

# Meet the Press: Chicago Classification v 4.0, circa 2021

*Your Hosts:*

*From Chicago: Peter J. Kahrilas, M.D.*

*From Seattle: Roger Tatum, MD*

# Meet the Press

## Esophageal motility disorders on high-resolution manometry: Chicago classification version 4.0<sup>©</sup>

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*Yadlapati R et al. Neurogastroenterol Mot 2021 Jan;33(1):e14058*

**Multidisciplinary Collaboration. Personalized Treatment Strategies. Patient Advocacy.**

# The Chicago Classification:4.0

Key updates in CCv.4.0 revolve around deficiencies of 3.0


1. A more rigorous and expansive protocol that incorporates different positions and provocative testing.
2. A refined definition of esophago-gastric junction (EGJ) outflow obstruction (EGJOO).
3. An increased threshold for the diagnosis of ineffective esophageal motility.
4. An inclusion of a description of baseline EGJ metrics.
5. Further, the CCv4.0 sought to define motility disorder diagnoses as conclusive and inconclusive based on associated symptoms, the use of provocative testing and corroborating supportive testing with barium esophagram with tablet and/or functional lumen imaging probe.

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TECHNICAL NOTE

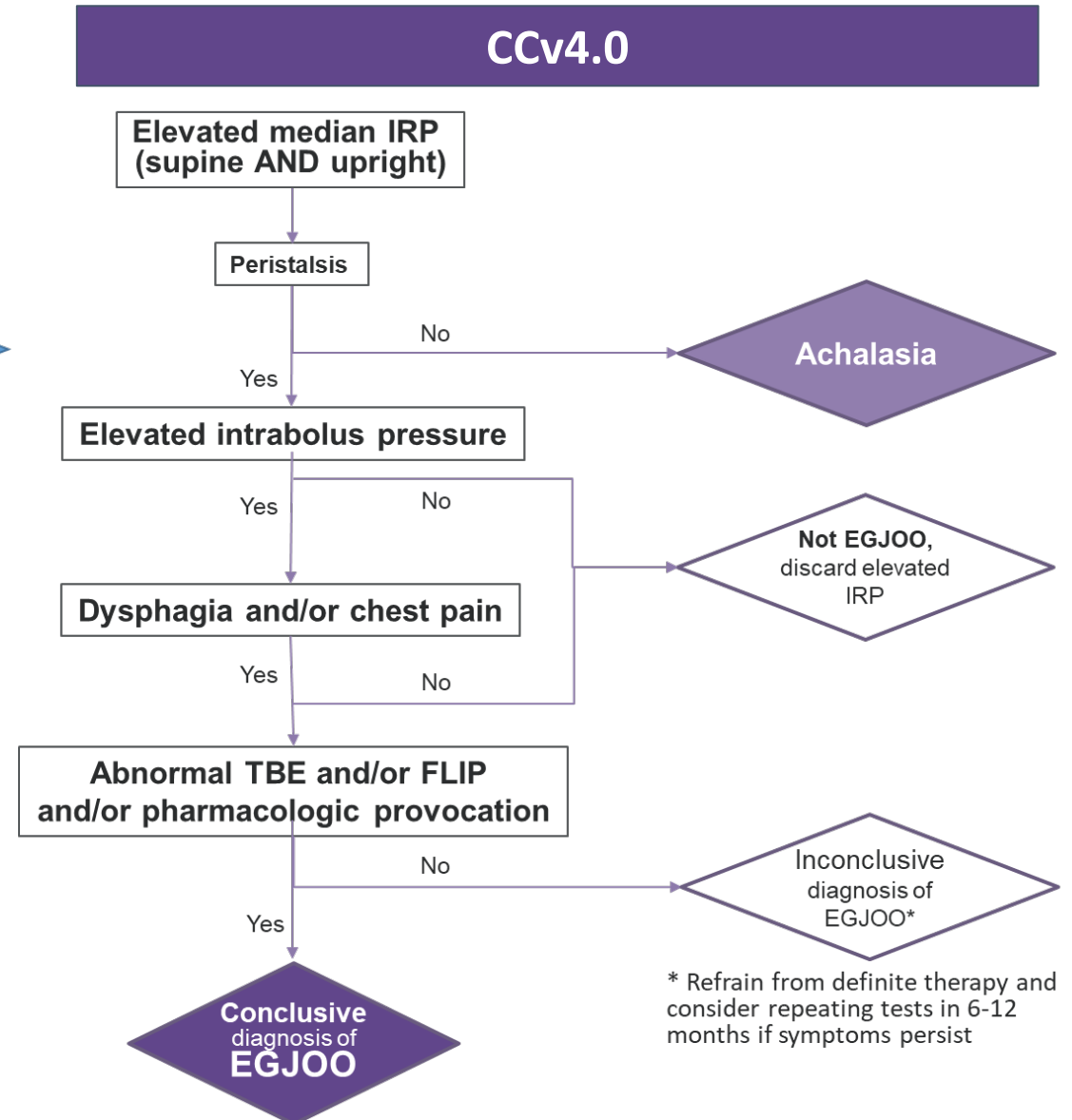
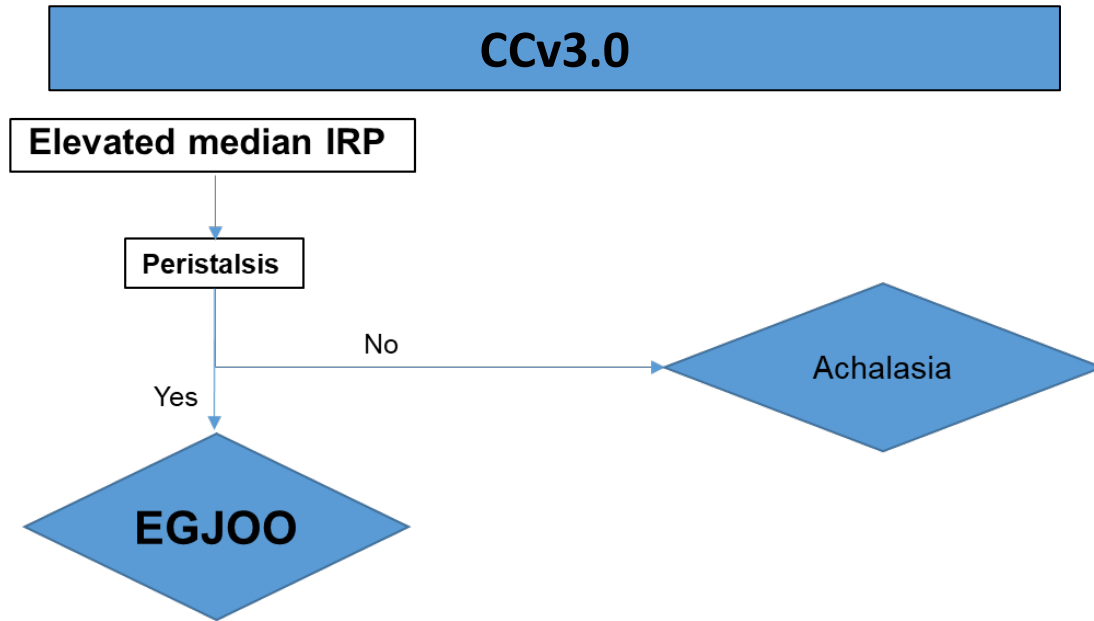
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## Esophagogastric junction outflow obstruction

Albert J. Bredenoord<sup>1</sup>  | Arash Babaei<sup>2</sup>  | **Dustin Carlson<sup>3</sup>**  | Taher Omari<sup>4</sup>  |  
Jun Akiyama<sup>5</sup> | Rena Yadlapati<sup>6</sup>  | John L. ...<sup>2</sup> | ... Richter<sup>7</sup> | Ronnie Fass<sup>8</sup> 

