Aspects of Minimally Invasive Surgery: A Global Trend

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APAGE

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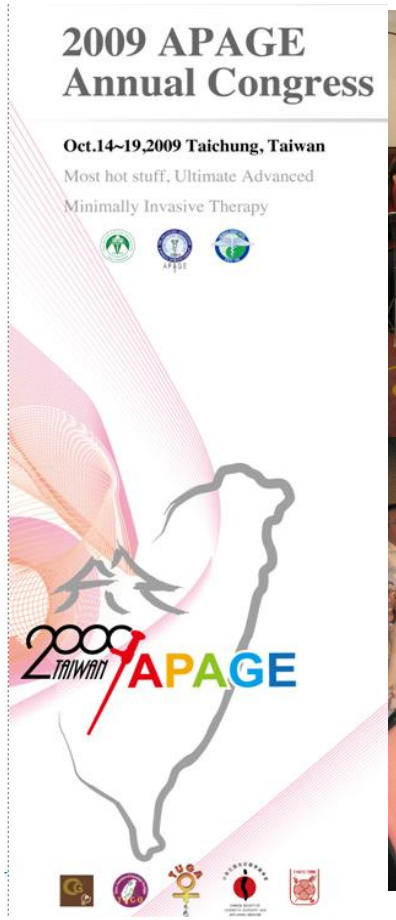
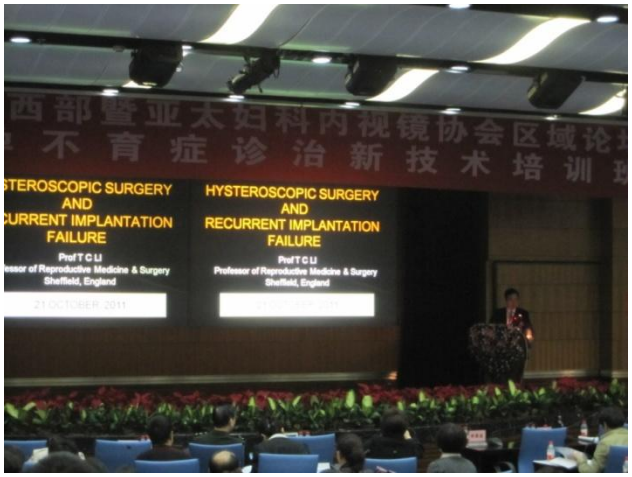


2010 Annual Congress, Singapore

2011 APAGE Regional Meeting, Beijing

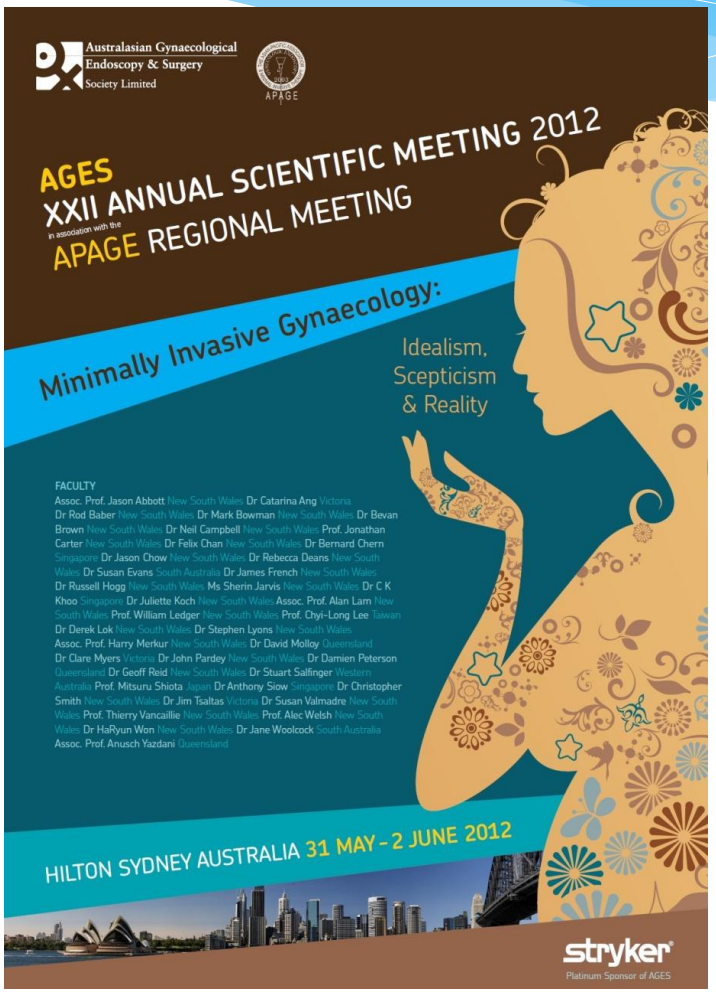
2011 APAGE Regional Meeting, Macau

2011 APAGE Regional Meeting, Chongqing

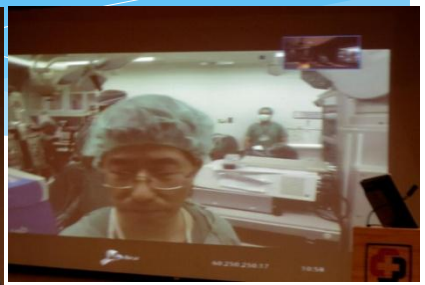


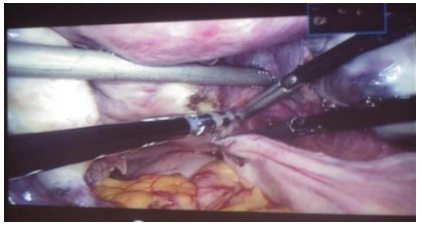
2011 APAGE Annual Congress in Japan Dec. 9~11

2012 Regional Meeting - Sydney, Australia
31 May to 2 Jun., 2012



2012 Regional Meeting - Singapore July 20-23.





2012 APAGE -13th Annual Congress, Pattaya, Thailand

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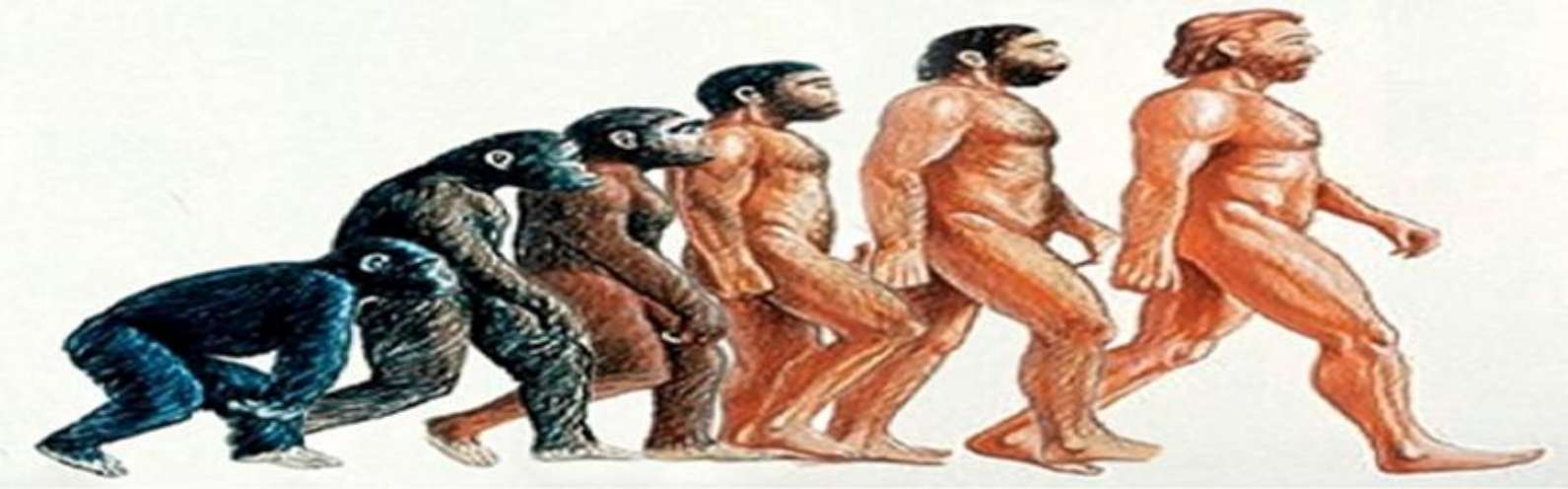
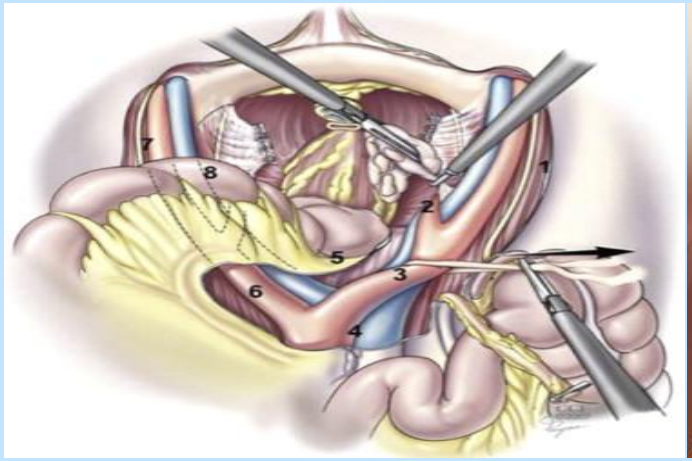
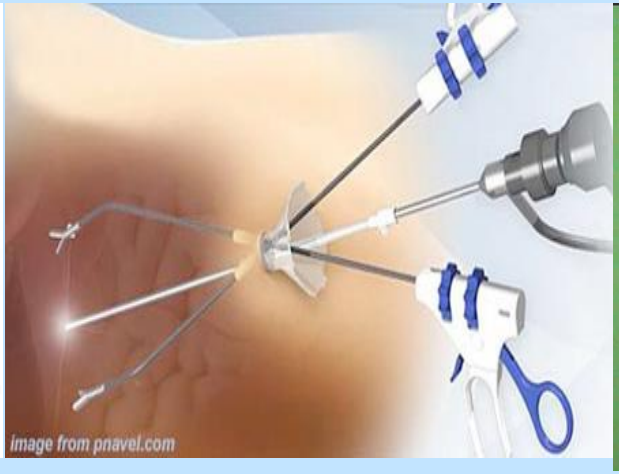
New trend of Minimal invasive surgery



Evolution or Revolution

- Laparoscopic oncologic surgery ?
- Robotic surgery ?
- Single incision surgery ?
- Nature orifice laparoscopic surgery?





