



## La nuova attività di chirurgia ginecologica endoscopica a SMN

Dr. Alberto Mattei



### XI EDIZIONE Giornate Mediche di Santa Maria Nuova 2019



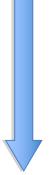




### LAPAROTOMY



### LAPAROSCOPY





3D SURGERY







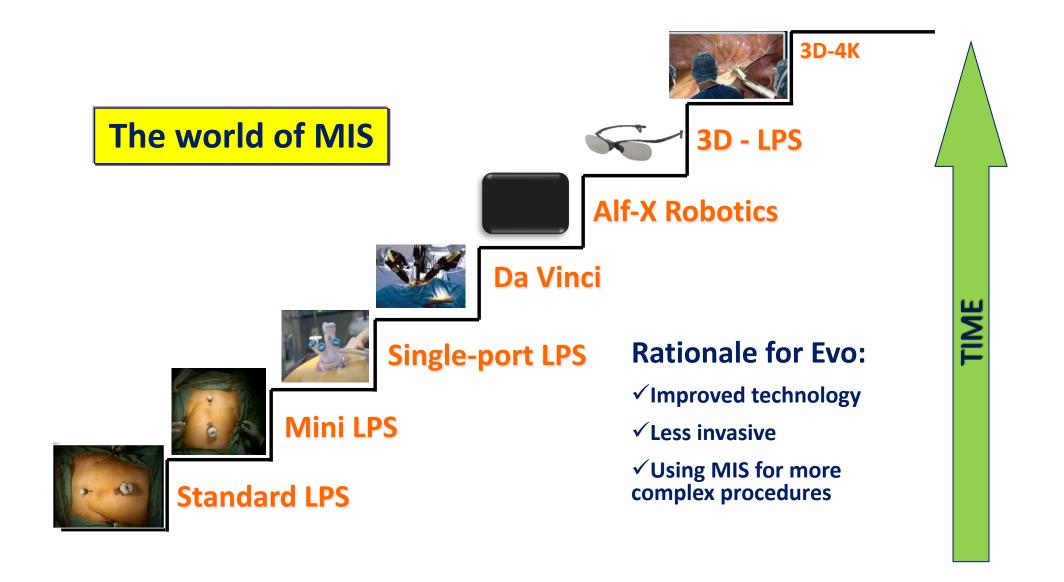


## **PROGRESS IN SURGERY**



## MINIMALLY INVASIVE SURGERY IN GYO

Single approach for multiple techniques



### Accepted Manuscript

Title: LAPAROSCOPIC, MINILAPAROSCOPIC, SINGLE-PORT AND PERCUTANEOUS HYSTERECTOMY: COMPARISON OF PERIOPERATIVE OUTCOMES OF MINIMALLY INVASIVE APPROACHES IN GYNECOLOGIC SURGERY



MIS in GYNECOLOGIC SURGERY

Authors: C. Rossitto, S. Cianci, S. Alletti Gueli, E. Perrone, S. Pizzacalla, G. Scambia

CONCLUSIONS: Data show that the effort to minimize the impact of surgical invasiveness can be feasible and could improve the advantages, not only in terms of aesthetic outcomes, even if the differences among the endoscopic approaches have not a relevant clinical impact. The technology innovations like PSS maintain the same triangulation between instruments as standard LPS with an evident decrease of the invasiveness thanks to reduced instruments size, even if the lack of suitability of bipolar energy, that require a multifunction instrument, remain a limit of these instruments.

FIGURE 1: Standard laparoscopy

FIGURE 2: single site laparoscopy

FIGURE 3: mini-laparoscopy

Figr-2

FIGURE 4: percutaneous surgical system

Title: LAPAROSCOPIC, MINILAPAROSCOPIC, SINGLE-PORT AND PERCUTANEOUS

HYSTERECTOMY: COMPARISON OF PERIOPERATIVE OUTCOMES OF MINIMALLY INVASIVE APPROACHES IN GYNECOLOGIC SURGERY

Authors: C. Rossitto, S. Cianci, S. Alletti Gueli, E. Perrone, S. Pizzacalla, G. Scambia









## ROBOTIC SURGERY in GYNECOLOGIC CANCER

### Accepted Manuscript

Robot-assisted surgery in Gynecologic cancers

V. Zanagnolo, MD, A. Garbi, MD, M.T. Achilarre, MD, L. Minig, MD PHD



learning curve for robotic-assisted surgery. However robotic-assisted surgery appears to be more expensive than laparotomy and traditional laparoscopy. In conclusion, robotic-assisted surgery appears to facilitate the surgical approach for complex operations to treat women with gynecological cancers. Although randomized controlled trials are lacking to further elucidate the equivalence of robot-assisted surgery to conventional methods in terms of oncologic outcome and patients' quality of life, the technology appears to be safe and effective, and could offer minimally invasive approach to a much larger group of patients.

## **ELDERLY and VERY ELDERLY**

Title: Robotic Surgery in Elderly and Very Elderly Gynecologic Cancer Patients

Author: Valerio Gallotta, Carmine Conte, Marco D'Indinosante, Alex Federico, Antonella Biscione, Giuseppe Vizzielli, Carolina Bottoni, Maria Vittoria Carbone, Francesco Legge, Stefano Uccella, Pierpaolo Ciocchetti, Andrea Russo, Lorenzo Polidori, Giovanni Scambia, Gabriella Ferrandina

