



## MORCELLEMENT E NUOVE STRATEGIE ALTERNATIVE

**Pietro Litta**

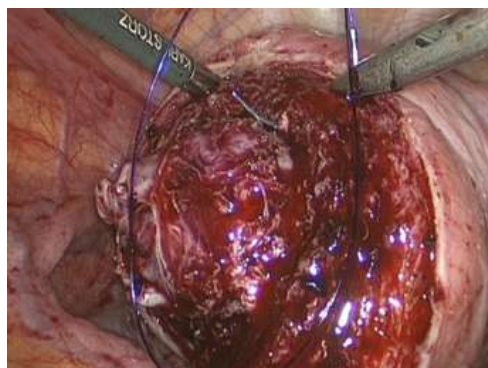
Università degli studi di Padova  
Dipartimento Salute della Donna e del Bambino  
Chirurgia Pelvica Mini-invasiva ed Ostetricia Operativa

# MIOMECTOMIA LAPAROSCOPICA: IL PASSATO...1992 .....



## Rischio: ROTTURA D'UTERO IN GRAVIDANZA

Autore	Tipo di mioma	Grandezza di mioma	Sede di mioma	Sutura isterotomia	Eta' gestazionale	Rottura prima del parto
Harris (1992)	N.R.	3.0	Posteriore	Si	34	Si
Dubuisson (1995)	Intramurale	3.0	Posteriore	Si	32	Si
Mecke (1995)	Intramurale	N.R.	N.R.	N.R.	30	Si
Friedmann (1996)	Intramurale	5.0	Fundico	N.R.	28	Si
Pelosi (1997)	Sottosieroso	5.0	Fundico	No	33	Si
Hockstein (2000)	Intramurale	N.R.	Fundico	Si	29	Si
Dubuisson (2000)	Intramurale	8.0	Posteriore	Si	25	Si



# Laparoscopic Morcellator-Related Complications

Magdy P. Milad, MD, MS\*, and Elizabeth A. Milad

**Table 2**

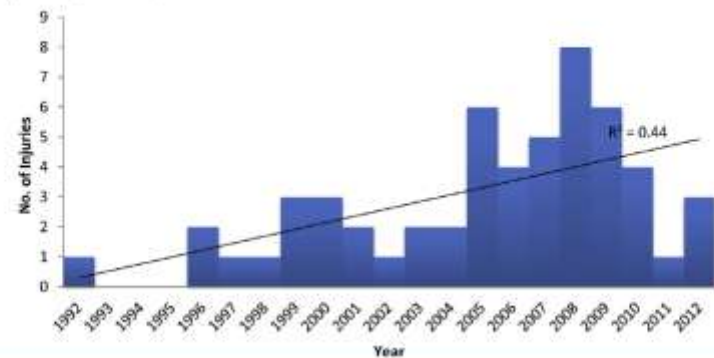
Location of morcellator-related injury

Location of injury	No. of injuries
<b>Bowel</b>	31
Large bowel	24
Small bowel	7
<b>Vascular system</b>	27
Major vessel	3
Artery	7
Vena cava	1
Mesentery	1
Iliac artery	8
Left iliac vein	2
Renal artery	1
Aorta	5
Major blood vessel	3
Genitourinary tract	7
Ureter	3
Bladder	1
Kidney	3
Pancreas	1
Diaphragm	1
Other injury	3
Fallopian tube	1
Omentum	2

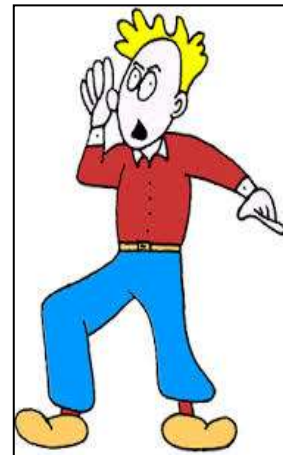
**Six patients died of morcellator-related complications.**

**Fig. 1**

Morcellator-related complications (1992-2012).



- .Lack of surgeon experience**
- .Training**
- .Lack of control**
- .Lack of visualization**
- .Device malfunction**



## MORCELLEMENT



- . **Ottima visione intraperitoneale**
- . **Ottima pressione CO<sub>2</sub> intraperitoneale (15 mmHg)**
- . **Trocar accessorio SN (mobilizzare la parete sigmoidea in basso)**

## **MIOMECTOMIA LAPAROSCOPICA: ...OGGI...2014 .....?**

**DISSEMINAZIONE DI TESSUTO SARCOMATOSO OCCULTO**

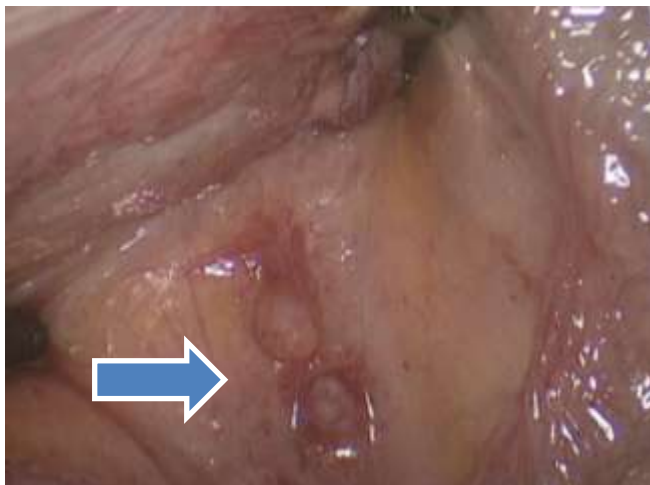


**DISSEMINAZIONE TESSUTO MIOMATOSO BENIGNO**

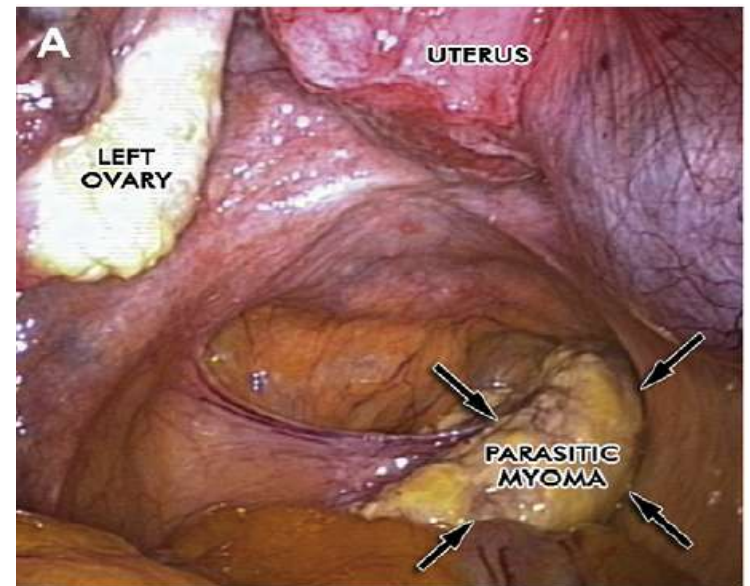
**“Parasitic myomas are defined as benign smooth-muscle masses separated from the uterus”**