*Bredenoord AJ et al. Neurogastroenterol Mot 2021;00:e14193.*

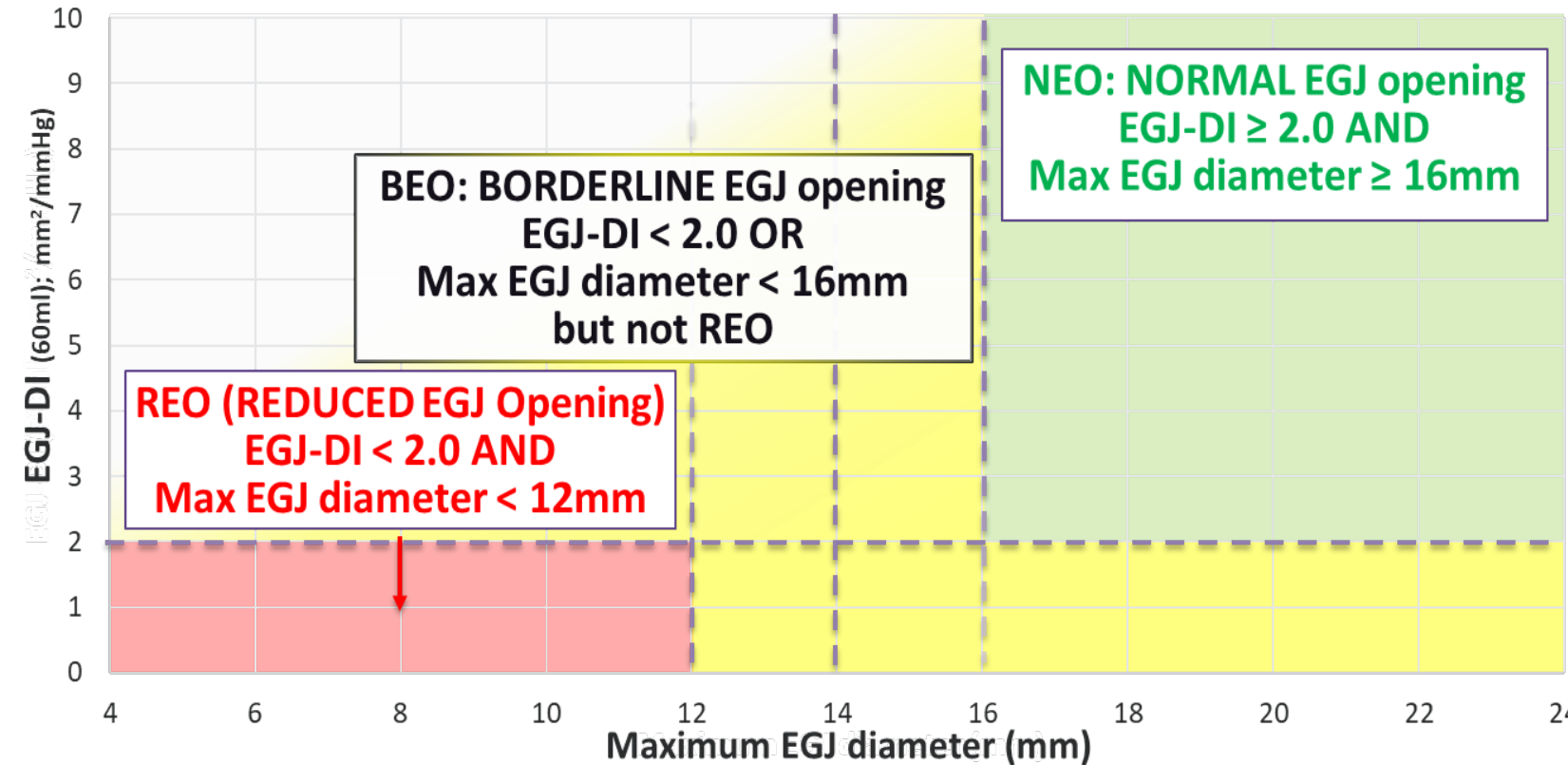
# EGJOO: CCv3.0 vs CCv4.0



\* Refrain from definite therapy and consider repeating tests in 6-12 months if symptoms persist

# EGJ opening on FLIP: EGJ-DI and maximum EGJ diameter

Prediction of esophageal retention  
(abnormal TBE)



	OR (95% CI)
<b>IRP-HRM</b>	
Normal	<i>ref</i>
Isolated elevation	0.5 (0.2-1.2)
Elevated	1.8 (0.8-3.7)
<b>FLIP-EGJ opening</b>	
Normal	<i>ref</i>
Borderline-normal	2.7 (1.1-6.7)
Borderline-reduced	6.3 (2.6-16)
Reduced	39 (16-96)



Carlson, DA et al. Clin Gastroenterol Hepatol; 2021

Multidisciplinary Collaboration. Personalized Treatment Strategies. Patient Advocacy.