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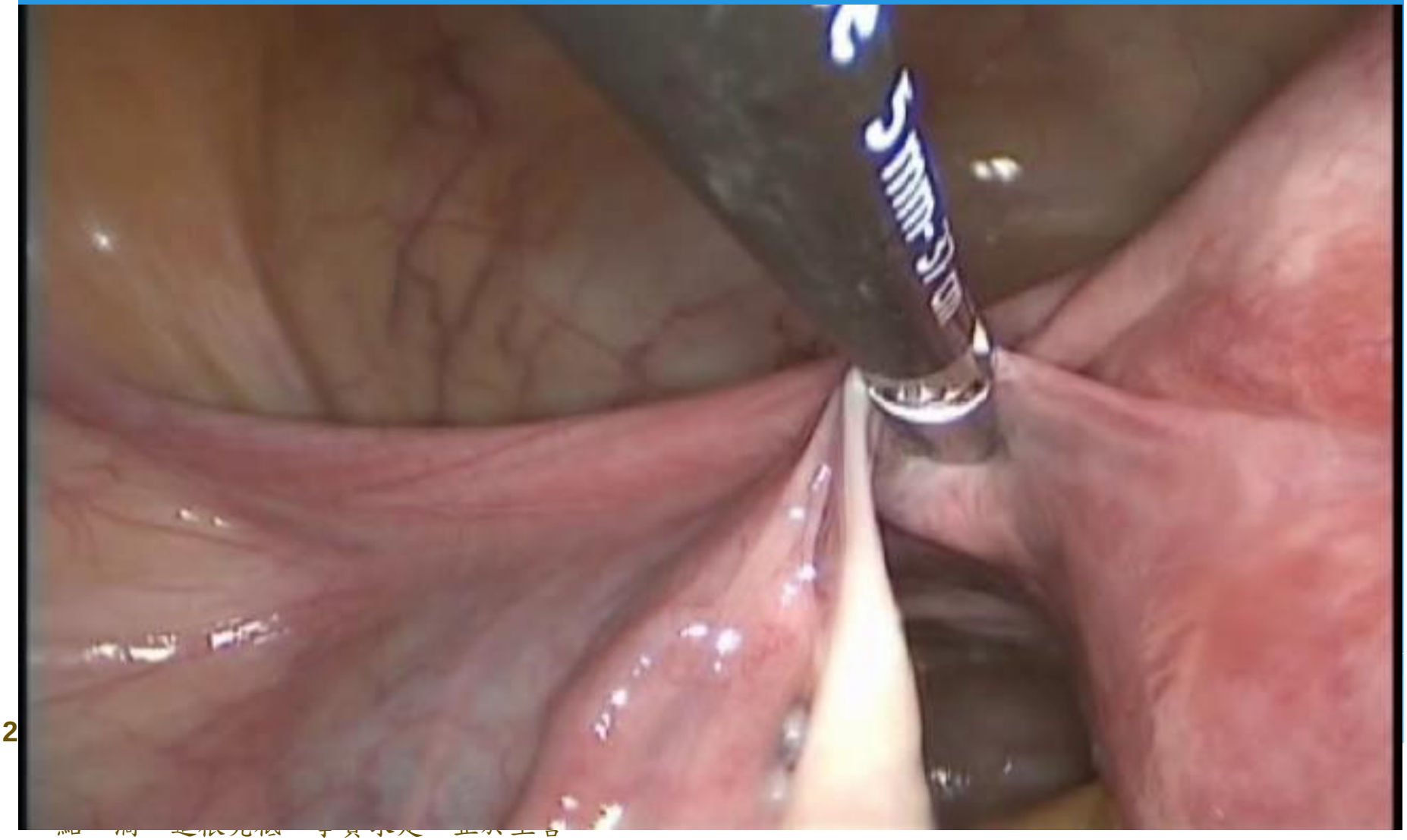
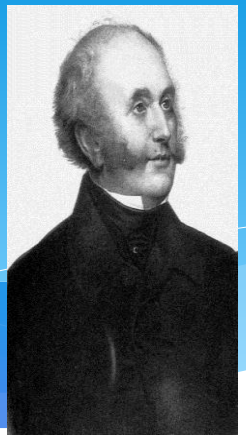



2005 3 1

* Obvious abdominal scar
* More complications
* More postoperative pain
* Longer hospital stay
* Longer recovery time

The Trend of Hysterectomy



1813 Conrad Langenbeck First vaginal hysterectomy

1863 UK Charles Clay First abdominal hysterectomy

1989 Harry Reich First laparoscopic hysterectomy

Why look through the keyhole when you can open the door.

Von Ott (1901):

The first direct inspection of the peritoneal cavity.

Hopkin and Kapany (1952):

Application of fiber optics to endoscopy.

Why are we trying to achieve with a minimally invasive surgery ?

* To reduce pain and discomfort
* To decrease the duration of hospitalization and the time to full recovery
* To avoid adhesion formation → so the complications lessen associated with adjunctive therapy, such as whole pelvic irridiation following radical hysterectomy wound decrease
* To get better outcome
* Fertility preservation

lake in Taiwan

...ion of endoscopy

Well established technique

- Ectopic pregnancy
- Ovarian cyst
- Adnexal adhesiolysis
- Tuboovarian abscess
- Endometriosis
- Retroverted uterus
- Detorsion of ovarian tumor
- Tubal ligation

ion of endoscopy

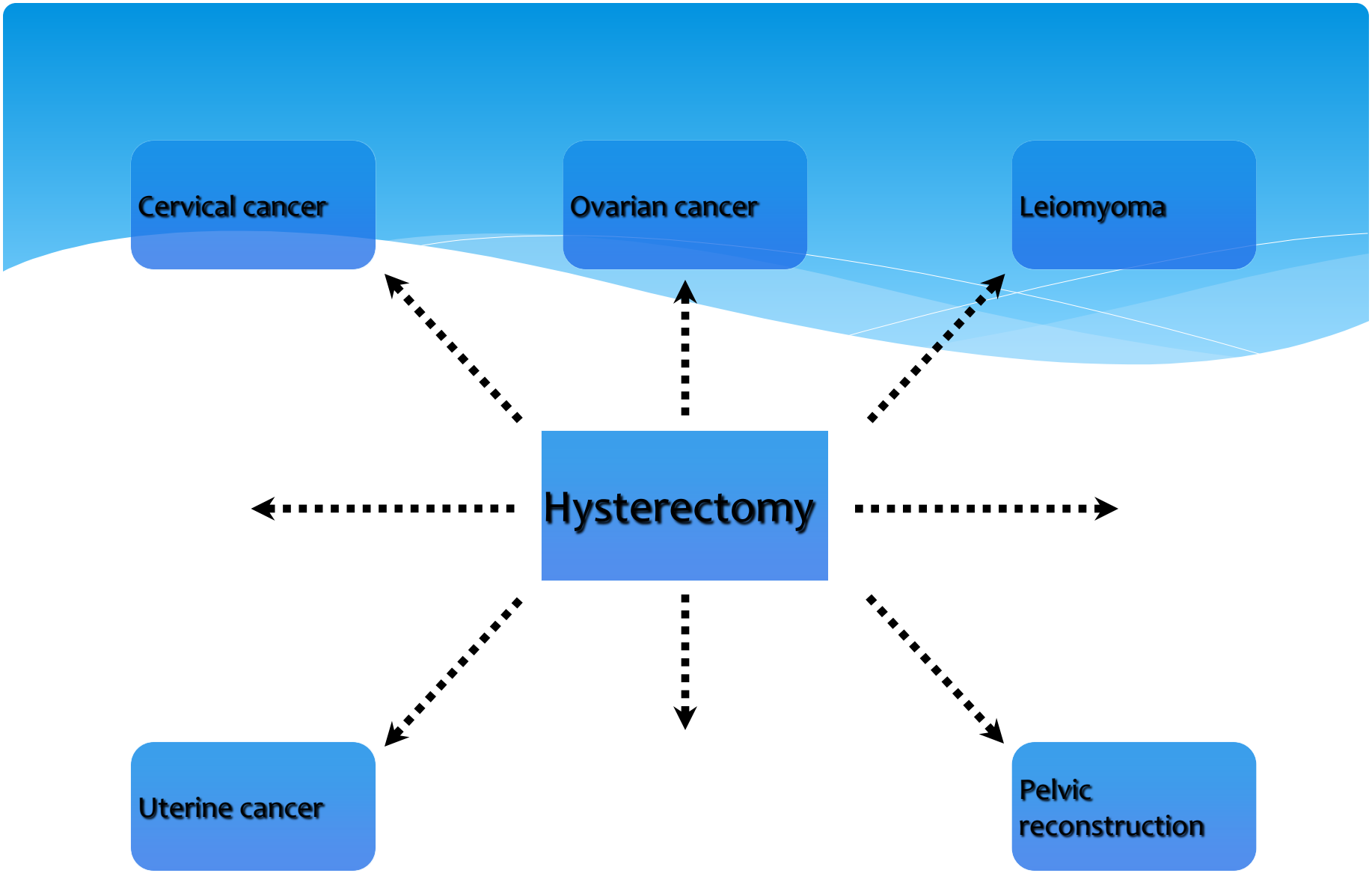
Developed Technique

- Myomectomy
- Hysterectomy
- Polycystic ovary, fimbroplasty
- Pelvic lymphadenectomy
- Second look for ov. ca.
- Anti-incontinent surgery
- Surgery for endometrial ca.

lication of endoscopy

Developing Technique

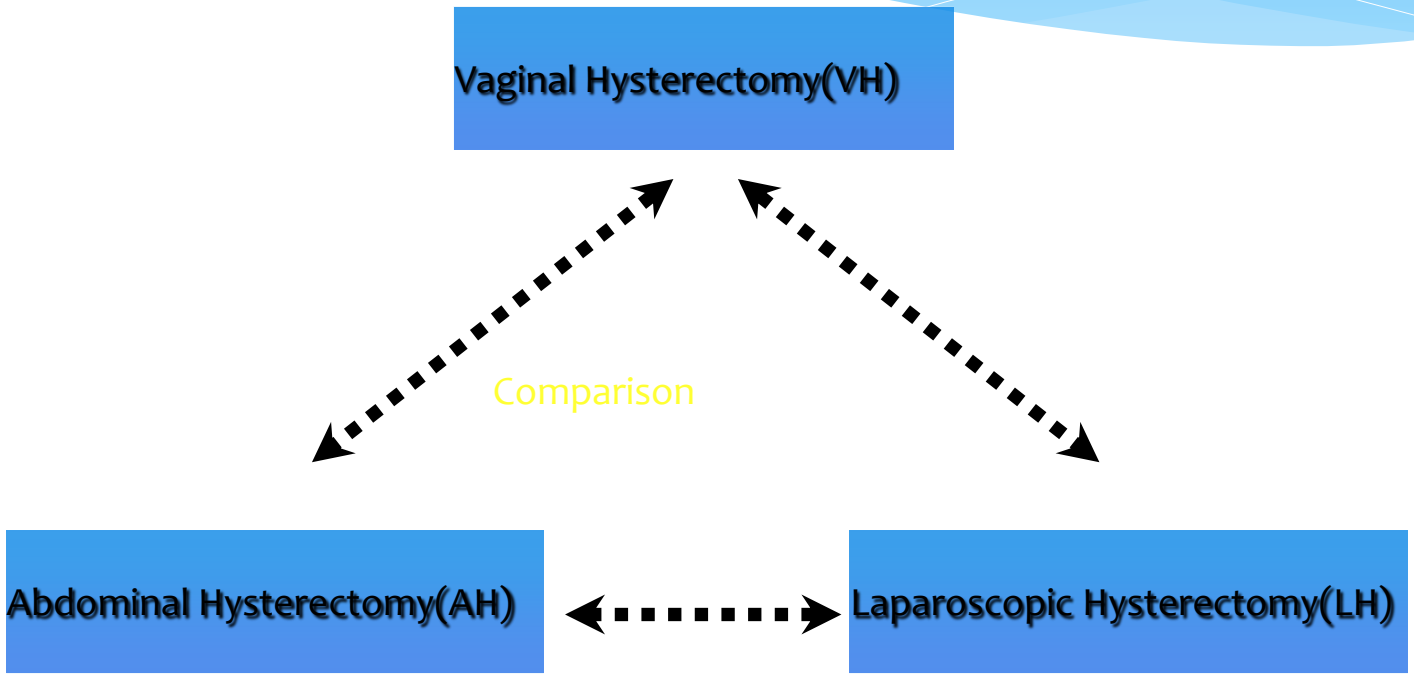
a. Laparoscopic radical hysterectomy
b. Para-aortic lymphadenectomy
c. Maximal debulking for ov. ca.
d. Pelvic floor reconstructive surgery
e. Tubal anastomosis


Cervical cancer
Ovarian cancer
Leiomyoma
Hysterectomy
Uterine cancer
Pelvic reconstruction

Harry Reich 1989

The first laparoscopic hysterectomy

Surgical approach to hysterectomy for benign gynaecological disease



Nieboer TE, Johnson N, Lethaby A, Tavender E, Curr E, Garry R, van Voorst S, Mol BWJ, Kluivers KB. Surgical approach to hysterectomy for benign gynaecological disease. Cochrane Database of Systematic Reviews 2009, Issue 3

Analysis 1.1. Comparison 1 VH versus AH, Outcome 1 Return to normal activities (days).

