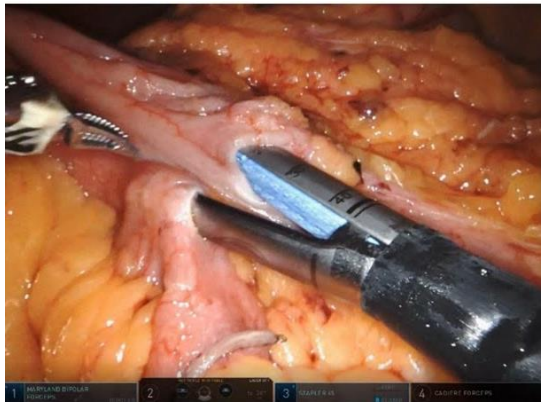
Intra or extra corporeal anastomosis after right colectomy ?



Pr Eddy COTTE

Lyon-Sud University Hospital

France

Hospices Civils de Lyon

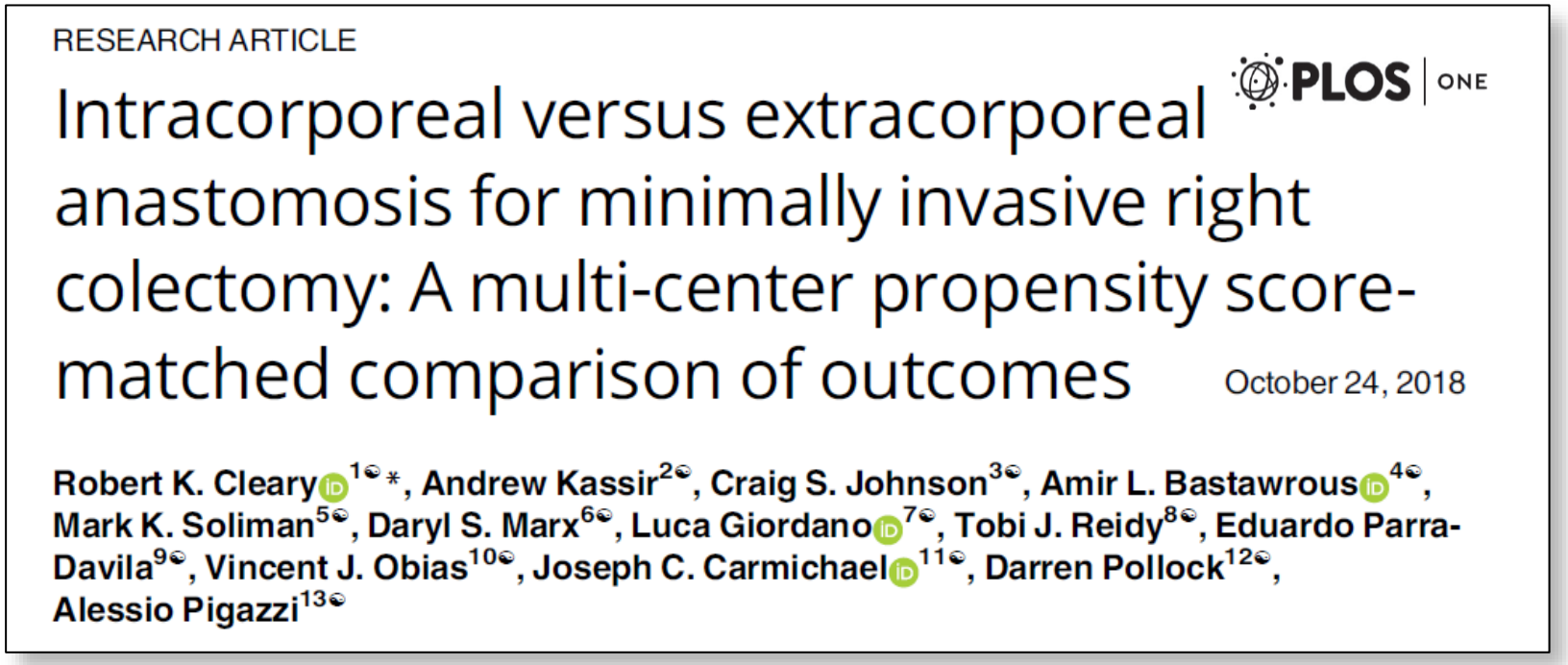
Université Claude Bernard Lyon 1

Laparoscopic right hemicolectomy: the SICE (Società Italiana di Chirurgia Endoscopica e Nuove Tecnologie) network prospective trial on 1225 cases comparing intra corporeal versus extra corporeal ileo-colic side-to-side anastomosis

Surgical Endoscopy (2020) 34:4788–4800

Gabriele Anania[1,2] · Ferdinando Agresta[3] · Elena Artioli[1,2] · Serena Rubino[1,2] · Giuseppe Resta[1,2] · Nereo Vettoretto[4] · Wanda Luisa Petz[5] · Carlo Bergamini[6] · Alberto Arezzo[7] · Giorgia Valpiani[8] · Chiara Morotti[8] · Gianfranco Silecchia[9] · SICE CoDIG (Colon Dx Italian Group)

- **Prospective study, n=1225 right colectomies** (125 centres, mars-sept 2018)
- **92,3 % lap**; 7,7% robot
- **Intra Anast 70,4%** vs **29,6% extra** (97% vs 66,4% stapled)
- **Intracorporeal anastomosis decreased**
  - **Post-op complications** : 35.4% vs 50.7%, p<0.0001
  - **LOS** : 6 days vs 8 days, p<0.0001
  - **Post-op pain** (opioids use), p<0.0001



RESEARCH ARTICLE

Intracorporeal versus extracorporeal anastomosis for minimally invasive right colectomy: A multi-center propensity score-matched comparison of outcomes

PLOS ONE

October 24, 2018

Robert K. Cleary[1]*, Andrew Kassir[2], Craig S. Johnson[3], Amir L. Bastawrous[4], Mark K. Soliman[5], Daryl S. Marx[6], Luca Giordano[7], Tobi J. Reidy[8], Eduardo Parra-Davila[9], Vincent J. Obias[10], Joseph C. Carmichael[11], Darren Pollock[12], Alessio Pigazzi[13]

- **Retrospective study with** propension score,n=1029

- 379 intracorporeal (88% robot) vs vs 650 extracorporeal (39% robot)

- **Intra Anastomosis decreased**
  - **Conversion rate**: 0.3% vs 2.9%, p=0.01
  - **LOS**: 3 days vs 4 days, p=0.02
  - **Complications rate** after discharge : 5% vs 8.9%, p=0.04

Langenbeck's Archives of Surgery (2021) 406:1789–1801
https://doi.org/10.1007/s00423-021-02235-4

SYSTEMATIC REVIEWS AND META-ANALYSES

Check for updates

Comparison of intracorporeal and extracorporeal anastomosis and resection in right colectomy: a systematic review and meta-analysis

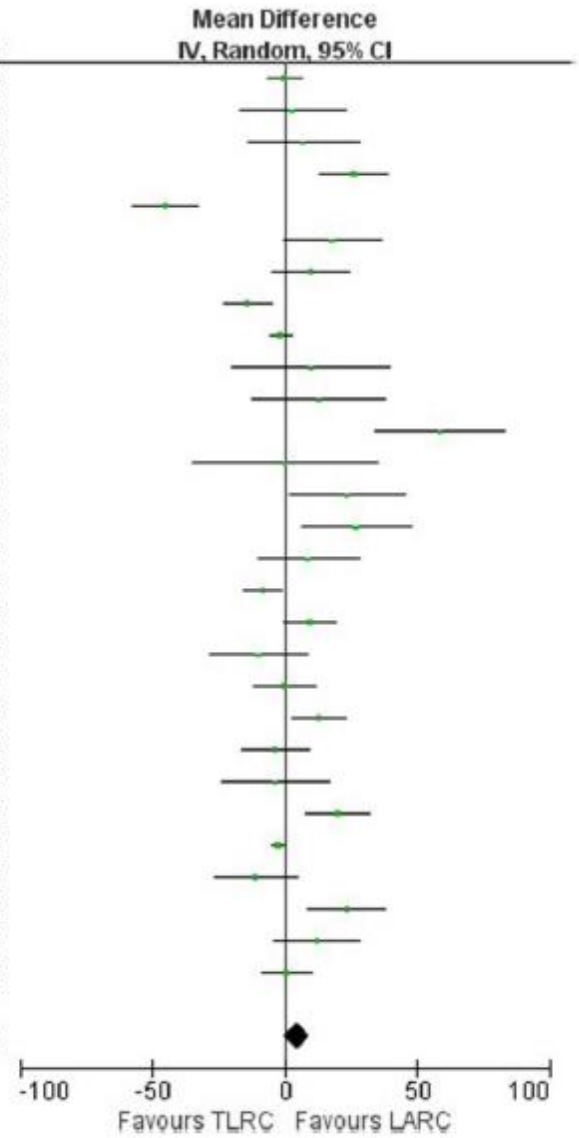
Jian-Chun Zheng[1] · Shuai Zhao[2] · Wei Chen[1] · Yu Tang[1] · Ying-Ying Wang[1] · Jian-Xiang Wu[1]

