



Novedades en Cirugía Minimamente Invasiva colorrectal:

Extraccion transanal

José Ignacio Rodríguez García

Servicio de Cirugía General y del Aparato Digestivo

Hospital de Cabueñes

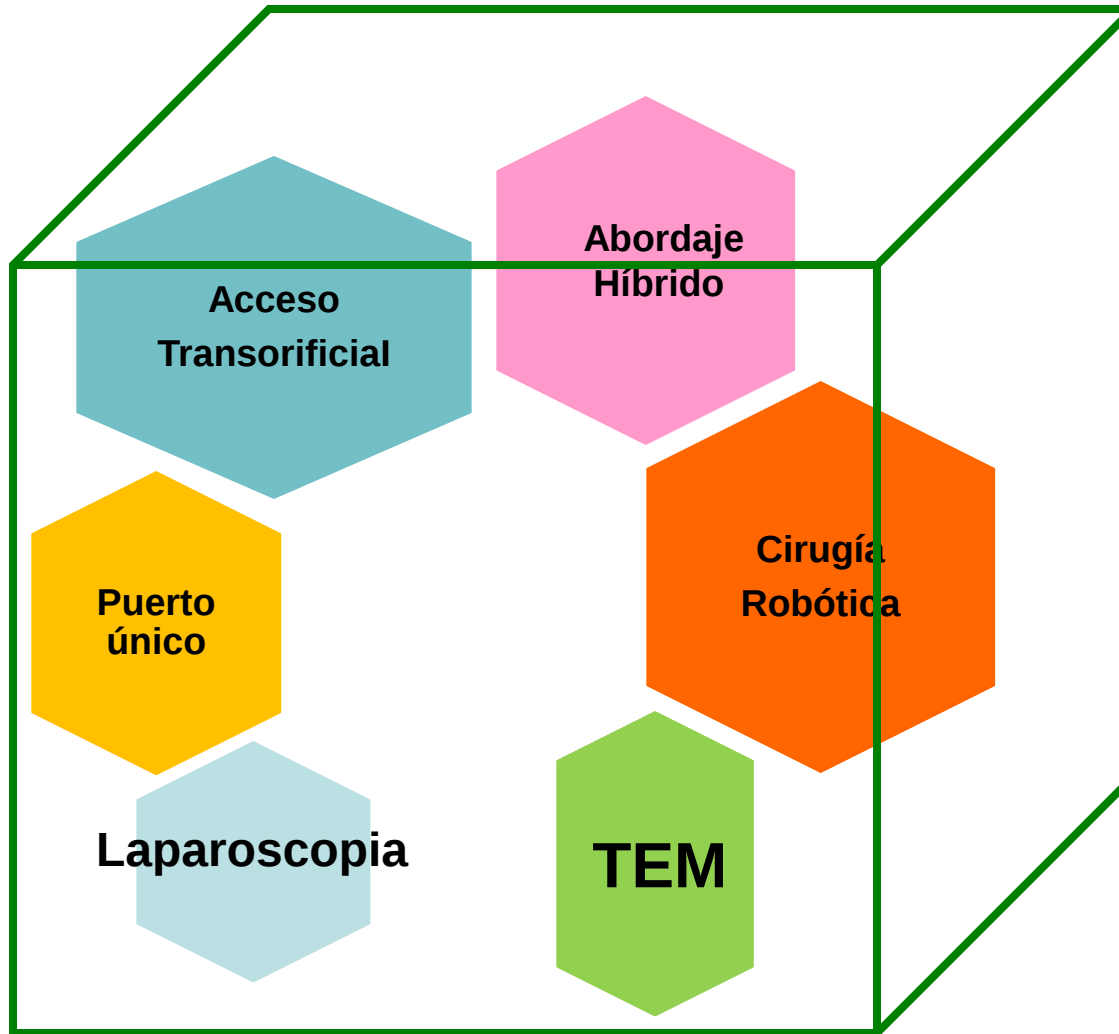
Departamento de Cirugía y Especialidades MQ

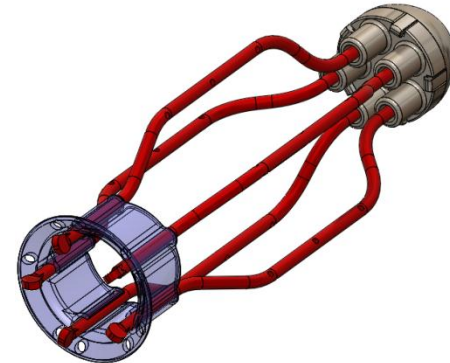
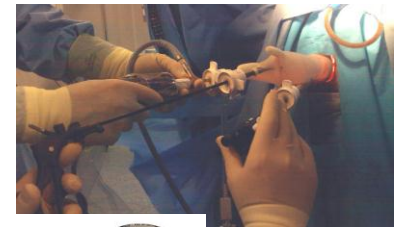
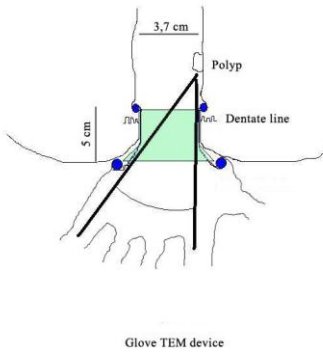
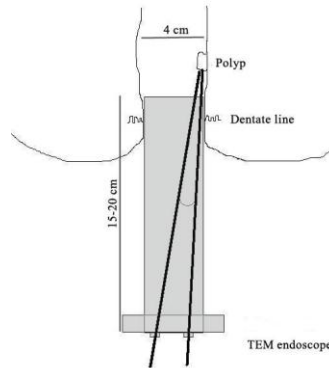
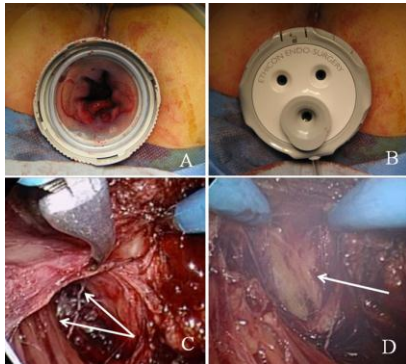
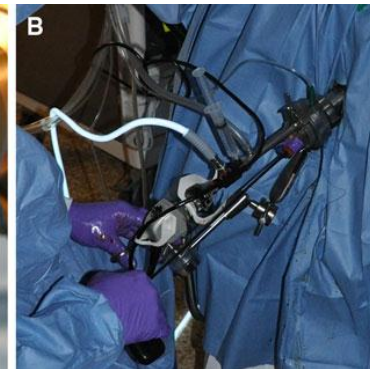
Universidad de Oviedo

