# New concepts in gynaeco-oncological surgery

**Zoltán Novák**
National Insitute of Oncology
Budapest
drnovakzoltan.hu

# Robert E Swain

- *The Specialist is who knows a great deal about a very little, and who keeps on knowing more and more about less and less until he knows everything about nothing. Then he is a Superspecialist*.

# ESGO

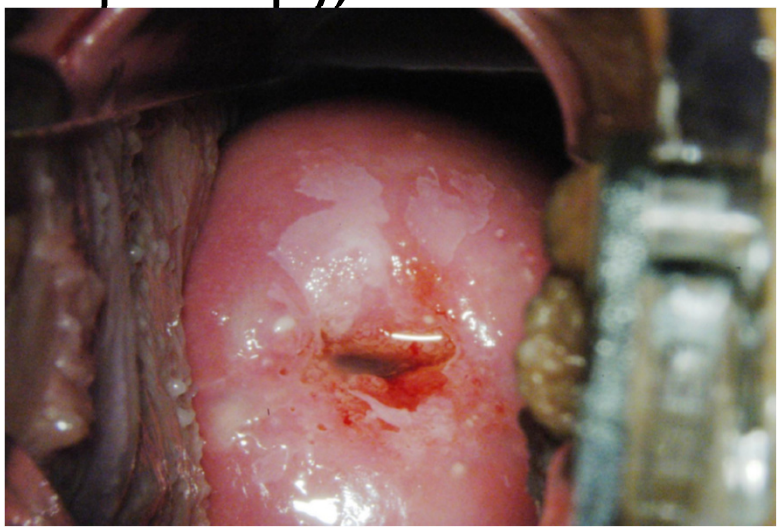



About ▾ Endometrial Cancer ▾ Vulvar Cancer ▾ Cervical Cancer ▾ Ovarian Cancer ▾

https://www.esgo.org/explore/guidelines/

# Cervical cancer

- Decreasing incidence
- Colposcopy, new trends in AI-guided image analysis



- Radical hysterectomy: more operative techniques than patients
- Radiotherapy –more indications in primary setting

**Box 1 FIGO staging of carcinoma of the cervix uteri (2018).**

Stage I:

The carcinoma is strictly confined to the cervix uteri (extension to the corpus should be disregarded)

- **IA** Invasive carcinoma that can be diagnosed only by microscopy, with maximum depth of invasion <5 mm[a]
  - **IA1** Measured stromal invasion <3 mm in depth
  - **IA2** Measured stromal invasion ≥3 mm and <5 mm in depth
- **IB** Invasive carcinoma with measured deepest invasion ≥5 mm (greater than stage IA), lesion limited to the cervix uteri[b]
  - **IB1** Invasive carcinoma ≥5 mm depth of stromal invasion and <2 cm in greatest dimension
  - **IB2** Invasive carcinoma ≥2 cm and <4 cm in greatest dimension
  - **IB3** Invasive carcinoma ≥4 cm in greatest dimension

Stage II:

The carcinoma invades beyond the uterus, but has not extended onto the lower third of the vagina or to the pelvic wall

- **IIA** Involvement limited to the upper two-thirds of the vagina without parametrial involvement
  - **IIA1** Invasive carcinoma <4 cm in greatest dimension
  - **IIA2** Invasive carcinoma ≥4 cm in greatest dimension
- **IIB** With parametrial involvement but not up to the pelvic wall

Stage III:

The carcinoma involves the lower third of the vagina and/or extends to the pelvic wall and/or causes hydronephrosis or non-functioning kidney and/or involves pelvic and/or paraaortic lymph nodes[c]

- **IIIA** Carcinoma involves the lower third of the vagina, with no extension to the pelvic wall
- **IIIB** Extension to the pelvic wall and/or hydronephrosis or non-functioning kidney (unless known to be due to another cause)
- **IIIC** Involvement of pelvic and/or paraaortic lymph nodes, irrespective of tumor size and extent (with r and p notations)[c]
  - **IIIC1** Pelvic lymph node metastasis only
  - **IIIC2** Paraaortic lymph node metastasis

Stage IV:

The carcinoma has extended beyond the true pelvis or has involved (biopsy proven) the mucosa of the bladder or rectum. A bullous edema, as such, does not permit a case to be allotted to stage IV

- **IVA** Spread of the growth to adjacent organs
- **IVB** Spread to distant organs

# ESGO ESTRO ESP

Virchows Archiv
https://doi.org/10.1007/s00428-018-2362-9

GUIDELINE PAPER

## The European Society of Gynaecological Oncology/European Society for Radiotherapy and Oncology/European Society of Pathology Guidelines for the Management of Patients with Cervical Cancer

David Cibula[1] · Richard Pötter[2] · François Planchamp[3] · Elisabeth Avall-Lundqvist[4] · Daniela Fischerova[1] · Christine Haie-Meder[5] · Christhardt Köhler[6] · Fabio Landoni[7] · Sigurd Lax[8] · Jacob Christian Lindegaard[9] · Umesh Mahantshetty[10] · Patrice Mathevet[11] · W. Glenn McCluggage[12] · Mary McCormack[13] · Raj Naik[14] · Remi Nout[15] · Sandro Pignata[16] · Jordi Ponce[17] · Denis Querleu[3] · Francesco Raspagliesi[18] · Alexandros Rodolakis[19] · Karl Tamussino[20] · Pauline Wimberger[21] · Maria Rosaria Raspollini[22]

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https://guidelines.esgo.org/media/2018/04/ESGO_Cervical-Cancer_A6.pdf

# Early stage

- 1A1 LVSI
- 1B1, 1B2
- 2A1
- < 4 cm

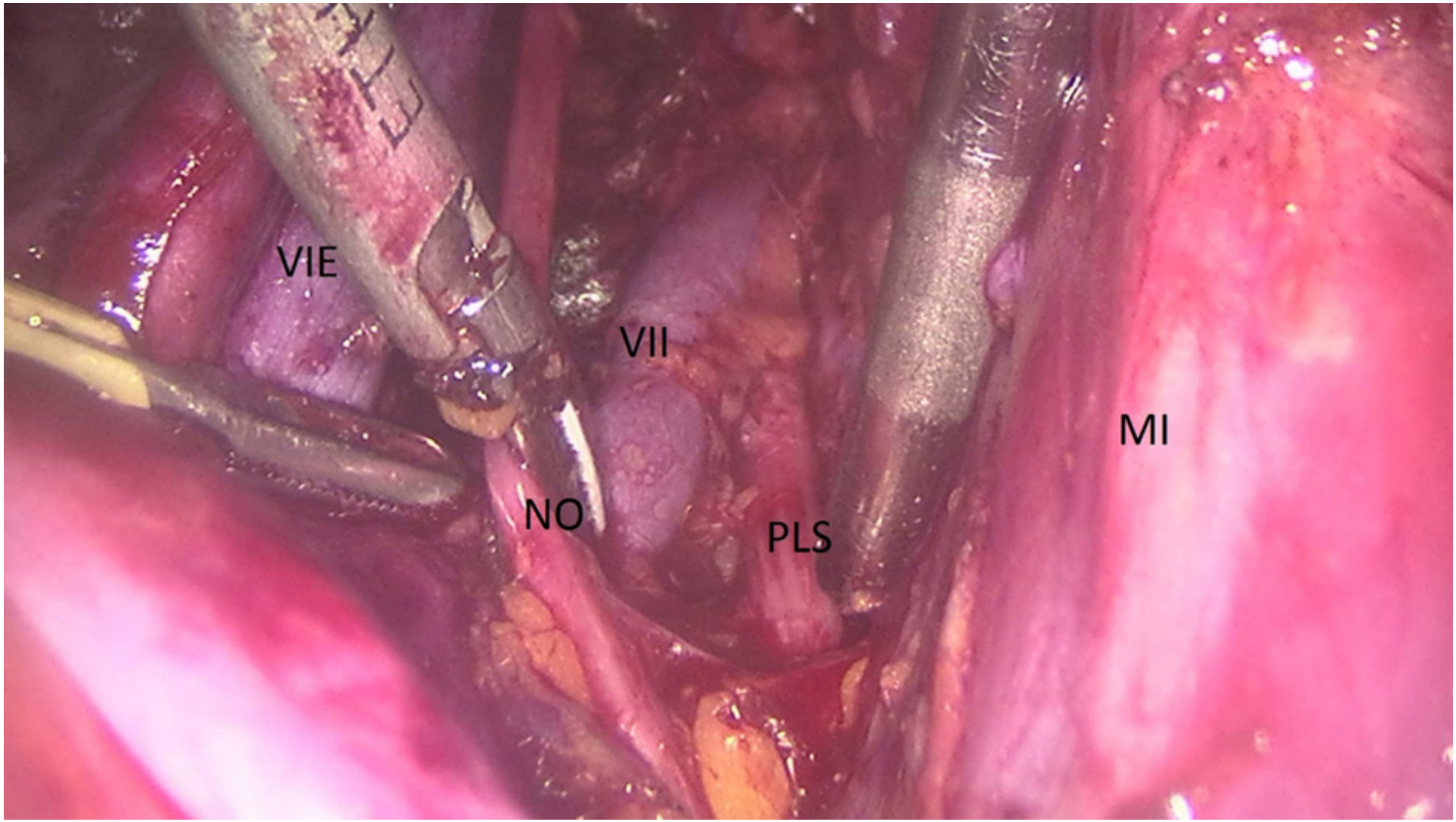
**MANAGEMENT OF STAGES T1b1/T2a1**

**General recommendation**

C Treatment strategy should aim for the avoidance of combining radical surgery and radiotherapy due to the highest morbidity after combined treatment.