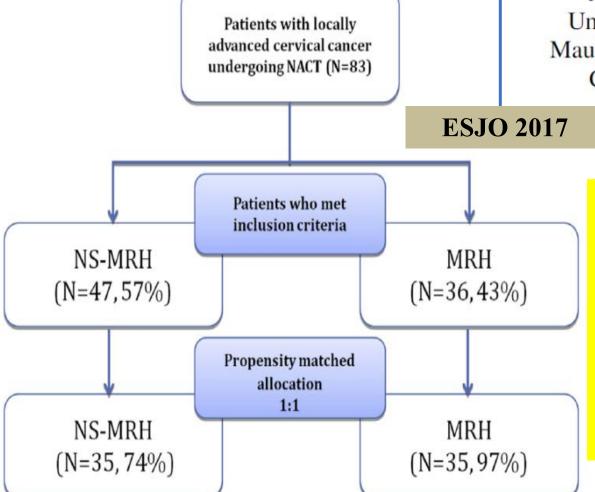
**CONCLUSIONS**: This study showed the feasibility, safety and good short-term outcomes of RS in elderly and very elderly gynecological cancer patients. No one can be considered too old for a minimally invasive robotic approach, but a multidisciplinary approach is the best pathway of managing; efforts reducing associated morbidity are essential.

## **CERVICAL CANCER**

Introducing nerve-sparing approach during minimally invasive radical hysterectomy for locally-advanced cervical cancer: A multi-institutional experience

Francesco Raspagliesi <sup>a</sup>, Giorgio Bogani <sup>a,\*</sup>, Arsenio Spinillo <sup>b</sup>,
Antonino Ditto <sup>a</sup>, Stefano Bogliolo <sup>b</sup>, Jvan Casarin <sup>c</sup>,
Umberto Leone Roberti Maggiore <sup>a,d</sup>, Fabio Martinelli <sup>a</sup>,
Mauro Signorelli <sup>a</sup>, Barbara Gardella <sup>b</sup>, Valentina Chiappa <sup>a</sup>,
Cono Scaffa <sup>a</sup>, Simone Ferrero <sup>d</sup>, Antonella Cromi <sup>c</sup>,

Domenica Lorusso <sup>a</sup>, Fabio Ghezzi <sup>c</sup>



The implementation of NS approach in the setting of LACC improves patients' outcomes, minimizing pelvic dysfunction rates.

NS approach has not detrimental effects on survival outcomes.

## Nerve Sparing Radical Hysterectomy

Title: Nerve Sparing Approach Improves Outcomes of Patients Undergoing Minimally Invasive Radical Hysterectomy: a Systematic Review and Meta-Analysis

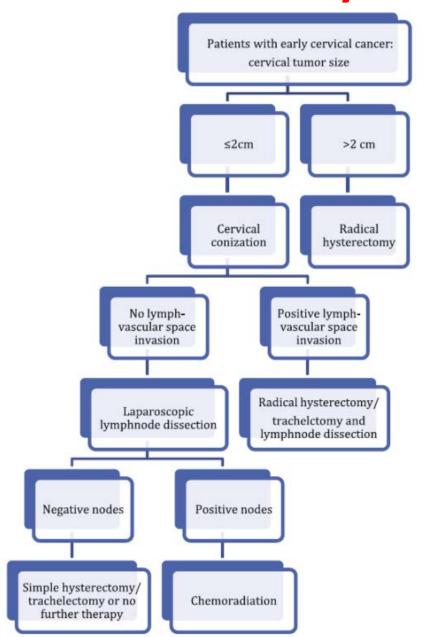
Author: Giorgio Bogani, Diego Oreste Rossetti, Antonino Ditto, Mauro Signorelli, Fabio Martinelli, Lavinia Mosca, Cono Scaffa, Umberto Leone Roberti Maggiore, Valentina Chiappa, Ilaria Sabatucci, Domenica Lorusso, Francesco Raspagliesi

Table 1. Main characteristics of the included studies

Authors [Ref.]	Year of publicati on	Principal Institution(s) involved	Study desig n	Study period	Patients n	Patients undergoi ng MRH n (%)	Patients undergoi ng NS- MRH n (%)	Level of recommendati on GRADE system	Level of evidence ACOG guidelines
Possover [13]	2000	Friedrich Schiller University, Germany	RS	1997- 1999	66	28 (42.4%)	38 (57.6%)	MQ	В
Querleu [14]	2002	University of Lille II, France	RS	1991- 1996	95	48 (50.5%)	47 (49.5%)	MQ	В
Liang [15]	2010	Southwest Hospital, Third Military Medical University, Chongqing, China	PS	2006- 2009	163	81 (49.7%)	82 (50.3%)	MQ	В
Bogani [16]	2014	University of Insubria, Varese, Italy	RS	2003- 2010	96	63 (65.6%)	33 (34.4%)	MQ	В
Chen [17]	2014	Sichuan University, Chengdu, Sichuan, China	PS	2010- 2014	65	35 (53.8%)	30 (46.2%)	MQ	В
Liu [18]	2016	PLA General Hospital, Fu Xing St, Beijing	PS	2011- 2012	120	60 (50%)	60 (50%)	MQ	В
Raspagliesi [19]	2017	IRCCS National Cancer Institute, Milan, Italy; University of Insubria, Varese, Italy; University of Genoa, Italy; University of Pavia, Italy	PS	2009- 2016	70	35 (50%)	35 (50%)	MQ	В

Legend:  $ACOG = American \ College \ of \ Obstetricians \ and \ Gynecologists; \ GRADE = Grading \ of \ Recommendations, \ Assessment, \ Development, \ and \ Evaluation; \ MQ = medium \ quality; \ MRH = conventional \ minimally \ invasive \ radical \ hysterectomy; \ NS-MRH = nerve \ sparing \ minimally \ invasive \ radical \ hysterectomy; \ PS = prospective; \ RS = retrospective$ 

## **Parametrectomy**



ELSEVIER EJSO 39 (2013) 76–80 www.ejso.com

Can parametrectomy be avoided in early cervical cancer? An algorithm for the identification of patients at low risk for parametrial involvement