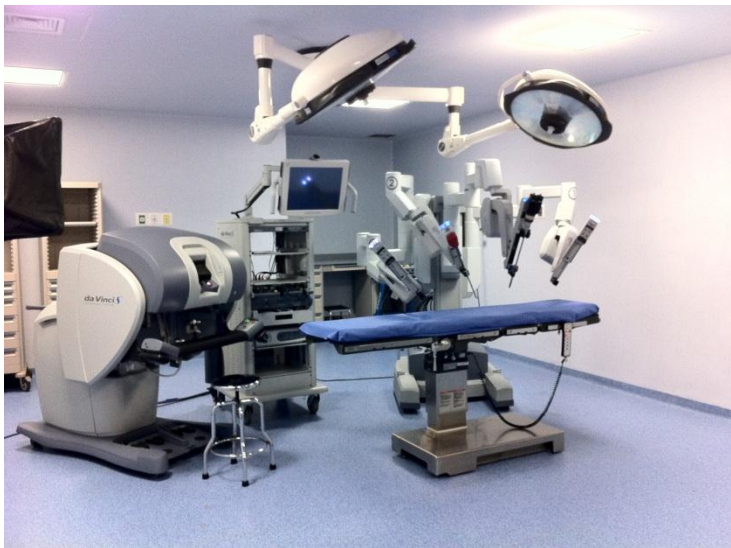
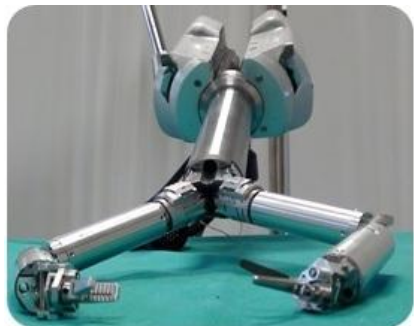
Indice

- Introducción
- Nuevos dispositivos transanales
- Novedades técnicas
- Resultados:
 - Estudios en desarrollo prospectivo
 - Estudios en Fase IIs
 - Revisiones sistemáticas
- Conclusiones

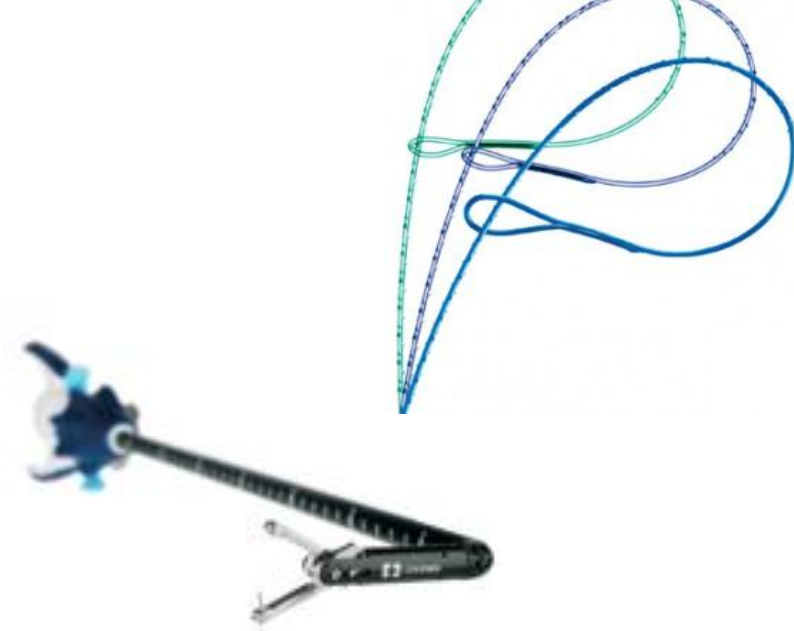
Innovación Cirugía Minimamente Invasiva Colorrectal







Introducing a True Profile in Performance
Endo GIA™ Radial Reload with Tri-Staple™ Technology



Extracción transanal

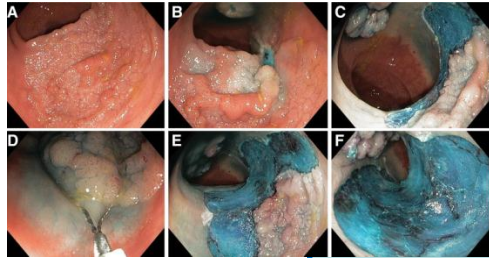
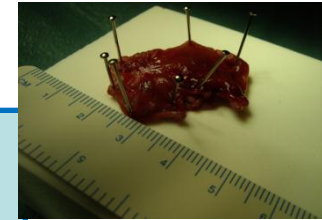
Minimamente invasiva

“Full Thickness”

TEO/TAMIS/“Glove-Port”

Polipectomía/Resecc.
Mucosa/Resecc
submucosa

Fibrocolonoscopia
asistencia laparoscópica



Resección
segmentaria colon

Laparoscópica/Robótica



Colectomía total

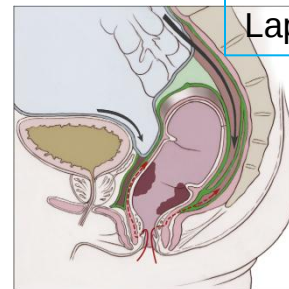
Laparoscópica /Robótica



Proctectomía

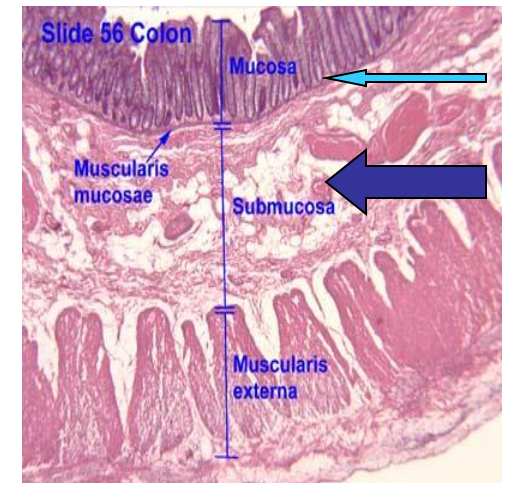
Endoscópica transanal
asistencia laparoscópica