# Early stage

| | |
|---|---|
| B | Radical surgery by a gynaecological oncologist is the preferred treatment modality. Minimal invasive approach is favoured. |
| B | The standard lymph node staging procedure is systematic pelvic lymphadenectomy. Sentinel node biopsy before pelvic lymphadenectomy is strongly recommended. Combination of blue dye with radiocolloid or use of indocyanine green alone are the recommended techniques. |
| ✓ | Lymph node assessment should be performed as the first step of surgical management. Intraoperative assessment of lymph node status (frozen section) is recommended. All sentinel nodes from both sides of the pelvis and/or any suspicious lymph nodes should be sent for frozen section. If sentinel node is not detected, intraoperative assessment of the pelvic lymph nodes should be considered. |
| ✓ | If intraoperative lymph node assessment is negative or it is not done, systematic pelvic lymph node dissection should be performed. At present, sentinel node biopsy alone cannot be recommended outside prospective clinical trials. Systematic lymph node dissection should include the removal of lymphatic tissue from regions with the most frequent occurrence of positive lymph nodes (sentinel nodes) including obturator fossa, external iliac regions, common iliac regions bilaterally, and presacral region. Distal external iliac lymph nodes (so called circumflex iliac lymph nodes) should be spared if they are not macroscopically suspicious. |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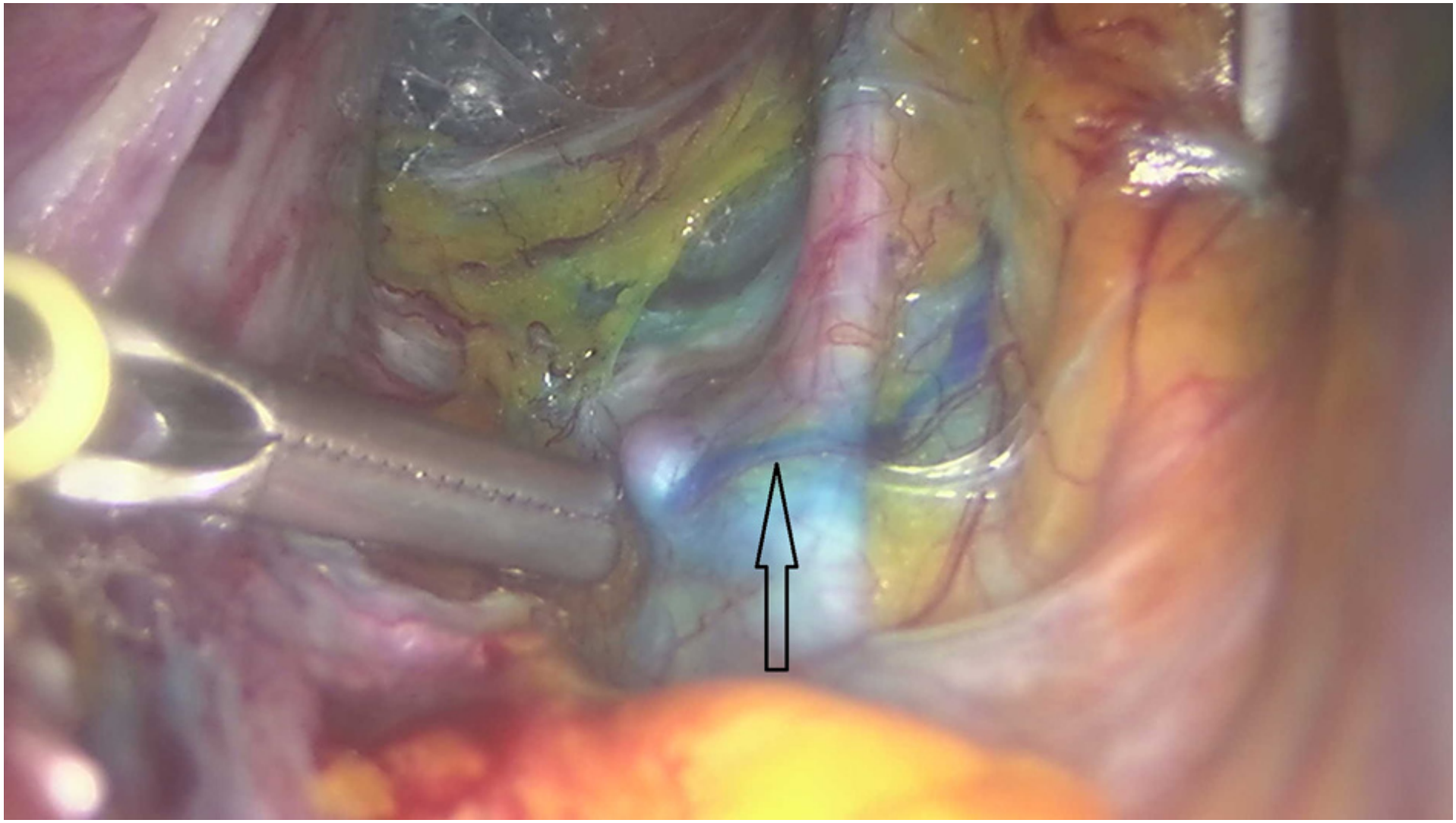
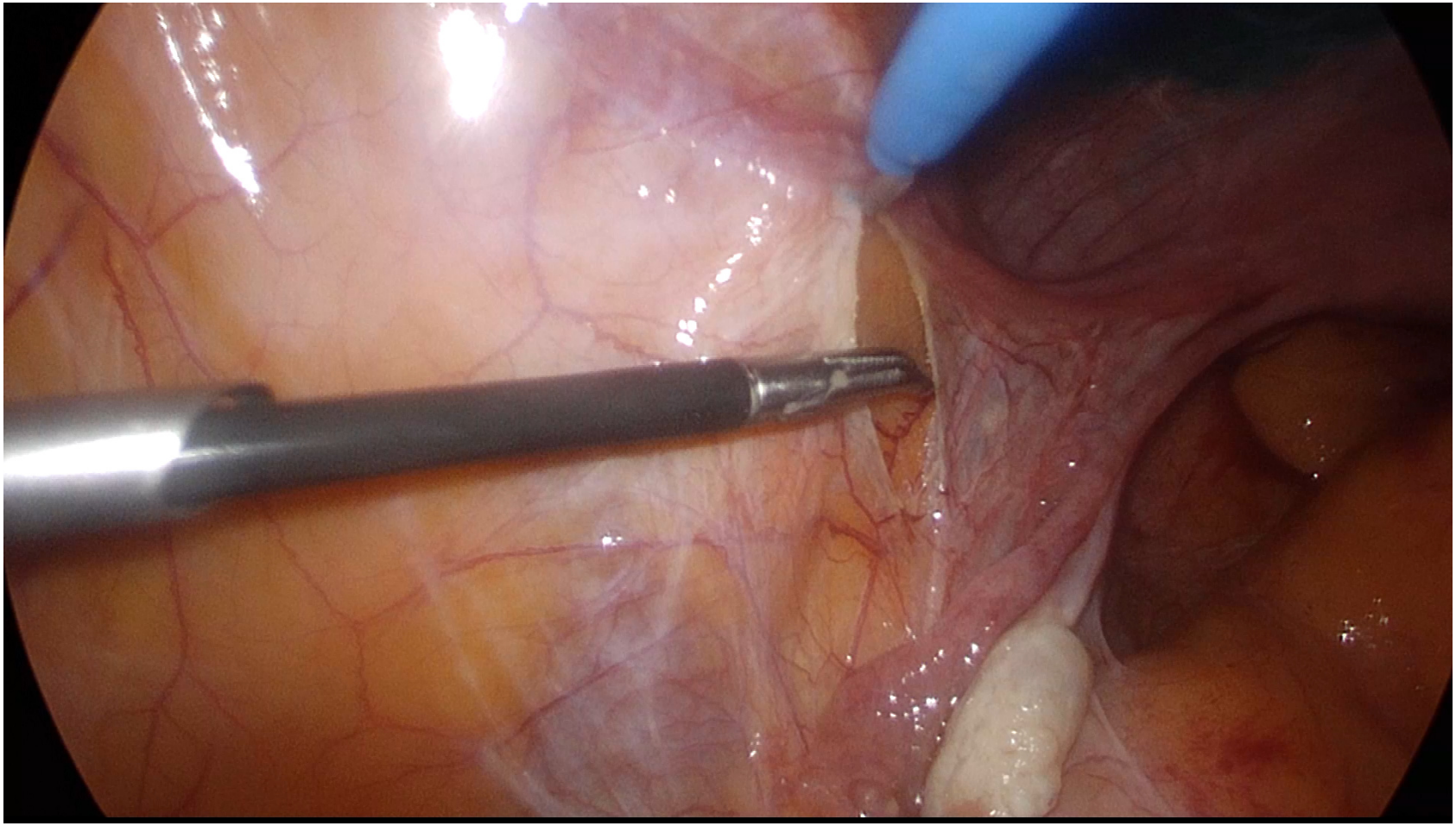
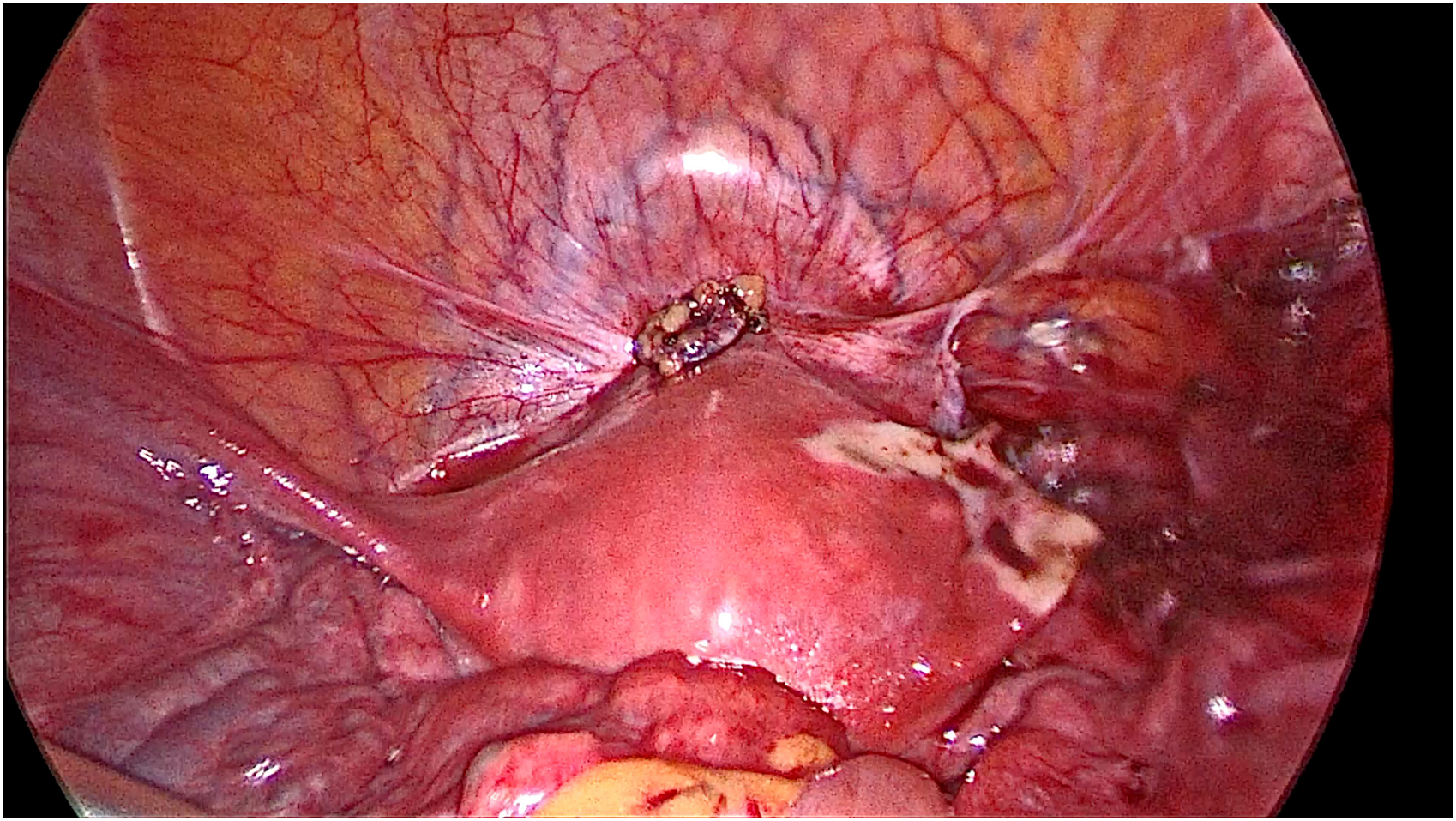
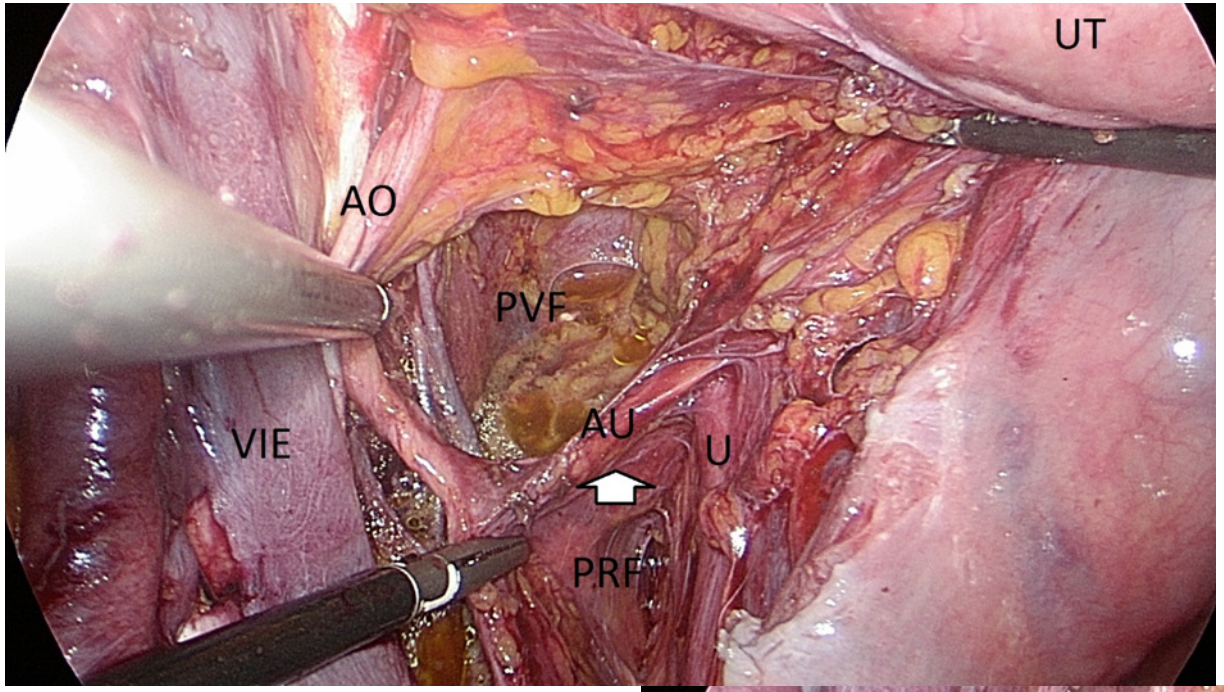


