

Ecografía intestinal: Novedades del pasado

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Ecografía intestinal: Novedades del futuro

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Ecografía intestinal

PATOLOGIA AGUDA

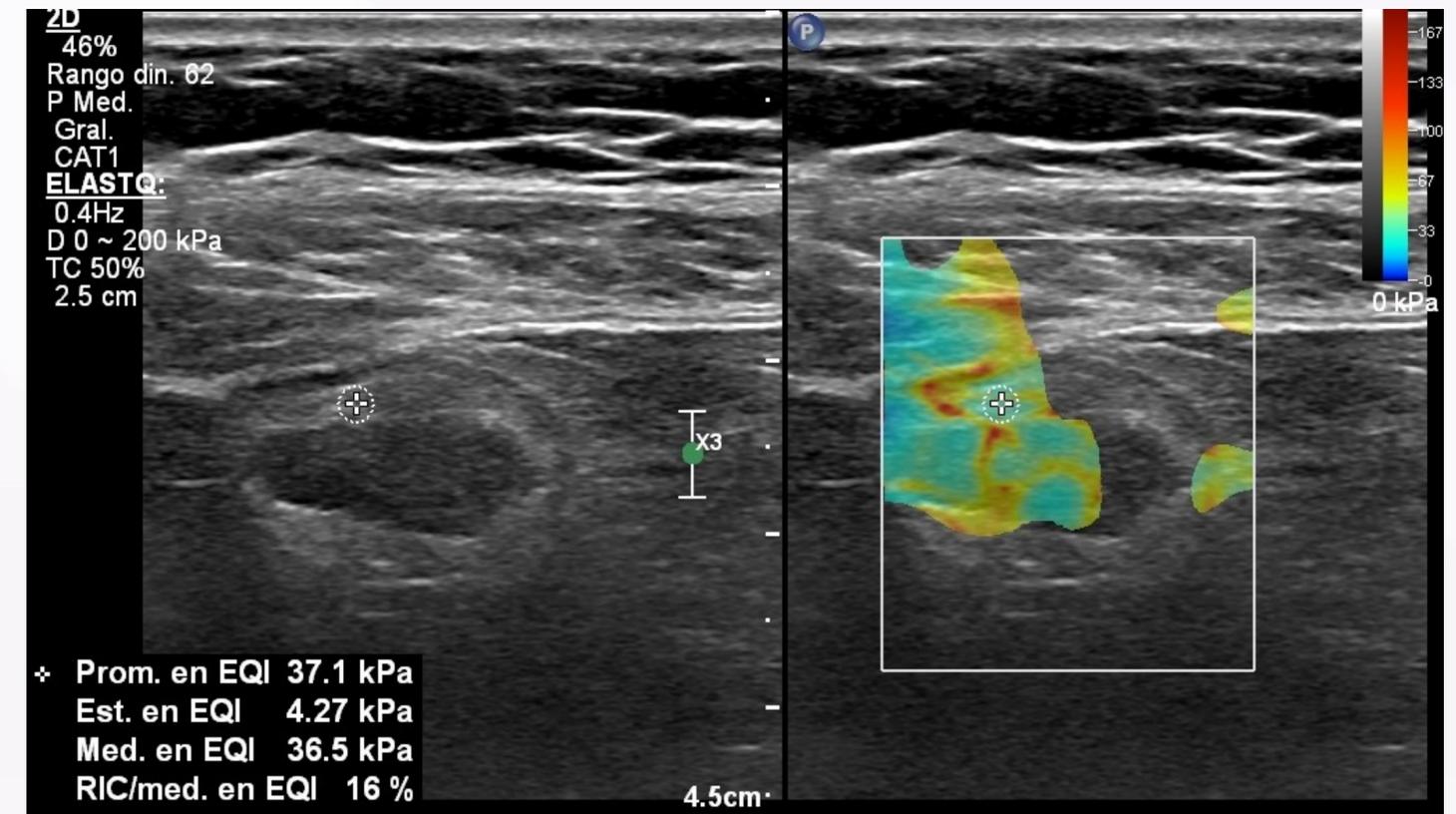


Dolor abdominal
agudo
Apendicitis
Diverticulitis
Colitis
Ileitis
Apendagitis

CONTROL EII

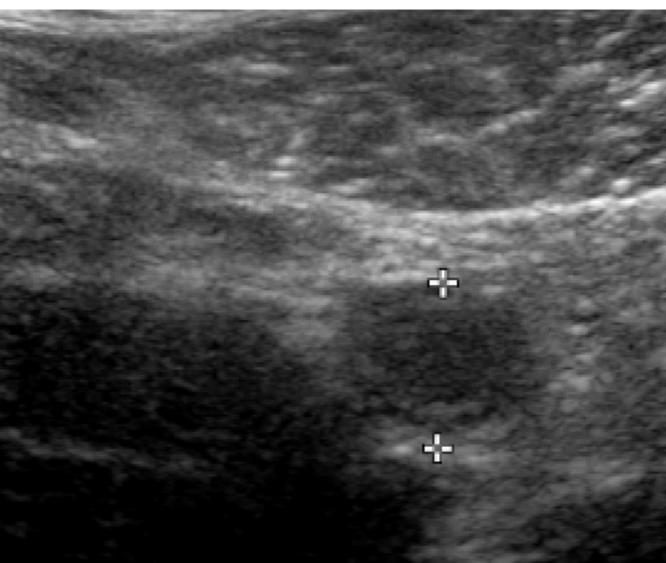
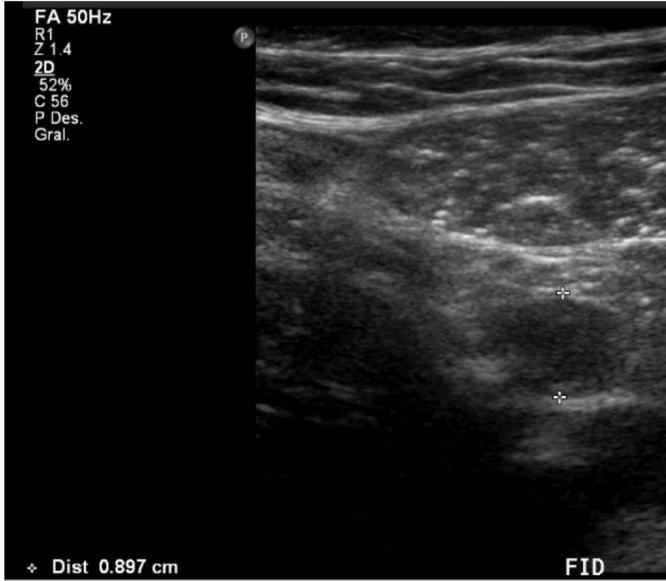
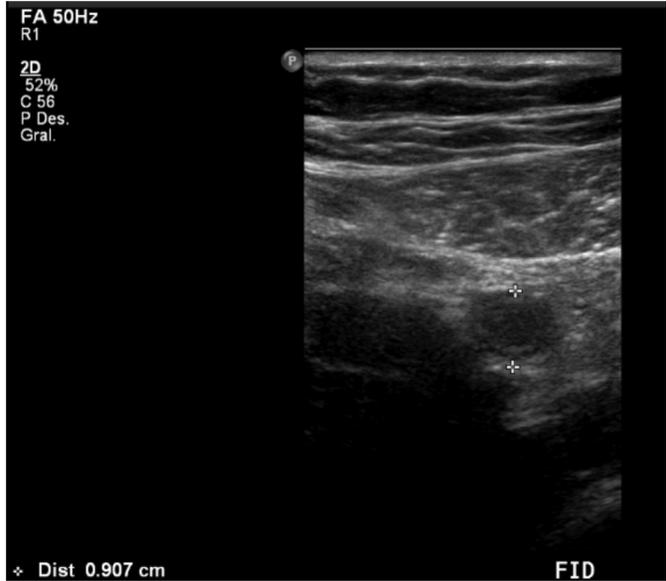


Enfermedad de
Crohn
Colitis Ulcerosa
Otras enteritis
Neoplasia?



Ecografía intestinal: Patología Aguda

Apendicitis Aguda



Radiology

Caroline Keyzer, MD
 Marc Zalcman, MD
 Viviane De Maertelaer, PhD
 Emmanuel Coppens, MD
 Maria-Antonietta Bali, MD
 Pierre Alain Gevenois, MD, PhD
 Daniel Van Gansbeke, MD

Comparison of US and Unenhanced Multi-Detector Row CT in Patients Suspected of Having Acute Appendicitis¹

ECOGRAFIA

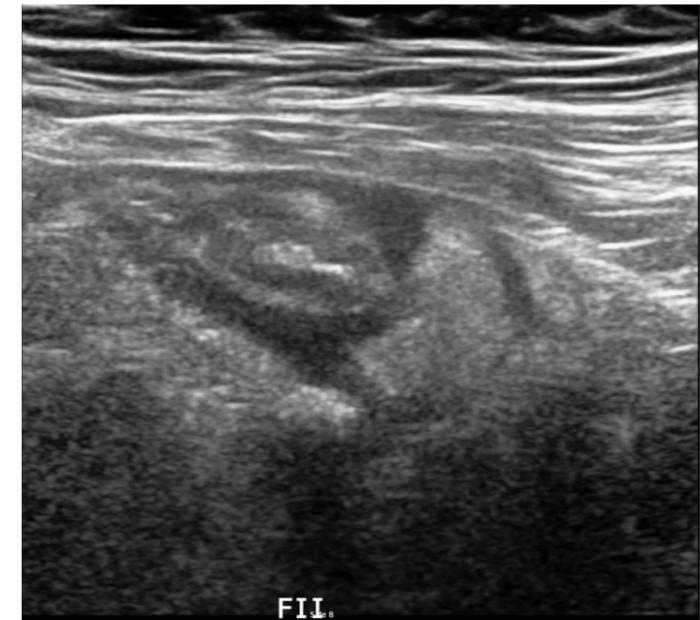
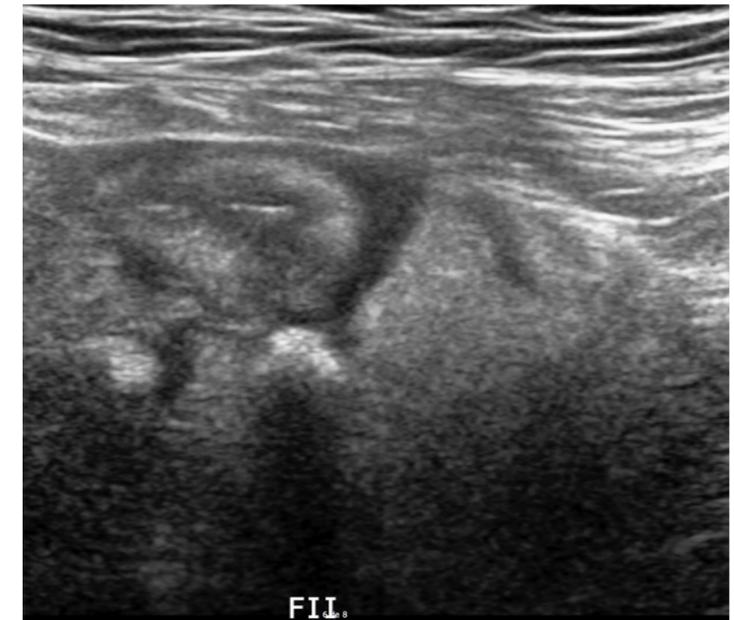
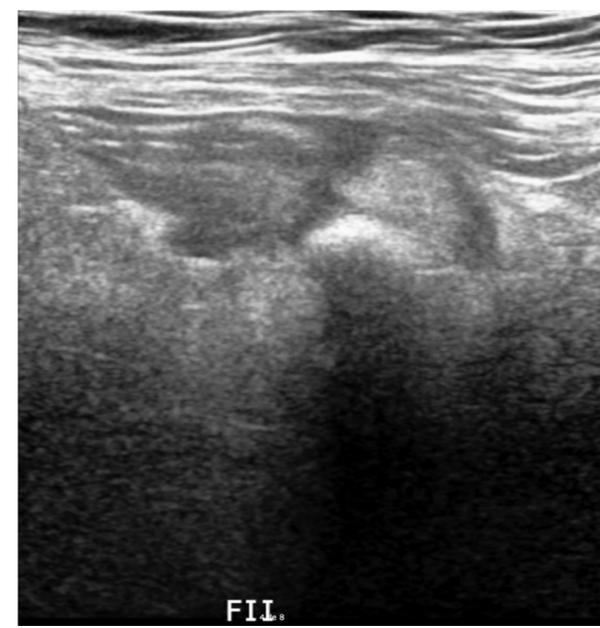
- Sensibilidad 76%-90%
- Especificidad 86-100%
- VPP 71-95%
- VPN 75-98%