**pregressa miomectomia uterina  
II look – isterectomia sopracervicale LPS**



**Cavo Douglas: miomi parassiti**



# MIOMECTOMIA LAPAROSCOPICA

## MORCELLEMENT :LIMITI

(Impianto intraddominale di tessuto miomatoso frammentato)

BENIGNO  
«MIOMI PARASSITI»

**Parasitic myomas after laparoscopic surgery: an emerging complication in the use of morcellator?  
Description of four cases**

*Gaspare Cucinella, M.D., Ph.D.,<sup>a</sup> Roberta Granese, M.D., Ph.D.,<sup>b</sup> Gloria Calagna, M.D.,<sup>a</sup>  
Edgardo Somigliana, M.D., Ph.D.,<sup>c</sup> and Antonio Perino, M.D., Ph.D.<sup>b</sup>*

**Result(s):** We identified four cases of parasitic myomas over the 3-year study period. Two out of the four were symptomatic. The prevalence of this complication, considering all women with whom the electric morcellator was used (n = 423) was 0.9% (95% CI, 0.3–2.2%). Considering exclusively the women who underwent myomectomy (n = 321), it was 1.2% (95% CI, 0.4–2.9%).

**Conclusion(s):** Laparoscopic myomectomy with the use of a morcellator is associated with an increased risk of developing of parasitic myomas. A thorough inspection and washing of the abdominopelvic cavity at the end of the surgery should be performed to prevent this rare complication. (Fertil Steril® 2011;96:e90–6. ©2011 by American

# FRAMMENTI INTRAPERITONEALI DI MIOMA

## COMPLICAZIONI

**Asintomatici** : re-intervento riscontro piccoli frammenti

**Sintomatici** : dolore pelvico  
dispareunia  
massa addominale  
sanguinamento vaginale  
disuria  
ritenzione urinaria  
dolore addominale

Peritonite  
Ascesso intra-addominale  
Occlusione intestinale



**The interval between the initial surgery and the second surgery ranged from 8 to 72 months.**

Milad MP, Milad EA. Laparoscopic morcellator-related complications. *J Minim Invasive Gynecol.* 2014;21:486–491.

### Retained fragments after total laparoscopic hysterectomy

D. Yvette LaCoursiere. MD. MPH. John Kennedy. MD. and Clement P. Hoffman, MD  
*Journal of Minimally Invasive Gynecology* (2005) 12, 67-69

[Surg Laparosc Endosc Percutan Tech.](#) 2010 Jun;20(3):e123-4. doi: 10.1097/SLE.0b013e3181e10c8e.

**Disseminated leiomyomatosis peritonei. Incidental finding in laparoscopy: a case report.**

[Paul PG<sup>1</sup>](#), [Naik S.](#)



Figure 6 Ectopic myoma under the dome of the diaphragm.





- 1) Posizionare la paziente in anti-Trendelenburg dopo il morcellament (1-2 volte)**
- 2) Irrigare abbondantemente l'ambiente intra-peritoneale per aspirare materiale sierematico e per rimuovere frammenti di mioma**
- 3) Una completa valutazione dell'addome e della pelvi deve essere seguito e qualsiasi frammento di mioma residuo rimosso**

## MIOMECTOMIA LAPAROSCOPICA: ...OGGI...2014 .....

DISSEMINAZIONE DI TESSUTO SARCOMATOSO OCCULTO



DISSEMINAZIONE TESSUTO MIOMATOSO BENIGNO

**Table 1**

Risk factors for uterine sarcoma

Variable	Effect
<u>Age</u>	Mean age at diagnosis 60 years [71]
Black race	Two-fold higher incidence of LMS [72]
<u>Tamoxifen therapy</u>	Prolonged tamoxifen use defined as $\geq 5$ years [73]
<u>Pelvic irradiation</u>	Association especially strong for carcinosarcoma [74]
HLRCC	Rare autosomal dominant syndrome. Uterine sarcomas associated with HLRCC are often found in younger women [75]
Survivors of childhood retinoblastoma	Higher risk of sarcomas in general, including uterine sarcomas [76]

HLRCC = hereditary leiomyomatosis and renal cell carcinoma;  
LMS = leiomyosarcoma.

## MIOMECTOMIA LAPAROSCOPICA: ...OGGI...2015.....?

### DISSEMINAZIONE DI TESSUTO SARCOMATOSO OCCULTO



### DISSEMINAZIONE

**1) Trazione: enucleazione «mioma»**



**2) Morcellament : cellule maligne**

**3) Morcellament : minuti frammenti di « mioma »**

Leung F, Terzibachian JJ. 2012. Re: The impact of tumor morcellation during surgery on the prognosis of patients with apparently early uterine leiomyosarcoma. *Gynecologic Oncology* 124:172–173.

## CLINICA : DIAGNOSI DIFFERENZIALE

### FIBROMI

- . Nodi multipli
- . Dimensioni variabili
- . Consistenza compatta
- . Aspetto fascicolato
- . Colore bianco grigio
- . Limiti definiti
- . Assenza infiltrazione parete vasale

### SARCOMA

- . Mioma singolo
- . Mioma  $\varnothing >10$  cm
- . Consistenza molle, friabile
- . Superficie carnosa
- . Colore giallo-bruno
- . Infiltrazione tessuto fibro-muscolare
- . Infiltrazione parete vasale