# Sentinel node ICG



# Atypical sentinel node ICG

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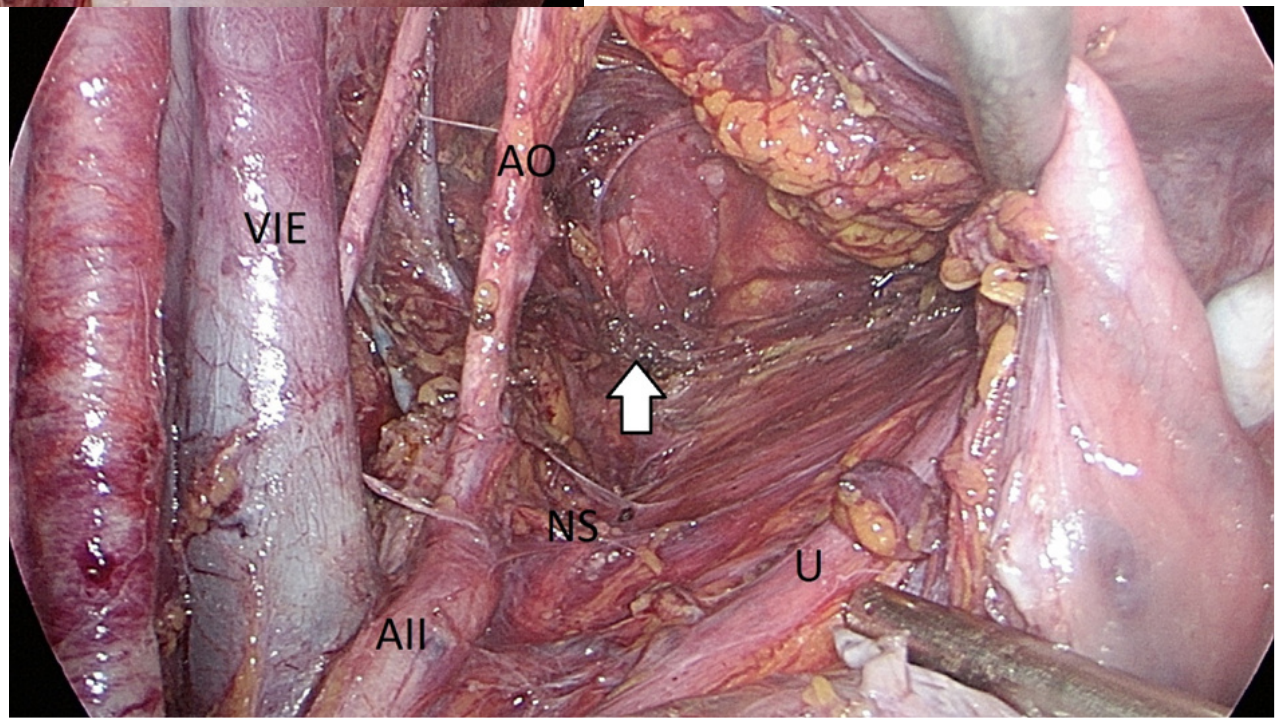
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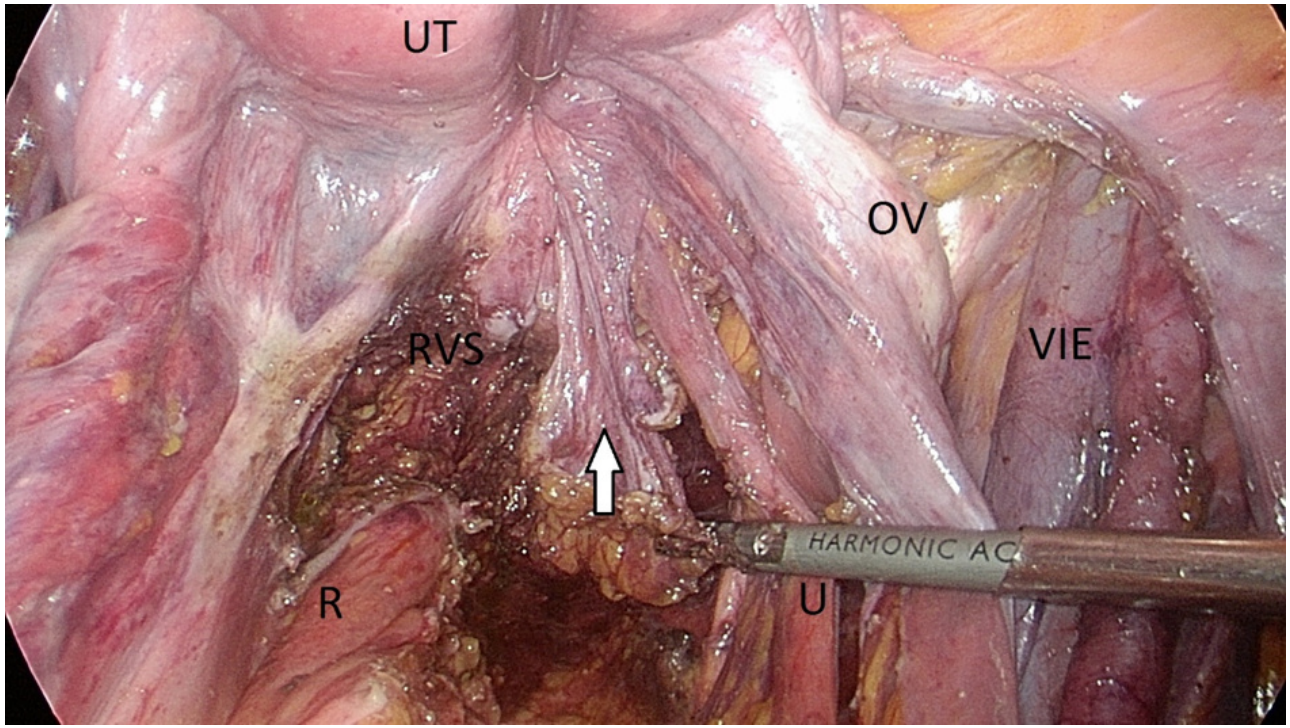
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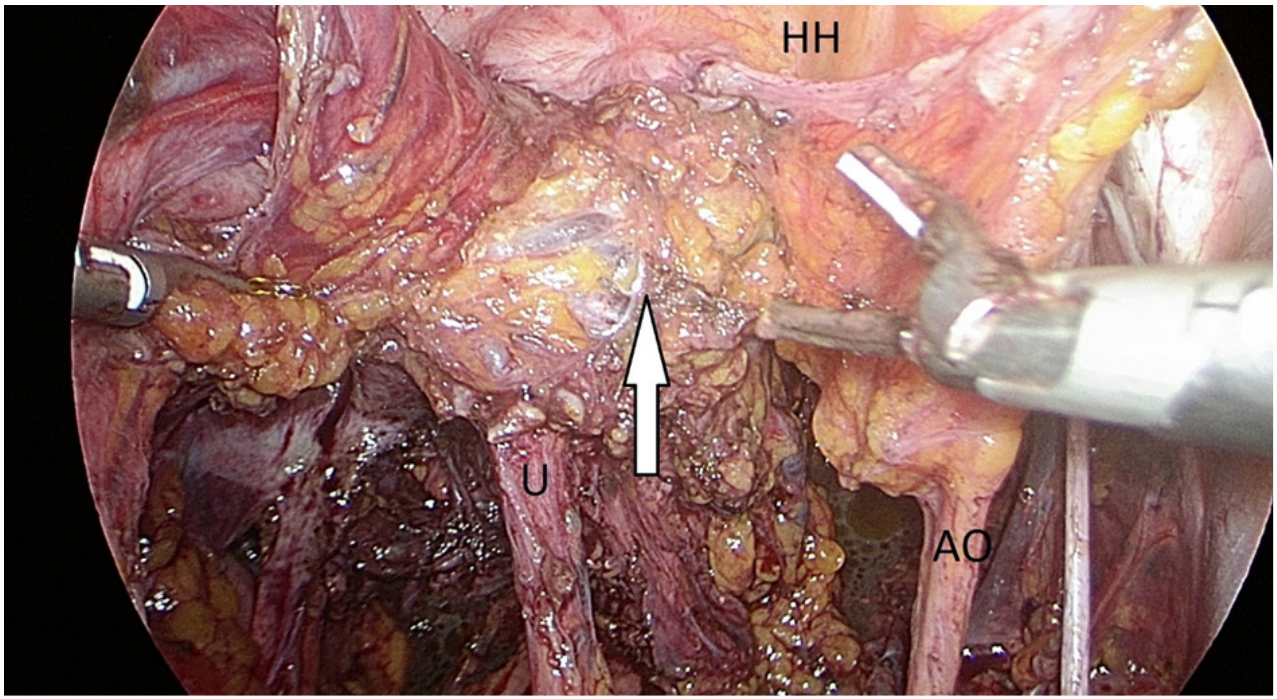
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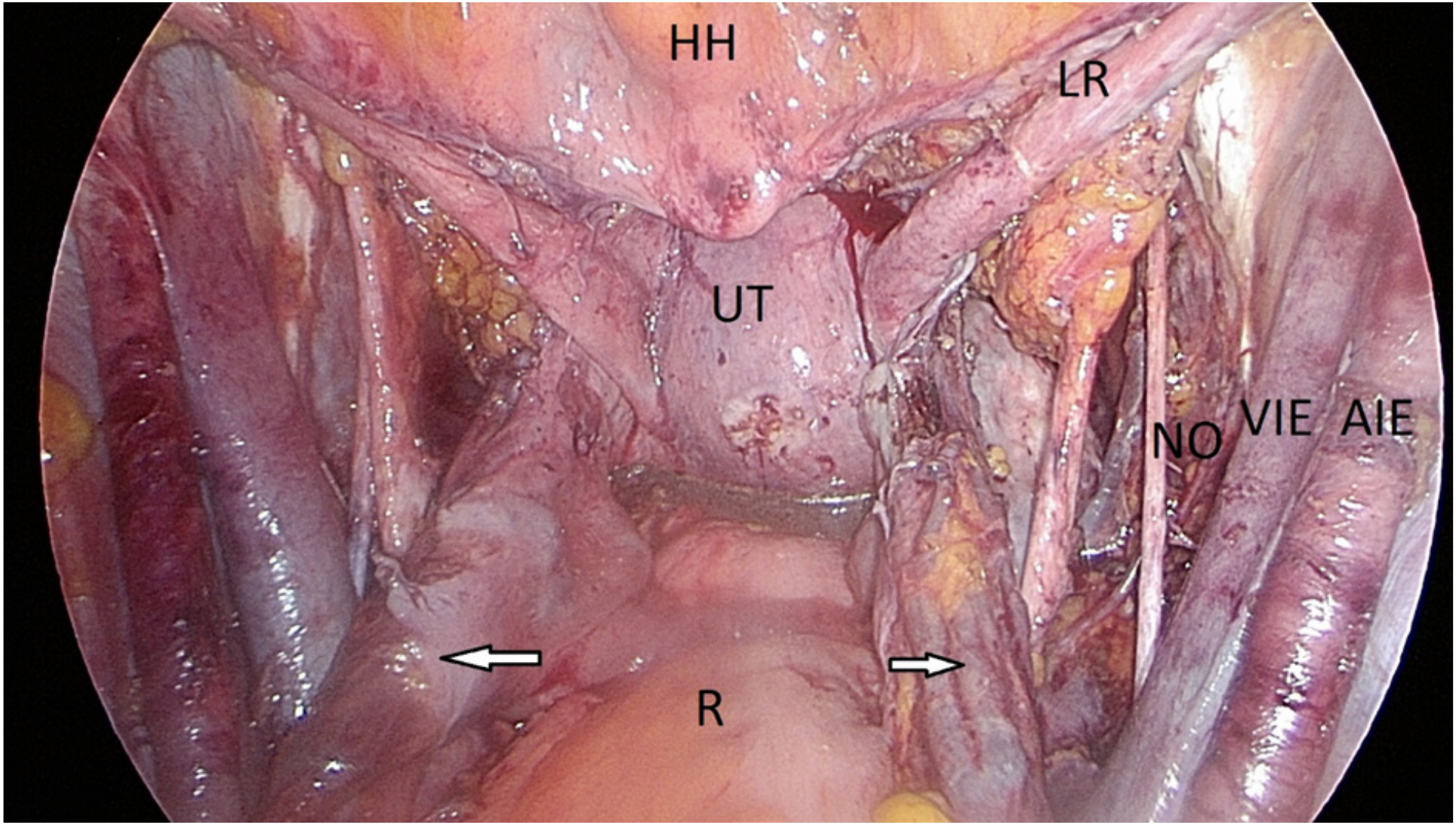
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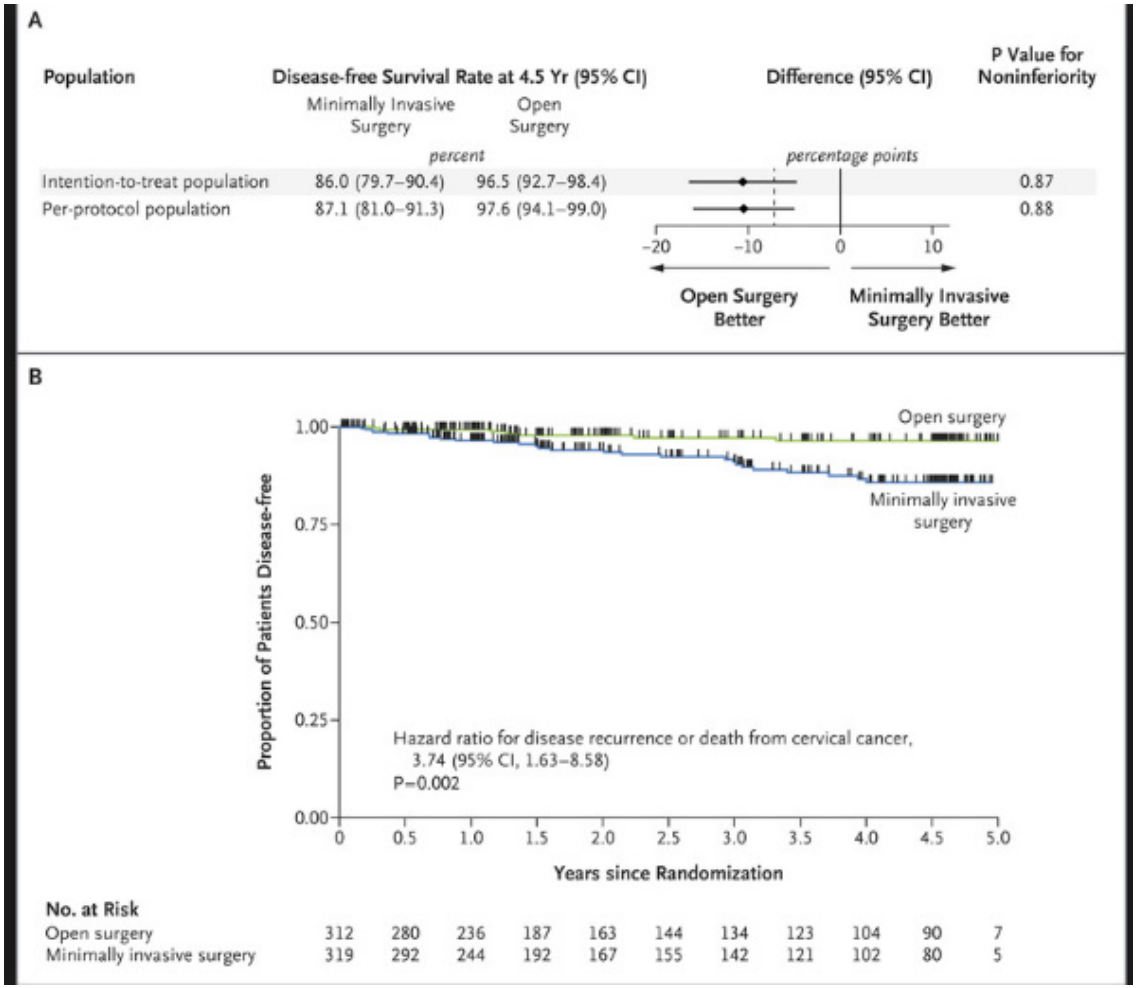
ORIGINAL ARTICLE FREE PREVIEW

# Minimally Invasive versus Abdominal Radical Hysterectomy for Cervical Cancer



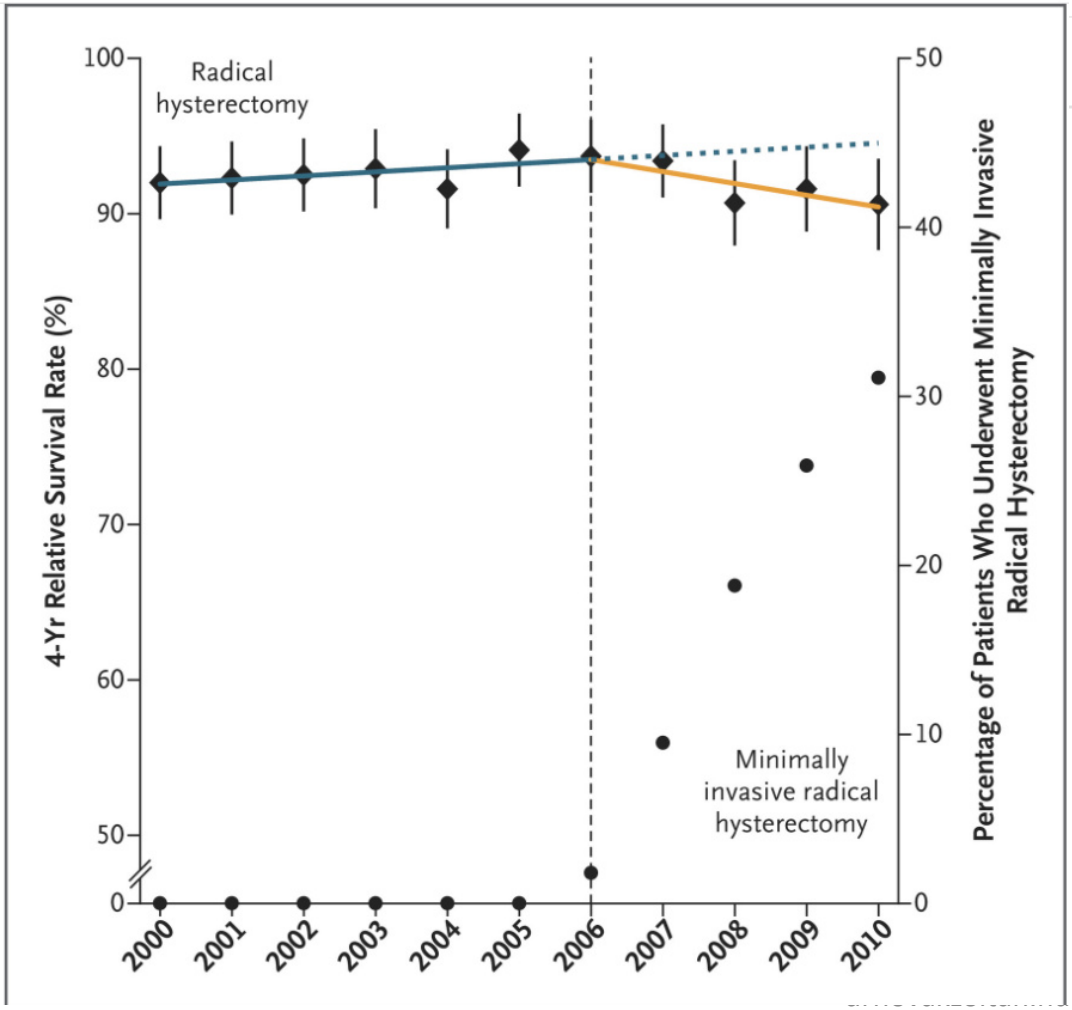

N Engl J Med 2018; 379:1895-1904

invasion, and lymph-node involvement; minimally invasive surgery was also associated with a lower rate of overall survival (3-year rate, 93.8% vs. 99.0%; hazard ratio for death from any cause, 6.00; 95% CI, 1.77 to 20.30).

ORIGINAL ARTICLE

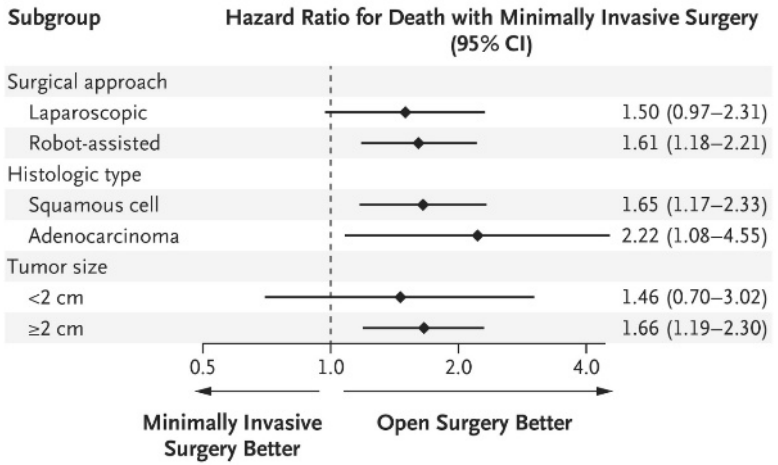
# Survival after Minimally Invasive Radical Hysterectomy for Early-Stage Cervical Cancer

Alexander Melamed, M.D., M.P.H., Daniel J. Margul, M.D., Ph.D., Ling Chen, M.D, M.P.H., Nancy L. Keating, M.D., M.P.H., Marcela G. del Carmen, M.D., M.P.H., Junhua Yang, M.S., Brandon-Luke L. Seagle, M.D., Amy Alexander, M.D., Emma L. Barber, M.D., Laurel W. Rice, M.D., Jason D. Wright, M.D., Masha Kocherginsky, Ph.D., et al.

