

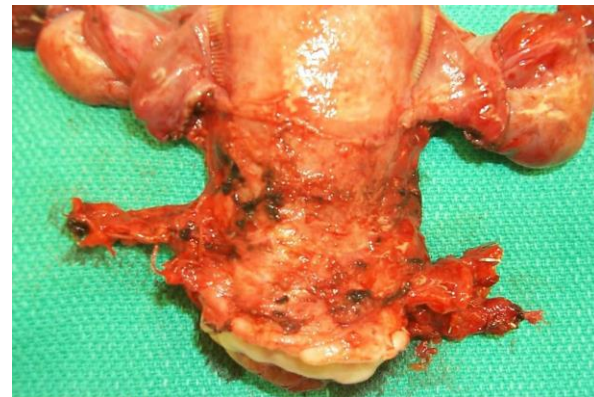
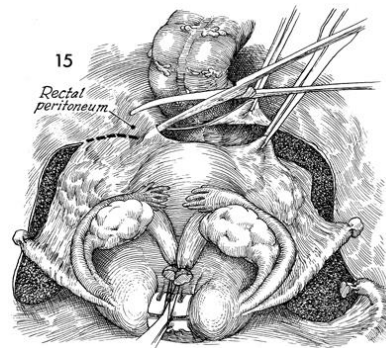
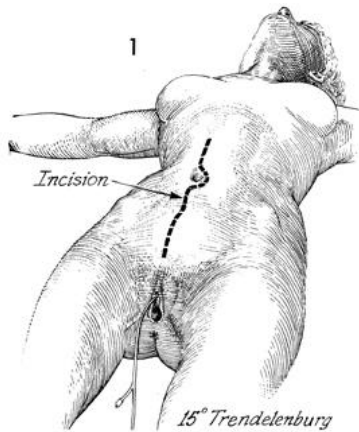
***SURGERY IN  
CERVICAL CANCER:  
LAPAROSCOPY, LAPAROTOMY  
AND ROBOTIC APPROACH***

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# RADICAL SURGERY IN CERVICAL CANCER

## Wertheim-Meigs Operation, 1905



### SUBSTANTIAL MORBIDITY

ureteral, ureterovaginal, and vesicovaginal fistulae; intraoperative hemorrhage due to pelvic large vessel lesion, ureter or bladder accidental section, abdominal wall dehiscence, ureteral obstruction causing hydronephrosis and renal exclusion; disorders such as urinary incontinence, pollakiuria, vesical atony, often accompanied by urinary tract infection and hematuria.

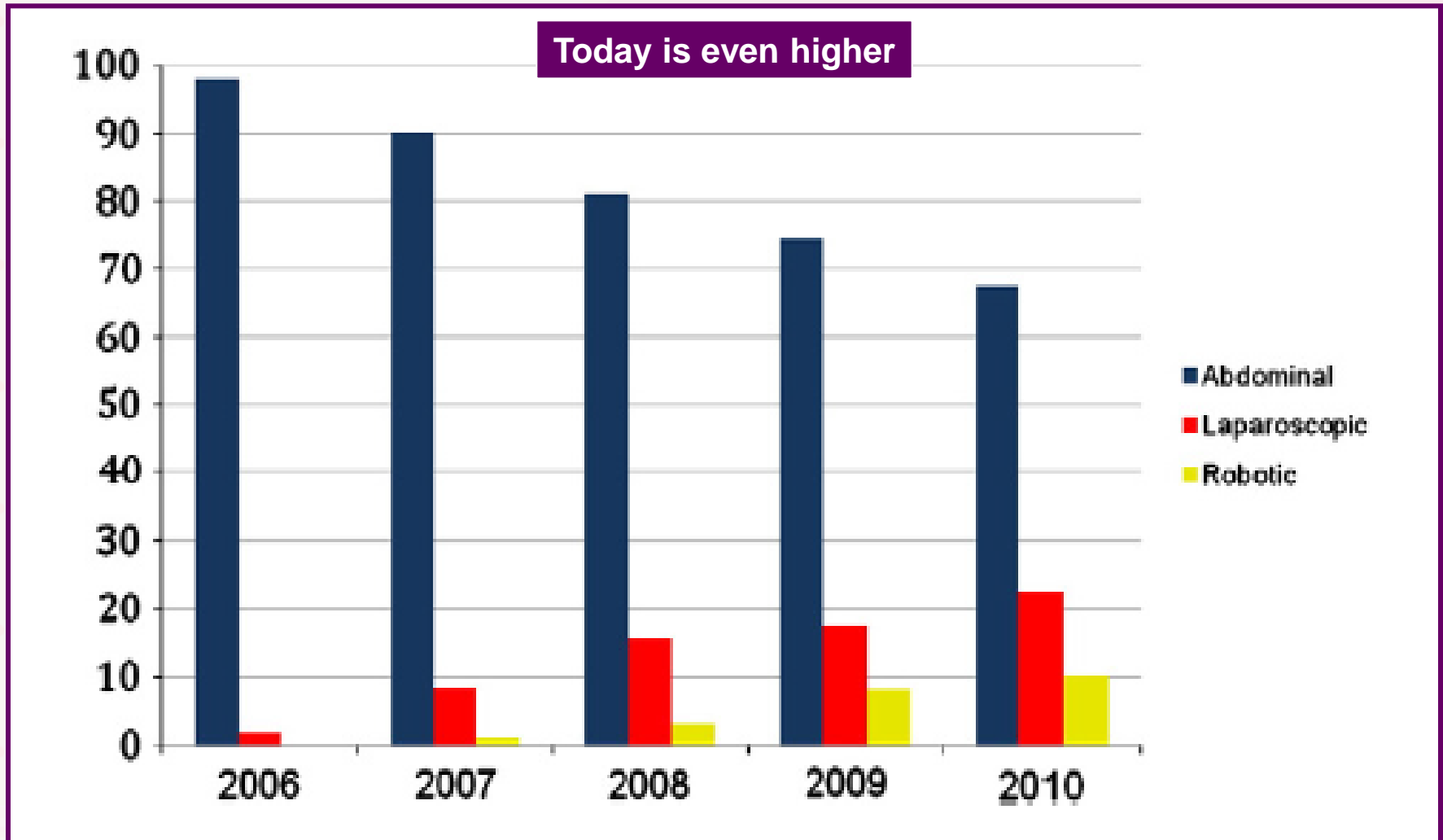
How's today...