TOMOGRAFIA COMPUTADA

- Sensibilidad >95%
- Especificidad

Ecografía intestinal: Patología Aguda

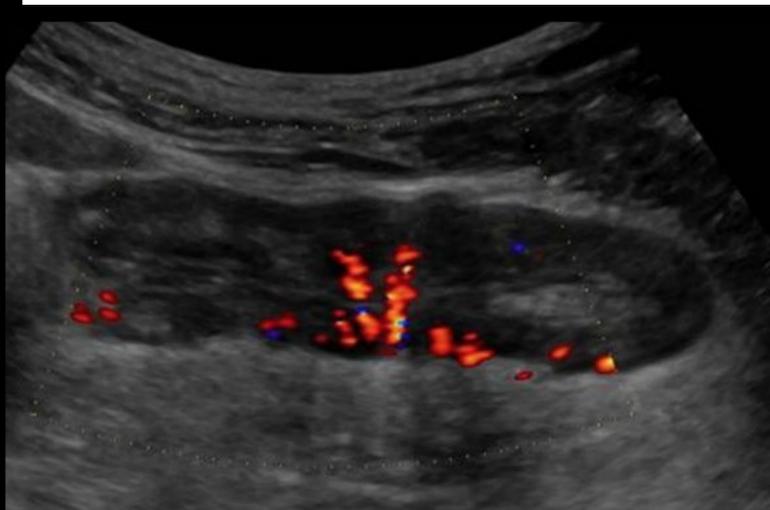
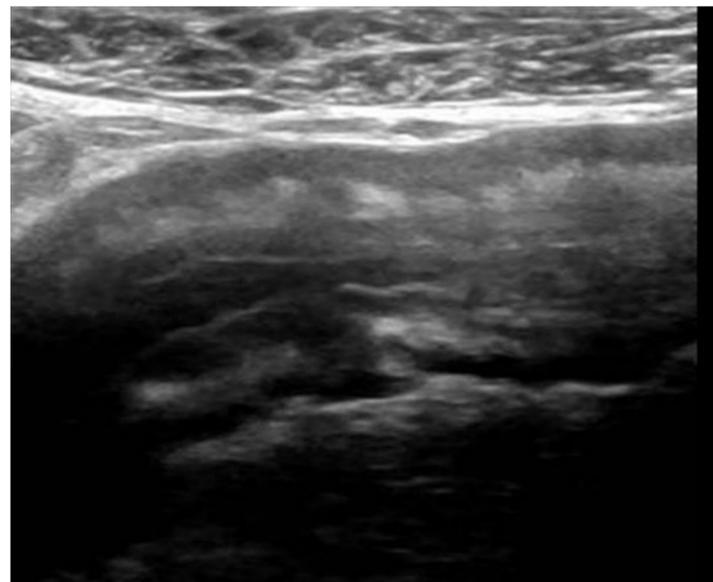
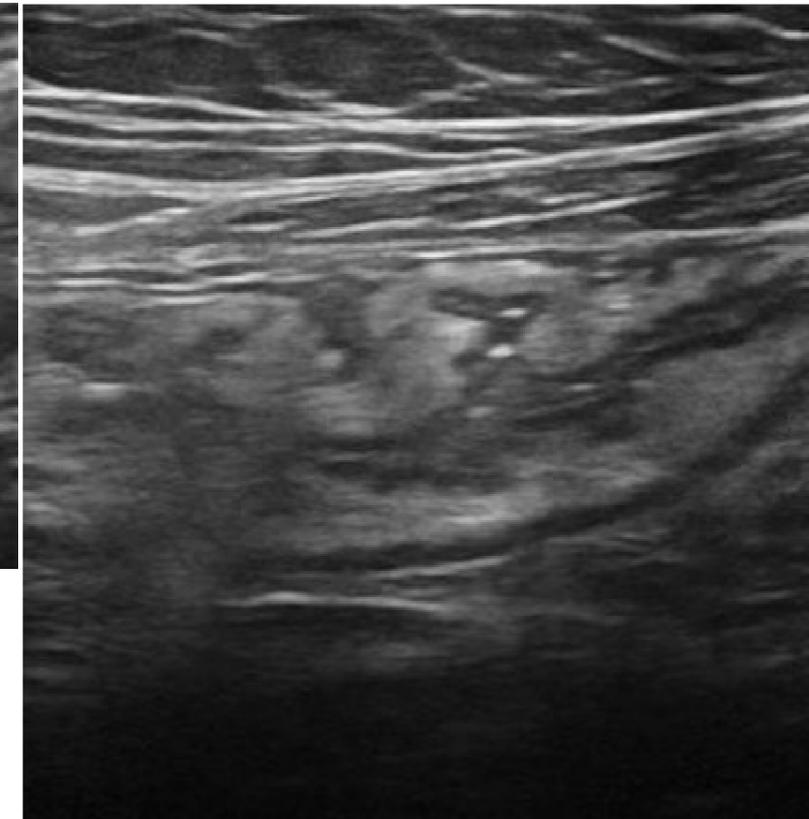
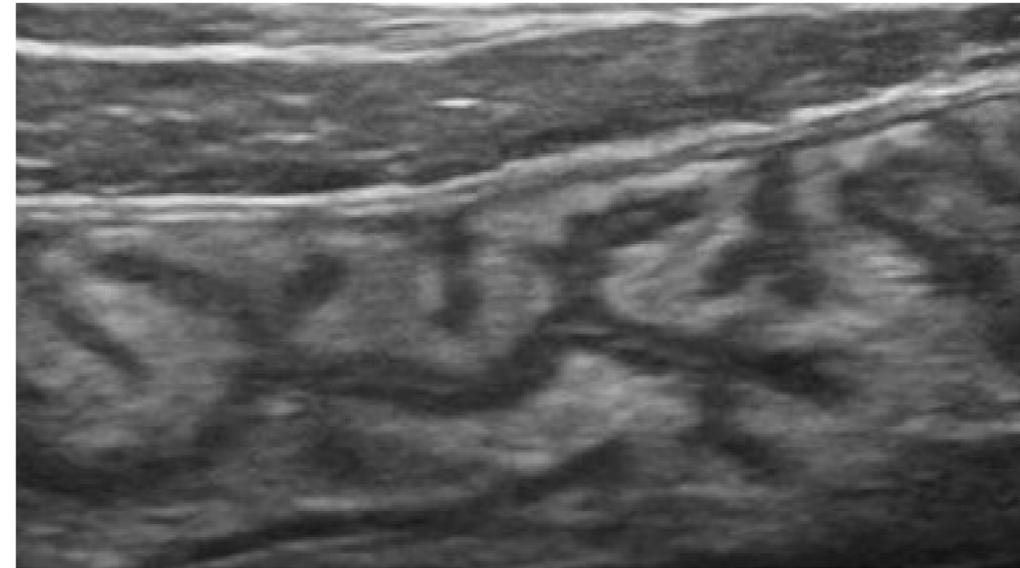
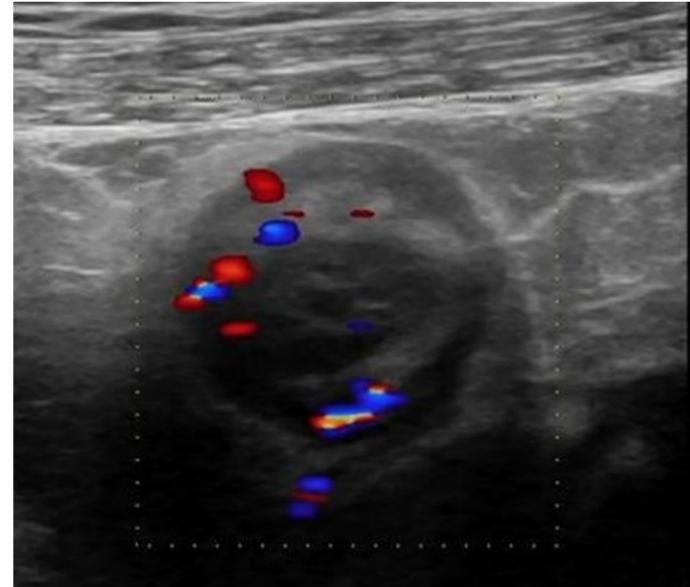
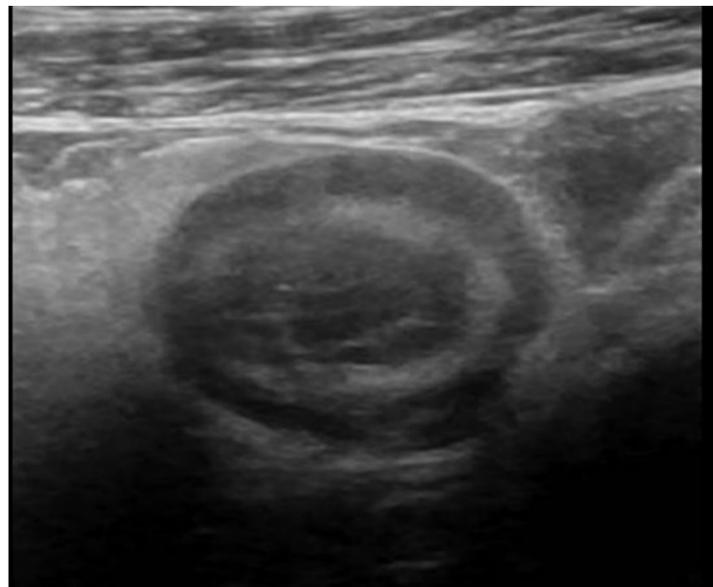
DIVERTICULITIS



Ecografía intestinal: Patología Aguda

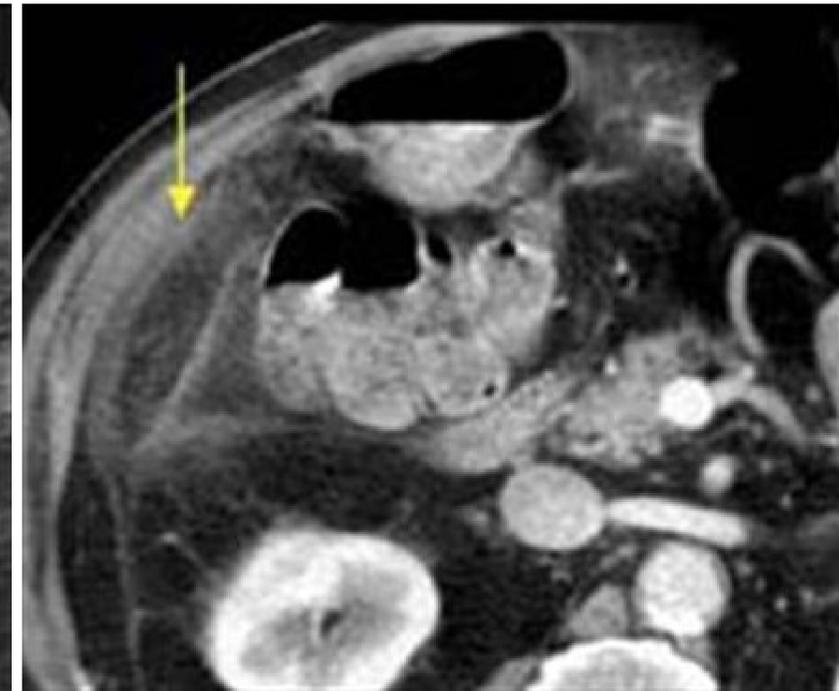
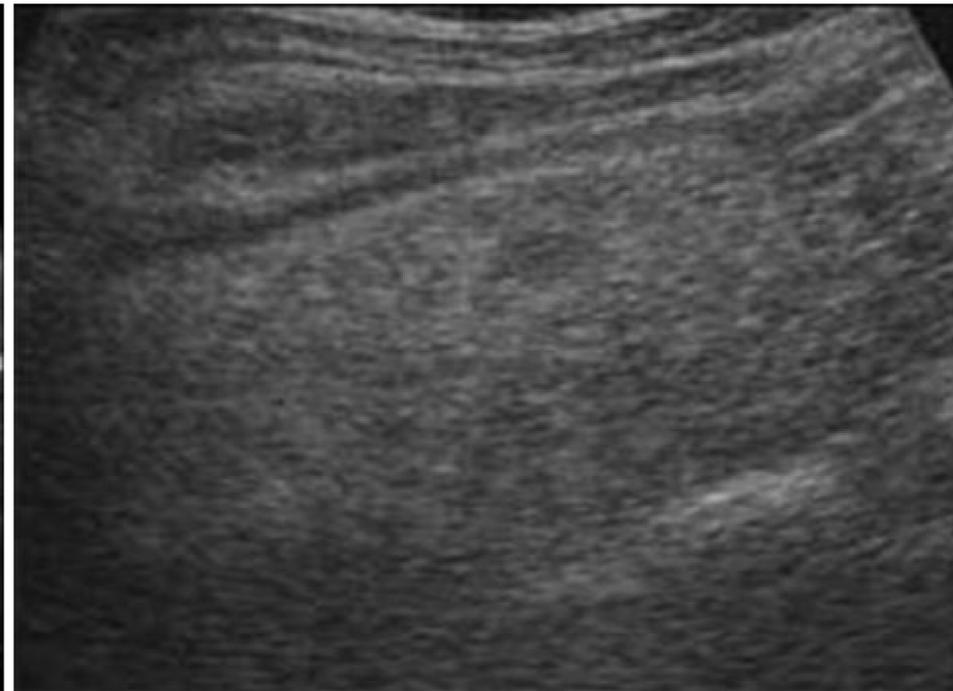
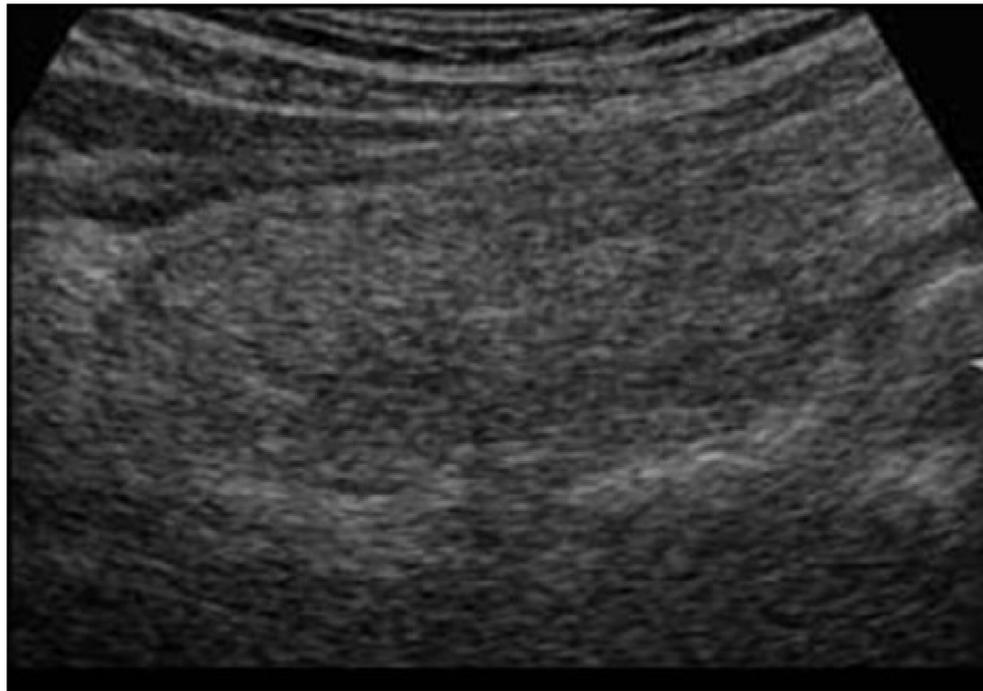
Ileitis

Colitis



Ecografía intestinal: Patología Aguda

Apendagitis



Ecografía intestinal: Enfermedad Inflamatoria Intestinal

Colonoscopia



Valor
Acceso
Reproductibilidad
Preparación

Imágenes

ECOGRAFIA

- Control de tratamiento estenosis
- Complicaciones extramurales



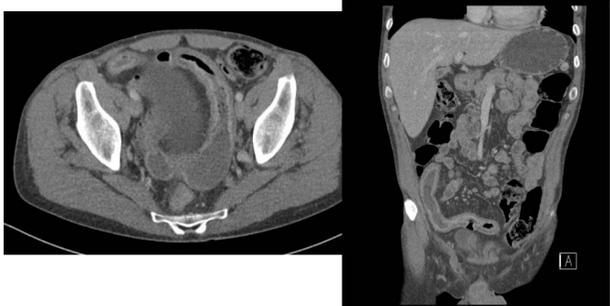
TOMOGRAFIA COMPUTADA

TC convencional

ENTEROTC

- Diagnóstico
- Complicaciones

- Diagnóstico
- Complicaciones
- Evaluación de actividad?



