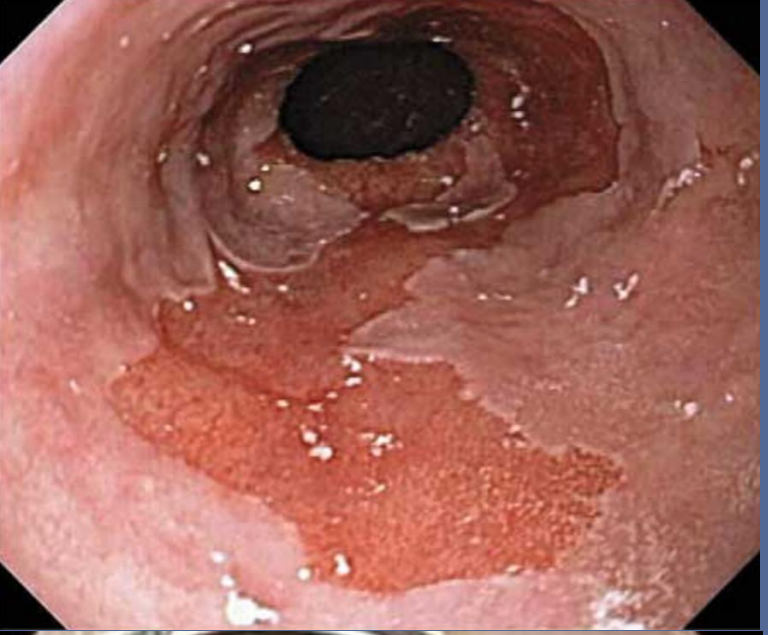


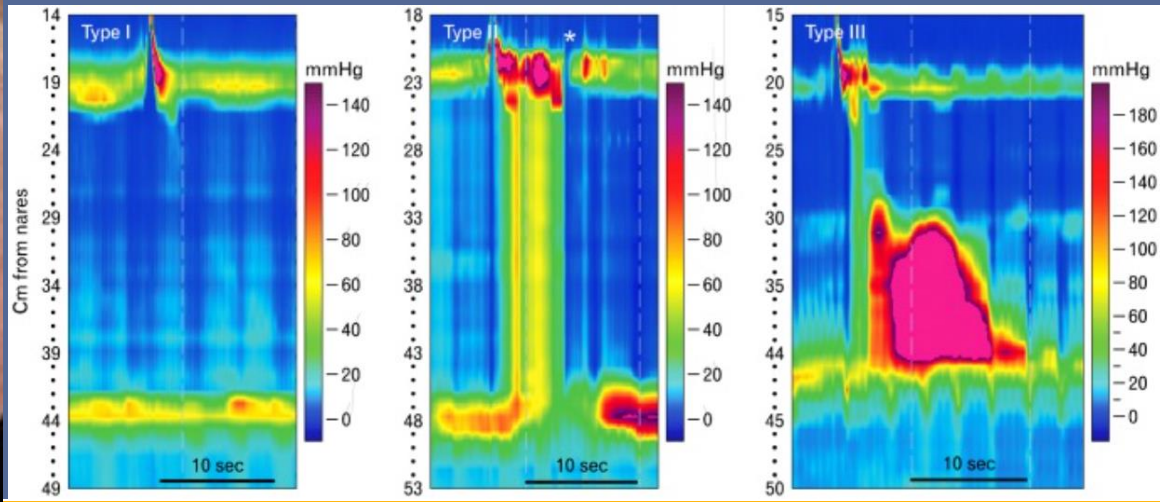
Esophageal Controversies

Jeffrey L. Conklin, MD, FACG

Director, Center for Esophageal Diseases & GI Motility Lab

UCLA

No conflicts of interest



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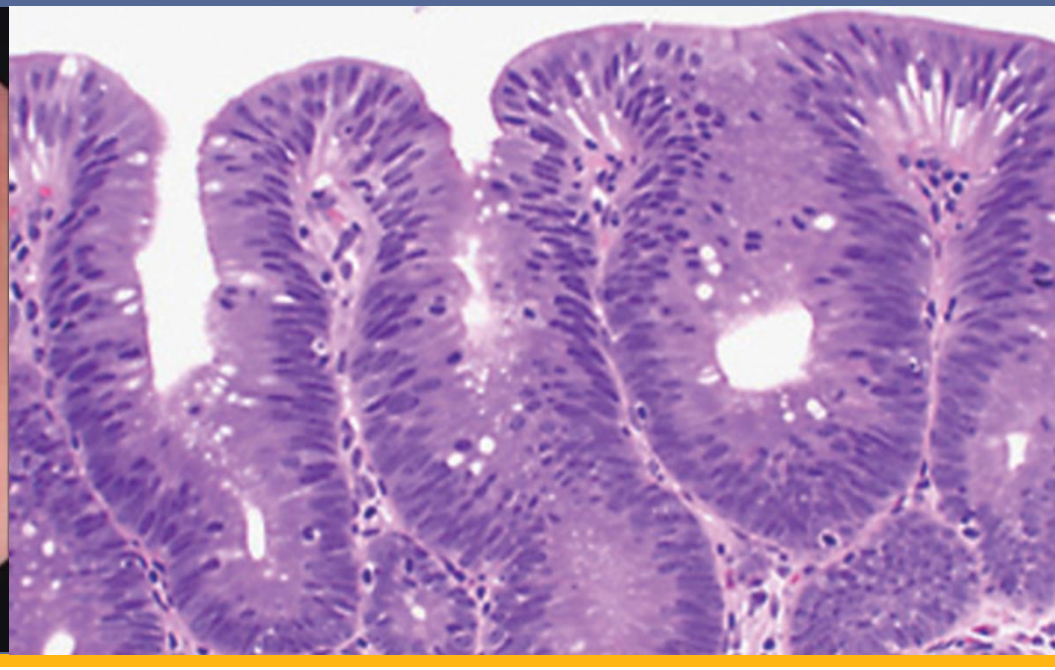
Significant Reduction in the Disease Progression in Barrett's Esophagus Low-Grade Dysplasia Patients Treated With Endoscopic Eradiation Therapy Compared With Surveillance Endoscopy: A Systematic Review and Meta-Analysis

B.J. Qumseya, M.D., M.P.H. ; S. Wani, M.D.; S.Gendi, M.D. ;

B.Harnke ; H. Wolfsen, M.D.