mioma



mioma



Esame istologico  
definitivo:  
sarcoma stromale

# MIOMECTOMIA LAPAROSCOPICA

## MORCELLEMENT: LIMITI

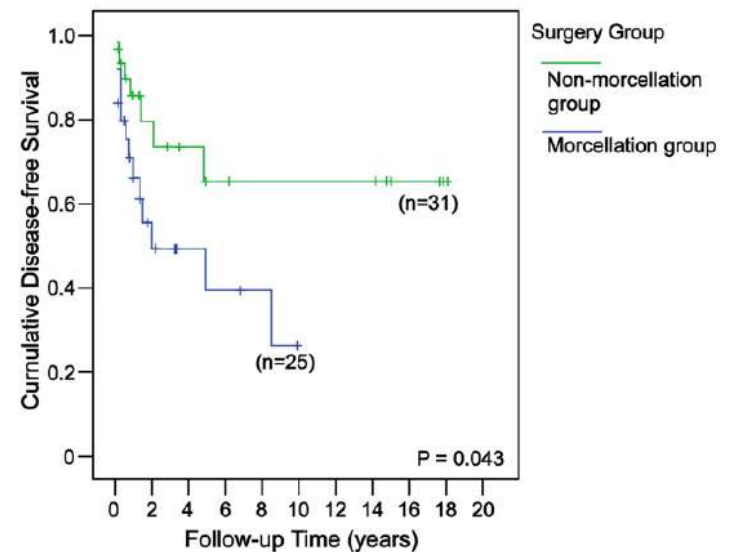
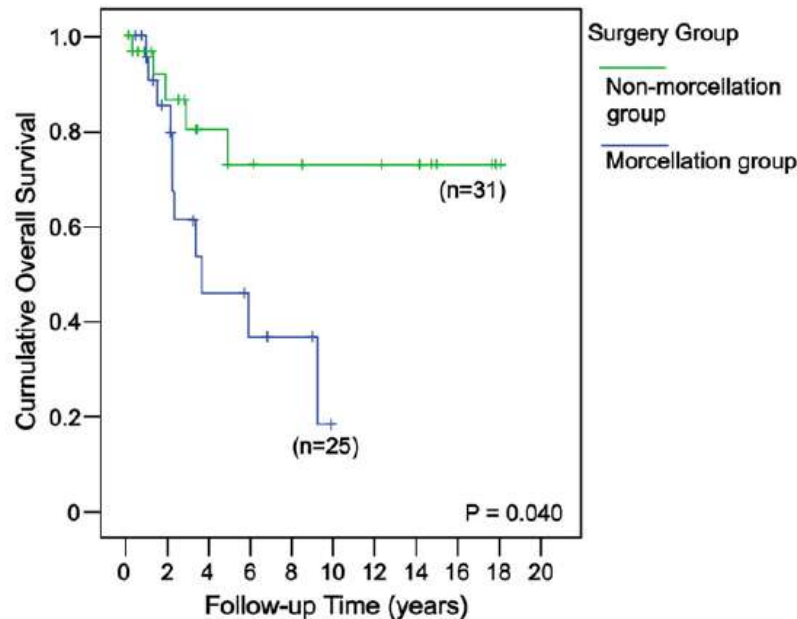
(Impianto intraddominale di tessuto sarcomatoso frammentato)

### MALIGNO Leiomyosarcoma

The impact of tumor morcellation during surgery on the prognosis of patients with apparently early uterine leiomyosarcoma<sup>☆,☆☆</sup>

Jeong-Yeol Park, Sun-Kyung Park, Dae-Yeon Kim, Jong-Hyeok Kim, Yong-Man Kim, Young-Tak Kim, Joo-Hyun Nam\*

**Conclusion.** Tumor morcellation during surgery increased the rate of abdomino-pelvic dissemination and adversely affected DFS and OS in patients with apparently early uterine LMS.



Case Report

## Biopsy of Uterine Leiomyomata and Frozen Sections Before Laparoscopic Morcellation

Togas Tulandi, MD, MHCM\*, and Alex Ferenczy, MD

**Fig. 1**

(A) Tru-Cut needle is inserted percutaneously into the abdominal cavity. (B) Biopsy needle inside the uterine myoma. Note vasoconstriction on the surface of the uterine wall after injection of a dilute solution of vasopressin. (C) Needle with a biopsy specimen.



**(Tru-Cut needle via the transabdominal route)**

# CONTROVERSIE

(Tru-Cut needle via the transabdominal route)

- . Biopsie multiple
- . Materiale inadeguato per la lettura
- . Rischio di disseminazione di cellule
- . Falsi negativi (fissaggio del tessuto)
- . Falsi positivi
- . Tempo di attesa del congelatore

LESIONI CON CELLULARITA', ATIPIA  
CITOLOGICA, MITOSI, NECROSI COAGULATIVA

miomectomia

**LAPAROTOMIA**

isterectomia



# MORCELLEMENT E NUOVE STRATEGIE ALTERNATIVE

**Azzerare  
il rischio di  
disseminazione  
Intraperitoneale  
di tessuto**



**OBIETTIVO**

**Morcellare**

- 1) nell'endobag disteso dalla CO2**
- 2) sotto controllo laparoscopico**

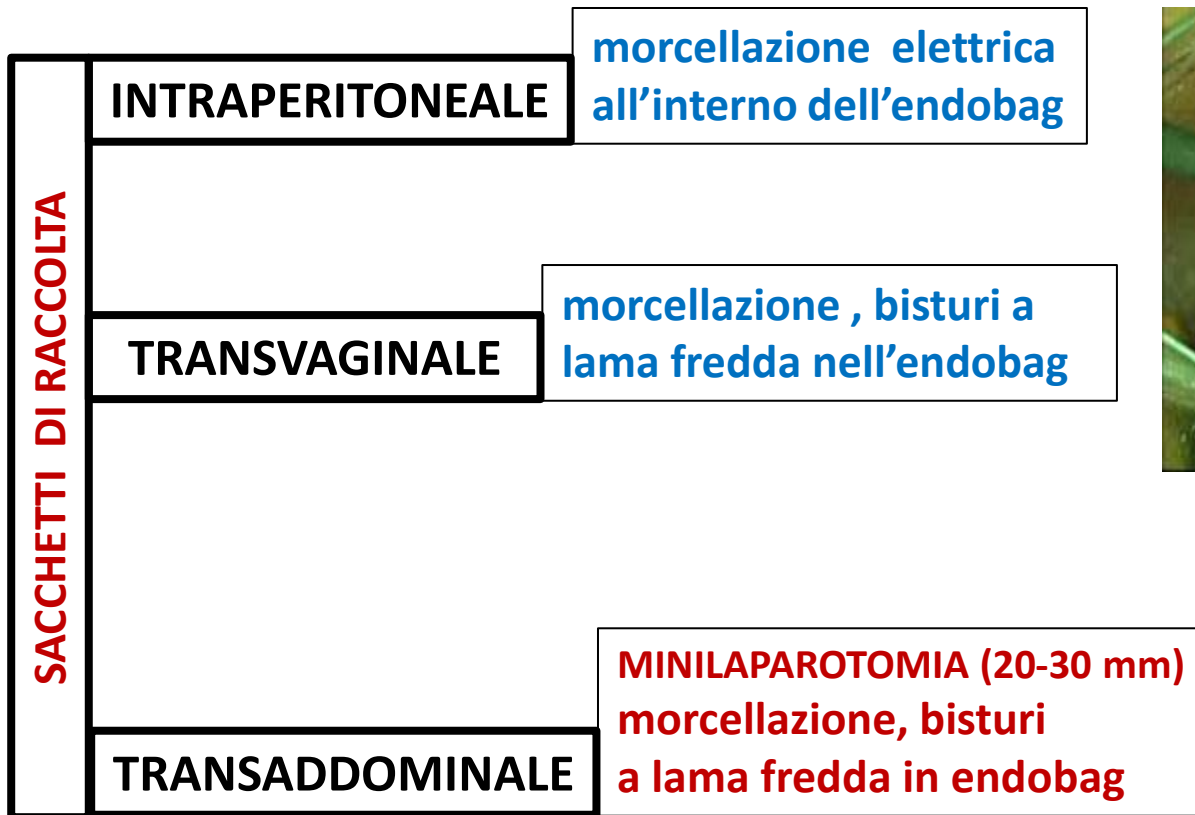
**evitare**



**evitare**



# MORCELLEMENT E NUOVE STRATEGIE ALTERNATIVE



# Laparoscopic hysterectomy with manual morcellation of the uterus

An original technique that permits the safe and quick removal of a large uterus

Eli Serur, MD; Nisha Lakhi, MD



We routinely employ a polyurethane Endo Catch II 15-mm specimen pouch (Covidien Surgical, Mansfield, MA), which can accommodate a uterus that is as large as 22 weeks. ~~First, the cannula is~~

**Incisione 20-30 mm, parete addominale**



Morcellation is performed extracorporeally.

