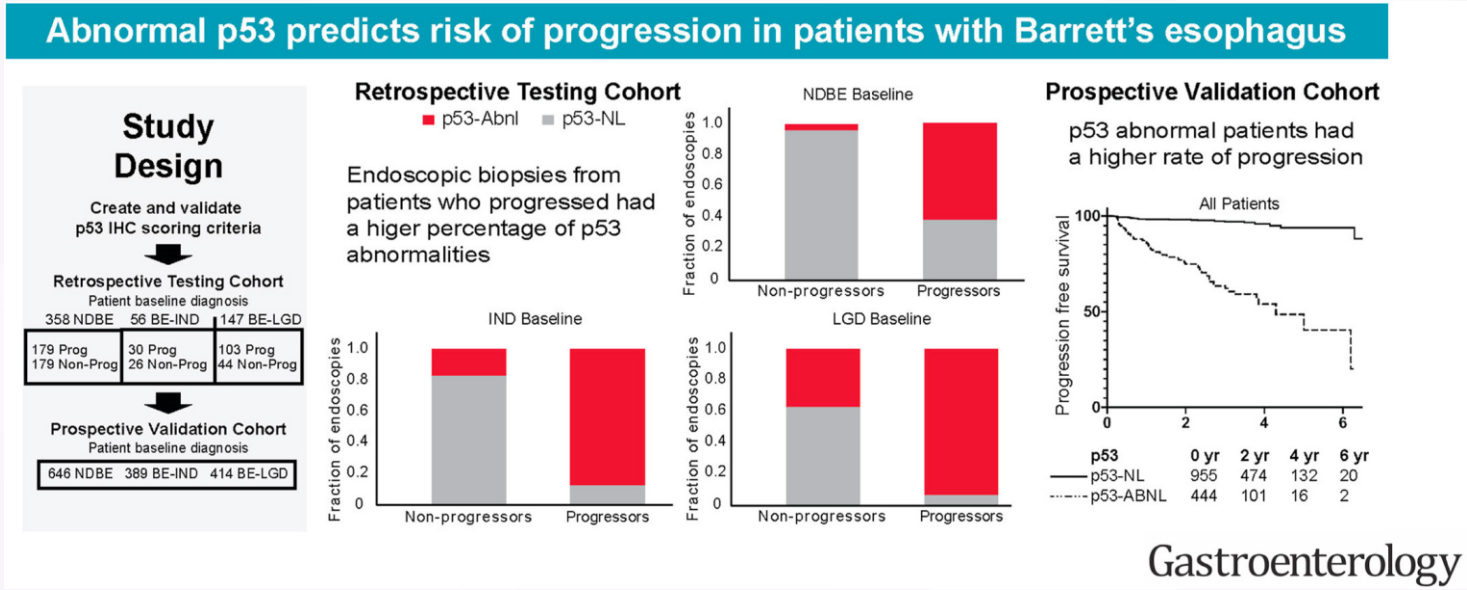
Costo aprox: $200-500

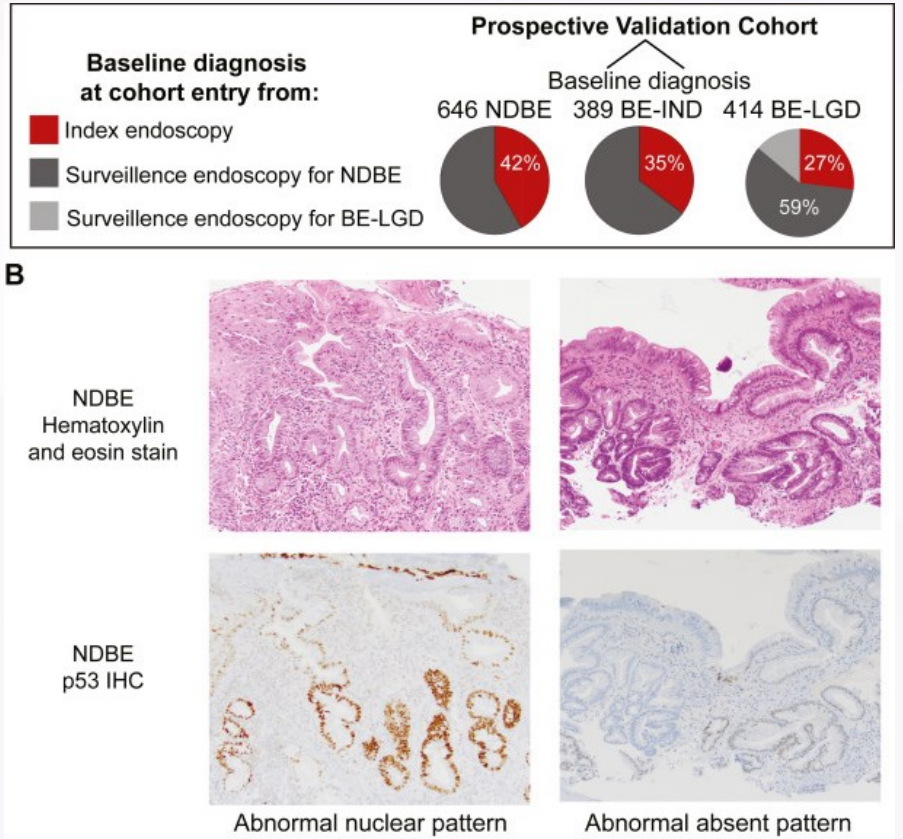
DDW2024 Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Proteína supresora de tumores p53

→ Factor independiente de riesgo de progresión hacia DAG/ACE





- ✓ **La IHC-p53 podría considerarse en biopsias de todos los pacientes con EB**
- ✓ **Puede ayudar a identificar pacientes con EB no displásico que pueden beneficiarse de vigilancia más intensiva**

Redston M, et al. Abnormal TP53 Predicts Risk of Progression in Patients With Barrett's Esophagus Regardless of a Diagnosis of Dysplasia. Gastroenterology 2022;162(2):468-481

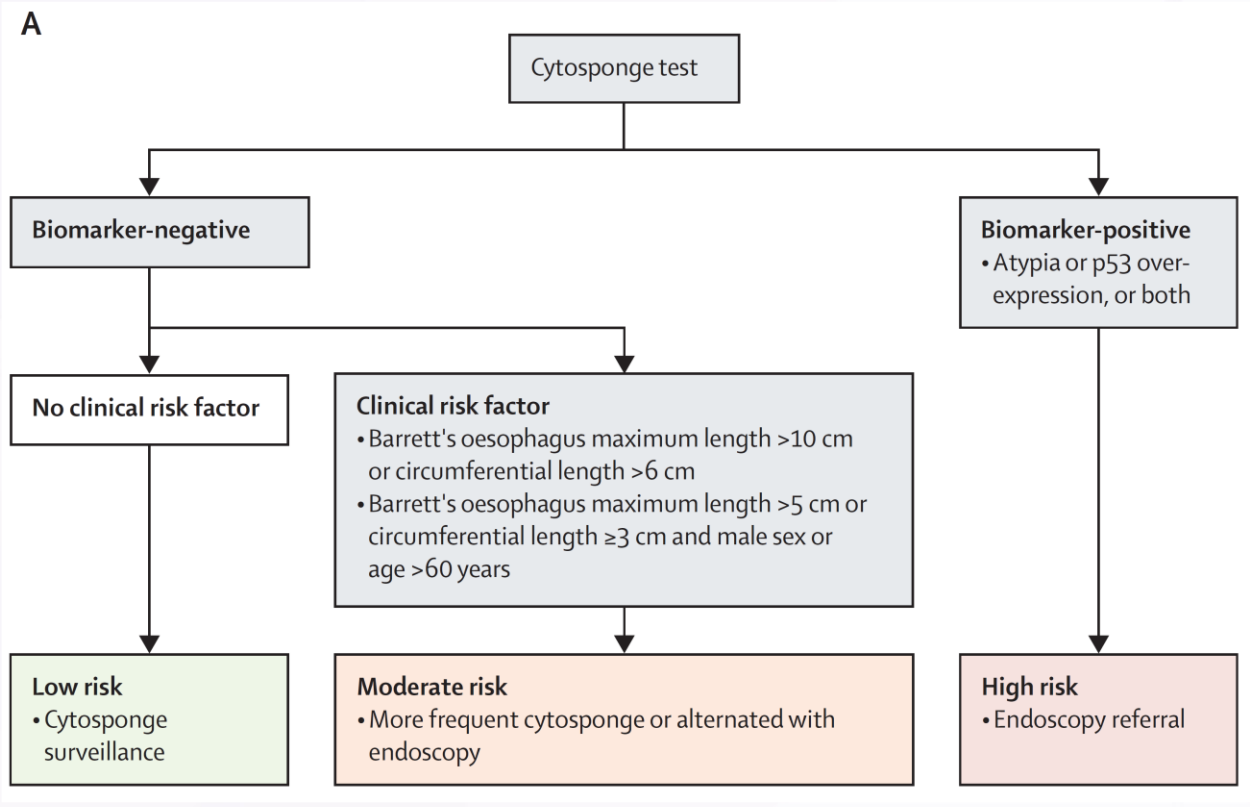
DDW2024 Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Use of a Cytosponge biomarker panel to prioritise endoscopic Barrett's oesophagus surveillance: a cross-sectional study followed by a real-world prospective pilot

Nastazja Dagny Pilonis*, Sarah Killcoyne*, W Keith Tan, Maria O'Donovan, Shalini Malhotra, Monika Tripathi, Ahmad Miremadi, Irene Debiram-Beecham, Tara Evans, Rosemary Phillips, Danielle L Morris, Craig Vickery, Jon Harrison, Massimiliano di Pietro, Jacobo Ortiz-Fernandez-Sordo, Rehan Haidry, Abigail Kerridge, Peter D Sasieni, Rebecca C Fitzgerald

Lancet Oncol 2022; 23: 270–78



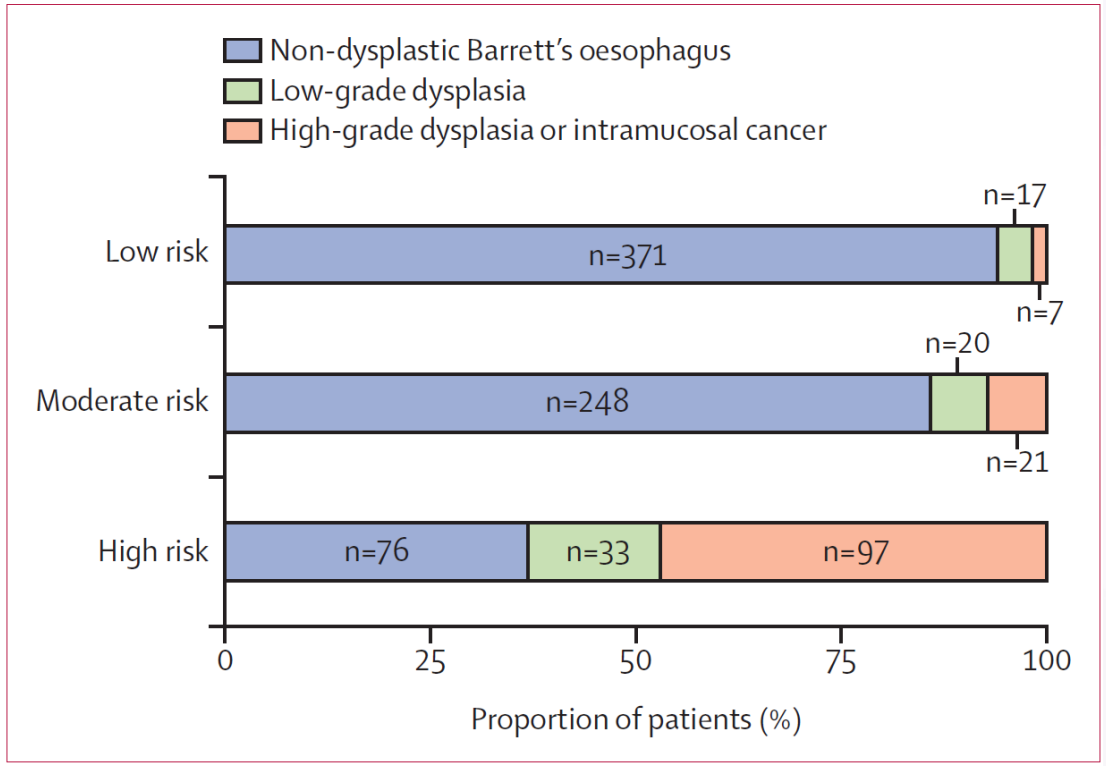
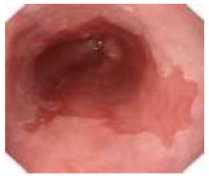


Figure 3: **Summary of dysplasia status in each risk group**

Interpretation Cytosponge atypia, p53 overexpression, and clinical risk factors (age, sex, and segment length) could be used to prioritise patients for endoscopy. Further investigation could validate their use in clinical practice and lead to a substantial reduction in endoscopy procedures compared with current surveillance pathways.

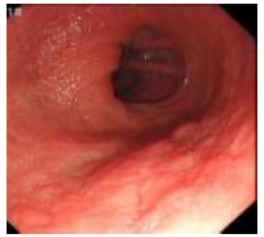
Aims

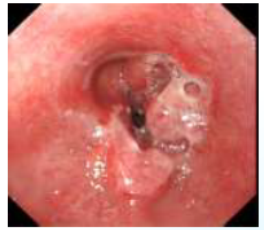
- Prospectively validate risk stratification biomarkers on a BE surveillance cohort not enriched for dysplasia



DELTA Early detection of oesophageal cancer

NHS England Capsule Sponge Implementation Pilot





Early Cancer Institute

Esófago de Barrett DDW2024 - Novedades

DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

DELTA Early detection of oesophageal cancer

Methods & Design

5 tertiary and community hospitals

2020-2022

Prospective cohort study

- **DELTA** (integrate**D** diagnostic solution for **E**ar**L**y de**T**ection of oesophageal c**A**ncer)
- **NHS England Capsule Sponge Implementation Pilot**

Eligibility criteria

- Any BE undergoing surveillance
- No prior endoscopic treatment

Intervention

Capsule sponge + risk stratification, and follow-up endoscopy as per clinician's discretion, but recommendations:

- **Low** Risk -> 2-3 years
- **Moderate** Risk -> 12-18 months
- **High** Risk -> urgent endoscopy (<6 weeks)

Outcomes

- **Primary:** PPV and NPV for dysplasia/cancer according to risk groups
- **Secondary:** PPV for individual high-risk biomarker group for a diagnosis of dysplasia/cancer

Early Cancer Institute

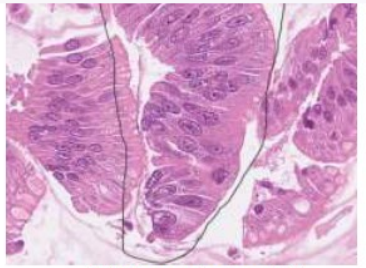
Atypia and p53 Correlates with Dysplasia/Cancer

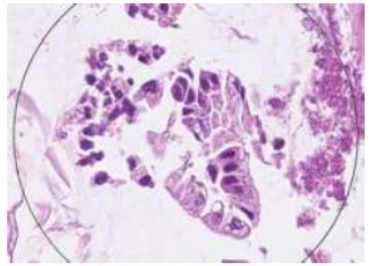
Resultados: 326 pacientes, 52.8% bajo riesgo; 28.5% riesgo moderado y 18.7% alto riesgo.
El VPP (valor predictivo positivo) grupo alto riesgo para displasia fue 44.3%

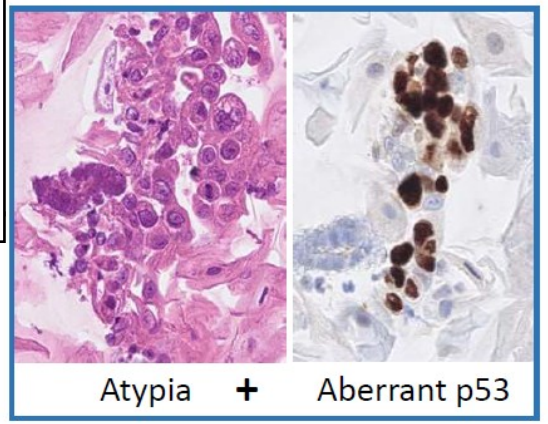
Dentro de la categoría de alto riesgo, el VPP para displasia cuando p53 y atipia fueron positivos fue del 92.8% (13/14).