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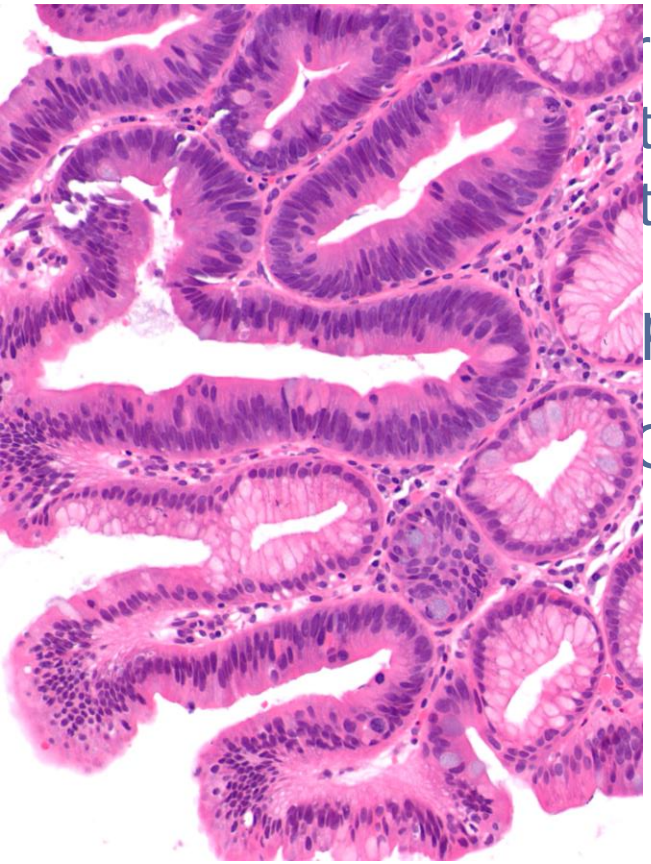
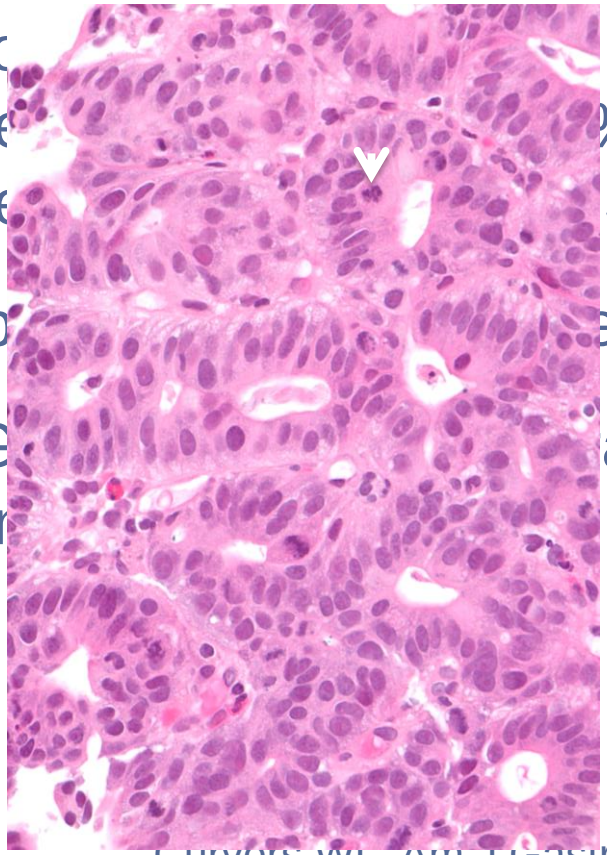
What we knew

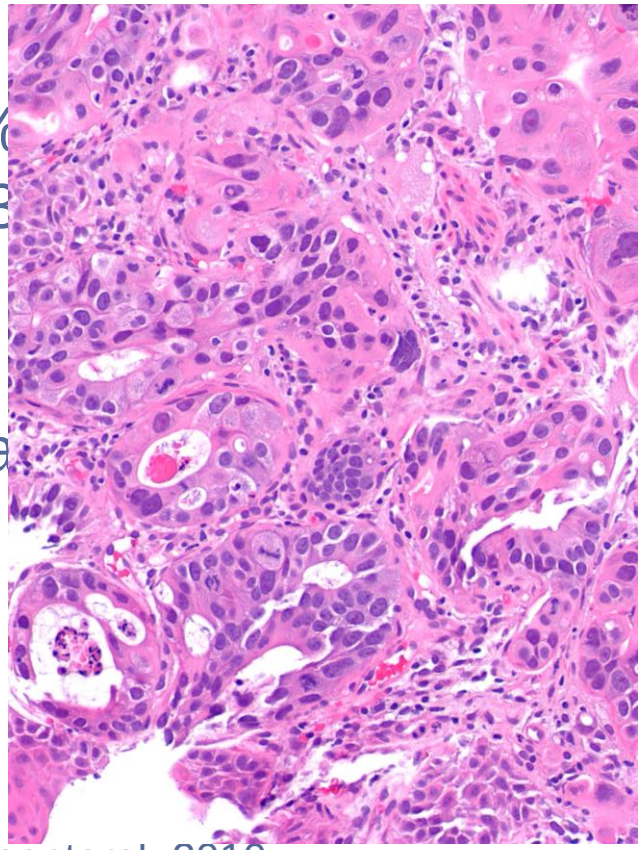
LGD



HGD



EAC



Curvers WL, Am J Gastroenterol, 2010

Systematic review and meta-analysis

Primary outcomes:

1. Relative risk (RR) of Barrett esophagus with LGD progressing after RFA vs surveillance

2. Cumulative rate of disease progression: defined as

disease progression over study period

Secondary outcomes:

1. Rates of progression to HGD or EAC.

2. Incidence rate of disease progression per patient- year of follow-up:

- *IR = number of new case/patient-year of follow up*

Relative risk of progression

3 studies compared disease progression of LGD in RFA vs. surveillance (369 patients)

Relative risk (RR) of LGD progression, RFA vs surveillance = 0.14 [95% CI: 0.04-0.45] p=0.001

