

# Laparoscopic staging of endometrial cancer: The Finnish experience



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# FIGO Staging

## FIGO Stage

IA	endometrium
IB	<1/2 invasion
IC	>1/2 invasion
IIA	cx: glandular
IIB	cx: stromal
IIIA	cytol+, adnex+
IIIB	vaginal spread
IIIC	LN+
IVA	bladder, rectum
IVB	distant metastasis



# **Impact of surgical staging in endometrial cancer**

# Impact of surgical staging

<b>Risk group</b>	<b>Pelvic nodes + (%)</b>
<b>Low risk (30%) Stage IA, IB, gr1</b>	<b>3</b>
<b>Moderate risk (50%) Stage IB, gr2,3</b>	<b>9</b>
<b>High risk (20%) Stage IC, gr1,2,3</b>	<b>18</b>

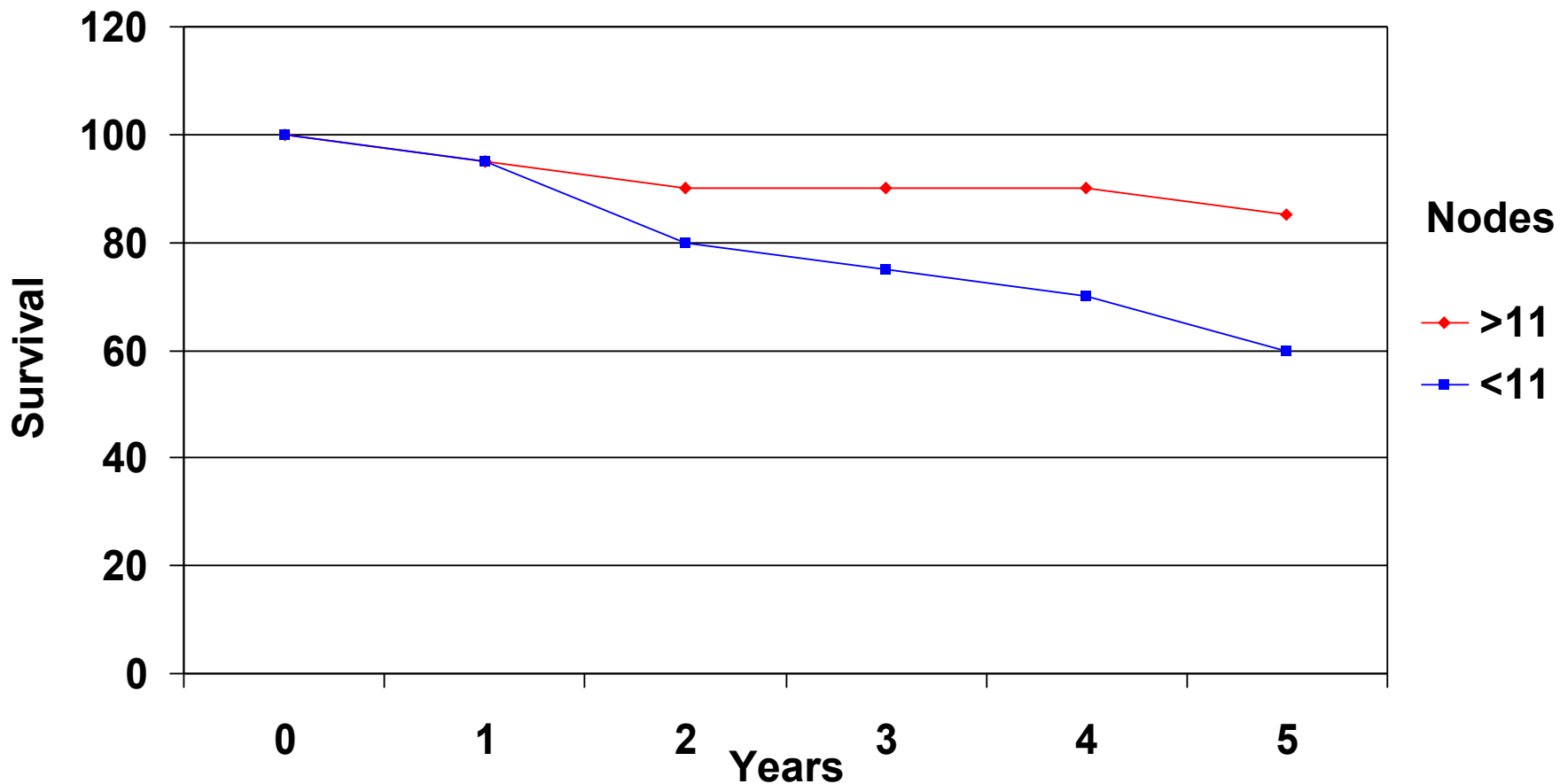
# Impact of surgical staging

N=207

	<b>Surg. staging St I-II gr2-3</b>	<b>Adjuvant RT all</b>	<b>Adjuvant RT St I</b>
<b>Gyn. oncol.</b>	<b>96%</b>	<b>8,6%</b>	<b>0 (T1,N0)</b>
<b>Gynecology</b>	<b>19%</b>	<b>21,7%</b>	<b>18% ← (T1,Nx)</b>

# Impact of surgical staging

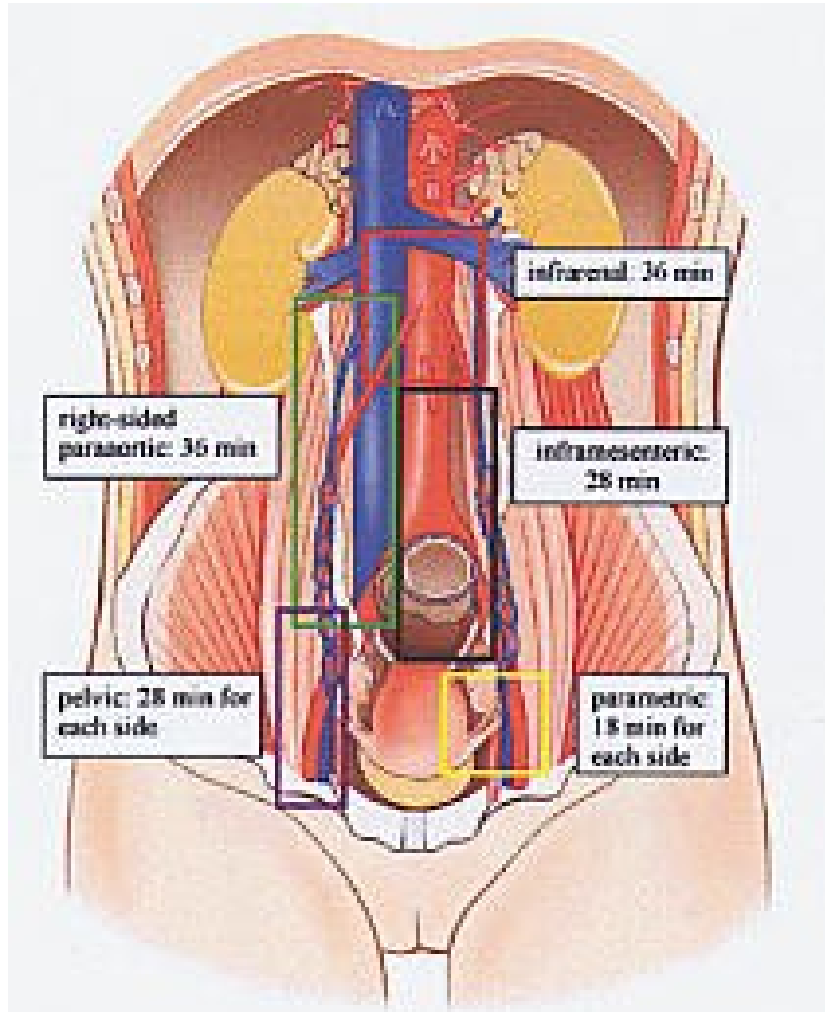
Cragun et al JCO 2005 N =509 (gr3, >1/2, improved survival)





