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VIETNAM - FRANCE - ASIA - PACIFIC
CONFERENCE ON OBSTETRICS AND GYNECOLOGY
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16th

LAPAROSCOPIC SURGERY FOR ENDOMETRIAL CANCER

INTRODUCTION

- **Endometrial cancer: the sixth most common cancer in women worldwide**

  the second most popular disease in gynecologic oncology

- **In Western countries: the most common cancer in gynecology**

- **In Asia: increased incidence of endometrial cancer**

  estimated to become the most popular gynecologic malignancy

- **In Viet Nam, uterine cancer (2002)**

  incidence: 2.5/100.000 populations

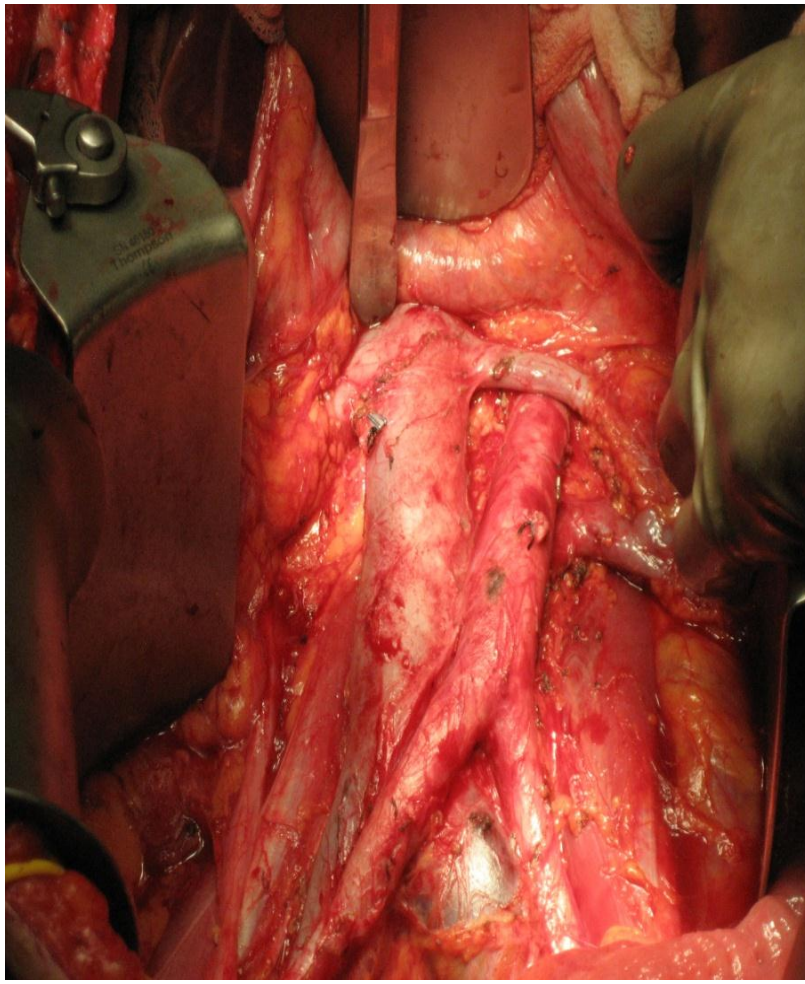
  mortality rate: 0.9/100.000 populations

- **Around 75 % endometrial cancer: diagnosed at early stage**
- **High survival rates after surgical treatment**
- **Surgery: major therapy**
- **Standard surgical procedure includes**

Total extrafascial hysterectomy

+ bilateral salpingo-oophorectomy

+ pelvic and paraaortic lymph node dissection/ LAPAROTOMY



Current trend in treatment of endometrial carcinoma is laparoscopy

Advantages of laparoscopy over traditional laparotomy:

- **Reduced post-operative pain**
- **Cosmetic effect**
- **Decreased blood loss**
- **Faster recovery time**
- **Shorter hospital stays**
- **Decreasing of perioperative complications**

Laparoscopic surgery for treatment of endometrial carcinoma: safe & effective

Laparoscopy for treatment of endometrial cancer: performed at

- Oncologic centers
- Obstetrics and gynecology hospitals
- Large general hospital

Laparoscopic lymph node dissection: relatively new & lack of experiences

Laparoscopic surgery has been employed for treatment of endometrial carcinoma at Tu Du Hospital

➔ ***Objective: to assess initially the efficacy of laparoscopy compared with open surgery***