Also controlled for age, sex, HH

Carlson, DA, et al. Am J Gastroenterol 2021; epub Aug 13



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DOI: 10.1111/nmo.14113

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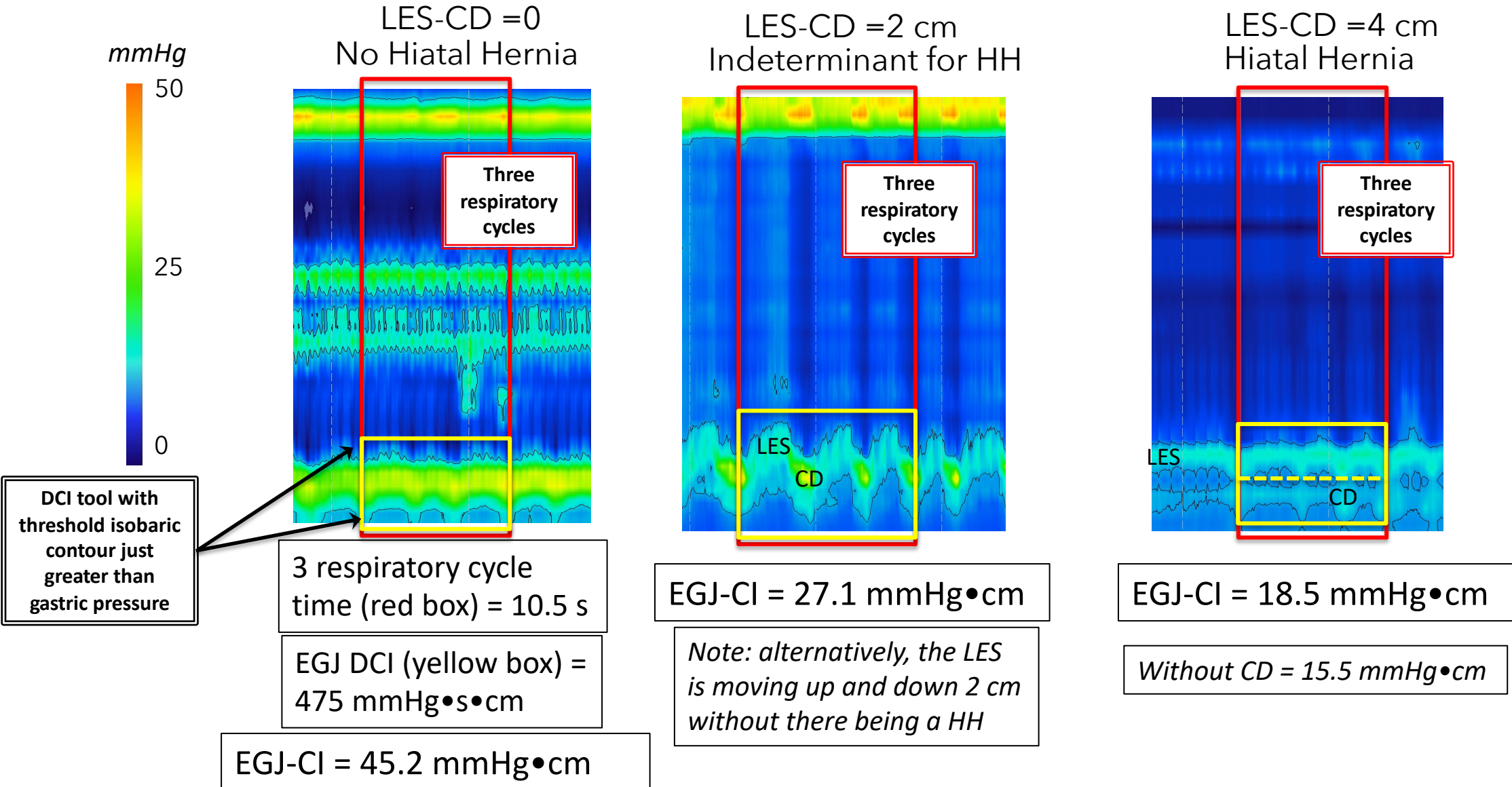
## Chicago Classification update (v4.0): Technical review of high-resolution manometry metrics for EGJ barrier function