**Is laparoscopic approach feasible?**

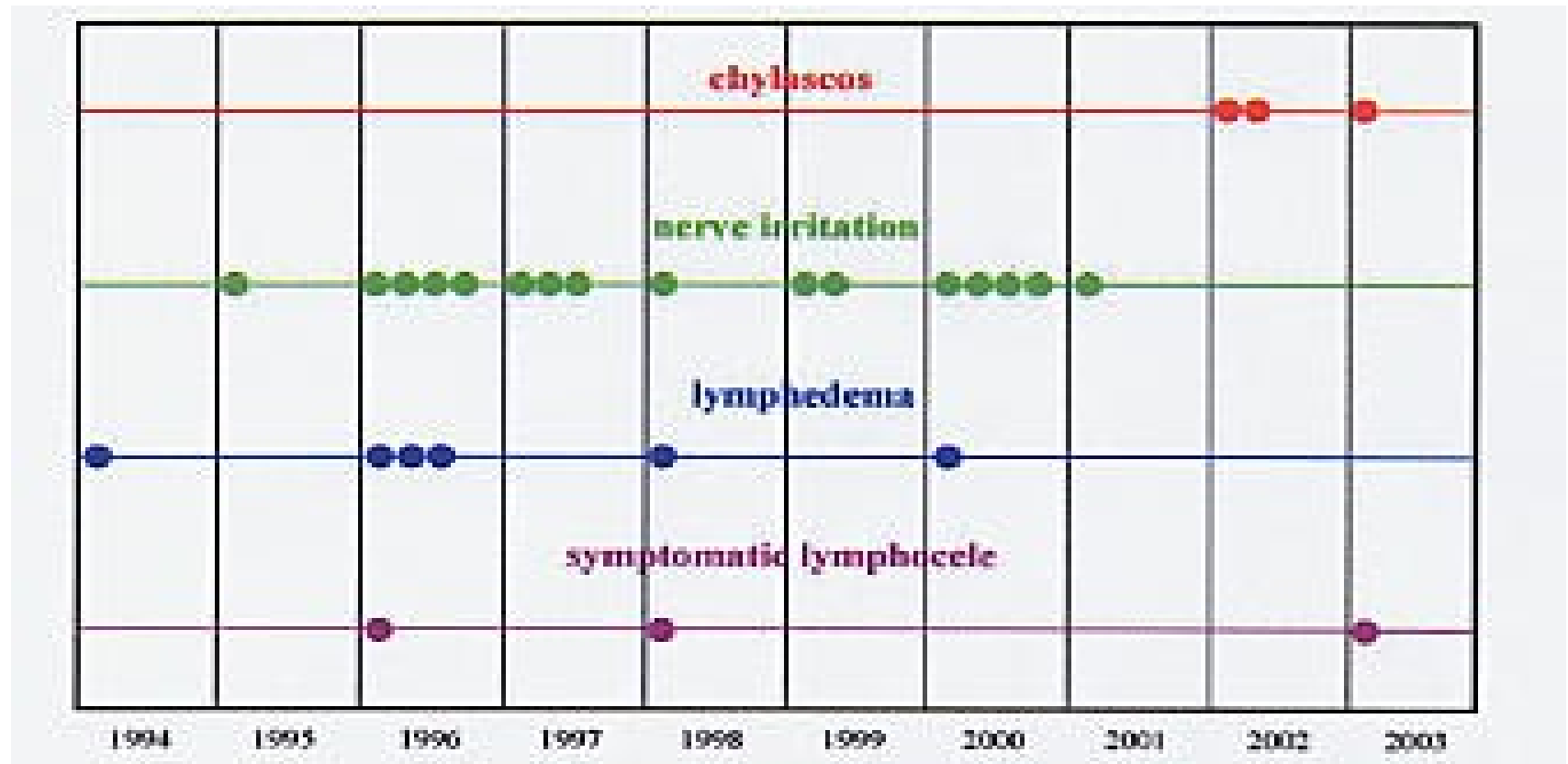
# L-scopy - feasibility





# L-scopy – feasibility

Köhler et al 2004, N= 650



# L-scopy - feasibility

L-scopy / I -tomy

Malur -01 prospective	37 / 33	no difference
Holub -02 prospective	177 / 44	no difference
Tozzi -05 prospective	63/59	no difference