Review: Surgical approach to hysterectomy for benign gynaecological disease

Comparison: 1 VH versus AH

Outcome: 1 Return to normal activities (days)

Return to normal activities

Study or subgroup	VH N	Mean(SD)	AH N	Mean(SD)	Mean Difference IV,Fixed,95% CI	Weight	Mean Difference IV,Fixed,95% CI
Hwang 2002	30	29 (11)	30	41 (10)		34.0 %	-12.00 [-17.32, -6.68]
Miskry 2003	18	32 (13)	18	59 (29)		4.5 %	-27.00 [-41.68, -12.32]
Ottosen 2000	40	21.3 (8.5)	40	28.1 (9.5)		61.6 %	-6.80 [-10.75, -2.85]
Total (95% CI)	**88**		**88**			**100.0 %**	**-9.47 [-12.57, -6.37]**

Heterogeneity: $Chi^2 = 8.10$, $df = 2$ ($P = 0.02$); $I^2 = 75\%$

Test for overall effect: $Z = 5.99$ ($P < 0.00001$)

Vag

Abd

Nieboer TE, Johnson N, Lethaby A, Tavender E, Curr E, Garry R, van Voorst S, Mol BWJ, Kluivers KB. Surgical approach to hysterectomy for benign gynaecological disease. Cochrane Database of Systematic Reviews 2009, Issue 3

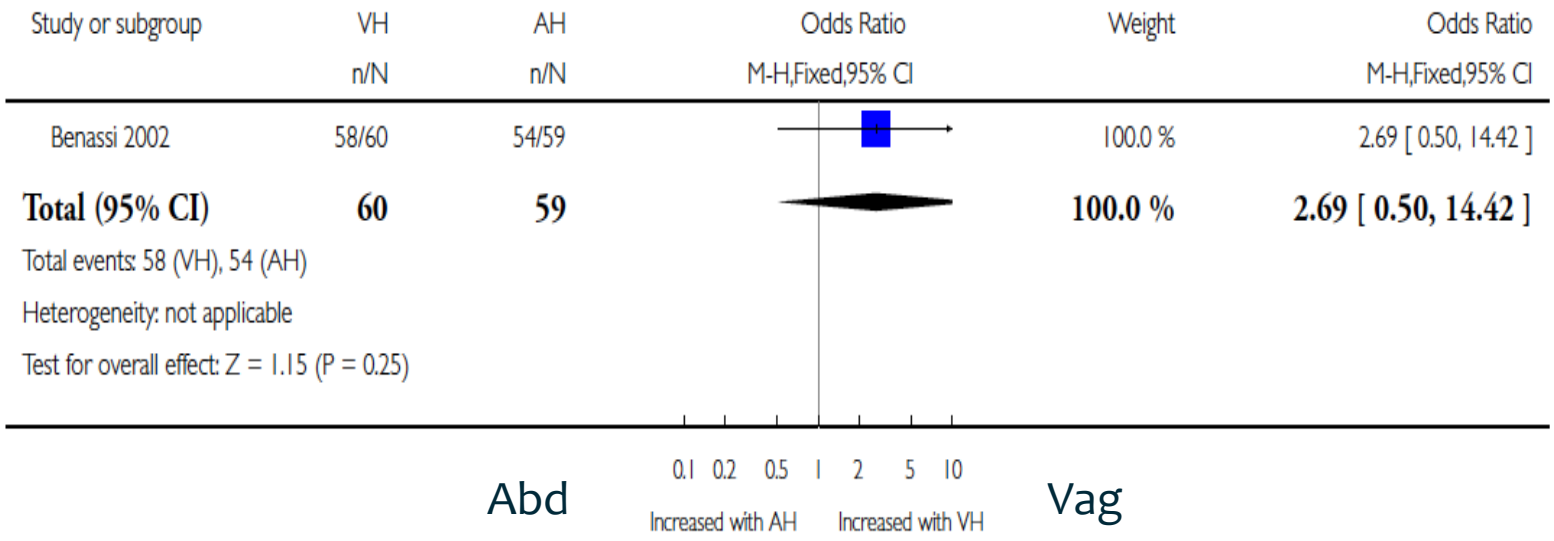
Analysis 1.2. Comparison 1 VH versus AH, Outcome 2 Long term outcomes: satisfaction (dich).

Review: Surgical approach to hysterectomy for benign gynaecological disease

Comparison: 1 VH versus AH

Outcome: 2 Long term outcomes: satisfaction (dich)

Satisfaction



Nieboer TE, Johnson N, Lethaby A, Tavender E, Curr E, Garry R, van Voorst S, Mol BWJ, Kluivers KB. Surgical approach to hysterectomy for benign gynaecological disease. Cochrane Database of Systematic Reviews 2009, Issue 3

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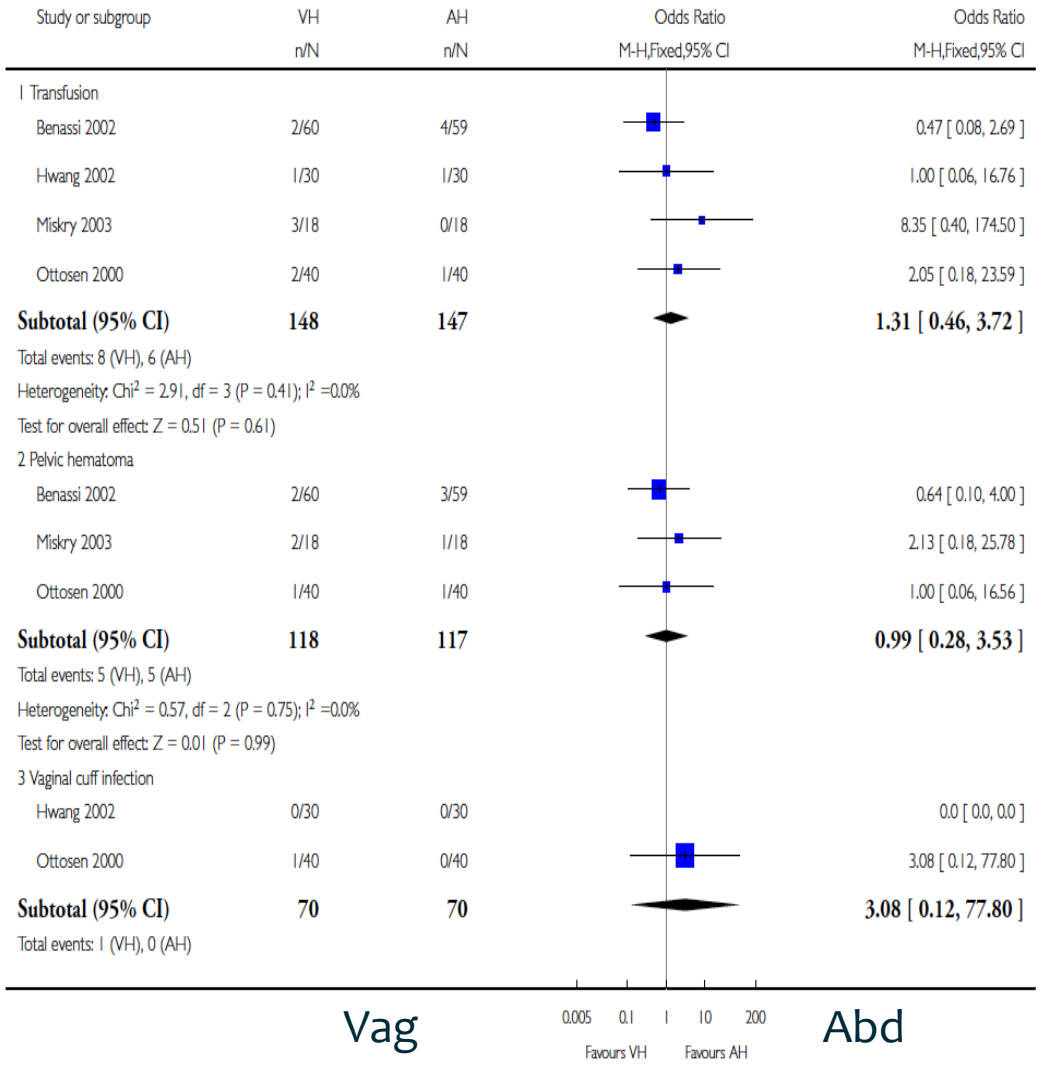
Analysis 1.10. Comparison 1 VH versus AH, Outcome 10 Short term outcomes (cont).

Review: Surgical approach to hysterectomy for benign gynaecological disease

Comparison: 1 VH versus AH

Outcome: 10 Short term outcomes (cont)

Outcome



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Nieboer TE, Johnson N, Lethaby A, Tavender E, Curr E, Garry R, van Voorst S, Mol BWJ, Kluivers KB. Surgical approach to hysterectomy for benign gynaecological disease. Cochrane Database of Systematic Reviews 2009, Issue 3

Analysis 1.13. Comparison 1 VH versus AH, Outcome 13 Length of hospital stay (days).

Review: Surgical approach to hysterectomy for benign gynaecological disease

Comparison: 1 VH versus AH

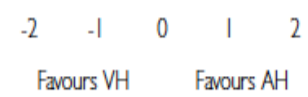
Outcome: 13 Length of hospital stay (days)

Hospital stay

Study or subgroup	VH N	VH Mean(SD)	AH N	AH Mean(SD)	Mean Difference IV,Fixed,95% CI	Weight	Mean Difference IV,Fixed,95% CI
Benassi 2002	60	3.4 (0.7)	59	4.3 (1.5)		12.8 %	-0.90 [-1.32, -0.48]
Miskry 2003	18	3.6 (1.42)	18	5 (1.49)		2.5 %	-1.40 [-2.35, -0.45]
Ottosen 2000	40	2.8 (1.1)	40	3.7 (1)		10.7 %	-0.90 [-1.36, -0.44]
Silva Filho 2006	30	1.03 (0.27)	30	2.14 (0.41)		73.9 %	-1.11 [-1.29, -0.93]
Total (95% CI)	**148**		**147**			**100.0 %**	**-1.07 [-1.22, -0.92]**

Heterogeneity: $Chi^2 = 1.81$, $df = 3$ ($P = 0.61$); $I^2 = 0.0\%$

Test for overall effect: $Z = 13.86$ ($P < 0.00001$)



Vag

Abd

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Analysis 2.1. Comparison 2 LH versus AH, Outcome 1 Return to normal activities (days).