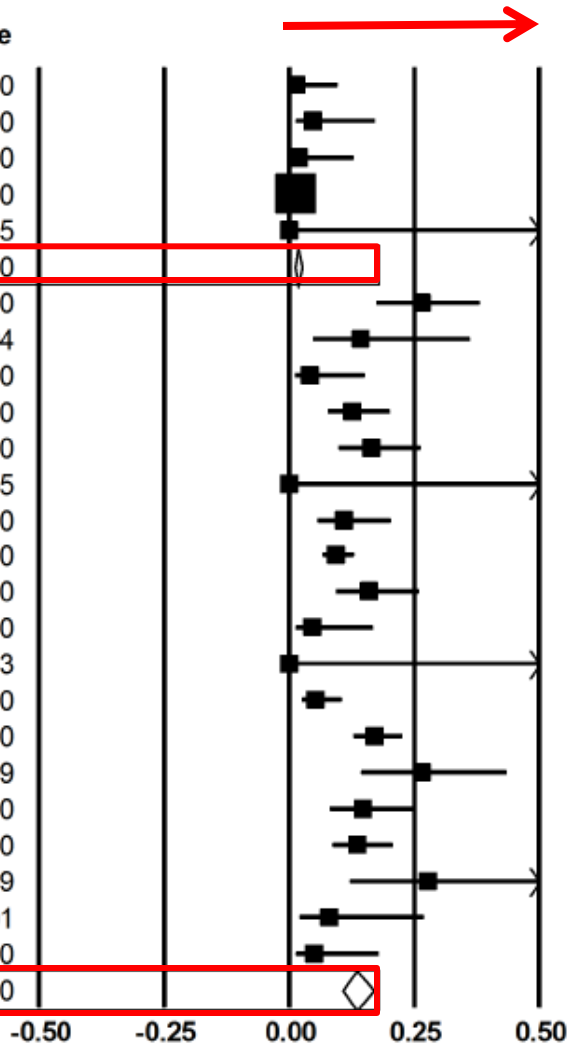
Risk of progression is lower with RFA

Shaheen N, NEJM, 2009
Phoa KN, JAMA, 2014

Small AJ, Gastro , 2015

Cumulative disease progression in RFA vs. surveillance

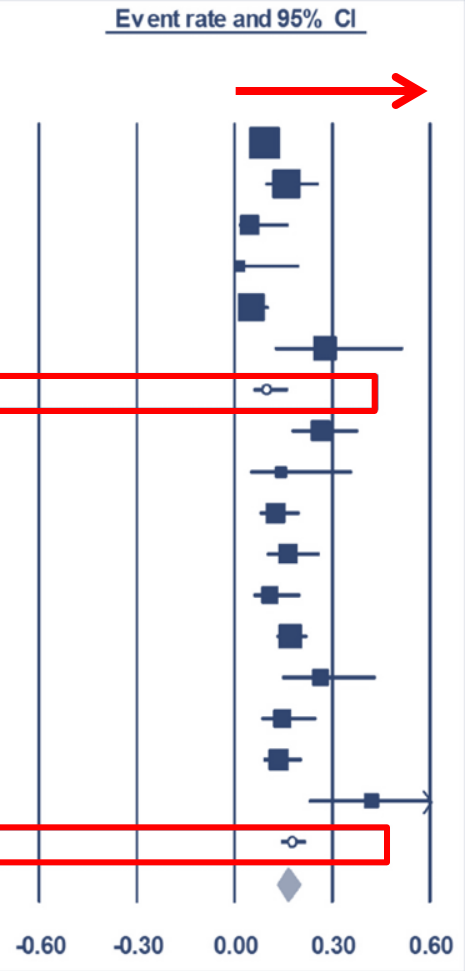
Study name	Subgroup within study	Event rate	Lower limit	Upper limit	p-Value
Phoa 2014 (RFA)	RFA	0.015	0.002	0.097	0.000
Shaheen 2009 (RFA)	RFA	0.048	0.012	0.171	0.000
Mishra, 2015	RFA	0.020	0.003	0.129	0.000
Wolf / Lightdale 2014	RFA	0.013	0.008	0.022	0.000
Small 2015 (RFA)	RFA	0.000	0.000	1.000	0.735
		0.016	0.010	0.025	0.000
Phoa 2014 (Surv)	Surveillance	0.265	0.174	0.382	0.000
Shaheen 2009 (Surv)	Surveillance	0.143	0.047	0.361	0.004
Westen 2001	Surveillance	0.042	0.010	0.152	0.000
Sikkema 2011	Surveillance	0.126	0.076	0.202	0.000
Dutis 2015	Surveillance	0.165	0.098	0.263	0.000
Curvers	Surveillance	0.000	0.000	1.000	0.755
Picardo 2015	Surveillance	0.110	0.056	0.204	0.000
Bhat 2011	Surveillance	0.093	0.066	0.130	0.000
Gatenb y2009	Surveillance	0.160	0.093	0.261	0.000
Ried 2000	Surveillance	0.047	0.012	0.168	0.000
Alcedo 2009	Surveillance	0.000	0.000	1.000	0.743
Dulai 2005	Surveillance	0.052	0.025	0.106	0.000
Thota 2015	Surveillance	0.171	0.127	0.227	0.000
Lim 2007	Surveillance	0.265	0.144	0.435	0.009
Wani 2011	Surveillance	0.147	0.081	0.252	0.000
Small 2015 (Surv)	Surveillance	0.136	0.086	0.208	0.000
Omodeo 2015	Surveillance	0.278	0.121	0.519	0.069
Skacel 2000	Surveillance	0.080	0.020	0.269	0.001
Conio 2003	Surveillance	0.050	0.013	0.179	0.000
		0.134	0.106	0.168	0.000



Cumulative progression higher in surveillance group

Progression of LGD by pathologist type

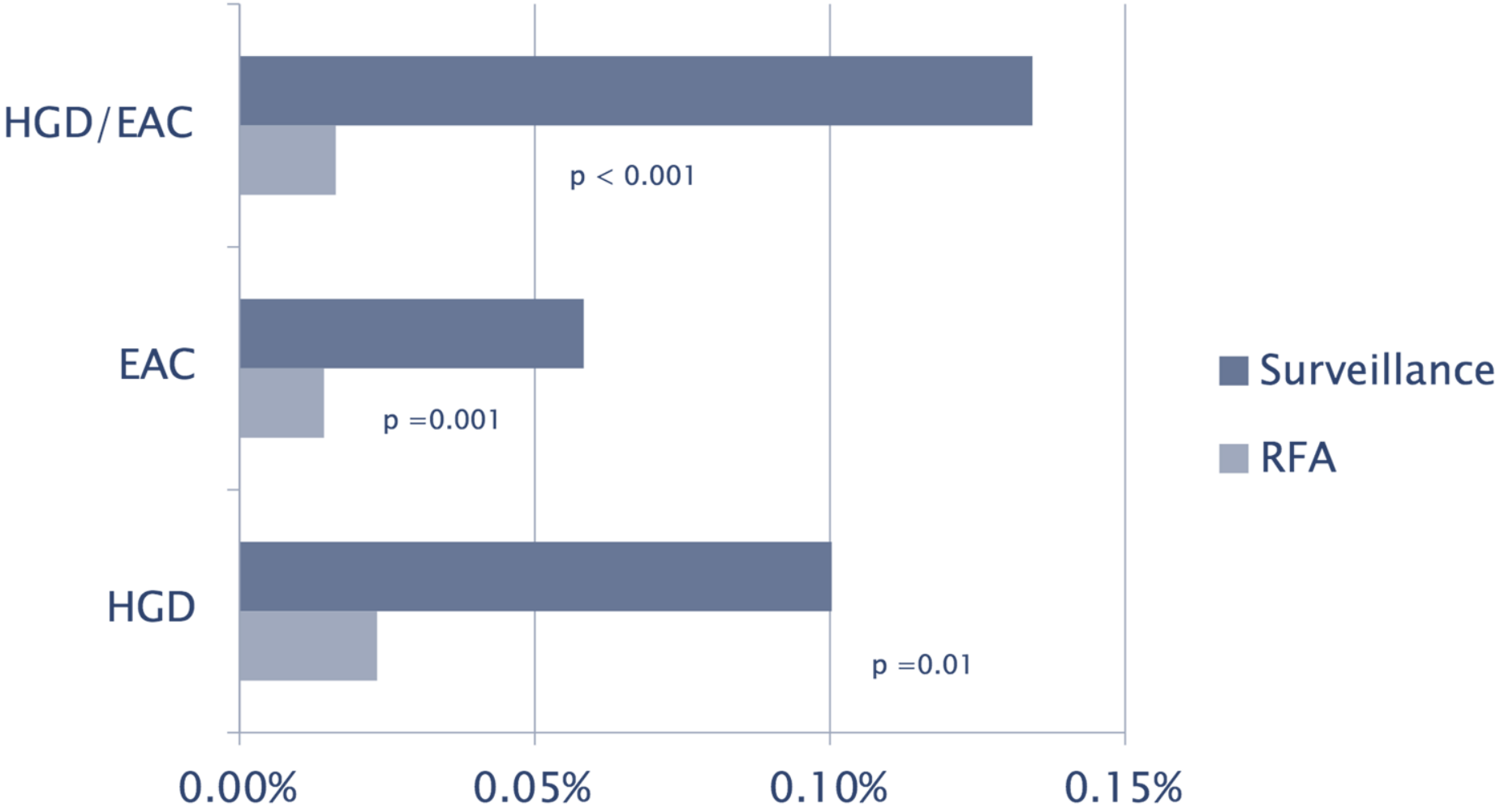
Group by GI pathologist	Study name	Subgroup within study	Comparison	Event rate	p-Value
No	Bhat 2011	National Registry	Surveillance	0.093	0.000
No	Gatenb y2009	Retrospective	Surveillance	0.160	0.000
No	Reid 2000	Retrospective	Surveillance	0.047	0.000
No	Alcedo 2009	Retrospective	Surveillance	0.015	0.003
No	Dulai 2005	Retrospective	Surveillance	0.052	0.000
No	Omodeo 2015	Retrospective	Surveillance	0.278	0.069
No				0.099	0.000
Yes	Phoa 2014 (Surv)	RCT	Surveillance	0.265	0.000
Yes	Shaheen 2009 (Surv)	RCT	Surveillance	0.143	0.004
Yes	Sikkema 2011	Prospective	Surveillance	0.126	0.000
Yes	Duits 2015	National Registry	Surveillance	0.165	0.000
Yes	Picardo 2015	National Registry	Surveillance	0.110	0.000
Yes	Thota 2015	Retrospective	Surveillance	0.171	0.000
Yes	Lim 2007	Retrospective	Surveillance	0.265	0.009
Yes	Wani 2011	Retrospective	Surveillance	0.147	0.000
Yes	Small 2015 (Surv)	Retrospective	Surveillance	0.136	0.000
Yes	Curvers 2010	National Registry	Surveillance	0.421	0.493
Yes				0.177	0.000
Overall				0.160	0.000



P <0.001

When a GI pathologist identifies LGD it is more likely to progress

Cumulative (life-long) risk of disease progression



What did we learn?