**ASTEC, MRC** **2006-2007**

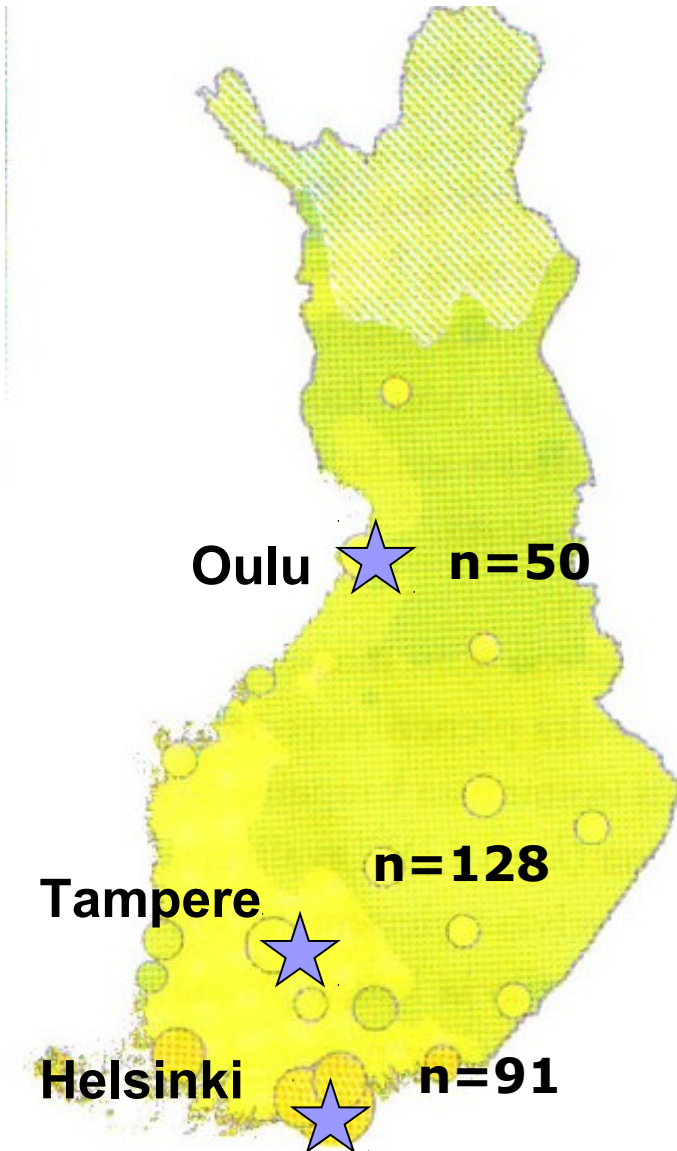
**GOG, LAP-2** **1000 / 1000** **2006-2007**  
prospective



# **The Finnish experience**

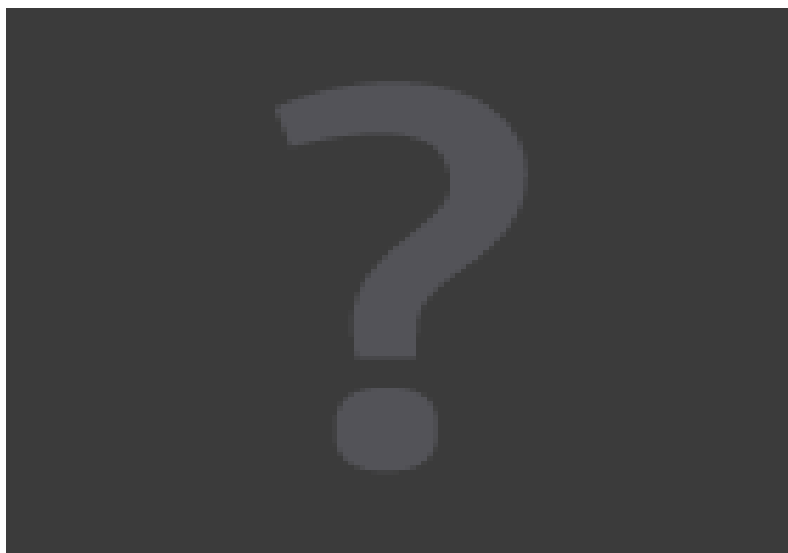
## **Materials and methods**

# Participating University Clinics



**Total n=269**

# Development of l-scopical surgery



	Hel N=91/ 670	Ou N=50/ 210	Tre N=128/ 402
1998	4 %		9%
1999	6%		24%
2000	5%		30%
2001	7%		30%
2002	16%	9%	65%
2003	22%	27%	57%
2004	35%	46%	71%