El VPN para displasia en pacientes de bajo riesgo fue 98.3% (169/172), con un 1.7% (3/172) presentando displasia (1 LGD, 1 displasia criptoglandular, 1 HGD) después de un seguimiento promedio de 351 días.

El VPN para riesgo moderado fue del 96.8% (90/93), con un 3.2% (3/93) que presentó displasia (2 LGD y 1 HGD). No hubo casos de cáncer intramucoso/invasivo en los grupos de bajo y moderado riesgo


AUS (crowded nuclei)


AUS (irregular dark nuclei)



Early Cancer Institute

Next Steps

- Aim to gather ~600 cases who had capsule sponge and follow-up endoscopy results available

- Comparing dysplasia detection rates of patients who swallowed capsule sponge to a propensity score matched counterfactual cohort
  - Barrett's surveillance cohort who has not swallowed capsule sponge
  - Aiming for 1:1 match (~600 cases)

DDW2024
Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo.
SChGE

The Tissue Systems Pathology Test Enables Risk-Aligned Management For Patients With Barrett's Esophagus

Lucas C. Duits[1], Amir M. Khoshiwal[1], Jon M. Davison[2], Prashanthi N. Thota[3], John R. Goldblum[3], David L. Diehl[4], Harshit S. Khara[4], Gary W. Falk[5], Christian Smolko[6], Meenakshi Arora[6], Jennifer J. Siegel[6], Rebecca J. Critchley-Thorne[6*], and Jacques J. Bergman[1*]

[1]Amsterdam University Medical Centers, Amsterdam, The Netherlands; [2]University of Pittsburgh School of Medicine, Pittsburgh, PA, USA; [3]Cleveland Clinic, Cleveland, Ohio, USA; [4]Geisinger Medical Center, Danville, PA, USA; [5]Perelman School of Medicine University of Pennsylvania, Philadelphia, PA, USA; [6]Castle Biosciences, Inc., Pittsburgh, PA, USA.

Amsterdam UMC · University of Pittsburgh School of Medicine · Cleveland Clinic · Geisinger · Perelman School of Medicine University of Pennsylvania · CASTLE BIOSCIENCES

Clinical needs in the management of Barrett's esophagus

- Endoscopic Barrett's esophagus (BE) surveillance to detect and treat dysplasia and esophageal adenocarcinoma (EAC) at an early stage[1,2]
- Current risk stratification based on pathology diagnosis and clinical factors[3,4]
- Effective endoscopic eradication therapy (EET) is available[3,4]
- However, endoscopic surveillance does not impact EAC incidence nor improves survival rates[5]
- Precision medicine tools needed to improve risk stratification and enable risk-aligned management:

High-risk BE patients
Short interval surveillance or EET

Low-risk BE patients
Long interval surveillance

[1]Shaheen NJ et al. *Am J Gastroenterol*. 2022;117(4):559-587; [2]Muthusamy VR et al. *Clinical Gastroenterology and Hepatology*. 2022;0(0).
[3]Kambhampati S et al *Sci Rep*. 2020;10:4899; [4]Desai M et al., *Aliment Pharmacol Ther*. 2021;54(3):222-233; [5]Cancer Facts & Figures 2023, American Cancer Society.

DDW2024
Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

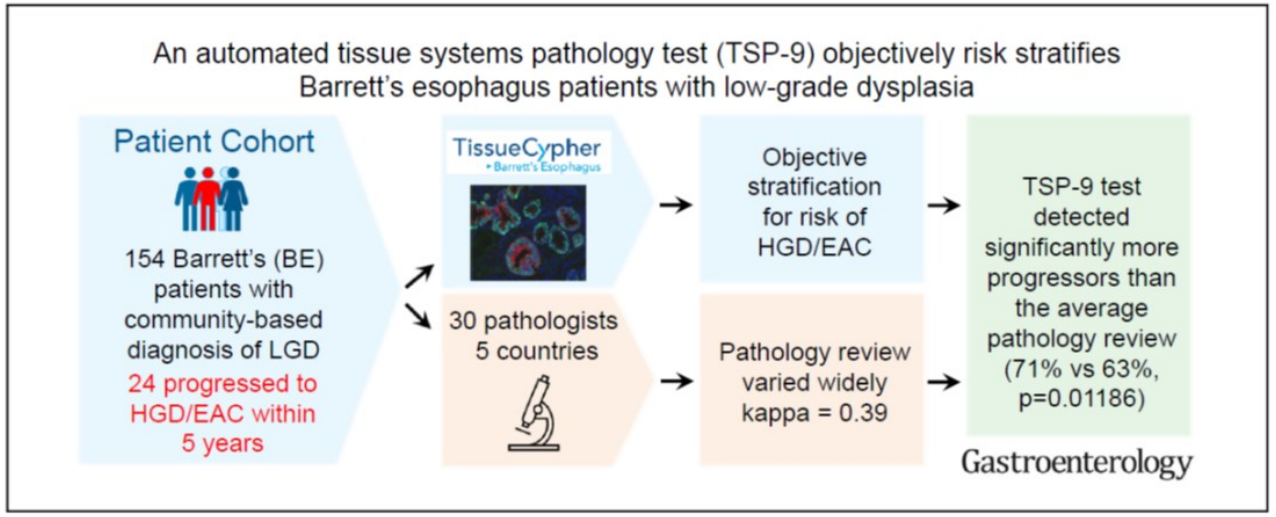
CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Gastroenterology 2023;165:1168–1179

The Tissue Systems Pathology Test Outperforms Pathology Review in Risk Stratifying Patients With Low-Grade Dysplasia

Amir M. Khoshiwal,[1] Nicola F. Frei,[1] Roos E. Pouw,[2] TissueCypher SURF LGD Study Pathologists Consortium, Christian Smolko,[3] Meenakshi Arora,[3] Jennifer J. Siegel,[3] Lucas C. Duits,[1] Rebecca J. Critchley-Thorne,[3] and Jacques J. G. H. M. Bergman[1]

[1]Amsterdam UMC location University of Amsterdam, Department of Gastroenterology and Hepatology, Amsterdam, The Netherlands; [2]Amsterdam UMC location Vrije Universiteit Amsterdam, Department of Gastroenterology and Hepatology, Amsterdam, The Netherlands; and [3]Castle Biosciences, Inc, Pittsburgh, Pennsylvania



EDITORIALS

TSP-9: A Barrett's Esophagus Biomarker Better Than Pathologists?

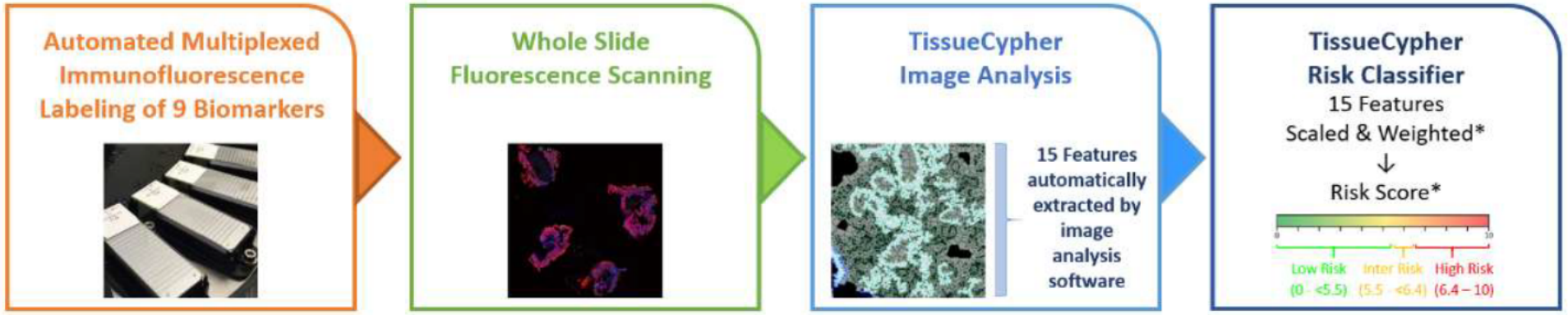
See "The tissue systems pathology test outperforms pathology review in risk stratifying patients with low-grade dysplasia," by Khoshiwal AM, Frei NF, Pouw RE, et al, on page 1168.

In this issue of *Gastroenterology*, the authors extended the prior analysis of the SURF data by recruiting a total of 30 pathologists (14 expert and 16 community) from the Netherlands, Belgium, Germany, the UK, and the United States to review the index specimens.[12] Of the 154 patients included, 24 progressed to HGD or cancer within 5 years. Clinical features of age, sex, and Barrett's esophagus length did not

The tissue systems pathology test (TissueCypher, TSP-9) has been validated to risk stratify patients with BE

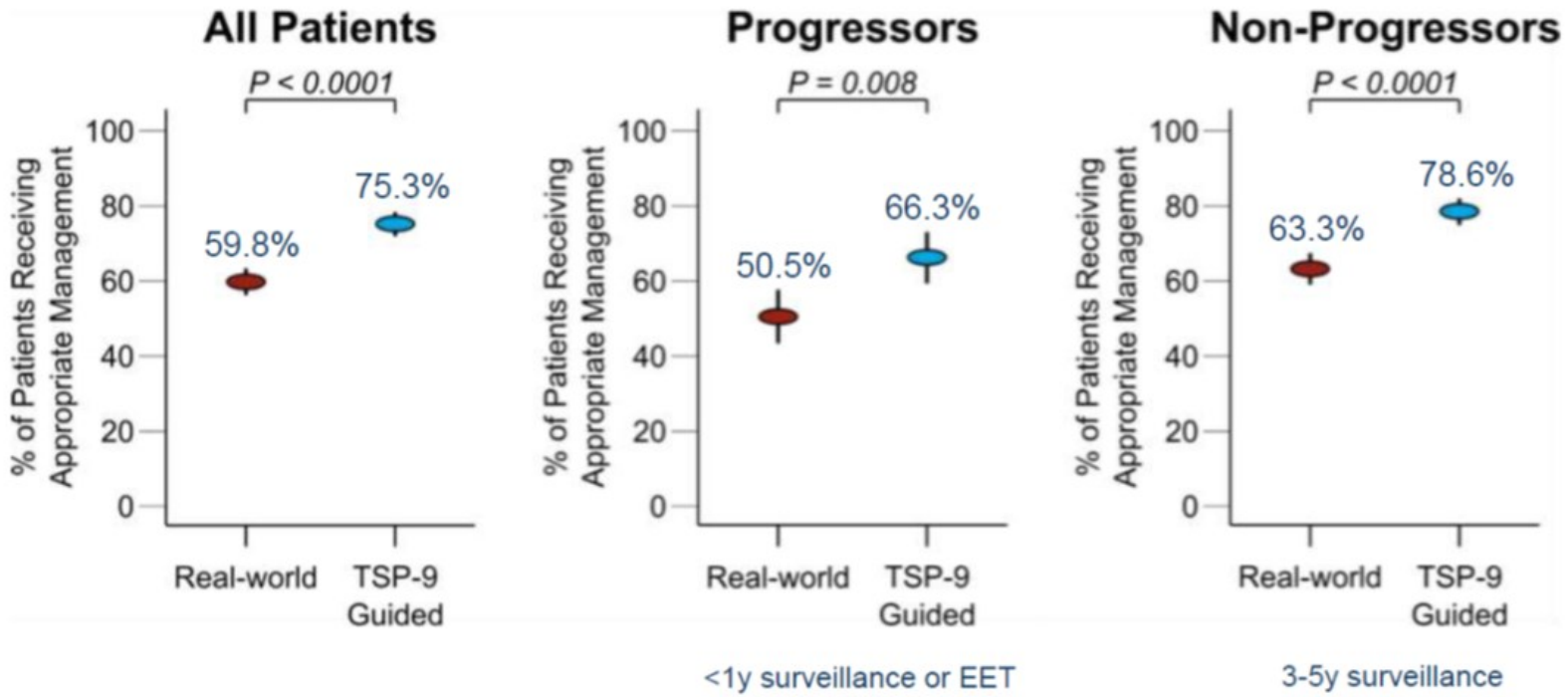
5 independent clinical validation studies and pooled analyses have demonstrated that:

- The TSP-9 test predicts incident progression to HGD and EAC;
- And predicts presence of prevalent HGD/EAC, in patients with BE[1-7].



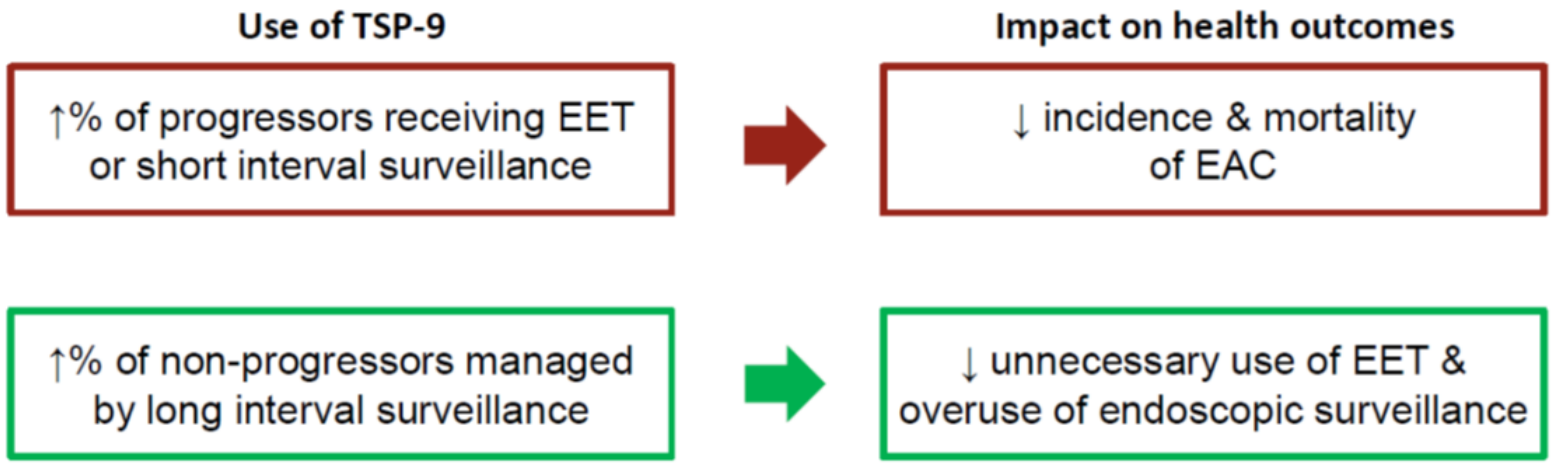
[1]Critchley-Thorne RJ, et al. *Cancer Epidemiol Biomarkers* Prev 2016;25:958–968; [2]Critchley-Thorne RJ, et al. *Cancer Epidemiol Biomarkers Prev* 2017;26:240–248; [3]Davison JM, et al. *Am J Gastroenterol* 2020;115:843–852; [4]Frei NF, et al. *Clin Transl Gastroenterol* 2020;11:e00244; [5]Frei NF, et al. Am J Gastroenterol 2021;116:675–682; [6]Iyer PG, et al. *Clin Gastroenterol Hepatol* 2022;S1542-3565(22)00190–2; [7]Davison JM, et al. *Clin Transl Gastroenterol* 2023;14:e00631.