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# NEW APPROACHES, LESS MORBIDITY

- **Open Radical Hysterectomy (ORH)**  
ORH is more accurated and less invasive compared to Wertheim-Meigs
- **Laparoscopic Radical Hysterectomy (LRH)**  
It's the most diffused approach to radical surgery in industrial countries
- **Robotic Radical Hysterectomy (RRH)**  
Probably the most appropriate indication for CC
- **Laparoscopic Endoscopic Single Site Surgery (LEES) or Minilaparoscopy**  
Variation of LRH using a single port or 3 mm trocar ports

# NEW APPROACHES, LESS MORBIDITY



# ENDOSCOPIC VS OPEN

- **Less Intraoperative Bleeding**  
and less iatrogenic lesions
- **Shorter hospital stay and early discharge**
- **Quality of life**  
Overall in long term and sexual life
- **Low morbidity**  
Magnification and technique advantage of endoscopic instruments
- **Same dissected lymph nodes number**  
Non inferiority
- **Same recurrence and survival**  
Adjusted for adjuvant treatment

**Endoscopic surgery has longer training curves**  
**Volume of the lesion is crucial**  
**Rare port site metastasis**

# ROBOTIC SURGERY IN CERVICAL CANCER

Study	Pt N.	LNC	Op Time	EBL (ml)	HS (d)	*POC %	Remarks	
Sert & Abeler 2007 Case-Control	7 RRH	13	241	71	4	4/7	POC: UTI: 1 each Lymphocyst: 2R vs 3L Bladder Inj: 1 each Compарт. S.: 1L	Less Time, Less EBL and Less HS
	8 LRH	15	300	160	8	6/8		
Kim et al 2008 Retrospective Pilot	10 RRH	27.6	207	355	-	1/10	POC: Pneumonia: 1 No Conversion	Same LNC, Less complications
Fanning et al 2008 Observational	20 RRH	18	390	300	1	10%	Included 45% of large volume	Shorter HS
Magrina et all. 2008 Prospective Analisis	18 RRH	25,9	185	133	1.7	30%	11% Large volumes	
	18 LRH	25,9	216	208	2.4	19%	No Large volumes	
	21 ARH	27,7	157	443	3.6	27%	9,5% Large volumes	

RRH: Robotic Radical Hysterectomy – LRH: Laparoscopic Radical Hysterectomy – ARH Abdominal Radical Hysterectomy - LNC: Lymphnode count – HS: Hospital Stay – POC: Postoperative Complications (included intra-operative complications for Magrina et All) – EBL: estimated blood loss

**Robotic surgery in early cervical cancer has various advantages:  
is feasible and safe**

1. Sert B. & Abeler V. – Int J Med Robotics Comput Assist Surg 2007; 3:224-228; Kim YT et al. – Yonsei Med J 49(6):886 - 890, 2008
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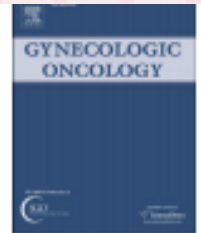


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## A multi-institutional experience with robotic-assisted radical hysterectomy for early stage cervical cancer

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*Article history:*

Received 9 December 2008

Available online 26 February 2009

- Multi-institutional experience of robotic-assisted surgery
- 42 out of 835 patients treated for CC
- IA2 (17%)- Ib1 (67%) – Ib2 (14%)
- **Surgeon with different experiences involved**

**Confirmed less blood loss, shorter hospital stay,  
less operative time.  
Acceptable nodal retrieval, few surgical complications.  
*Surgeon experience is not mandatory to success in RRH***

### **Conflict of interest statement**

M. Patrick Lowe MD: Intuitive Surgical, Covidien.  
Todd Tillmanns MD: Intuitive Surgical, Covidien.