Confirmed, untreated LGD has a high risk of progression
13.4% life-long risk

This risk is decreased to 1.6% if treated with RFA

Diagnosis by a GI pathologist increases the risk of LGD progressing, because they ID true cases.

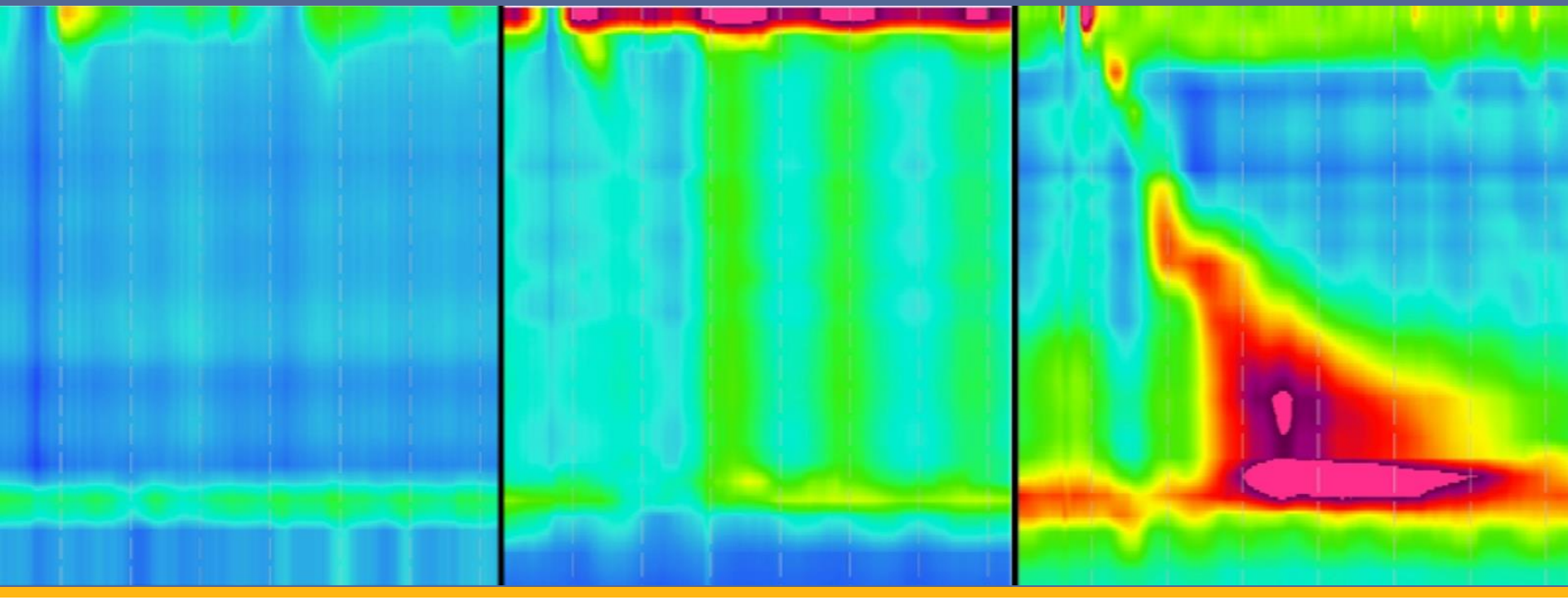
GI pathologists, preferably more than 1, should review biopsies of Barrett epithelium

Strong consideration should be given to ablating LGD

CLINICAL CHARACTERISTICS AND OUTCOMES OF POEM ACCORDING TO ACHALASIA MANOMETRIC PATTERN

DO THE OUTCOMES OF TREATMENT DEPEND ON MANOMETRIC SUBTYPE?

P. Familiari, A. Calì, G. Gigante, R. Landi, F. Barbaro, I. Boskoski, A. Tringali, S. Andrade Zurita, V. Perri, G. Costamagna