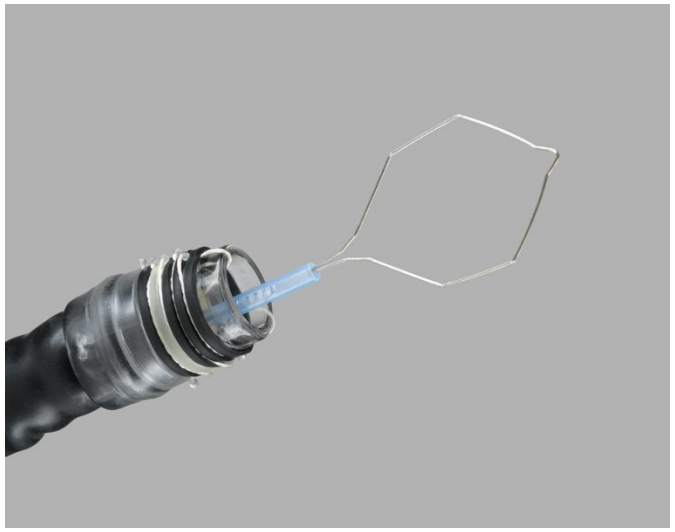
Use of TSP-9 increased appropriate management in progressors and non-progressors

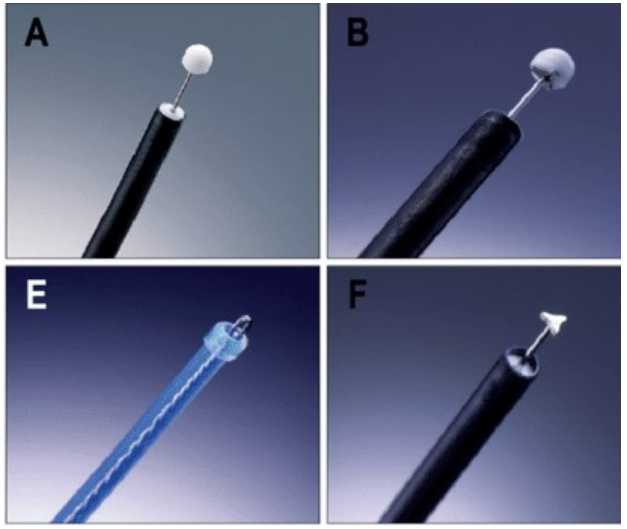


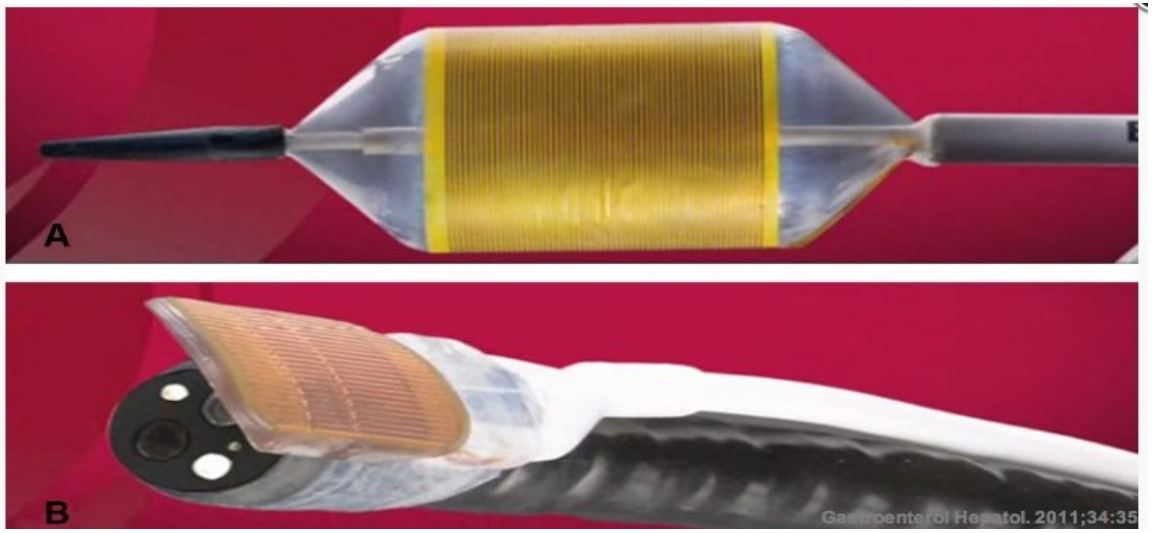
Conclusions and Implications

- Use of TSP-9 results demonstrated broad clinical utility
- Significantly improved the likelihood of receiving appropriate management for:
  - Progressors and non-progressors with BE;
  - Patients with NDBE;
  - Short and long segment BE.



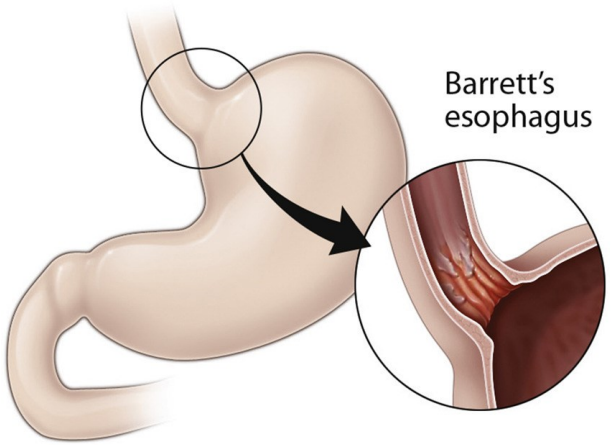


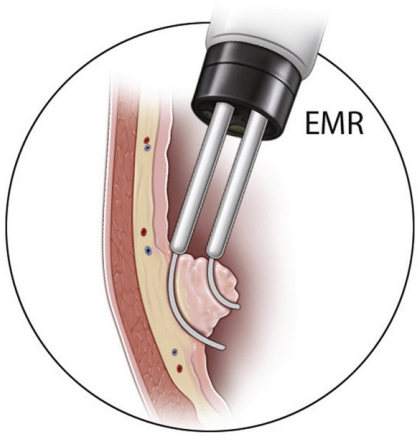


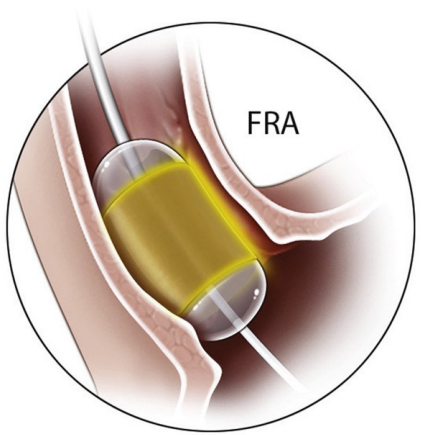


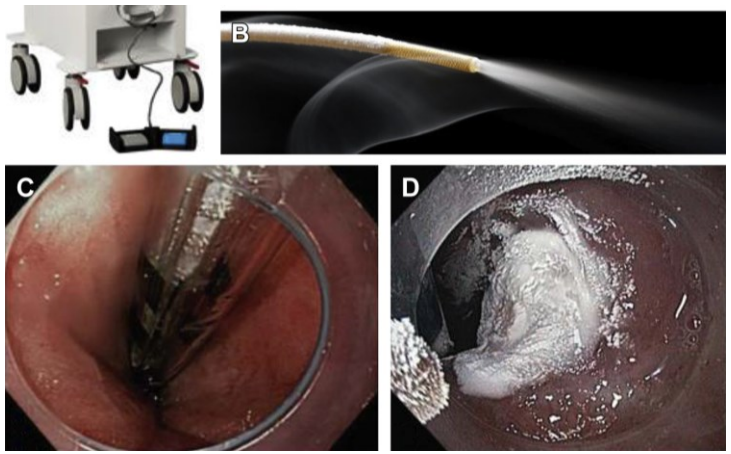
Tratamiento Endoscópico de Barrett 2024

Endoscópica Resectivas (EMR/ESD) + Ablativas (RFA/Crioablación/APC)









DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

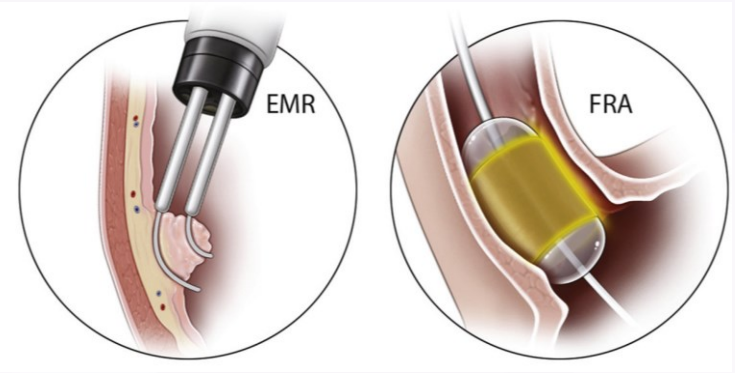
CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Gastroenterology 2024;166:1020–1055

GUIDELINES

AGA Clinical Practice Guideline on Endoscopic Eradication Therapy of Barrett's Esophagus and Related Neoplasia

Joel H. Rubenstein,[1,2,3,*] **Tarek Sawas**,[4,*] **Sachin Wani**,[5,*] Swathi Eluri,[6] Shailendra Singh,[7,8] Apoorva K. Chandar,[9] Ryan B. Perumpail,[10] John M. Inadomi,[11] Aaron P. Thrift,[12] Alejandro Piscoya,[13] Shahnaz Sultan,[14,15] Siddharth Singh,[16] David Katzka,[17] and Perica Davitkov[18,19]



- ✓ **In patients undergoing EET, AGA suggests resection of visible lesions followed by ablation of the remaining BE segment over resection of the entire BE segment.**

Tratamiento Endoscópico del Barrett: ESGE 2023

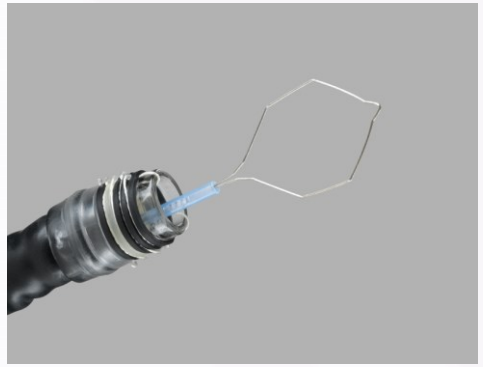
DDW2024 Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

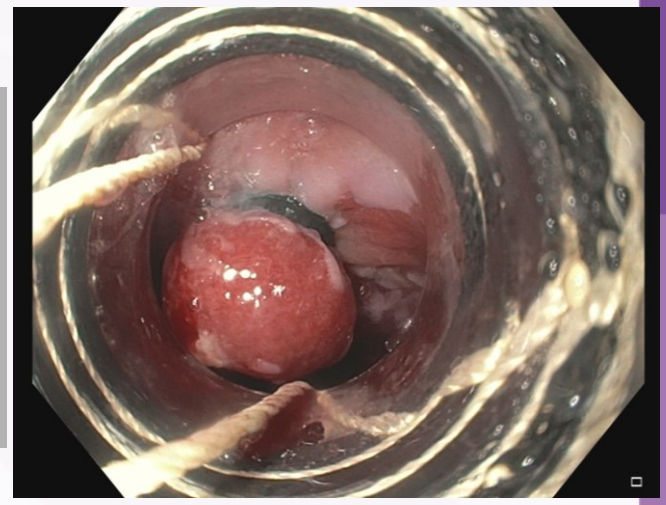
CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

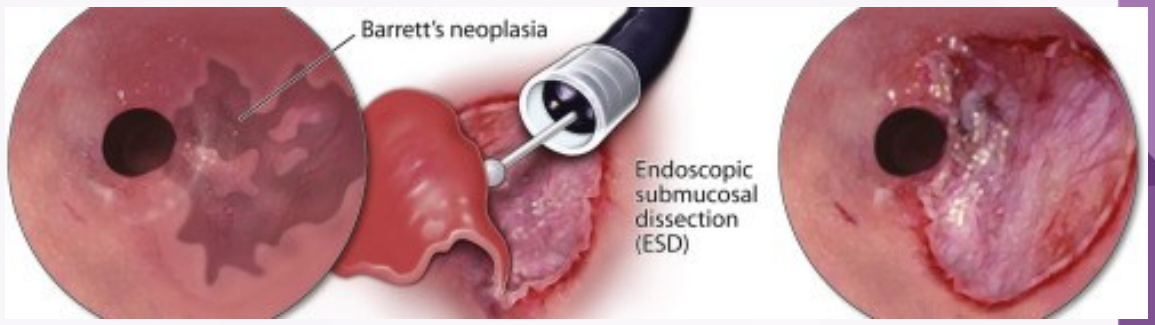
RECOMMENDATION 14

a ESGE recommends the use of endoscopic mucosal resection (EMR) for ≤20-mm visible lesions with low probability of submucosal invasion (Paris type 0-IIa, 0-IIb) and for larger or multifocal benign (dysplastic) lesions.
Strong recommendation, high quality evidence.

b ESGE suggests the use of endoscopic submucosal dissection (ESD) for lesions suspicious for submucosal invasion (Paris type 0-Is, 0-IIc), for malignant lesions of >20 mm, and for lesions in scarred/fibrotic areas.
Weak recommendation, low quality of evidence.







Red de Salud UC • CHRISTUS

Weusten BLAM, Bisschops R, Dinis-Ribeiro M, et al. Diagnosis and management of Barrett esophagus: European Society of Gastrointestinal Endoscopy (ESGE) Guideline. *Endoscopy*. 2023;55(12):1124-1146.

DDW2024
Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Rates of Recurrent Intestinal Metaplasia and Dysplasia After Successful Endoscopic Therapy of Barrett's Neoplasia by Endoscopic Mucosal Resection vs Endoscopic Submucosal Dissection and Ablation: A Large North American Multicenter Cohort

Kornpong Vantanasiri, MD[1,*], Abel Joseph, MD[2,*], Karan Sachdeva, MD[1], Rohit Goyal, MBBS[1], Nikita Garg, MBBS[1], Dayyan Adoor, MD[3], Amrit K. Kamboj, MD[1], D. Chamil Codipilly, MD[1], Cadman Leggett, MD[1], Kenneth K. Wang, MD, FACG[1], William Harmsen, MS[4], Umar Hayat, MD[3], Amitabh Chak, MD, FACG[3], Amit Bhatt, MD[5,*] and Prasad G. Iyer, MD, MSc, FACG[1,*]