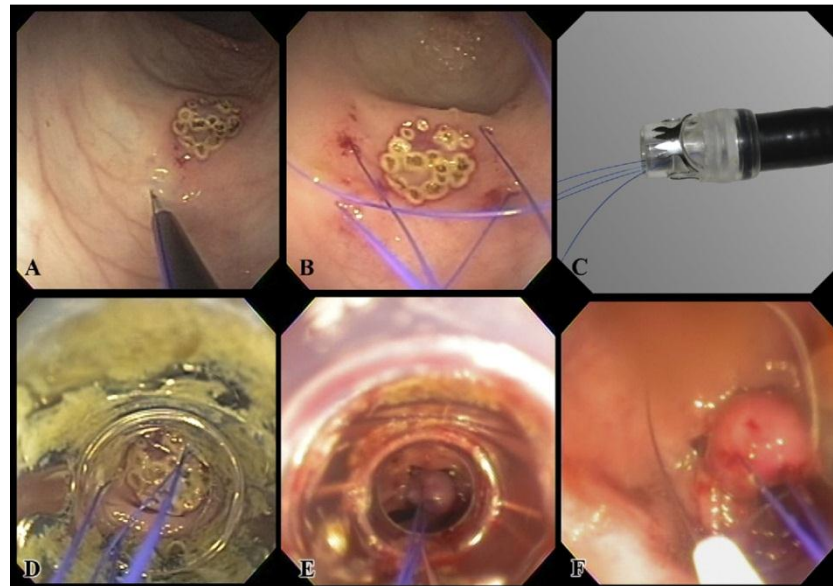
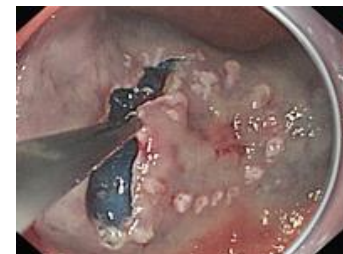
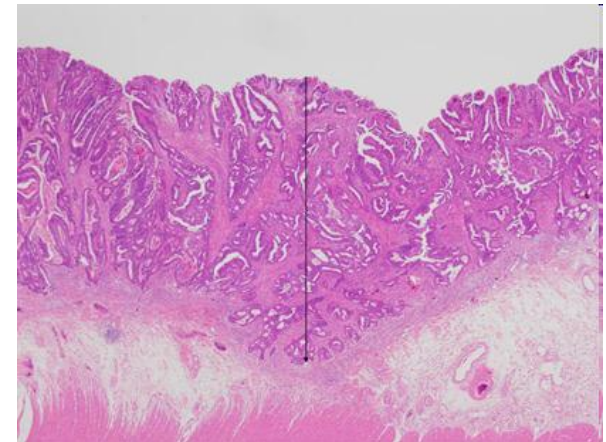
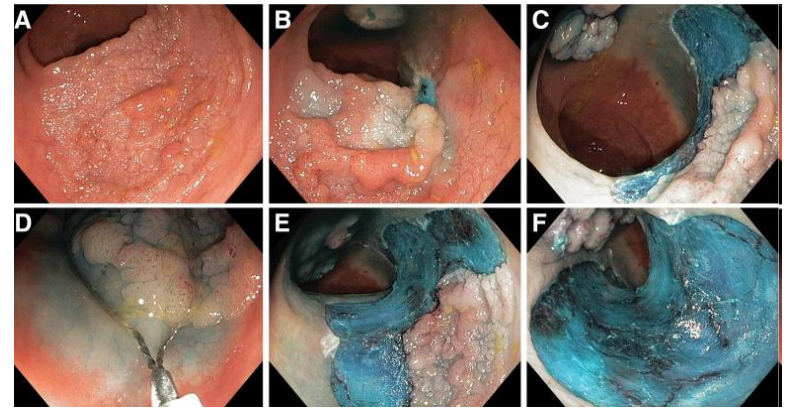
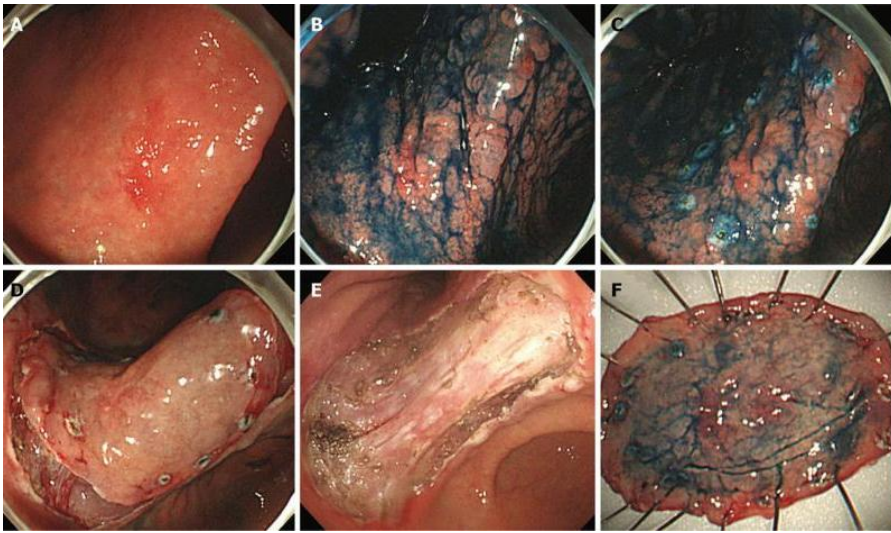
Laparoscópica interesfinteriana



Diferentes técnicas de resección endoscópica

	RESECCIÓN ENDOSCÓPICA MUCOSA (REM)	RESECCIÓN ENDOSCÓPICA SUBMUCOSA (RES)
MATERIAL	Asa de diatermia/capuchón/bandas	Bisturí eléctrico
VENTAJAS	Menos perforaciones(1%)	Menos recurrencias(1%)
INCONVENIENTES	Más recurrencias(15%)	Más perforaciones(5-15%)





Rieder J Am Coll Surg 2011;
213:422-429

Cirugía Endo-Laparoscópica/ Híbrida/Endoscópica asistida por laparoscopia

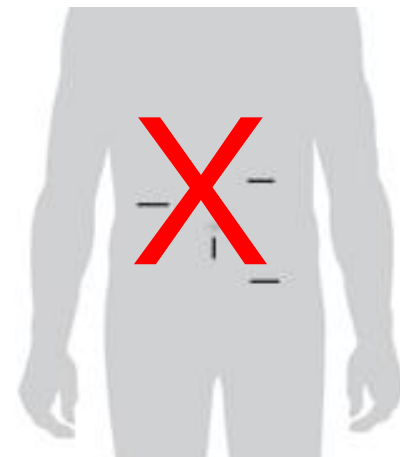
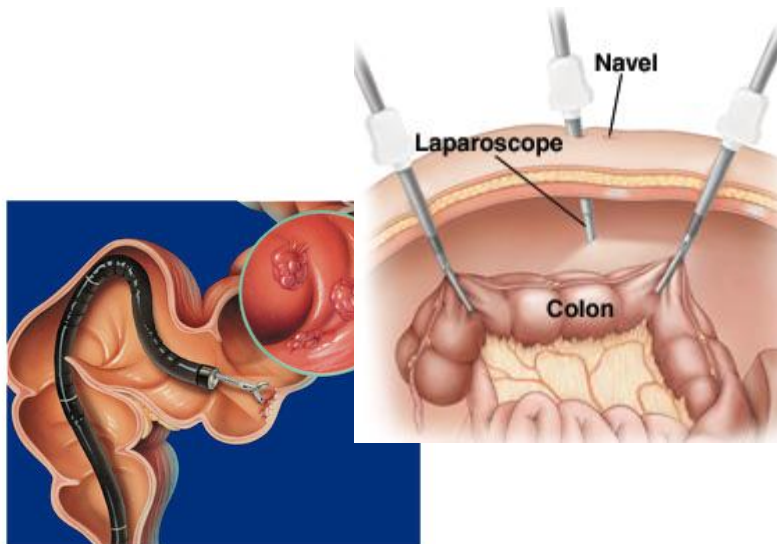
Full-Thickness laparoendoscopic colonic excision in an experimental model *Brigic A y cols.*

