Robotic colectomy
Experience and technique

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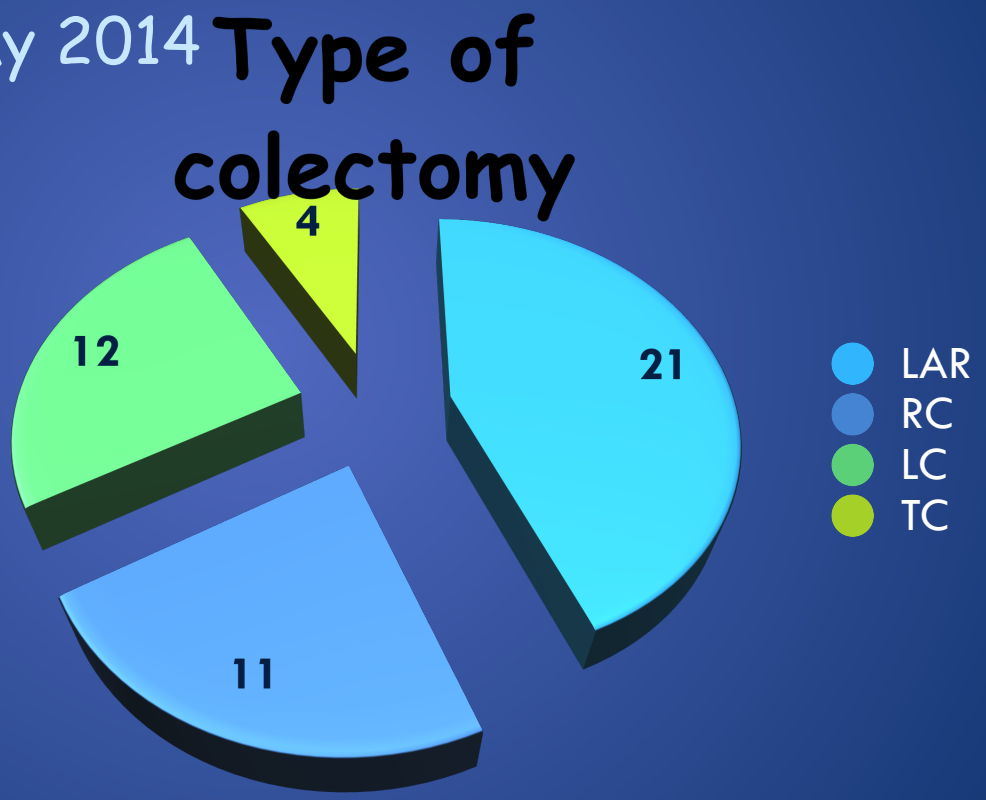
Same surgeons team
Same Da Vinci system