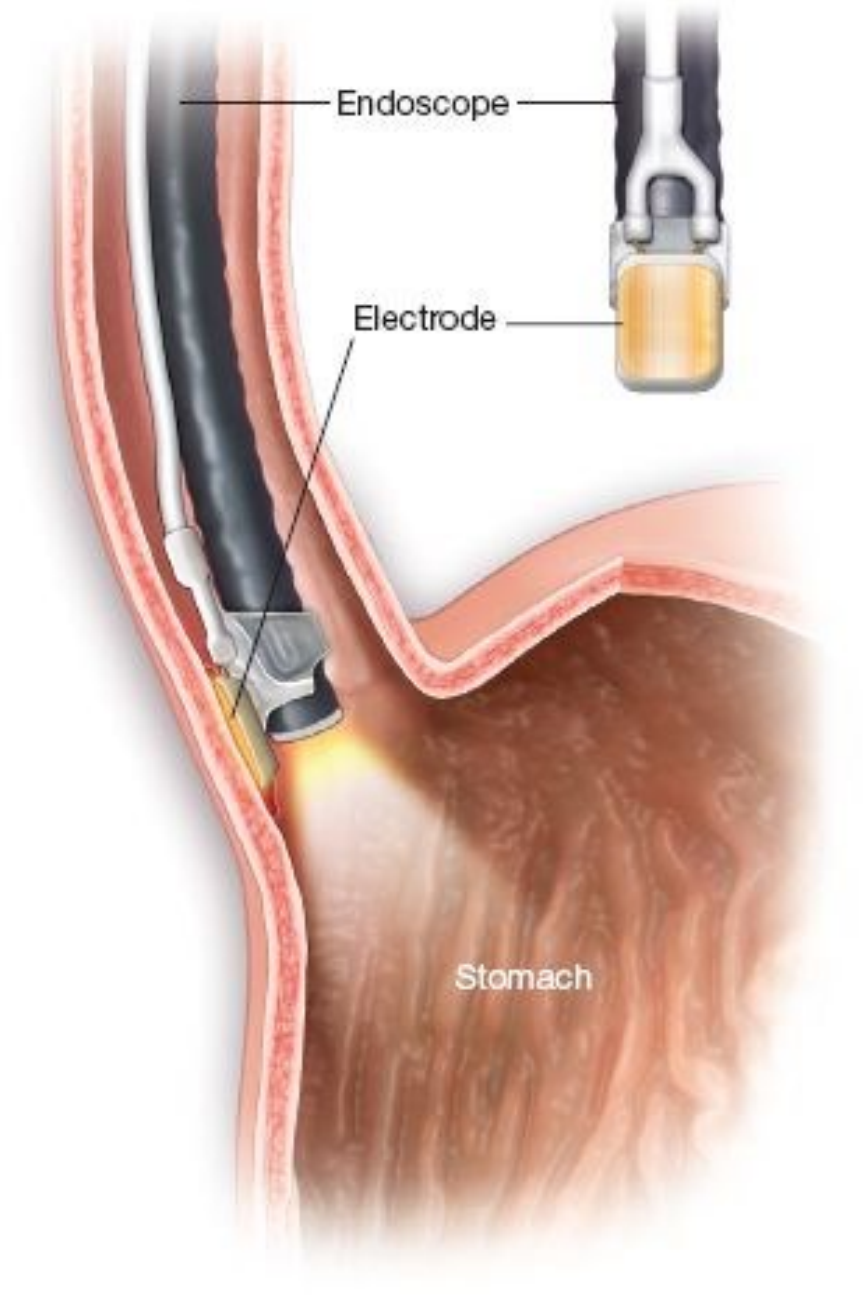
ESD vs EMR = similar tasa de recurrencia

83% de los casos se realiza EMR

RESULTS: **A total of 621 patients (514 EMR and 107 ESD) achieving CRIM were included in the recurrence analysis. The incidence of any BE (15.7, 5.7 per 100 patient-years) and dysplastic BE recurrence (7.3, 5.3 per 100 patient-years) were comparable in the EMR and ESD groups, respectively. On multivariable analyses, the chances of BE recurrence were not influenced by ER technique (hazard ratio 0.87; 95% confidence interval 0.51–1.49; *P* = 0.62), which was also confirmed by IPTW analysis (ESD vs EMR: hazard ratio 0.98; 95% confidence interval 0.56–1.73; *P* = 0.94). BE length, lesion size, and history of cigarette smoking were independent predictors of BE recurrence.**

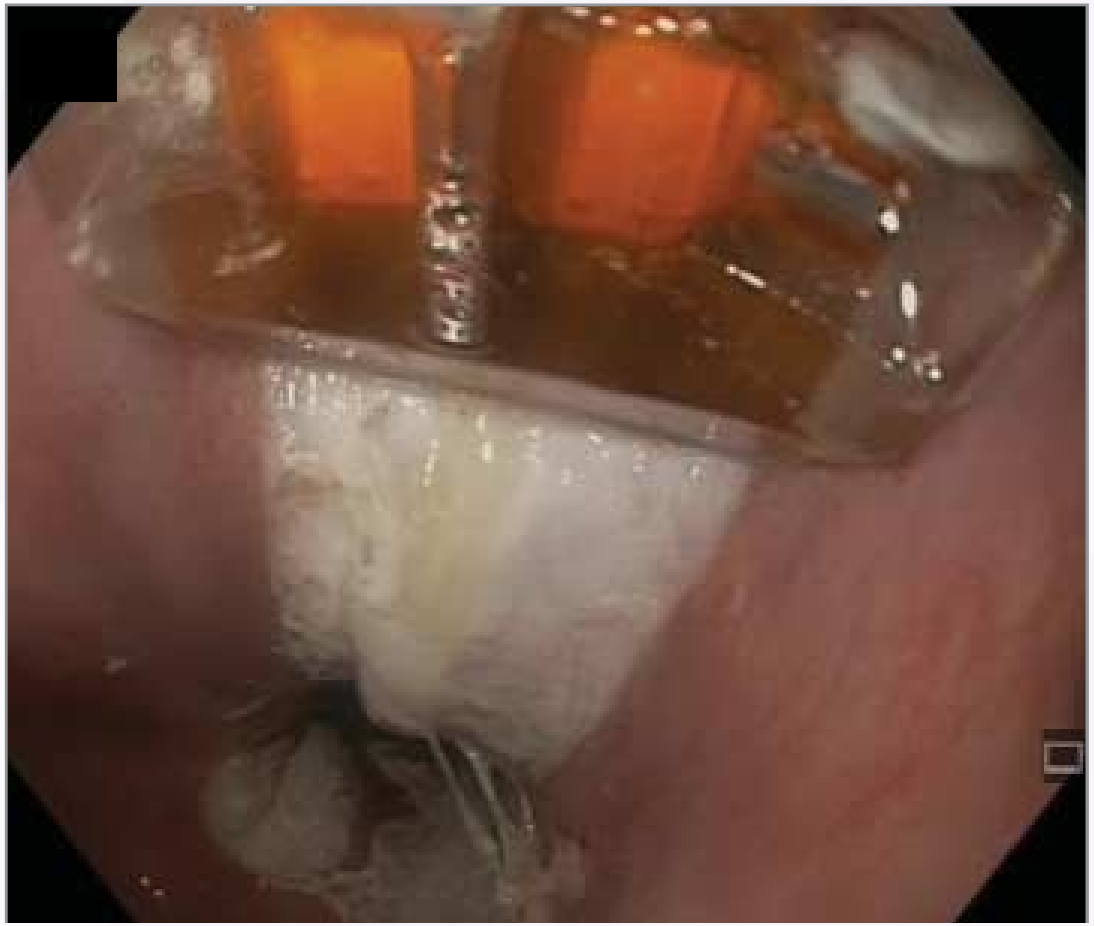
DISCUSSION: **Patients with BE dysplasia/neoplasia achieving CRIM, initially treated with EMR/ablation, had comparable recurrence rates to ESD/ablation. Randomized trials are needed to confirm these outcomes between the 2 ER techniques.**

Am J Gastroenterol 2024;00:1–10.



DDW2024
Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo.
SChGE



DDW2024
Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Low Incidence of Recurrent Neoplastic Barrett's Esophagus After Successful Endoscopic Eradication Therapy: Long-term Outcomes from a Multicenter Prospective Cohort Study

Thomas Enke, Sridevi K. Pokala, Jazmyne Gallegos, Case W. Brennan, Colin Hensen, Camille Hochheimer, Justeena Jojo, V. Raman Muthusamy, Adarsh M. Thaker, Amit Rastogi, Vladimir Kushnir, Dayna Early, Nazish Zafar, Erika Sloan, Katey Grossman, Hazem T. Hammad, Steven A. Edmundowicz, Sri Komanduri, and Sachin B. Wani