## Laparoscopic hysterectomy with manual morcellation of the uterus

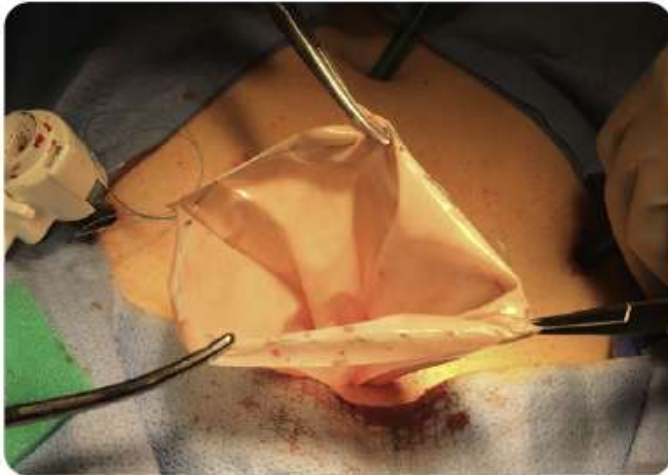
An original technique that permits the safe and quick removal of a large uterus

Eli Serur, MD; Nisha Lakhi, MD



Uterus is extracted in fragments.

**FIGURE 1**  
**Contained manual morcellation**



Edges of the specimen bag brought through an abdominal incision (extended port site) in preparation for contained manual morcellation.

*Senapati. Power morcellators: current practice and risk assessment. Am J Obstet Gynecol 2014.*