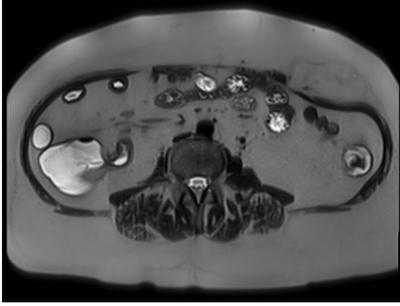
RESONANCIA MAGNETICA

RM convencional

EnteroRM

- Complicaciones
- Evaluación de patología pelviana.

- Complicaciones
- Evaluación de actividad



Ecografía intestinal: Enfermedad Inflamatoria Intestinal

Ecografía intestinal

Journal of Crohn's and Colitis, 2019, 144–164K
 doi:10.1093/ecco-jcc/ijy113
 Advance Access publication August 23, 2018
 ECCO Guideline/Consensus Paper



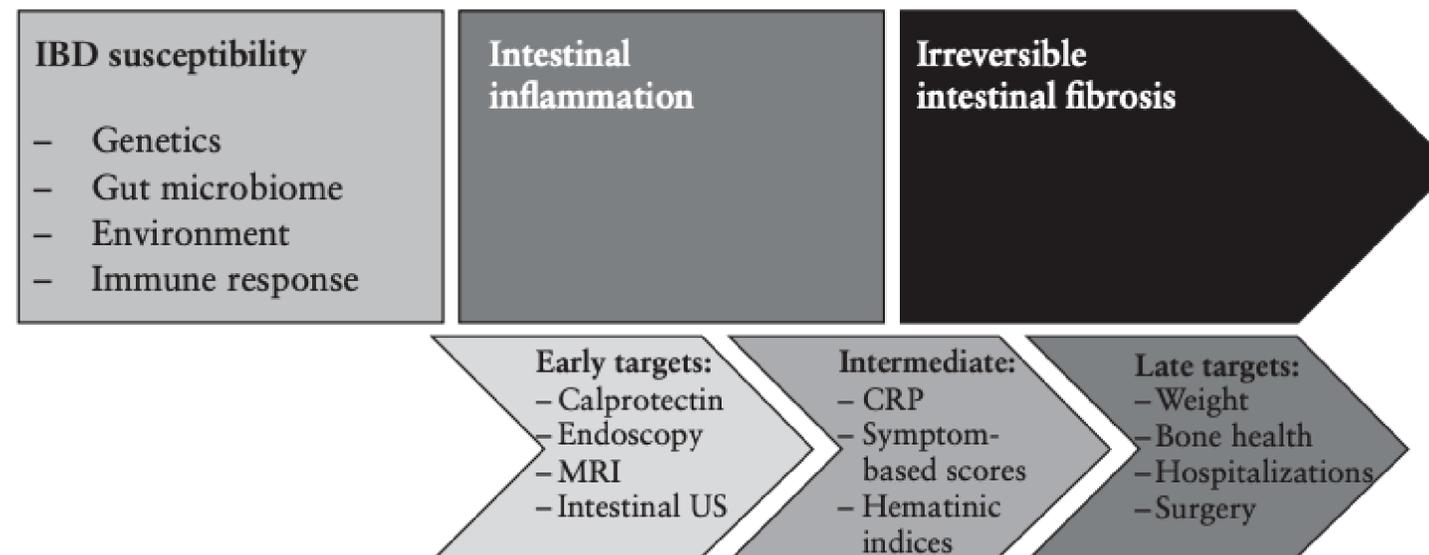
ECCO Guideline/Consensus Paper

ECCO-ESGAR Guideline for Diagnostic Assessment in IBD Part 1: Initial diagnosis, monitoring of known IBD, detection of complications

Statement 1.10. ECCO-ESGAR Diagnostics GL [2018]
 All newly diagnosed CD patients should undergo small bowel assessment [intestinal ultrasound, MR enterography and/or capsule endoscopy] [EL2]

Statement 2.3.4. ECCO-ESGAR Diagnostics GL [2018]
 Symptomatic small bowel disease can be investigated with MR enterography, IUS, and/or small bowel capsule endoscopy [SBCE] [EL2]

Statement 2.4.2. ECCO-ESGAR Diagnostics GL [2018]
 FC, IUS, MR enterography, and SBCE can be considered as non-invasive alternatives to detect postoperative recurrence, in particular after small bowel resection [EL2]



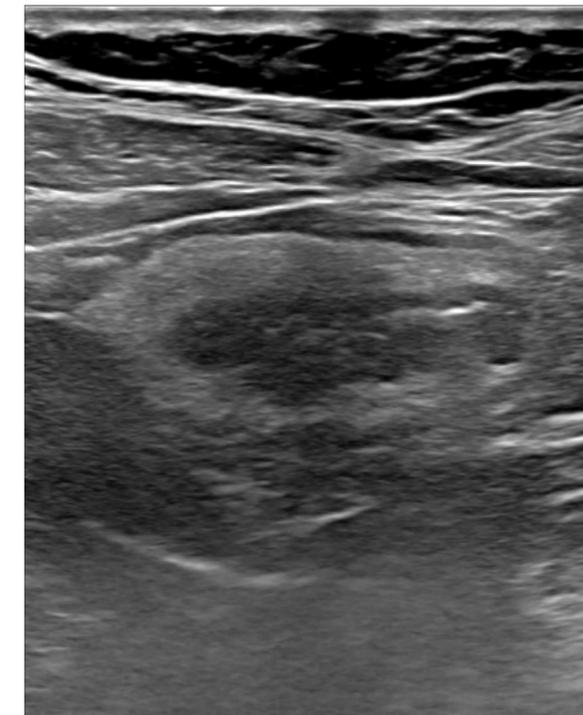
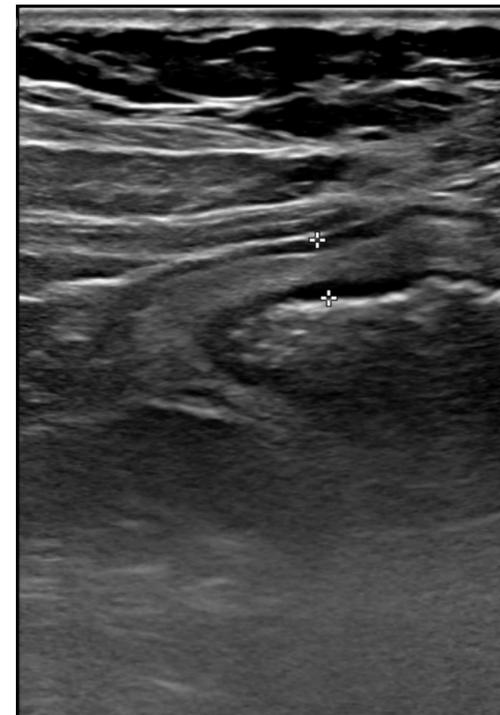
Ecografía intestinal: Enfermedad Inflamatoria Intestinal

- Experiencia en el control de Enfermedad inflamatoria intestinal
- Evaluación de fibrosis intestinal
- Evaluación de actividad inflamatoria
- Elastografía intestinal