Washington University in St. Louis
School of Medicine

UCLA

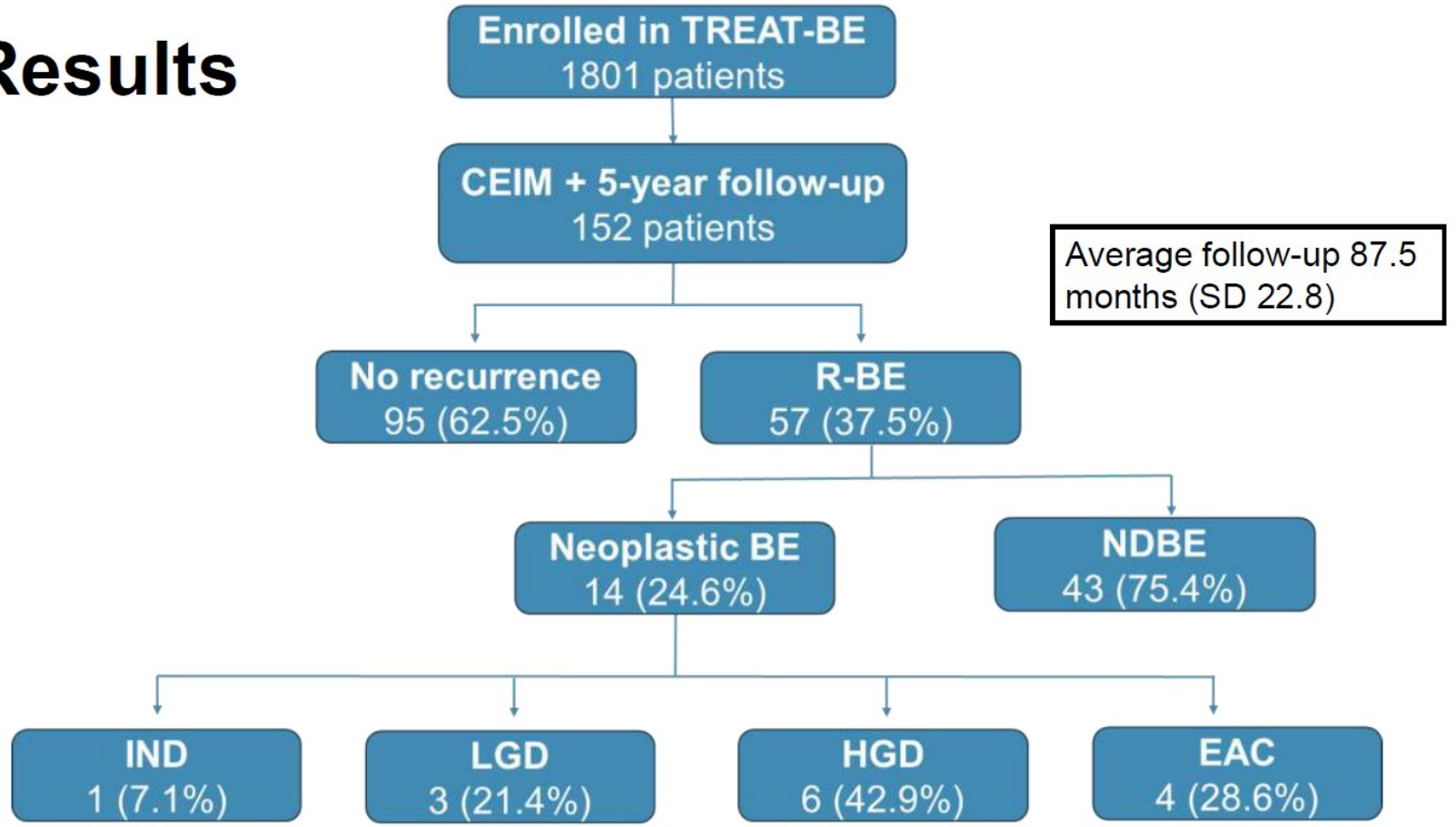
KU

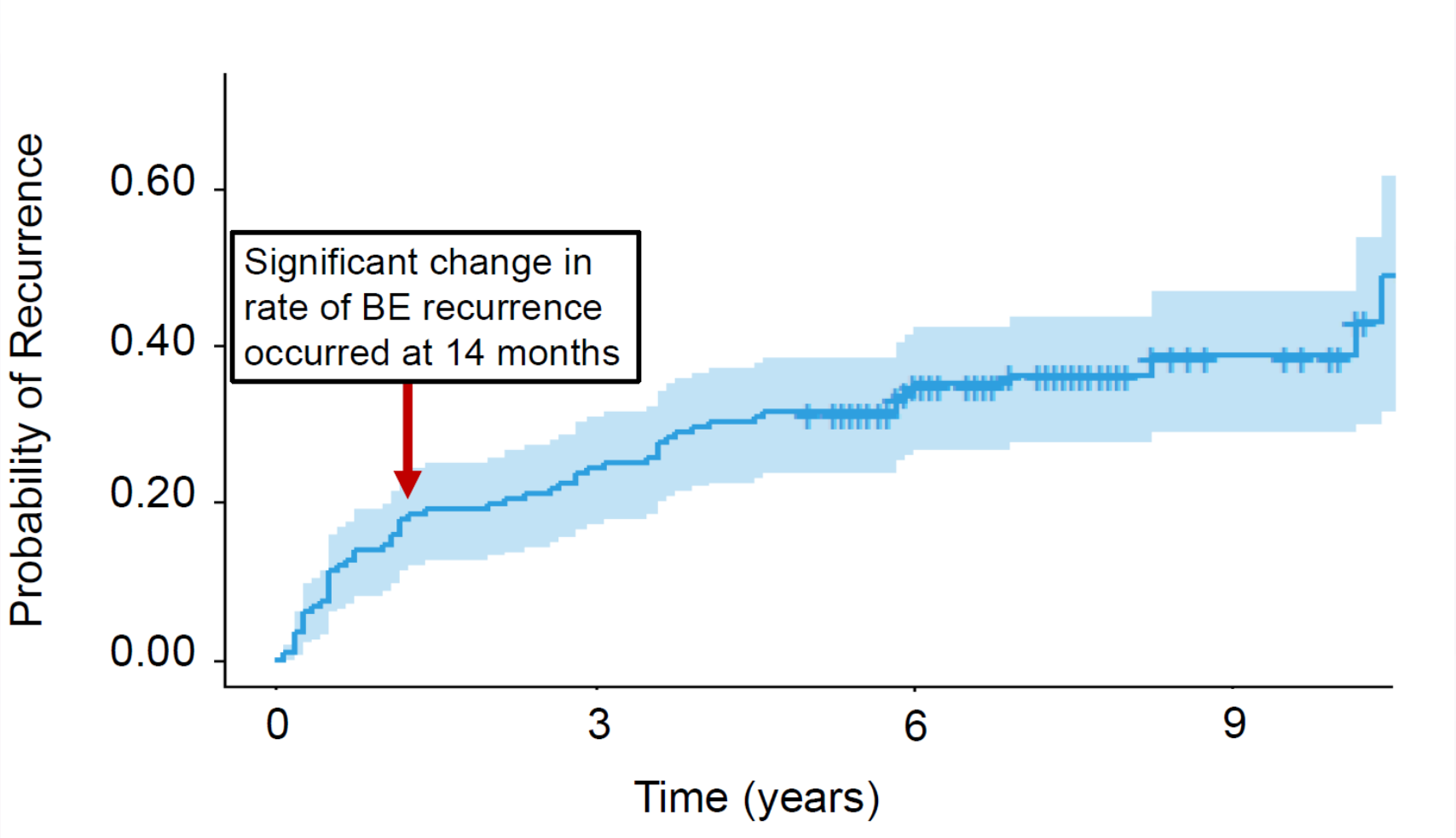
Methods: *EET and Surveillance*

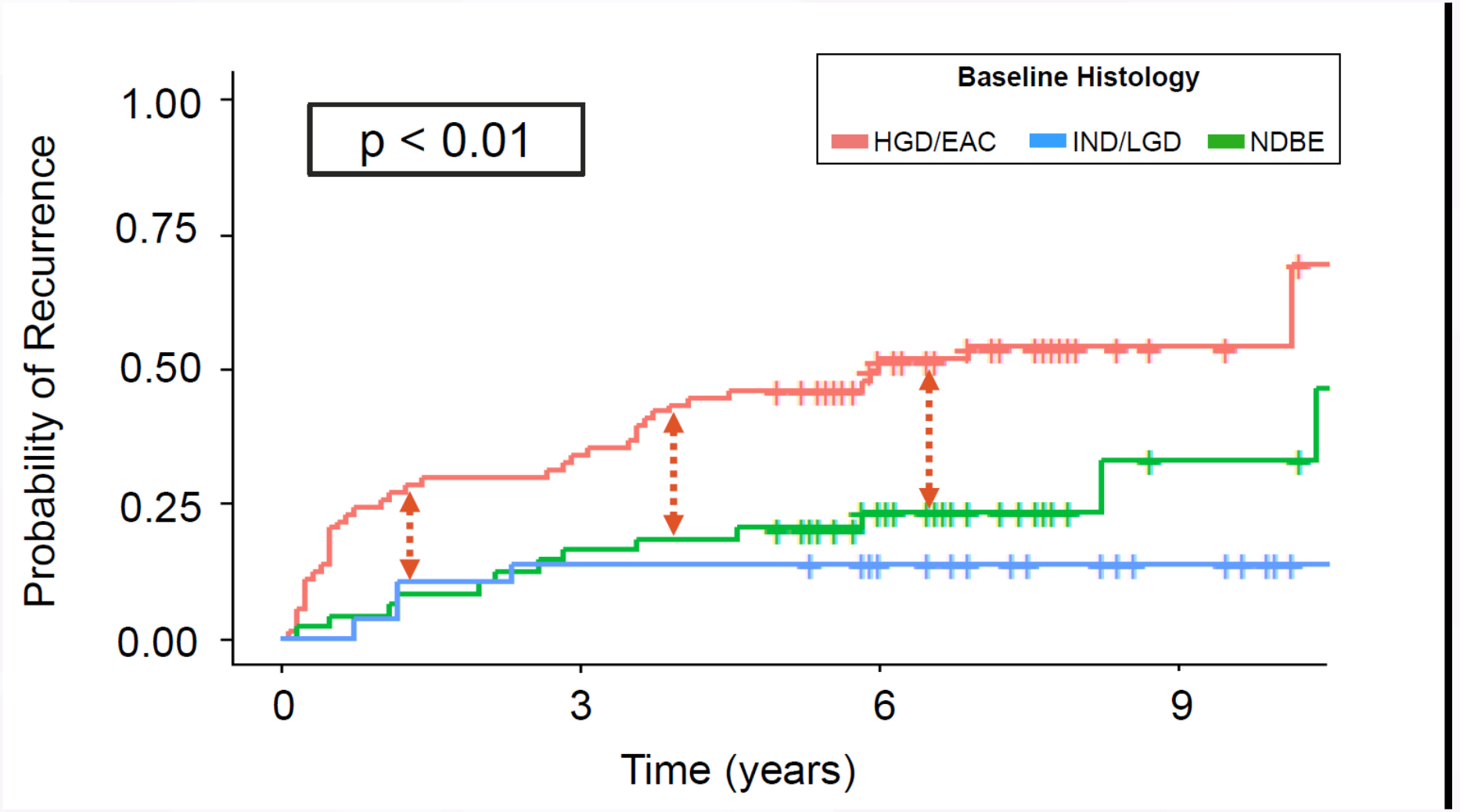
- EET: endoscopic mucosal resection for visible lesions followed by ablation, EET every 2-3 months.
- Surveillance biopsies: four quadrant biopsies every 1-2 cm throughout the pre-treatment length of BE including the gastric cardia + targeted biopsies of visible lesions
- Surveillance intervals:
  - HGD/EAC: every 3-6 months for 2 years and then annually
  - LGD: every 6 months for 1 year and then annually

Complete eradication of intestinal metaplasia (CE-IM)
Absence of visible BE and IM on a single surveillance endoscopy following EET.

Results




Probability of Recurrence
0.60
0.40
0.20
0.00
Significant change in rate of BE recurrence occurred at 14 months
0
3
6
9
Time (years)


Baseline Histology
HGD/EAC
IND/LGD
NDBE
p < 0.01
Probability of Recurrence
1.00
0.75
0.50
0.25
0.00
0
3
6
9
Time (years)

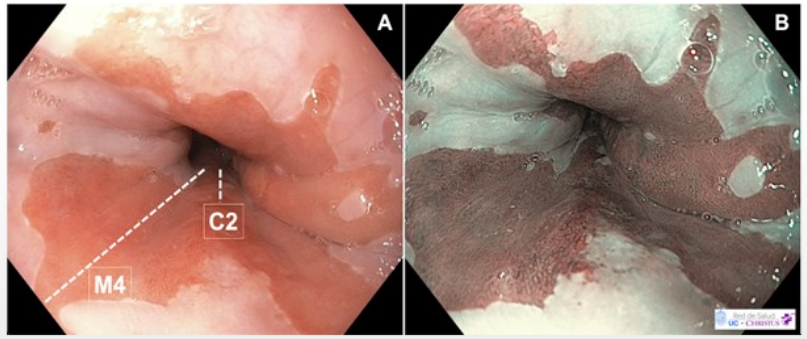
Implication

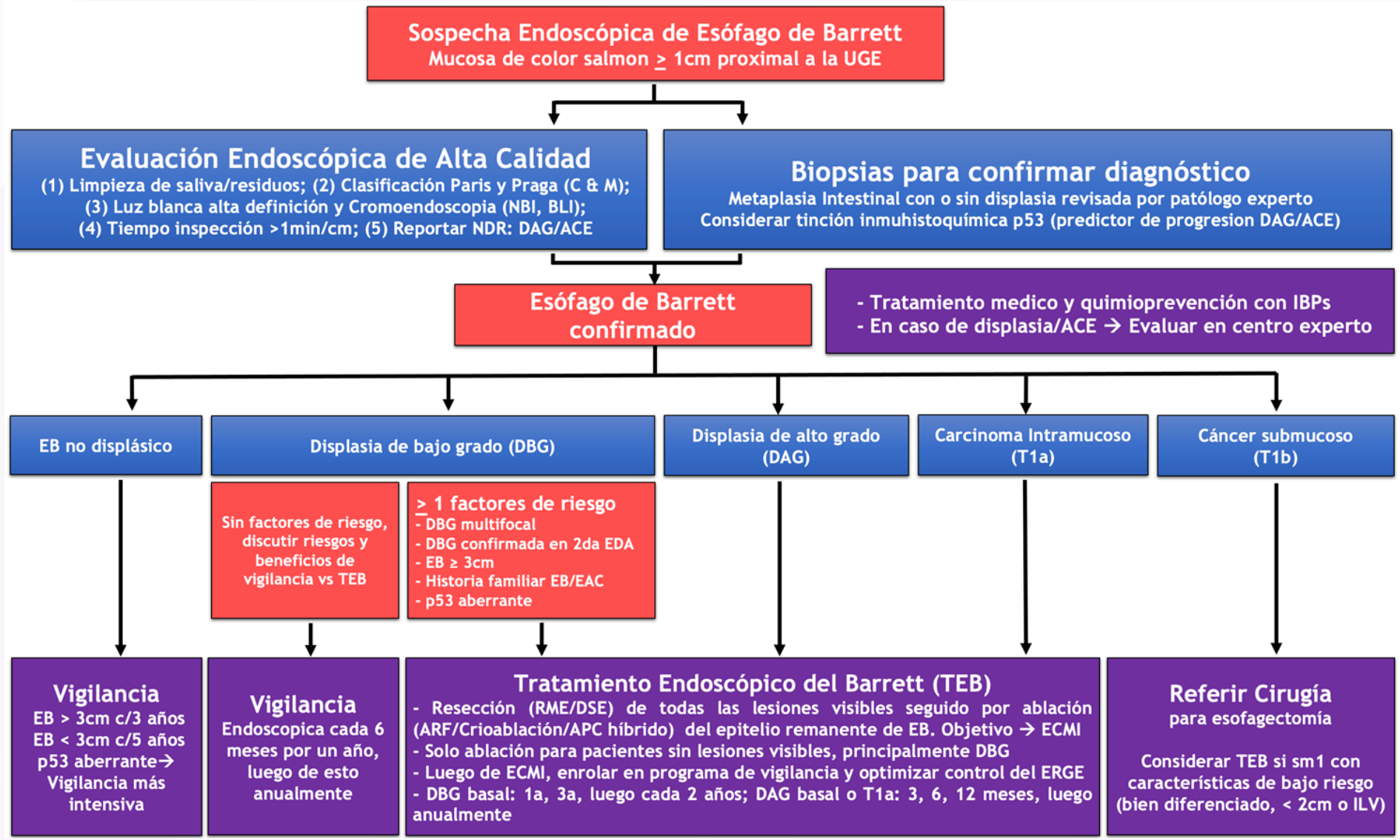
- Reflection of clinical practice at high-volume centers – **"real life"** data
- Estimates of recurrence are critical to establish and validate **surveillance guidelines** post CE-IM (duration and frequency of surveillance)
- Surveillance after EET **benefits those with baseline HGD or IMC the most** and clinicians should concentrate on retaining these patients in surveillance programs.

Conclusion

- Low incidence of neoplastic recurrence among BE patients who achieved CE-IM following EET.
- A change in the rate of recurrence was seen at 14 months, however neoplastic recurrence can occur 10 years after achieving CE-IM.
- A baseline histology of HGD or IMC prior to EET remains the most important predictor of recurrence.

# Diagnóstico Endoscópico Esófago de Barrett 2015-2022
N= 422/91723 EGD = 0.46%
62% hombres; 58 años edad, rango 17-87 años

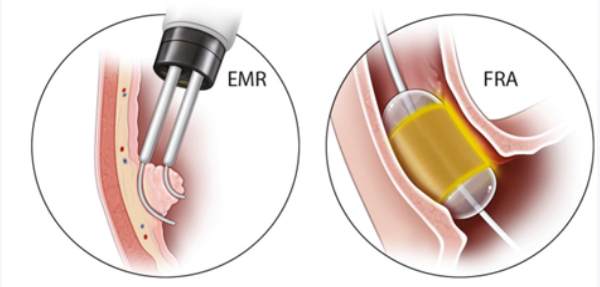




Espino A et al. Revista Médica de Chile 2023; 152:1339-1350

DDW2024
Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

Red de Salud UC • CHRISTUS



Control ID: 4041925 – Poster ASGE

ENDOSCOPIC THERAPY FOR BARRETT'S ESOPHAGUS NEOPLASIA IN CHILE: A SINGLE-CENTER EXPERIENCE

- ✓ **N = 422 EB / 34 EET**
- ✓ **90.6% complete eradication in patients treated endoscopically (EMR+RFA)**
- ✓ 3% was treated with surgery after receiving endoscopic treatment
- ✓ 3% developed a post-EMR delayed bleeding
- ✓ 26% strictures were observed
- ✓ All complications were treated endoscopically

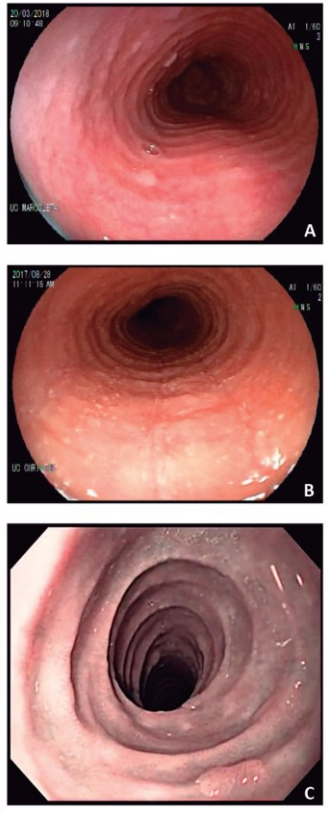
- ✓ CONCLUSIONS: This study represents a novel experience in Latin America regarding Barrett's esophagus diagnosis and treatment. Endoscopic therapy was applied as a safe and effective treatment for BE-associated neoplasia. **Our initial results are similar to those reported in the literature from the USA and Europe**

Comité Barrett SIED, Washington 2024

DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Esofagitis eosinofílica: resumen estado del arte - DDW2024



- **Epidemiología:** Más común en niños, adultos jóvenes (> 70% masculino) con antecedentes de atopia y alergias alimentarias. La prevalencia global está en aumento (1 cada 2500 personas), aunque la incidencia exacta varía geográficamente.
- **Diagnóstico:** Disfunción esofágica, disfagia, impactación de alimentos, puede asociarse a enfermedades atópicas (asma, eczema). Endoscopia con múltiples biopsias esofágicas con ≥ 15 eosinófilos por campo de alta potencia. Descartar otras enfermedades que causen eosinofilia.
- **Tratamiento:** Dietas de eliminación de alimentos (leche, trigo), IBPs, glucocorticoides tópicos y, en el caso de estenosis, dilatación esofágica. **Recientemente aprobada por FDA → inmunoterapia (dupilumab).**

INCIDENCE AND RISK FACTORS OF EOSINOPHILIC ESOPHAGITIS IN JAPAN: A POPULATION-BASED STUDY

Akinari Sawada, Takumi Imai, Yasutaka Ihara, Fumio Tanaka, Yasuhiro Fujiwara

DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

乾杯 Kanpai!

Methods:
We analyzed a large employer-based health insurance claim database from January 2005 to September 2022.

Results:
Of 15,200,895 individuals, 1,010 EoE cases without EGE diagnosis were identified. Incidence rate of EoE was 2.82 (95% CI 2.44-3.26) per 100,000 person-years in 2022, nearly triple that of 2017 (0.93 (95% CI 0.72-1.20). On average, males were 2.89 times more likely to develop EoE compared to females. In the nested case-control study, 931 adult EoE cases and 9,310 matched controls were analyzed. Smoking was associated with decreased risk of EoE (odds ratio (OR) 0.45 (0.36 to 0.56), p<0.001) **whereas constant alcohol consumption (OR 1.51 (1.21 to 1.88), p<0.001)** were associated with increased risk of EoE along with several allergic conditions and psychiatric disorders (Table 1).

Conclusions:
Incidence of EoE has rapidly increased in Japan. **Some modifiable factors such as smoking, and alcohol consumption were significant potential risk factors for EoE**. Further study is warranted to investigate the effect of lifestyle modification on EoE management.

Table 1. Screening of associated factors with EoE

Variables	Odds ratio (95%CI)	P value
Body mass index (1kg/m2 increase)	1.02 (0.99 to 1.04)	0.191
Smoking	0.45 (0.36 to 0.56)	<0.001
Alcohol consumption: always	1.51 (1.21 to 1.88)	<0.001
Alcohol consumption: sometimes	1.18 (0.97 to 1.45)	0.105
Allergic rhinitis	1.52 (1.25 to 1.85)	<0.001
Chronic sinusitis	1.26 (0.99 to 1.60)	0.061
Asthma	1.72 (1.41 to 2.09)	<0.001
Atopic Dermatitis	1.57 (1.19 to 2.06)	0.001
Urticaria	1.34 (1.02 to 1.76)	0.036
Any allergy	2.27 (1.28 to 4.01)	0.005
Disorders of thyroid gland	1.31 (0.90 to 1.91)	0.156
Any psychiatric disorders	1.37 (1.07 to 1.74)	0.011
Insomnia	1.21 (0.91 to 1.61)	0.181
Hypertension	1.14 (0.89 to 1.46)	0.299
Diabetes mellitus	0.88 (0.66 to 1.18)	0.403
Hyperuricemia	0.93 (0.68 to 1.27)	0.647
Dyslipidemia	1.00 (0.79 to 1.25)	0.977

Abbreviations: EoE, eosinophilic esophagitis; CI, confidence interval.

Risk of cancer diagnosis in patients with eosinophilic esophagitis using a nationwide Swedish population cohort

Sophia S. Schuman BS BSW[1]*, Amiko M Uchida MD[1]*, Ashley Pyne PhD RD[1], Kathryn Peterson MD MSCI[1], Marie Carlson, MD, PhD[2], John J Garber MD[3], Bjorn Roelstraete PhD[4], Jonas F Ludvigsson MD PhD[4,5,6]

Sophia.Schuman@hsc.utah.edu

Rationale

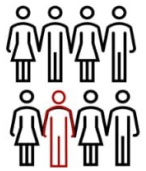
- Eosinophilic esophagitis is a chronic inflammatory disease of the esophagus.
- Chronic inflammation has been associated with increased cancer risk.
- Few studies to date have investigated EoE and cancer directly.

Methods

- Utilized ESPRESSO cohort to identify EoE individuals diagnosed between 1990-2017.
- Match to general population and full siblings.
- Follow up until Dec 31, 2020.
- Cox regression analysis estimated adjusted hazard ratios (aHRs).