Da Vinci Standard

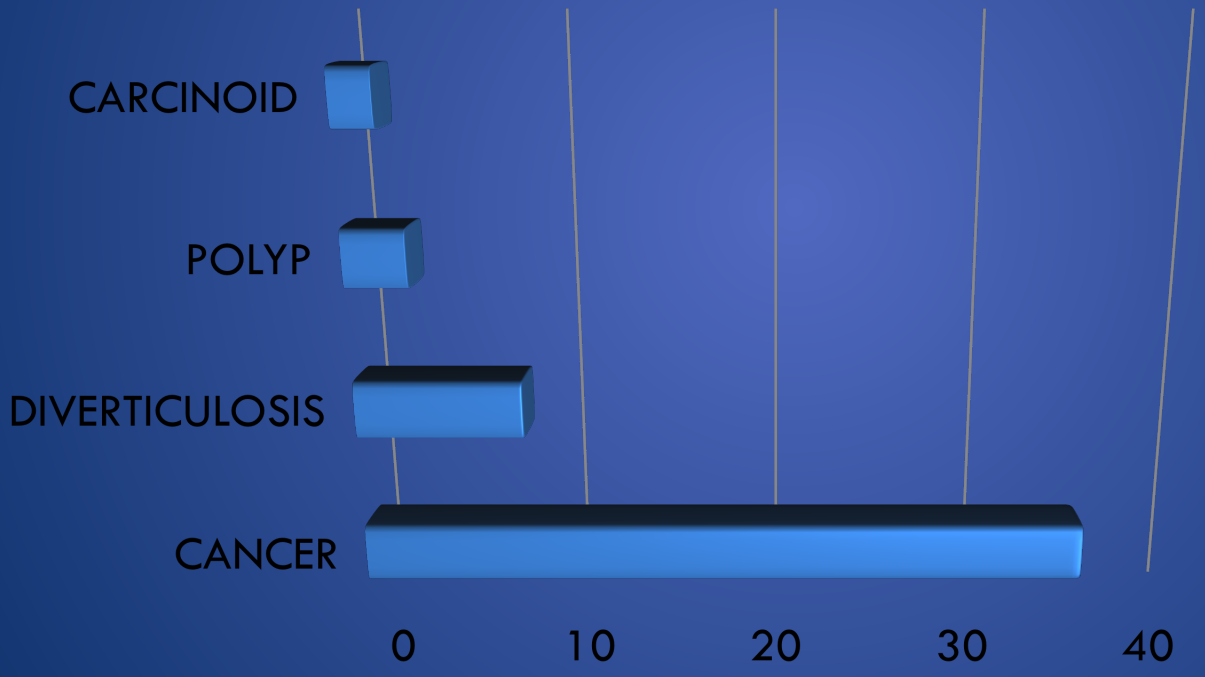
The robotic operation room

48 robotic colectomies

November 2011-May 2014



Indications



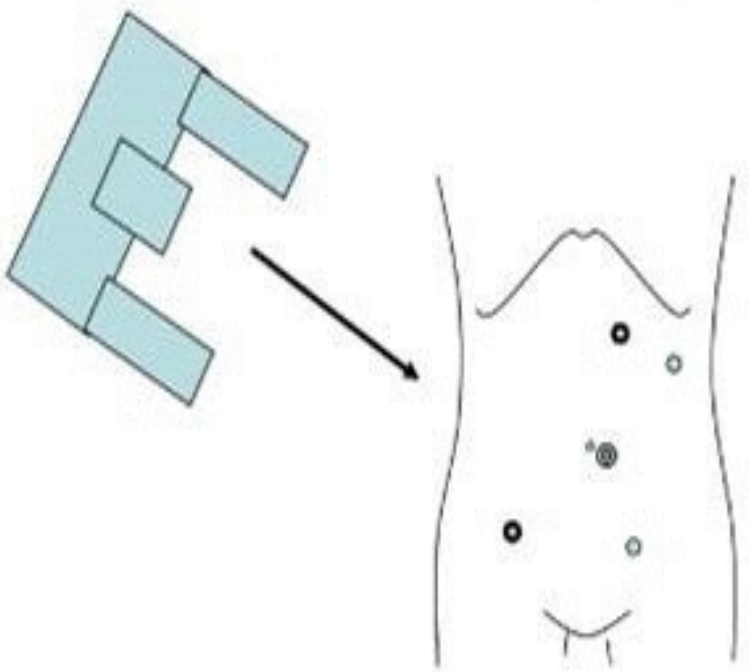
Patient selection

- 29 females , 19 males
- Average age 61 yrs (48-87)
- Elective operation
- Non metastatic disease

technique

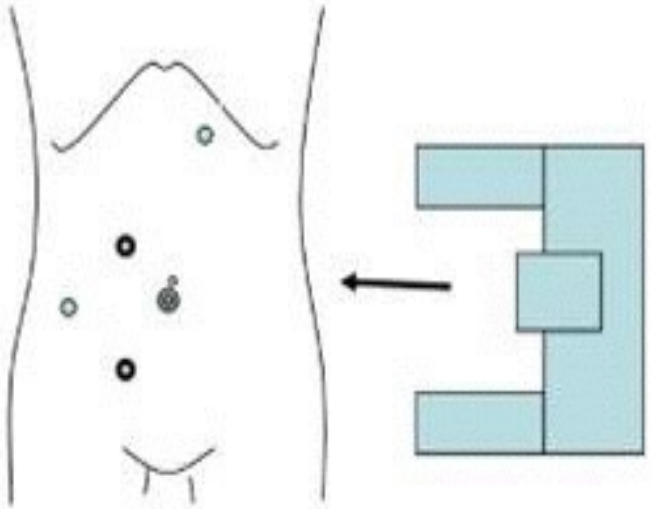
- Pneumoperitoneum introduction - 12mm trocar for the robotic camera
- Placement of the trocars under direct vision
- Docking of the 8mm trocars to the Da Vinci arms