Operador Experto

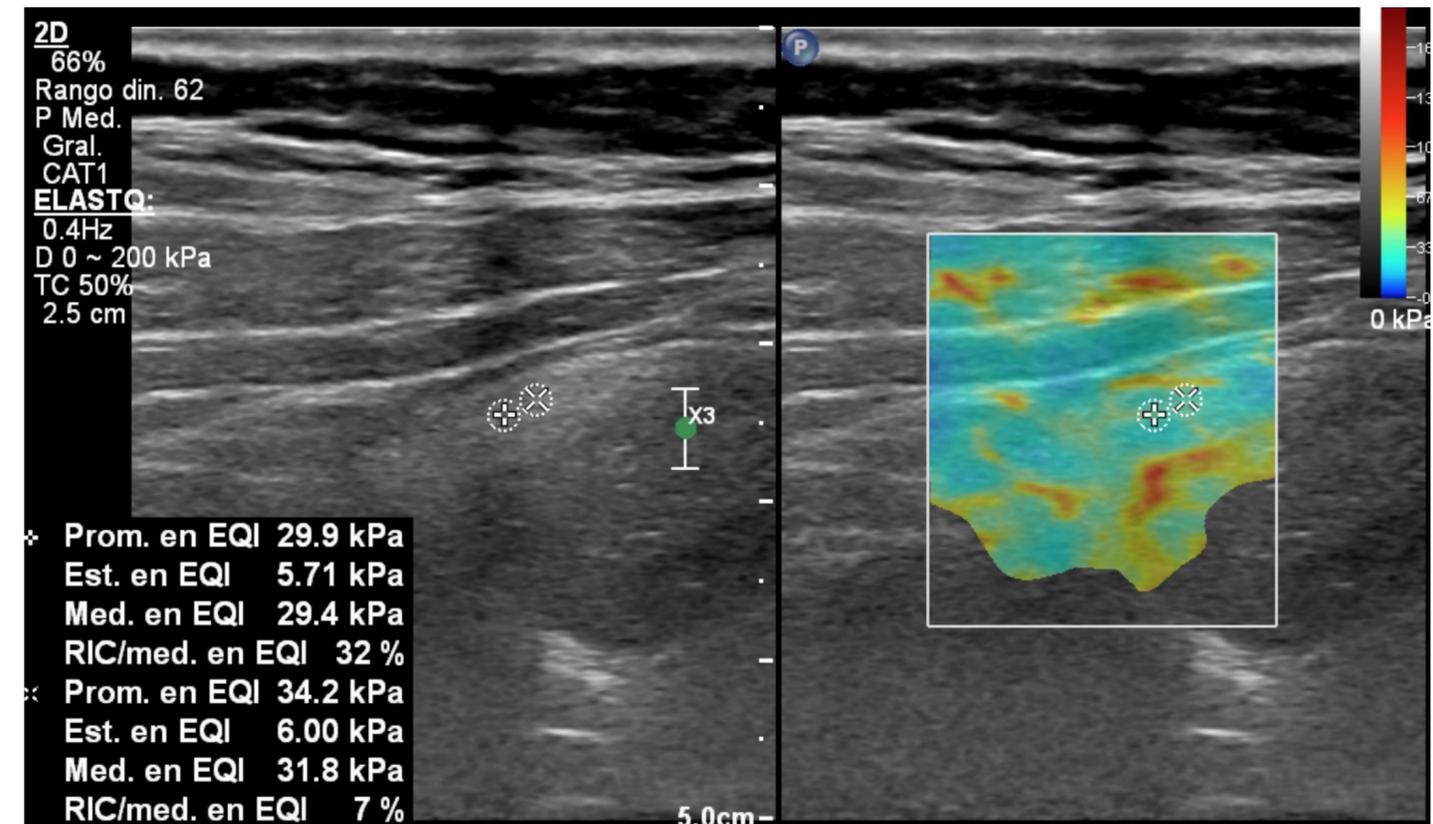
Examen EnteroRM

Antecedentes



Elastografía intestinal: Enfermedad Inflamatoria Intestinal

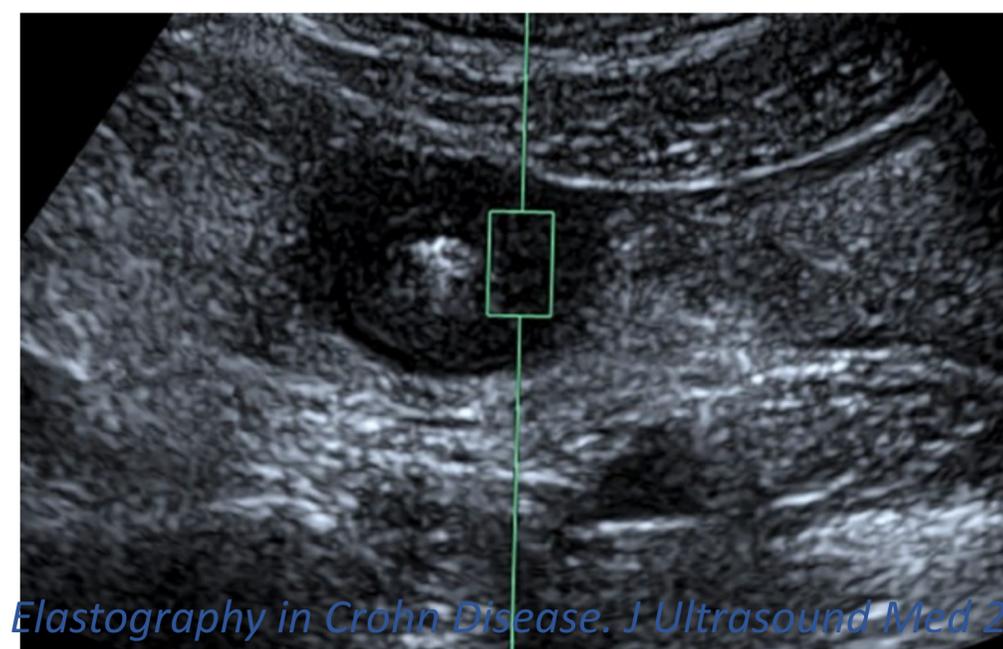
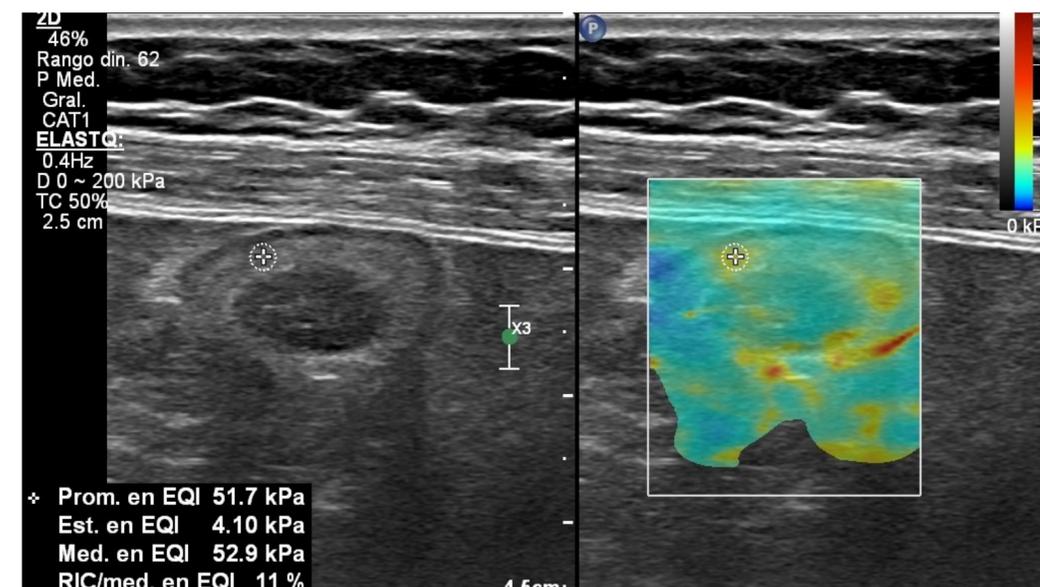
- Evaluación de fibrosis intestinal
- Elastografía por deformación:
 - Difícil de realizar
 - Limitada por peristaltismo
 - Dificultad para realizar compresión mecánica por movilidad de asas
- Elastografía Onda de corte
 - Mediciones objetivas y reproducibles





Elastografía intestinal: Enfermedad Inflamatoria Intestinal ¿cómo hacerla?

- 10 ROI
- Axial o longitudinal
- Control de calidad de la muestra:
 - IQR/Med:
 - < 30% kPa
 - < 15% m/s
- Valores de corte no del todo claros actualmente.

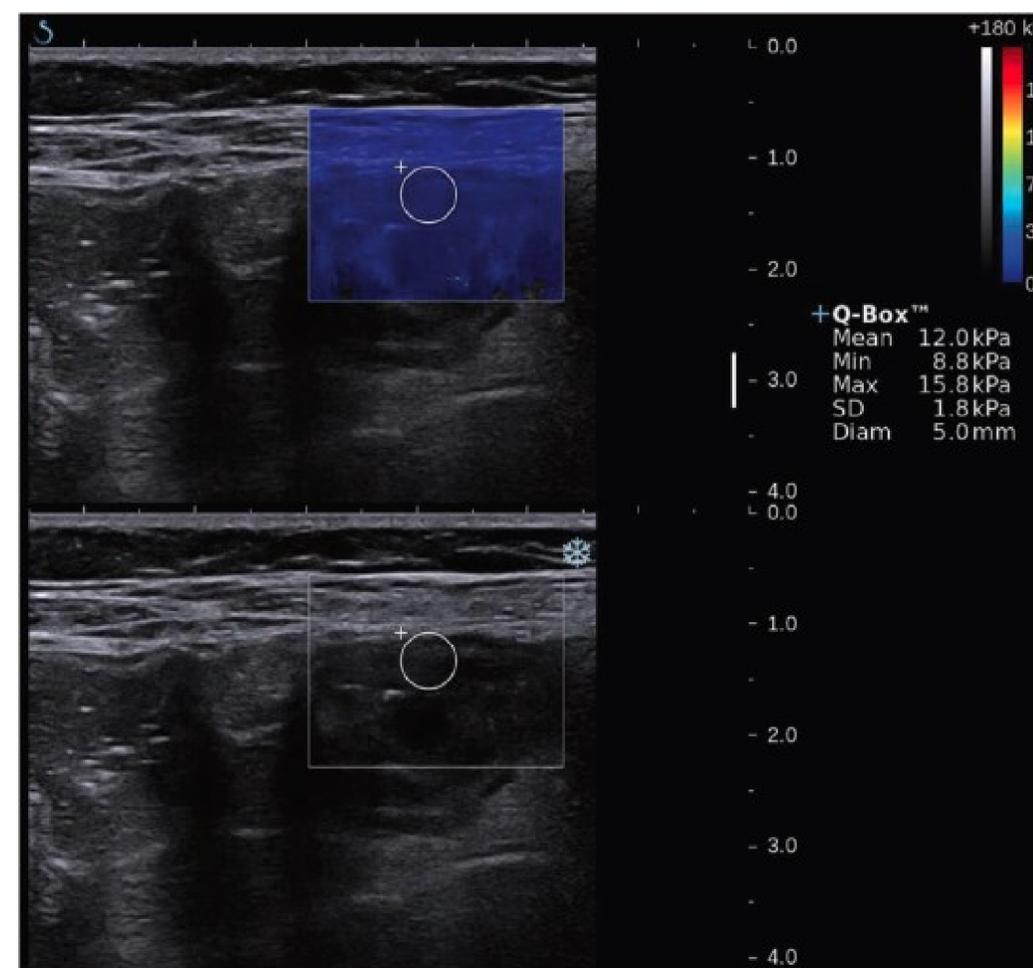


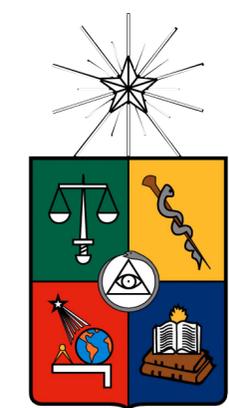


Real-Time Shear Wave Ultrasound Elastography Differentiates Fibrotic from Inflammatory Strictures in Patients with Crohn's Disease

Yu-jun Chen, MD,^{*,*} Ren Mao, MD, PhD,^{*,†} Xue-hua Li, MD,[‡] Qing-hua Cao, MD,[§]
Zhi-hui Chen, MD, PhD,[¶] Bao-xian Liu, MD,^{*} Shu-ling Chen, MD,^{*} Bai-li Chen, MD,[†] Yao He, MD,[†]
Zhi-rong Zeng, MD,[†] Shomron Ben-Horin, MD,^{†,**} Jordi Rimola, MD,^{††} Florian Rieder, MD, PhD,^{##}
Xiao-yan Xie, MD,^{*} and Min-hu Chen, MD, PhD[†]

- 35 pactes
- Eco convencional para evaluar
 - Grosor parietal
 - Presencia de patrón estratificado
 - Puntaje de Limberg
 - I: engrosamiento pared intestinal (<3 mm) sin vascularización.
 - II: engrosamiento pared intestinal con leve vascularización.
 - III: engrosamiento pared intestinal con mayor vascularización
 - IV: engrosamiento pared intestinal con vascularización elevada que se extiende desde el mesenterio.





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TABLE 3: Conventional Ultrasound and Shear-Wave Elastography Findings in Different Grades of Intestinal Inflammation and Fibrosis

	Grade of Inflammation			P	Grade of Fibrosis			P
	mild (no. = 5)	moderate (no. = 11)	severe (no. = 19)		mild (no. = 3)	moderate (no. = 12)	severe (no. = 20)	
Bowel thickness	11.5 ± 2.7	10.0 ± 3.9	10.7 ± 3.1	0.699	7.39 ± 2.8	9.9 ± 2.4	10.9 ± 3.7	0.392
Proximal bowel dilation	1	4	6	0.808	1	4	6	0.451
Limberg classification _a				0.001				0.373
I	1	0	0		0	0	1	
II	4	3	1		2	1	5	
III	0	6	7		3	5	5	
IV	0	2	11		4	6	3	
Stratified echo pattern	1	8	7	0.106	2	6	8	0.290
SWE value (mean)	19.3 ± 1.6	20.9 ± 9.0	20.3 ± 4.6	0.380	14.4 ± 2.1	17.4 ± 3.8	23.0 ± 6.3	0.008



Real-Time Shear Wave Ultrasound Elastography Differentiates Fibrotic from Inflammatory Strictures in Patients with Crohn's Disease