ESPRESSO

(Epidemiology Strengthened by histopathology Reports in Sweden) cohort contains prospectively collected data from all Swedish health and welfare registers.



About **1 in 800** EoE patients had a later diagnosis of esophageal cancer

EoE was not associated with an overall risk of cancer development.

EoE was associated with an increased risk of later esophageal cancer although absolute risks were small and excess risks were potentially due to intrafamilial and environmental factors.

Results

- Biopsy-verified EoE was not associated with future cancer.
- There was a significantly increased risk for esophageal cancer (aHR 25.50, 95%CI=2.28-278.80), and non-esophageal GI cancer diagnoses fell just short of significance (aHR 2.03; 95%CI=0.99-4.18).
- Earlier cancer diagnosis was not associated with an increased in EoE, suggesting that at a population level undiagnosed EoE does not predispose to cancer.

Conclusions & Considerations

- While the aHR for esophageal cancer was markedly high (aHR=25.2), we urge caution with interpretation. Additionally, noting the type of esophageal cancer could help with biological underpinnings of possible associations, however our ethical approval for this study did not allow us to specify the type of cancer since that would increase the risk that individual patients be identified.

[1] Division of Gastroenterology, Hepatology & Nutrition, University of Utah School of Medicine, Salt Lake City, UT, USA
[2] Department of Medical Sciences, Gastroenterology Research Group, Uppsala University, Uppsala, Sweden.
[3] Gastrointestinal Unit, Massachusetts General Hospital, Harvard Medical School, Boston MA, USA
[4] Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden
[5] Department of Pediatrics, Örebro University, Örebro, Sweden
[6] Celiac Disease Center, Department of Medicine, Columbia University College of Physicians and Surgeons, New York, New York, USA
* Denotes co-first authorship

Disclosure / Conflict of interest declaration:
Dr. Uchida is an advisor/consultant for Sanofi-Regeneron and AstraZeneca (unrelated to this study). Dr. Ludvigsson has coordinated an unrelated study on behalf of the Swedish IBD quality register (SWIBREG). That study received funding from Janssen corporation. Dr Ludvigsson has also received financial support from MSD developing a paper reviewing national healthcare registers in China. Dr Ludvigsson is currently discussing potential research collaboration with Takeda. Dr. Carlson has received speaker's fees from ViforPharma. She is the national PI for clinical trials for AstraZeneca. None of these activities have any relation to the present study.

DDW2024 Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

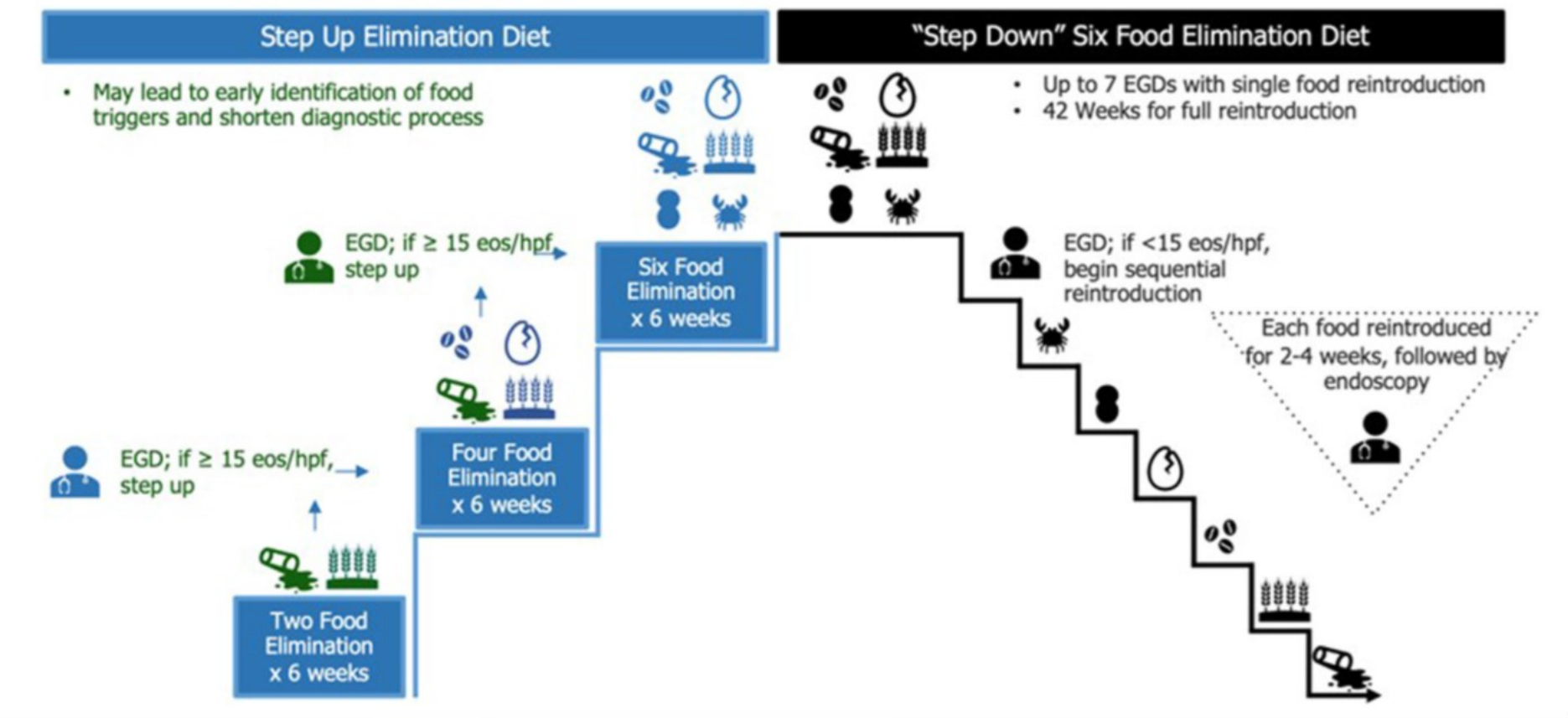
CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Table 2: Risk of incident cancer among individuals with histologically defined EoE compared to general population controls.

Cancer		EoE	Reference Individuals
Any cancer	**N**	**1580**	**7533**
	Event	47	183
	IR [95% CI]	3.9 [3.0-5.1]	3.2 [2.8-3.7]
	IRD [95% CI]	0 [-1.6-1.6]	-0.7 [-1.9-0.5]
	HR [95% CI]	NA	1.11 [0.81-1.53]
	aHR [95% CI]	NA	1.11 [0.80-1.53]
Esophageal cancer	Event	2	1
	IR [95% CI]	0.2 [0.1-0.5]	0.0 [0.0-0.1]
	IRD [95% CI]	0 [-0.3-0.3]	-0.1 [-0.4-0.1]
	HR [95% CI]	NA	18.35 [1.66-202.97]
	aHR [95% CI]	NA	25.20 [2.28-278.80]
Gastrointestinal cancer* (not esophageal)	Event	11	24
	IR [95% CI]	0.9 [0.5-1.5]	0.4 [0.3-0.6]
	IRD [95% CI]	0 [-0.8-0.8]	-0.5 [-1.1-0.1]
	HR [95% CI]	NA	2.09 [1.02-4.28]
	aHR [95% CI]	NA	2.03 [0.99-4.18]
Skin cancer	Event	10	30
	IR [95% CI]	0.8 [0.5-1.4]	0.5 [0.4-0.7]
	IRD [95% CI]	0 [-0.7-0.7]	-0.3 [-0.9-0.2]
	HR [95% CI]	NA	1.37 [0.67-2.82]
	aHR [95% CI]	NA	1.31 [0.63-2.70]
Lung cancer	Event	0	7
	IR [95% CI]	0	0.1 [0.1-0.2]
	IRD [95% CI]	0	0.1 [0-0.2]
	HR [95% CI]	NA	NA
	aHR [95% CI]	NA	NA
Breast cancer	Event	4	10
	IR [95% CI]	0.3 [0.1-0.7]	0.2 [0.1-0.3]
	IRD [95% CI]	0 [-0.5-0.5]	-0.2 [-0.5-0.2]
	HR [95% CI]	NA	1.68 [0.53-5.35]
	aHR [95% CI]		1.67 [0.52-5.33]
Hematologic cancers#	Event	0	13
	IR [95% CI]	0.0 [0.0-0.0]	0.2 [0.1-0.4]
	IRD [95% CI]	NA	0.2 [0.1-0.3]
	HR [95% CI]	NA	NA
	aHR [95% CI]	NA	NA

IR, incidence rate per 1000 person-years.
IRD, incidence rate difference per 1000 person-years.
HR, Hazard ratio adjusted for age, sex, calendar year, county, and education.
aHR: adjusted HR for age at EoE, sex, calendar year, county where biopsy obtained, education and immune-mediated diagnosis at baseline (EoE diagnosis date or matching date in reference individuals, Suppl. Table 2)
NA values could not be calculated due to insufficient data.
**Any GI cancer including liver cancer but excludes esophageal (see Suppl Table 1 for ICD list of codes: gastric, small bowel, colon, liver, biliary, pancreas, peritoneum, unspecified digestive organ)*
#Extrahepatic hematological cancer

Dietas de eliminación más usadas: 2 (lácteos + trigo) vs 6



REAL-LIFE EFFECTIVENESS OF SWALLOWED TOPICAL STEROIDS, PROTON PUMP INHIBITORS, AND ELIMINATION DIETS: RESULTS FROM THE SWISS EOSINOPHILIC ESOPHAGITIS COHORT STUDY

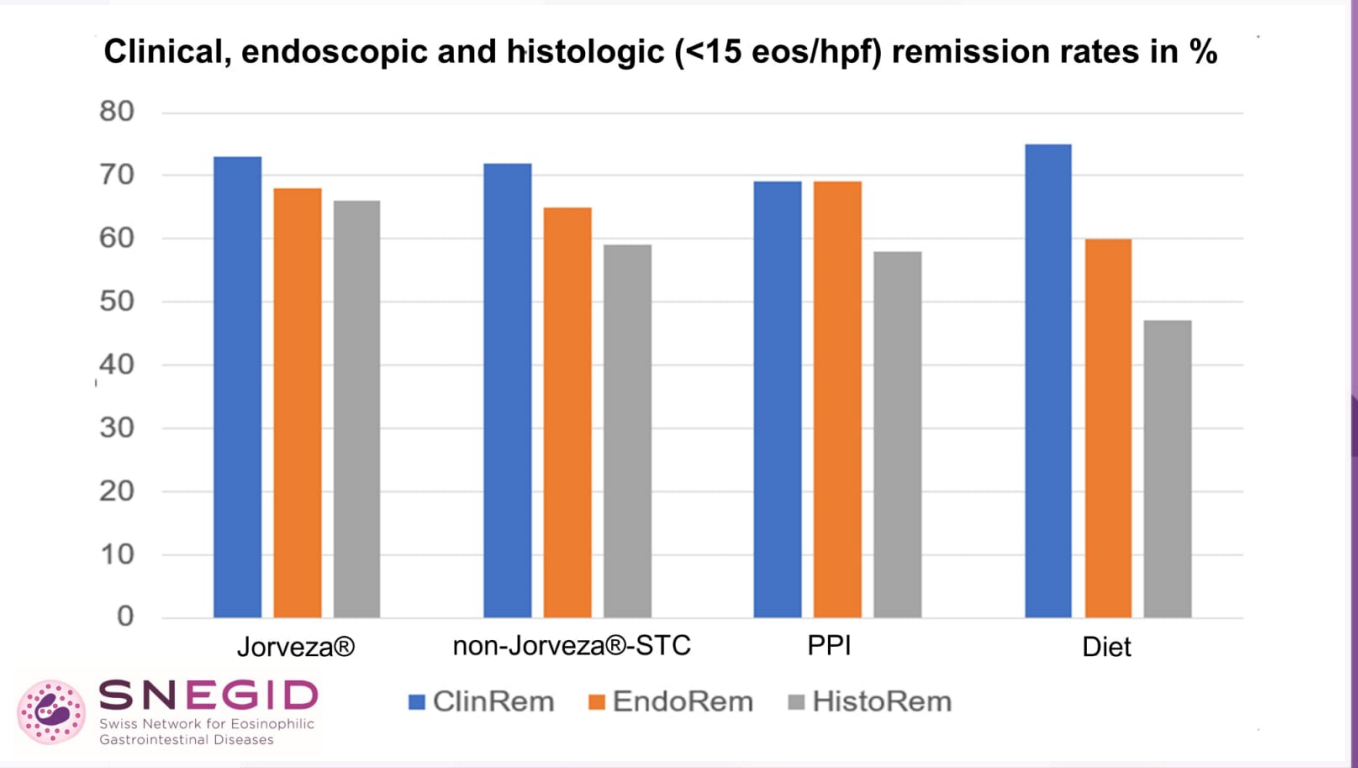
Ekaterina Safroneeva, Jean-Benoit Rossel, Catherine Saner, Luc Biedermann, Andrea Kreienbuehl, Thomas Greuter, Annett Franke, Emanuel Burri, Alex Straumann, Alain M. Schoepfer

DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

SEECS
Swiss Eosinophilic Esophagitis Cohort Study

1,979 visits of 710 EoE patients (72% males). During 799 (40.4%), 483 (24.4%), 435 (22%) and 316 (16%) visits, patients were treated with either budesonide or fluticasone in form of a syrup or swallowed powder (below referred to as 'non-Jorveza®-STC'), PPI, Jorveza® (orodispersible budesonide tablet), and an elimination diet, respectively. Some patients were treated with either STC or Jorveza® in combination with PPI (total over 100%).



DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

Clinical effectiveness and safety of esophageal stricture dilation using a novel endoscopic attachment cap (BougieCap version 2.0) in adults with Eosinophilic Esophagitis

J. Wakim El-Khoury[1], L. Biedermann[2], A. Kreienbühl[2], C. Saner[1], A. Straumann[2], T. Greuter[2], E. Safroneeva[3], A. Schoepfer[1]
1 Division of Gastroenterology and Hepatology, Centre Hospitalier Universitaire Vaudois (CHUV) and University of Lausanne, Lausanne, Switzerland
2. Division of Gastroenterology and Hepatology, University Hospital Zurich, Zurich, Switzerland
3. Institute of Social and Preventive Medicine, University of Bern, Bern, Switzerland

CHUV

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

INTRODUCTION

BougieCap (Ovesco, Endoscopy AG, Tübingen, Germany) is a single-use cone-shaped transparent plastic cap attached by an adhesive tape to the tip of the endoscope. It allows optical and tactile feedback during stricture dilation, avoiding overstretching. In 2021, our group confirmed the safety & efficacy of a one-time esophageal stricture dilation using BougieCap v1.0 in 50 adults with EoE. However, one BougieCap got detached during endoscopy. Ovesco released BougieCap v2.0 (improved tape's adhesive power, gradual dilation over 2 mm/cap, improved fit of the connecting part).

AIM

As of yet, the technical feasibility, safety and clinical effectiveness of BougieCap version 2.0 for stricture dilation in adult EoE patients is unknown. We aimed to assess its safety & clinical effectiveness for stricture dilation in EoE patients prospectively included in the Swiss EoE Cohort Study (SEECS).

METHOD

EoE patients prospectively included in the Swiss EoE Cohort were dilated with BougieCap 2.0 in case of the presence of esophageal strictures and stricture-related symptoms.

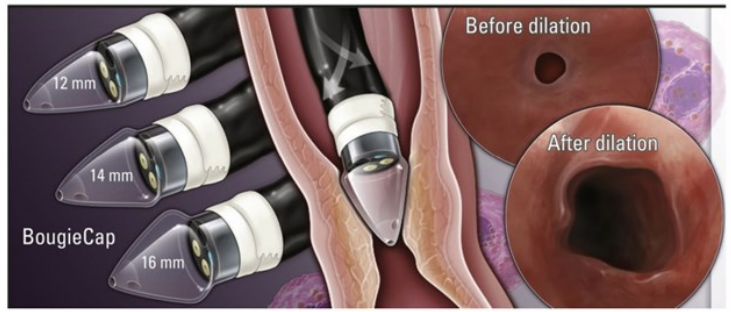
Symptoms were assessed before and two weeks after a single dilation session using the validated EEsAI PRO tool (range 0-100 points).