# Indications for l-scopic surgery

## Helsinki

- adenoca, gr 1, 2
- invasion  $<1/2$

## Oulu

- adenoca, gr 1,2
- invasion  $< \text{ or } >1/2$

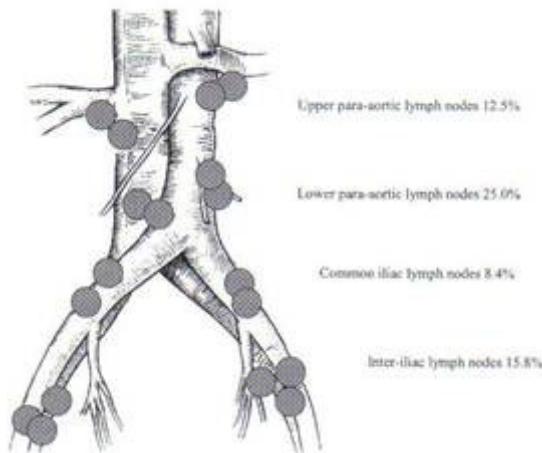
## Tampere

- all histological types  
(also sarcomas)
- all grades
- invasion  $<\text{or}> 1/2$

# Mode of Operation

## Helsinki & Oulu

- LH, BSO
- pelvic LAE
- or
- pelvic node biopsies



## Tampere

- LH, BSO
- pelvic or iliacal LAE
- or
- pelvic node biopsies

## In high risk groups:

- para-aortic LAE
- resectio omenti

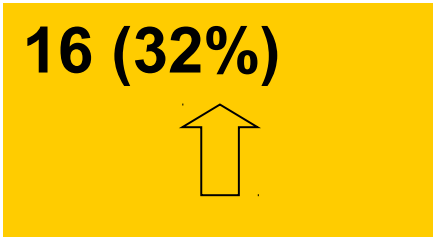
# Patient characteristics

	<b>Helsinki</b> <b>N=91</b>	<b>Oulu</b> <b>N=50</b>	<b>Tampere</b> <b>N=128</b>
<b>Age</b>	<b>61</b> <b>(30-80)</b>	<b>63</b> <b>(40-76)</b>	<b>65</b> <b>(42-83)</b>
<b>Parity</b>	<b>1,8</b> <b>(0-6)</b>	<b>2,2</b> <b>(0-5)</b>	<b>1,9</b> <b>(0-6)</b>
<b>HRT (any estrogen based)</b>	<b>50 (55%)</b>	<b>13 (26%)</b>	<b>50 (36%)</b>





# Patient characteristics

	<b>Helsinki</b> <b>N=91</b>	<b>Oulu</b> <b>N=50</b>	<b>Tampere</b> <b>N=128</b>
<b>BMI</b>	<b>25,56</b> <b>(17-41)</b>	<b>29,55</b> <b>(18-42)</b>	
<b>Obesity</b> BMI>30 or >90kg	<b>11 (12%)</b>	<b>16 (32%)</b> 	<b>28 (25%)</b>
<b>Severe obesity</b> BMI>35 or >100kg	<b>2 (2%)</b>	<b>7 (14%)</b>	<b>14 (13%)</b>

# Results



# Pathological findings

	Helsinki	Oulu	Tampere
<b>Stage Ia</b>	<b>18</b>	<b>8</b>	<b>26</b>
	} <b>81%</b>	} <b>66%</b>	} <b>64%</b>
<b>Ib</b>	<b>56</b>	<b>25</b>	<b>54</b>
<b>Ic</b>	<b>3</b>	<b>10</b>	<b>25</b>
<b>IIa</b>	<b>3</b>		<b>4</b>
<b>IIb</b>	<b>1</b>	<b>3</b>	<b>9</b>
<b>IIIa</b>	<b>8</b>	<b>3</b>	<b>6</b>
<b>IIIb</b>			<b>1</b>
<b>IIIc</b>	<b>1</b>	<b>1</b>	<b>3</b>
<b>other</b>	<b>1 cxca</b>		<b>1 tuubaca</b>

# Pathological findings

	<b>Helsinki N=91</b>	<b>Oulu N=50</b>	<b>Tampere N=128</b>
<b>Grade 1</b>	<b>76 (85%)</b>	<b>42 (84%)</b>	<b>81 (63%)</b>
<b>2</b>	<b>10 (11%)</b>	<b>5 (10%)</b>	<b>22 (17%)</b>
<b>3</b>	<b>1 (1%)</b>	<b>3 (6%)</b>	<b>25 (20%)</b>
<b>other</b>	<b>1 ser. papill. 1 sarcoma</b>		