O. Gemer <sup>a,k</sup>, R. Eitan <sup>b,\*,k</sup>, M. Gdalevich <sup>a</sup>, A. Mamanov <sup>a</sup>, B. Piura <sup>c</sup>, A. Rabinovich <sup>c</sup>, H. Levavi <sup>b</sup>, B. Saar-Ryss <sup>a</sup>, R. Halperin <sup>d</sup>, S. Finci <sup>e</sup>, U. Beller <sup>e</sup>, I. Bruchim <sup>f</sup>, T. Levy <sup>g</sup>, I. Ben Shachar <sup>h</sup>, A. Ben Arie <sup>i</sup>, O. Lavie <sup>j</sup>

Using a pre-operative triage algorithm, patients with early small lesions, no LVSI and no nodal involvement may be spared radical surgical procedures and parametrectomy. Further prospective data are urgently needed.

## CERVICAL CANCER and LESS

Minilaparoscopic radical hysterectomy (mLPS-RH) vs. laparoendoscopic singlesite radical hysterectomy (LESS-RH) in early stage cervical cancer: a multicenter retrospective study

Anna Fagotti, Fabio Ghezzi, David M. Boruta, Giovanni Scambia, Pedro Escobar, Amanda N. Fader, Mario Malzoni, Francesco Fanfani

Table 2. Perioperative outcomes in ultra minimally invasive RH.

Variable	All cases Nr. (%)	LESS-RH Nr. (%)	mLPS-RH Nr. (%)	p value <sup>a</sup>
All cases	46 (100)	19 (41.3)	27 (58.7)	-
Radical hysterectomy Type B1/2 Type C1/2	22 (47.9) 24 (52.1)	10 (57.9) 9 (42.1)	12 (44.4) 15 (55.6)	0.275
Median lymph nodes removed (range) <sup>b</sup>	23 (4-52)	22 (4-34)	19 (6-52)	0.832
Median operative time (min) (range) <sup>b</sup>	200 (90-380)	270 (149-380)	180 (90-240)	0.001
Median estimated blood loss (ml) (range) <sup>b</sup>	50 (10-400)	60 (25-350)	50 (10-400)	0.229
Intra-operative complications	2 (4.3)	1 (5.3)	1 (3.7)	1.000
Post-operative complications	4 (8.6)	2 (10.5)	2 (7.4)	1.000
Conversion to LPS/LPT	2 (4.3)	2 (10.5)	0 (0.0)	0.165
Median duration of hospital stay (days) (range) <sup>b</sup>	2 (1-10)	1 (1-4)	2 (1-10)	0.020
One day to discharge	17	11 (57.9)	6 (22.2)	0.030
Readmission	2 (4.3)	1 (5.3)	1 (3.7)	1.000

<sup>&</sup>quot;Calculated by Fisher's exact test.

<sup>&</sup>lt;sup>b</sup>Calculated by Kruskal-Wallis non parametric test.

## ENDOMETRIAL CANCER

**GYNECOLOGY** 

Surgical outcomes among elderly women with endometrial cancer treated by laparoscopic hysterectomy: a NRG/Gynecologic Oncology Group study

Erin A. Bishop, MD; James J. Java, PhD; Kathleen N. Moore, MD; Nick M. Spirtos, MD; Michael L. Pearl, MD; Oliver Zivanovic, MD; David M. Kushner, MD; Floor Backes, MD; Chad A. Hamilton, MD; Melissa A. Geller, MD, MS; Jean Hurteau, MD; Cara Mathews, MD; Robert M. Wenham, MD, MS; Pedro T. Ramirez, MD; Susan Zweizig, MD; Joan L. Walker, MD

**CONCLUSION:** Laparoscopic staging for uterine cancer is associated with decreased morbidity in the immediate postoperative period in patients ≥60 years old. These results allow for more accurate preoperative counseling. A minimally invasive approach to uterine cancer staging may decrease morbidity that could affect long-term survival.

### Accepted Manuscript

Title: Robotic, Laparoscopic, or Open Hysterectomy - Surgical Outcomes by Approach in Endometrial Cancer

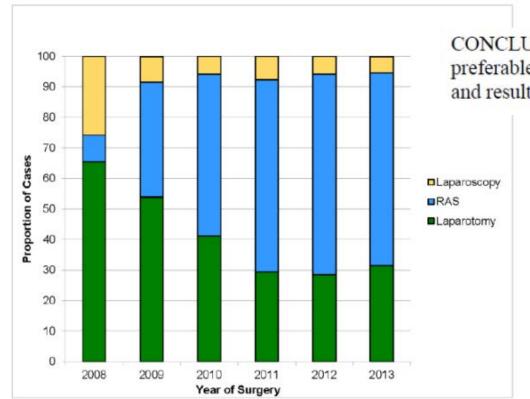
Author: Tiffany L. Beck, Melissa A. Schiff, Barbara A. Goff, Renata R. Urban

PII: S1553-4650(18)30044-X



## ENDOMETRIAL CANCER

Figure 1: Surgical trends in the management of endometrial cancer in Washington State 2008-2013.

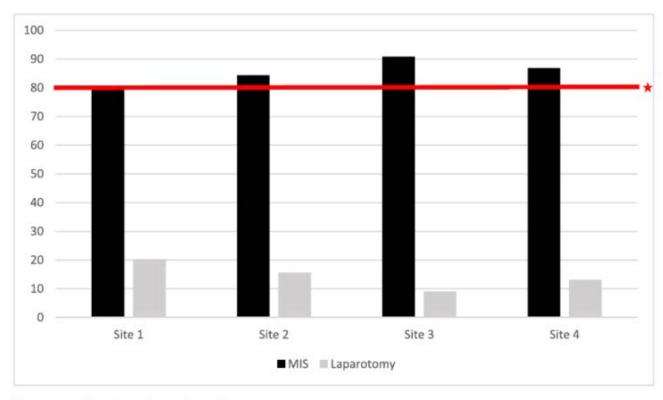


CONCLUSIONS: RAS is as an alternative to LS in the treatment of endometrial cancer, and preferable to laparotomy. The use of RAS resulted in fewer early readmissions compared to LS and resulted in an increased proportion of cases via minimally invasive surgery.