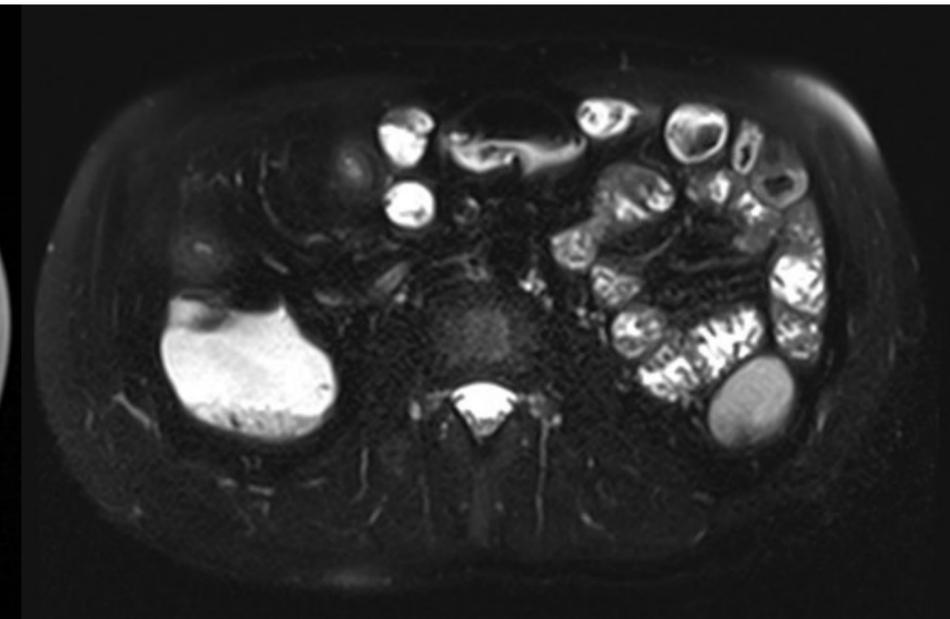
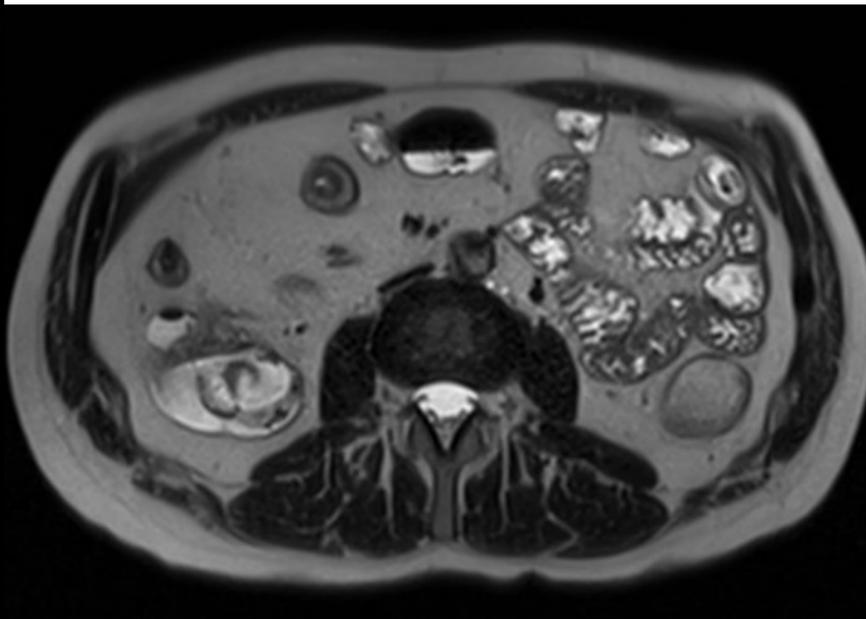
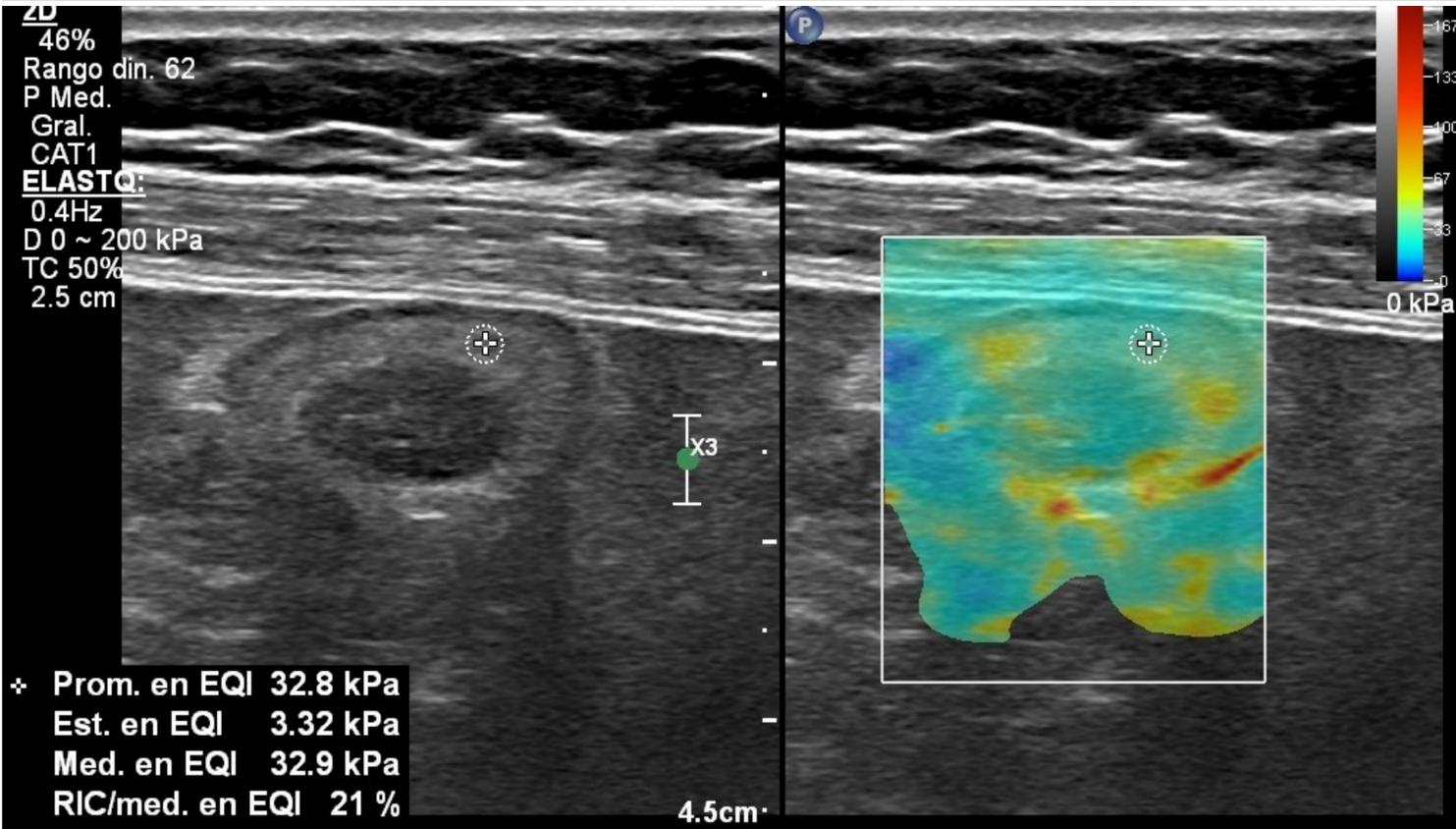
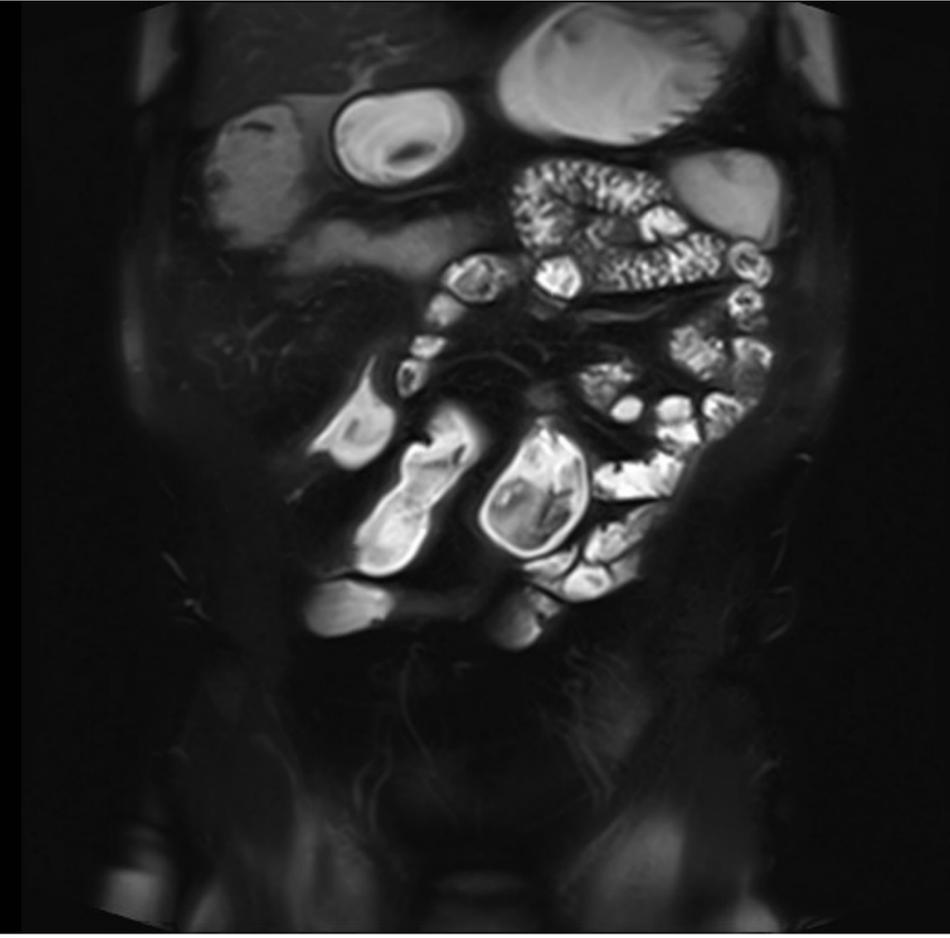
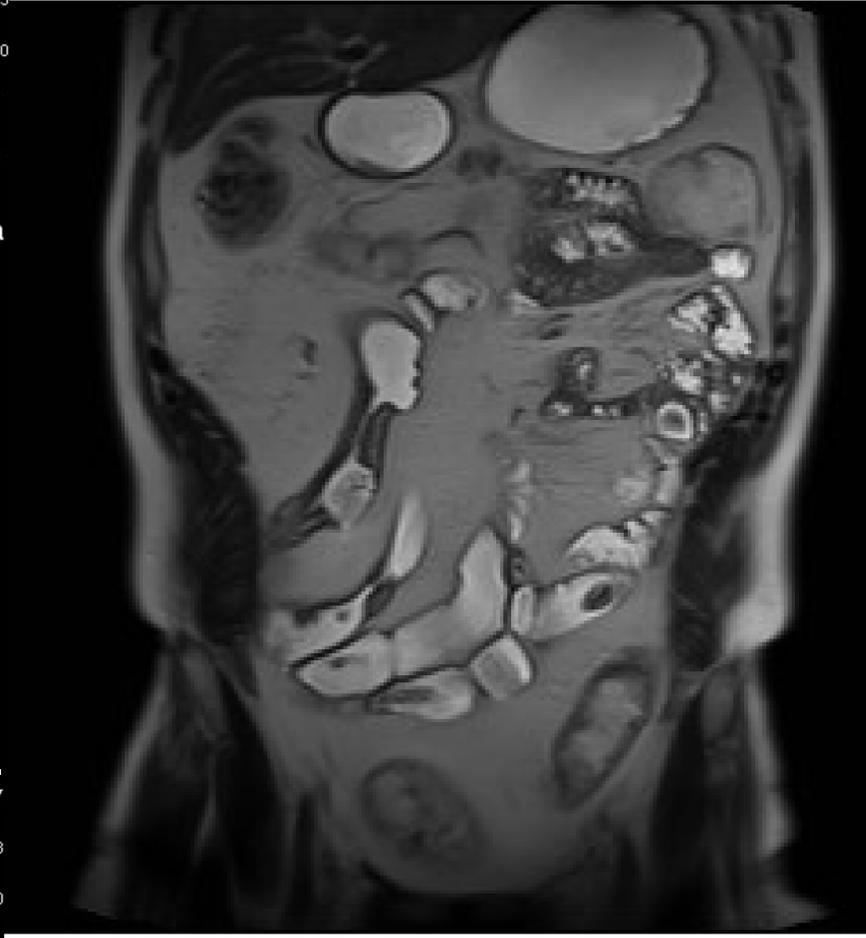
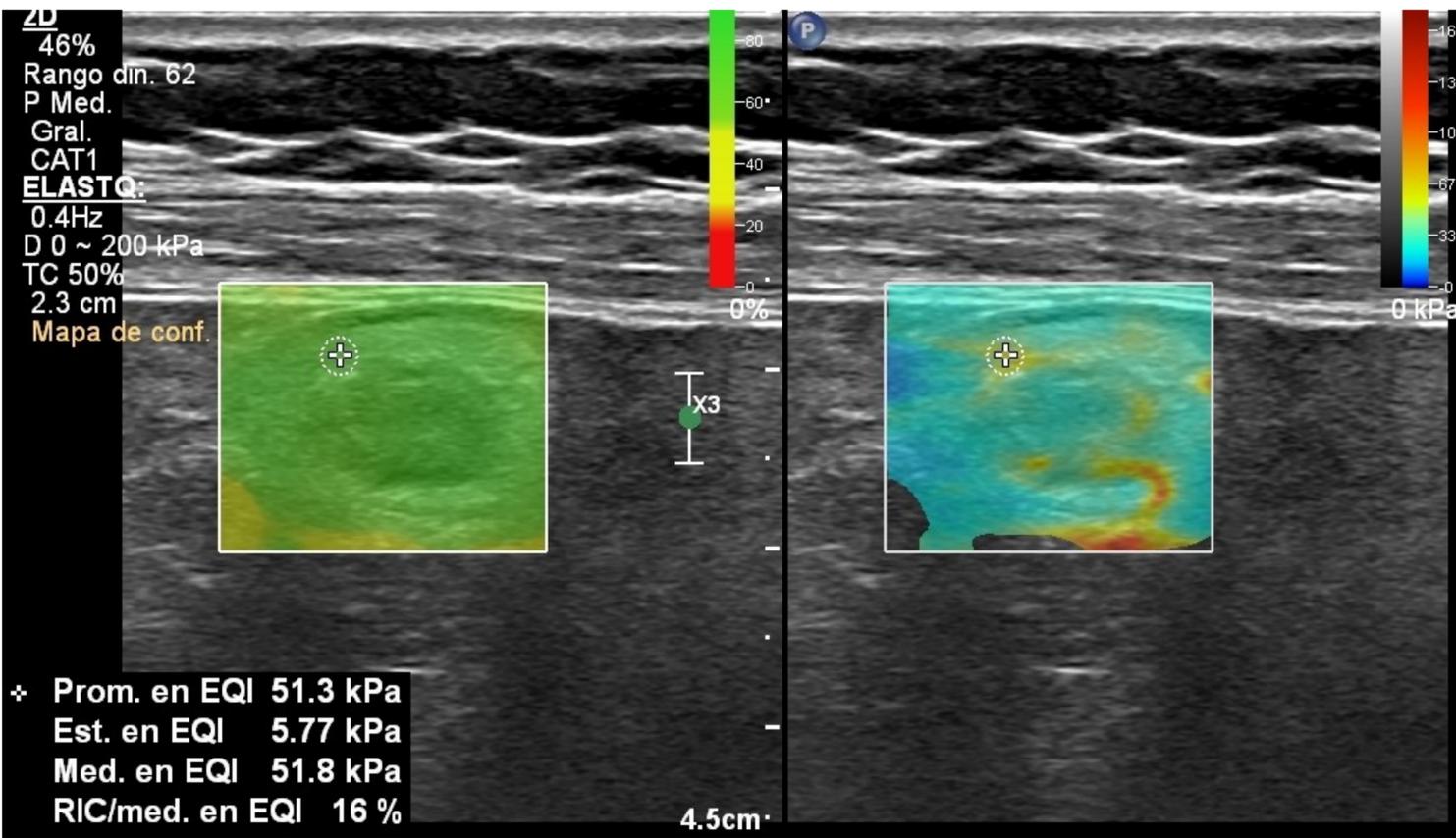