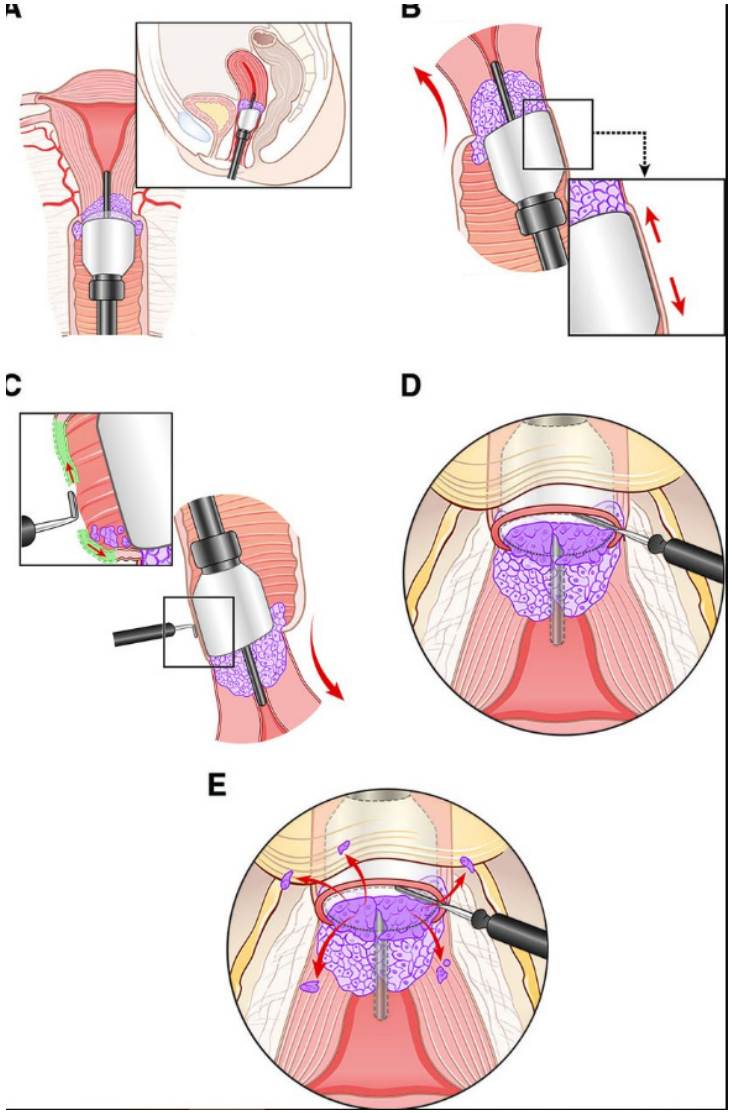


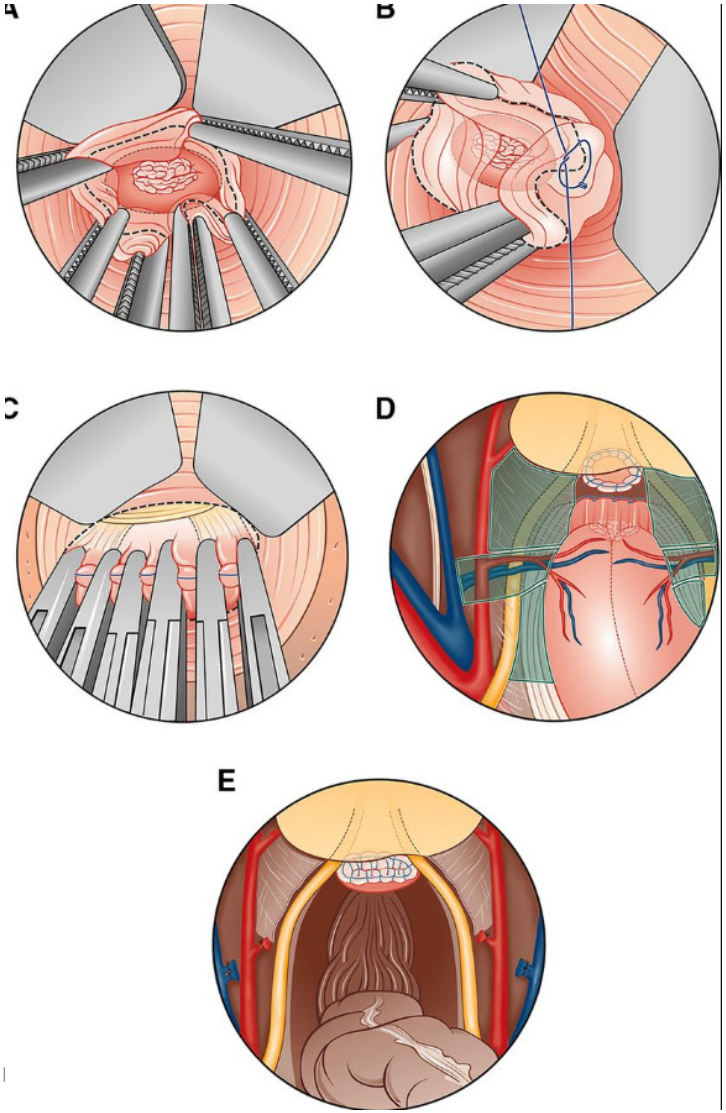

Metrics

November 15, 2018
N Engl J Med 2018; 379:1905-1914
DOI: 10.1056/NEJMoa1804923



Köhler C, Hertel H, Herrmann J, *et al* Laparoscopic radical hysterectomy with transvaginal closure of vaginal cuff – a multicenter analysis. *International Journal of Gynecologic Cancer* 2019;**29**:845-850.




drnovakzoltai

# Locally advanced

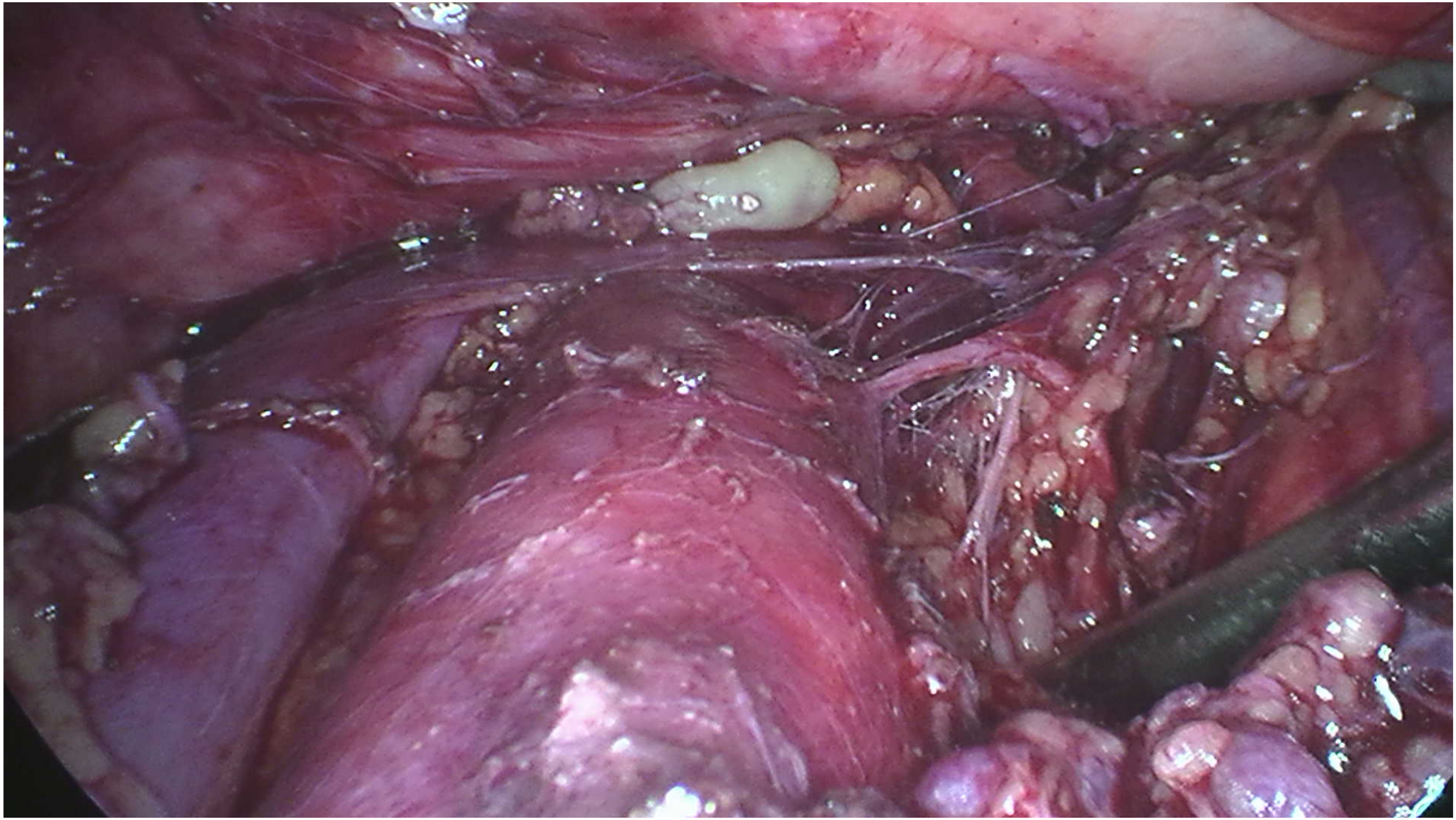
## MANAGEMENT OF LOCALLY ADVANCED CERVICAL CANCER

**Stage T1b2/T2a2 and negative lymph nodes on radiological staging**

| | |
|---|---|
| B | Treatment strategy should aim for avoiding the combination of radical surgery and postoperative external radiotherapy, due to the significant increase of morbidity and no evident impact on survival. |
| A | Definitive platinum-based chemoradiotherapy and brachytherapy is the preferred treatment (see Principles of radiotherapy). |
| C | Paraaortic lymph node dissection, at least up to inferior mesenteric artery, may be considered before chemoradiotherapy and brachytherapy. Pelvic lymph node dissection is not required. |

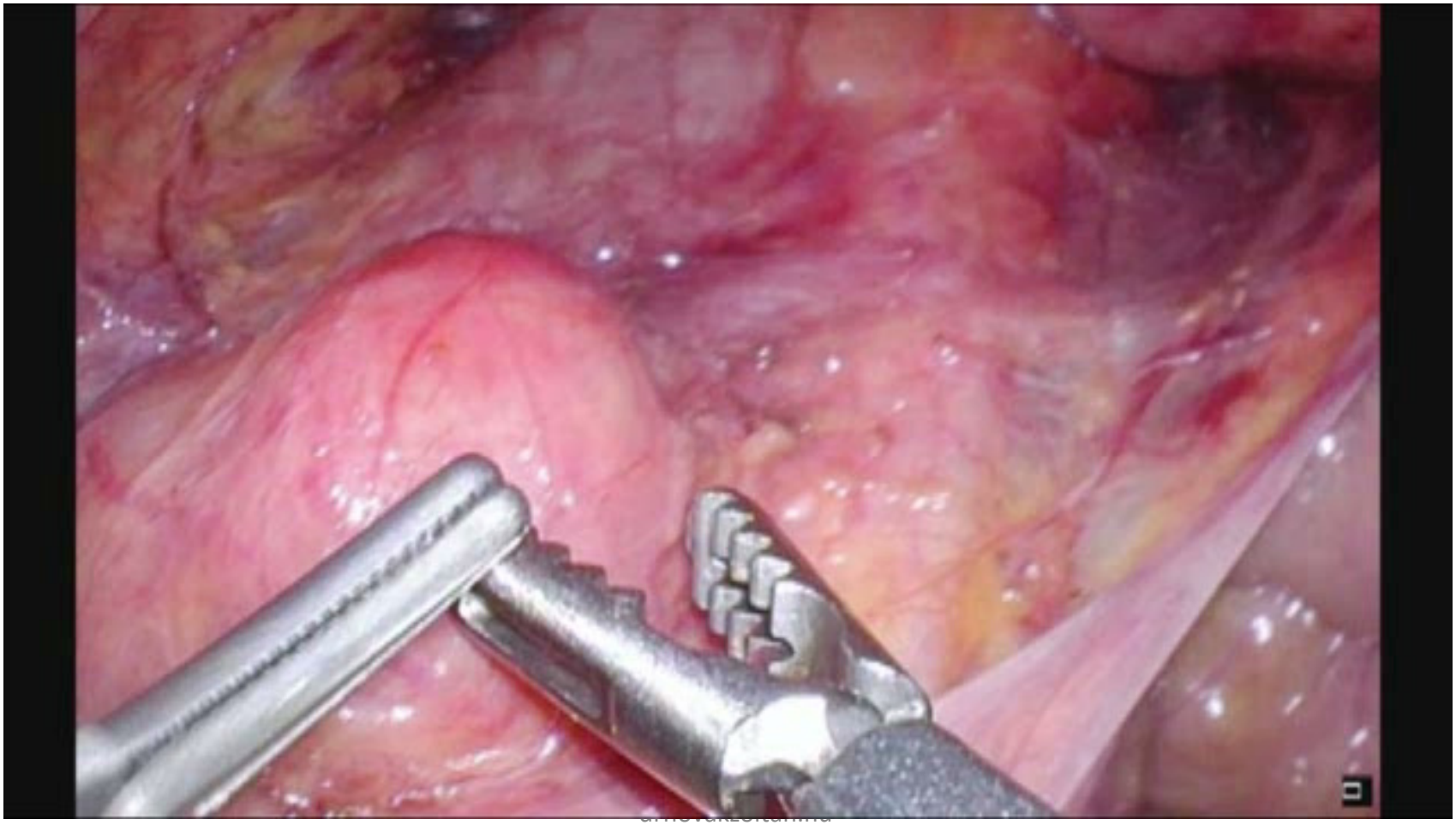
https://guidelines.esgo.org/media/2018/04/ESGO_Cervical-Cancer_A6.pdf