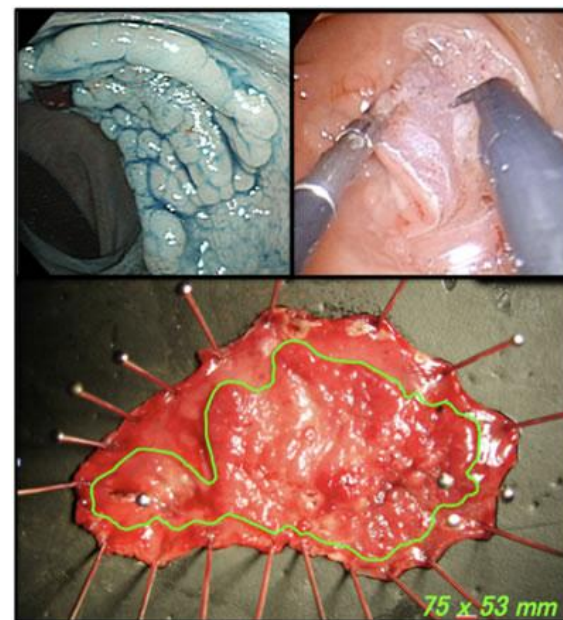
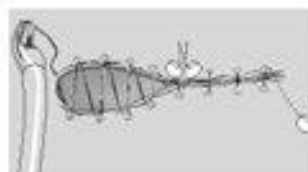
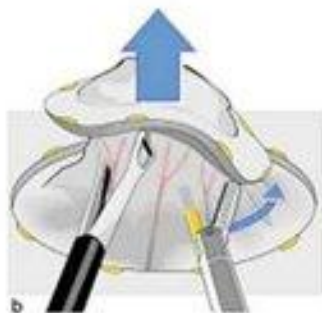
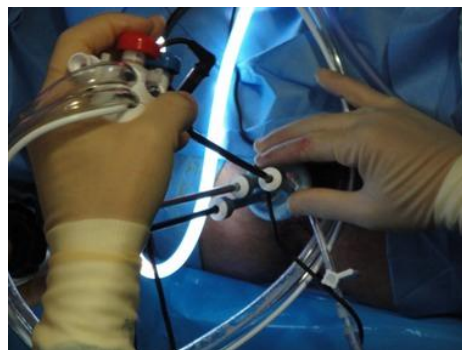
Br J Surg 2013

Endolaparoscopic removal of colonic polyps

Goh J y cols.

Colorectal Disease 2014





Cirugía endoscópica transanal “Full Thickness”

Guerrieri M. Surg Endosc 2010; 24;445-449 (TEM)

No mortalidad. No conversión. Complicaciones menores 7% y mayores 0.5%

Morino M. Surg Endosc 2011 (TEM)

Un tamaño **>3cm**, la infiltración **sm3**, diferenciación **bajo grado**, la ***infiltración del borde y linfovascular*** se asocian a más recurrencia

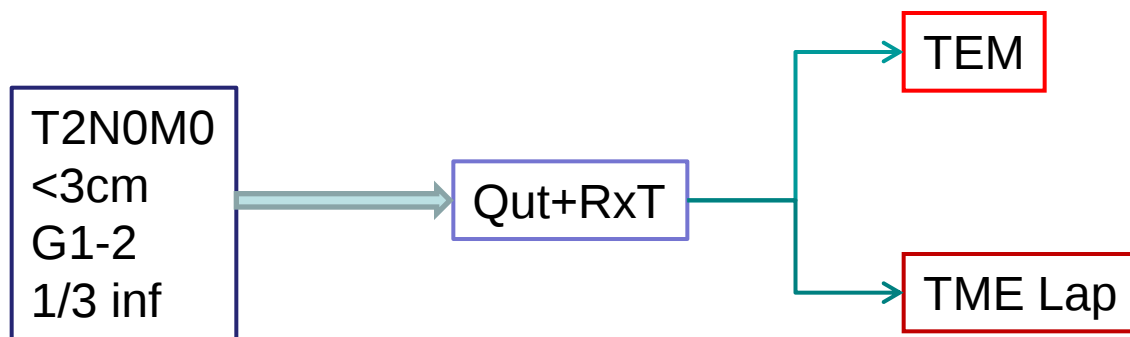
Allaix ME. Br J Surg 2011 (TEM)

No empeora la continencia fecal ni la calidad de vida

Randomized clinical trial of endoluminal locoregional resection versus laparoscopic total mesorectal excision for T2 rectal cancer after neoadjuvant therapy

Lezoche E y cols.

Br J Surg 2012; 99: 1211-1218

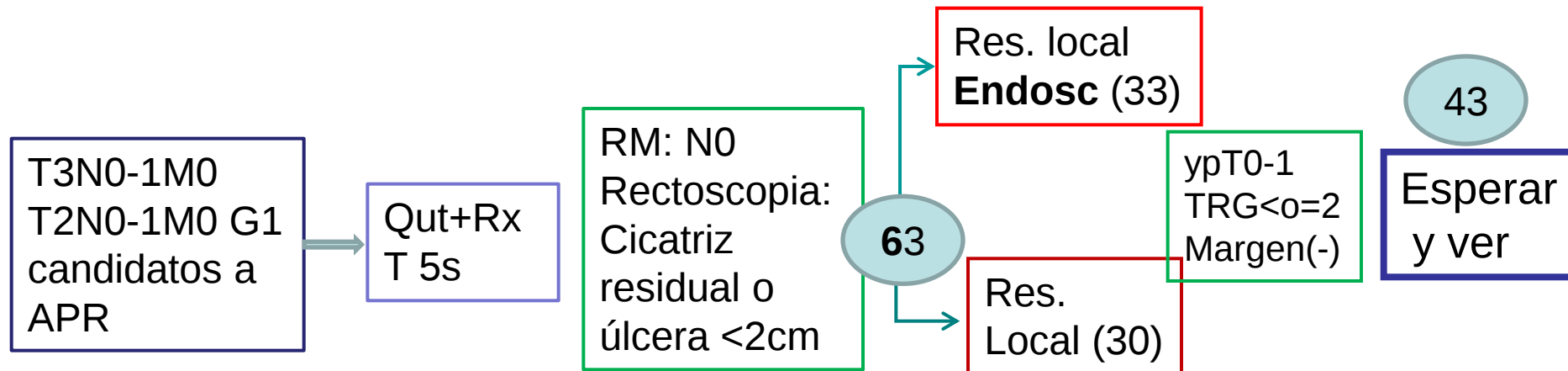


	TEM N=50	TME Lap N=50	p
Estoma temporal definitivo		11 (22%) 12 (24%)	
Duración (min)	90(90-100)	174 (160-190)	<0.001
Transfusión CH	0	10(20%)	<0.001
Estancia (días. Mediana)	3	6	<0.01
Morbilidad	7(14%)	10(20%)	ns
Recurrencia local	4	3	ns
Metástasis (5 años)	2	2	ns

Local excision after preoperative chemoradiotherapy for rectal cancer: results of a multicenter phase II clinical trial

Pucciarelli S y cols.