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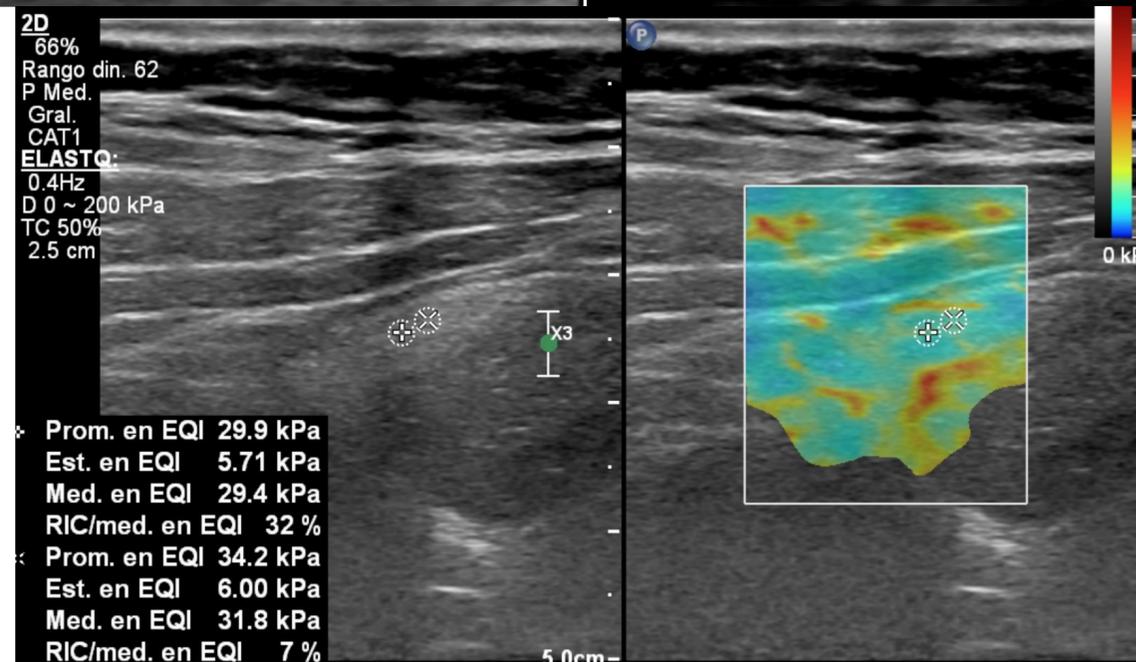
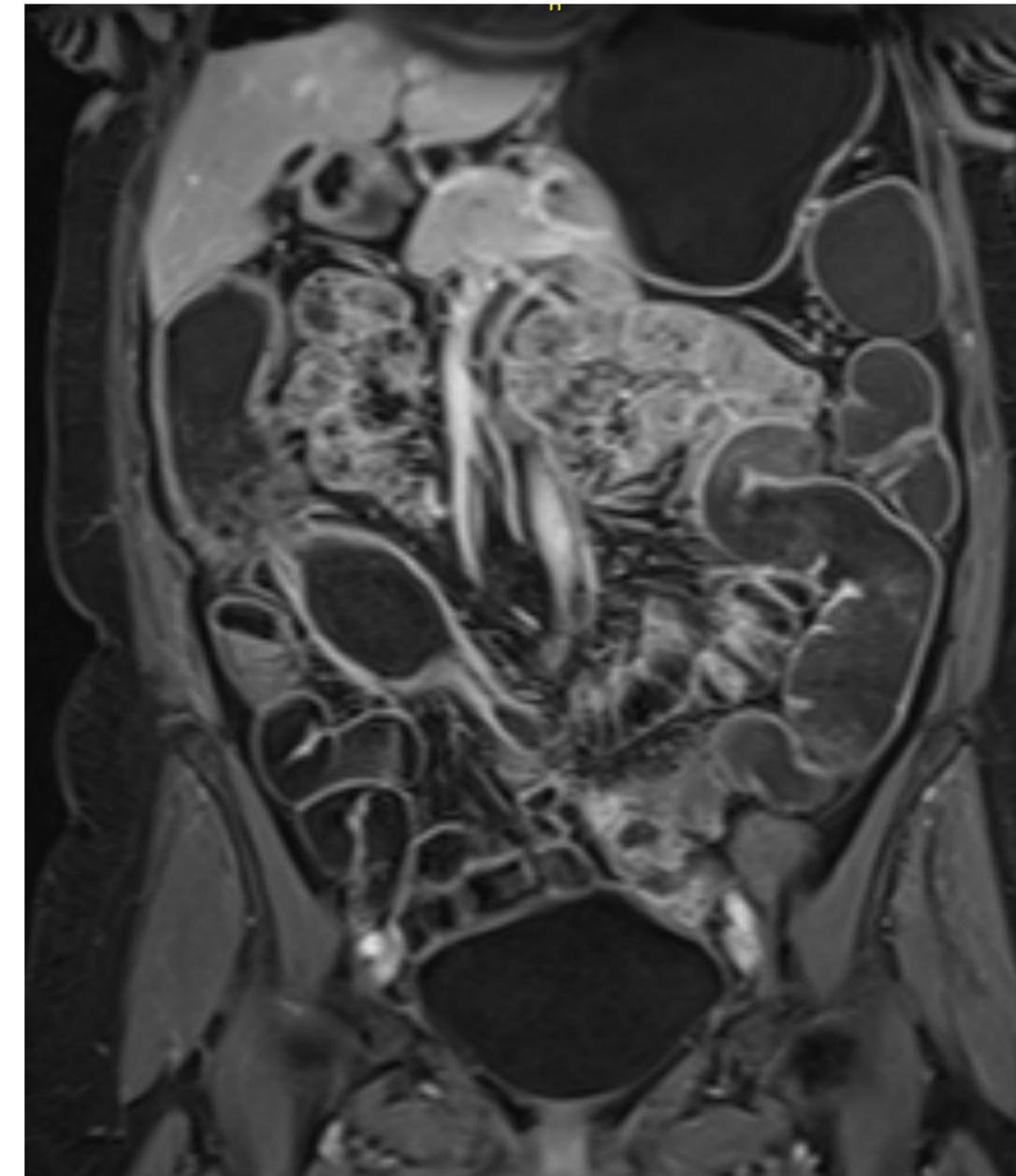
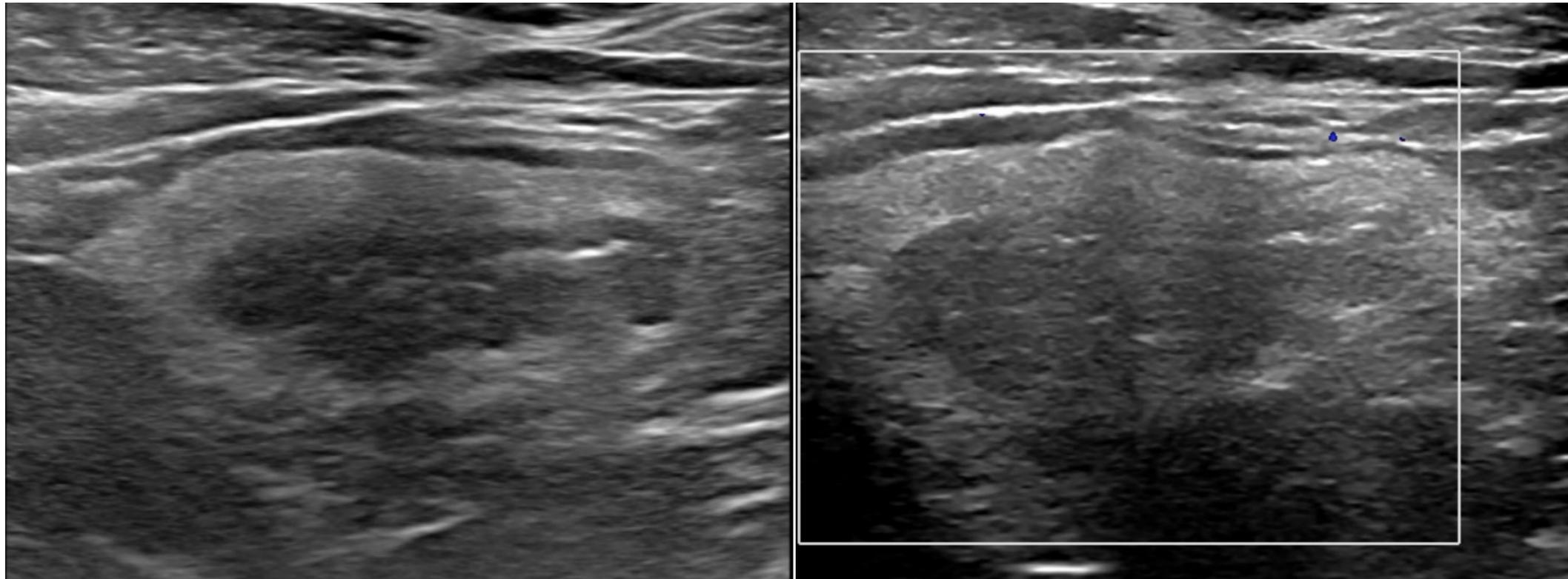
TABLE 4: Stricture Classification Based on Grade of Inflammation and Fibrosis on Bowel Ultrasound

	SWE value < 22.55 Kpa	SWE value ≥22.55 Kpa
Limberg _a I/II	Low inflammation Low fibrosis (n = 2)	Low inflammation Marked fibrosis (n = 7)
Limberg _b III/IV	Low fibrosis Severe inflammation (n = 16)	Severe inflammation Marked fibrosis (n = 10)

Kappa de Cohen; P < 0,001, K, 0,536

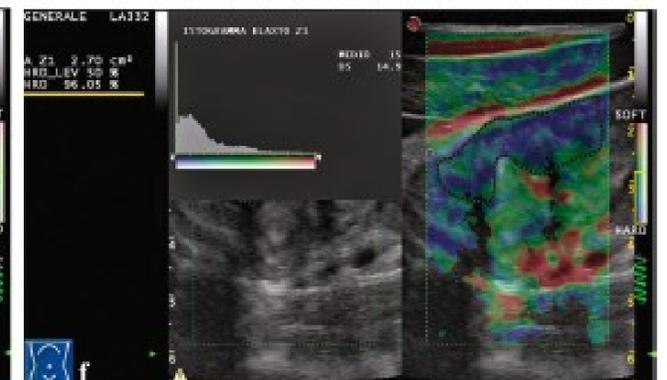
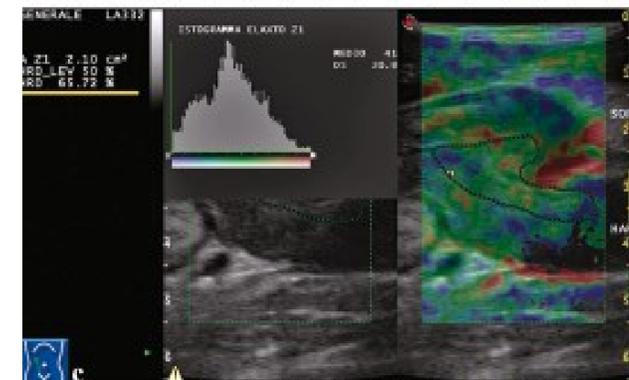
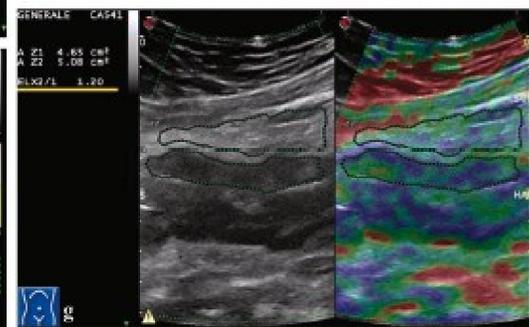
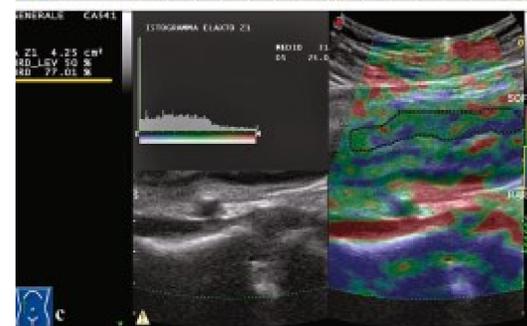
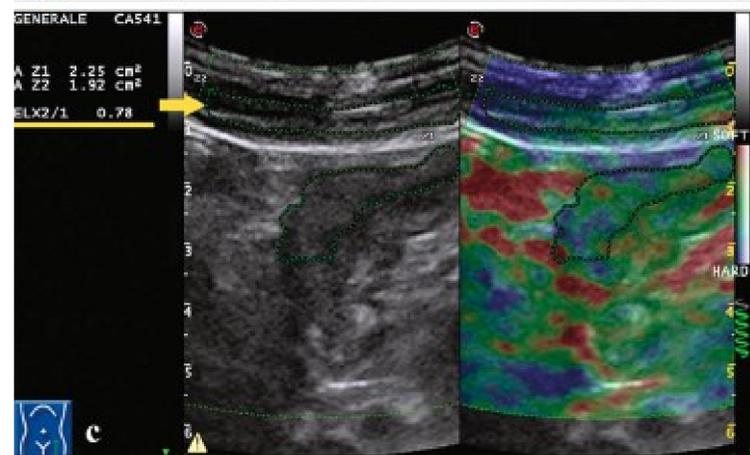
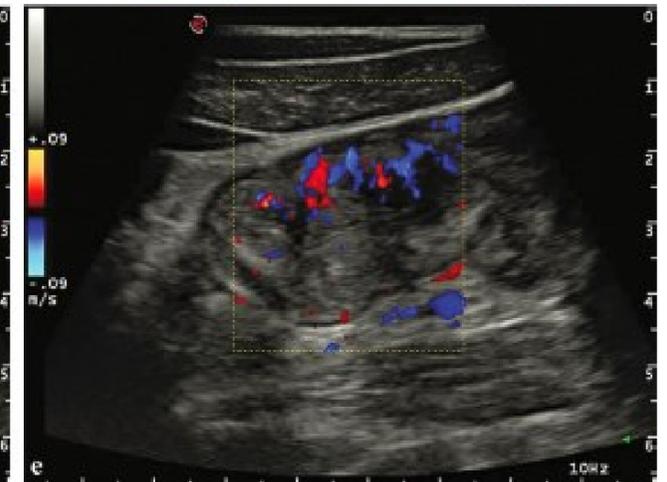
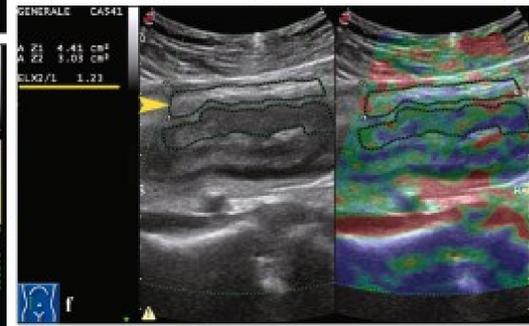
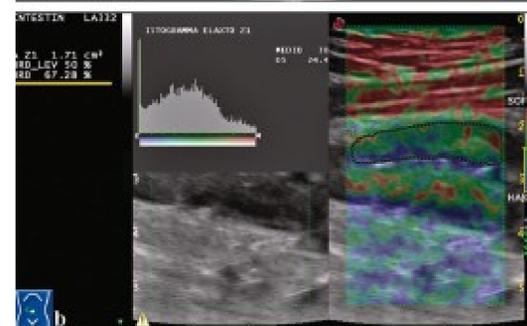
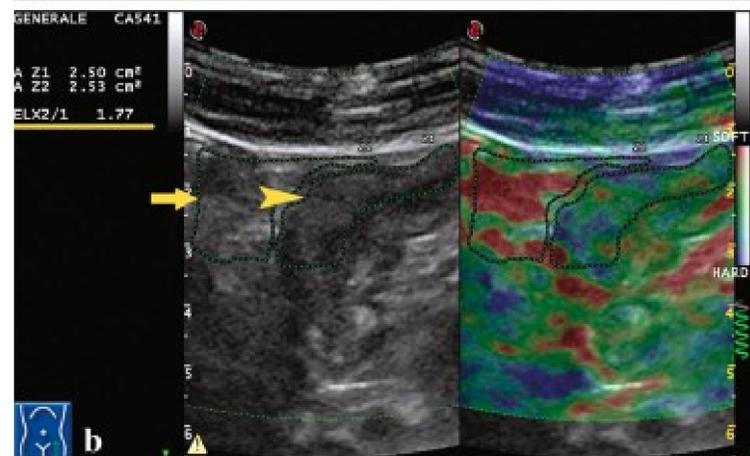
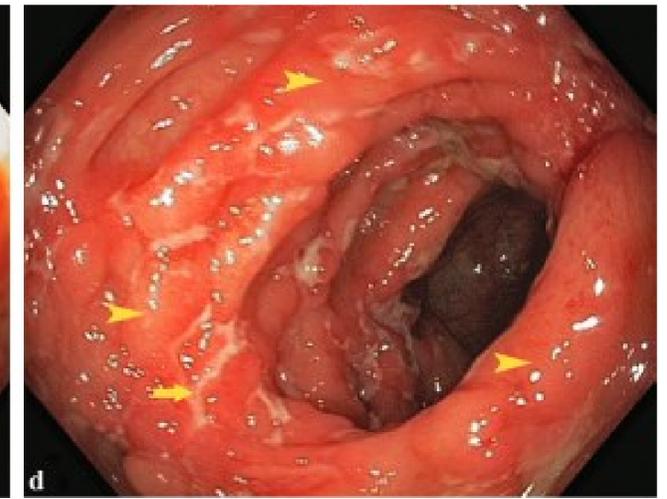
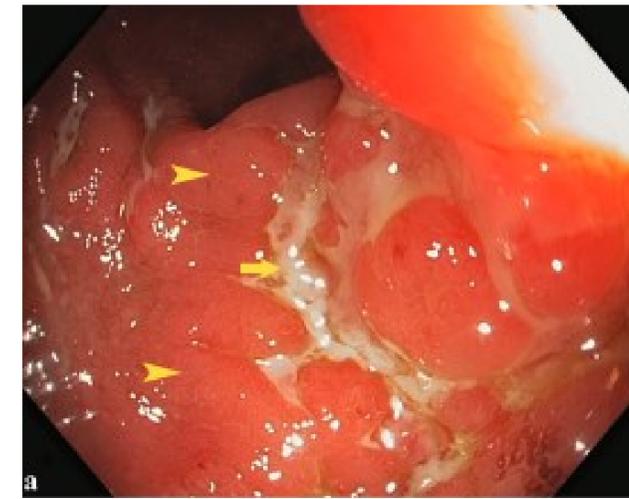
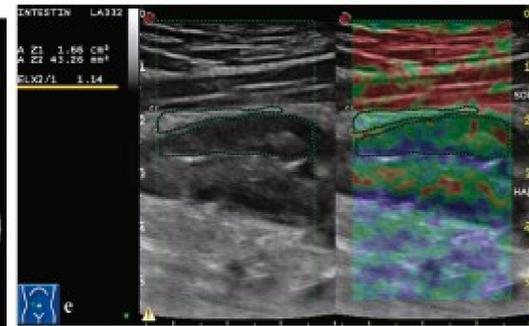
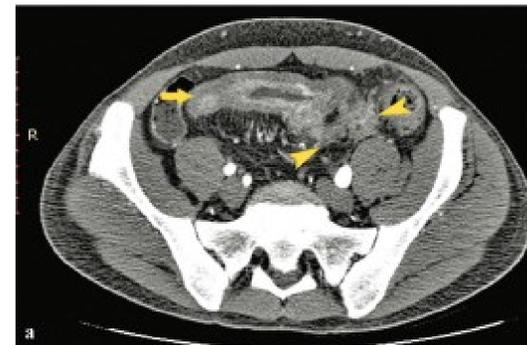
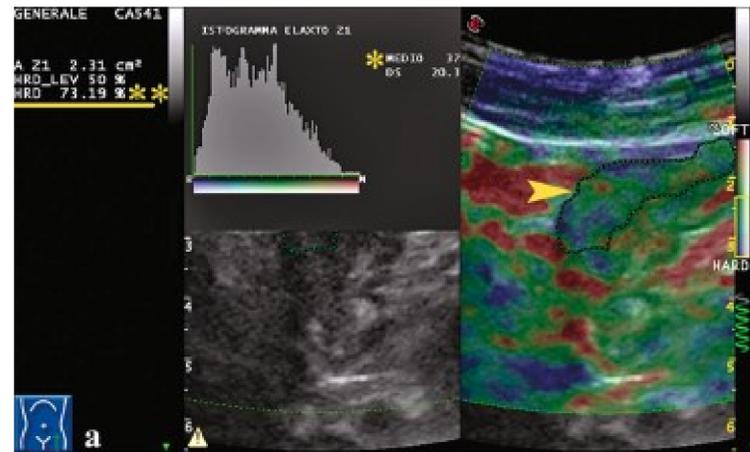