# Laparoscopic PAO



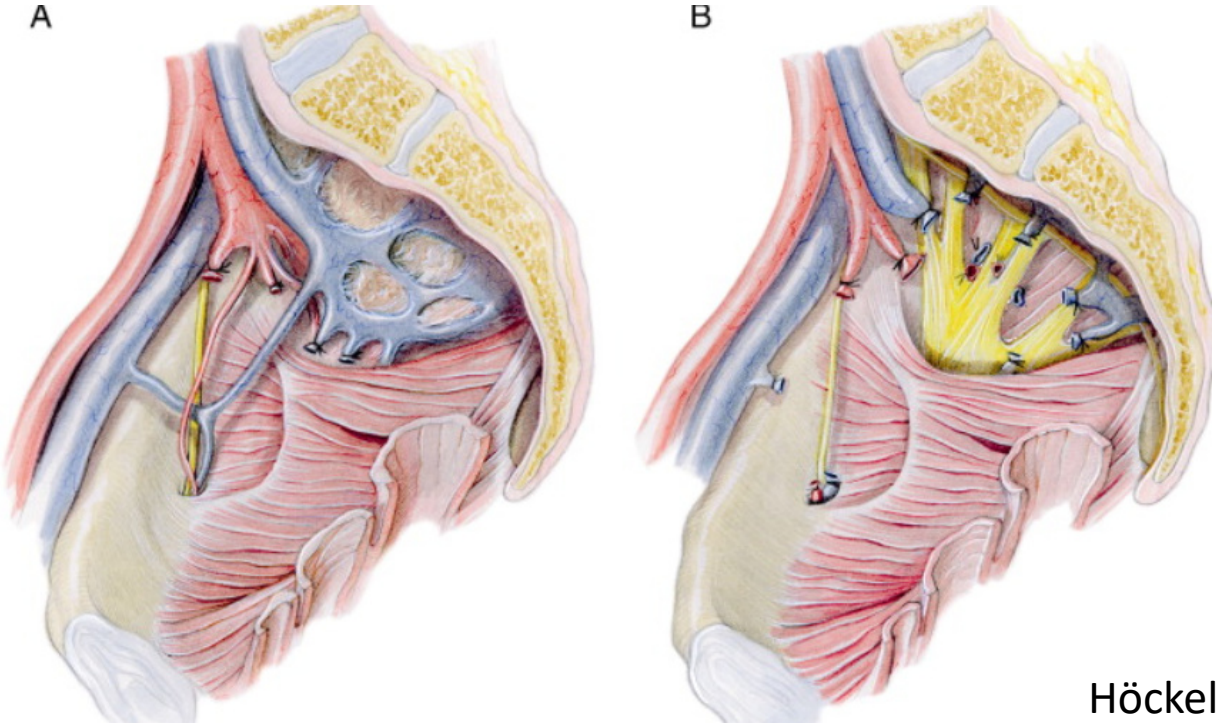
# Recurrent cervical cancer

- Localised recurrence

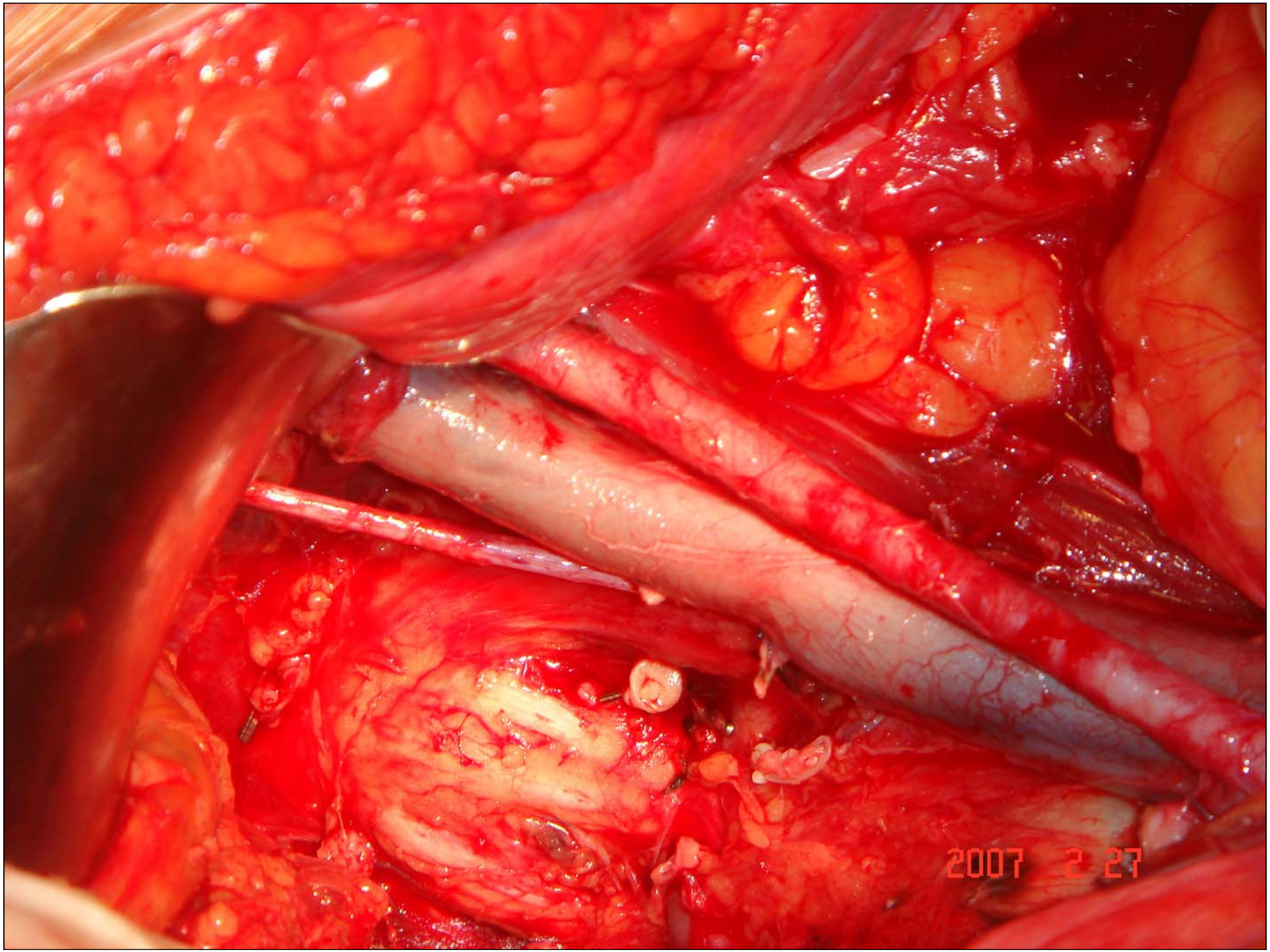


# Exenteration post radiotherapy

- Only curative option
- R0 resection is the goal
- Laterally extended resection




Höckel, Gynecol Oncol, 2008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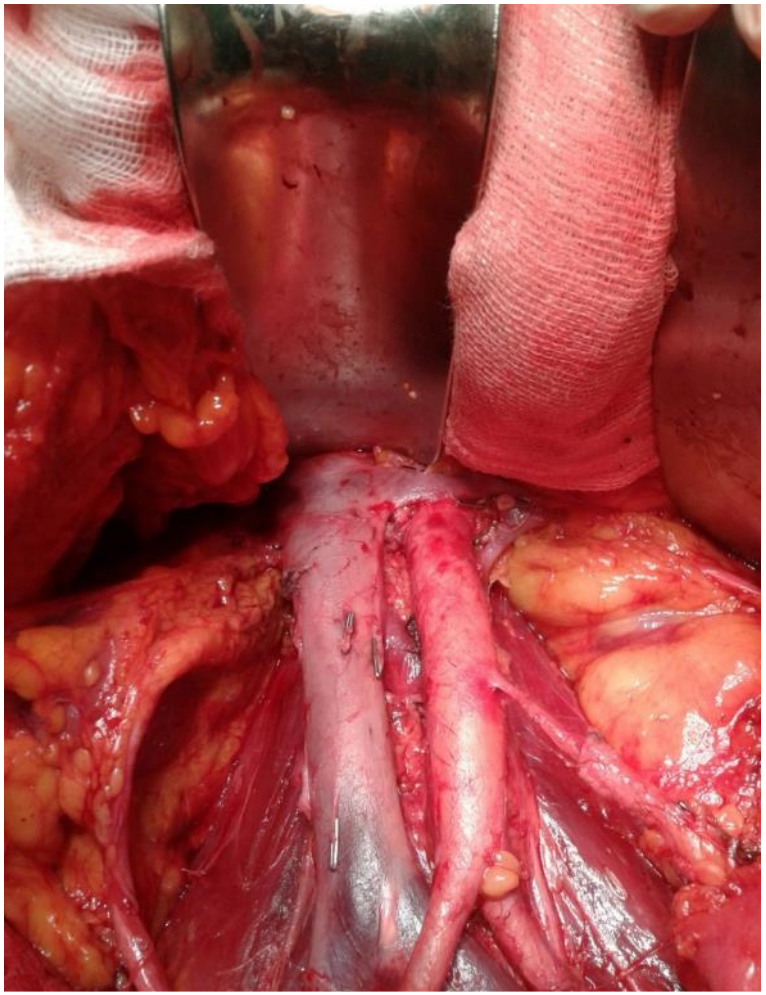
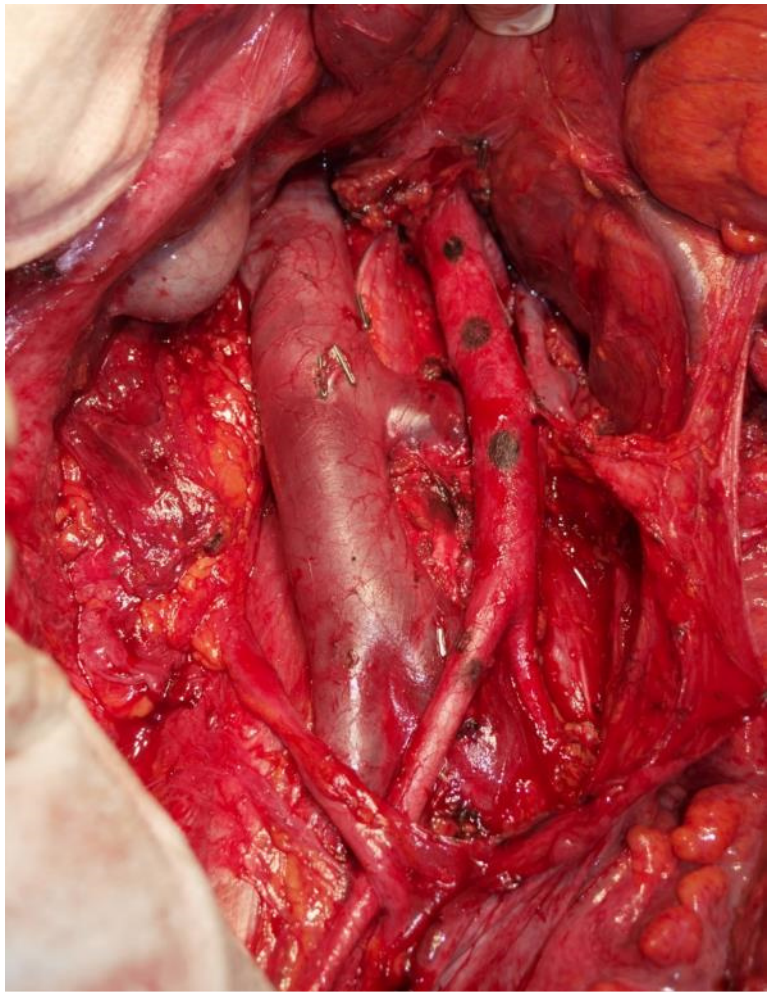
# Early stage ovarian cancer

- Full comprehensive staging
- Pelvic and paraaortic lymphadenectomy





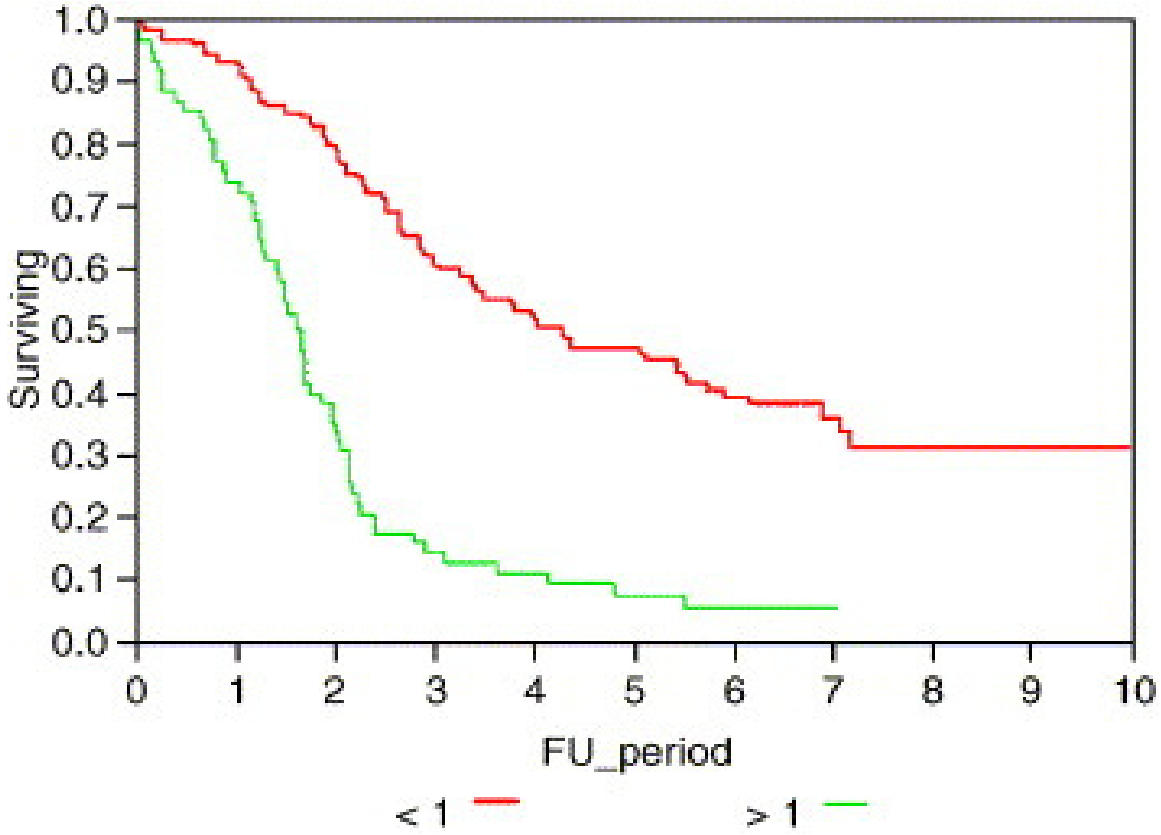
# Advanced stage ovarian cancer

## ESMO–ESGO consensus conference recommendations on ovarian cancer: pathology and molecular biology, early and advanced stages, borderline tumours and recurrent disease FREE

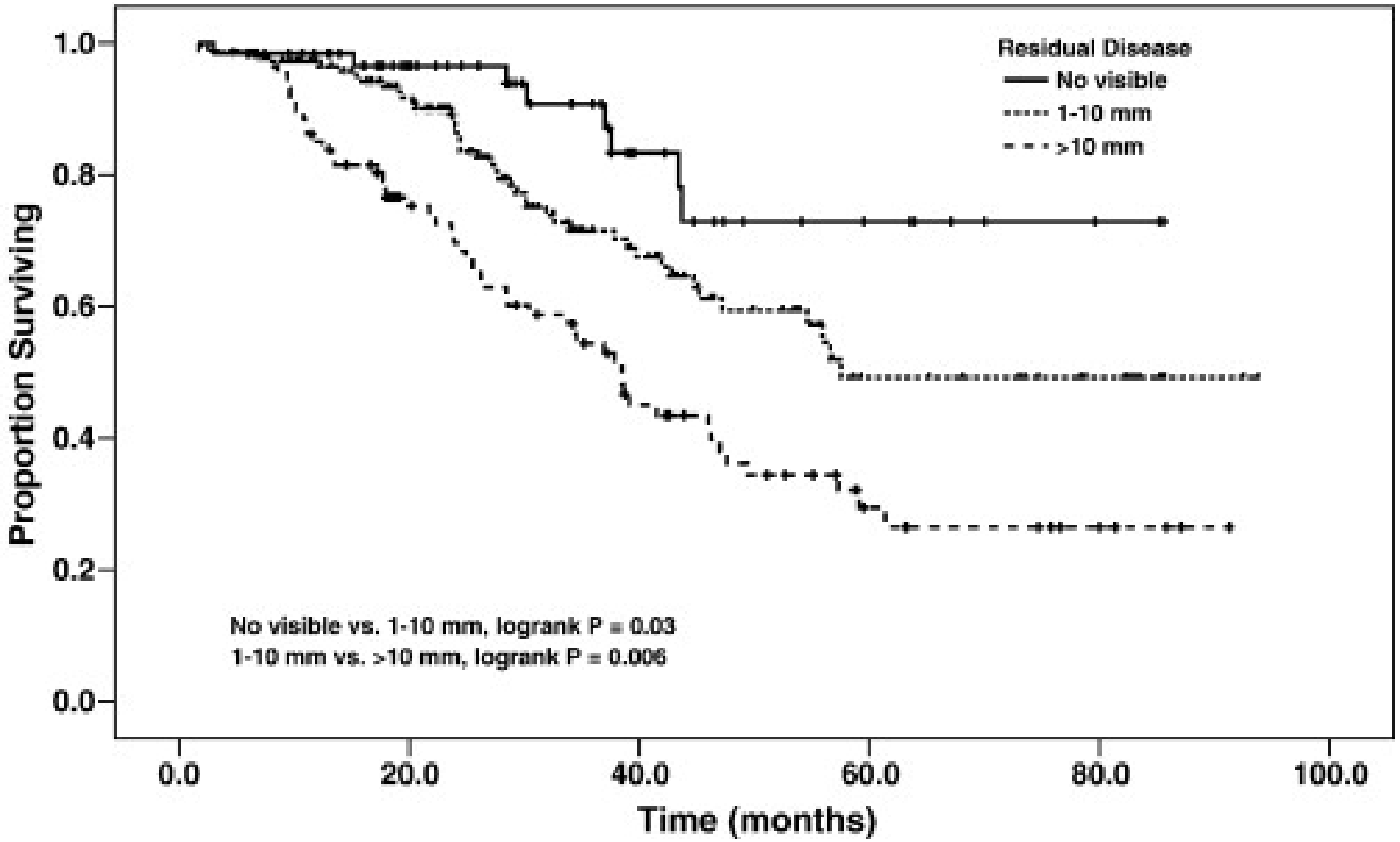
N Colombo ✉, C Sessa, A du Bois, J Ledermann, W G McCluggage, I McNeish, P Morice, S Pignata, I Ray-Coquard, I Vergote T Baert, I Belaroussi, A Dashora, S Olbrecht, F Planchamp, D Querleu ✉,
ESMO–ESGO Ovarian Cancer Consensus Conference Working Group