Dis Colon Rectum 2013; 56: 1349-1356



	Tras esperar y ver (43)	TME (11)	Rechazaron ETM (9)
Recurrencia local	0	0	1
Metástasis (5 años)	1	1	1

Posibilidades terapéuticas mínimamente invasivas colo-rectales

Laparoscopia /Robótica

Abordaje:

- Sin incisión de asistencia/Extracción espécimen por orificio natural (NOSE):

- Transvaginal
- Transanal (interesfinteriana) o transrectoanal

- Asistida: (incisión abdominal de apoyo)

- Multipuerto + incisión
- "Single port"/"Glove port"

Resección:

- Total o parcial de colon

- Anterior de recto

- AAP

- Estándar
- Cilíndrica

Anastomosis

- Coloanal

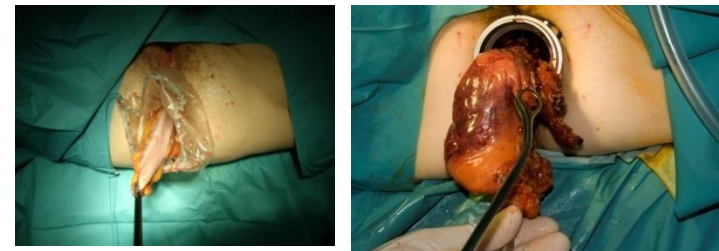
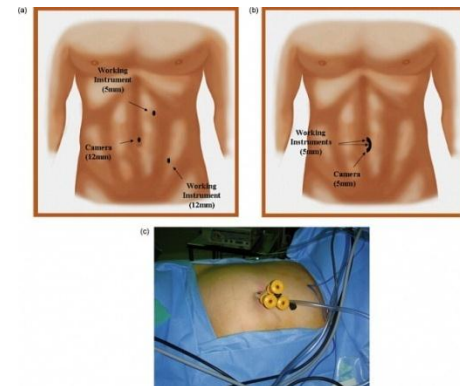
- Con /sin coloplastia
- Con/sin reservorio
- 1 o 2 tiempos (Turnbull-Cutait)

- Mecánica intracorporea

Herida:
Infec 9%
Eventrac 8-11%



Can J Surg 2007; 50: 48-57.
Colorectal Disease 2010; 12: 423-427



Intersphincteric resection for **low** rectal cancer: laparoscopic vs open surgery approach (... *In the laparoscopic Group, it was removed transanally... Included colonic pouch*)

Laurent C y cols

Colorectal Disease 2012; 14(1): 35-43

	Laparoscopy n=110 (%)	Open Surgery n=65 (%)	p
Mortality	0(0)	0(0)	ns
Surgical morbidity Dindo III-IV)	25(22.7)	18(27.7)	ns
Hospital Stay (days)	9(4-57)	16(7-75)	<0.001
Conversion	24(21.8)		
Operative time (min)	390(210-720)	300(210-470)	0.003
Reintervention	20(18.2)	14(21.5)	ns

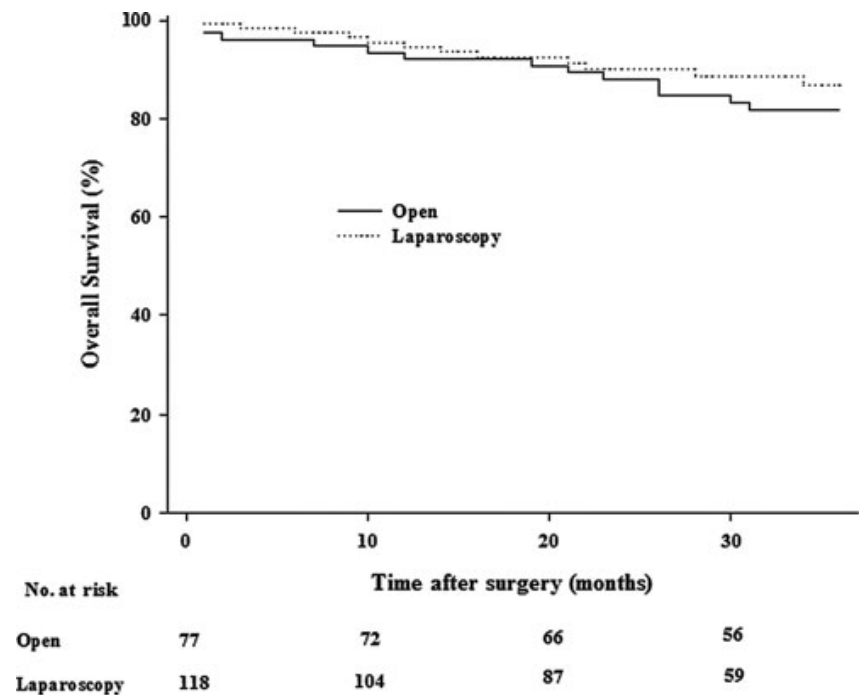
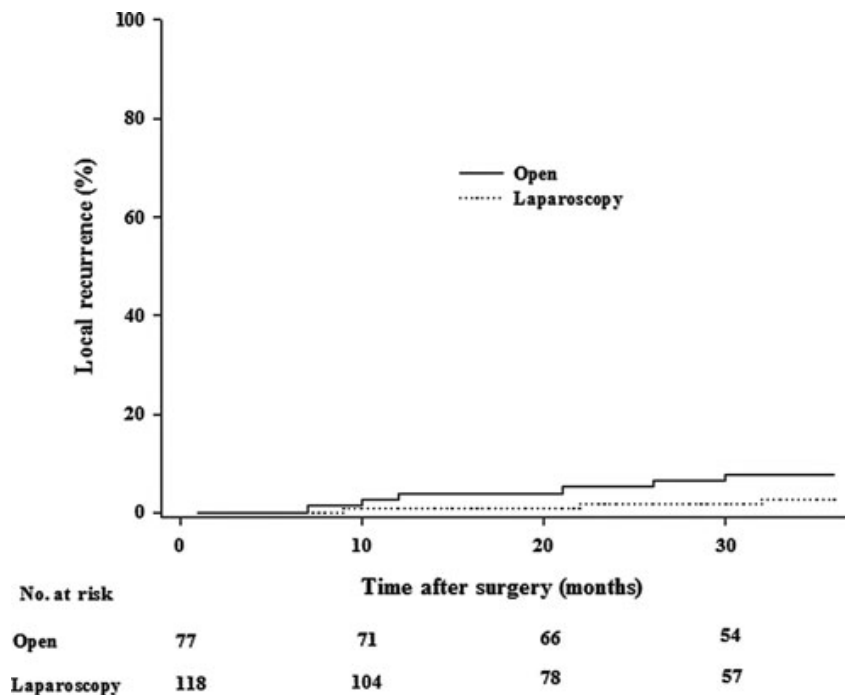
No incisión= < complicaciones de herida (infección-eventración)

Laparoscopic Versus Open Intersphincteric Resection and Coloanal Anastomosis for **Low** Rectal Cancer

Intermediate-Term Oncologic Outcomes

Park JS

Annals of Surgery Volume 254, Number 6, December 2011



Transanal specimen extraction in robotic rectal cancer surgery

Kang J y cols

British Journal of Surgery

2012;99(1):133–136

	Robotic transanal specimen extraction (RTSE) n=53 (%) (sd*)	Minilaparotomy specimen extraction (MSE) n=66 (%)	<i>p</i>
Operative time (min)	357.4 (66.8*)	345(75.8)	ns
Soft Diet(days)	3.5(1.5)	4.6(1.7)	<0.01
Hospital Stay (days)	9(4.8*)	11.3(5.3)	=0.016
Postoperative complications	7(13)	18(27)	ns
Reoperation	4(7.5)	8(12)	ns
Mortality	0	0	ns

Laparoscopic coloanal anastomosis for rectal cancer: randomised trial comparing laparoscopic vs initial perineal approach

Laurent C y cols.
Colorectal Disease 2010

“The perineal approach reduces the risk of a positive circumferential margin...”