Peter J. Kahrilas<sup>1</sup> | Ravinder K. Mittal<sup>2</sup>  | Serhat Bor<sup>3</sup>  | Geoffrey P. Kohn<sup>4,5</sup> |  
Srinivasan Aravamudan<sup>6</sup> | Sumeet K. Mittal<sup>7</sup> | John E. Pandolfino<sup>1</sup> | Jordi Serra<sup>8</sup>  |  
Roger Tatum<sup>9</sup> | Rena Yadlapati<sup>2</sup> 

*Kahrilas PJ et al. Neurogastroenterol Mot 2021;00:e14113.*

# Calculation of the esophagogastric junction contractile integral (EGJ-CI)

## Chicago Classification v4.0





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## Chicago classification version 4.0<sup>©</sup> technical review: Update on standard high-resolution manometry protocol for the assessment of esophageal motility

Mark R. Fox<sup>1</sup>  | Rami Sweis<sup>2</sup>  | **Rena Yadlapati<sup>3</sup>**  | John Pandolfino<sup>4</sup>  |  
Albis Hani<sup>5</sup> | Claudia Defilippi<sup>6</sup> |  |  |  | 

*Fox MR et al. Neurogastroenterol Mot 2021;33:e14120*

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Chicago classification version 4.0<sup>©</sup> technical review: Update on standard high-resolution manometry protocol for the assessment of esophageal motility

*Rena, Why is it necessary/essential to standardize the clinical HRM protocol?*





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## Chicago Classification update (version 4.0): Technical review on diagnostic criteria for achalasia

Abraham Khan<sup>1</sup>  | Rena Yadlapati<sup>2</sup>  | Sutep Gonlachanvit<sup>3</sup> |  
Moo In Park<sup>5</sup> | Michael Vaezi<sup>6</sup> | Marcelo Vela<sup>7</sup> | John Pandolfino<sup>8</sup>

David A. Katzka<sup>4</sup> |

*Khan A et al. Neurogastroenterol Mot 2021;33:e14182..*





# Type III Achalasia vs Diffuse Esophageal Spasm

## Type III Achalasia

- Distinct:
  - IRP Elevated (median > 15 mm Hg)
  - Absent Peristalsis
- Similar
  - ≥20% swallows with premature/spastic contraction
  - Can be borderline IRP
  - Pathology with loss of ICCs, mild fibrosis, increased muscle thickness <sup>1,2</sup>

## Diffuse Esophageal Spasm

- Distinct
  - IRP normal
  - Peristalsis can be present
- Similar
  - ≥20% swallows with premature contractions
  - Can be borderline IRP
  - Pathology with loss of ICCs, mild fibrosis, increased muscle thickness <sup>1,2</sup>