*Annals of Oncology*, Volume 30, Issue 5, May 2019, Pages 672–705,

# Residual tumor <1 cm



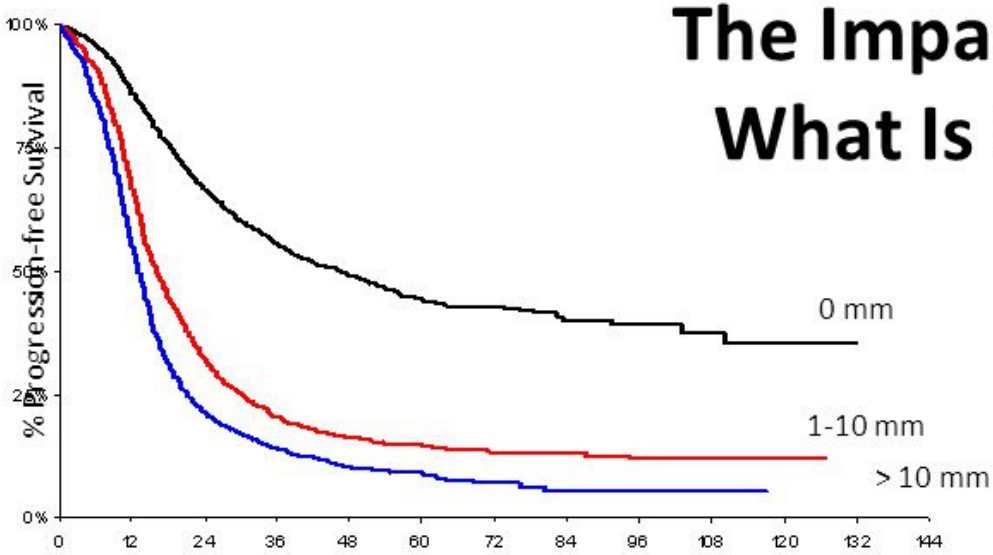

Aletti et al, Gynecol Oncol, 2006




Overall survival

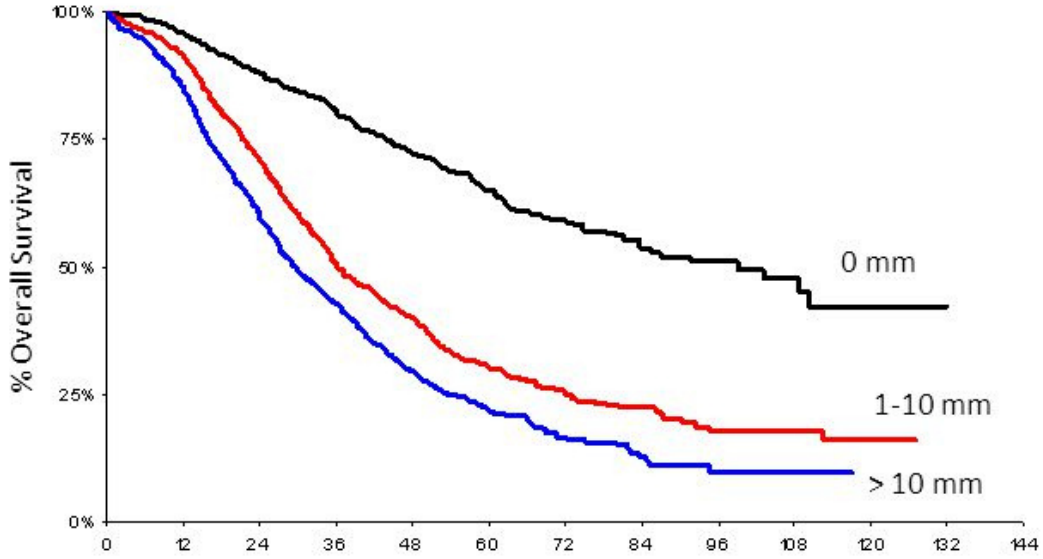
Eisenhauer et al, Gynecol Oncol, 2008

# The Impact of Residual Tumor: What Is Optimal Debulking?




| | HR (95%CI) |
|---|---|
| 1-10 mm vs. 0 mm: | 2.52 (2.26;2.81) |
| >10 mm vs. 1-10 mm: | 1.36 (1.24;1.50) |

log-rank: p < 0.0001




**Generated from 3 prospective Phase III trials (OVAR 3,5, & 7) N = 3126 pts**

| | HR (95%CI) |
|---|---|
| 1-10 mm vs. 0 mm: | 2.70 (2.37; 3.07) |
| >10 mm vs. 1-10 mm: | 1.34 (1.21; 1.49) |

log-rank: p < 0.0001

DuBois, Cancer (2009)115:1234

Available online at www.sciencedirect.com
ScienceDirect
EJSO 35 (2009) 135–143
EJSO the Journal of Cancer Surgery
www.ejso.com

# Aggressive surgical strategies in advanced ovarian cancer: A monocentric study of 203 stage IIIC and IV patients

P.-E. Colombo [a,*], A. Mourregot [a], M. Fabbro [b], M. Gutowski [a], B. Saint-Aubert [a], F. Quenet [a], S. Gourgou [c], P. Rouanet [a]

[a] Department of Surgical Oncology, CRLC Val d'Aurelle, 208 rue des Apothicaires, 34298 Montpellier Cedex 5, France
[b] Department of Medical Oncology, CRLC Val d'Aurelle, Montpellier, France
[c] Department of Biostatistics, CRLC Val d'Aurelle, Montpellier, France

Accepted 8 January 2008
Available online 4 March 2008

| Initial surgery group | 5year OS(%) |
|---|---|
| No residual tm | 50 |
| RT <1cm | 30 |
| RT>1cm | 14 |

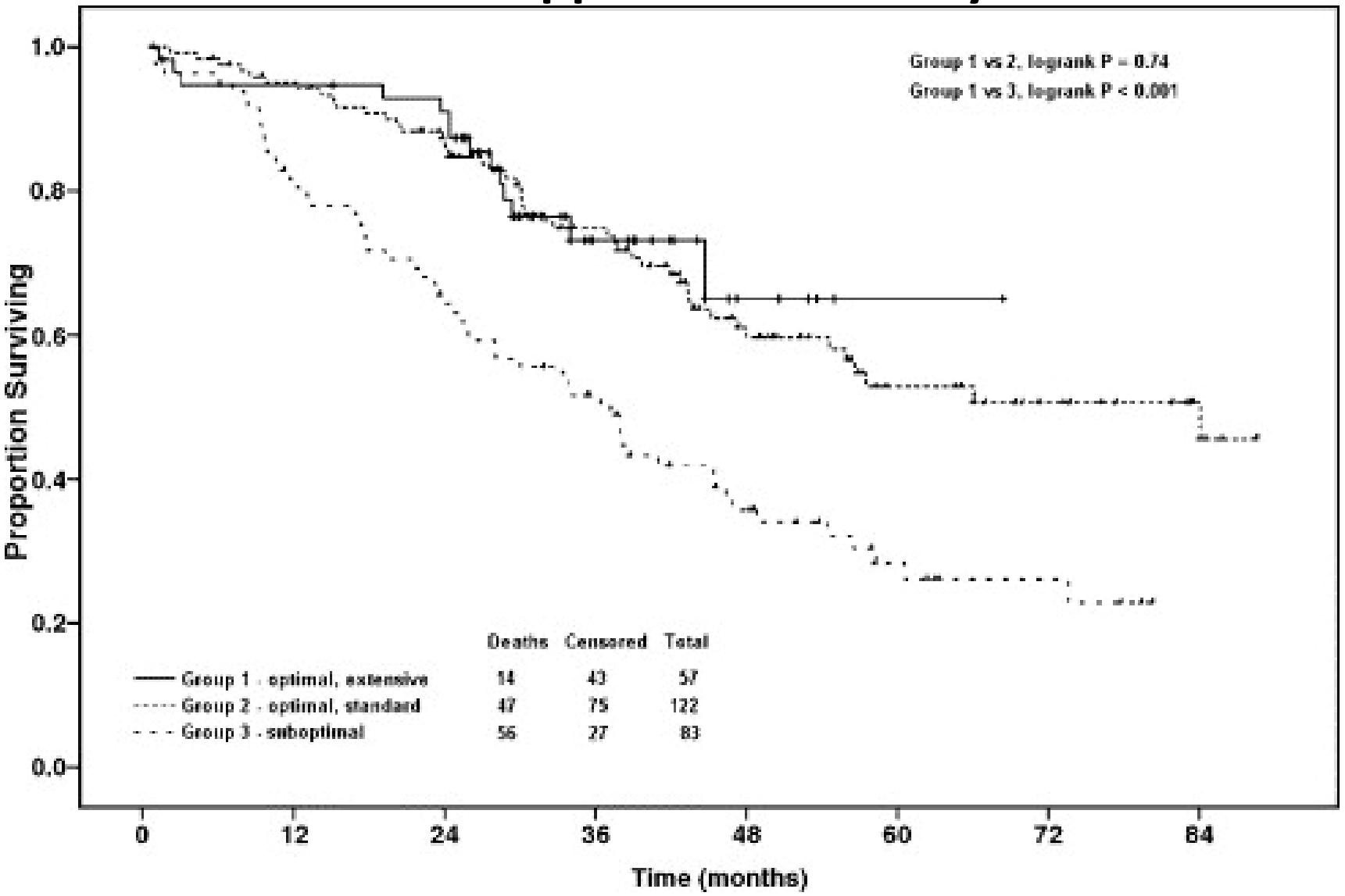
Table 3
Significant prognostic factors observed for the patients in group 1

| | N | 5-Year survival (%) | Median survival (months) | P |
|---|---|---|---|---|
| *Ascites* | | | | |
| <1 l | 67 | 47 | 50 | 0.012 |
| >1 l | 75 | 20 | 34 | |
| *Extensive peritoneal carcinomatosis* | | | | |
| PCI < 17 | 67 | 41 | 45 | 0.002 |
| PCI > 17 | 75 | 16 | 28 | |
| *Diaphragm disease* | | | | |
| Yes | 44 | 43 | 48 | 0.013 |
| No | 98 | 22 | 34 | |
| *Residual disease* | | | | |
| 0 | 39 | 50 | 58 | <0.001 |
| <1 cm | 50 | 30 | 40 | |
| >1 cm | 53 | 14 | 25 | |
| *Ca-125 regression after initial surgery* | | | | |
| <75% | 60 | 19 | 29 | 0.040 |
| >75% | 82 | 35 | 39 | |

PCI, peritoneal cancer index.[19]

P.-E. Colombo et al. / EJSO 35 (2009) 135e143

# Extensive upper abdominal cytoreduction




Eisenhauer et al, Gynecol Oncol, 2006

***Recommendation 11.1***: the selection of patients for primary debulking surgery or neoadjuvant treatment must be carried out in a specialist ovarian cancer centre, according to the ESGO Quality recommendations 2016 [191] in a multidisciplinary setting.

Level of evidence: IV

Strength of recommendation: A

Consensus: 100% (40) yes, 0% (0) no, 0% (0) abstain (40 voters)

***Recommendation 11.2***: complete tumour resection at upfront debulking is the most important prognostic factor for patients with advanced ovarian cancer and is the main goal of surgery.

Level of evidence: IV

Strength of recommendation: A

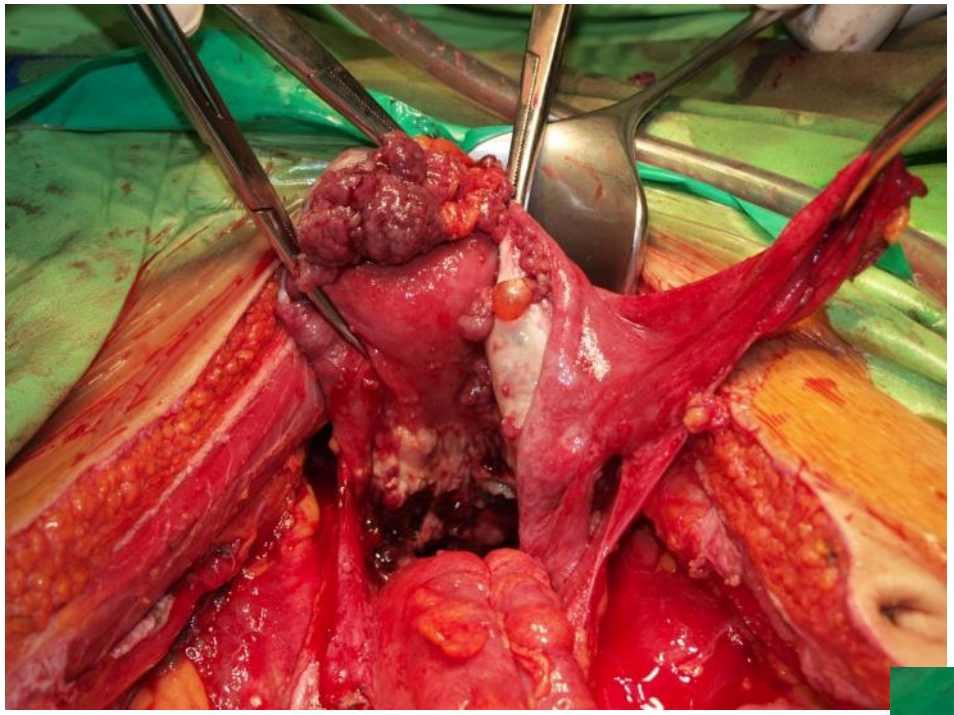
Consensus: 100% (40) yes, 0% (0) no, 0% (0) abstain (40 voters)

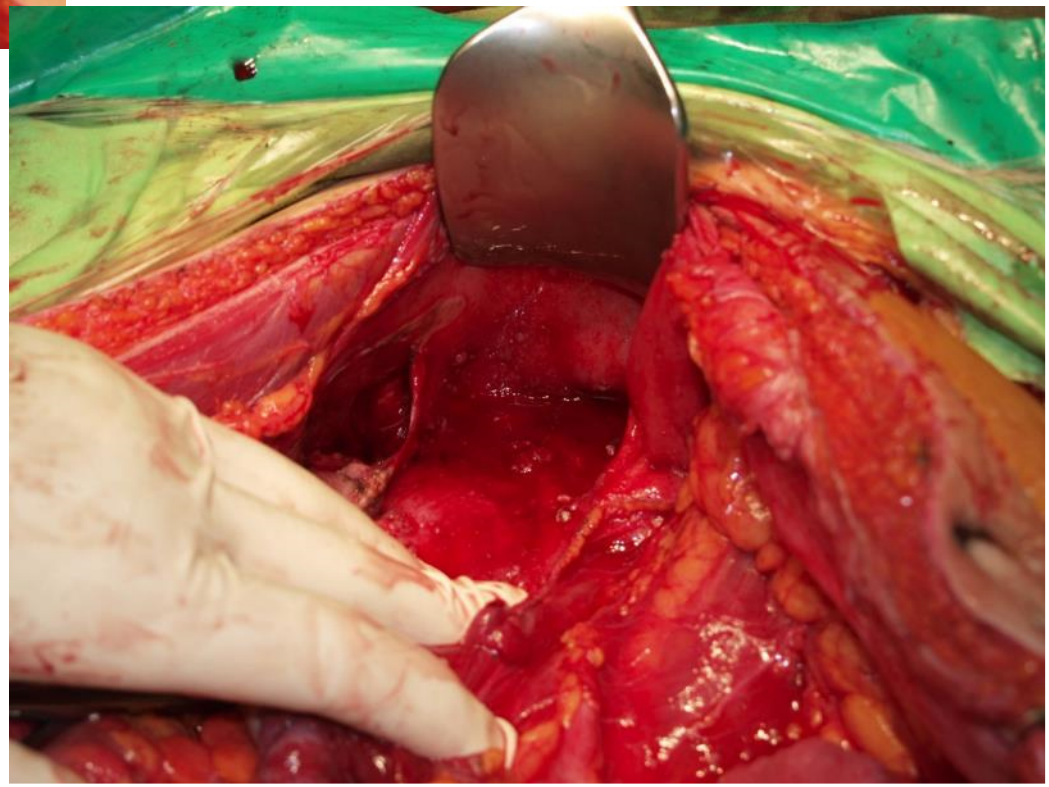
***Recommendation 11.3***: when complete surgery with no macroscopic visible disease appears feasible (both spread of disease and general condition of the patient), primary upfront debulking should be offered.