## Minimally invasive hysterectomy surgery rates for endometrial cancer performed at National Comprehensive Cancer Network (NCCN) Centers\*

Jennifer Bergstrom <sup>a,1</sup>, Alessia Aloisi <sup>b</sup>, Shannon Armbruster <sup>c</sup>, Ting-Tai Yen <sup>a</sup>, Jvan Casarin <sup>d</sup>, Mario M. Leitao Jr <sup>b,e</sup>, Edward J. Tanner <sup>a</sup>, Rayna Matsuno <sup>f</sup>, Karime Kalil Machado <sup>a</sup>, Sean C. Dowdy <sup>d</sup>, Pamela T. Soliman <sup>c</sup>, Stephanie L. Wethington <sup>a</sup>, Rebecca L. Stone <sup>a</sup>, Kimberly L. Levinson <sup>a</sup>, Amanda N. Fader <sup>a,\*</sup>

### J. Bergstrom et al. / Gynecologic Oncology xxx (2018) xxx-xxx



★ Proposed 80% MIS benchmark

Fig. 1. Route of surgical procedure.

## ENDOMETRIAL CANCER

Indocyanine green fluorescence imaging of lymph nodes during robotic-assisted laparoscopic operation for endometrial cancer. A prospective validation study using a sentinel lymph node surgical algorithm\*

Bjørn Hagen <sup>a,\*</sup>, Marit Valla <sup>b,c</sup>, Guro Aune <sup>a</sup>, Merethe Ravlo <sup>a</sup>, Anne Britt Abusland <sup>b</sup>, Elisabeth Araya <sup>a</sup>, Marit Sundset <sup>a</sup>, Solveig Tingulstad <sup>a</sup>

# TOOLS: indocyanine green, NBI, IOUS

## Prospective Comparative Study of Laparoscopic Narrow Band Imaging (NBI) Versus Standard Imaging in Gynecologic Oncology

Alessia Aloisi, MD<sup>1</sup>, Yukio Sonoda, MD<sup>1</sup>, Ginger J. Gardner, MD<sup>1</sup>, Kay J. Park, MD<sup>2</sup>, Sarah L. Elliott, MD<sup>3</sup>, Qin C. Zhou, MS<sup>4</sup>, Alexia Iasonos, PhD<sup>4</sup>, and Nadeem R. Abu-Rustum, MD<sup>1</sup>

Title: Role of Intraoperative Ultrasound to Extend the Application of Minimally Invasive Surgery for Treatment of Recurrent Gynecological Cancer

Author: Floriana Mascilini, Lorena Quagliozzi, Francesca Moro, Maria Cristina Moruzzi, Valerio Gallotta, Salvatore Gueli Alletti, Giovanni Scambia, Antonia Carla Testa, Anna Fagotti Indocyanine green fluorescence imaging of lymph nodes during robotic-assisted laparoscopic operation for endometrial cancer. A prospective validation study using a sentinel lymph node surgical algorithm\*

Bjørn Hagen <sup>a,\*</sup>, Marit Valla <sup>b,c</sup>, Guro Aune <sup>a</sup>, Merethe Ravlo <sup>a</sup>, Anne Britt Abusland <sup>b</sup>, Elisabeth Araya <sup>a</sup>, Marit Sundset <sup>a</sup>, Solveig Tingulstad <sup>a</sup>

## **TOOLS:** indocyanine green.

Conclusions. We have reproduced the high total and bilateral SLN mapping using cervical ICG injection and NIR fluorescence. Practical application of the MSKCC algorithm allowed high lymph node metastasis detection in combination with a low extent of lymph node removal.

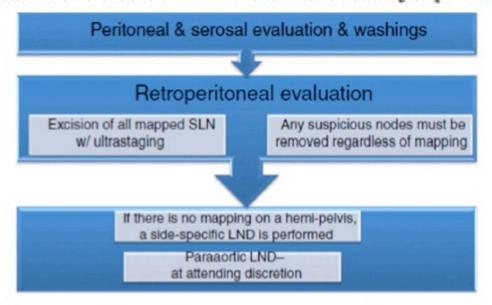
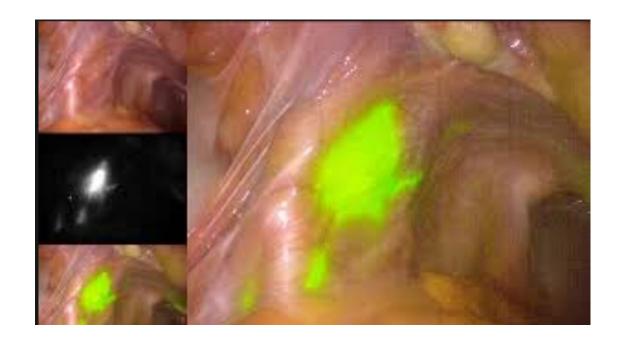


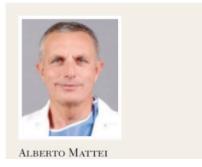
Fig. 1. The sentinel lymph node surgical algorithm. From Barlin JN et al.: The importance of applying a sentinel lymph node mapping algorithm in endometrial cancer staging: Beyond removal of blue nodes. Gynecol Oncol 2012;125:534; with permission.