Review: Surgical approach to hysterectomy for benign gynaecological disease

Comparison: 2 LH versus AH

Outcome: 1 Return to normal activities (days)

Return to normal activities

Study or subgroup	LH N	LH Mean(SD)	AH N	AH Mean(SD)	Mean Difference IV,Fixed,95% CI	Weight	Mean Difference IV,Fixed,95% CI
Harkki-Siren 2000	25	21.4 (6.7)	25	38.5 (5.7)		26.9 %	-17.10 [-20.55, -13.65]
Hwang 2002	30	30 (16)	30	41 (10)		7.0 %	-11.00 [-17.75, -4.25]
Ollson 1996	71	18 (11)	72	36.2 (16.2)		15.6 %	-18.20 [-22.73, -13.67]
Ottosen 2000	40	19.7 (7.5)	40	28.1 (9.5)		22.7 %	-8.40 [-12.15, -4.65]
Seracchioli 2002	60	22 (11.3)	62	36 (12.1)		18.5 %	-14.00 [-18.15, -9.85]
Summitt 1998	34	28 (13.3)	31	38 (10.8)		9.3 %	-10.00 [-15.87, -4.13]
Total (95% CI)	**260**		**260**			**100.0 %**	**-13.63 [-15.42, -11.84]**

Heterogeneity: $Chi^2 = 17.35$, $df = 5$ ($P = 0.004$); $I^2 = 71\%$

Test for overall effect: $Z = 14.94$ ($P < 0.00001$)

Laparoscopy Abd

Nieboer TE, Johnson N, Lethaby A, Tavender E, Curr E, Garry R, van Voorst S, Mol BWJ, Kluivers KB. Surgical approach to hysterectomy for benign gynaecological disease. Cochrane Database of Systematic Reviews 2009, Issue 3

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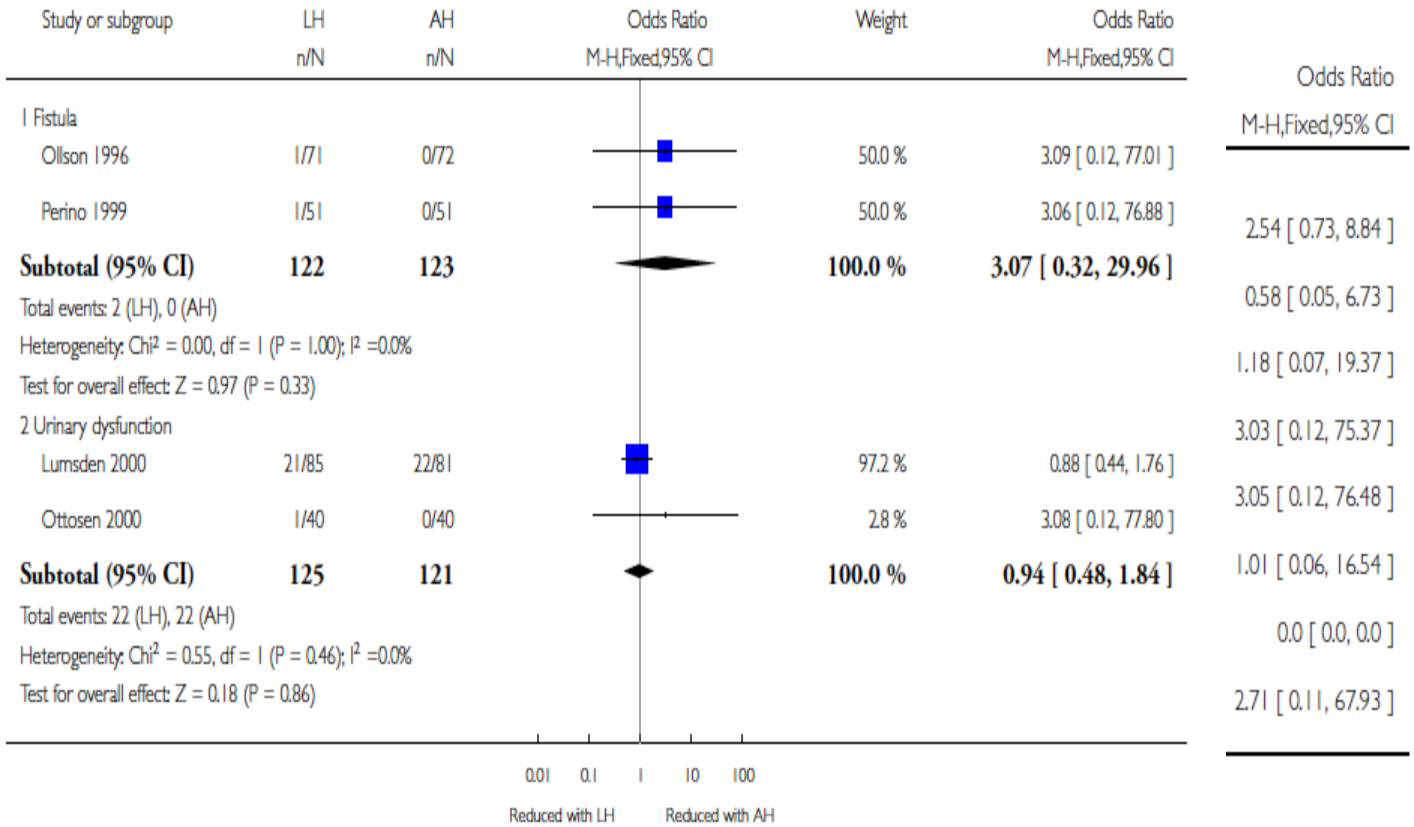
Analysis 2.6. Comparison 2 LH versus AH, Outcome 6 Long term complications (dich). (dich).

Review: Surgical approach to hysterectomy for benign gynaecological disease

Comparison: 2 LH versus AH

Outcome: 6 Long term complications (dich)

Long-term Complication



Study or subgroup	LH n/N	AH n/N	Odds Ratio M-H,Fixed,95% CI	Weight	Odds Ratio M-H,Fixed,95% CI	Odds Ratio M-H,Fixed,95% CI
1 Fistula						
Ollson 1996	1/71	0/72		50.0 %	3.09 [0.12, 77.01]	2.54 [0.73, 8.84]
Perino 1999	1/51	0/51		50.0 %	3.06 [0.12, 76.88]	0.58 [0.05, 6.73]
Subtotal (95% CI)	**122**	**123**		**100.0 %**	**3.07 [0.32, 29.96]**	1.18 [0.07, 19.37]
Total events: 2 (LH), 0 (AH)						3.03 [0.12, 75.37]
Heterogeneity: Chi^2 = 0.00, df = 1 (P = 1.00); I^2 =0.0%						3.05 [0.12, 76.48]
Test for overall effect: Z = 0.97 (P = 0.33)						1.01 [0.06, 16.54]
2 Urinary dysfunction						0.0 [0.0, 0.0]
Lumsden 2000	21/85	22/81		97.2 %	0.88 [0.44, 1.76]	2.71 [0.11, 67.93]
Ottosen 2000	1/40	0/40		2.8 %	3.08 [0.12, 77.80]	
Subtotal (95% CI)	**125**	**121**		**100.0 %**	**0.94 [0.48, 1.84]**	
Total events: 22 (LH), 22 (AH)						
Heterogeneity: Chi^2 = 0.55, df = 1 (P = 0.46); I^2 =0.0%						
Test for overall effect: Z = 0.18 (P = 0.86)						

0.01 0.1 1 10 100

Reduced with LH Reduced with AH

Ribiero 2003	0/20	0/20	0.0 [0.0, 0.0]
Summitt 1998	2/34	0/31	4.85 [0.22, 104.99]
Tsai 2003	0/100	1/100	0.33 [0.01, 8.20]
Subtotal (95% CI)	**1189**	**901**	**2.41 [1.21, 4.82]**

t S, Mol BWJ, Kluivers KB. Surgical approach
atabase of Systematic Reviews 2009, Issue 3

Conclusion

Vaginal Hysterectomy(VH)	>	Abdominal Hysterectomy(AH)
Laparoscopic Hysterectomy(LH)	>	Abdominal Hysterectomy(AH)
Laparoscopic Hysterectomy(LH)	≒	Vaginal Hysterectomy(VH)

Nieboer TE, Johnson N, Lethaby A, Tavender E, Curr E, Garry R, van Voorst S, Mol BWJ, Kluivers KB. Surgical approach to hysterectomy for benign gynaecological disease. Cochrane Database of Systematic Reviews 2009, Issue 3

Recommendation

If you can performed hysterectomy vaginally---> VH

If not, ---> LH

Endometrial cancer

Review

Laparoscopic treatment for endometrial cancer: A meta-analysis of ra controlled trials (RCTs)

Stefano Palomba [a,*], Angela Falbo [a], Rita Mocciaro [a], Tiziana Russo [b], Fulvio Zullo [a,b]

[a] Department of Gynecology and Obstetrics, University "Magna Graecia" of Catanzaro, Viale Europa, 88100 Catanzaro, Italy
[b] Gynecologic Oncology Unit, Cancer Center of Excellence "Tommaso Campanella" of Germaneto, Catanzaro, Italy

Gynecologic Oncology 112 (2009) 415–421

Table 1
Quality of the RCTs enclosed

Study	Setting	Allocation concealment A: adequate B: unclear C: inadequate	Blinding A: Investigators B: Patients C: Outcome assessors	ITT	Follow-up
Tozzi et al. [6]	Department of Gynecology–Friedrich-Schiller University–Jena (Germany)	B	A: Not reported B: Not reported C: Not reported	Yes	44 months
Zullo et al. [7,32]	Department of Obstetrics and Gynecology–University Magna Graecia of Catanzaro (Italy)	A	A: No B: Yes C: Not reported	Yes	79 months
Zorlu et al. [13]	Akdeniz University School of Medicine–Antalya (Turkey)	B	A: Not reported B: Not reported C: Not reported	No	Short-term postoperative period (not clearly defined)
Fram et al. [18]	Department of Obstetrics and Gynaecology–Jordan University Hospital – Jordan (Asia)	B	A: Not reported B: Not reported C: Not reported	No	Short-term postoperative period (not clearly defined)

Review

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Gynecologic Oncology 112 (2009) 415–421

Table 2

Characteristics of the populations studied

Table 1
Quality of the RCTs enclosed

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Fram et al. [18]	Department of Obstetrics and Gynaecology–Jordan University Hospital – Jordan (Asia)	B	A: Not reported B: Not reported C: Not reported	No	Short-term postoperative period (not clearly defined)