METHODOLOGY

- 188 women suffering from endometrial cancer underwent operations at Tu Du Hospital from 10/2014 to 10/2015.
- 77 cases were performed laparoscopy surgeries
- Decision on therapeutic approaches was made by Tumor board
- Histologic diagnosis of endometrial sampling, excludes uterine sarcoma
- Prospective design
- Data analysed by using SPSS software version 20

RESULTS & DISCUSSION

Patient demographics

No difference in the subjects' age between two groups

Age

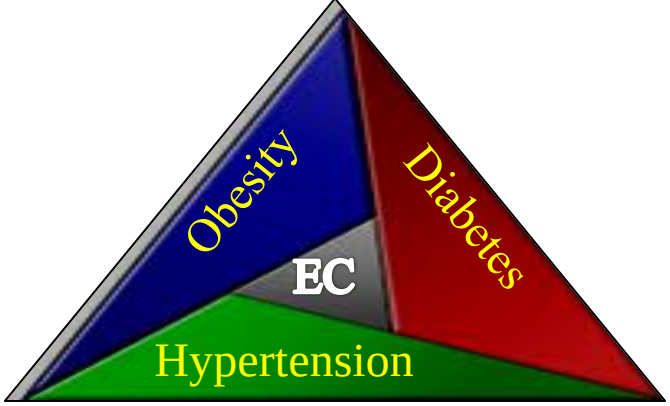
	Open surgery	Laparoscopy	P
Median	57	55	0.572
Minimum	29	28	
Maximum	74	68	

Menstrual status

	Open surgery	Laparoscopy	P
Pre-menopause	15	8	0,342
Post-menopause	96	69	

Marital status

	Open surgery	Laparoscopy	P
Married	99	67	0,407
Single	12	10	



Medical history

	Open surgery	Laparoscopy	P
Hypertension	20	12	0,539
Diabetes	8	3	

BMI : **Obese class I patients were more common in the laparoscopy group**

	Open surgery	Laparoscopy	P
Mean BMI	22,54	23,95	0,274
Underweight (<18,5)	19	2	0,004
Normal (18,5-24,9)	65	48	
Obese class I (25-29,9)	21	26	
Obese class II (30-39,9)	4	1	
Obese class III (>40)	0	0	

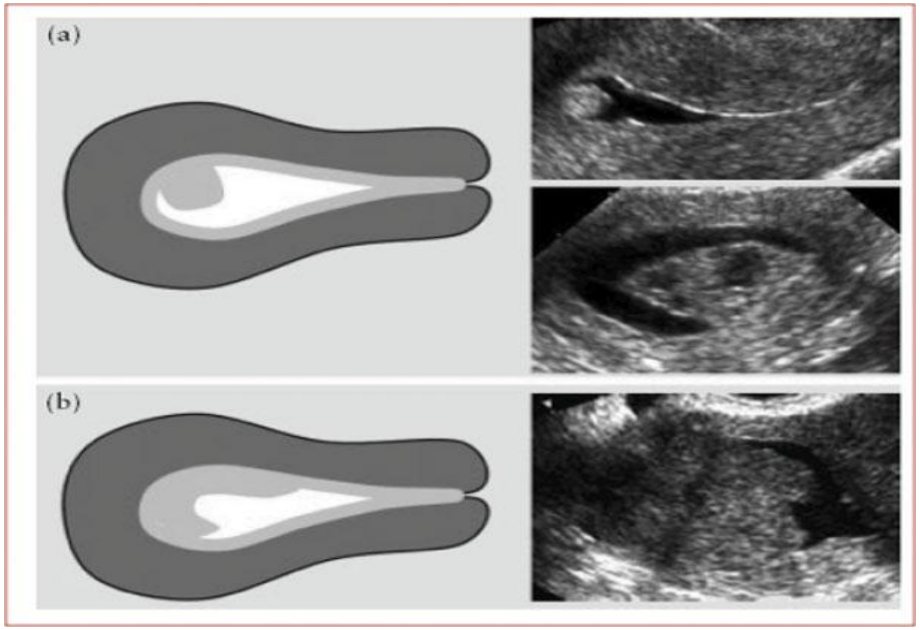
Symptoms

	Open surgery	Laparoscopy	P
Abnormal uterine bleeding	98	66	0,79
Increased vaginal fluid	7	4	
Pelvic pain	2	3	
Urinary intestinal disorders	3	2	
Others	1	2	