**FIGURE 3**  
**Contained vaginal morcellation**

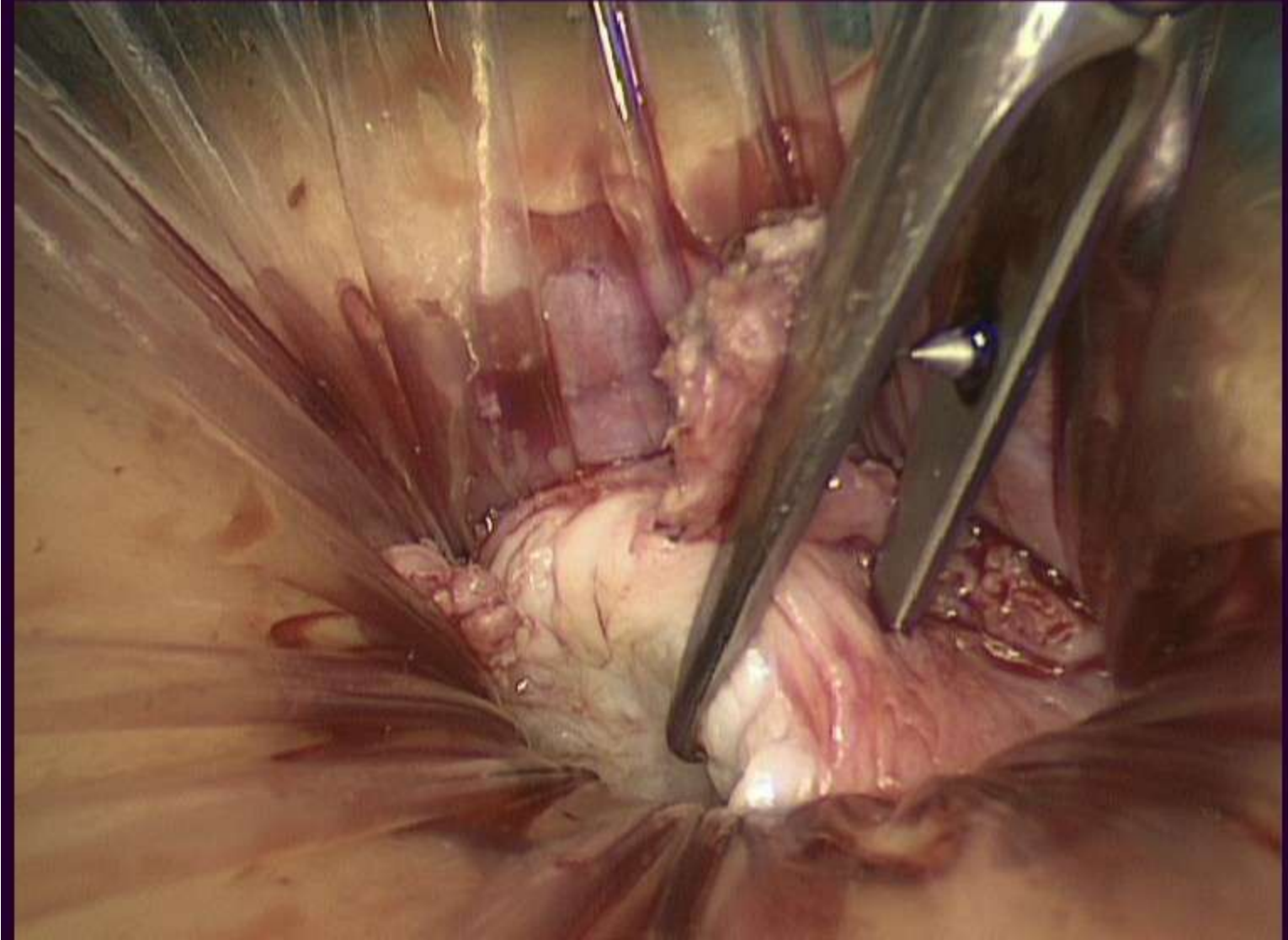


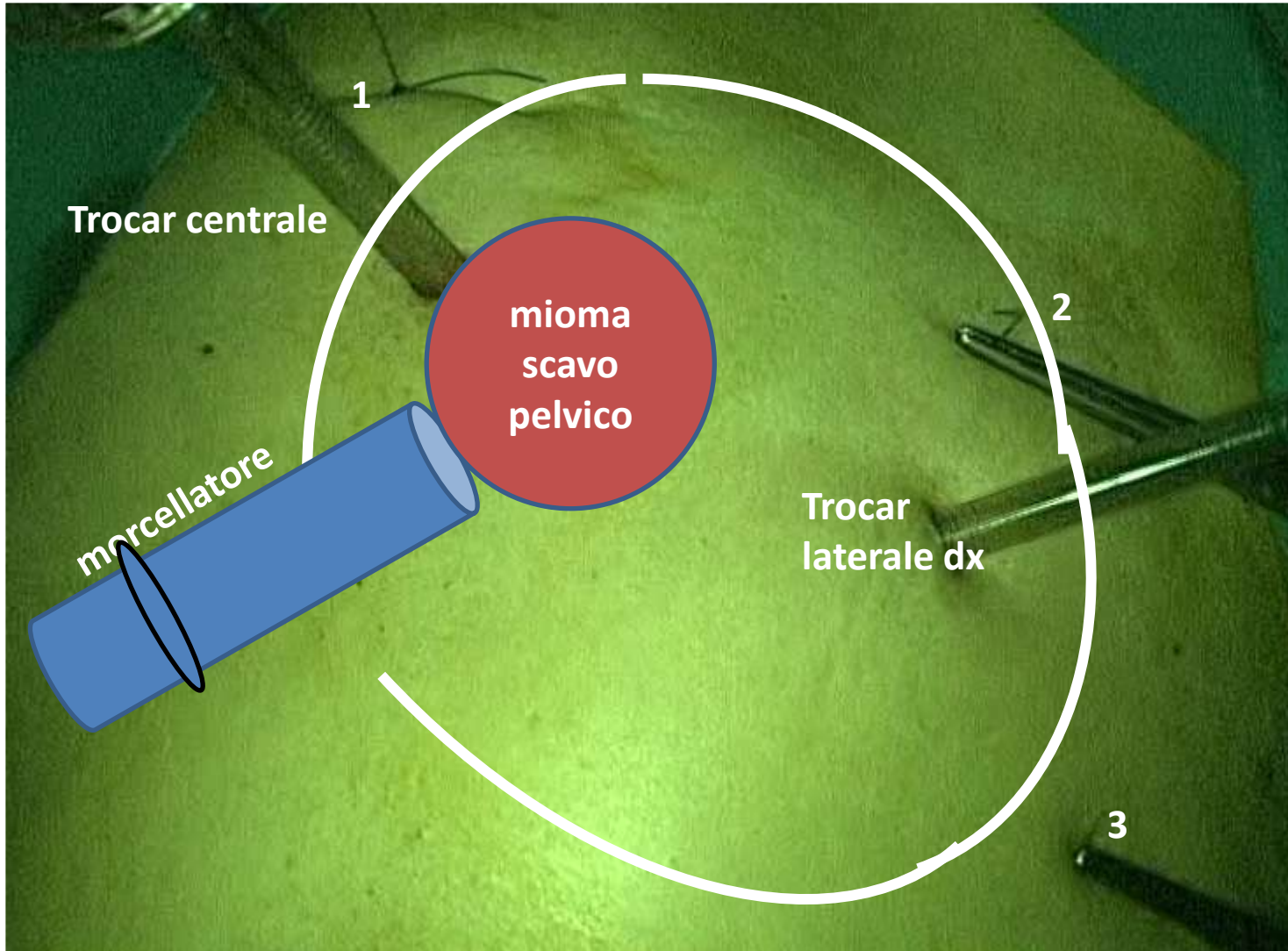
Vaginal morcellation of a large fibroid uterus contained in a specimen bag.

*Senapati. Power morcellators: current practice and risk assessment. Am J Obstet Gynecol 2014.*



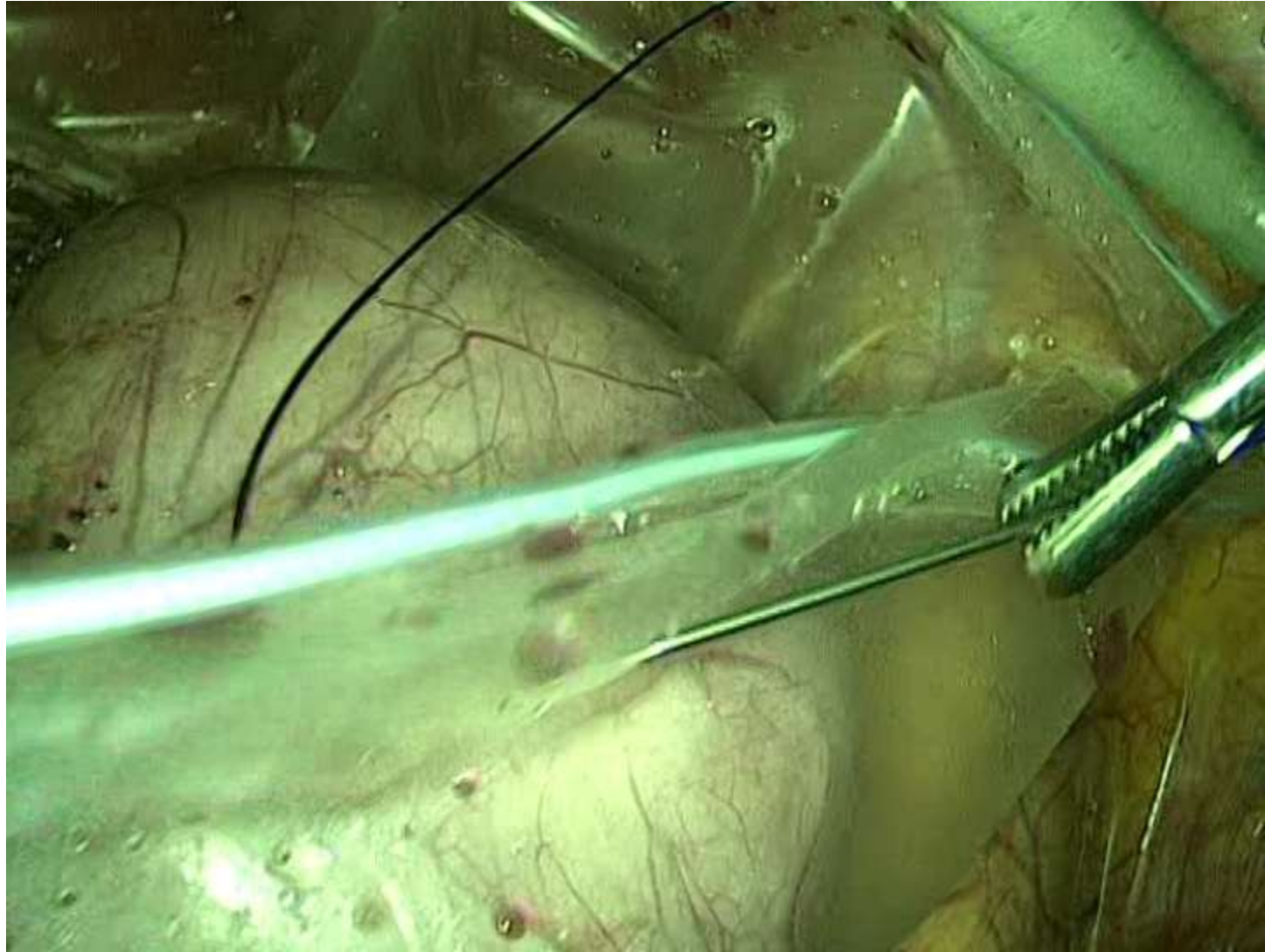
**Sacchetto di poliuretano:  
diametro 13x23 cm**