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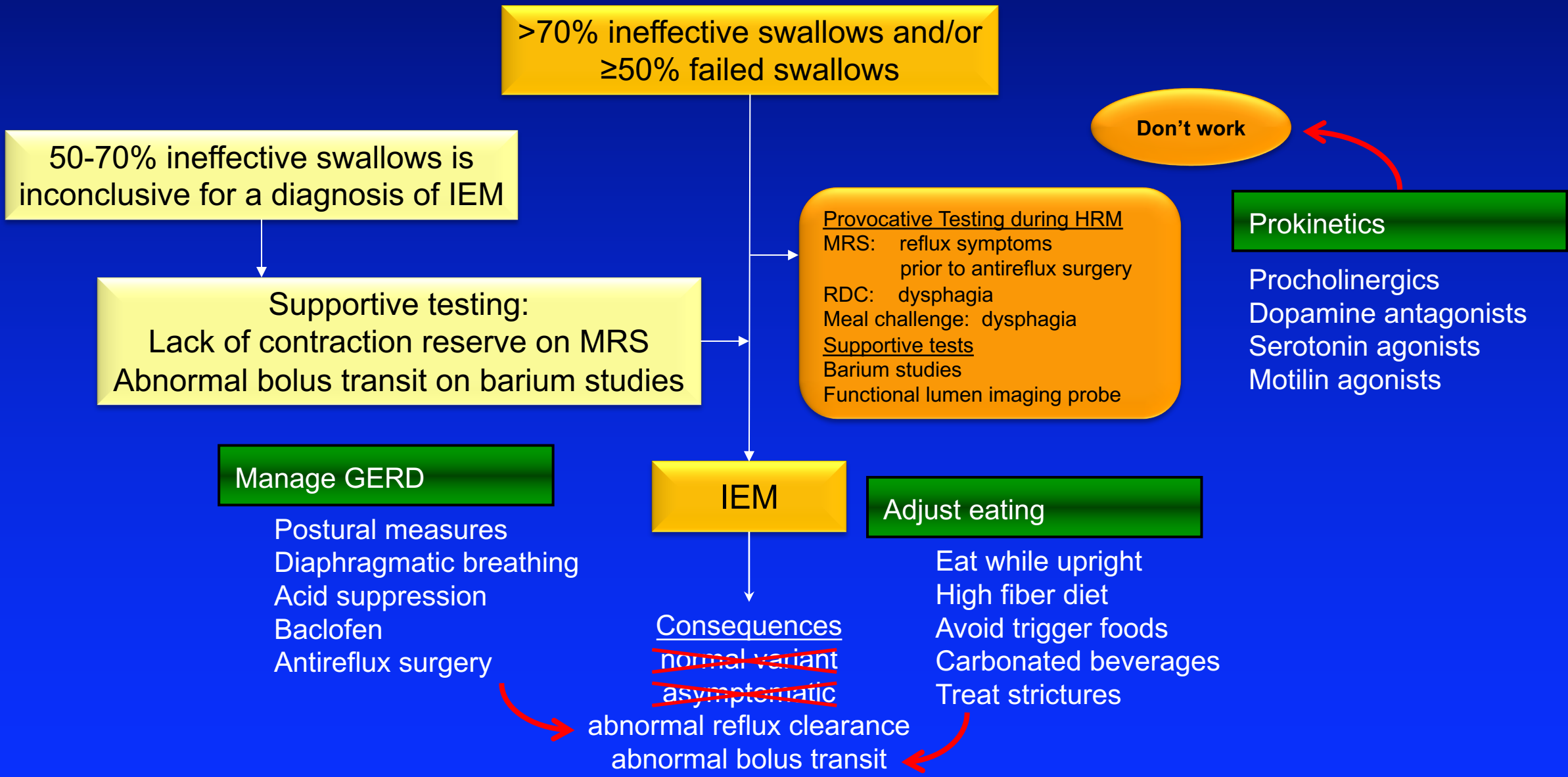
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## Chicago Classification update (V4.0): Technical review on diagnostic criteria for ineffective esophageal motility and absent contractility

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Adriana Lazarescu<sup>6</sup> | Daniel Pohl<sup>7</sup> | Rena Yadlapati<sup>8</sup> |  
Roberto Penagini<sup>9</sup> | John Pandolfino<sup>10</sup>

*Gyawali CP et al. Neurogastroenterol Mot 2021;33:e14182..*



Gyawali CP et al, Stanford IEM Symposium, Neurogastroenterol Motil 2019  
 Gyawali CP et al, IEM Technical Note, Neurogastroenterol Motil 2021  
 Yadlapati R et al, Chicago Classification 4.0, Neurogastroenterol Motil 2021

# Meet the Press: Chicago Classification v 4.0

*Goodbye from your Hosts and Enjoy AFS 2021!*

*Peter J. Kahrilas, M.D.*

*Roger Tatum, MD*