Level of evidence: IV

Strength of recommendation: B

Consensus: 100% (40) yes, 0% (0) no, 0% (0) abstain (40 voters)





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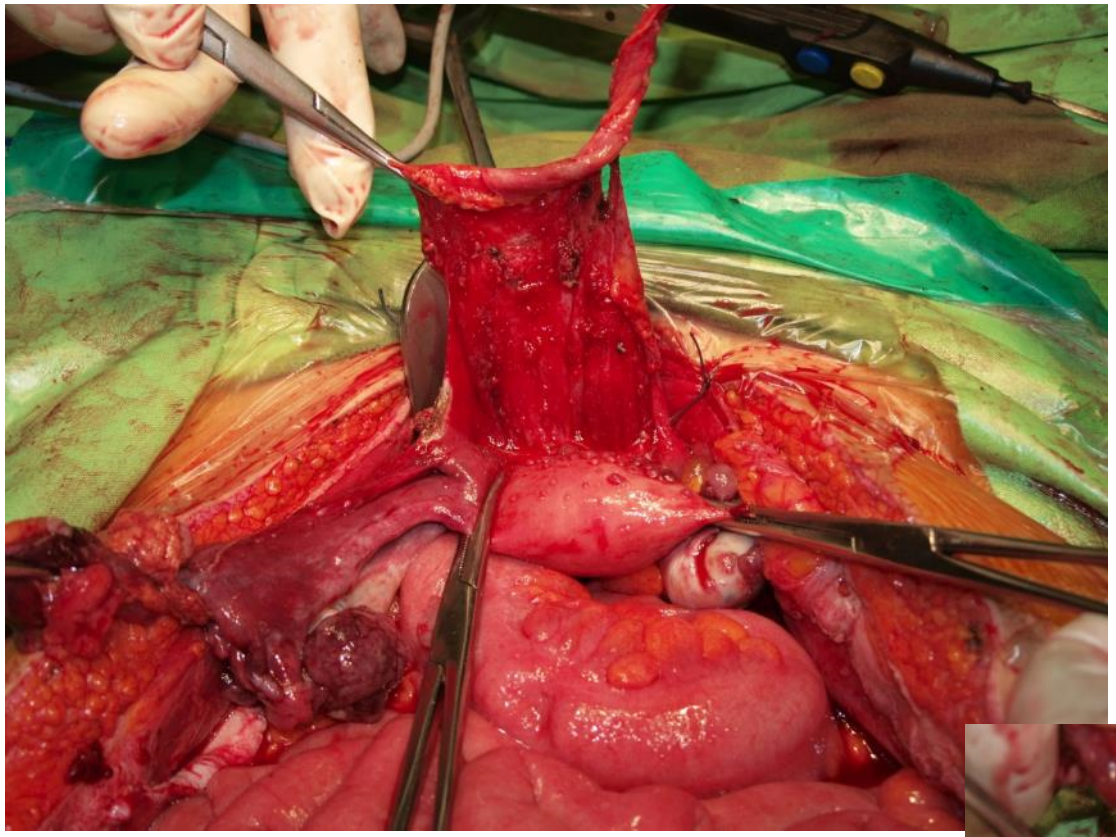

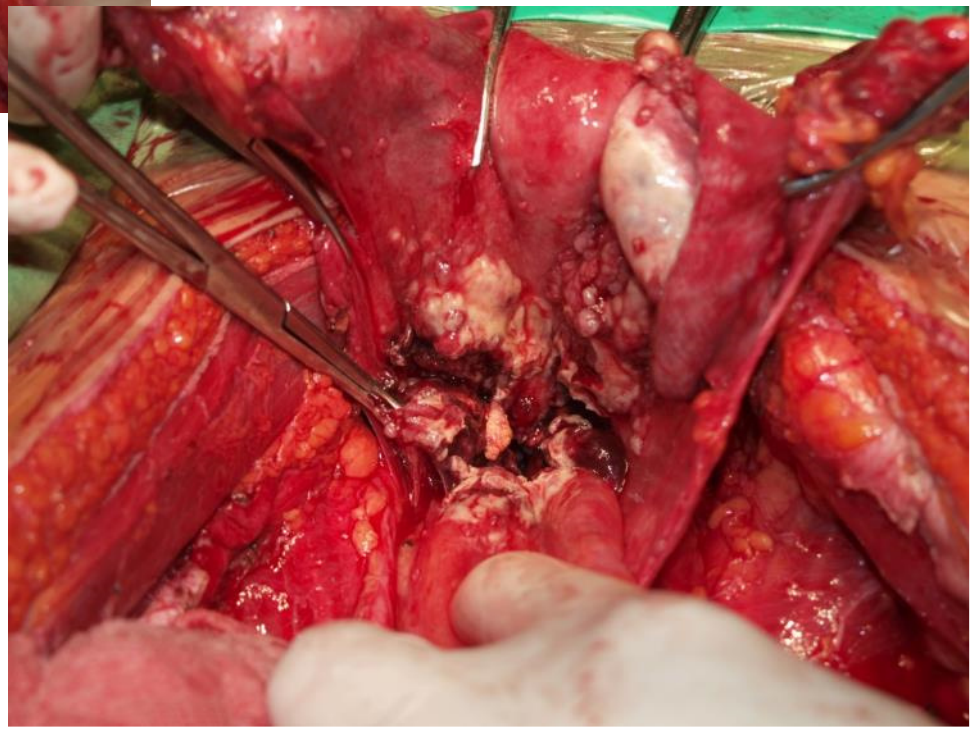

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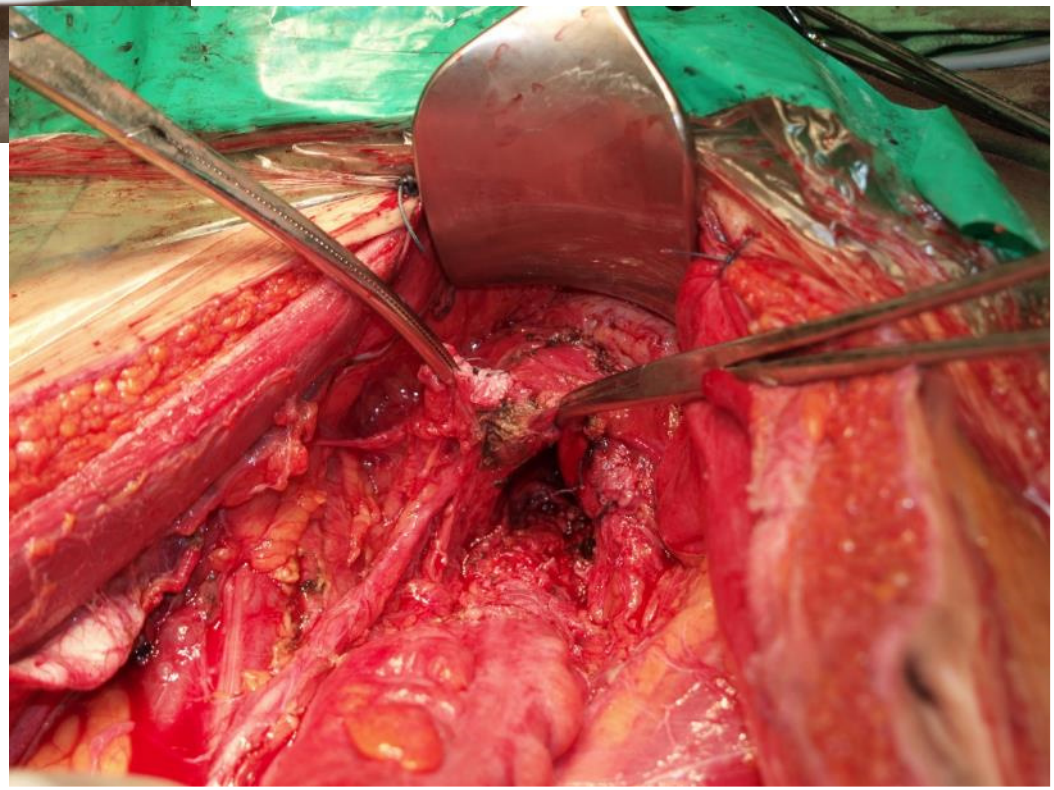

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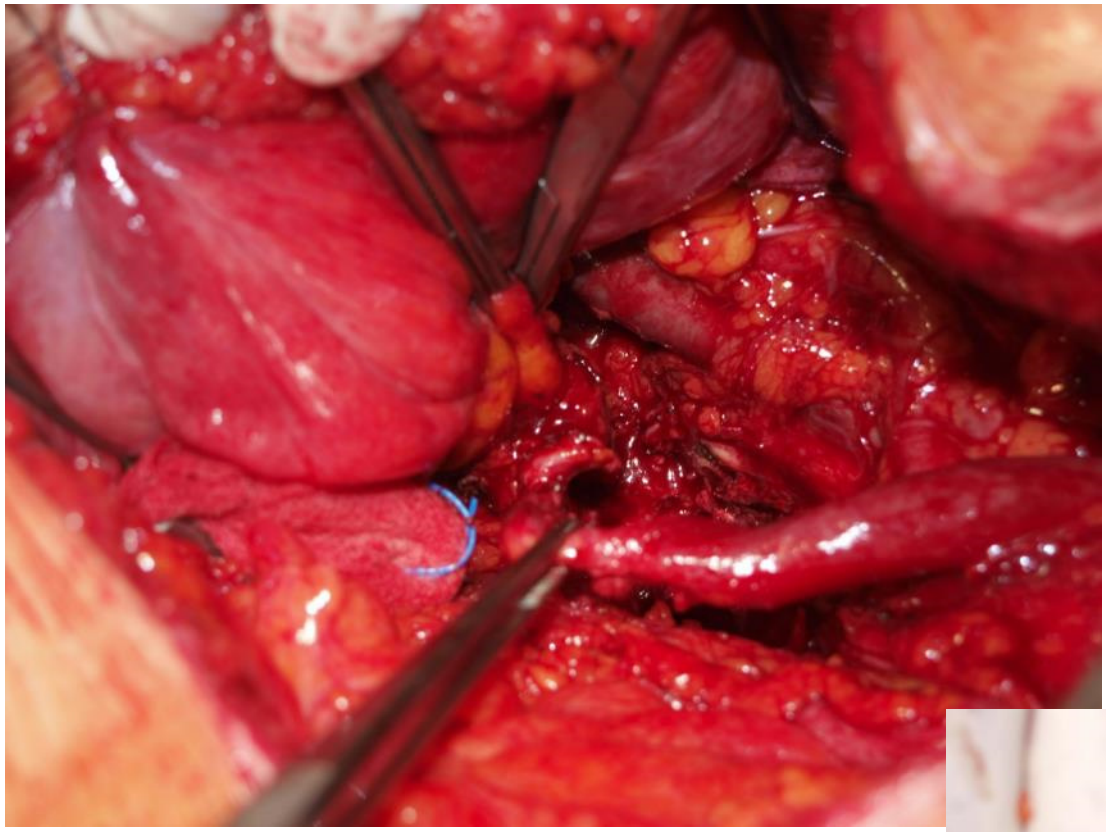