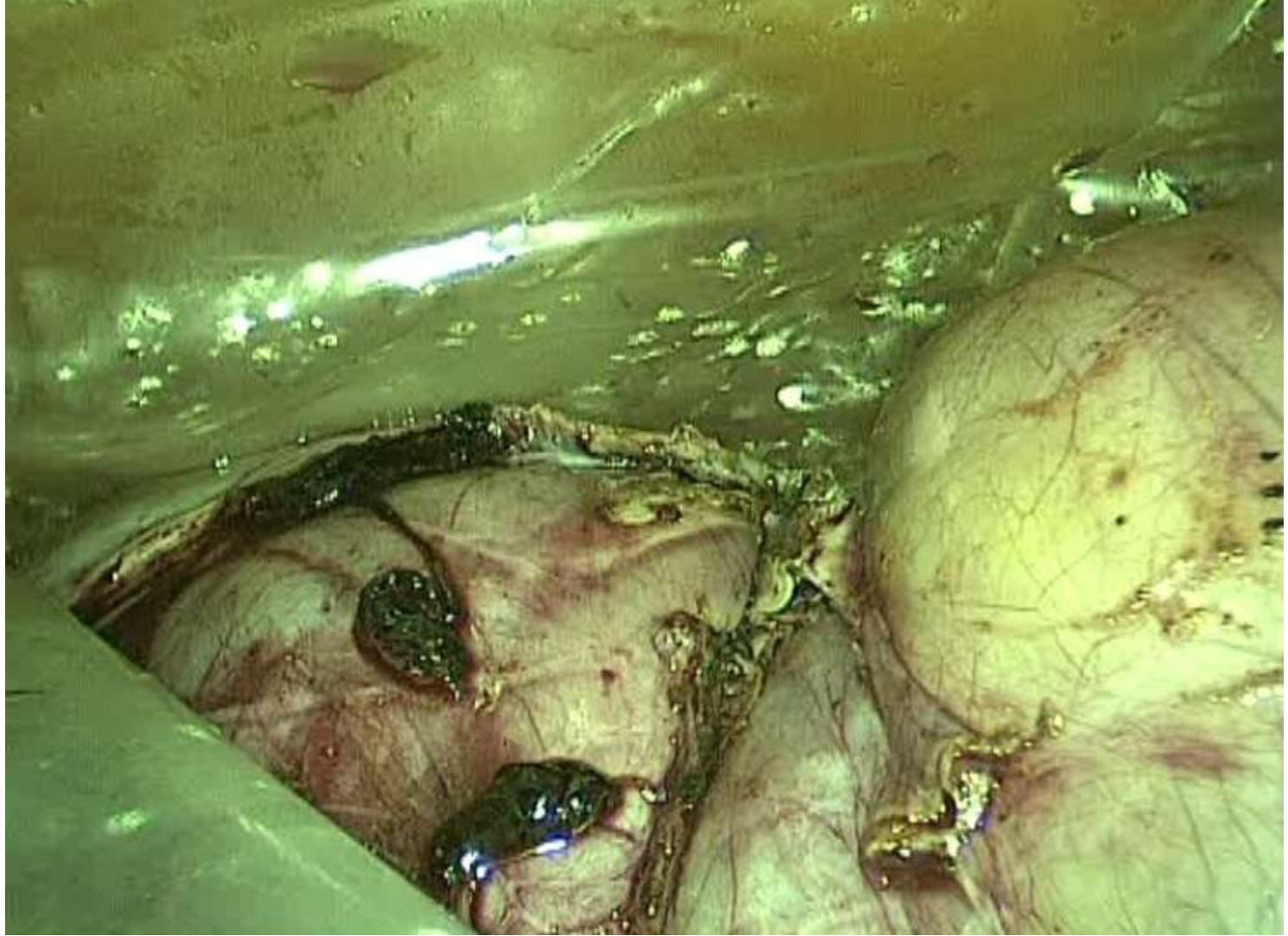




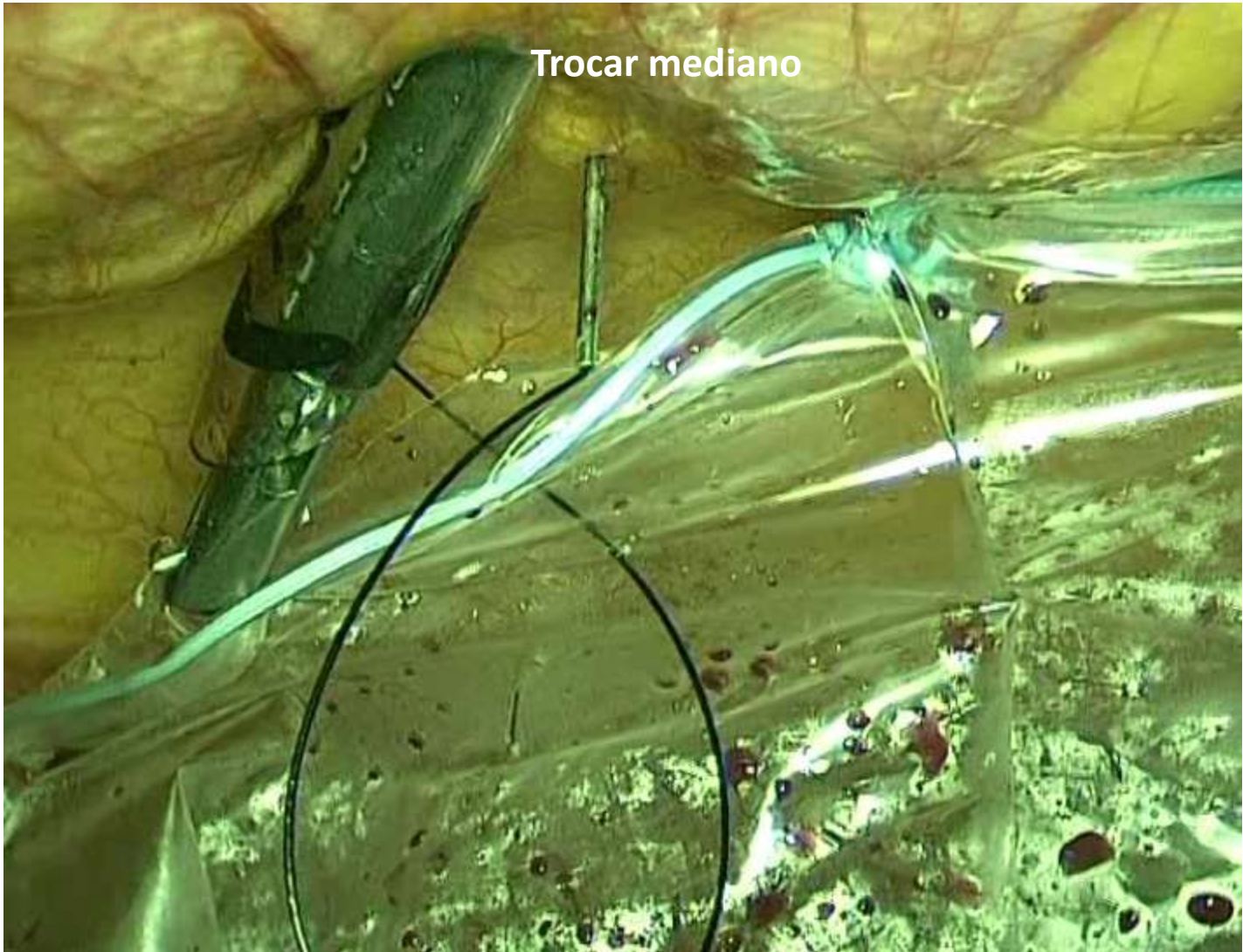


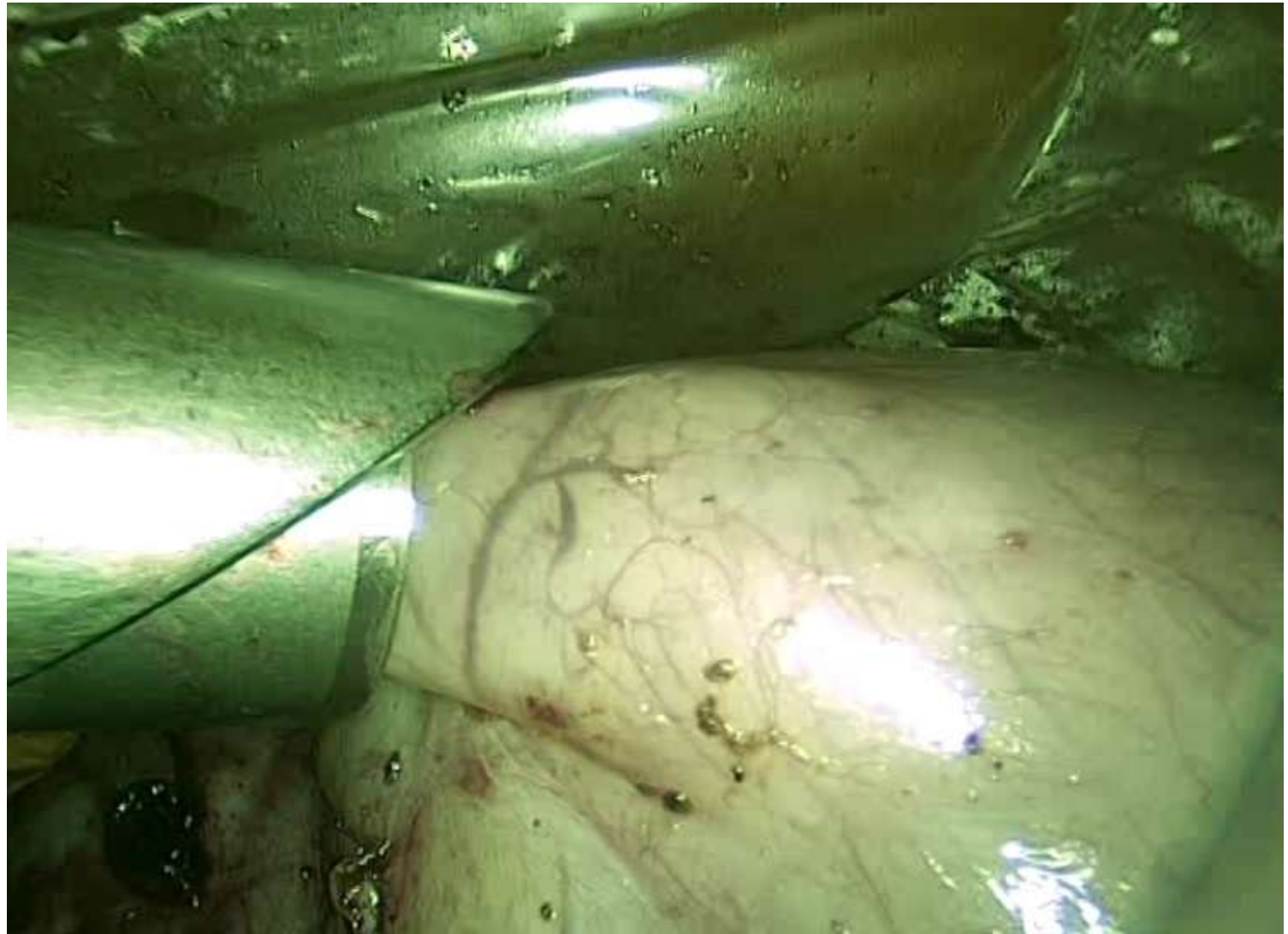


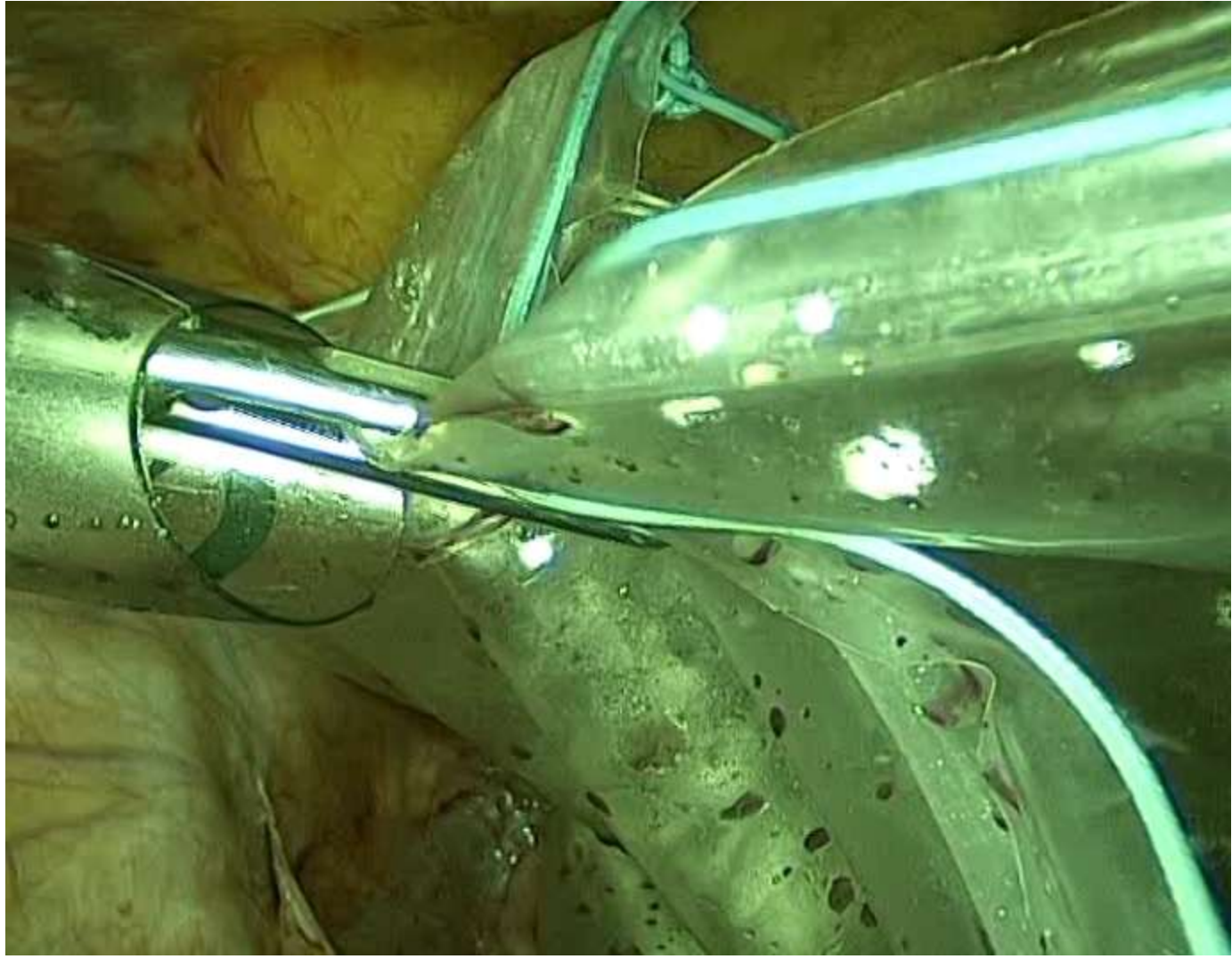


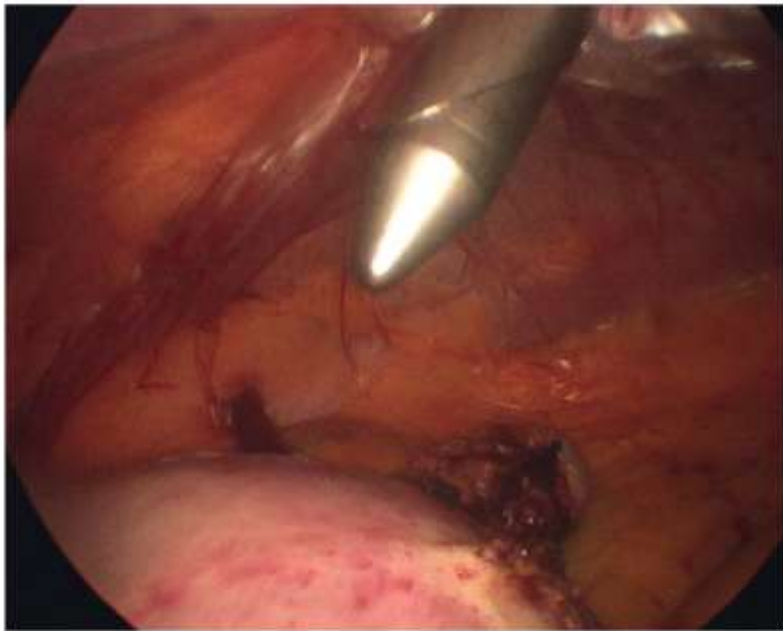


Trocar mediano









**Single port**



~~insufflated~~. The laparoscopic camera and morcellator are placed through the access port and the uterine specimen is morcellated under direct vision. ~~All small~~

**Fig. 5.** Introduction of morcellator device within the insufflated isolation bag.

Cohen. *Morcellation Within an Insufflated Isolation Bag*. *Obstet Gynecol* 2014.

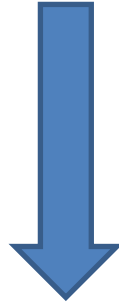
**CONCLUSION:** Morcellation within an insufflated isolation bag is a feasible technique. Methods for morcellating uterine tissue in a contained manner may provide an option to minimize the risks of open power morcellation while preserving the benefits of minimally invasive surgery.

(*Obstet Gynecol* 2014;124:491–7)