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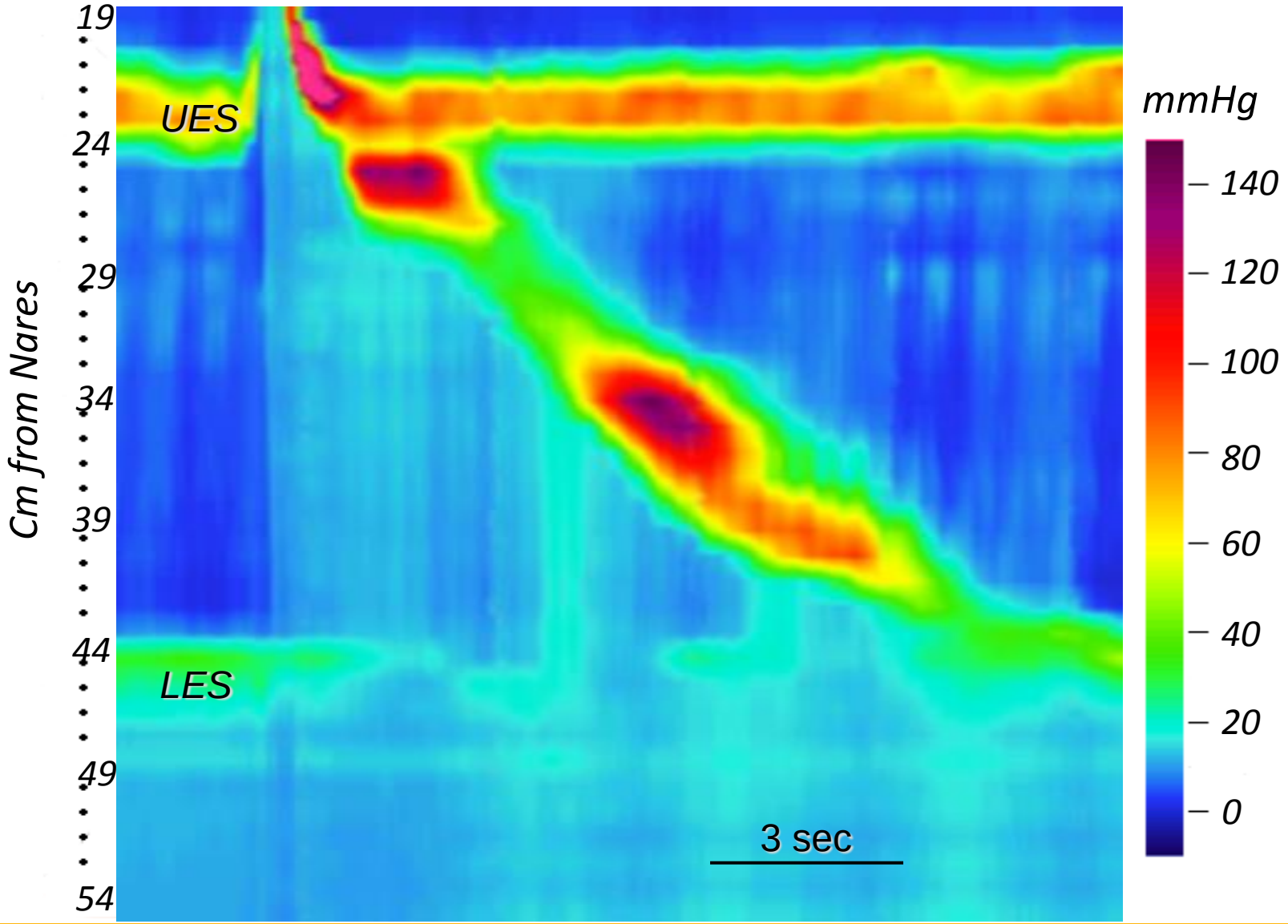
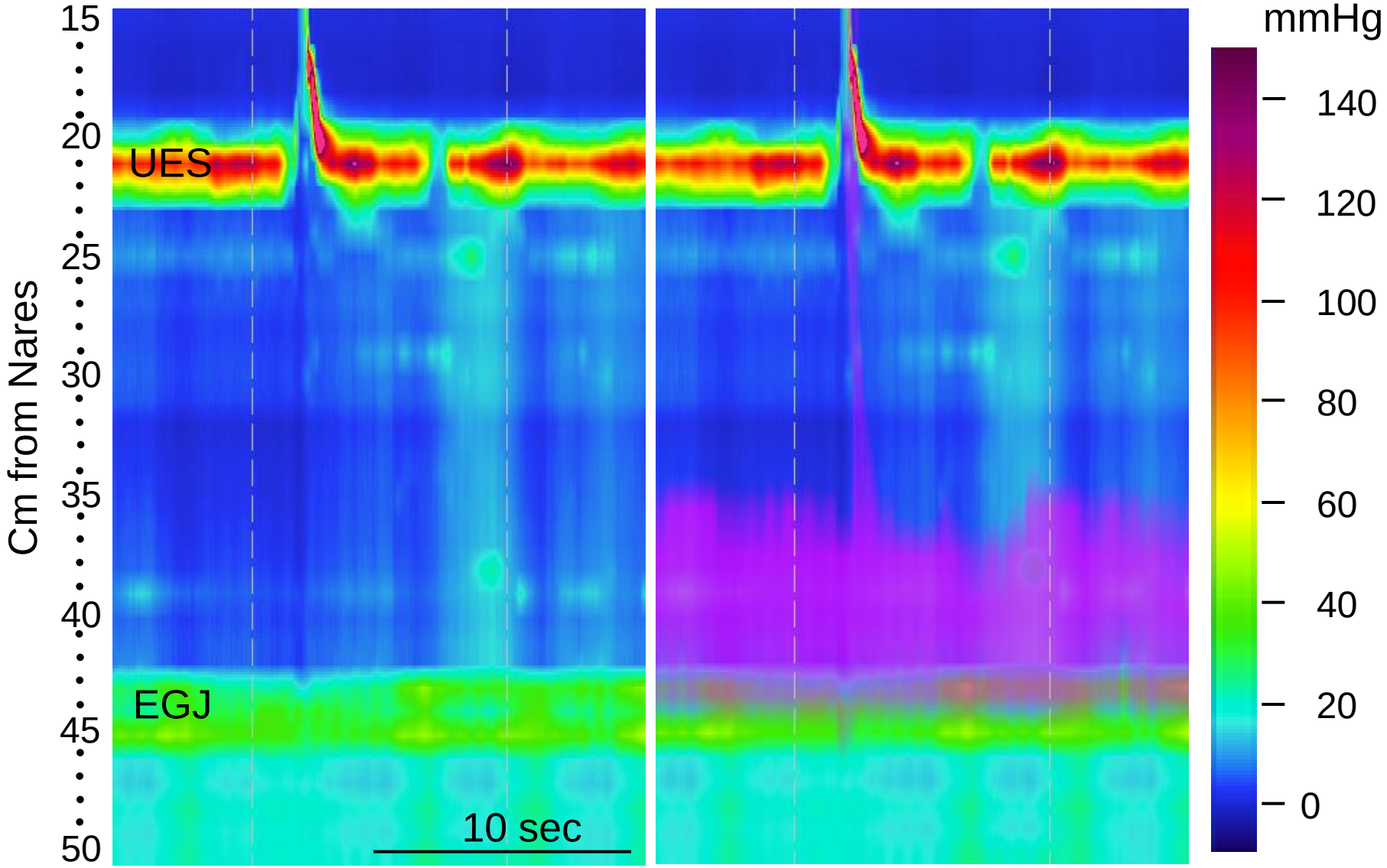
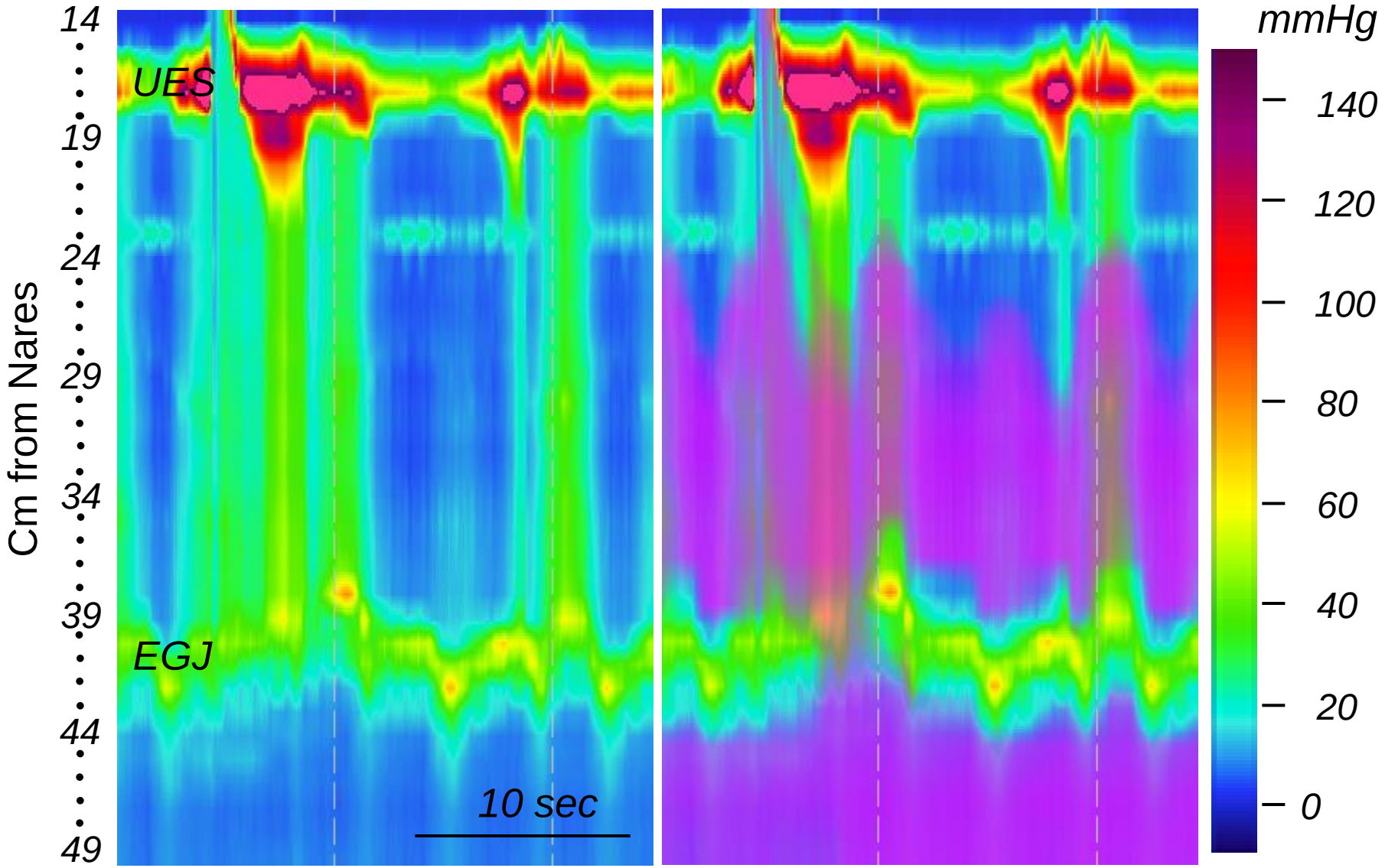
Normal high-resolution pressure topography of normal