This is an investigator-initiated study. None of the authors has financial ties with Ovesco Endoscopy AG.

RESULTS

- 42 patients (76.2% male, median age 40 years (IQR 31-54 years) were evaluated.
- Median disease duration 5 years (IQR 4-8 years), median diagnostic delay of 4 years (IQR 3-5 years).
- Treatment: 57.2% are on swallowed topical corticosteroids, 19.1% on PPIs, 9.5% without anti-eosinophil therapy, 7.1% on elimination diet, 4.8% on dupilumab, 2.4% on benralizumab.
- Median esophageal peak eosinophil count was 10/hpf (IQR 0-24).
- **Endoscopic bougienage was technically successful in 100%.**
- A stricture diameter of <10mm was found in 14.3% of patients.
- Strictures were located in 38.1% in the proximal esophagus, in 57.4% in the distal esophagus, and in 4.8% in both proximal and distal esophagus.
- **Median esophageal diameter increased from 12 mm (IQR 12-13) to 14mm (IQR 14-16, p<0.001).**
- **Median EEsAI PRO dropped from 35 points (IQR 27-42) to 0 (IQR 0-12, p<0.001) after 2 weeks.**
- There was no bleeding necessitating endoscopic intervention.
- Temporary post-dilation thoracic pain was reported by 33.3% of patients.
- **No esophageal perforation was observed and no BougieCap got detached.**
- One BougieCap was used in 66.7% of dilations, 2 BougieCap were used in 33.3% of procedures.

BougieCap version 1.0



BougieCap version 2.0 (image from Ovesco.com)

CONCLUSIONS

In adults with EoE, endoscopic treatment of esophageal strictures using the upgraded BougieCap version 2.0 is technically feasible, safe and offers symptomatic improvement in the short term.

REFERENCES

Schoepfer AM, et al. Gastrointest Endosc. 2021 Nov;94(5):912-919

SEECS
Swiss Eosinophilic Esophagitis Cohort Study

ACKNOWLEDGEMENTS

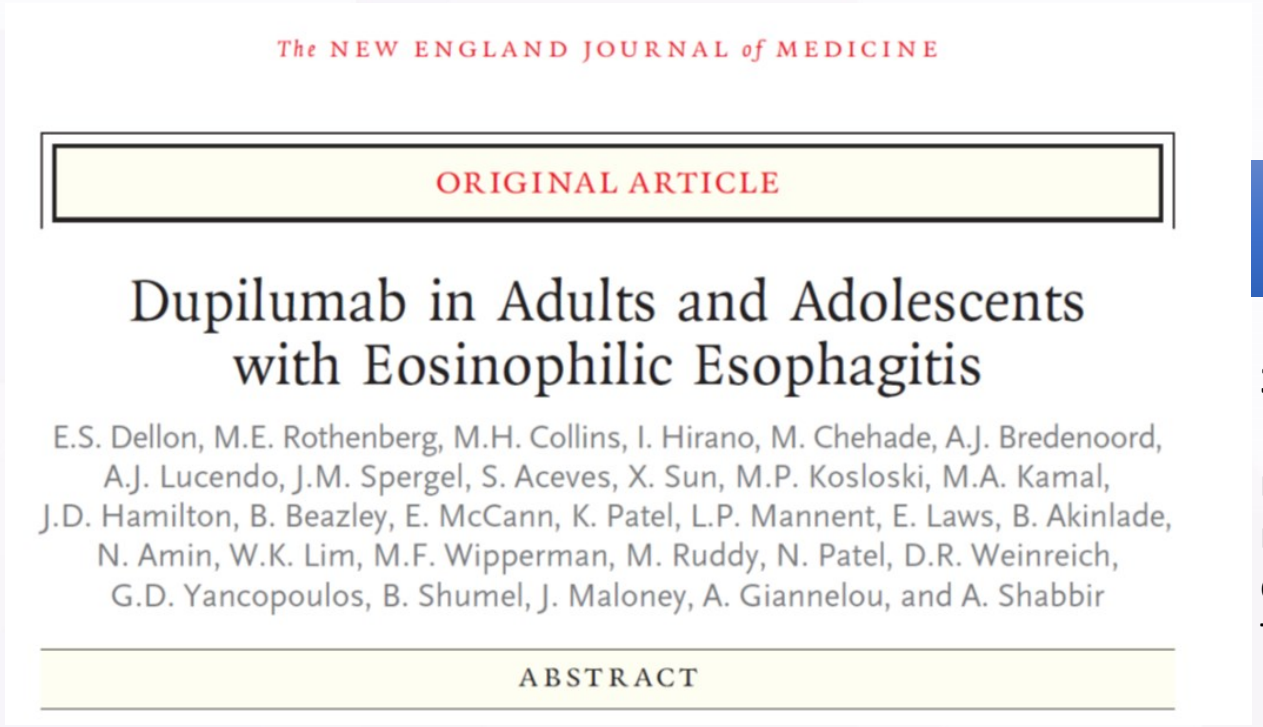
SEECS is supported by the Swiss National Science Foundation (grant no 32003B_204751/1 to AMS), the Swiss EoE foundation (to AMS), and grants from BMS, Dr Falk Pharma, and Sanofi-Genzyme

CONTACT INFORMATION

alain.schoepfer@chuv.ch

DDW2024
Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE


The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Dupilumab in Adults and Adolescents with Eosinophilic Esophagitis

E.S. Dellon, M.E. Rothenberg, M.H. Collins, I. Hirano, M. Chehade, A.J. Bredenoord, A.J. Lucendo, J.M. Spergel, S. Aceves, X. Sun, M.P. Kosloski, M.A. Kamal, J.D. Hamilton, B. Beazley, E. McCann, K. Patel, L.P. Mannent, E. Laws, B. Akinlade, N. Amin, W.K. Lim, M.F. Wipperman, M. Ruddy, N. Patel, D.R. Weinreich, G.D. Yancopoulos, B. Shumel, J. Maloney, A. Giannelou, and A. Shabbir

ABSTRACT

Estudio de fase 3 – NEJM 2022

Anticuerpo monoclonal totalmente humano, bloquea la señalización de la IL-4 y la IL-13.

300mg semanales sc

Histologic remission occurred in 25 of 42 patients (60%) who received weekly dupilumab and in 2 of 39 patients (5%) who received placebo (difference, 55 percentage points; 95% confidence interval [CI], 40 to 71; P<0.001).

The most frequently adverse event was injection-site reaction

DDW2024 Digestive Disease Week®
MAY 18-21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19-21, 2024

Baseline characteristics of EoE do not predict histologic response to dupilumab: A retrospective, real-world study.

T. Sia[1], A. Miller[1], L. Bacchus[2], J. Young[2], A. P. Narayan[1], R. Solecki[2], J. Fu[2], M. Zheng[2], S. Shami[2], A. Roby[2], T. Telukunta[2], P. McDonald[2], A. S. Matmatte[2], S. Mallik[2], K. Love[2], S. Liu[2], R. Khuda[2], Y. Jiang[2], M. Headen[2], J. Leung[2]*
1 Stanford School of Medicine, Stanford, CA 2 Boston Specialists, Boston, MA
* Corresponding author

Boston Specialists

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

INTRODUCTION

- Eosinophilic esophagitis (EoE) is a Th2-mediated chronic inflammatory disease diagnosed by ≥15 peak eos/hpf in the esophagus collected by esophagogastroduodenoscopy (EGD)
- Dupilumab is a FDA-approved biologic medication for the treatment of EoE.
- Endoscopic findings are scored using the endoscopic reference score (EREFS)
- Predictive factors for histologic response have been assessed previously in other treatments for EoE, including swallowed corticosteroids and proton-pump inhibitors
- In both the original phase 3 clinical trial and in our own experience, a small subset of patients do not respond histologically to dupilumab
- To our knowledge, no factors have been assessed that could predict outcomes of treatment with dupilumab in patients with EoE

AIM

- Explore whether demographic factors, endoscopic phenotypes, and clinical characteristics of EoE may predict histologic response to dupilumab (remission defined as <15 peak eos/hpf)

METHODS

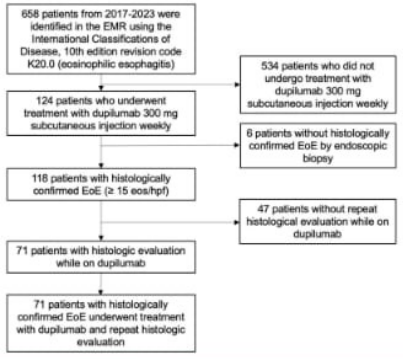


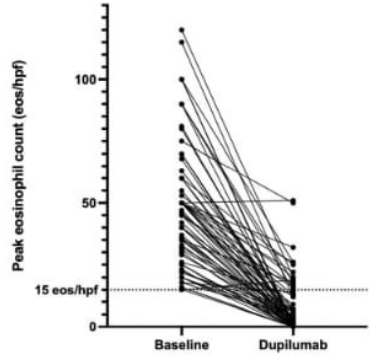
Figure 1. Inclusion/Exclusion Flowchart. Patients were separated based on histologic response on dupilumab and Mann-Whitney U tests (for continuous variables) and Fisher's exact tests (for categorical variables) were used to identify differences in baseline characteristics of the two groups.

RESULTS

Table 1. Patient profile, initial reported symptoms, and baseline characterization of eosinophilic esophagitis do not predict histological response to dupilumab. Reported presence of symptoms were included in our analysis on a binary scale (yes/no). A post-hoc Bonferroni correction was applied to reduce family-wise error rates, such that α = 0.05/21 = 0.002.

Characteristics	All patients (n = 71)	Patients histologically responsive to dupilumab (n = 56)	Patients histologically not responsive to dupilumab (n = 15)	P-value (α = 0.002)
Age, median (IQR)	27.4 (21.8-36.1)	27.8 (21.5-35.0)	27.8 (21.5-35.0)	0.9168
Pediatric, n (%)	10 (14.1)	7 (12.5)	3 (20)	0.4309
Male, n (%)	27 (38)	24 (42.9)	3 (20)	0.1394
Any atopic comorbidity, n (%)	64 (90.1)	40 (71.4)	12 (80)	0.7441
Atopic dermatitis	7 (9.9)	6 (10.7)	1 (6.7)	>0.9999
Asthma	22 (31)	17 (30.4)	5 (33.3)	>0.9999
Allergic rhinitis	38 (53.5)	29 (51.8)	9 (60)	0.7716
Food Allergy	23 (32.4)	17 (30.4)	6 (40)	0.5407
Symptoms, n (%)				
Dysphagia	63 (88.7)	49 (87.5)	14 (93.3)	>0.9999
Food impaction	31 (43.7)	24 (42.9)	7 (46.7)	>0.9999
Choking	12 (16.9)	8 (14.3)	4 (26.7)	0.2643
Regurgitation	2 (2.8)	1 (1.8)	1 (6.7)	0.3803
Vomiting	18 (25.4)	15 (26.8)	3 (20)	0.745
Heartburn / Chest pain	33 (46.5)	27 (48.2)	6 (40)	0.7716
Abdominal pain	14 (19.7)	12 (21.4)	2 (13.3)	0.7186
Asymptomatic	1 (1.4)	1 (1.8)	0 (0)	>0.9999
Baseline eosinophil counts, median eos/hpf (IQR)				
Proximal esophagus	28 (5-50)	23 (2.8-50)	45 (30-50)	0.1495
Middle esophagus	31 (16-50)	28 (15-50)	48 (35-50)	0.064
Distal esophagus	35 (19-50)	32 (18-50)	42.5 (28.8-50)	0.2005
Peak eosinophil count	45 (27.5-60)	40 (25-51.3)	50 (50-82.5)	0.0089
Patients with EREFS available at baseline, n	16	10	6	
EREFS, median (IQR)	2.5 (1-3.3)	1.5 (0.3-2.8)	3 (3-3.8)	0.076

Figure 2. Histological remission after initiation of dupilumab was observed in 78.9% (n = 56) of patients in the study cohort. Histological remission is defined by <15 eos/hpf. Peak eosinophil counts were abstracted from the patient's first reported EGD.



CONCLUSIONS

- There are no statistically significant differences in patient demographics, symptom profile, atopic comorbidities, and baseline endoscopic and histologic features between patients who respond or do not respond histologically to dupilumab
- Based on a real world, retrospective analysis of patients with EoE, dupilumab can be used to induce histologic remission across a wide range of patient profiles and disease phenotypes

LIMITATIONS and FUTURE DIRECTIONS

- Limitations include lack of a DSQ or validated symptom score, small sample size, and inclusion of more characteristics from the EMR
- Further studies should explore specific endoscopic features (i.e. ringed esophagus), further complications (i.e. stenosis, food impaction, dilations), and other demographic factors (i.e. race, ethnicity)
- Future studies may also consider if baseline characterization affects symptomatic response to dupilumab

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE

Dupilumab Improves Inflammatory and Remodeling Aspects of Endoscopic Disease Activity in Eosinophilic Esophagitis: 52-Week Results From the Phase 3 LIBERTY EoE TREET Study

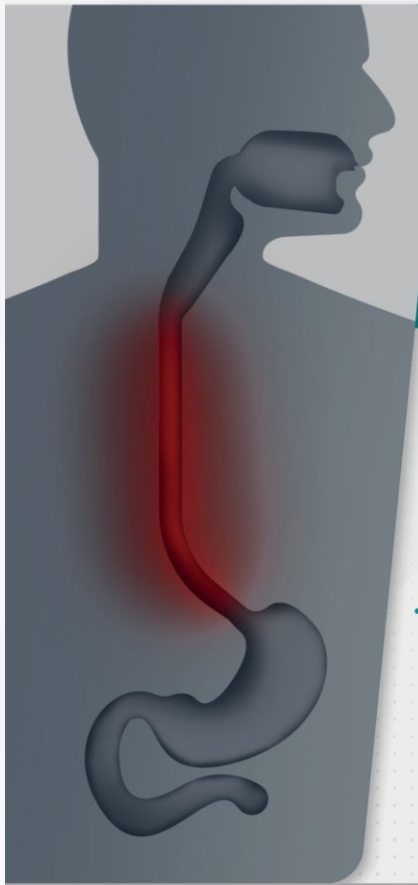
Ikuo Hirano[1], Evan S. Dellon[2], Gaia Pellegatta[3], Changming Xia[4], Tiffany Pela[5], Sandy Durrani[4], Juby A. Jacob-Nara[5], Amr Radwan[4]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL, USA; [2]University of North Carolina School of Medicine, Chapel Hill, NC, USA; [3]Humanitas Research Hospital, Rozzano, Milan, Italy; [4]Regeneron Pharmaceuticals Inc., Tarrytown, NY, USA; [5]Sanofi, Bridgewater, NJ, USA

Eosinophilic Esophagitis

Background

- EoE is a chronic, progressive, type 2 inflammatory disease that can lead to progressive remodeling and fibrostenosis of the esophagus[1-3]
- EREFS is a validated classification system for the major endoscopic features of EoE, which includes subscores that assess inflammation and remodeling[4]
  - By convention, EREFS has been scored as a summation of proximal and distal esophageal sites[4]
  - EREFS scored by worst observed region may be more responsive to change in disease state than traditional EREFS scoring[5]
- Dupilumab, a fully human monoclonal antibody,[6] is approved in the USA for the treatment of EoE in adult and pediatric patients aged ≥1 year, weighing ≥15 kg, and in the EU for adults and adolescents aged ≥12 years, weighing ≥40 kg[7,8]
- In Parts A and B of the phase 3 LIBERTY EoE TREET study, dupilumab 300 mg qw improved histologic, symptomatic, and endoscopic aspects of EoE vs placebo at Week 24 in adults and adolescents with EoE; patients who completed Parts A and B and continued to the active treatment extension Part A–C/B–C received a further 28 weeks' dupilumab treatment[9]
- For more information on methods, please scan the QR code below.