port sites for RC



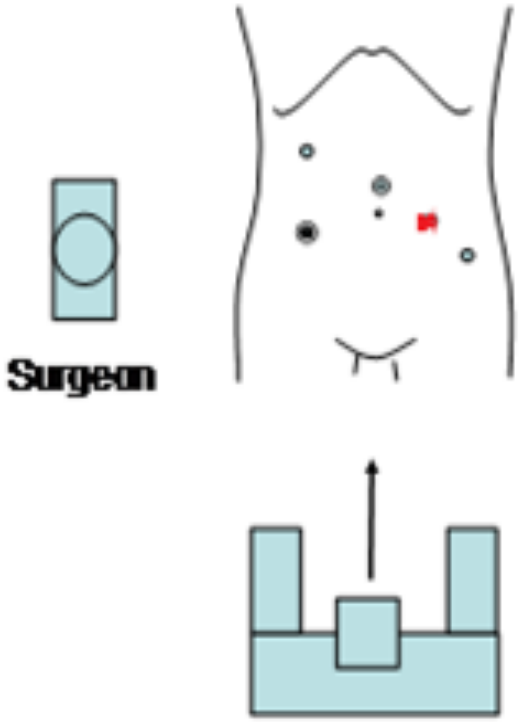
Robotic port Endoscope port Assistant port

port sites for LC



Robotic port Endoscope port Assistant port

port sites for LAR



Shared port Robotic port Endoscope port Assistant port

technique

- 3 active robotic arms
- Medial to lateral approach
- Anastomosis with circular stapler

instruments

Cautery hook

Fenestrated
Bipolar Forceps

DaVinci scissors

Needle Holder

AirSeal System

- Continious smoke evacuation
- Stable pneumoperitoneum
- Unimpeded Introduction of Clips, Needles, Sutures, and Mesh

Intraoperative data

Mean operation length 201,8 min (140-250)

Mean set up time 34,3 min (23-41)

Intraoperative data

Mean blood loss
120ml (30-190)

Conversion to open surgery rate
0%

Postoperative data

No blood tranfusion was needed

Full mobilization and bowel movement comeback on the day of the operation

Pos nutrition on 2nd day

Postoperative data

ICU needed in 1 case

Mean hospital stay 4 days (3-12)

30 days re-admission in 1 case

Oncologic adequacy

Histology revealed

- 17-28 LNs and
- R0 resection with clear margins
- 0% positive circumferencial margins in LAR

On follow up till now all patients are disease free

Compare to open LAR

	LNs (mean)			Distal margin (mean, cm)			Positive CRM (%)		
	ROB	OPEN	*p*	ROB	OPEN	*p*	ROB	OPEN	*p*
De Souza et al], 2011	15	16.8	0.26	na	na		0	3	0.25
Kim et al, 2012	20	19.6	0.7	2.7	1.9	0.001	1	1	1
Park et al, 2011	19.4	18.5	0.06	2.8	2.3	0.002	1	2	0.9

(LN: lymph nodes, CRM: circumferential resection margin, na: not assessed, ROB: robotic procedure, OPEN: laparoscopic procedure.)

Table 4. Oncologic results of open and robotic surgery for rectal cancer [52].

Complications

Anastomotic leak in one case

One case of acute postoperative respiratory failure

Video

Why robotic?

- It improves our ability for precise movements
- Minimizes tissue trauma
- Improves the perceived picture
- Reduces fatigue of the surgeon

How do you put a value on these improvements?

Dr. Talamini , Professor and Chairman of the Department of Surgery at the University of California, San Diego

Thank you for the attention