Single port access proctectomy with total mesorectal excision and intersphincteric resection with a primary transanal approach

Gaujoux S y cols.
Colorectal Disease 2011

“This preliminary experience shows that proctectomy with TME and intersphincteric resection can be safely performed using only two ports (transanal and site of the future stoma).”

Extracción transanal

- Minimiza complicaciones en pared abdominal
- Requiere estandarización del procedimiento
- El riesgo de infección intrabdominal, de diseminación tumoral y de disfunción esfinteriana aún requiere estudios de más calidad

Diana M et al. Colorectal Disease 2011; Suppl 7: 23-27 (Rev sistemática)

- Técnica factible, baja morbilidad y estancia hospitalaria

Wolthuis AM et al. Colorectal Disease 2012; 14: 1183-90 (Rev sistemática)

☐ Segura y efectiva

☐ Sin diferencia en recurrencias locales y complicaciones

Franklin ME et al. Surg Endosc 2013; 27:127-132 (Serie de 179 pacientes)

Resección colorrectal laparoscópica con extracción transrectoanal del espécimen

CEQTt-Cabueñes-Asturias

	RC-RTE (n=29)
Indicaciones:	Ca colorrectal PAF Pólipos irresecables con fibrocolonoscopia Diverticulosis Vólvulo-Dolicosigma Colitis ulcerosa
Dispositivo transanal	Alexis® TEO GelPoint-Path (Proctectomía endoscópica) Glove-Port (Proctectomía endoscópica)
Complicaciones	Clavien-Dindo: I: Ileo (2) III: <u>Absceso intrabdominal (1)</u> <i>Necrosis colon (Turnbull- Cutait) (1)</i> <i>Dehisc colo-anal (2)</i> <i>Hemorragia intrabdominal (1)</i> V: SIRS y Broncoaspiración con EXITUS (2)



Indicado: Diámetro del espécimen < 4cm

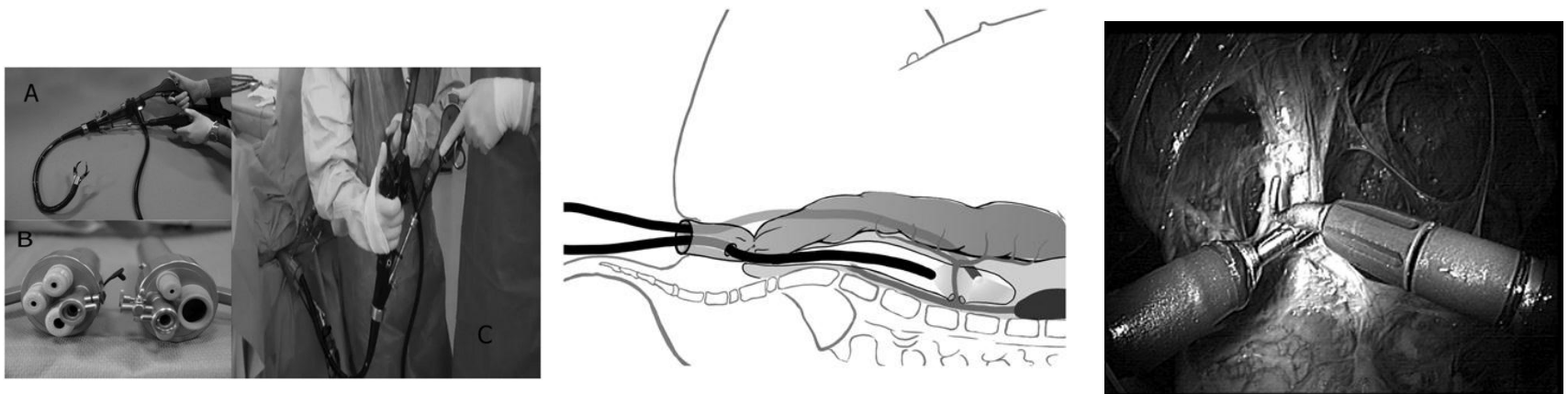
Cirugía experimental NOTES transanal

Sylla P, Willingham FF, Sohn DK, et al. *J Gastrointest Surg* 2008

Leroy J, Cahill RA, Peretta S et al. *Surgical Endoscopic* 2009

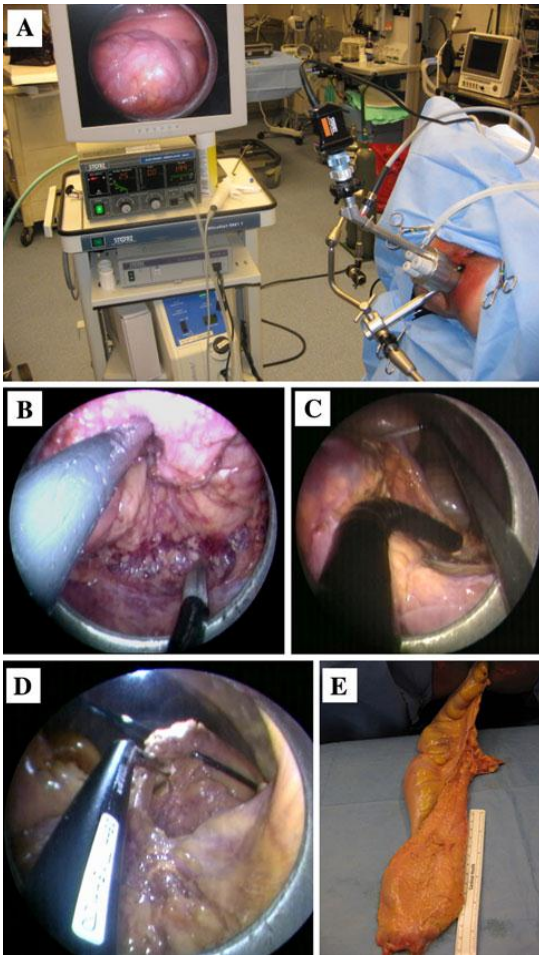
Sylla P, Sohn DK, Cizginer S et al. *Surgical Endoscopic* 2010