Abnormal uterine bleeding was the most common symptom, accounted for 87.2%

Imaging diagnosis

Sonography:



100% of patients underwent transvaginal and abdominal US

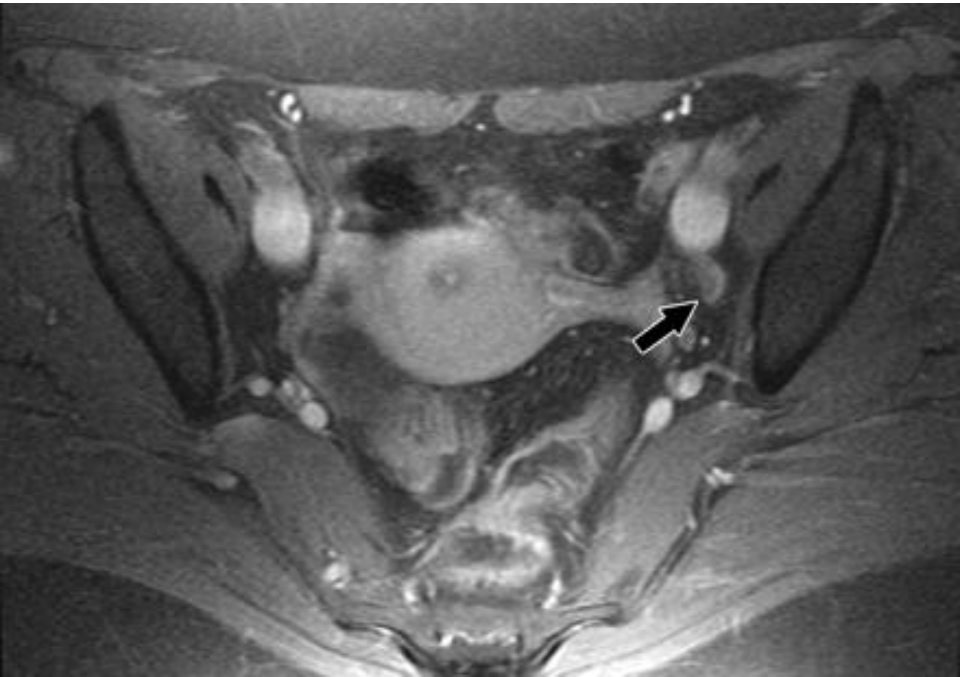
- **Assessed endometrium**
- **Examined lymph notes and metastases**
- **Evaluated myometrial invasion or cervical involvement**

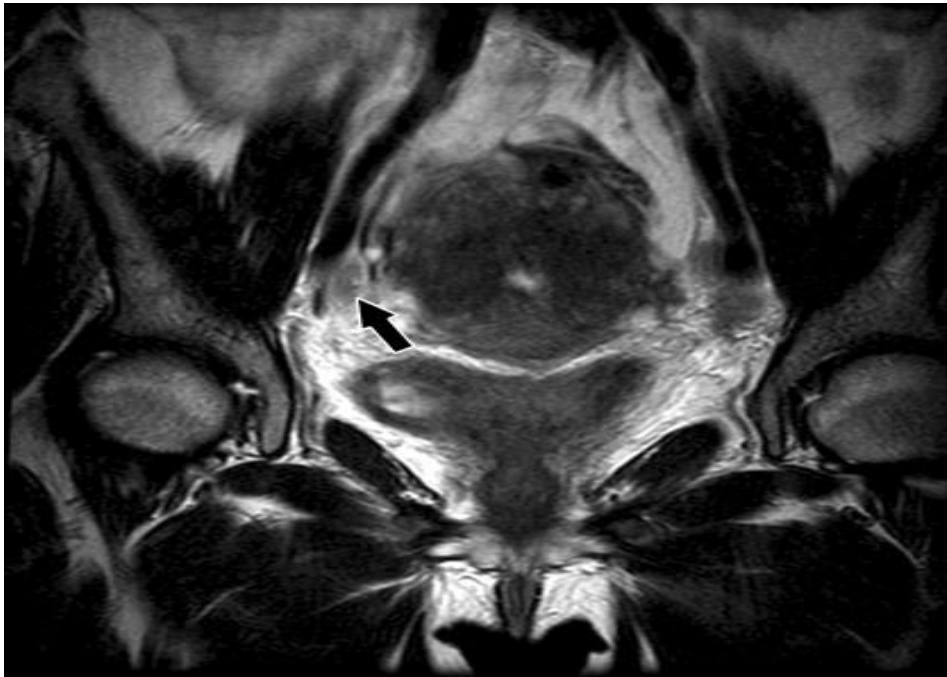
MRI: contrast-enhanced magnetic resonance imaging

Majority of patients offered preoperative MRI

1 patient had no MRI since the diagnosis of endometrial cancer invaded myometrium was made after laparoscopic hysterectomy for complex – atypical endometrial

MRI aimed to evaluate preoperative staging, particularly myometrial invasion. MRI for staging had accuracy of 80-85%.