All without significant difference

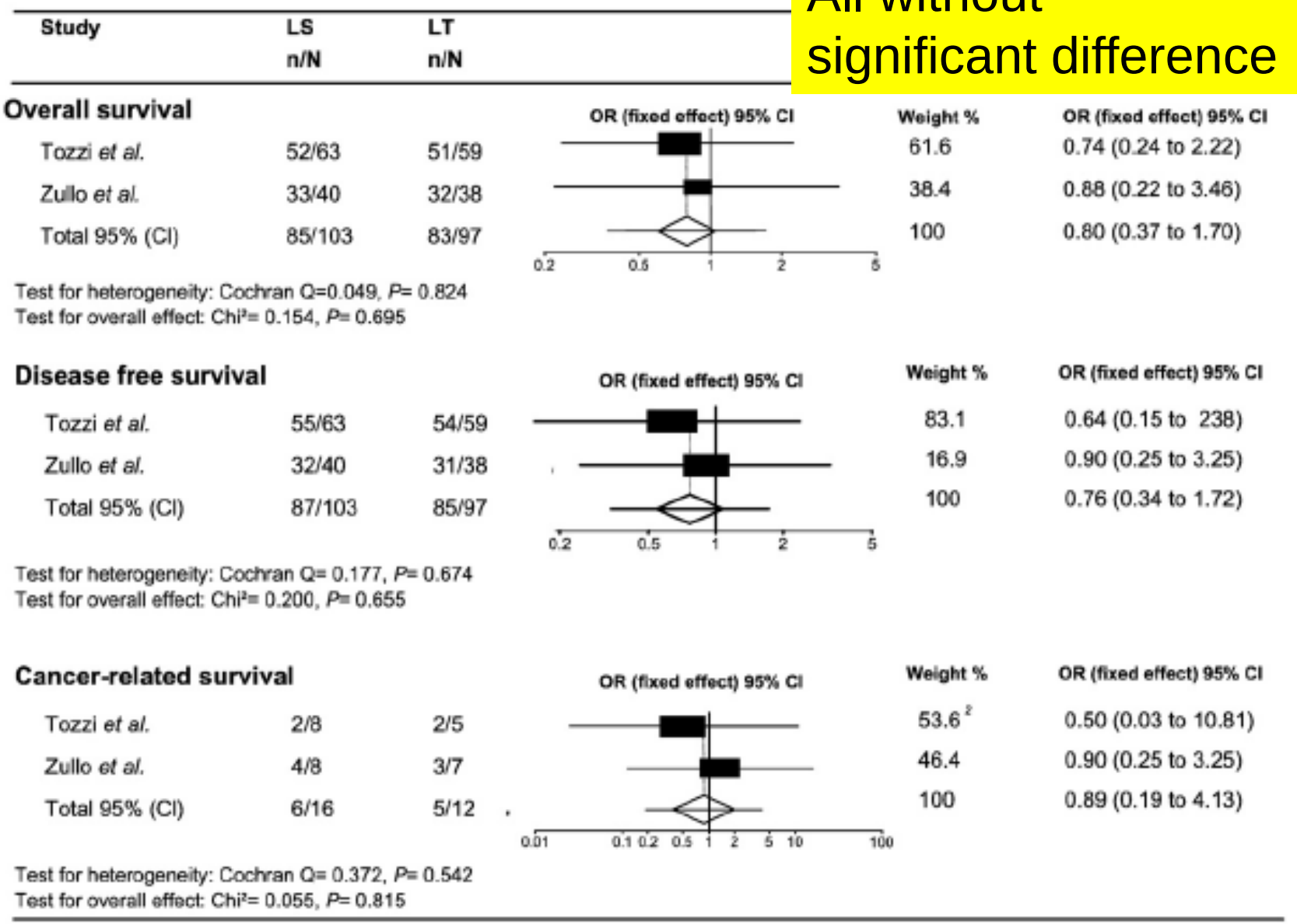
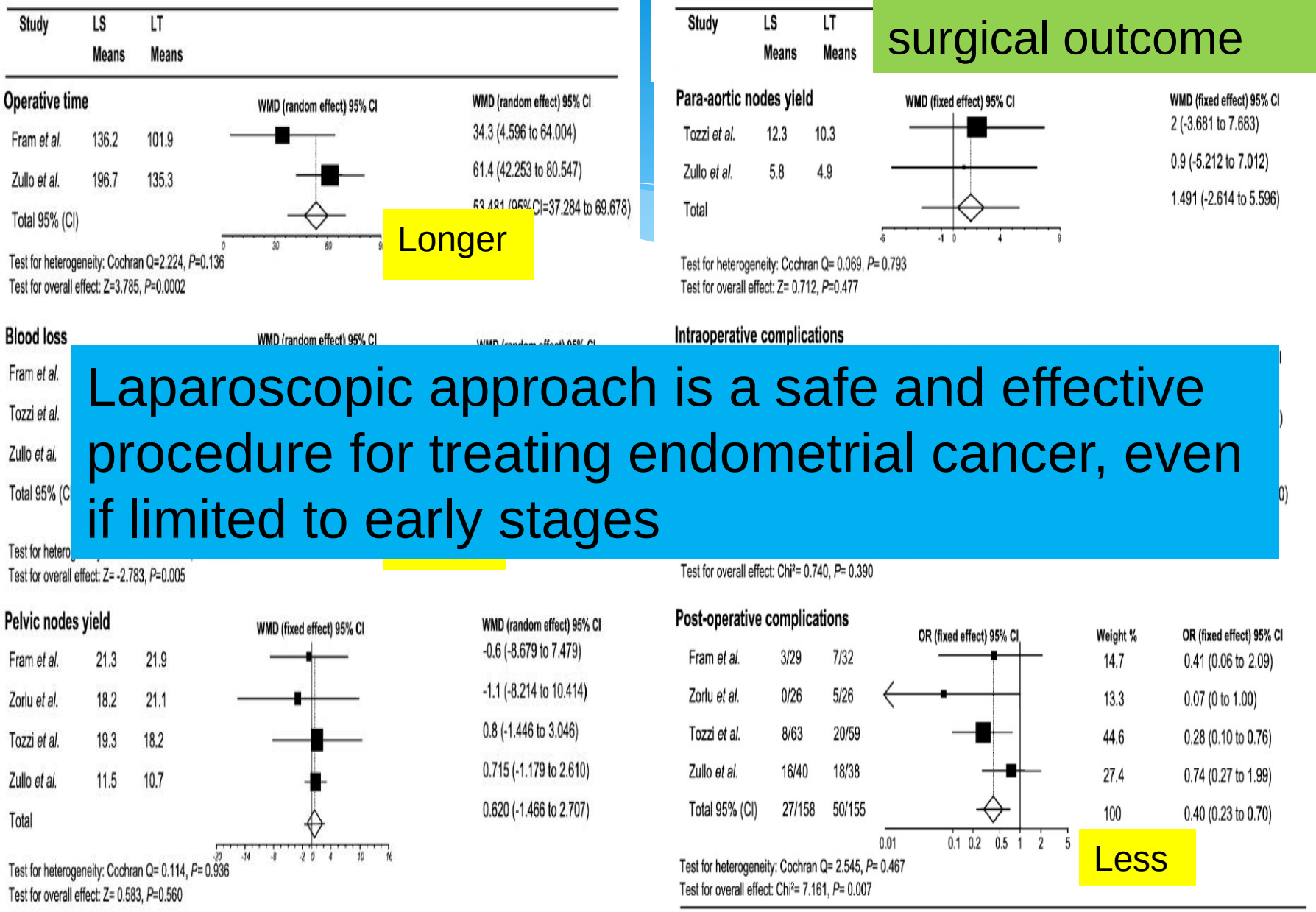


Fig. 2. Comparison of laparoscopic and laparotomic approaches to early stage endometrial cancer. Efficacy data.

Better short-term surgical outcome



Laparoscopic approach is a safe and effective procedure for treating endometrial cancer, even if limited to early stages

Fig. 3. Comparison of laparoscopic and laparotomic approaches to early stage endometrial cancer. Safety data.

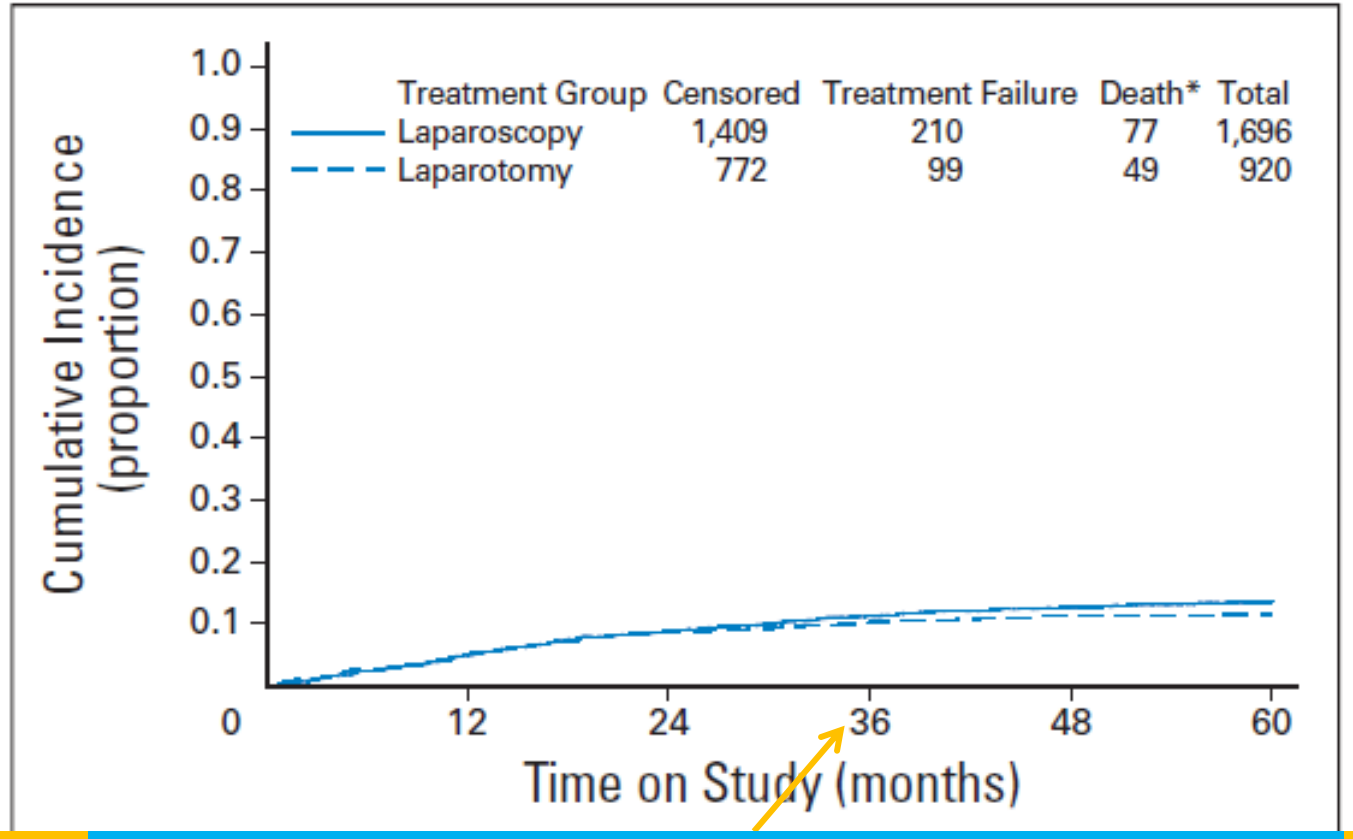
JOURNAL OF CLINICAL ONCOLOGY

Recurrence and Survival After Random Assignment to Laparoscopy Versus Laparotomy for Comprehensive Surgical Staging of Uterine Cancer: Gynecologic Oncology Group LAP2 Study

Joan L. Walker, Marion R. Piedmonte, Nick M. Spirtos, Scott M. Eisenkop, John B. Schlaerth, Robert S. Mannel, Richard Barakat, Michael L. Pearl, and Sudarshan K. Sharma