## Operative details

	<b>Helsinki</b> <b>N=91</b>	<b>Oulu</b> <b>N=50</b>	<b>Tampere</b> <b>N=128</b>
<b>Operative time</b>	<b>131,6</b> <b>(45-265)</b>	<b>168,1</b> <b>(90-240)</b>	<b>135,3</b> <b>(100-175)</b>
<b>Blood loss</b>	<b>154,6</b> <b>(30-700)</b>	<b>186,2</b> <b>(50-500)</b>	<b>173,4</b> <b>(30-2000)</b>
<b>Lymph nodes removed</b>	<b>16,4</b> <b>(5-46)</b>	<b>14,4</b> <b>(6-30)</b>	<b>10,7</b> <b>(3-21)</b>
<b>Hospital stay</b>	<b>2,8</b> <b>(1-22)</b>	<b>3,6</b> <b>(2-6)</b>	<b>3,6</b> <b>(2-11)</b>

# Cytology

Oulu: N=50

		Before	After
■ cytology taken	L I-II	50	42
■ before and	L III-IV	0	4 (9,5%)
■ after intrauterine manipulation	ND	0	4

# Positive lymph nodes

	<b>Patient:</b>	<b>Tumor:</b>	<b>Nodes:</b>	
	<b>-age</b>	<b>-grade</b> <b>-invasion</b>	<b>-posit/ total</b>	
<b>1</b> (Helsinki)	<b>63 year</b> <b>G0P0</b> <b>BMI= 25</b>	<b>gr 2</b> <b>&lt; 1/2</b>	<b>1/ 17</b>	<b>NED (7kk)</b>
<b>1</b> (Oulu)	<b>68 year</b> <b>G4P3</b> <b>BMI=37</b>	<b>gr 3</b> <b>&gt; 1/2</b>	<b>1 / 11</b>	<b>NED (8kk)</b>
<b>3</b> (Tampere)	<b>70 year</b>	<b>gr 3</b>	<b>2 / 13</b>	<b>NED (5kk)</b>
	<b>69 year</b>	<b>gr3</b>	<b>1 / 17</b>	<b>NED (41kk)</b>
	<b>69 year</b>	<b>gr3</b>	<b>4 /10</b>	<b>NED (24kk)</b>

# Complications

## Perioperative:

- conversion to I-tomy
- urinary bladder lesion
- uterus ruptured – profuse haemorrhage



# Complications

## Postoperative:

- peritonitis, embolia pulmonum
- n.obturatorius axon lesion
- pyelonephritis
- blood transfusion (4 units)
  
- hernia umbilicalis incarcerata
- port-site herniation, ileus
- pelvic lymphacyst x3
- wound rupture
- embolia pulmonum
- deep venous trombosis, embolia pulmonum

# Postoperative and Follow up details

	<b>Helsinki N=91</b>	<b>Oulu N=50</b>	<b>Tampere N=128</b>	
<b>Perioperative complications</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3 (1%)</b>
<b>Postoperative complications</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>10 (4%)</b>
<b>Recurrence</b>	<b>0</b>	<b>0</b>	<b>6 (4,6%)</b>	<b>6 (2,2%)</b>

# Recurrences

<b>Stage</b>	<b>Adjuvant Treatment</b>
<b>IIIB, gr3</b>	<b>pelvic RT+brachy</b>
<b>IC, gr1</b>	<b>-</b>
<b>IIA, gr1</b>	<b>pelvic RT</b>
<b>IB, gr3</b>	<b>pelvic RT</b>
<b>IIB, gr1</b>	<b>pelvic RT</b>
<b>IIIA, ser.papill</b>	<b>pelvic RT+ chemo</b>

# Recurrences

Site	Time to relapse	Follow-up
bones, brain, <b>vagina</b>	5 mo	alive
lung	12 mo	alive
bone (os ileum)	2 mo	alive
bone (upper arm)	15 mo	alive
liver, lung	24 mo	dead
abdomen (ascites)	12 mo	dead



# **Conclusions & Discussion**



# Conclusions...

## **I-scopic approach is feasible:**

- **less time**
- **less blood loss**
- **less hospital days**
- **lymph node amount equal (or more)**

## Conclusions...

- Operative staging in endometrial cancer is essential for adjuvant treatment planning
- ...there seems to be **little justification** for the standard use **of adjuvant pelvic RT in the completely staged** women with Stage I or II endometroid endometrial cancer.

Berman; Gyn Oncol 2004, editorial

## Conclusions...

- **...surgical stage in gr 1 endometrial cancer significantly impacted postoperative treatment decision in 29 % of patients**
- Ben-Shachar et al Obstet Gynecol 2005
- **Sentinel node ?**



# Acknowledgements to Surgery Groups

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