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## Il linfonodo sentinella nelle neoplasie ginecologiche

di Alberto Mattei, Gianni Bargelli, Federica Perelli, Giovanni Scambia



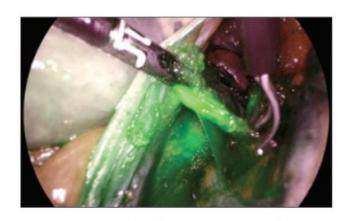


Figura 1 – Linfonodo sentinella rilevato dopo la diffusione del verde di indiocianina in sede iliaca esterna destra.

Il fatto di non ricorrere alla linfadenectomia sistematica nelle pazienti affette da neoplasia endometriale o della cervice uterina è un ottimo risultato per la riduzione della morbilità postoperatoria, in particolare per la riduzione di complicanze che si possono associare alla linfadenectomia quali linfedema, linfocele e compromissione dei nervi pelvici.

## **TOOLS:** indocyanine green.



Figura 2 – Linfonodo sentinella dopo la sua asportazione.



### Prospective Comparative Study of Laparoscopic Narrow Band Imaging (NBI) Versus Standard Imaging in Gynecologic Oncology

**TOOLS:** NBI.

Alessia Aloisi, MD<sup>1</sup>, Yukio Sonoda, MD<sup>1</sup>, Ginger J. Gardner, MD<sup>1</sup>, Kay J. Park, MD<sup>2</sup>, Sarah L. Elliott, MD<sup>3</sup>,

Qin C. Zhou, MS<sup>4</sup>, Alexia Iasonos, PhD<sup>4</sup>, and Nadeem R. Abu-Rustum, MD<sup>1</sup>

### **Ann Surg Oncol 2018**

**TABLE 2** Results of white light and NBI compared with histological findings (N = 79)

Laparoscopic technique	Histology		NPV %	PPV %	Diagnostic accuracy % (95% CI*)	
	Benign Malignant		(95% CI*)	(95% CI*)		
White light						
Benign	40	3	93% (75.8-99.3%)	61.1% (43.5-76.9%)	78.5% (63.8-89.2%)	
Malignant	14	22				
NBI						
Benign	38	0	100%	61% (44.5-75.8%)	79.7% (68.1-88.6%)	
Malignant	16	25				

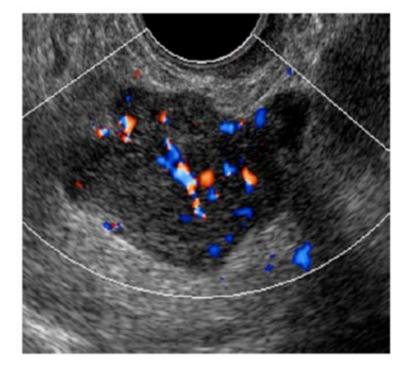
Conclusions. NBI imaging provides a unique contrast between peritoneal surface and microvascular patterns. However, the results of this study suggest that NBI-enhanced laparoscopy does not provide superior detection of peritoneal surface malignancy compared with standard white light high-definition laparoscopy.

Title: Role of Intraoperative Ultrasound to Extend the Application of Minimally Invasive Surgery for Treatment of Recurrent Gynecological Cancer

Author: Floriana Mascilini, Lorena Quagliozzi, Francesca Moro, Maria Cristina Moruzzi, Valerio Gallotta, Salvatore Gueli Alletti, Giovanni Scambia, Antonia Carla Testa, Anna Fagotti

## TOOLS: IOUS.

**Conclusions:** About one of four patients (25%) with single gynecological cancer recurrence needs IOUS to benefit from MIS for complete secondary cytoreduction.



## MIS in OVARIAN CANCER REVIEW OF LITERATURE

## **Current Recommendations for Minimally Invasive Surgical Staging in Ovarian Cancer**

Curr. Treat. Options in Oncol. 2016

- Early Stage Ovarian Cancer
- Advanced Ovarian Cancer

Primary Debulking Interval Debulking

Recurrent Ovarian Cancer

Anna Fagotti, MD, PhD<sup>1,\*</sup> Federica Perelli, MD<sup>2</sup> Luigi Pedone, MD<sup>3</sup> Giovanni Scambia, MD<sup>3</sup>

## LEVEL OF EVIDENCE

MINIMALLY INVASIVE SURGERY is currently used to stage and treat ovarian cancer patients, at <u>different stages</u> of disease. However, the higher level of evidence from existing studies is IIB.

### Therapy/Prevention/Etiology/Harm:

1a: Systematic reviews (with homogeneity) of randomized controlled trials

**1b:** Individual randomized controlled trials (with narrow confidence interval)

1c: All or none randomized controlled trials

**2a:** Systematic reviews (with homogeneity) of cohort studies

**2b:** Individual cohort study or low quality randomized controlled trials (e.g. <80% follow-up)

2c: "Outcomes" Research; ecological studies

**3a:** Systematic review (with homogeneity) of case-control studies

**3b:** Individual case-control study

4: Case-series (and poor quality cohort and case-control studies)

5: Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"

## MIS IN OVARIAN CANCER

Timing of surgery	Reference [Author, year]	Level of evidence
Staging [Early stage]	Lawrie 2013, Gallotta 2014, Tozzi 2004,	IIB
	Ghezzi 2007, Nezhat 2009, Lee 2011,	
	Cress 2011, Brockbank 2013	
Staging [Advanced stage]	Petrillo 2014, Fagotti 2013, Vizzielli 2014	IIB
<b>Primary Debulking</b>	Nezhat 2010, Fanning 2011, Rabinovic	IIIB
	2015, Sinno 2014	
<b>Interval Debulking</b>	Favero 2015, Corrado 2015, Gueli Alletti	IIIB
	2015	
Staging [Recurrence]	Fagotti 2008, Fanfani 2015	IIIB
<b>Secondary Debulking</b>	Passot 2013, Fish 2014, Gallotta 2014,	IIIB
	Fagotti 2014, Fagotti 2015	