Trunzo JA, Delaney CP. *Surgical Innovation* 2010

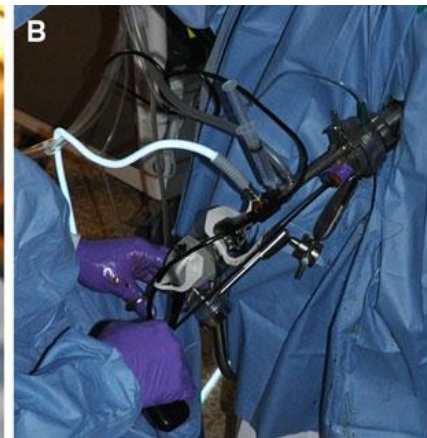
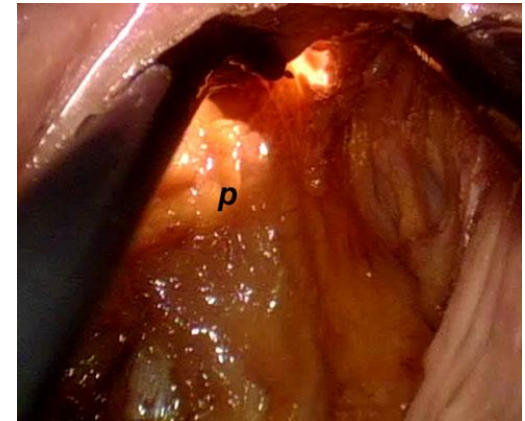
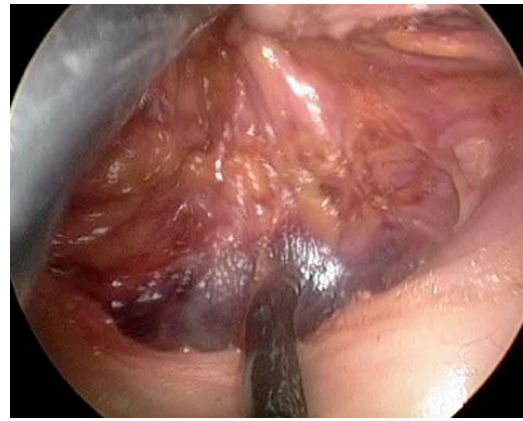
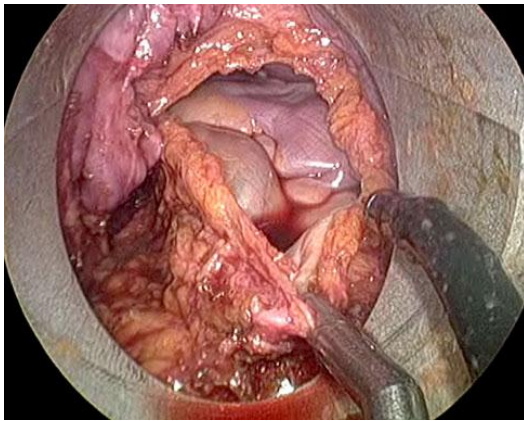


Leroy J, Diana M, Barry B et al. *Surgical Innovation* 2012

Telem DA, Han KS, Kim M-Ch et al. Transanal rectosigmoid resection via natural orifice transluminal endoscopic surgery (NOTES) with total mesorectal excision in a large human **cadaver series**. Surg endosc 2013, 27:74-80



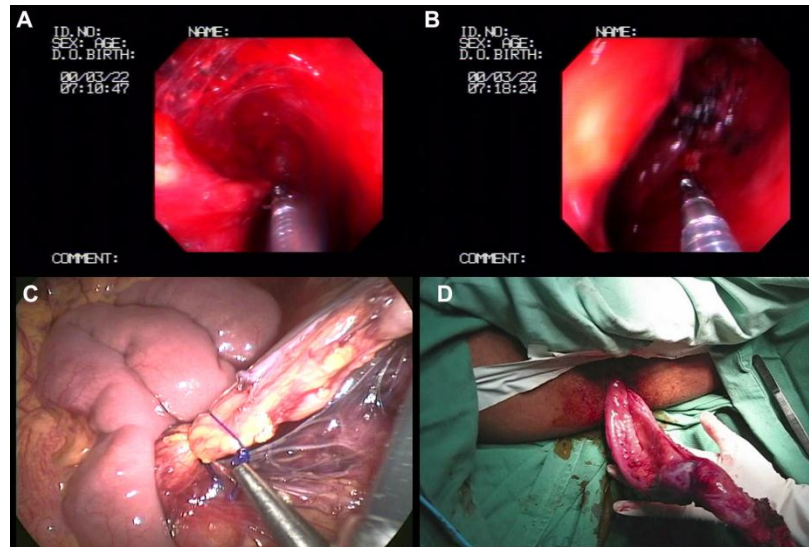
- Transanal (19)
- Transanal + transgastric (5)
- Transanal + laparoscopic (8)
 - <complicaciones
 - >longitud espécimen



Rieder EA y cols.
 Natural orifice **transrectal approach for oncologic resection of the rectosigmoid**: an **experimental** study and comparison with conventional laparoscopy.
 Surg Endosc. 2011; 25(10):3357–3363

- La linfadenectomía es equivalente en rectosigmoidectomía transanal y LAP.
- El instrumental de TEO/TEM convencional no permite una adecuada movilización del colon izquierdo

Primero casos clínicos



Perirectal NOTES Access: “Down-to-up” Total Mesorectal Excision for Rectal Cancer. **Zorron R**, Neuerbarth H, Coelho F, et al. *Surg Innov* 2012;19: 11-19 (2)

Sylla P, Rattner DW, delgado S, et al. *Surg Endosc* 2010; 24: 1205-1210 (1)

Tuech JJ, Bridoux V, Kianifard B, et al. *EJSO* 2011; 37: 334-335 (1)

Atallach SB, Larach S, de Beche-Adams TC, et al *DisColon rectum* 2013; 56:931 (1) Vídeo

Proctectomía Endoscópica con excisión total del mesorrecto (Down-to-up)

Feasibility study of transanal total mesorectal excision

Velthuis S, van den Boezem, van
der Peet, Cuesta MA, Sietses C.
Br J Surg 2013
100; 828-831

Pacientes:5

Duración:175(160-194)min

SILS (transanal y abdominal-
zona ileostomía)

Pneumoperirectum 15mmHg
Ligasure^R

Alexis transanal para
extracción

Sutura manual
Mecánica: EEATM (Covidien)
4-8mm

Transanal natural orifice transluminal endoscopic surgery(NOTES) rectal resection: “down-to-up” total mesorectal excision (TME)-short-term outcomes in the first 20 cases

Lacy AM, Rattner DW, Adelsdorfer C,
Tasende MM, Fernández M, Delgado
S, Sylla P, Martínez-Palli G
Surg Endosc 2013

Pacientes:20

Duración: 235+/-56min

1º VideoLaparoscopia punta
flexible 10mm

2º **GelPoint Path**
(5mm) 3D/ Lone Star

Sutura manual
Mecánica

Transanal Endoscopic Proctectomy: an alternative Procedure for difficult resection of rectal tumors in Men with narrow pelvis

Rouanet P, Mourregot N, Azar
ChCh, et al.

Dis Colon Rectum 2013
56; 408-415

Pacientes:30

TEO
Harmonic scalpel
10mmHg

Sutura manual/J-pouch
Ileostomy

Proctectomía endoscópica con excisión total del mesorrecto (Down-to-up)