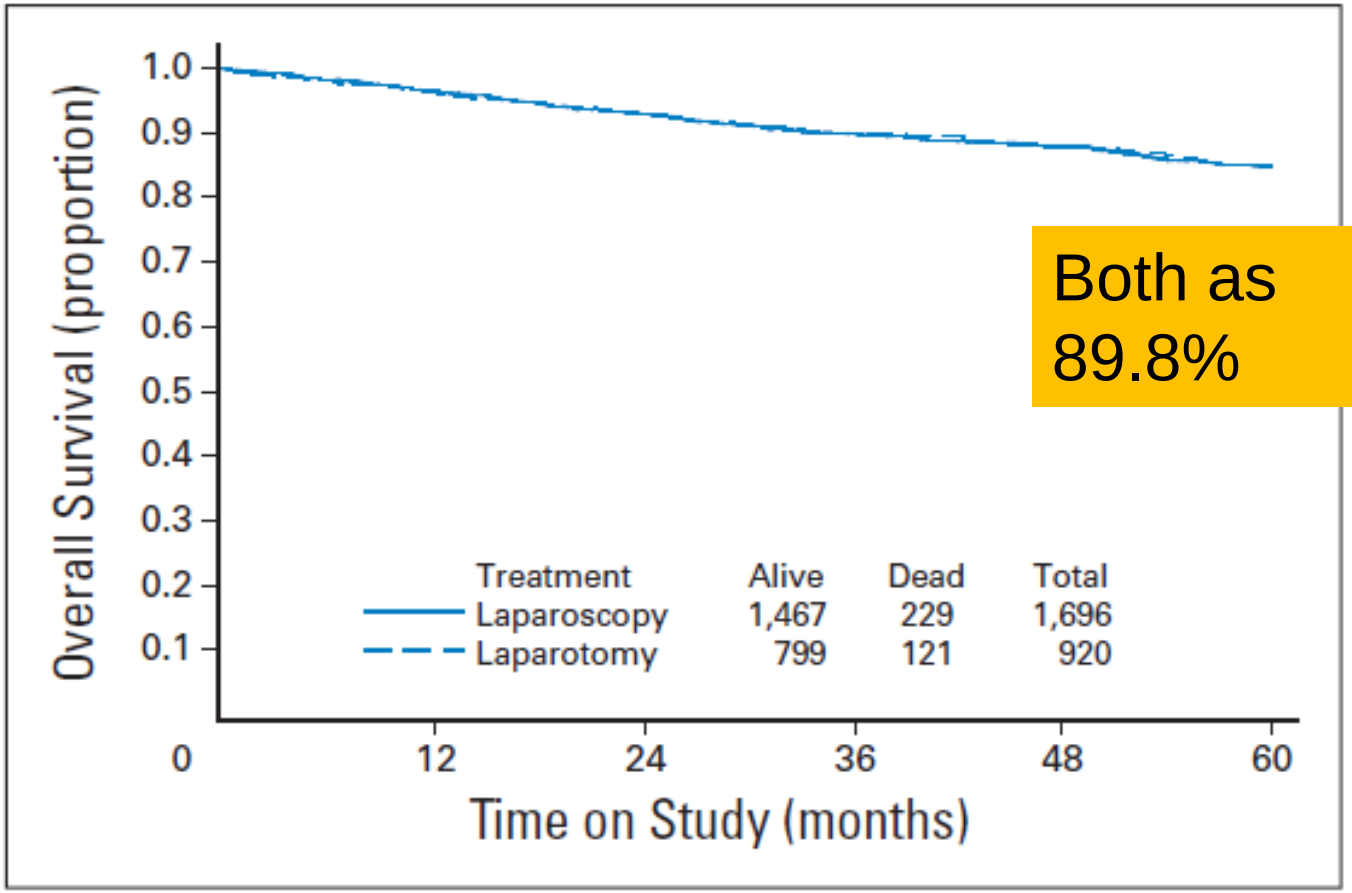
VOLUME 30 · NUMBER 7 · MARCH 1 2012

* Patients with clinical stages I to IIA disease were randomly allocated (two to one) to laparoscopy (n=1,696) versus laparotomy (n= 920) for hysterectomy, salpingo-oophorectomy, pelvic cytology, and pelvic and para-aortic lymphadenectomy.



The 3-ye rrence
laparoto %
the esti

Estimated 5-year recurrence rate →
Laparotomy arm : 11.61%
Laparoscopy arm : 13.68%



Both as 89.8%

Fig 3. Overall survival by randomly assigned treatment group.

Lee et al. TJOG 2012

Table 1. Patient characteristics and methods of initial diagnosis (N = 105)

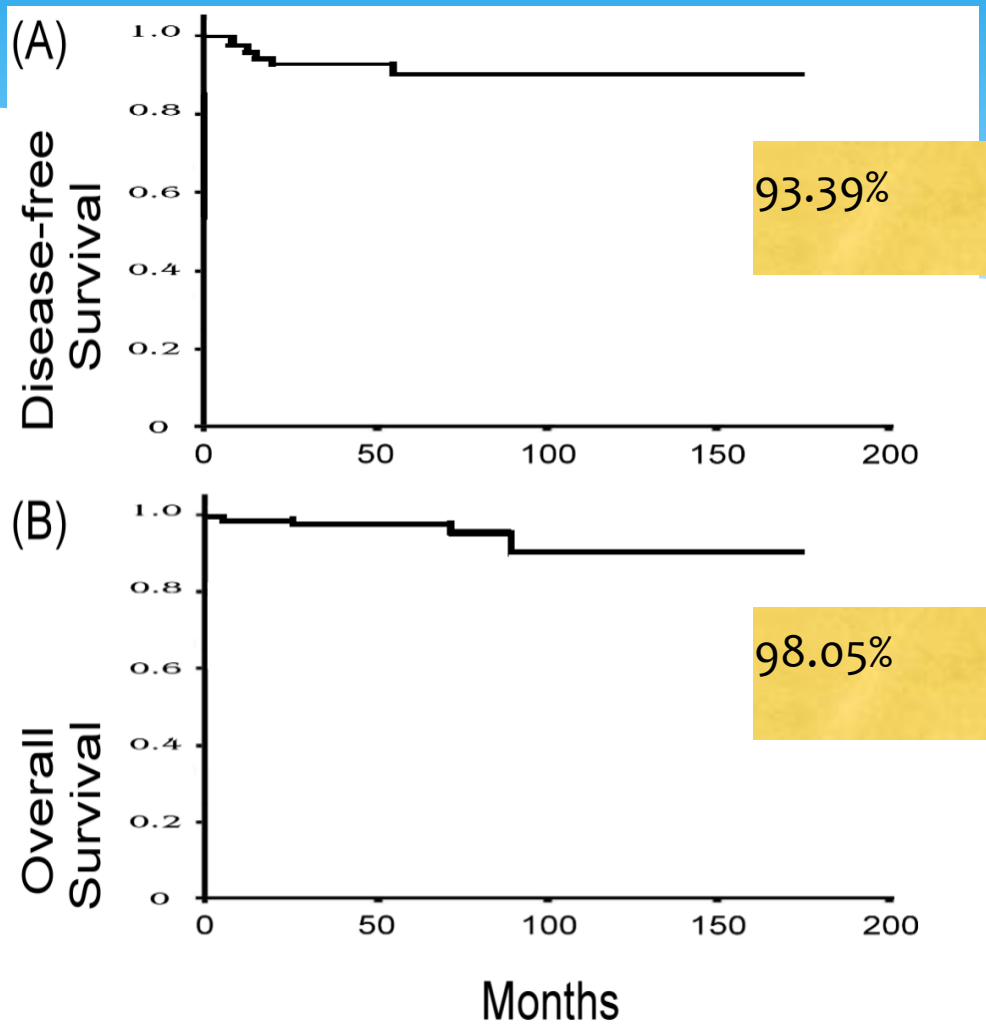
Age (year, mean ± SEM)	51.25 ± 0.97
Parity (median 【interqartile】)	3
BMI(mean ± SEM)	26.78 ± 0.56
Methods of initial diagnosis (No.%)	
Endometrial curettage	73 (69.5)
Hysteroscopic resection	28 (26.7)
hysterectomy	4 (3.8)

Median follow-up of 55.3 months

Department of Obstetrics and Gynecology

Table 3. Analyzed surgical parameters	
Duration of surgery (min, mean ± SEM)	186.8 ± 6.16
Intraoperative blood loss (ml, mean ± SEM)	220.38 ± 15.59
Preserved ovaries (N)	10
Blood transfusion (N)	2
Retrieved pelvic lymph nodes (median)	18
Conversion to laparotomy	0
Duration of hospitalization (days, mean ± SEM)	5.96 ±0.28
Intraoperative complication (N)	
Total (N [%])	5 (4.8%)
Ureteral injury	2
Bladder injury	
Bowel injury	
Vascular injury	1
Postoperative complication (<30 days, N)	
Urinary tract infection	2
Voiding dysfunction	2

All the complications were successfully managed by laparoscopy



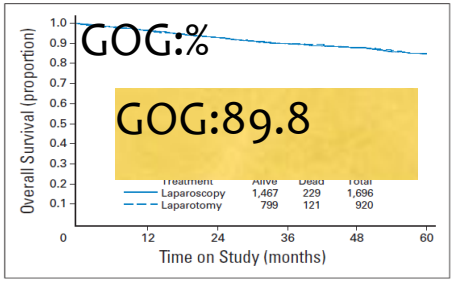


Fig 3. Overall survival by randomly assigned treatment group.

Figure 1. disease-free and overall survival

Lee et al. TJOG 2012

Discussion

* The first long term study basing on Taiwanese women with endometrial cancer who underwent laparoscopic assisted staging surgery

  →compare with western studies

✓similar disease pattern

✓Comparable results of short-term and long term survival rates

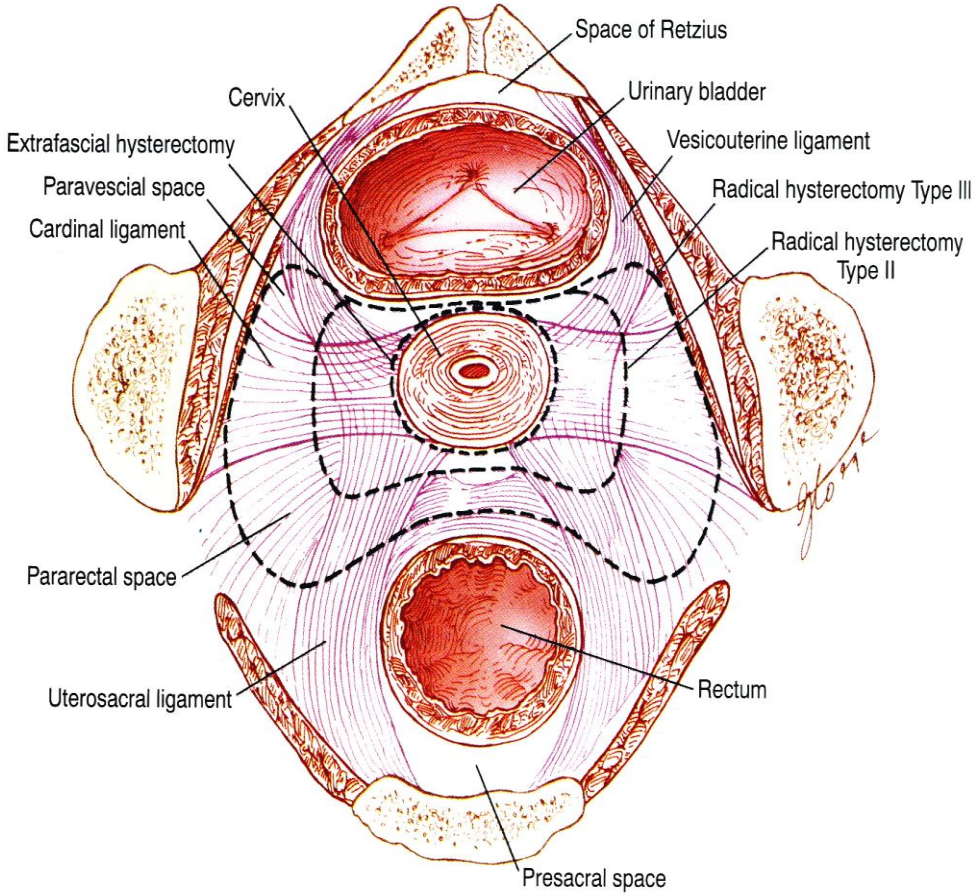
✓Better than reported database of Taiwan

Conclusion

* LSS by experienced surgeons is a safe and efficacious alternative to laparotomy and is feasible for minimally invasive surgery.
* ✓ Better short-term surgical outcome
* ✓ No difference in long-term survival outcome

Cervical cancer

- Surgical treatment of cervical cancer: in patients earlier than FIGO stage IIa, with type III radical hysterectomy and bilateral pelvic lymph node dissection (BPLD).