# CONCLUSIONI

- . ESIGUA INCIDENZA DI LMS INATTESI ( 0.13-0.81%)
- . SCARSI DATI IN LETTERATURA SULL'OUTCOME DOPO MORCELLEMENT DI LMS



## COUNSELING SULL'IMPOSSIBILITÀ DIAGNOSI PREOPERATORIA DI LMS

Informare dell'uso e dei rischi legati al morcellatore  
Informare del rischio clinico di disseminazione di frammenti di sarcoma  
Informare dei benefici della chirurgia mini-invasiva

Approximately 15% of patients will be upstaged by reexploration, particularly those with LMS who underwent morcellation.

[Int J Gynecol Cancer](#). 2008 Sep-Oct;18(5):1065-70. Epub 2007 Nov 6.

**Management of uterine malignancy found incidentally after supracervical hysterectomy or uterine morcellation for presumed benign disease.**

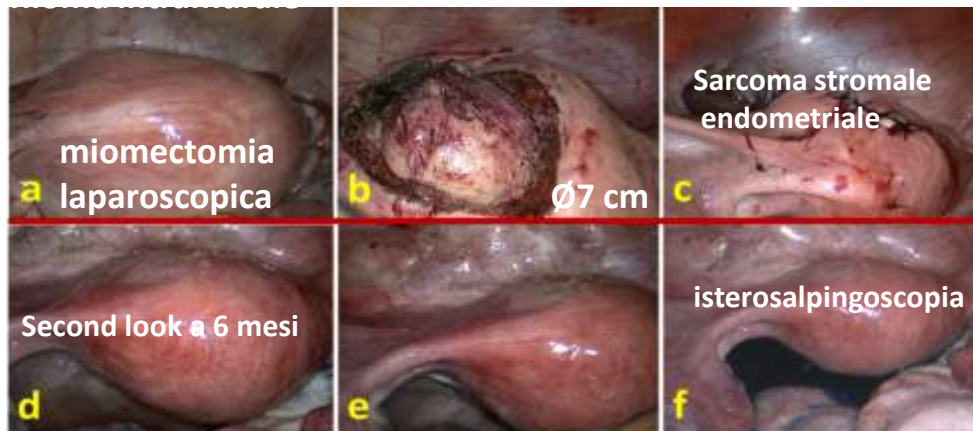
[Einstein MH](#)<sup>1</sup>, [Barakat RR](#), [Chi DS](#), [Sonoda Y](#), [Alektiar KM](#), [Hensley ML](#), [Abu-Rustum NR](#).

# Chirurgia Pelvica Mini-invasiva ed Ostetricia Operativa Università degli Studi di Padova

## CASO CLINICO

S.E. : 32 anni , nullipara

- 05/2013 miomectomia laparoscopica (es. definitivo: **sarcoma stromale endometriale** )
- 11/2013 second look laparoscopico a 6 mesi (reperto negativo)
- 12/2014 gravidanza fisiologica, taglio cesareo conservatore 37 sett.(sec. Pfannenstiel )
- 06/2015 programmato third look laparoscopico



**1 sarcoma/905 (0,1%) MIOMECTOMIE LAPAROSCOPICHE**

**Fertility sparing surgery in young women affected by endometrial stromal sarcoma:** an oncologic dilemma or a reliable option?  
review of literature starting from a peculiar case. Noventa M, Gizzo S, Conte L, Dalla Toffola A, Litta P, Saccardi C.  
Onco Targets Ther. 2014 Dec 18;8:29-35.



.... Grazie per la vostra attenzione