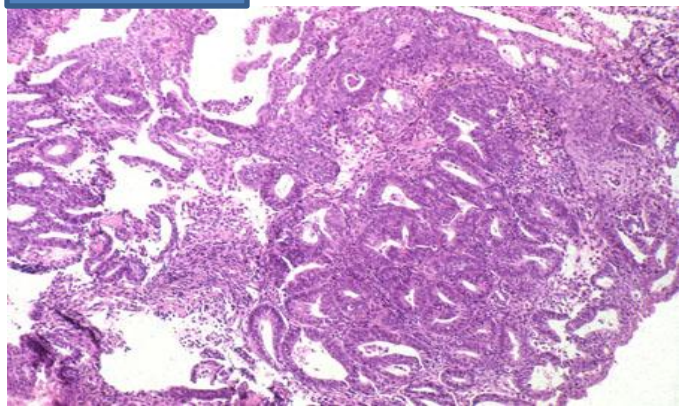


Histologic characteristics

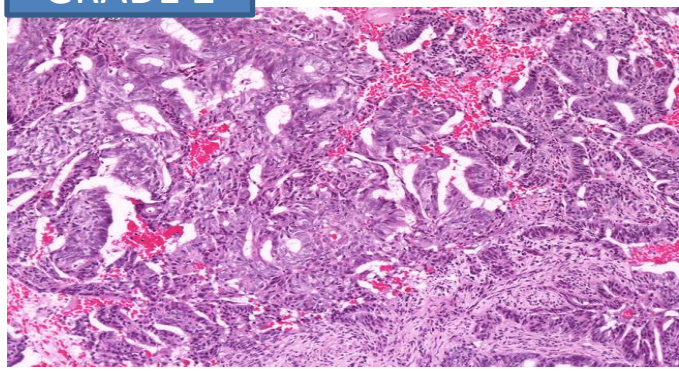
Endometrial samplings performed in all patients

	Open surgery	Laparoscopy	P
Grade 1 carcinoma	98	68	0,589
Grade 2 carcinoma	6	2	
Grade 3 carcinoma	3	1	
Clear cell carcinomas	3	3	
Carcinosarcoma	1	2	
Other	0	1	