- **30 studies (all retrospectives except 7 prospective, 3 RCT, 3 case-control)**
- **All laparoscopic right colectomies (no robotic surgery)**
- **4317 patients**

Study or Subgroup	TLRC Mean	TLRC SD	TLRC Total	LARC Mean	LARC SD	LARC Total	Weight	Mean Difference IV, Random, 95% CI
Allaix 2019	130	22.5	70	130	17.5	70	4.8%	0.00 [-6.68, 6.68]
Anania 2012	186.8	43.7	39	184.1	42.5	33	2.7%	2.70 [-17.26, 22.66]
Biondi 2017	195.7	51.5	54	188.8	59.2	54	2.6%	6.90 [-14.03, 27.83]
Bollo 2019	149	30	69	123	45	70	3.9%	26.00 [13.30, 38.70]
Bou Saleh 2020	150	45	150	195	105.8	447	3.9%	-45.00 [-57.17, -32.83]
Chaves 2011	226	36.3	35	208	36.5	25	2.9%	18.00 [-0.69, 36.69]
Erguner 2012	100	20	15	90	21.2	15	3.5%	10.00 [-4.75, 24.75]
Fabozzi 2010	78	25	50	92	22	50	4.4%	-14.00 [-23.23, -4.77]
Hanna 2016	183	12.8	86	184.5	15.7	109	5.1%	-1.50 [-5.50, 2.50]
Hellan 2009	190	60	23	180	65	57	1.7%	10.00 [-19.77, 39.77]
Ishizaki 2020	211	41.7	51	198	81	50	2.1%	13.00 [-12.20, 38.20]
Kwiatkowski 2019	154	70	51	95	45	34	2.2%	59.00 [34.55, 83.45]
Lee 2013	197	74.5	51	197	86	35	1.4%	0.00 [-35.07, 35.07]
Liao 2021	219	77.1	101	195.5	80.1	101	2.5%	23.50 [1.82, 45.18]
Magistro 2013	230	45	40	203	48	40	2.7%	27.00 [6.61, 47.39]
Marchesi 2013	205.8	45.8	28	196.8	23	27	2.9%	9.00 [-10.05, 28.05]
Martinek 2018	132	37	195	140	36	195	4.7%	-8.00 [-15.25, -0.75]
Milone 2015	166.9	43.7	286	157.5	67.2	226	4.3%	9.40 [-0.72, 19.52]
Roscio 2012	176.5	40	42	186.3	40.1	30	2.9%	-9.80 [-28.57, 8.97]
Scatizzi 2010	150	16.3	40	150	35	40	4.0%	0.00 [-11.96, 11.96]
Shapiro 2016	155	37	91	142	35	100	4.3%	13.00 [2.76, 23.24]
Su 2019	115.8	30.8	36	119.3	29.3	50	3.8%	-3.50 [-16.43, 9.43]
Trastulli 2015	204.3	51.9	40	208	61	94	2.7%	-3.70 [-23.97, 16.57]
Trépanier 2020	164.6	40	71	144.4	48.1	155	4.0%	20.20 [8.20, 32.20]
Tu 2016	24.7	3.3	56	27.4	5.1	29	5.3%	-2.70 [-4.75, -0.65]
Vergis 2015	170	29	21	181	26.8	29	3.4%	-11.00 [-26.78, 4.78]
Vignali 2016	158.5	30.8	30	135	27	30	3.5%	23.50 [8.84, 38.16]
Vignali 2018	185.1	57.9	64	173	33.6	64	3.3%	12.10 [-4.30, 28.50]
Zhang 2021	163.7	41.9	120	163.2	38.5	180	4.4%	0.50 [-8.87, 9.87]
Total (95% CI)			**2005**			**2439**	**100.0%**	**4.59 [-0.16, 9.34]**

Heterogeneity: Tau² = 110.37; Chi² = 165.54, df = 28 (P < 0.00001); I² = 83%

Test for overall effect: Z = 1.89 (P = 0.06)



Operative time

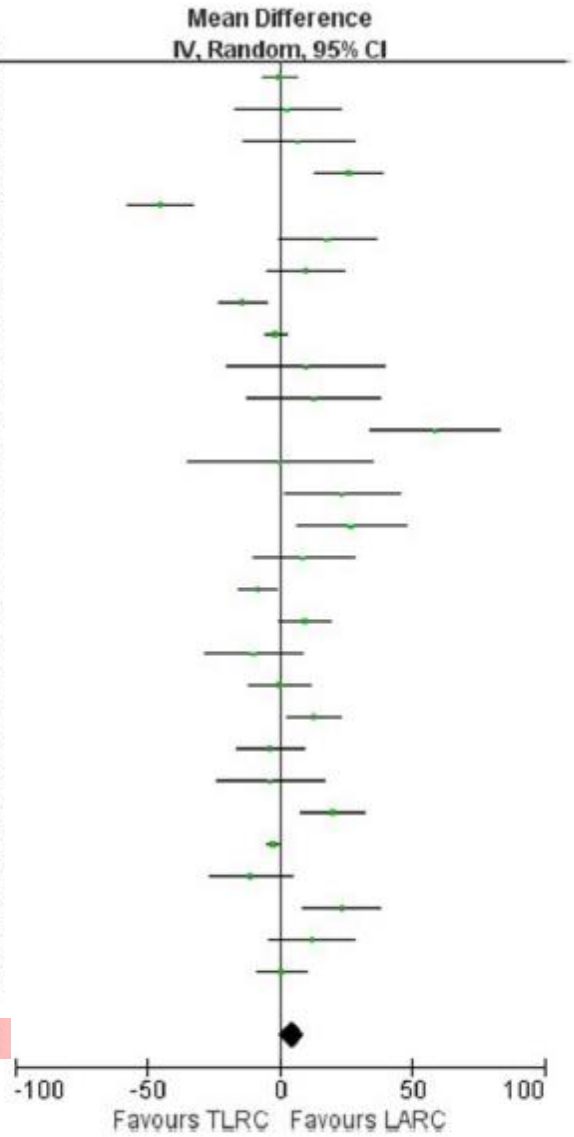
Total Laparoscopic right colectomy = Intracorporeal Anastomosis

Laparoscopic Assisted right colectomy = Extracorporeal Anastomosis

Study or Subgroup	TLRC Mean	TLRC SD	TLRC Total	LARC Mean	LARC SD	LARC Total	Weight	Mean Difference IV, Random, 95% CI
Allaix 2019	130	22.5	70	130	17.5	70	4.8%	0.00 [-6.68, 6.68]
Anania 2012	186.8	43.7	39	184.1	42.5	33	2.7%	2.70 [-17.26, 22.66]
Biondi 2017	195.7	51.5	54	188.8	59.2	54	2.6%	6.90 [-14.03, 27.83]
Bollo 2019	149	30	69	123	45	70	3.9%	26.00 [13.30, 38.70]
Bou Saleh 2020	150	45	150	195	105.8	447	3.9%	-45.00 [-57.17, -32.83]
Chaves 2011	226	36.3	35	208	36.5	25	2.9%	18.00 [-0.69, 36.69]
Erguner 2012	100	20	15	90	21.2	15	3.5%	10.00 [-4.75, 24.75]
Fabozzi 2010	78	25	50	92	22	50	4.4%	-14.00 [-23.23, -4.77]
Hanna 2016	183	12.8	86	184.5	15.7	109	5.1%	-1.50 [-5.50, 2.50]
Hellan 2009	190	60	23	180	65	57	1.7%	10.00 [-19.77, 39.77]
Ishizaki 2020	211	41.7	51	198	81	50	2.1%	13.00 [-12.20, 38.20]
Kwiatkowski 2019	154	70	51	95	45	34	2.2%	59.00 [34.55, 83.45]
Lee 2013	197	74.5	51	197	86	35	1.4%	0.00 [-35.07, 35.07]
Liao 2021	219	77.1	101	195.5	80.1	101	2.5%	23.50 [1.82, 45.18]
Magistro 2013	230	45	40	203	48	40	2.7%	27.00 [6.61, 47.39]
Marchesi 2013	205.8	45.8	28	196.8	23	27	2.9%	9.00 [-10.05, 28.05]
Martinek 2018	132	37	195	140	36	195	4.7%	-8.00 [-15.25, -0.75]
Milone 2015	166.9	43.7	286	157.5	67.2	226	4.3%	9.40 [-0.72, 19.52]
Roscio 2012	176.5	40	42	186.3	40.1	30	2.9%	-9.80 [-28.57, 8.97]
Scatizzi 2010	150	16.3	40	150	35	40	4.0%	0.00 [-11.96, 11.96]
Shapiro 2016	155	37	91	142	35	100	4.3%	13.00 [2.76, 23.24]
Su 2019	115.8	30.8	36	119.3	29.3	50	3.8%	-3.50 [-16.43, 9.43]
Trastulli 2015	204.3	51.9	40	208	61	94	2.7%	-3.70 [-23.97, 16.57]
Trépanier 2020	164.6	40	71	144.4	48.1	155	4.0%	20.20 [8.20, 32.20]
Tu 2016	24.7	3.3	56	27.4	5.1	29	5.3%	-2.70 [-4.75, -0.65]
Vergis 2015	170	29	21	181	26.8	29	3.4%	-11.00 [-26.78, 4.78]
Vignali 2016	158.5	30.8	30	135	27	30	3.5%	23.50 [8.84, 38.16]
Vignali 2018	185.1	57.9	64	173	33.6	64	3.3%	12.10 [-4.30, 28.50]
Zhang 2021	163.7	41.9	120	163.2	38.5	180	4.4%	0.50 [-8.87, 9.87]
Total (95% CI)			**2005**			**2439**	**100.0%**	**4.59 [-0.16, 9.34]**