Curr. Treat. Options in Oncol. (2016) 17:3 DOI 10.1007/s11864-015-0379-8

Gynecologic Cancers (RJ Morgan, Section Editor)

## Current Recommendations for Minimally Invasive Surgical Staging in Ovarian Cancer

Anna Fagotti, MD, PhD<sup>1,\*</sup> Federica Perelli, MD<sup>2</sup> Luigi Pedone, MD<sup>3</sup> Giovanni Scambia, MD<sup>3</sup>

## **OVARIAN CANCER**

Minimally Invasive Surgical Staging for Ovarian Carcinoma: a propensity-matched comparison with traditional open surgery

Antonino Ditto, M.D, Giorgio Bogani, M.D, Ph.D, Fabio Martinelli, M.D, Mauro Signorelli, M.D, Valentina Chiappa, M.D, Cono Scaffa, M.D, Alice Indini, M.D, Umberto Leone Roberti Maggiore, M.D, Domenica Lorusso, M.D, Ph.D, Francesco Raspagliesi, M.D

Conclusions: Our findings suggest that the implementation of minimally invasive staging does not influence survival outcomes of patients affected by eEOC. LS improve patients' outcomes, reducing length of hospital stay. Further large prospective studies are warranted.

Table 1. Current indications for MIS in ovarian cancer

Timing of surgery	References (author, year)	Level of evidence
Staging (early stage)	Lawrie et al. 2013 [13], Gallotta et al. 2014 [14•], Tozzi et al. 2004 [15], Ghezzi et al. 2007 [16], Nezhat et al. 2009 [17], Lee et al. 2011 [18], Cress et al. 2011 [19], Brockbank et al. 2013 [20]	IIB
Staging (advanced stage)	Petrillo et al. 2015 [21], Fagotti et al. 2013 [22], Vizzielli et al. 2014 [23]	IIB
Primary debulking	Nezhat et al. 2010 [24], Fanning et al. 2011 [25], Rabinovich 2015 [7], Sinno et al. 2014 [26]	IIIB
Interval debulking	Favero et al. 2015 [27], Corrado et al. 2015 [28], Gueli Alletti et al. 2015 [29]	IIIB
Staging (recurrence)	Fagotti et al. 2008 [30], Fanfani et al. 2015 [31]	IIIB
Secondary debulking	Passot et al. 2014 [32], Fish 2014 [33], Gallotta et al. 2014 [34], Fagotti et al. 2014 and 2015 [35, 36]	IIIB

## EARLY STAGE OVARIAN CANCER

Minimally invasive surgical staging in early stage ovarian carcinoma: a systematic review and meta-analysis

Giorgio Bogani, MD, PhD, Chiara Borghi, MD, Umberto Leone Roberti Maggiore, MD, Antonino Ditto, MD, Mauro Signorelli, MD, Fabio Martinelli, MD, Valentina Chiappa, MD, Carlos Lopez, MD, Ilaria Sabatucci, MD, Cono Scaffa, MD, PhD, Alice Indini, MD, Simone Ferrero, PhD, Domenica Lorusso, MD, PhD, Francesco Raspagliesi, MD

### LPS staging is associated with a

- shorter time to chemotherapy than laparotomic procedures
- survival outcomes were not influence by route of surgery
- MIS approach is equivalent to laparotomy for the treatment of eEOC and may be superior in terms of perioperative outcomes

Robotic Versus Laparoscopic Staging for Early Ovarian Cancer: A Case Matched Control Study

V. Gallotta, MD, C. Cicero, MD, C. Conte, MD, G. Vizzielli, MD, M. Petrillo, MD, A. Fagotti, MD, V. Chiantera, MD, B. Costantini, MD, G. Scambia, PhD, G. Ferrandina, PhD

**CONCLUSIONS**: The present study suggests that there is no relevant difference between robotic and laparoscopic approach in staging EOC. Further prospective trials are needed to confirm our results.

## ADVANCED OVARIAN CANCER and INTERVAL DEBULKING SURGERY

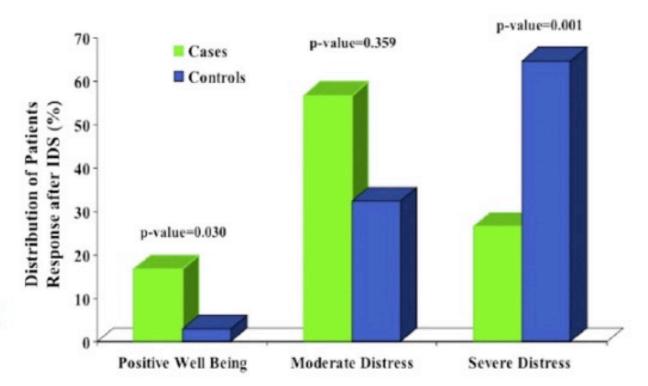
Minimally invasive versus standard laparotomic interval debulking surgery in ovarian neoplasm: A single-institution retrospective case-control study

S. Gueli Alletti <sup>a,\*</sup>, M. Petrillo <sup>b,c</sup>, G. Vizzielli <sup>a</sup>, C. Bottoni <sup>a</sup>, F. Nardelli <sup>c</sup>, B. Costantini <sup>a</sup>, L. Quagliozzi <sup>a</sup>, V. Gallotta <sup>a</sup>, G. Scambia <sup>a,c</sup>, A. Fagotti <sup>c</sup>

Conclusions. Minimally invasive approach could represent an advantageous alternative surgical way to perform interval debulking surgery in this specific subset of patients, with no impact on PFS. Based on these findings a randomized clinical trial is now under evaluation in our Institution.