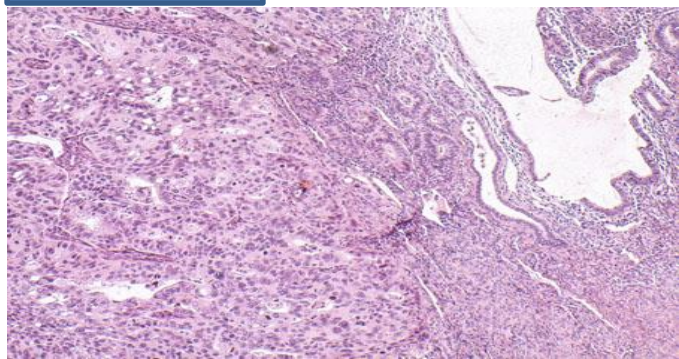
GRADE 1



GRADE 2

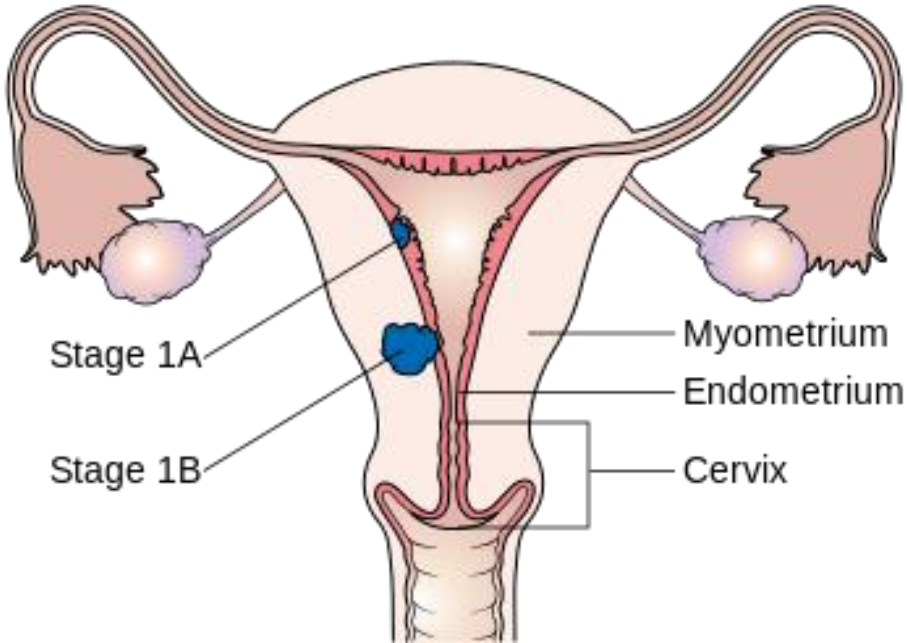


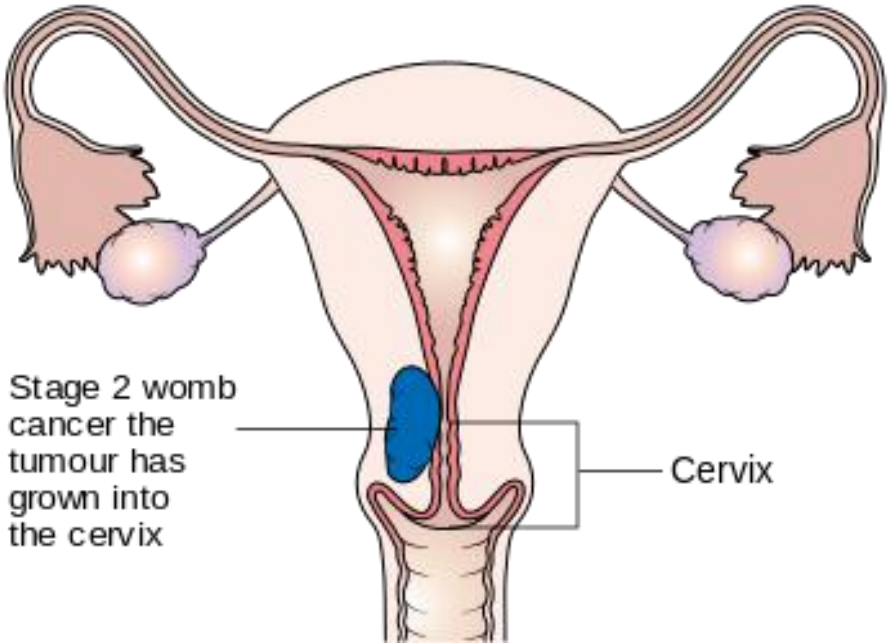
GRADE 3



Preoperative staging (FIGO 2009)

Stage	Open surgery	Laparoscopy	P
IA	59	51	0,189
IB	40	19	
II	12	7	





Surgical procedures

	Open surgery	Laparoscopy	P
Hysterectomy + BSO	36	6	0,0001
Hysterectomy + BSO + PLND	49	49	
Radical hysterectomy + BSO	6	0	
Radical hysterectomy + BSO + PLND	13	22	
Hysterectomy + BSO + Omentum	2	0	
Radical hysterectomy+BSO+Omentum+PLND	3	0	
Others	2	0	

- **2 cases changed from laparoscopy to laparotomy**
- **Significant differences in the numbers of cases underwent lymph nodes dissection in laparoscopy group compared with those in laparotomy group**

BSO = bilateral salpingo-oophorectomy; PLND = pelvic lymph node dissection

VIDEO

Evaluation of myometrial invasion

	Open surgery	Laparoscopy	P
Tumor invaded < ½ myometrium	65	53	0,152
Tumor invaded > ½ myometrium	46	24	

Prevalence of pelvic lymph node dissection

	Open surgery	Laparoscopy	P
No	43	6	0,0001
Pelvic lymph node dissection	68	71	

Prevalence of pelvic lymph node dissection was 92.2% in laparoscopy group, compared with 61,3% in laparotomy one.