Heterogeneity: Tau² = 110.37; Chi² = 165.54, df = 28 (P < 0.00001); I² = 83%

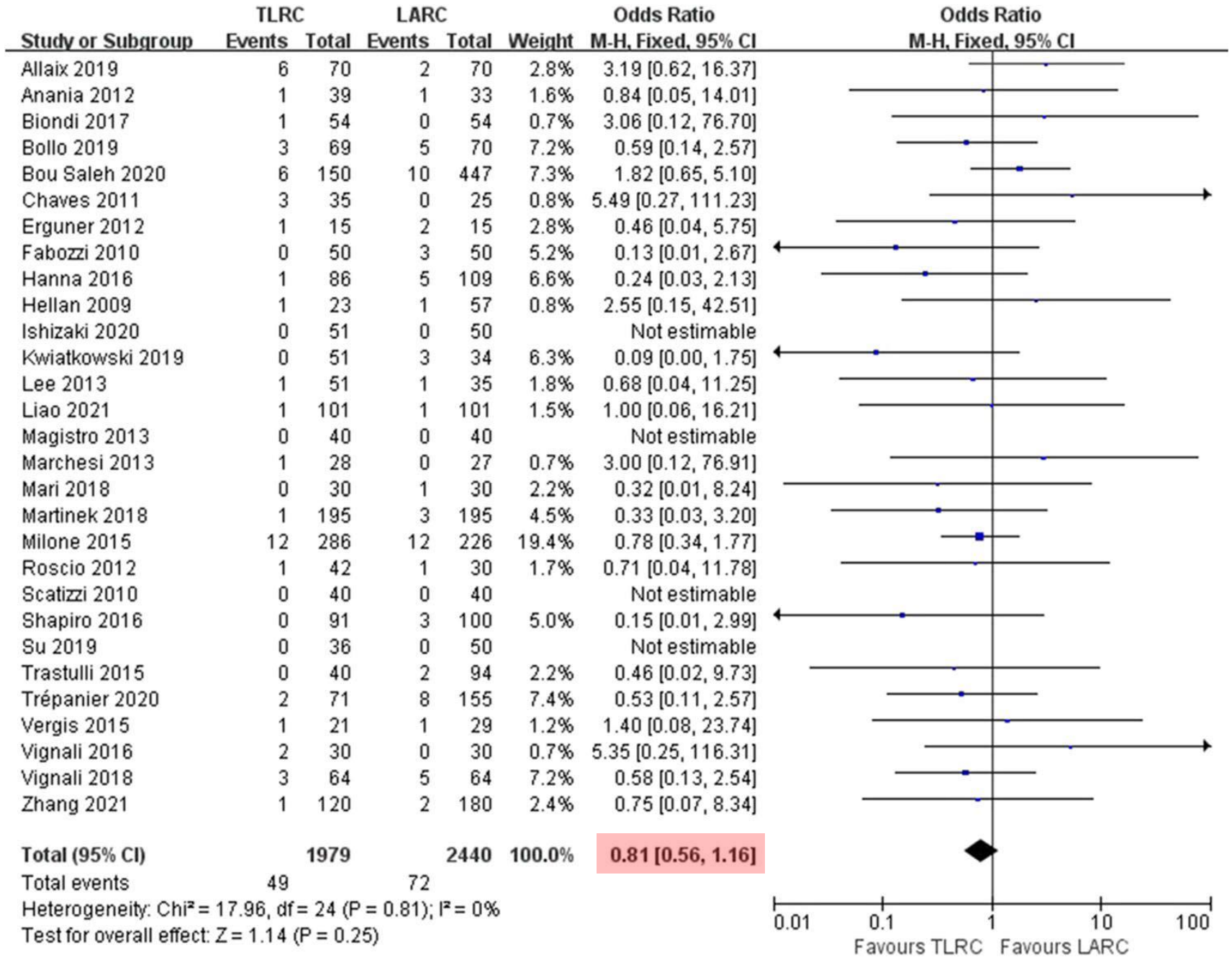
Test for overall effect: Z = 1.89 (P = 0.06)