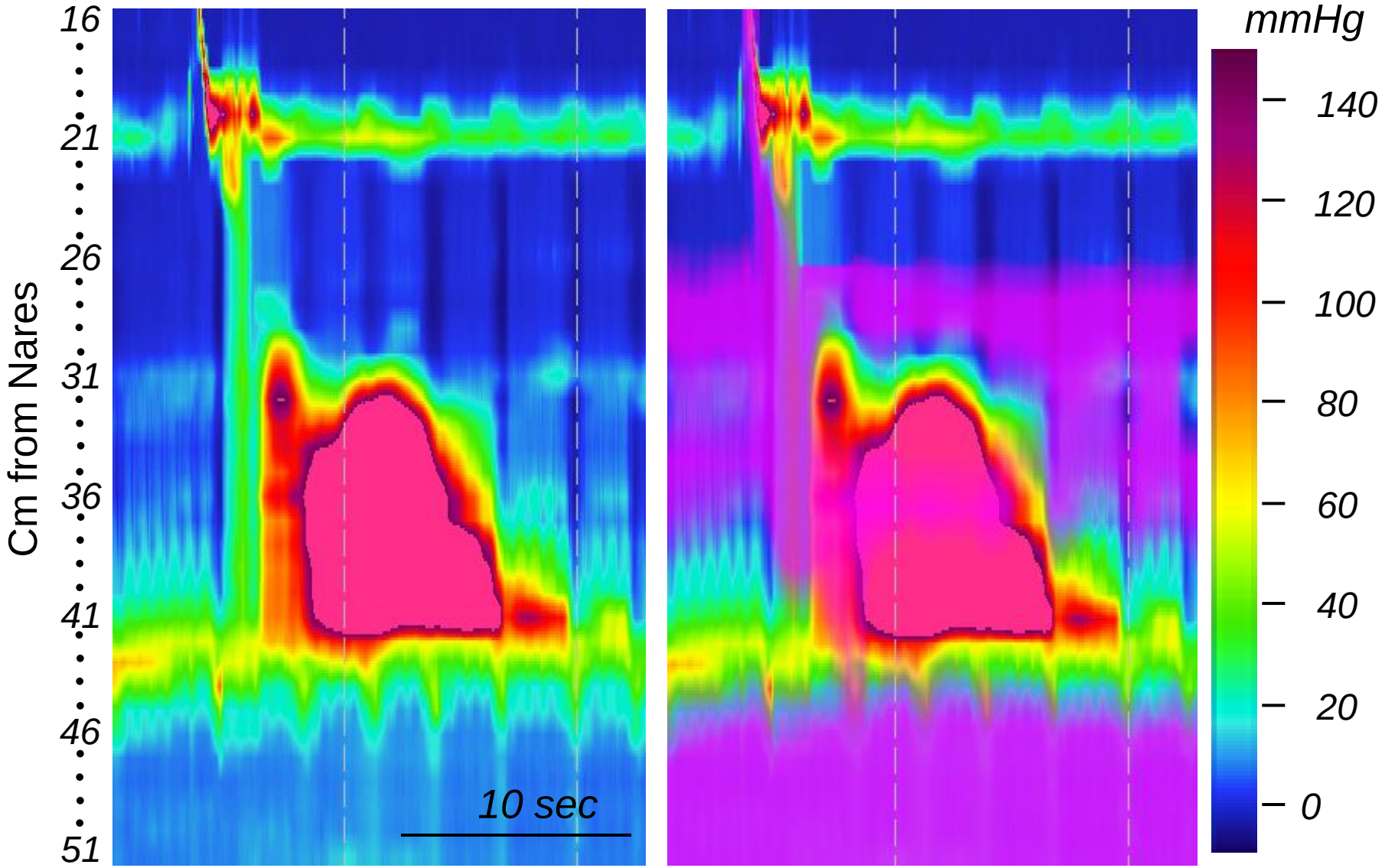
Achalasia Type I



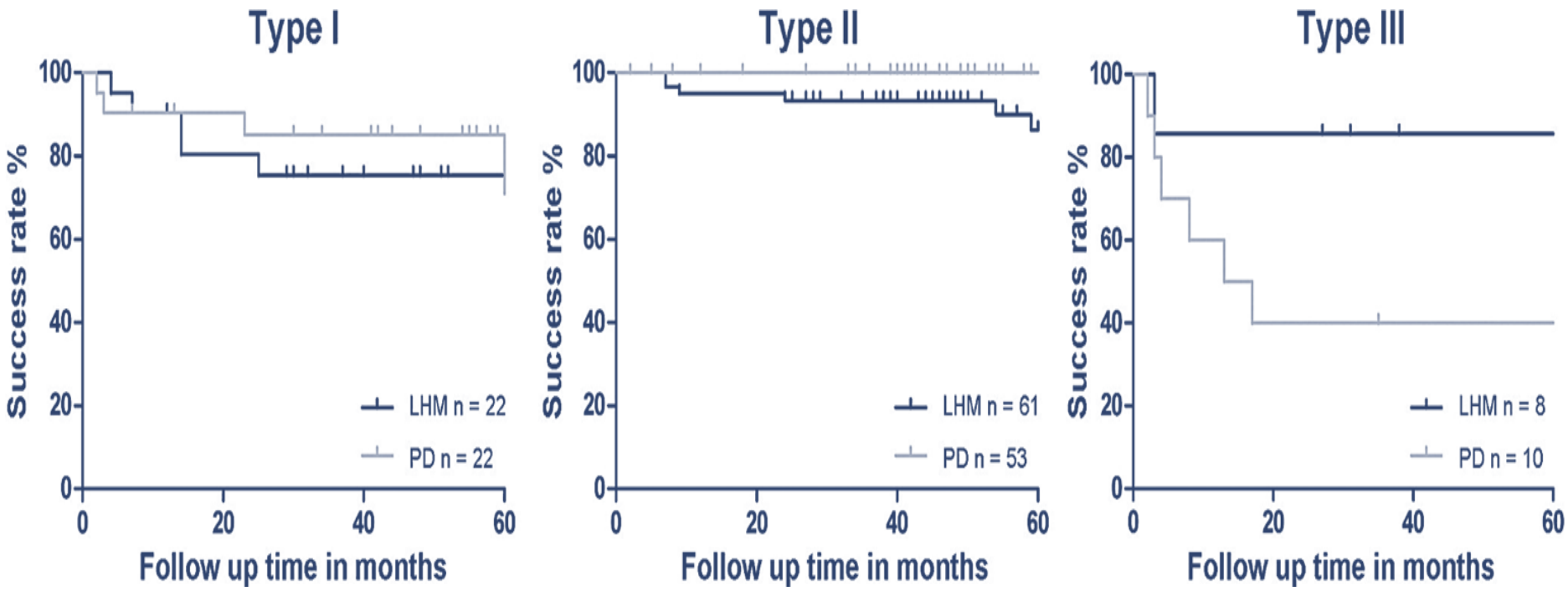
Achalasia Type II

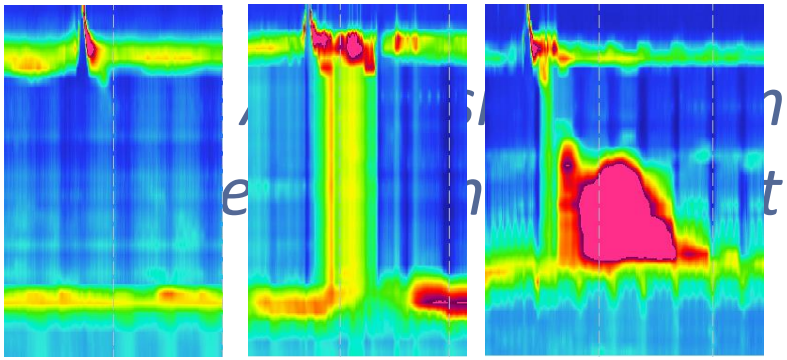


Achalasia Type III



Balloon vs. Lap Heller as a Function of Subtype





...most responsive to either therapy

...t Well Treated by Balloon Dilation

Gastroenterology 2013; 144: 718 – 725

Peroral Endoscopic Myotomy *POEM*

UCLA Health

AIM: Does achalasia subtype predict success of POEM?

Patients: 182 achalasia patients with preop HRM and minimum
6 month follow-up
Clinical success: Eckardt score ≤3

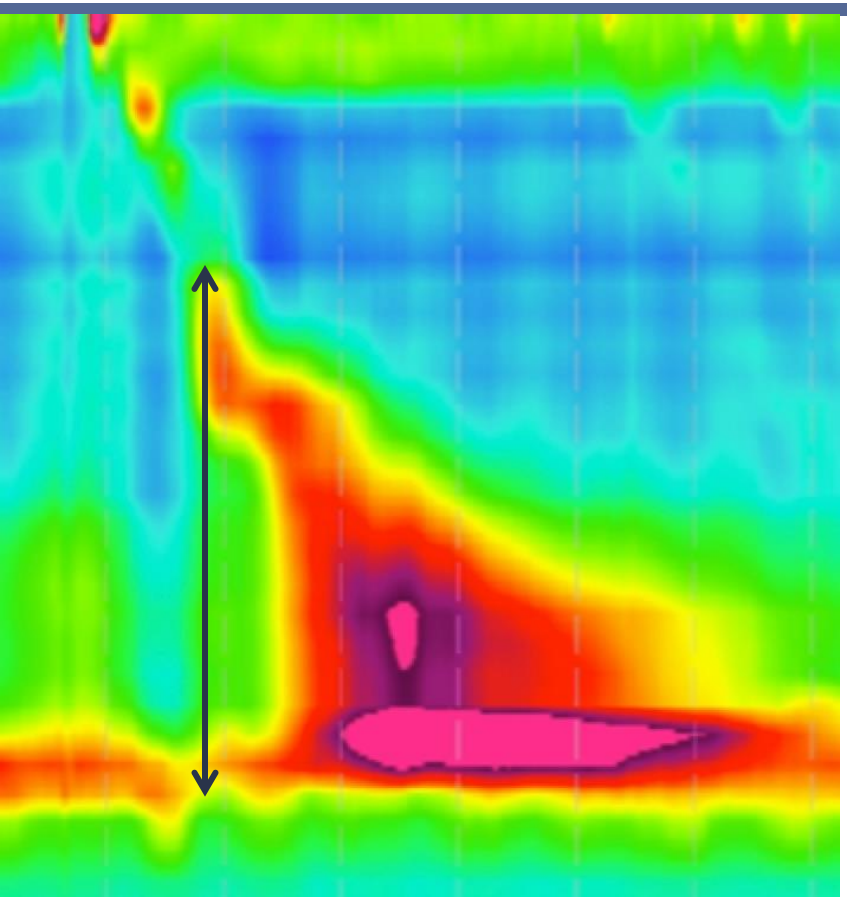
Score	Weight Loss (kg)	Dysphagia	Chest Pain	Regurgitation
0	None	None	None	None
1	<5	Occasional	Occasional	Occasional
2	5-10	Daily	Daily	Daily
3	>10	Each Meal	Each Meal	Each Meal

> 3 is clinical failure

Results

	Type I (52)	Type II (112)	Type III (18)	*p*-value
Procedure Time (minutes)	73.0 ± 21.5	66.7 ± 20.2	72.0 ± 30.8	0.188
Lenght of myotomy (cm)	10.9 ± 2.3	11.4 ± 2.2	14.3. ± 2.8*	<0.0001
Clinical Efficacy (ECK ≤ 3)	96.2%	96.4%	94.4%	0.920
GERD (altered pH-study + heartburn or esophagitis)	32.6% (14/43)	40% (40/100)	28.6% (4/14)	0.555
Post-Operative ECK (mean)	0.9	0.7	1.3	0.094

What did we learn?



POEM is comparable to LHM and PD for treatment of types I and II achalasia and is more efficacious for type III

The improved efficacy for type III is probably because the myotomy can be tailored to dissect the entire length of the spastic esophageal contraction

30-40% will have abnormal pH study, heartburn or esophagitis, comparable to Heller myotomy without Dor or Toupet fundoplication