Laparoscopic Radical Hysterectomy in Cervical Cancer

APAGE

Asia-Pacific Association Gynecologic Endoscopy & Minimal Invasive Therapy

Our experience

RESEARCH ARTICLE IN PRESS www.AJOG.org

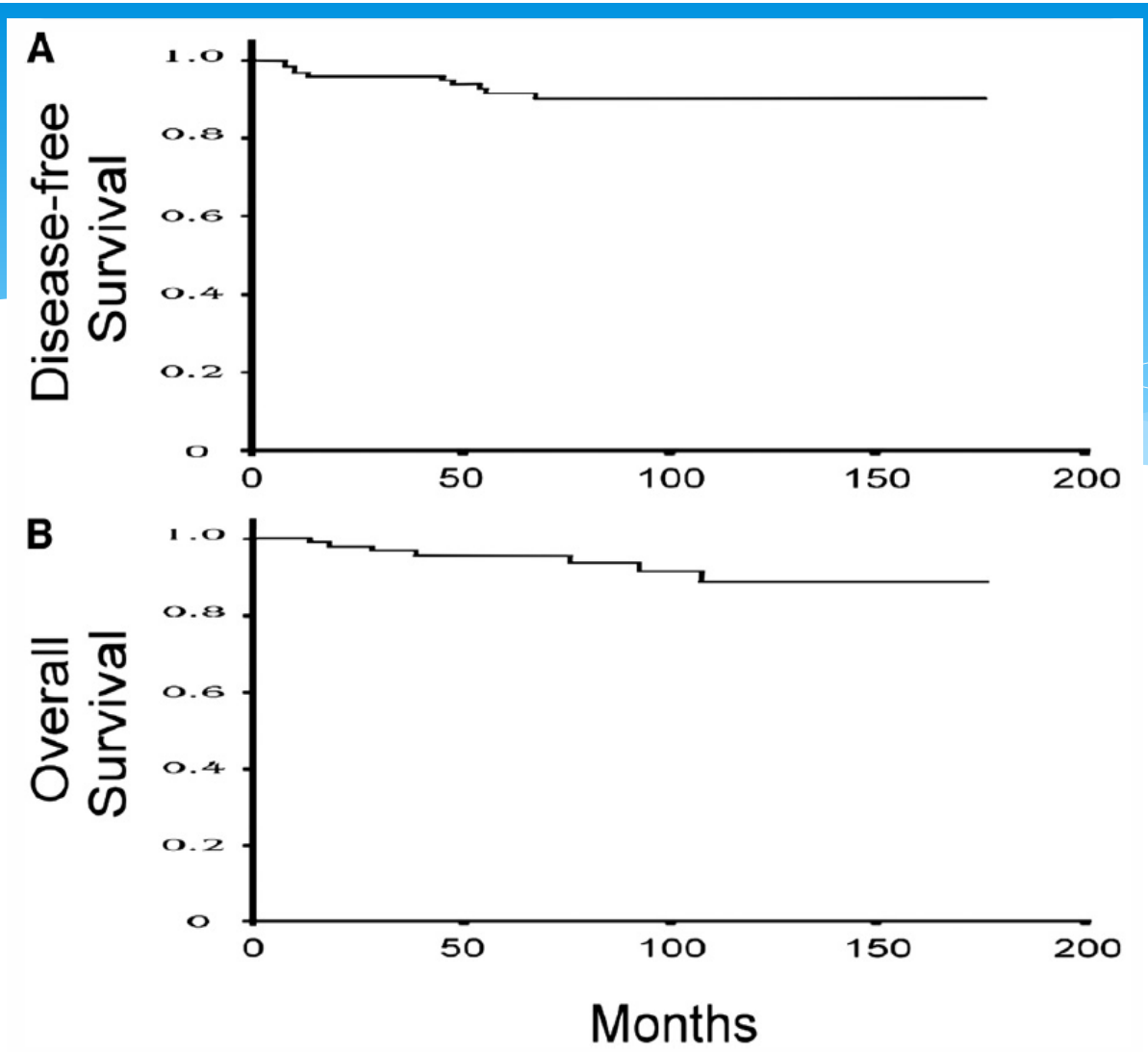
ONCOLOGY

Long-term survival outcomes of laparoscopically assisted radical hysterectomy in treating early-stage cervical cancer

Chyi-Long Lee, MD, PhD; Kai-Yun Wu, MD; Kuan-Gen Huang, MD; Pei-Shan Lee, RN, MSN; Chih-Feng Yen, MD

AUGUST 2010 American Journal of Obstetrics & Gynecology 165.e1

- Design: longitudinal study with a series of prospectively registered patients with chart review.
- Institution: University hospital (Linkou CGMH)
- 1994/06/01 - 2007/12/31



Cumulative DFS: 91.01 ± 2.77% (mean ± SEM)

Cumulative OS: 92.78 ± 3.06% (mean ± SEM)

Survival Outcomes

Literature Review

Intermediate and Long-term follow up

Intermediate Follow-up

Year	Journal	Authors & Country	P't N	Stage	Mean Op Time (min)	Conversion	F/u Duration (months)	Disease Free Survival	Overall Survival
2003	Gyn Oncol	Hertel *et al* Germany	200	IA1~IIB	333	0.5%	40	X	83%
2003	Gyn Oncol	Pomel *et al* France	50	IA1~IB1	258	0	44	90.5%	96.8%
2008	ASO	Chen *et al* China	295	IA2~IIIb	162	1.7%	36	83.7%	85.4%
2009	EJSO	Mehra *et al* U.K.	51	IB	210	X	41	X	89.0%

Long-term Follow-up

Year	Journal	Authors & Country	P't N	Stage	Mean Op Time (min)	Conversion	F/u Duration (months)	Disease Free Survival	Overall Survival
2002	AJOG	Spirtos *et al* U.S.	78	IA2, IB	205	6.4%	68.3	89.7%	93.6%
2010	AJOG	Lee *et al* Taiwan	139	IA1~IB2	231	1.4%	92	91.0%	92.8%

Mainstream of oncologic surgery

* Gynecologists make every effort in improving quality of life as well as oncologic outcomes.

  Our study had the longest period of follow up with the largest case series available in literature.
* With the advantages of minimal invasiveness, laparoscopic radical hysterectomy by experienced surgeons should be offered to patients with early-stage cervical cancer and will be the mainstream in the future.

Complication

Postoperative complications		
Internal bleeding	3 (2.1)	2 laparotomy, 1 laparoscopy
Ileus	2 (1.4)	Medical treatment
Vesicovaginal fistula	1 (0.7)	Successfully repaired via abdominal approach
Ureterovaginal fistula	1 (0.7)	Ureteroureterostomy via abdominal approach
Ureterostenosis	5 (3.6)	D-J ureteral stent placement
Acute tubular necrosis	1 (0.7)	Supportive treatment
Lymphocyst	1 (0.7)	Aspiration
Bladder dysfunction	7 (5.0)	Self-catheterization
Total	21 (15.1)	

Nerve-sparing

Cure disease → Quality of life

Radical hysterectomy → Nerve Sparing laparoscopic radical hysterectomy

Available online at www.sciencedirect.com

ScienceDirect

Gynecologic Oncology 107 (2007) 4 – 13

Okabayashi H

First nerve-sparing radical hystere

Anatomic identification and functional outcomes of the nerve sparing Okabayashi radical hysterectomy

Shingo Fujii *, Kenji Takakura, Noriomi Matsumura, Toshihiro Higuchi, Shigeo Yura, Masaki Mandai, Tsukasa Baba, Shinya Yoshioka

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www.tjog-online.com

Original Article

A prospective study of nerve-sparing radical hysterectomy for uterine cervical carcinoma in Taiwan

Chih-Jen Tseng [a,b,*], Huang-Pin Shen [a,b], Yu-Hsiang Lin [a,b], Chung-Yuan Lee [c], Will Wei-Cheng Chiu [d,e]

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Accepted 3 October 2011

Table 1
Comparison of characteristics between patients undergoing RH with or without nerve-sparing techniques.

Characteristics	NRH ($n = 18$)	RH ($n = 12$)
Age (y)	42 (range, 32–54)	45 (range, 38–61)
Histology		
Squamous cell carcinoma	12	9
Adenocarcinoma	6	3
Operative time (min)	168 (range, 132–255)	152 (range, 116–223)
Blood loss (mL)	162 (range, 50–550)	205 (range, 50–750)
Hospital stay (days)	8.5 (range, 7–14)	14.7 (range, 8–18)
Tumor size (cm)	1.7	2.8
Parametrial involvement	0	0
Positive pelvic lymph node	1	3
Positive paraaortic lymph node	0	0
Positive section margin	0	0
Operation-related complications		
Bladder injuring	0	0
Fistula/ureter injuring	0	0
GI injury	0	0
Thromboembolism	0	0

Table 2

Mean duration of spontaneous voiding without urine retention.

	n	Days
NRH	18	
Bilateral success	15	6.8 ± 1.5
Unilateral success*	2	8.0 ± 1.4
RH/Failed bilateral	12/1	20.6 ± 3.0

*Data are presented as mean ± standard deviation.

Table 3

Comparison of postoperative urinary symptoms and parameters between patients undergoing RH with or without nerve-sparing techniques.

Characteristics	NRH ($n = 18$)*	RH ($n = 12$)*	p
Duration of spontaneous voiding (days)	6.9 ± 1.5	20.6 ± 3.0	< 0.0001
Number of catheterizations (per woman)	0 (0%)	21.4 ± 9	< 0.01
Re-inserting indwelling catheter	0 (0%)	1 (8.3%)	0.4
Frequency/urgency symptoms	2 (11.1%)	9 (75.0%)	0.001
Nocturia	1 (5.6%)	9 (75.0%)	0.0001
Dysuria	1 (5.6%)	7 (58.3%)	0.003
Voiding difficulty	1 (5.6%)	8 (66.7%)	0.0006
Urinary retention	0 (0%)	7 (58.3%)	0.0004
Incontinence	0 (0%)	5 (41.7%)	0.006
Personal satisfaction scoring	4.5 ± 0.9	1.9 ± 0.5	< 0.0001

*Data are presented as n (%) and mean ± standard deviation.

Conclusion

Nerve-sparing RH significantly reduces the incidence and severity of lower urinary tract dysfunctions.