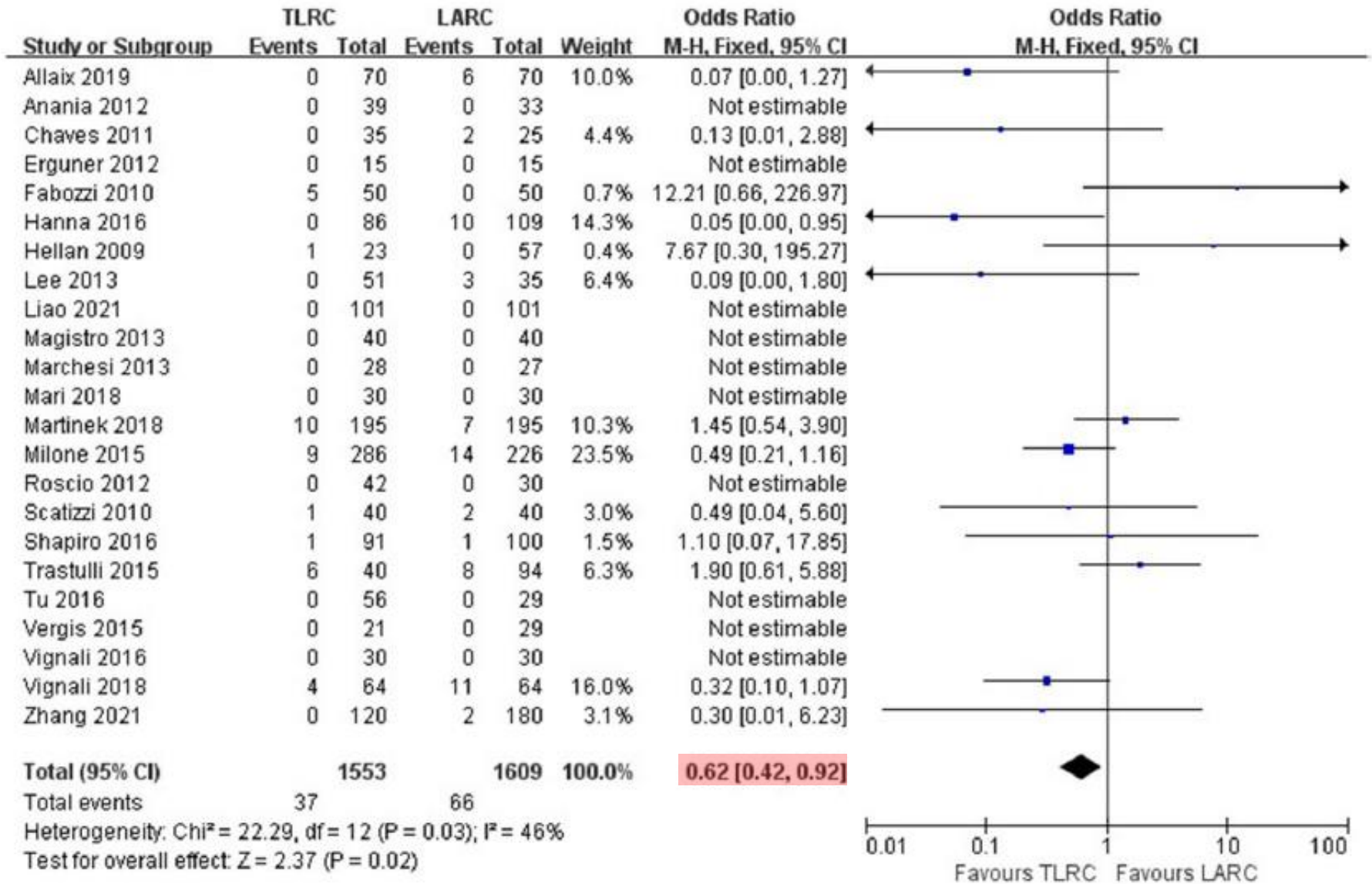
~~Operative time~~

Total Laparoscopic right colectomy = Intracorporeal Anastomosis

Laparoscopic Assisted right colectomy = Extracorporeal Anastomosis



~~Anastomotic leakage~~

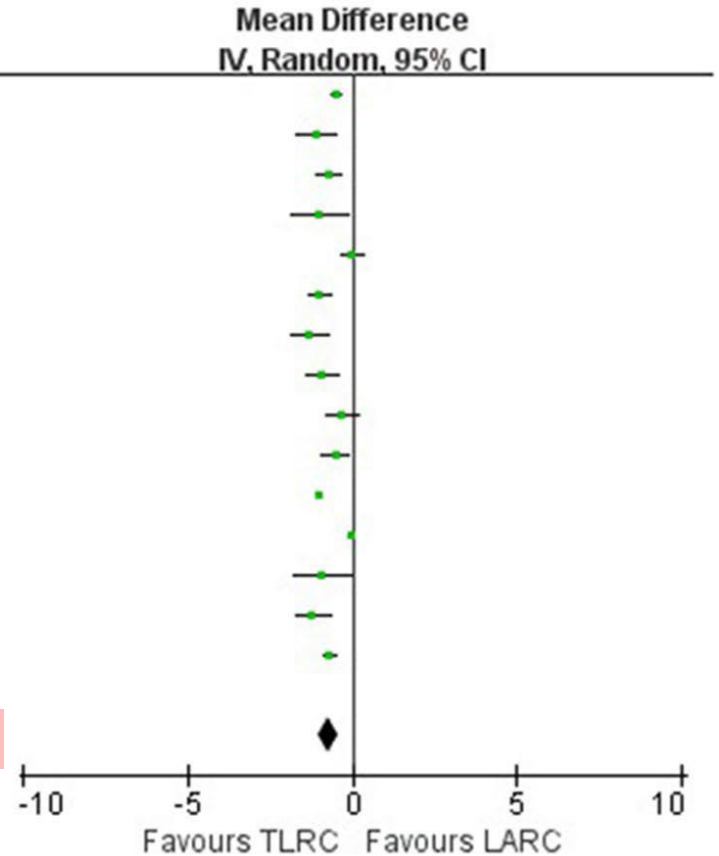

TLRC
LARC
Odds Ratio
Odds Ratio
Study or Subgroup Events Total Events Total Weight M-H, Fixed, 95% CI
M-H, Fixed, 95% CI
Allaix 2019 0 70 6 70 10.0% 0.07 [0.00, 1.27]
Anania 2012 0 39 0 33 Not estimable
Chaves 2011 0 35 2 25 4.4% 0.13 [0.01, 2.88]
Erguner 2012 0 15 0 15 Not estimable
Fabozzi 2010 5 50 0 50 0.7% 12.21 [0.66, 226.97]
Hanna 2016 0 86 10 109 14.3% 0.05 [0.00, 0.95]
Hellan 2009 1 23 0 57 0.4% 7.67 [0.30, 195.27]
Lee 2013 0 51 3 35 6.4% 0.09 [0.00, 1.80]
Liao 2021 0 101 0 101 Not estimable
Magistro 2013 0 40 0 40 Not estimable
Marchesi 2013 0 28 0 27 Not estimable
Mari 2018 0 30 0 30 Not estimable
Martinek 2018 10 195 7 195 10.3% 1.45 [0.54, 3.90]
Milone 2015 9 286 14 226 23.5% 0.49 [0.21, 1.16]
Roscio 2012 0 42 0 30 Not estimable
Scatizzi 2010 1 40 2 40 3.0% 0.49 [0.04, 5.60]
Shapiro 2016 1 91 1 100 1.5% 1.10 [0.07, 17.85]
Trastulli 2015 6 40 8 94 6.3% 1.90 [0.61, 5.88]
Tu 2016 0 56 0 29 Not estimable
Vergis 2015 0 21 0 29 Not estimable
Vignali 2016 0 30 0 30 Not estimable
Vignali 2018 4 64 11 64 16.0% 0.32 [0.10, 1.07]
Zhang 2021 0 120 2 180 3.1% 0.30 [0.01, 6.23]
Total (95% CI) 1553 1609 100.0% 0.62 [0.42, 0.92]
Total events 37 66
Heterogeneity: Chi² = 22.29, df = 12 (P = 0.03); I² = 46%
Test for overall effect: Z = 2.37 (P = 0.02)
0.01
0.1
1
10
100
Favours TLRC
Favours LARC

Conversion

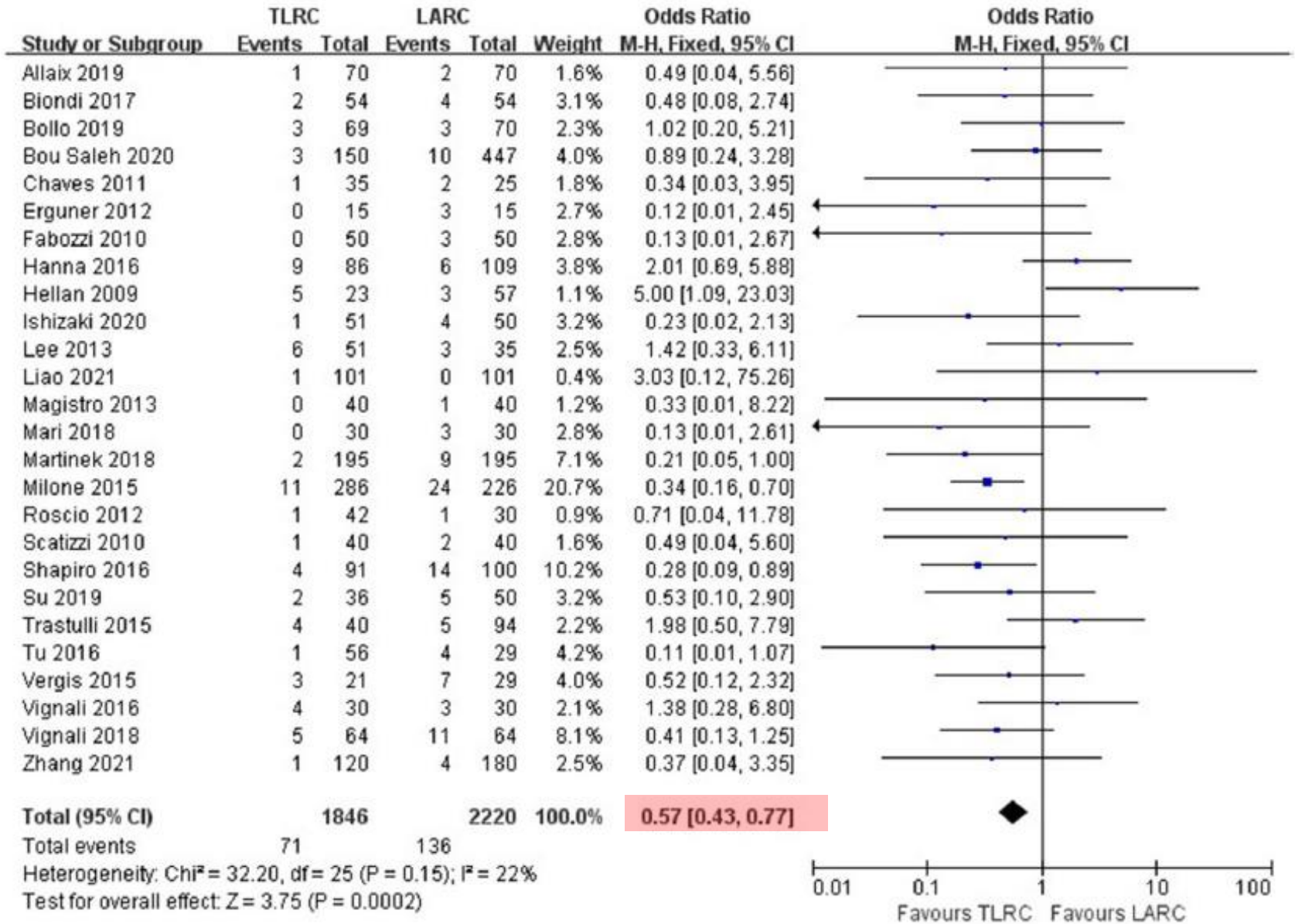
Study or Subgroup	TLRC Mean	TLRC SD	TLRC Total	LARC Mean	LARC SD	LARC Total	Weight	Mean Difference IV, Random, 95% CI
Allaix 2019	4	0.5	70	4.5	0.5	70	7.7%	-0.50 [-0.67, -0.33]
Anania 2012	3.8	1.5	39	4.9	1.2	33	5.9%	-1.10 [-1.72, -0.48]
Biondi 2017	3.6	0.9	54	4.3	1.1	54	7.0%	-0.70 [-1.08, -0.32]
Bollo 2019	2.3	1.5	69	3.3	3.5	70	4.7%	-1.00 [-1.89, -0.11]
Bou Saleh 2020	3	1.8	150	3	2.1	447	7.1%	0.00 [-0.35, 0.35]
Erguner 2012	3	0.5	15	4	0.5	15	7.1%	-1.00 [-1.36, -0.64]
Fabozzi 2010	3.1	1.2	50	4.4	1.6	50	6.2%	-1.30 [-1.85, -0.75]
Liao 2021	3.5	1.5	101	4.4	2	101	6.5%	-0.90 [-1.39, -0.41]
Magistro 2013	3.5	1.1	40	3.8	1.1	40	6.6%	-0.30 [-0.78, 0.18]
Roscio 2012	2.9	0.9	42	3.4	0.9	30	6.8%	-0.50 [-0.92, -0.08]
Scatizzi 2010	0	0.2	40	1	0.2	40	7.8%	-1.00 [-1.09, -0.91]
Trépanier 2020	2	0.2	71	2	0.2	155	7.8%	0.00 [-0.06, 0.06]
Vignali 2016	3	1.7	30	3.9	1.8	30	4.8%	-0.90 [-1.79, -0.01]
Vignali 2018	2.8	1.7	64	4	1.3	64	6.4%	-1.20 [-1.72, -0.68]
Zhang 2021	4	0.7	120	4.7	1.1	180	7.6%	-0.70 [-0.90, -0.50]
Total (95% CI)			**955**			**1379**	**100.0%**	**-0.71 [-1.02, -0.41]**