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**Fig. 3.** Title: Differences of distress level after IDS Legend: Minimally invasive approach determines a higher percentage of women with positive well-being compared to patients treated with the conventional approach.



## ADVANCED OVARIAN CANCER and IDS – MIS and PSYCHOLOGICAL EFFECT

Title: Single-Institution Propensity-Matched Study to Evaluate the Psychological Effect of Minimally Invasive Interval Debulking Surgery vs Standard Laparotomic Treatment: From Body to Mind and Back.

Author: S. Gueli Alletti, Giuseppe Vizzielli, Letizia Lafuenti, Barbara Costantini, Anna Fagotti, Camilla Fedele, Stefano Cianci, Emanuele Perrone, Valerio Gallotta, Cristiano Rossitto, Giovanni Scambia

### Conclusions

Minimally invasive interval debulking surgery seems to play an important role in the quality of life and oncological outcomes. Even if presented data testified a further evolutionary step in oncological patient cares, more experiences in larger groups of patients are desirable in order to deeply investigate and assess our results.

## OVARIAN CANCER and ROBOTIC SURGERY

 $\mathbf{B}$ 

Role of Robotic Surgery in Ovarian Malignancy

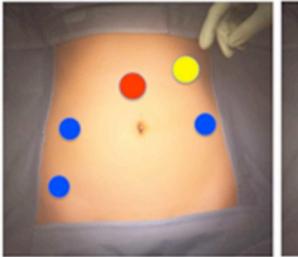
A. Lucidi, V. Chiantera, V. Gallotta, A. Ercoli, G. Scambia, A. Fagotti

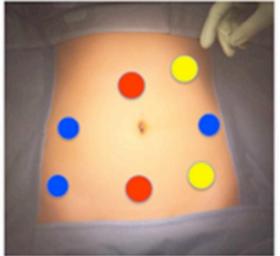
Robotic Trocar (8mm)

Telescope (12 mm)

A

Assistant Trocar (12 mm)





Robotic Trocar (8mm)

Assistant Trocar (12 mm)





В

## OVARIAN CANCER and ROBOTIC SURGERY

Role of Robotic Surgery in Ovarian Malignancy

A. Lucidi, V. Chiantera, V. Gallotta, A. Ercoli, G. Scambia, A. Fagotti

Table 2. Studies comparing robotic surgery with different approaches in ovarian cancer.

Reference	Study Design	Surgical Procedures	N. of patients	Clinical Setting	Operative Time (min)	Ematic Blood Loss (ml)	Hospital Stay (day)	Complications (%)	Maximal debulking (%)
Magrina et al. [19]	Retrospective	RA	25	I-IV Figo	300	100	2	24	77.8
	case-control	LA	27		248	150	2	4	69.8
	20-470. See 2 20. Ober 20.0 Microsoft (1997)	LT	119		256	1000	7	33	53.9
Nezhat et al. [20]	Retrospective	RA	20	I–IV Figo	NA	NA	NA	NA	NA
	analysis	LA LT	50 11	+Recurrence					
Gallotta et al. [21]	Retrospective	RA	32	I-IIIB Figo	170	70	3	3.1	:= :
	case-control	LA	64		205	100	3	4.7	
Feuer GA et al. [36]	Retrospective	RA	63	I-IV Figo	138	94	2.3	33.3	73
	analysis	LT	26		95	385	6.2	34.6	50
Magrina et al. [38]	Retrospective	RA	10	Recurrence	220	206	3.4	20	70
	analysis	LA	9	44 400 404 400 400 500	177	127	4.1	33.3	88.9
		LT	33		222	936	9.9	42.4	72.7
Fagotti et al. [40]	Retrospective	MIS	11	Recurrence	125	50	4	18.2	•
* p	analysis	LT (+HIPEC)	11	20	295	500	8	33.3	

FIGO, International Federation of Gynecology and Obstetrics; RA robotic assisted; LA laparoscopic assisted; LT, laparotomy; NA, not available.

## OVARIAN CANCER and S-LPS

### Laparoscopy to Predict the Result of Primary Cytoreductive Surgery in Patients With Advanced Ovarian Cancer: A Randomized Controlled Trial

Marianne J. Rutten, Hannah S. van Meurs, Roelien van de Vrie, Katja N. Gaarenstroom, Christiana A. Naaktgeboren, Toon van Gorp, Henk G. Ter Brugge, Ward Hofhuis, Henk W.R. Schreuder, Henriette J.G. Arts, Petra L.M. Zusterzeel, Johanna M.A. Pijnenborg, Maarten van Haaften, Guus Fons, Mirjam J.A. Engelen, Erik A. Boss, M. Caroline Vos, Kees G. Gerestein, Eltjo M.J. Schutter, Brent C. Opmeer, Anje M. Spijkerboer, Patrick M.M. Bossuyt, Ben Willem Mol, Gemma G. Kenter, and Marrije R. Buist

Cost-effectiveness of laparoscopy as diagnostic tool before primary cytoreductive surgery in ovarian cancer

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Conclusion. In patients with suspected advanced stage ovarian cancer, a diagnostic laparoscopy reduced the number of futile laparotomies, without increasing total direct medical health care costs, or adversely affecting complications or quality of life.

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#### Conclusion

Diagnostic laparoscopy reduced the number of futile laparotomies in patients with suspected advanced-stage ovarian cancer. In women with a plan for PCS, these data suggest that performance of diagnostic laparoscopy first is reasonable and that if cytoreduction to < 1 cm of residual disease seems feasible, to proceed with PCS.

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Editorial

The costs of adding laparoscopy to the management of advanced stage epithelial ovarian cancer

Havrilesky 2017

These data, as well as recent reports on the efficacy of laparoscopy to predict the surgical resectability of advanced stage ovarian cancer, justified a prospective examination of laparoscopy as part of the primary surgical management of epithelial ovarian cancer.