Comparative evaluation of peroral endoscopic myotomy (POEM) for the treatment of achalasia in patients with failed Heller myotomy vs patients without a history of surgical myotomy: A multicenter retrospective cohort study

Saowanee Ngamruengphong, Haruhiro Inoue, Michael Ujiki, Amol Bapaye, Pankaj N. Desai, Thierry Ponchon, Shivangi Dorwat, Peter V Draganov, Yaseen Perbtani, Ali Abbas, Davinderbir Pannu, Dennis Yang, Silvana Perretta, John Romanelli, David Desilets, Bu Hayee, Lava Patel, Mathieu Pioche, Sabine Roman, Jérôme Rivory, François Mion, Aurélien Garros, Jun Nakamura, Yoshitaka Hata, Valerio Balassone, Manabu Onimaru, Gulara Hajiyeva, Amr Ismail, Yen-I Chen, Majidah Bukhari, Yamile Haito Chavez, Vivek Kumbhari, Roberta Maselli, Alessandro Repici, Mouen Khashab

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What we knew

POEM for patients who failed prior HM

- Few single-center small series (<15 patients)
- High clinical success (> 90%) and low rate of AE

Hypothesis: clinical outcomes of patients who failed prior HM are comparable to patients without a history of surgical myotomy

Zhou PH. Endoscopy. 2013
Onimaru M. J Am Coll Surg. 2013

Vigneswaran Y. J Gastrointest Surg. 2014

Baseline characteristics – previous therapy

	Control [n=90]	Prior HM [n=90]	p
Previous therapy, n(%)			
Pneumatic dilation	23 (26%)	40 (44%)	0.01
Botulinum toxin	7 (8%)	10 (11%)	0.61
HM with Dor fundoplication	0	19 (21%)	
HM with Toupet fundoplication	0	2 (2%)	
HM with fundoplication	0	64 (70%)	
HM without fundoplication	0	6 (3%)	
Orientation of Myotomy			<0.001
Anterior	42 (47%)	2 (3%)	
Posterior	48 (53%)	86 (97%)	