Ecografía intestinal: Enfermedad Inflamatoria Intestinal

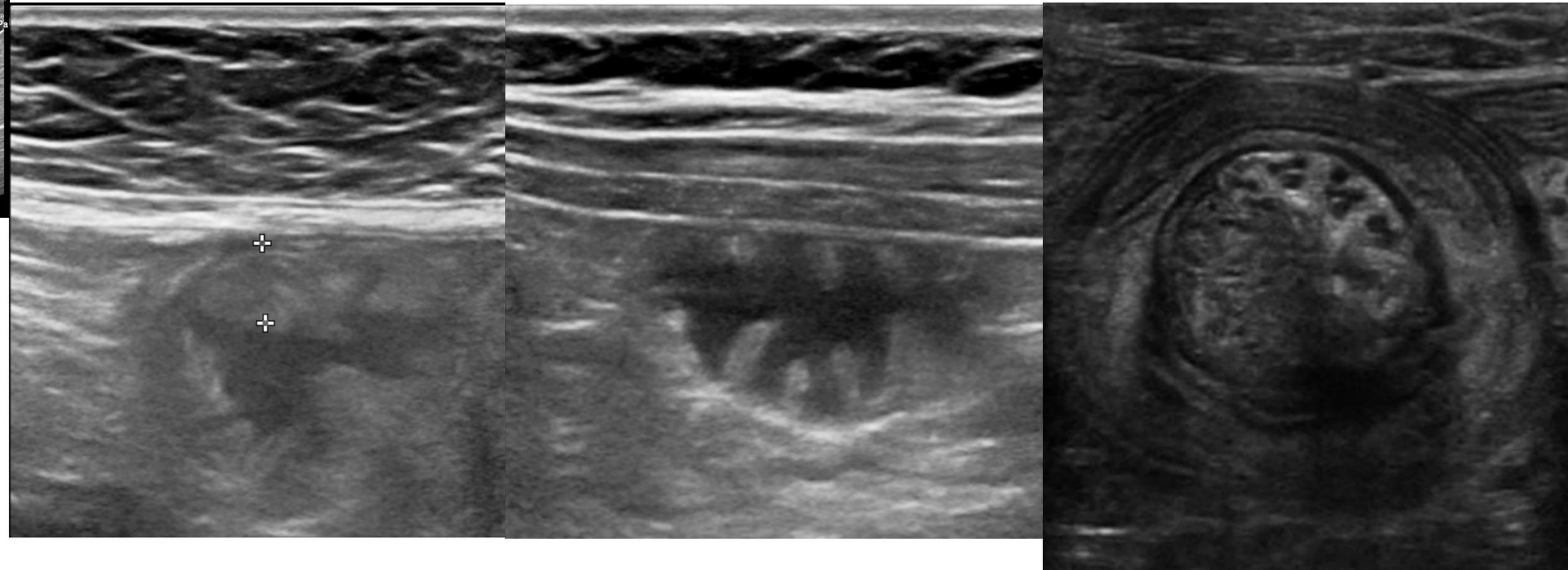
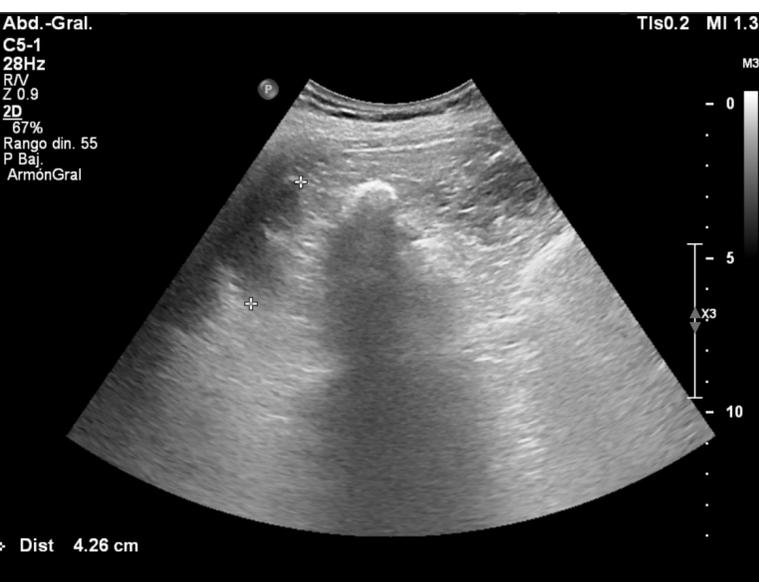
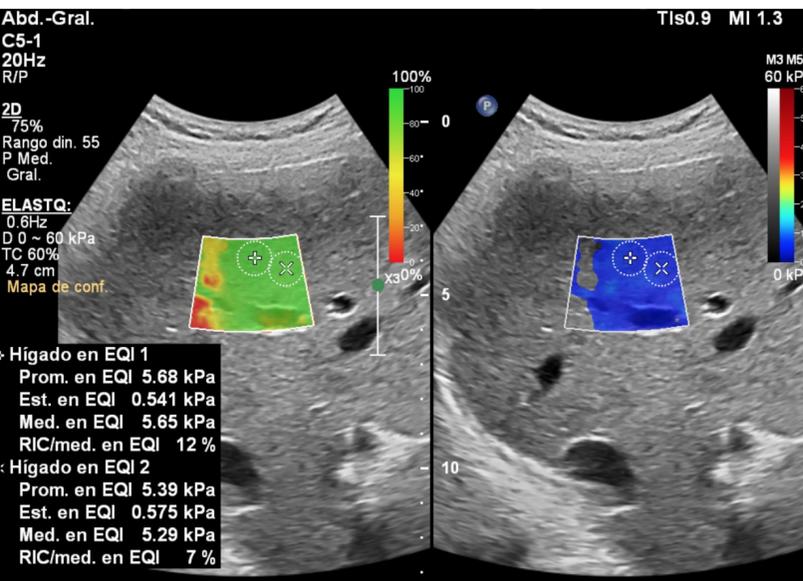


Strain elastography in Crohn's disease: the role of visual observation and semiquantitative parameters

Andrea Giannetti¹ · Marco Matergi¹ · Marco Biscontri¹ · Francesco Tedone¹ · Lucia Falconi¹ · Luca Giovannelli¹ · Valeria Ussia¹ · Luca Franci²



Ecografía intestinal: Otras Enteritis

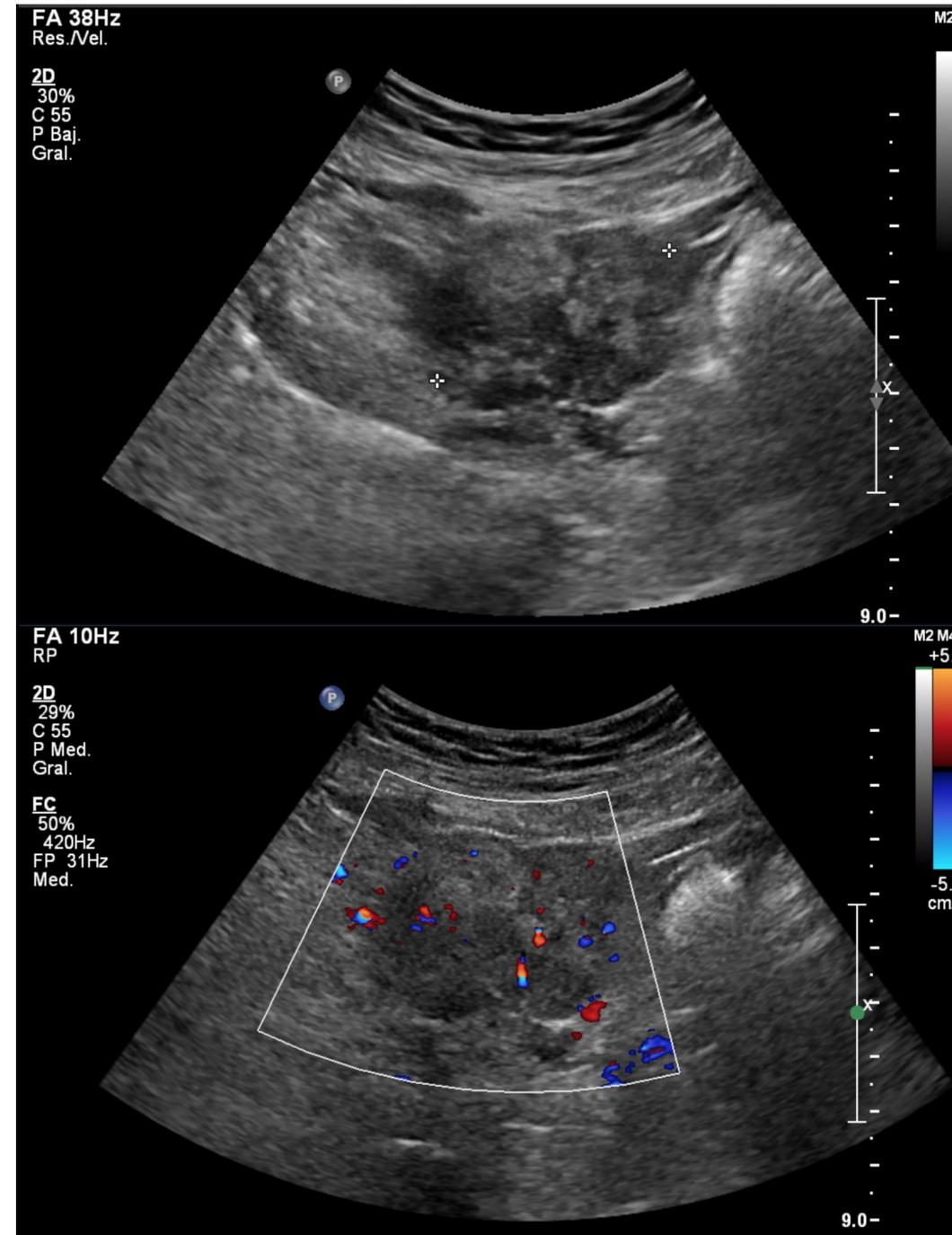
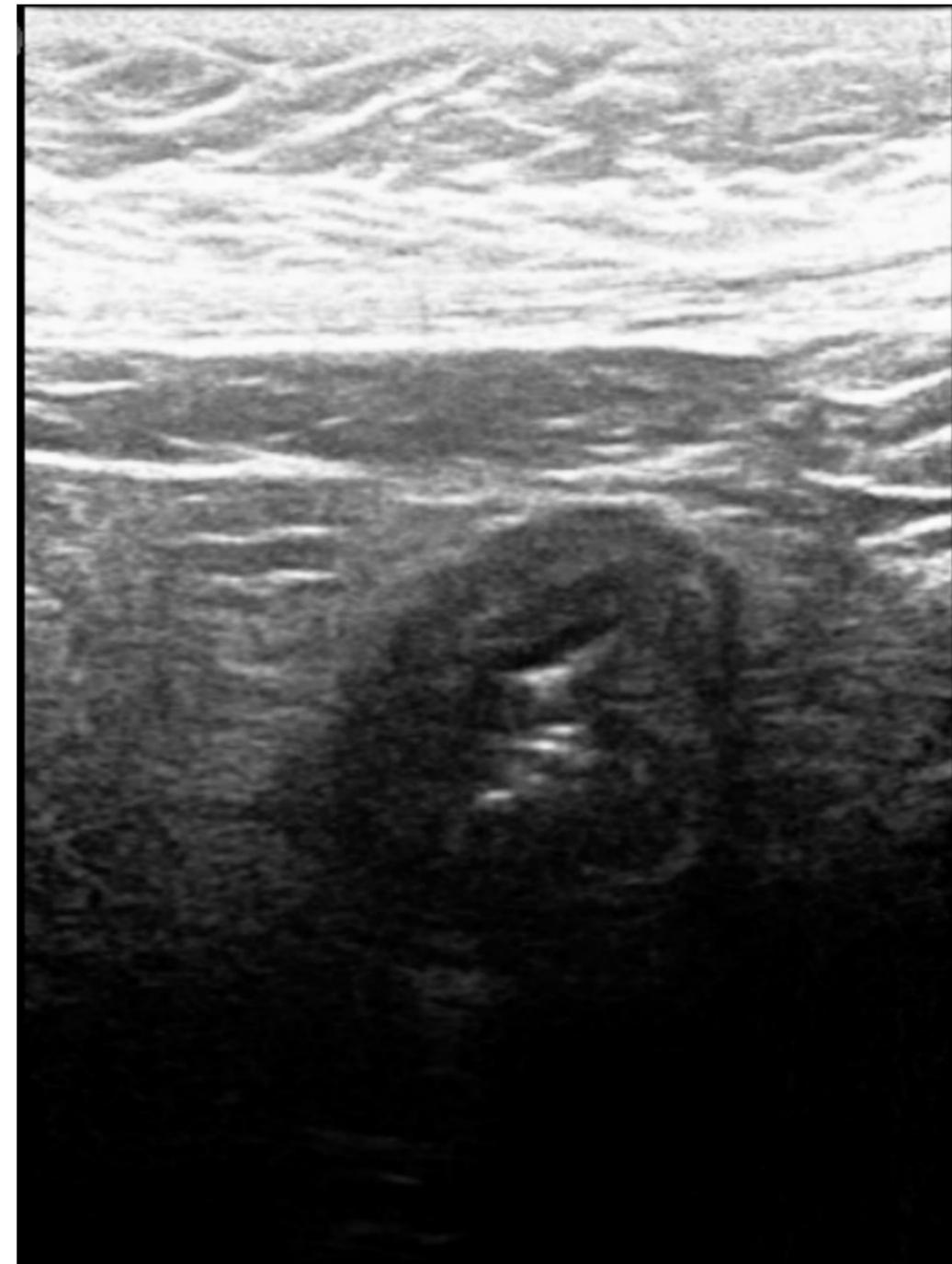