Heterogeneity: Tau² = 0.32; Chi² = 430.41, df = 14 (P < 0.00001); I² = 97%

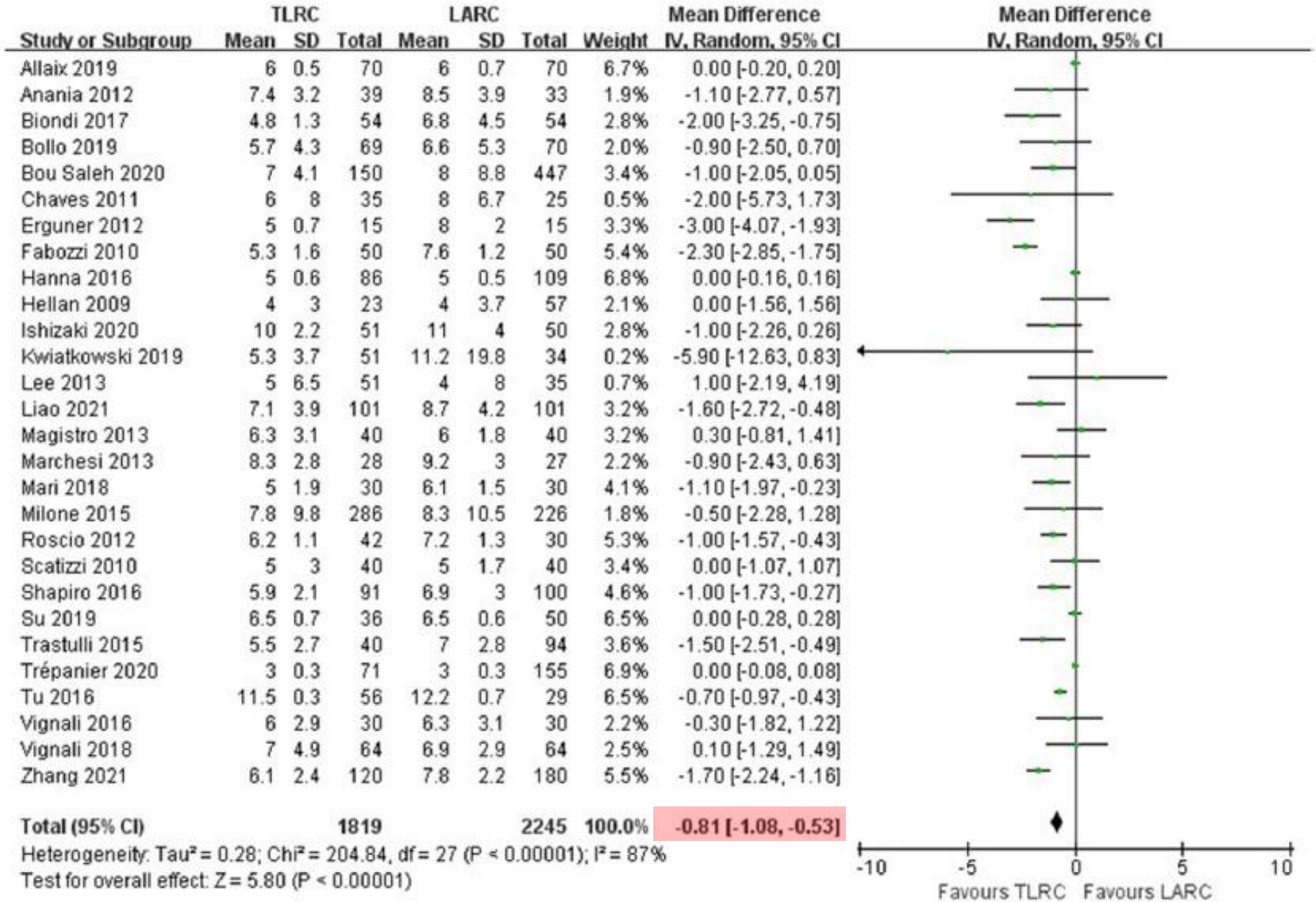
Test for overall effect: Z = 4.54 (P < 0.00001)



Time to first defecation



Wound infection


TLRC
LARC
Mean Difference
Mean Difference
Study or Subgroup Mean SD Total Mean SD Total Weight IV, Random, 95% CI
IV, Random, 95% CI
Allaix 2019 6 0.5 70 6 0.7 70 6.7% 0.00 [-0.20, 0.20]
Anania 2012 7.4 3.2 39 8.5 3.9 33 1.9% -1.10 [-2.77, 0.57]
Biondi 2017 4.8 1.3 54 6.8 4.5 54 2.8% -2.00 [-3.25, -0.75]
Bollo 2019 5.7 4.3 69 6.6 5.3 70 2.0% -0.90 [-2.50, 0.70]
Bou Saleh 2020 7 4.1 150 8 8.8 447 3.4% -1.00 [-2.05, 0.05]
Chaves 2011 6 8 35 8 6.7 25 0.5% -2.00 [-5.73, 1.73]
Erguner 2012 5 0.7 15 8 2 15 3.3% -3.00 [-4.07, -1.93]
Fabozzi 2010 5.3 1.6 50 7.6 1.2 50 5.4% -2.30 [-2.85, -1.75]
Hanna 2016 5 0.6 86 5 0.5 109 6.8% 0.00 [-0.16, 0.16]
Hellan 2009 4 3 23 4 3.7 57 2.1% 0.00 [-1.56, 1.56]
Ishizaki 2020 10 2.2 51 11 4 50 2.8% -1.00 [-2.26, 0.26]
Kwiatkowski 2019 5.3 3.7 51 11.2 19.8 34 0.2% -5.90 [-12.63, 0.83]
Lee 2013 5 6.5 51 4 8 35 0.7% 1.00 [-2.19, 4.19]
Liao 2021 7.1 3.9 101 8.7 4.2 101 3.2% -1.60 [-2.72, -0.48]
Magistro 2013 6.3 3.1 40 6 1.8 40 3.2% 0.30 [-0.81, 1.41]
Marchesi 2013 8.3 2.8 28 9.2 3 27 2.2% -0.90 [-2.43, 0.63]
Mari 2018 5 1.9 30 6.1 1.5 30 4.1% -1.10 [-1.97, -0.23]
Milone 2015 7.8 9.8 286 8.3 10.5 226 1.8% -0.50 [-2.28, 1.28]
Roscio 2012 6.2 1.1 42 7.2 1.3 30 5.3% -1.00 [-1.57, -0.43]
Scatizzi 2010 5 3 40 5 1.7 40 3.4% 0.00 [-1.07, 1.07]
Shapiro 2016 5.9 2.1 91 6.9 3 100 4.6% -1.00 [-1.73, -0.27]
Su 2019 6.5 0.7 36 6.5 0.6 50 6.5% 0.00 [-0.28, 0.28]
Trastulli 2015 5.5 2.7 40 7 2.8 94 3.6% -1.50 [-2.51, -0.49]
Trépanier 2020 3 0.3 71 3 0.3 155 6.9% 0.00 [-0.08, 0.08]
Tu 2016 11.5 0.3 56 12.2 0.7 29 6.5% -0.70 [-0.97, -0.43]
Vignali 2016 6 2.9 30 6.3 3.1 30 2.2% -0.30 [-1.82, 1.22]
Vignali 2018 7 4.9 64 6.9 2.9 64 2.5% 0.10 [-1.29, 1.49]
Zhang 2021 6.1 2.4 120 7.8 2.2 180 5.5% -1.70 [-2.24, -1.16]
Total (95% CI) 1819 2245 100.0% -0.81 [-1.08, -0.53]
Heterogeneity: Tau² = 0.28; Chi² = 204.84, df = 27 (P < 0.00001); I² = 87%
Test for overall effect: Z = 5.80 (P < 0.00001)
-10
-5
0
5
10
Favours TLRC
Favours LARC