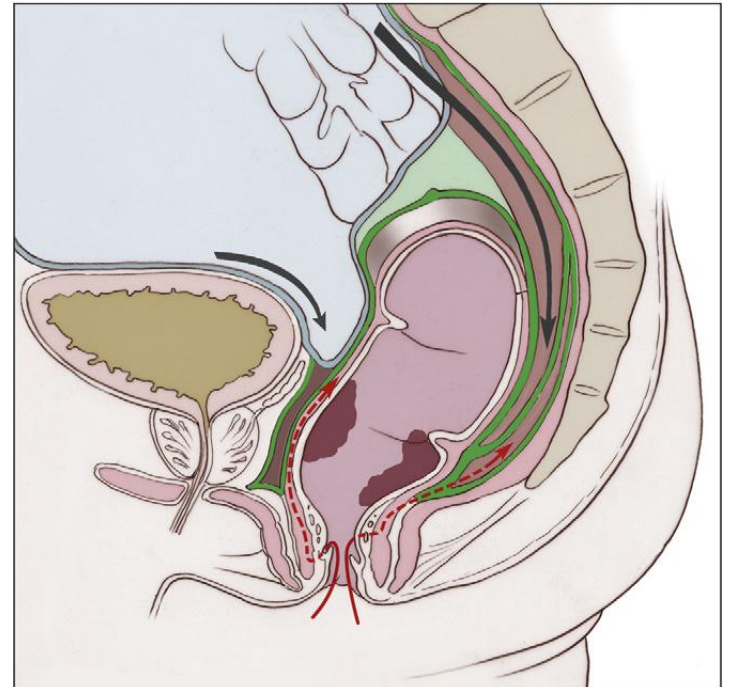
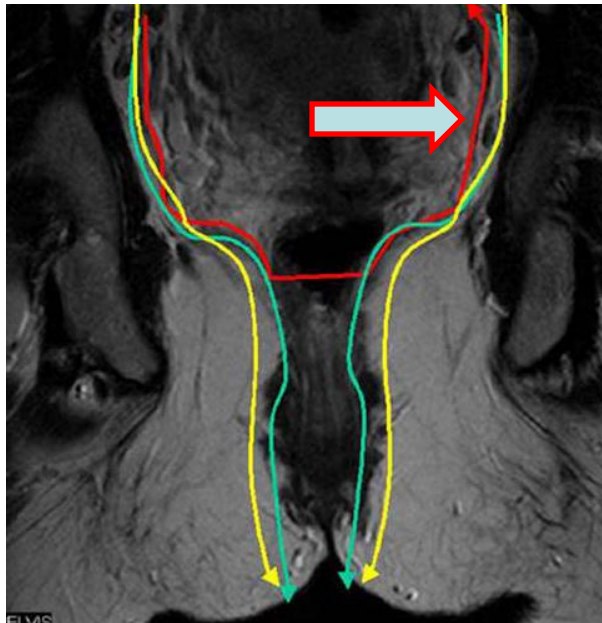
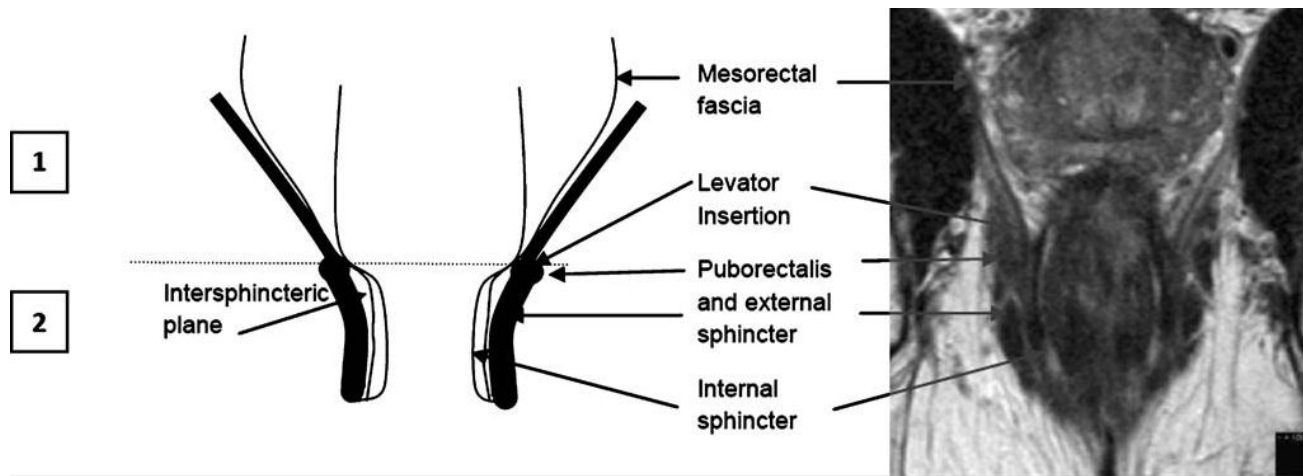
Indicaciones:	Dispositivos	Disector	Complicaciones
Neoplasia (T1-T4) Polipo Proctitis (CU y EC)	TEO TEM SILS Gel Point Path <i>Glove-Port</i>	Ultracision Ligasure	<u>Intraoperatorias:</u> Lesión uretral Perforación recto <u>Postoperatorias:</u> Dehiscencias- sepsis anastom.

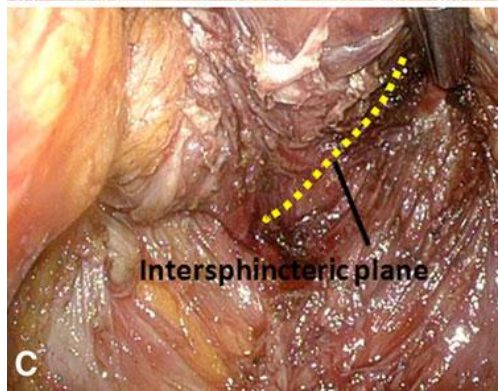
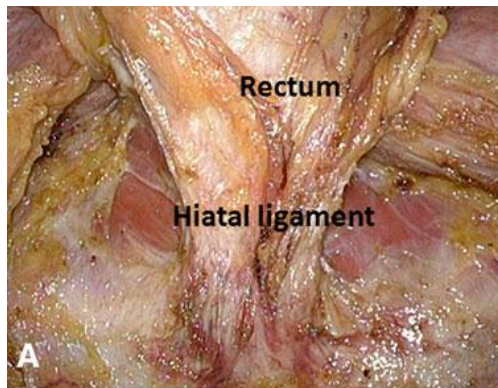
Emhoff IA. et al. *Digestive Endoscopy* **2014** (recopilación de 72 pacientes de series desde 2010)

Wolthuis AM. et al. *Dis Colon Rectum* **2014** (14 pacientes)

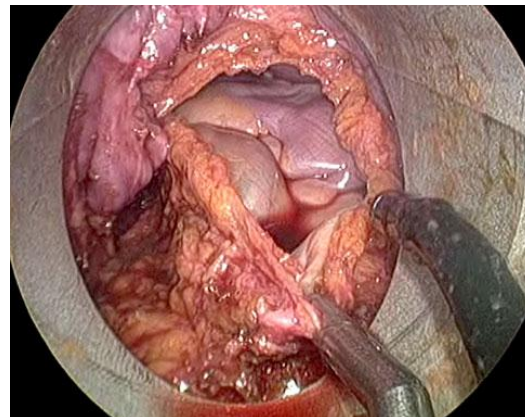
Liyanage C et al. *Colorectal Disease* 2013 (12 pacientes)

Serie H. Cabueñes (8 pacientes)





Fujii S. Y cols. Surg Endosc
2012



Editorial Colorectal Disease
Vol. 15(11) Novembre 2013



No more “standard” abdominoperineal excision

(ELAPE: extralevator abdominoperineal or intersphincteric
excision)

John Nicholls

Dep. of Surgery and Cancer, London, UK

Conclusiones:

- *Es posible una cirugía más mínimamente invasiva colorrectal que evite las molestias e infecciones-eventraciones de la laparotomía y mejore el acceso a la pelvis menor.*
- *Se puede recurrir a distintos dispositivos y técnicas transanales.*
- *Se ha superado la fase de desarrollo prospectivo y se empieza a disponer de resultados de estudios fase IIs y randomizados*