Leve esteatosis hepática asociado a elastografía hepática con valor de mediana de 5,65 kPa asociado a ausencia de signos ecográficos de daño hepático crónico, lo que descartaría Enfermedad hepática crónica avanzada compensada. Hipoesplenía asociado a ileitis con engrosamiento y aumento de los pliegues. Se debe considerar Enfermedad celíaca

Ecografía intestinal: Neoplasia

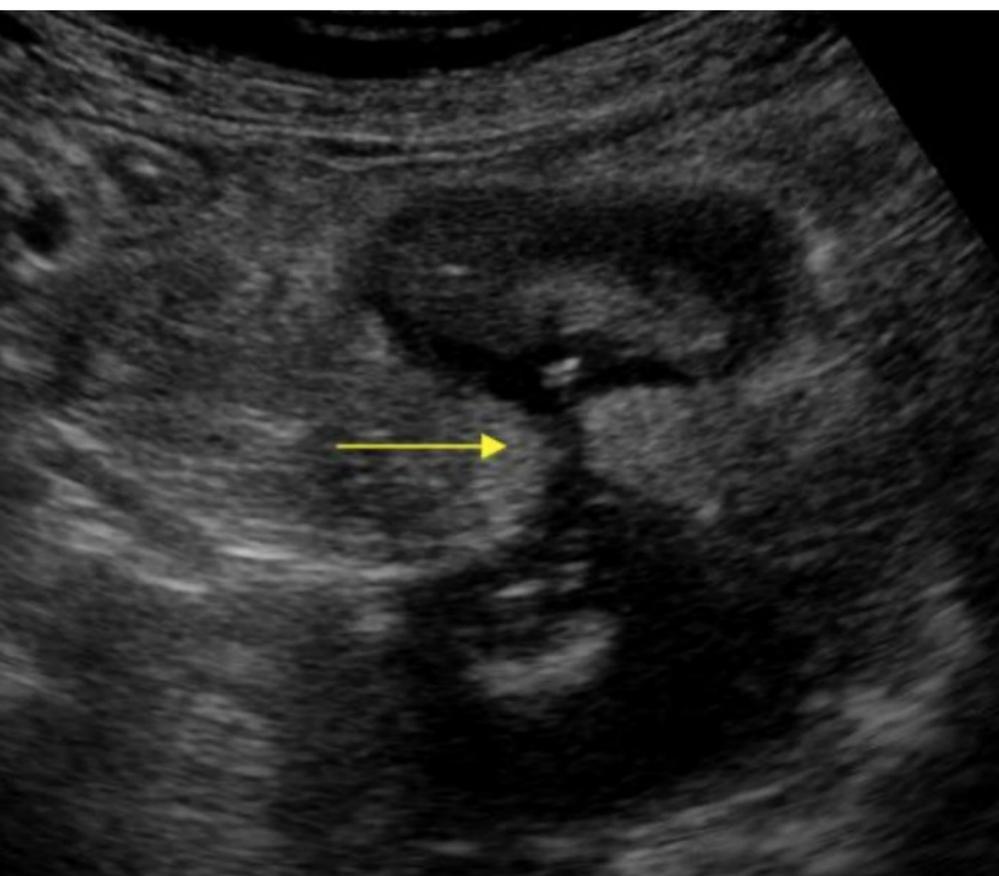


Dr. Juan
Salvador
Casas

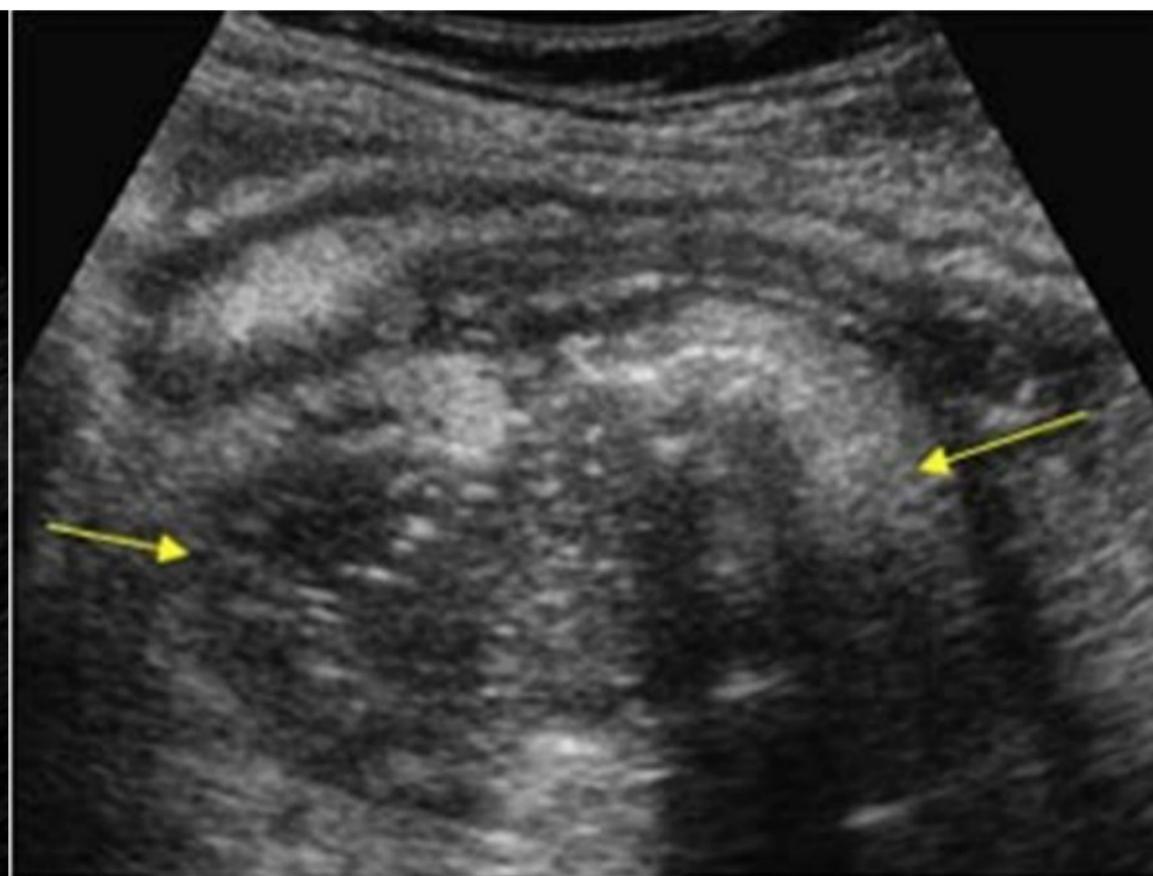


Conclusión

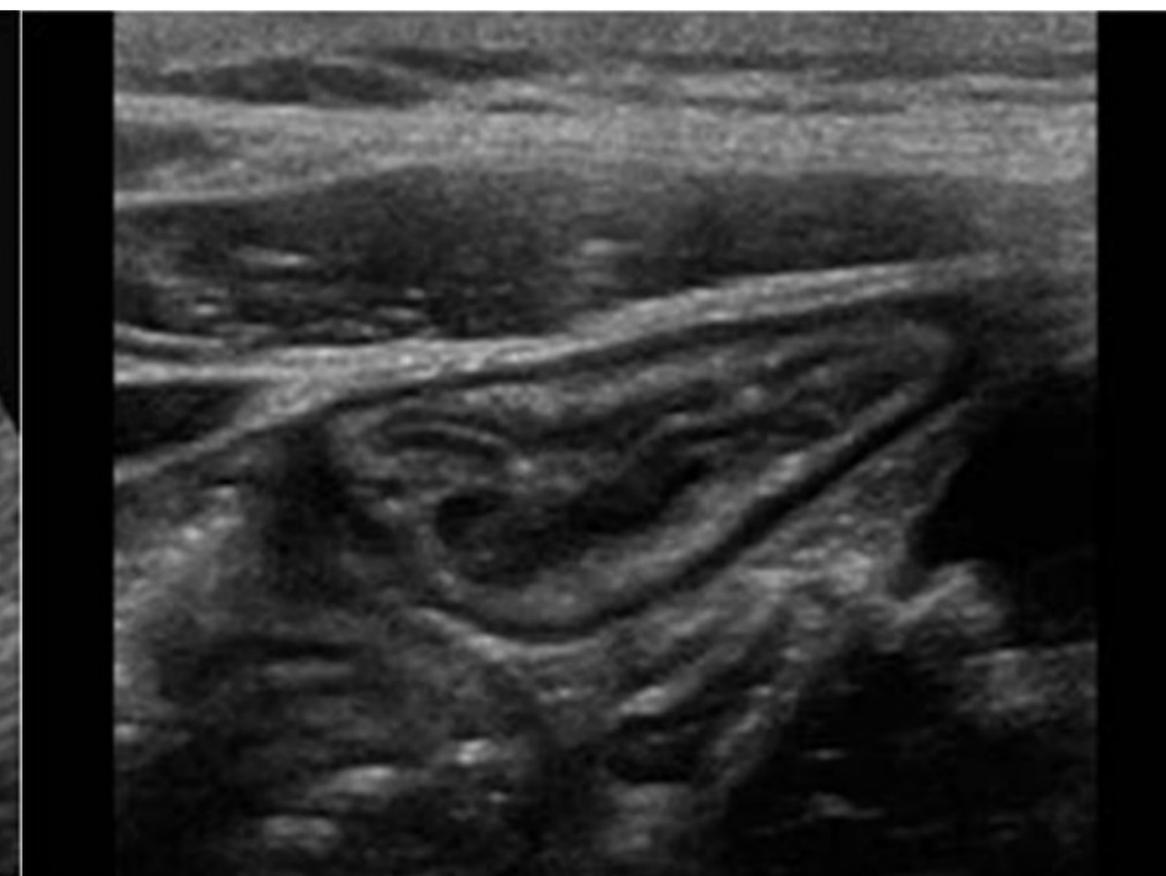
- La ecografía intestinal es una técnica que en manos expertas y dedicadas tiene indicaciones validas y con excelentes resultados diagnósticos y clínicos, tanto para patología aguda o crónica.



Fistulas



Abscesos



Ileitis

Reflexión final

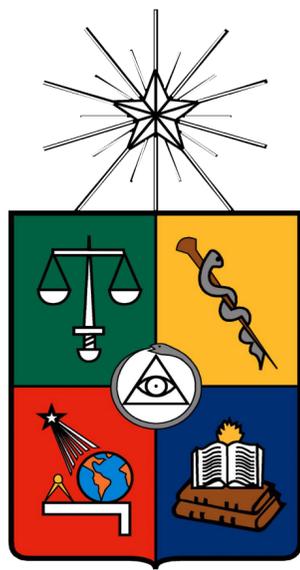
"En cualquier tarea se puede ganar o perder, lo importante es la nobleza de los recursos utilizados"

La Ecografía es un técnica noble que hay que valorar, recuperar y fomentar para el beneficio de nuestros pacientes.



Marcelo Bielsa





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gcardenas@hcuch.cl