LOS

ESA-Randomized Controlled Trial

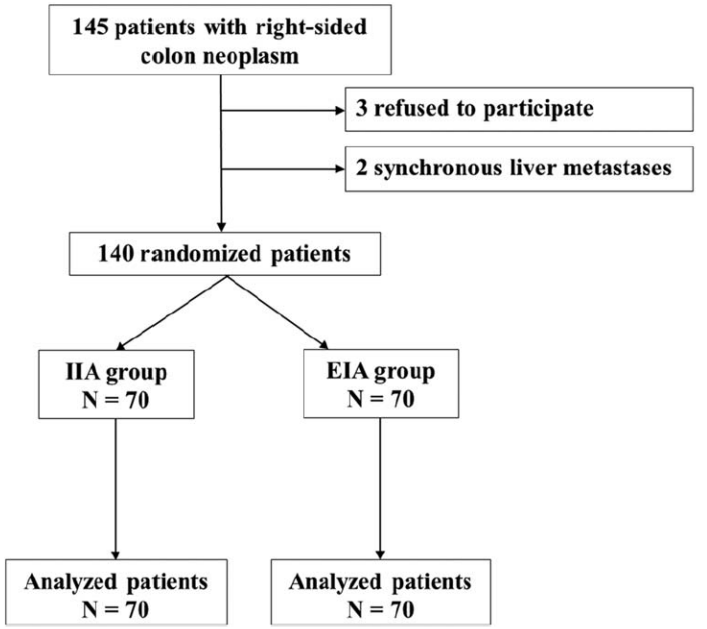
Annals of Surgery • Volume 270, Number 5, November 2019

Intracorporeal or Extracorporeal Ileocolic Anastomosis After Laparoscopic Right Colectomy

A Double-blinded Randomized Controlled Trial

Marco E. Allaix, MD, PhD,✉ Maurizio Degiuli, MD,* Marco A. Bonino, MD,* Alberto Arezzo, MD,* Massimiliano Mistrangelo, MD,* Roberto Passera, PharmD, PhD,† and Mario Morino, MD*✉*

- **RCT, n=140, double-blinded**
- **Laparoscopic right colectomies**
- ***Intracorporeal anastomosis* : always stapled**
- ***Extracorporeal* : stapled or hand-sewn**



ESA-RANDOMIZED CONTROLLED TRIAL

Annals of Surgery • Volume 270, Number 5, November 2019

Intracorporeal or Extracorporeal Ileocolic Anastomosis After Laparoscopic Right Colectomy

A Double-blinded Randomized Controlled Trial

Marco E. Allaix, MD, PhD,✉ *Maurizio Degiuli, MD,* Marco A. Bonino, MD,* Alberto Arezzo, MD,* Massimiliano Mistrangelo, MD,* Roberto Passera, PharmD, PhD,† and Mario Morino, MD*✉*

- *Only significant differences :*
  - **Quicker recovery of bowel function** after intracorporeal anastomosis
    - 2 days vs 3 days for gas, p=0.003
    - 4 vs 4.5 days for stool, p=0.032

- *But no differences for*
  - **Operative time** : 130 vs 130 min, p=0.770
  - **LOS** : 6 vs 6 days, p=0.839
  - **30-day mordidity** rate : 17.1% vs 15.7%, p=0.823

Randomized clinical trial

BJS 2020; **107**: 364–372

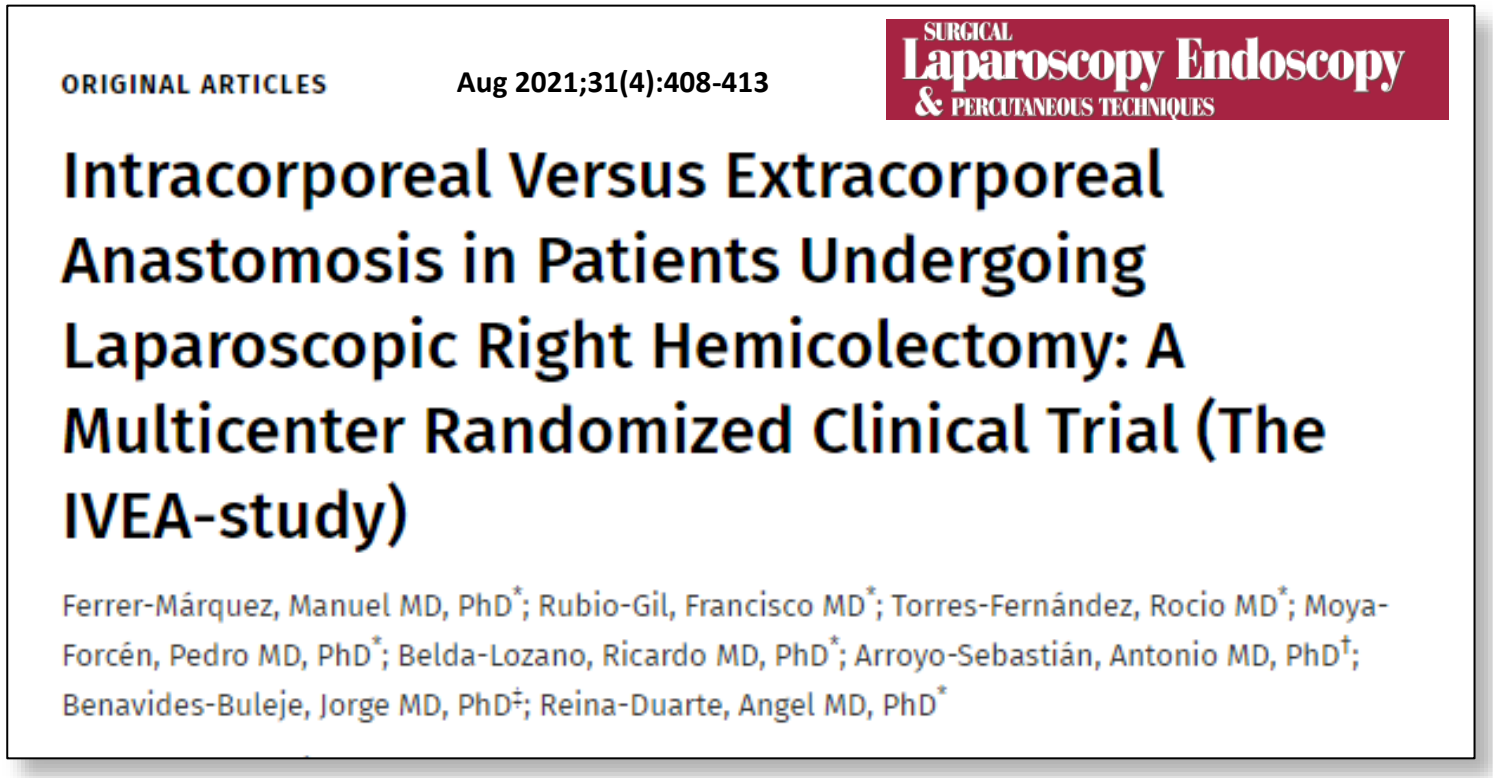
Randomized clinical trial of intracorporeal *versus* extracorporeal anastomosis in laparoscopic right colectomy (IEA trial)