Outcomes

Successfully completed POEM

	Control (n = 90)	Prior HM (n =90)	p
Technical success	90 (100%)	88* (98%)	0.49

2 failures due to extensive submucosal fibrosis

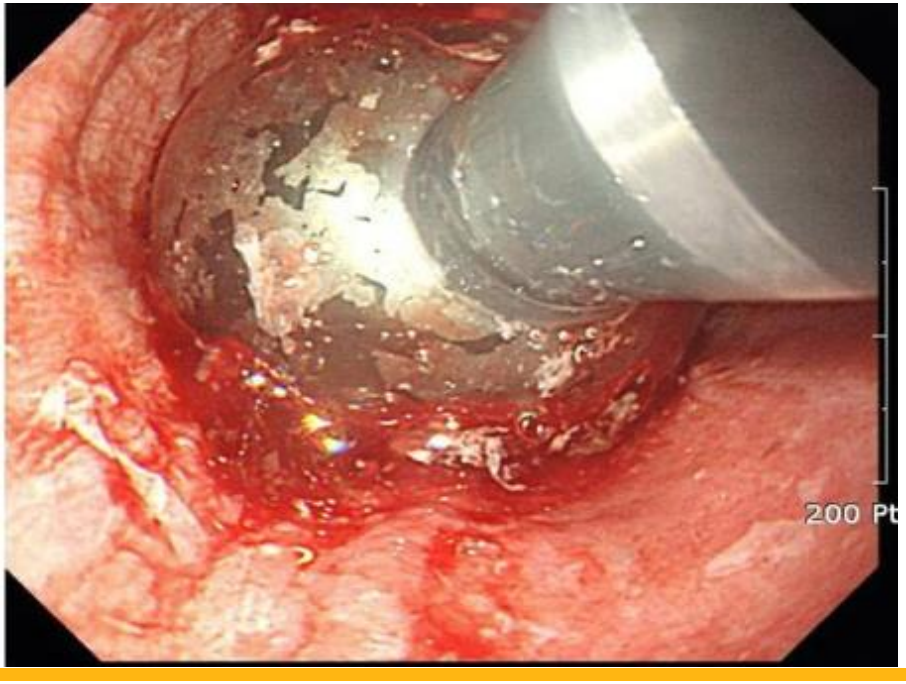
Successful by Eckhardt symptom score

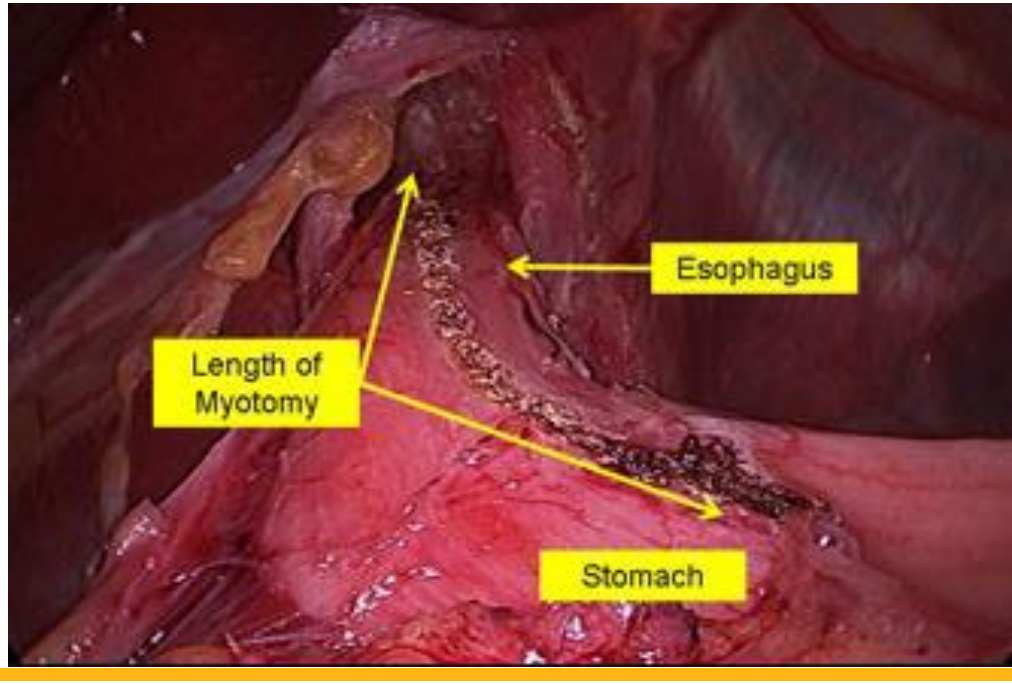
	Control (n=90)	Prior HM (n=90)	P
Clinical success ES < 3	85 (94%)	72 (80%)	0.02
Post-POEM ES	1.08 + 1.2	2.09 + 2.5	0.002

Multivariable analysis: Predictors of clinical failure after POEM

Factors	Odds ratio (95% CI)	P
Prior PD (Yes vs No)	3.18 (1.14-8.85)	0.02
Prior HM (Yes vs No)	2.91 (0.97-8.73)	0.05
Baseline ES	0.85 (0.69-1.03)	0.10

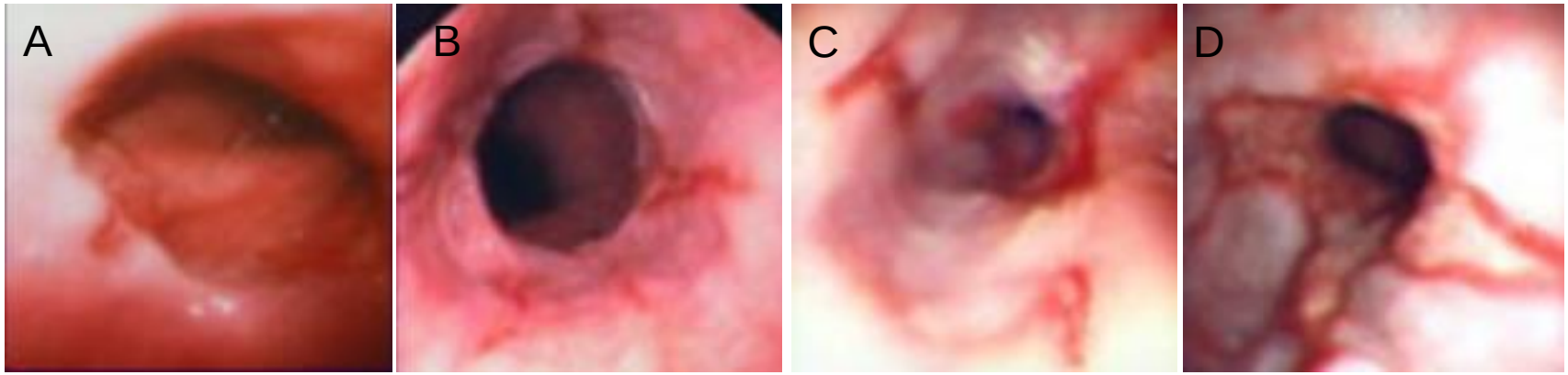
Previous pneumatic dilation makes failure of POEM more likely





Reflux after POEM

	Control	Prior HM	p
# Patients	76	70	
Reflux symptoms	24 (32%)	21 (30%)	0.85
# Patients	51	48	
Esophagitis on EGD	23 (52%)	18 (36%)	0.52
LA grade A	13 (25%)	14 (29%)	
LA grade B	6 (12%)	3 (6%)	
LA grade C	3 (6%)	1 (2%)	
LA grade D	1 (2%)	0	



What did we learn?

POEM is effective in patients with failed HM (80%), but less so than in those without prior HM (94%).

Prior pneumatic dilation is associated with clinical failure of POEM