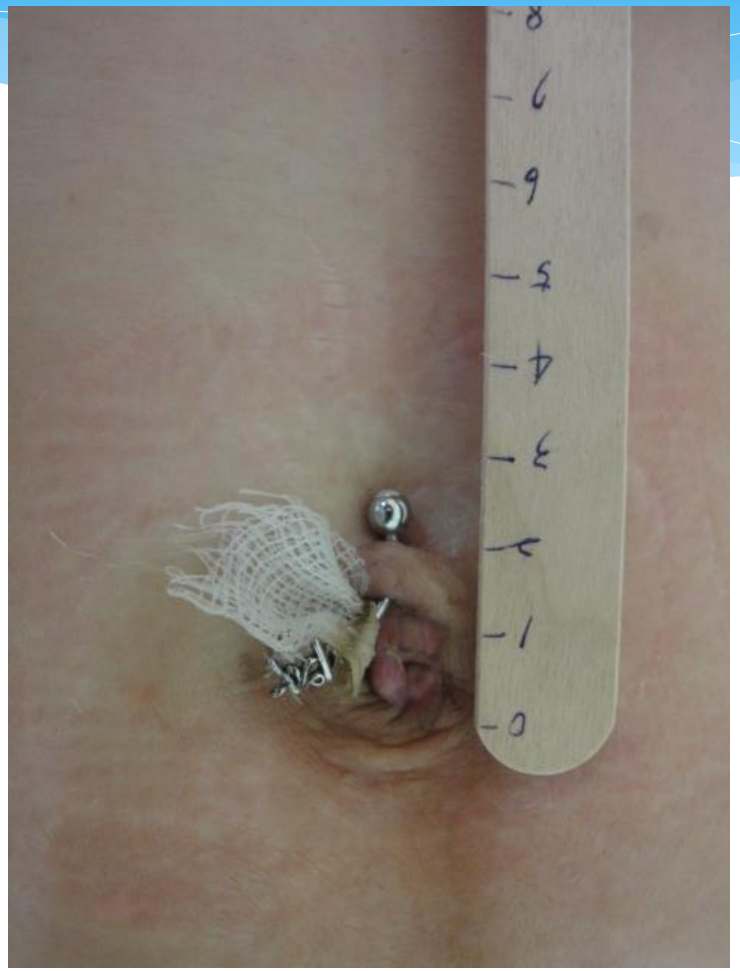
Nerve sparing surgery should be the standard procedure for radical surgery

Laparoscopic approach have **better identification for nerve fibers and surgical landmarks**

Laparoscopic approach **should be the better choice in nerve sparing radical hysterectomy**

單切口腹腔鏡手術

術後一周 単切口腹腔鏡子宮肌瘤切除術



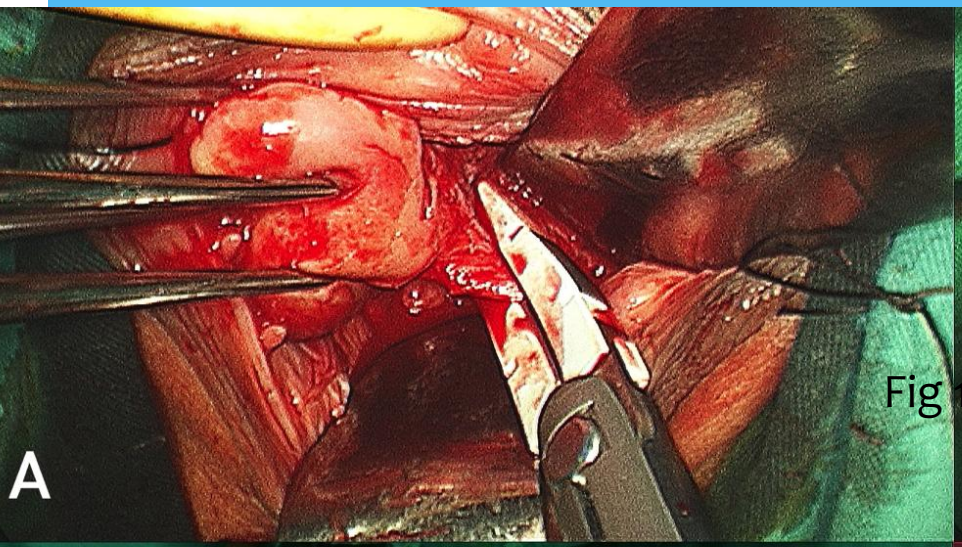
術後四周 単切口腹腔鏡子宮肌瘤切除術

Natural Orifice Transluminal Endoscopic Surgery (NOTES)

NOTES in the World

Fig. 1. A videoendoscope entering the peritoneal cavity through a trocar in the posterior vaginal fornix – courtesy from Dolz et al. (43,44). *Videoendoscopio entrando en cavidad peritoneal a través del trocar colocado en el fondo de saco posterior de la vagina – cortesía de Dolz y cols. (43,44).*

NOTES Hysterectomy



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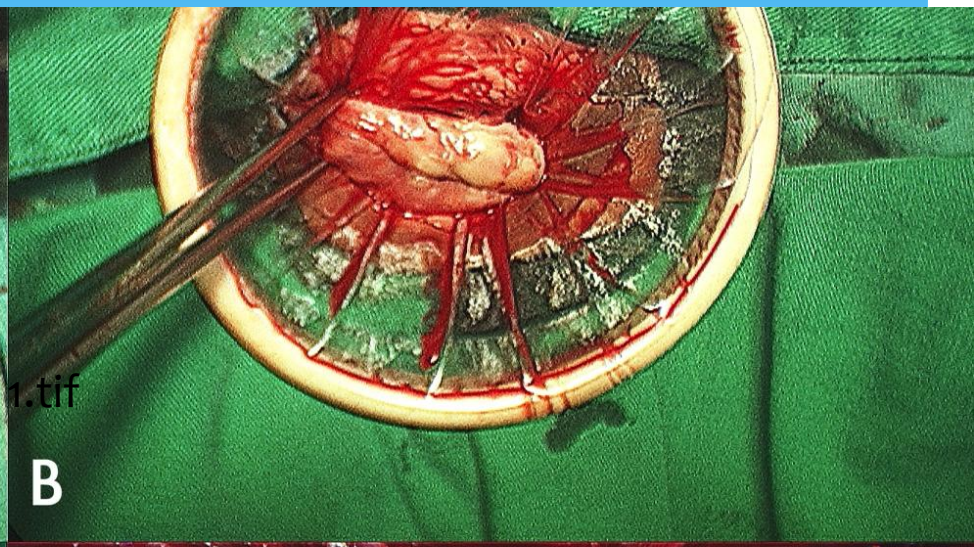
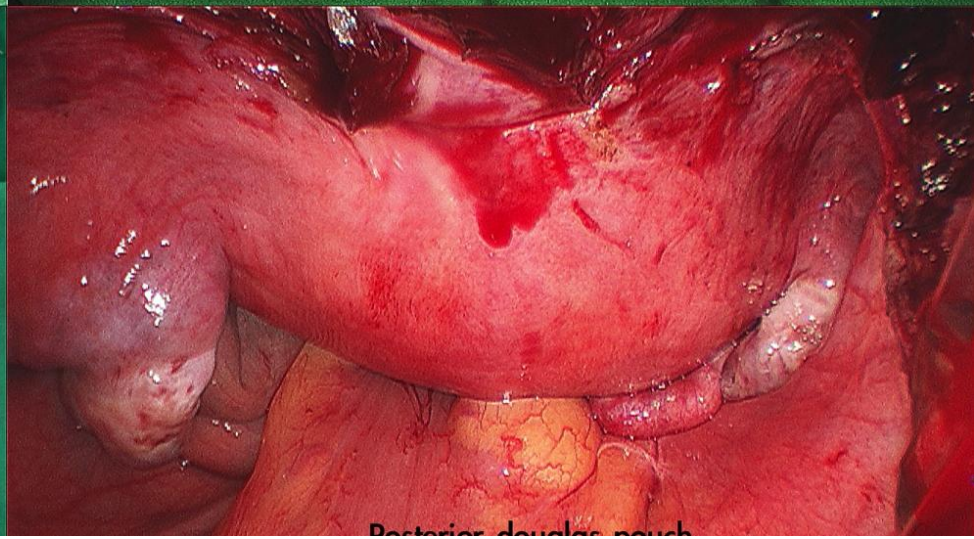
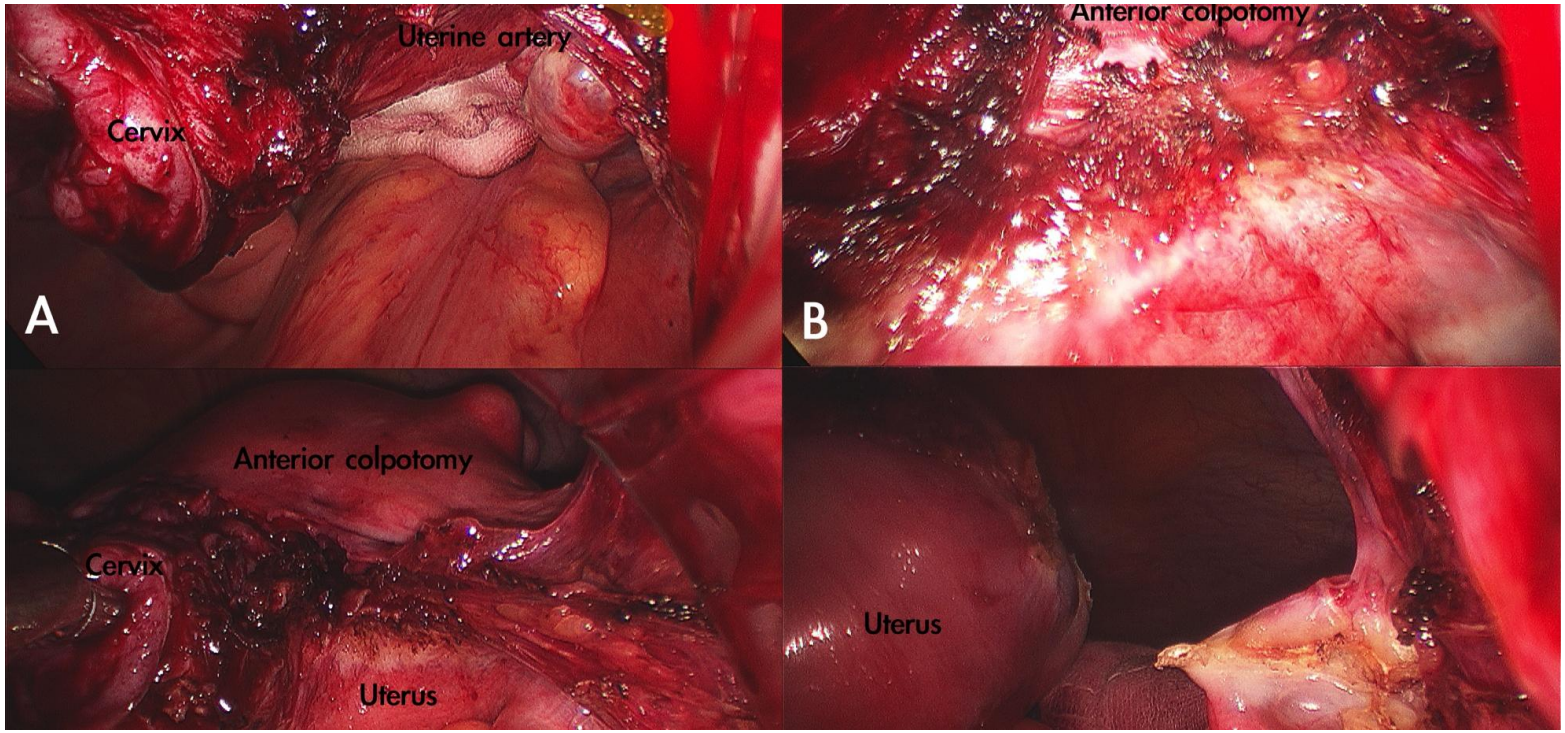




NOTES Hysterectomy



Summary

- Procedures once thought to be impossible through laparoscopic access are now in routine use.
- Lee-Huang point anad endoscopy usage make the surgery simple.
- Laparoscopic endometrial cancer and cervical cancer surgery have good outcome as laparotomy.
- Endoscopy is the trend of gynecologic surgery.