J. Bollo[1], V. Turrado[4], A. Rabal[1], E. Carrillo[3], I. Gich[2], M. C. Martinez[1], P. Hernandez[1] and E Targarona[1]

- RCT, n=140
- lap, stapled anastomosis in each arm

Op time 149 vs 123 min, p<0.001

- Intra Anastomosis decreased
  - **Incision length**: 6.7 vs 8.7 cm, p<0.001
  - **First stool**: 2.3 vs 3.3 days, p=0.003
  - **Ileus rate**: 13% vs 30%, p=0.022
  - **Post-op pain** (AVS) p=0.035
  - **Complications rate** (Dindo)
    - grade I : 10% vs 27%, p=0.016
    - grade II : 19% vs 36%, p=0.037



ORIGINAL ARTICLES Aug 2021;31(4):408-413

SURGICAL Laparoscopy Endoscopy & PERCUTANEOUS TECHNIQUES

Intracorporeal Versus Extracorporeal Anastomosis in Patients Undergoing Laparoscopic Right Hemicolectomy: A Multicenter Randomized Clinical Trial (The IVEA-study)

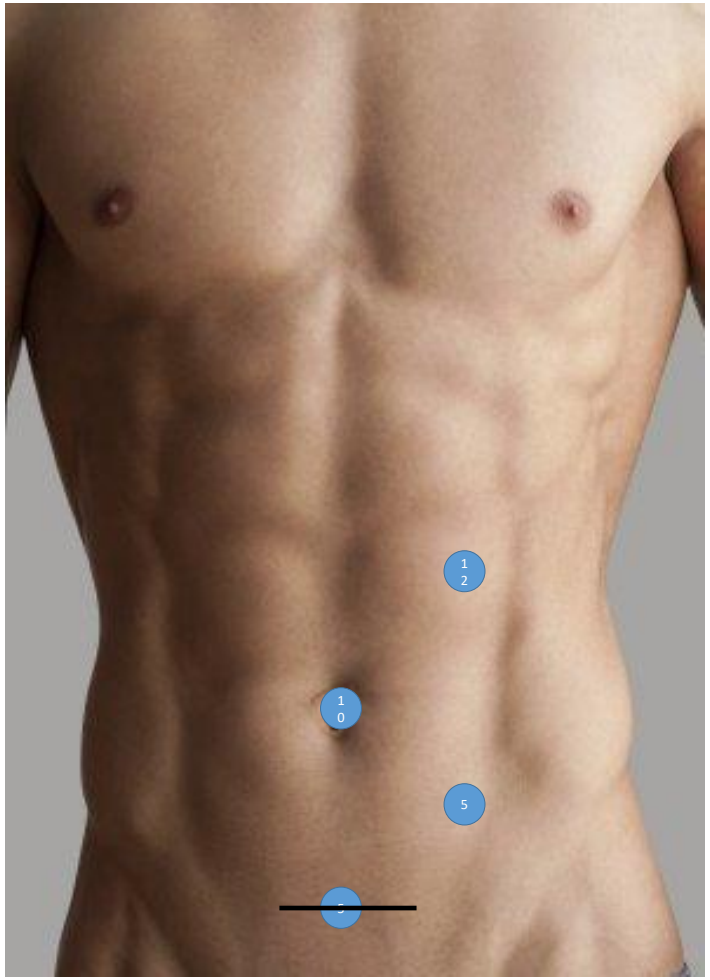
Ferrer-Márquez, Manuel MD, PhD*; Rubio-Gil, Francisco MD*; Torres-Fernández, Rocio MD*; Moya-Forcén, Pedro MD, PhD*; Belda-Lozano, Ricardo MD, PhD*; Arroyo-Sebastián, Antonio MD, PhD†; Benavides-Buleje, Jorge MD, PhD‡; Reina-Duarte, Angel MD, PhD*

- **Multicenter RCT; n=168 patients** (colon cancer)

- **Intracorporeal anastomosis decreased significantly**
  - Post-operative pain
  - Incision size
  - Surgical site infection : 3.65 % vs 16.67%, p=0.008

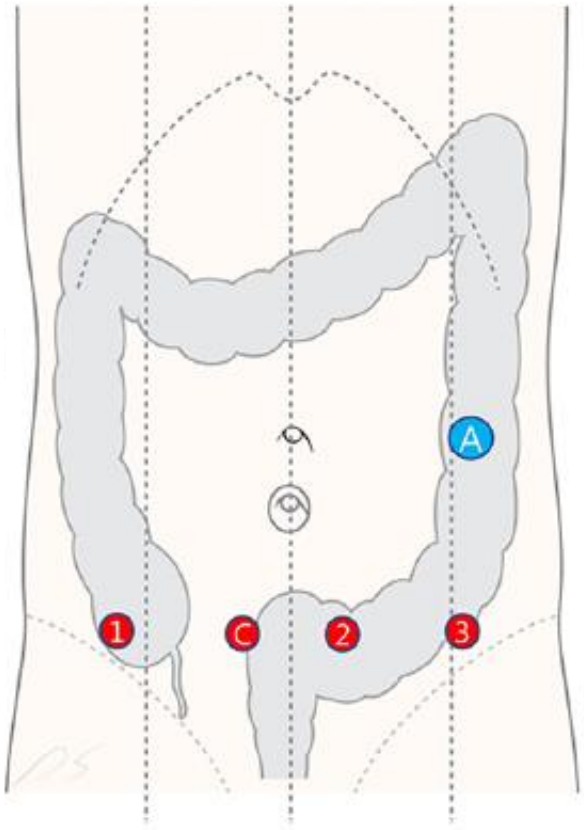
- **No difference between groups for**
  - LOS
  - Ileus
  - Anastomotic leakage

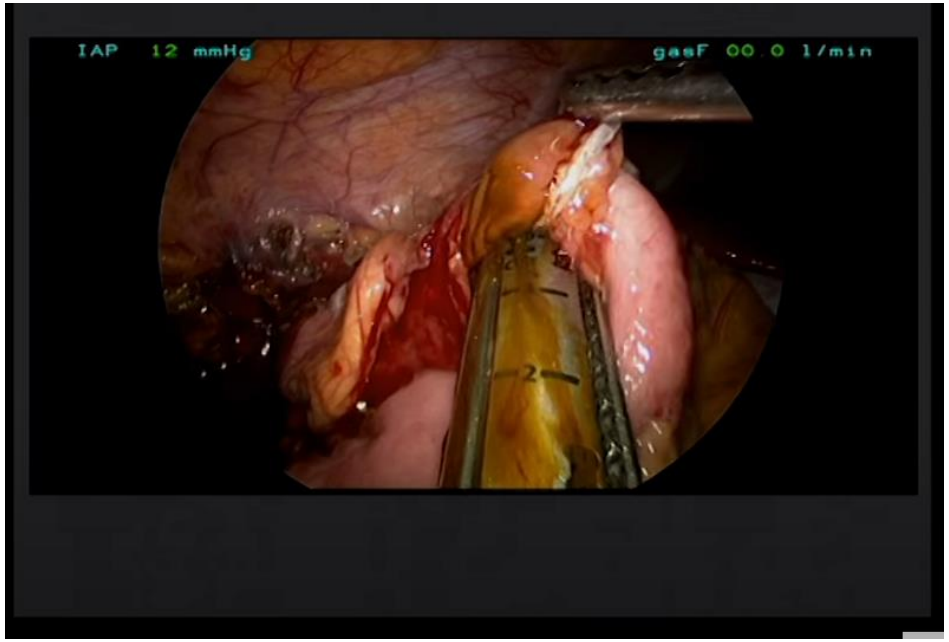
Other advantage of intracorporeal anastomosis = extraction site



- **Extraction /supra-pubic incisio**n
  - Cosmetic aspect +++
  - ↓ Risk of incisional hernia (vs midline incision)