A take-home message for this cost-effectiveness study is that the addition of diagnostic laparoscopy is unlikely to "break the bank" and should be considered whenever PCS is contemplated for AEOC.

## **OVARIAN CANCER** PDS vs IDS Randomized **Clinical Trials**

**JCOG0602** 

Jpn J Clin Oncol 2008;38(1)74-77 doi:10.1093/jjco/hym145

Phase III Trial of Upfront Debulking Surgery Versus Neoadjuvant Chemotherapy for Stage III/IV Ovarian, Tubal and Peritoneal Cancers: Japan Clinical Oncology Group Study JCOG0602

Takashi Onda<sup>1</sup>, Koji Matsumoto<sup>2</sup>, Taro Shibata<sup>3</sup>, Akihiro Sato<sup>3</sup>, Haruhiko Fukuda<sup>3</sup>, Ikuo Konishi<sup>4</sup>, Toshiharu Kamura<sup>5</sup> and Hiroyuki Yoshikawa<sup>6</sup>

### **CHORUS**

Primary chemotherapy versus primary surgery for newly diagnosed advanced ovarian cancer (CHORUS): an open-label, randomised, controlled, non-inferiority trial

Sean Kehoe, Jane Hook, Matthew Nankivell, Gordon C Jayson, Henry Kitchener, Tito Lopes, David Luesley, Timothy Perren, Selina Bannoo, Monica Mascarenhas, Stephen Dobbs, Sharadah Essapen, Jeremy Twiqa, Jonathan Herod, Glenn McCluqage, Mahesh Parmar, Ann-Marie Swart

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#### ORIGINAL ARTICLE

### Neoadjuvant Chemotherapy or Primary Surgery in Stage IIIC or IV Ovarian Cancer

Ignace Vergote, M.D., Ph.D., Claes G. Tropé, M.D., Ph.D., Frédéric Amant, M.D., Ph.D., Gunnar B. Kristensen, M.D., Ph.D., Tom Ehlen, M.D., Nick Johnson, M.D., René H.M. Verheijen, M.D., Ph.D., Maria E.L. van der Burg, M.D., Ph.D., Angel J. Lacave, M.D., Pierluigi Benedetti Panici, M.D., Ph.D., Gemma G. Kenter, M.D., Ph.D., Antonio Casado, M.D., Cesar Mendiola, M.D., Ph.D., Corneel Coens, M.Sc., Leen Verleye, M.D., Gavin C.E. Stuart, M.D., Sergio Pecorelli, M.D., Ph.D., and Nick S. Reed, M.D., for the European Organization for Research and Treatment of Cancer-Gynaecological Cancer Group and the NCIC Clinical Trials Group\* — a Gynecologic Cancer Intergroup Collaboration

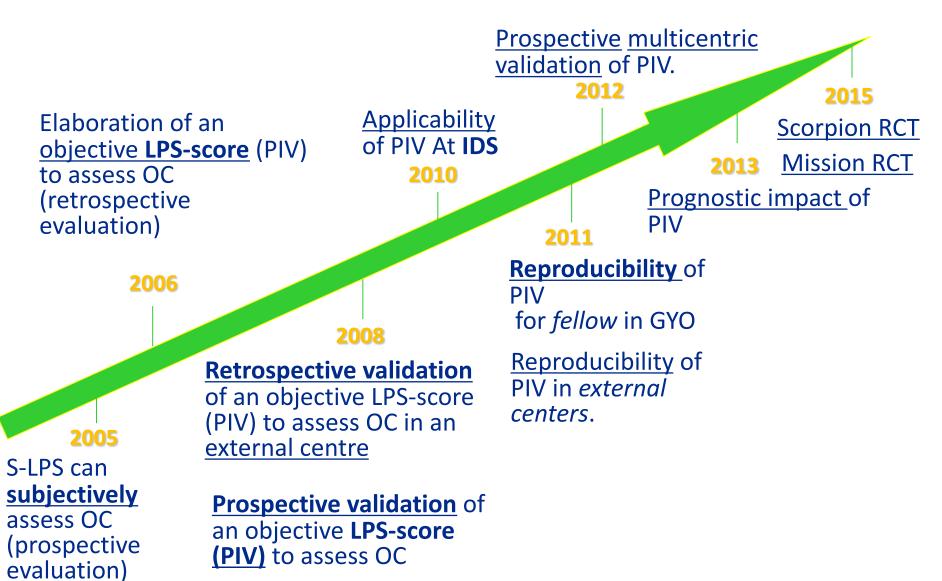
#### Clinical Trial

### **SCORPION**

Phase III randomised clinical trial comparing primary surgery versus neoadjuvant chemotherapy in advanced epithelial ovarian cancer with high tumour load (SCORPION trial): Final analysis of peri-operative outcome

Anna Fagotti <sup>a,\*</sup>, Gabriella Ferrandina <sup>b</sup>, Giuseppe Vizzielli <sup>b</sup>, Francesco Fanfani <sup>c</sup>, Valerio Gallotta <sup>b</sup>, Vito Chiantera <sup>d</sup>, Barbara Costantini b, Pasquale Alessandro Margariti b, Salvatore Gueli Alletti <sup>b</sup>, Francesco Cosentino <sup>b</sup>, Lucia Tortorella <sup>b</sup>, Giovanni Scambia b

## EVOLUTION OF S-LPS AS A NEW DIAGNOSTIC TOOL IN AOC



## RECURRENT OVARIAN CANCER and MIS HIPEC

## **Future Perspectives**

### HIPEC FOLLOWS THE EVOLUTION IN OVARIAN CANCER TREATMENT