Prevalence of pelvic nodal metastases

12,2% of 139 patients had nodal metastases, no difference between two groups

	Open surgery	Laparoscopy	P
Positive	10	7	0,383
Negative	58	64	

Prevalence of pelvic nodal metastases in endometrial cancer was 10% reported in several studies

Pham Van Bung *et al*: 8,6%, lower than current study

Myometrial invasion

crucial feature affected pelvic nodal metastases

	Invaded < ½ myometrium	Invaded > ½ myometrium	**P**
No nodal metastases	70	52	0,002
Nodal metastases	3	14	

26.9% of cases had nodal metastases when tumor invaded > ½ myometrium, while this figure accounted for only 4.3% of cases having less invasive

The prevalences were 27.2% vs 3.8% in open surgery group and 20.8% vs 4.3% in laparoscopy group, respectively.

Pelvic lymph node dissection

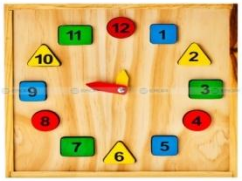
No	Selective dissection	Routine dissection	Radical dissection

Selective pelvic lymphadenectomy

Risk:

- Invaded > ½ myometrium
- Tumor's diameter > 2 cm
- Grade 3
- Type 2: clear cell, serous carcinoma or carcinosarcoma

Operative time



	Open surgery	Laparoscopy	P
Hysterectomy + BSO	108,89’	135,00’	0,008
Hysterectomy + BSO + PLND	136,73’	192,86’	0,0001
Radical hysterectomy + BSO	118,33’		
Radical hysterectomy + BSO + PLND	147,69’	218,64’	0,0001
Hysterectomy + BSO + Omentum	135,00’		
Radical hysterectomy+BSO+Omentum+PLND	160,00’		
Others	180,00’		
	129,37’	195,71’	0,0001

Janda *et al*: Laparoscopy consumed more time than laparotomy

(138 ± 43 mins versus 109 ± 34 mins)

Laparoscopy required highly skillful and experienced surgeons.

➔ Needs thorough training in both approaches of operation & management complications

Major intraoperative complications

	Open surgery	Laparoscopy	P
Severe bleeding (need transfusion)	10	3	
Average blood loss (ml)	171,80	124,03	0,0001
Ureter injury	0	0	
Bladder injury	0	0	
Bower injury	2	0	
Other	1	0	
Total	13	3	

No severe vascular injury

Jacques Donnez: common vascular injuries when performing pelvic Lymph node dissection included iliac vessels and several branches of hypogastric arteries such as uterine arteries, superior vesicle arteries and umbilical arteries

Postoperative complications

	Open surgery	Laparoscopy
Wound infection	6	0
Wound dehiscense	1	0
Vaginal cuff infection	7	4
Pelvic abscess	1	1
Peritonitis	0	0
Occlusion	0	1
Urinary retention	4	8
Vesicovaginal fistula	0	0
Ureterovaginal fistula	0	2
Other		
Total	19	16

Complications following laparoscopic surgery appeared to be less than open operation and were common to urinary tract.

2 cases suffered from ureterovaginal fistula in laparoscopic radial hysterectomy group

Zullo *et al*

Laparoscopy: comparative safety and efficacy to abdominal surgery

Laparoscopy: improve quality of life after 6 months postoperative

Tozzi *et al*

	Open surgery	Laparoscopy
Survival rate without recurrence	94%	91%
Overall survival rates	90%	86%

Malur *et al*

No difference in recurrent rates between two surgical methods

Ju *et al*

No difference in overall survival and recurrent rates between two surgical methods

Lower complications after laparoscopy

Duration of hospital stays and antibiotic treatment

Duration of hospital stays:

Laparoscopy: 8 days

Open surgery: 10 days

Similar duration of antibiotic treatment

Laparoscopy offered cosmetic aspects due to small incision, reduced postoperative pain and fast recovery after operations

CONCLUSION

- Endometrial carcinoma is a common gynecologic cancer
- Surgery is a mainstay therapy
- Laparoscopy appears to be a promising alternative to laparotomy
- Laparoscopy has comparable to laparotomy regarding complications, while offering less wound infection, cosmetic effect and shorter hospital stays
- Laparoscopic lymphadenectomy requires advanced skills and professional experience
- Further research need to assess the recurrent and survival rates between two operative approaches and the effectiveness of adjuvant therapies such as chemo-, radio- or hormone therapies


Thank you