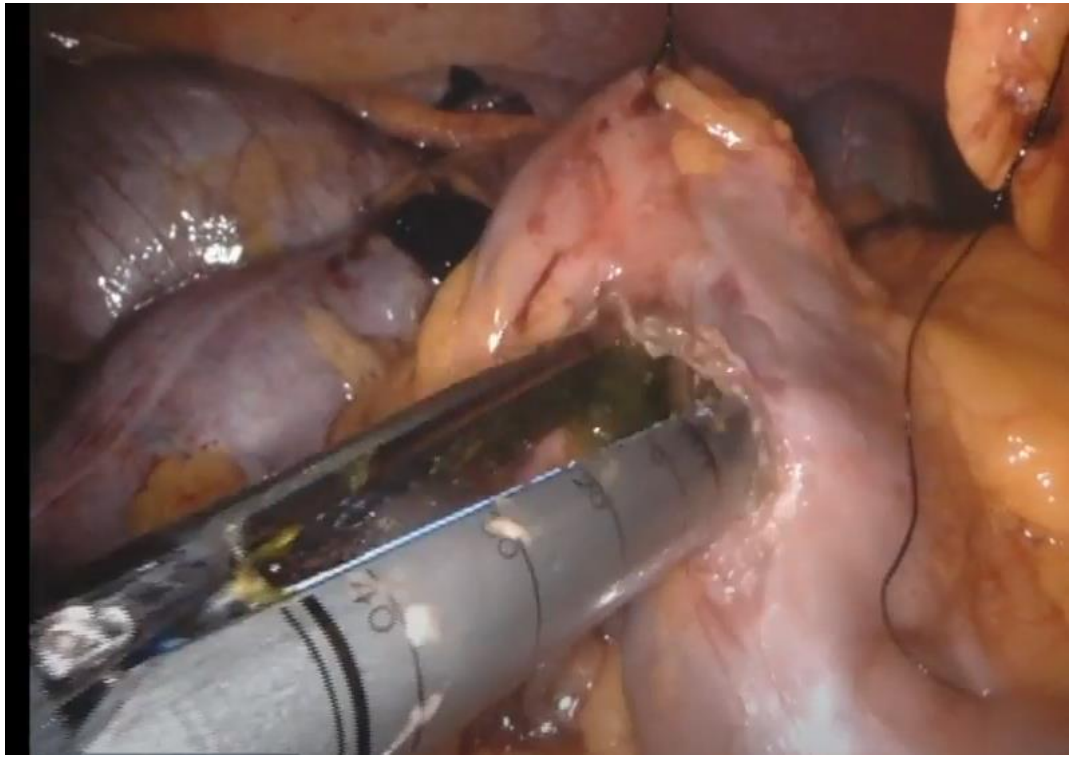
ROBOTIC APPROACH





QUESTION FOR STAPLED INTRA ANASTOMOSIS ?

Device removal without peritoneal contamination ?



Intracorporeal anastomoses in minimally invasive right colectomies are associated with fewer incisional hernias and shorter length of stay

Dis Colon Rectum. 2020 May ; 63(5): 685–692.

Maria Widmar, MD, MPH[1], Piyush Aggarwal, MD[1], Metin Keskin, MD[1], Paul Strombom, MD[1], Sujata Patil, PhD[2], J. Joshua Smith, MD, PhD[1], Garrett M. Nash, MD, MPH[1], Julio Garcia-Aguilar, MD, PhD[1]

- **Monocentric prospective study (one surgeon) all stapled robotic anastomosis (intra and extracorporeal)**
- n=164 patients

- Intra anastomosis
  - ↓**LOS** : 3 j vs 4j, p<0.01
  - ↓ **incisional hernia (1 year)** : 2% vs 12%, p=0.007

  - **Increased wound infection: 9% vs 1%, p=0.02**

Comparison of Intra-Abdominal Infection Risk Between Intracorporeal and Extracorporeal Anastomosis in Laparoscopic Right Hemicolectomy for Colon Cancer: A Single-Center Retrospective Study

Tetsuo Ishizaki, MD, Kenji Katsumata, MD, Masanobu Enomoto, MD, Junichi Mazaki, MD, Takahiro Wada, MD, Kenta Kasahara, MD, Yuichi Nagakawa, MD, Akihiko Tsuchida, MD Show less

First Published September 24, 2020 | Research Article | Find in PubMed | Check for updates

https://doi.org/10.1177/0003134820950291

The American Surgeon

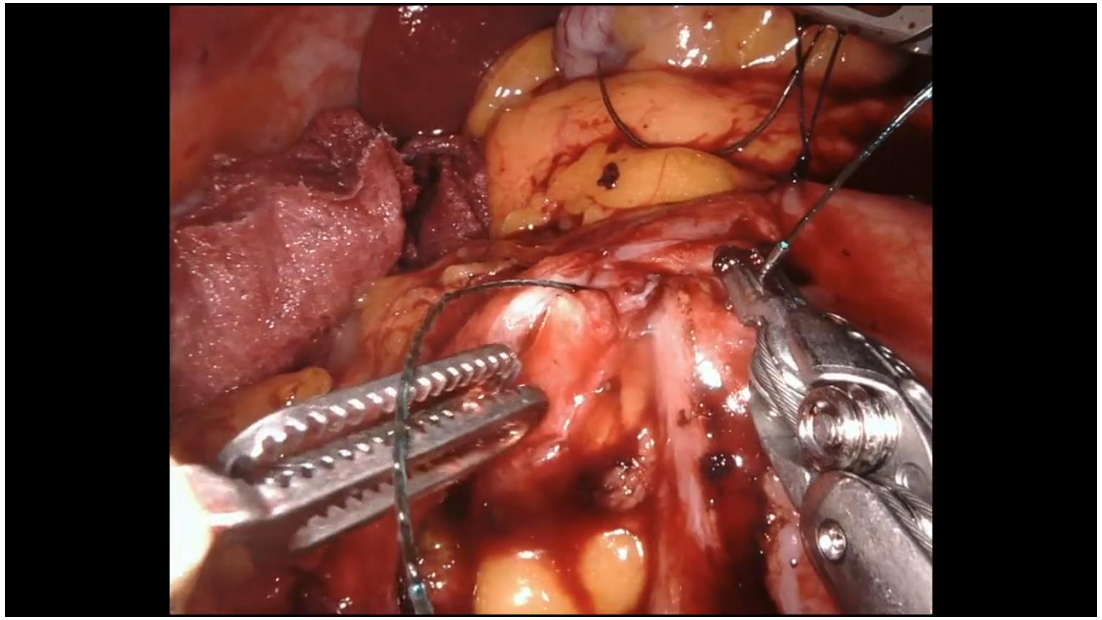
- **Monocentric prospective study, 101 consecutive patients (lap right colectomy)**
- 51 stapled intra anastomosis vs 50 extra anastomosis
- No difference for patients characteristics between groups
- **More surgical site infection occurred after intracorporeal anastomosis 7.8% vs 0%, p=0.04**

Received: 23 August 2021 | Revised: 31 January 2022 | Accepted: 1 February 2022
DOI: 10.1111/codi.16096

ORIGINAL ARTICLE

A multicentre, prospective cohort study of handsewn versus stapled intracorporeal anastomosis for robotic hemicolectomy

Deena Harji[1] | Philippe Rouanet[2] | Eddy Cotte[3] | Anne Dubois[4] | Eric Rullier[1] | Denis Pezet[4] | Guillaume Passot[3] | Christophe Taoum[2] | Quentin Denost[1]

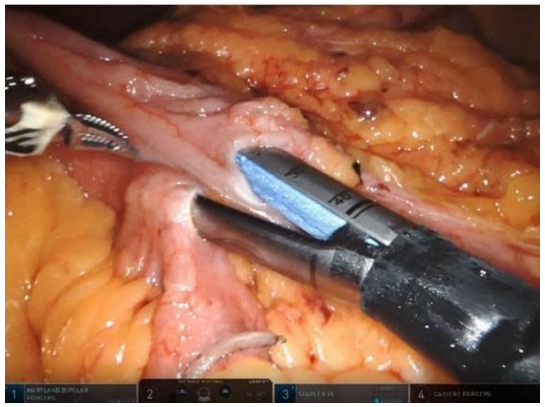


Hand-

- **No difference for**
  - Conversion rate 5.8% vs 5.4%, p=1.00
  - Anastomotic leak rate 3.8% vs 3.3%, p=1.00
  - Post-operative morbidity rate or severity

- **Only differences are (hand-sewn vs stapled)**
  - Longer operative time 219 vs 193 min, p=0.001
  - Reduced LOS : 5 vs 6 days, p=0.03

CONCLUSIONS



- **The literature is in favor of intracorporeal anastomosis** with:
  - Faster bowel recovery
  - Reduced LOS
  - Reduced conversion rate

- Even though intracorporeal anastomosis is **more challenging** to perform there is **no impact on :**
  - Post-operative morbidity
  - Anastomotic leak rate

- Intracorporeal anastomosis can be **safely** performed by **handsewn or stapled technique**.