Objective

- This analysis assessed the effect of dupilumab on EREFS inflammatory and remodeling severity up to Week 52, using EREFS by worst observed region, in participants of the LIBERTY EoE TREET study

Conclusions

- Dupilumab demonstrated improvements in worst observed EREFS total score, and inflammation and remodeling subscores, vs placebo at Week 24, which were maintained through Week 52 for patients who continued dupilumab, and improved in those who switched from placebo to dupilumab
- Dupilumab also led to improvements in individual EREFS features at Week 52

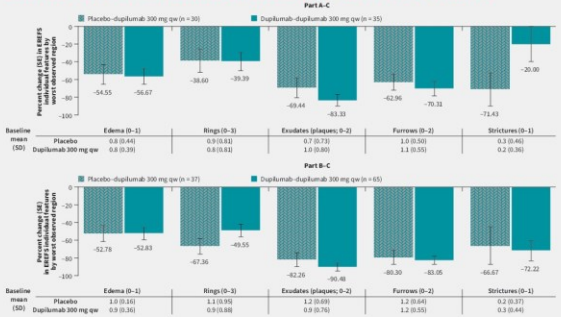
Results

Table. Baseline demographics and disease characteristics were generally well balanced between groups.

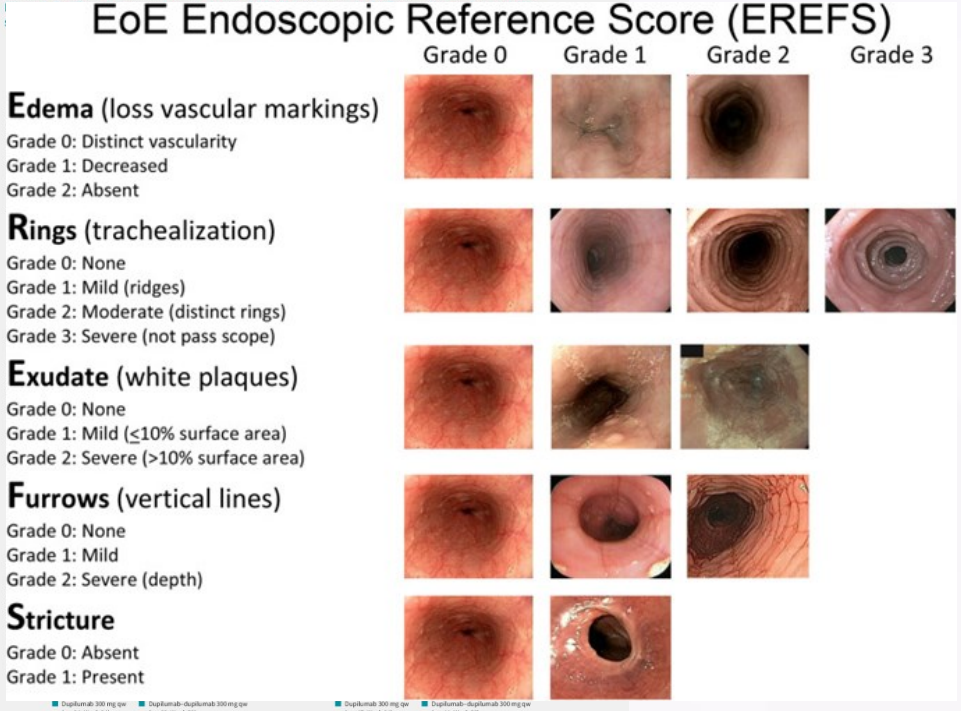
	Part A–C		Part B–C	
	Placebo–dupilumab 300 mg qw (N = 37)	Dupilumab–dupilumab 300 mg qw (N = 40)	Placebo–dupilumab 300 mg qw (N = 37)	Dupilumab–dupilumab 300 mg qw (N = 74)
Age, years, mean (SD)	29.0 (12.8)	34.3 (15.7)	28.6 (12.7)	28.6 (14.0)
Adolescents ≥12 to <18 years, n (%)	9 (24.3)	10 (25.0)	10 (27.0)	24 (32.4)
Female sex, n (%)	16 (43.2)	14 (35.0)	13 (35.1)	26 (35.1)
Race, n (%)				
White	35 (94.6)	39 (97.5)	34 (91.9)	65 (87.8)
Black/African American	1 (2.7)	1 (2.5)	1 (2.7)	2 (2.7)
Other/missing	1 (2.7)	0	2 (5.4)	7 (9.5)
History of prior swallowed topical steroid use for EoE, n (%)	30 (81.1)	28 (70.0)	27 (73.0)	51 (68.9)
History of prior esophageal dilations, n (%)	16 (43.2)	18 (45.0)	18 (48.6)	23 (31.1)
Eos count of three regions (/hpf), mean (SD)	71.57 (41.59)	59.78 (34.04)	60.00 (28.81)	62.70 (31.47)
DSQ score, mean (SD)[a]	34.9 (12.4)	31.6 (12.6)	36.7 (9.7)	38.0 (10.7)
EREFS total score, mean (SD)[b]	6.0 (2.4)	6.5 (3.3)	8.0 (3.4)	6.9 (3.1)
EREFS total score by worst observed region, mean (SD)[b]	3.7 (1.4)	3.9 (1.6)	4.6 (1.7)	4.1 (1.6)
EREFS inflammation subscore, mean (SD)[c]	4.2 (2.3)	5.0 (2.8)	6.0 (2.2)	5.0 (2.2)
EREFS inflammation subscore by worst observed region, mean (SD)[c]	2.5 (1.2)	2.9 (1.3)	3.4 (1.0)	2.9 (1.2)
EREFS remodeling subscore, mean (SD)[d]	1.8 (1.6)	1.5 (1.6)	2.0 (2.0)	1.9 (1.8)
EREFS remodeling subscore by worst observed region, mean (SD)[d]	1.2 (1.1)	1.0 (1.0)	1.2 (1.1)	1.2 (1.1)
EoE-HSS grade score, mean (SD)[e]	1.34 (0.47)	1.28 (0.41)	1.31 (0.35)	1.31 (0.40)
EoE-HSS stage score, mean (SD)[e]	1.39 (0.40)	1.31 (0.33)	1.30 (0.30)	1.29 (0.34)

[a]The DSQ assesses the frequency and severity of dysphagia. The biweekly total DSQ score ranges from 0 to 84; lower scores indicate less dysphagia-related symptom burden. [b]EREFS assesses the severity of endoscopic features. Scores range from 0 to 18 (traditional) or from 0 to 9 (worst observed region); higher scores indicate greater severity. [c]EREFS inflammation subscore is comprised of the inflammatory features: edema, exudates, and furrows. Scores range from 0 to 10 (traditional) or from 0 to 5 (worst observed region); higher scores indicate greater severity. [d]EREFS remodeling subscore is comprised of the remodeling features: rings and strictures. Scores range from 0 to 8 (traditional) or from 0 to 4 (worst observed region); higher scores indicate greater severity. [e]EoE-HSS assesses the severity (grade) and extent (stage) of histologic features summed over 3 regions. Scores range from 0 to 3; 0 represents normal and 3 maximum change. Both scores exclude lamina propria fibrosis.

Figure 2. Mean (SE) percent changes at Week 52 were improved from study baseline in all treatment groups, across all the EREFS individual features by worst observed region, in Part A–C and Part B–C.



- In patients who had a worst observed EREFS total score of ≥1 at baseline, 75% and 62% in Part A–C, and 80% and 95% in Part B–C, had improved scores from baseline at Week 52, in the dupilumab-dupilumab 300 mg qw and placebo-dupilumab 300 mg qw groups, respectively



DSQ, Dysphagia Symptom Questionnaire; EoE, eosinophilic esophagitis; eos, eosinophils; EREFS, EoE-Endoscopic Reference Score; hpf, high-power field; HSS, Histologic Scoring System; qw, weekly; SD, standard deviation; SE, standard error.

References: 1. Straumann A, Katzka DA. Gastroenterology. 2018;154:346-59. 2. Stern E, et al. Dis Esophagus. 2018;31:1-7. 3. Dellon ES, Hirano I. Gastroenterology. 2018;154:319-32.e3. 4. Hirano I, et al. Gut. 2013;62:489-95. 5. Ma C, et al. Gastrointest Endosc. 2022;95(6):1126-37.e2. 6. Le Floc'h A, et al. Allergy. 2020;75:1188-204. 7. Regeneron Pharmaceuticals Inc. DUPIXENT®. Prescribing information. Revised January 2024. Available from: https://www.regeneron.com/downloads/dupixent_fpi.pdf. Accessed January 2024. 8. European Medicines Agency. Dupixent. Available from: https://www.ema.europa.eu/en/documents/product-information/dupixent-epar-product-information_en.pdf. Accessed January 12, 2024. 9. Dellon ES, et al. N Engl J Med. 2022;387:2317-30.

Acknowledgments: Research sponsored by Sanofi and Regeneron Pharmaceuticals Inc. ClinicalTrials.gov Identifier: NCT03633617. Medical writing/editorial assistance was provided by Elizabeth Drysdale, MBChB, of Adelphi Communications, Bollington, UK, and was funded by Sanofi and Regeneron Pharmaceuticals Inc., according to the Good Publication Practice guidelines.

Disclosures: Hirano I: Adare/Ellodi, Allakos, Aslan, AstraZeneca, Calyx/Parexel, Celldex, Eli Lilly, EsoCap, Gossamer Bio, Meritage, Nexstone Immunology, Pfizer/Arena, Phathom, Receptos/Celgene/BMS, Sanofi/Regeneron Pharmaceuticals Inc., Shire/Takeda – consultant; Adare/Ellodi, Allakos, AstraZeneca, Meritage, Pfizer/Arena, Receptos/Celgene/BMS, Regeneron Pharmaceuticals Inc., Shire/Takeda – research funding. **Dellon ES:** Abbott, AbbVie, Adare/Ellodi, Ainmune, Akesobio, Allasigma, ALK, Allakos, Amgen, Aqilion, Arena/Pfizer, Aslan, AstraZeneca, Avir, Biorasi, Calypso, Celgene/Receptos/BMS, Celldex, Dr. Falk Pharma, Eli Lilly, EsoCap, Eupraxia, Ferring, Gossamer Bio, GSK, Holoclara, Invea, Knightpoint, Landos, LucidDx, Morphic, Nexstone Immunology/Uniquity, Nutricia, Parexel/Calyx, Phathom, Regeneron Pharmaceuticals Inc., Revolo, Robarts/Alimentiv, Salix, Sanofi, Shire/Takeda, Target RWE, Upstream Bio – consultant; Adare/Ellodi, Allakos, Arena/Pfizer, AstraZeneca, Celgene/Receptos/BMS, Eupraxia, Ferring, GSK, Meritage, Miraca, Nutricia, Regeneron Pharmaceuticals Inc., Revolo, Shire/Takeda – research funding; Allakos, Aqilion, Holoclara, Invea – educational grant. **Pellegatta G:** Dr. Falk Pharma – consultant. **Xia C, Durrani S, Radwan A:** Regeneron Pharmaceuticals Inc. – employees and shareholders. **Pela T, Jacob-Nara JA:** Sanofi – employees, may hold stock and/or stock options in the company.

Presented at Digestive Disease Week (DDW) 2024 congress: Washington, DC, USA; May 18–21, 2024.

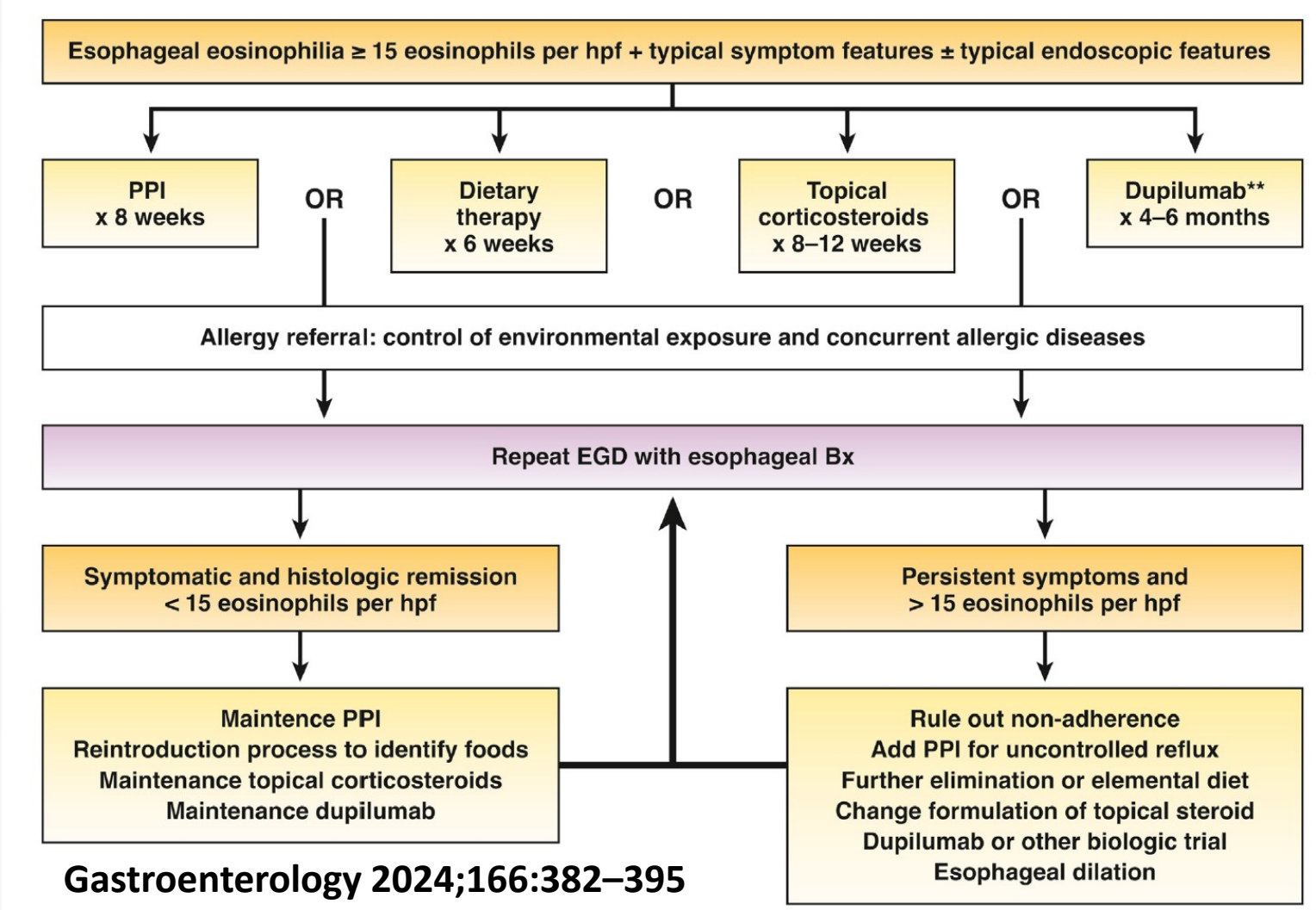
Download full poster and supplementary information (Copies of this poster obtained through Quick Response (QR) Code are for personal use only)

DDW2024 Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

Resumen EOS Manejo 2024

DDW2024 Digestive Disease Week®
MAY 18–21, 2024 | WASHINGTON, D.C.
EXHIBIT DATES: MAY 19–21, 2024

CURSO DE AVANCES EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo. SChGE



Gastroenterology 2024;166:382–395


CURSO DE AVANCES
EN GASTROENTEROLOGÍA
PERSPECTIVAS FUTURAS EN GASTROENTEROLOGÍA
17 - 19 Julio 2024 - Hotel InterContinental, Stgo.
SChGE
SOCIEDAD INTERAMERICANA DE ENDOSCOPIA DIGESTIVA
SIED
¡Muchas gracias!
aoespino@uc.cl
UC | Chile
Red de Salud
UC • CHRISTUS
SCh G-E
Sociedad Chilena de Gastroenterología