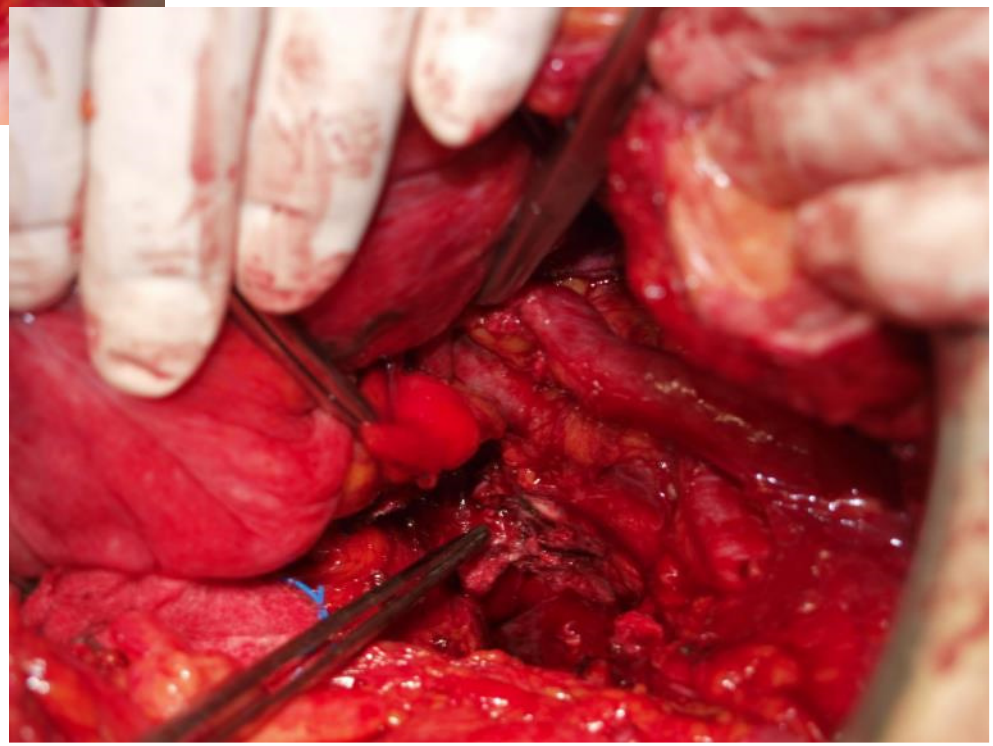

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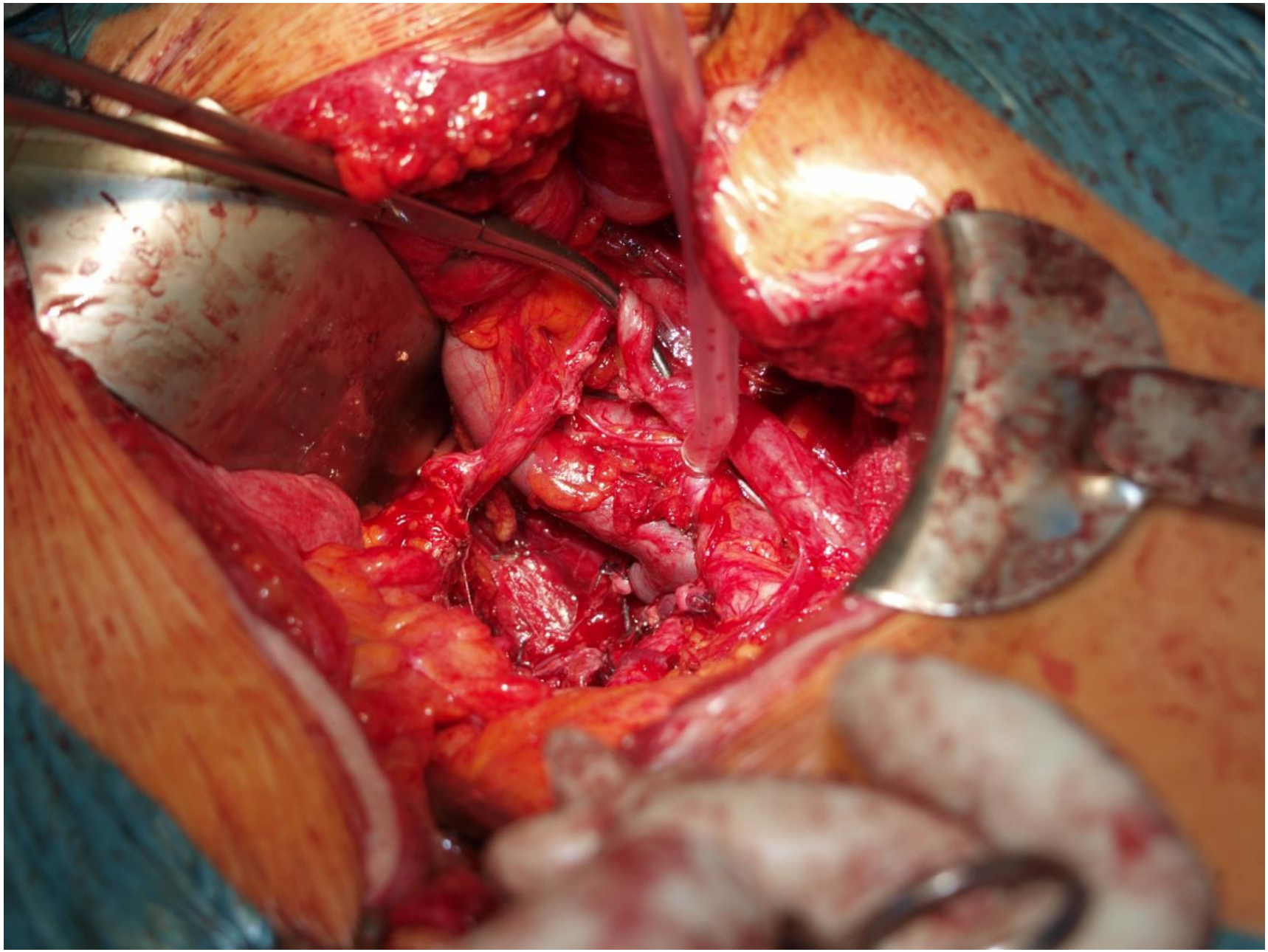

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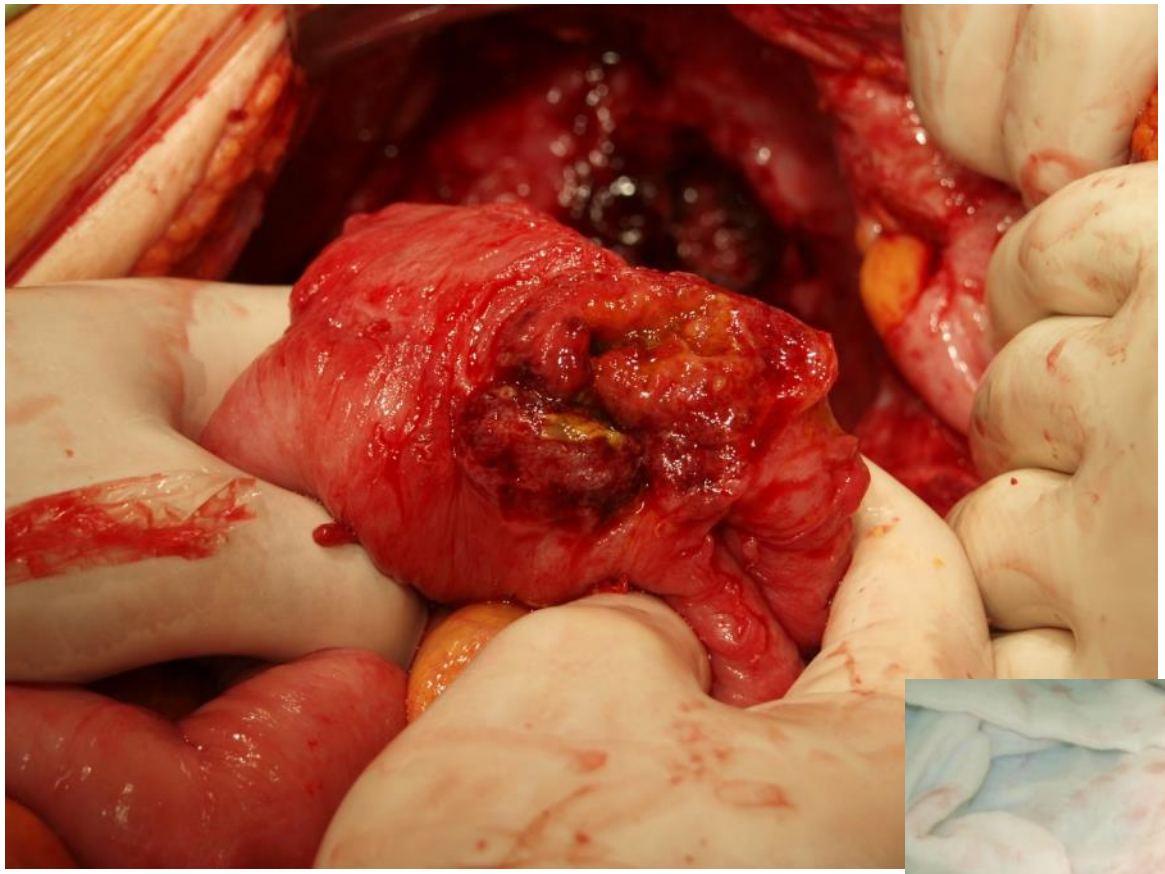

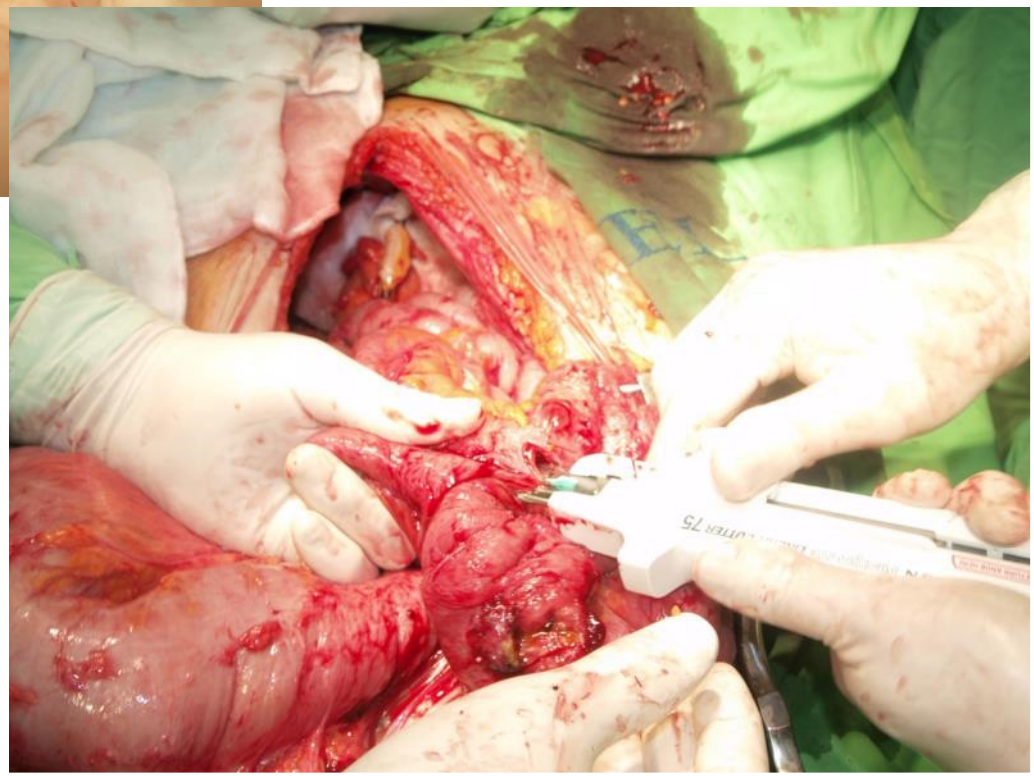

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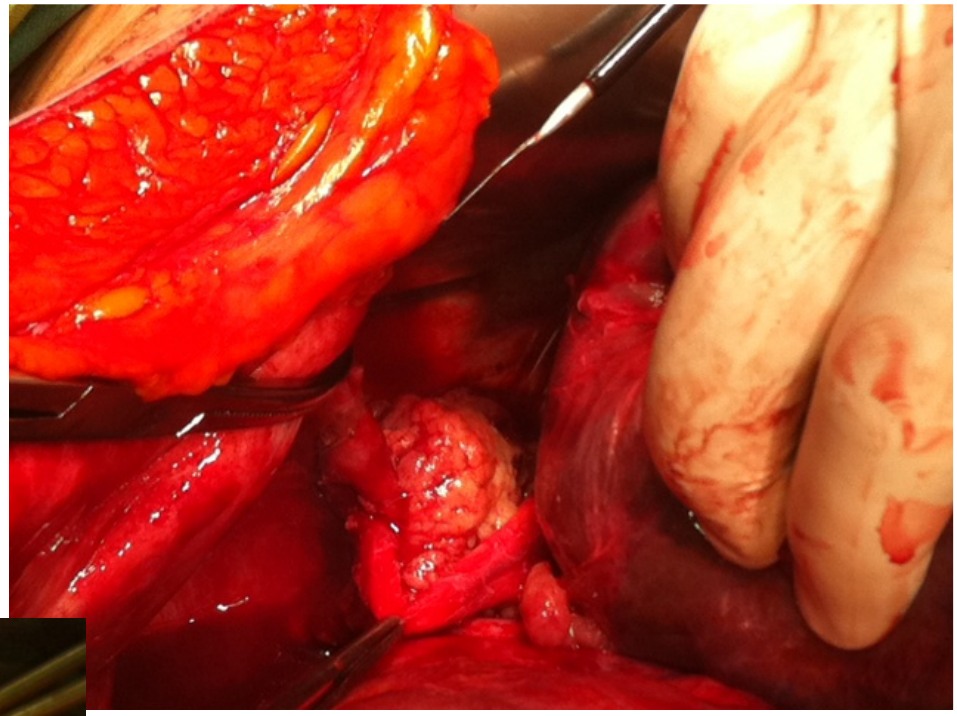
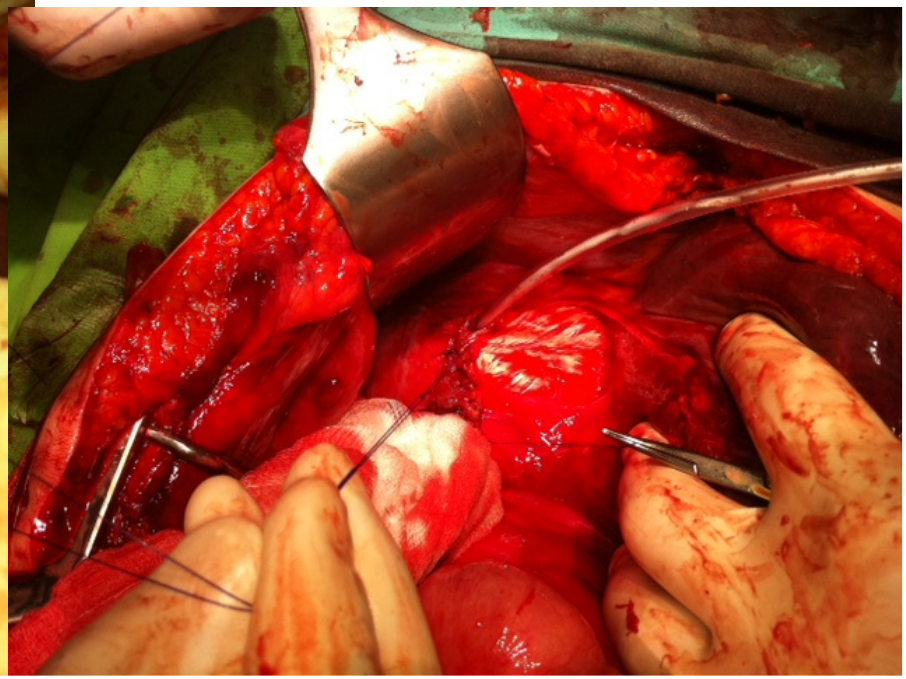
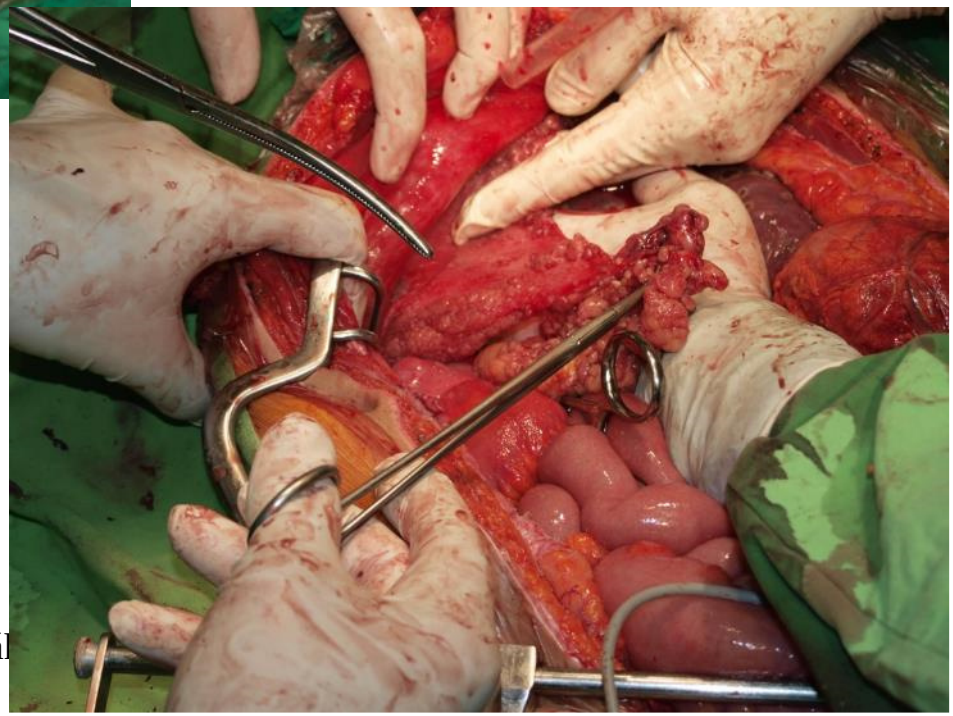
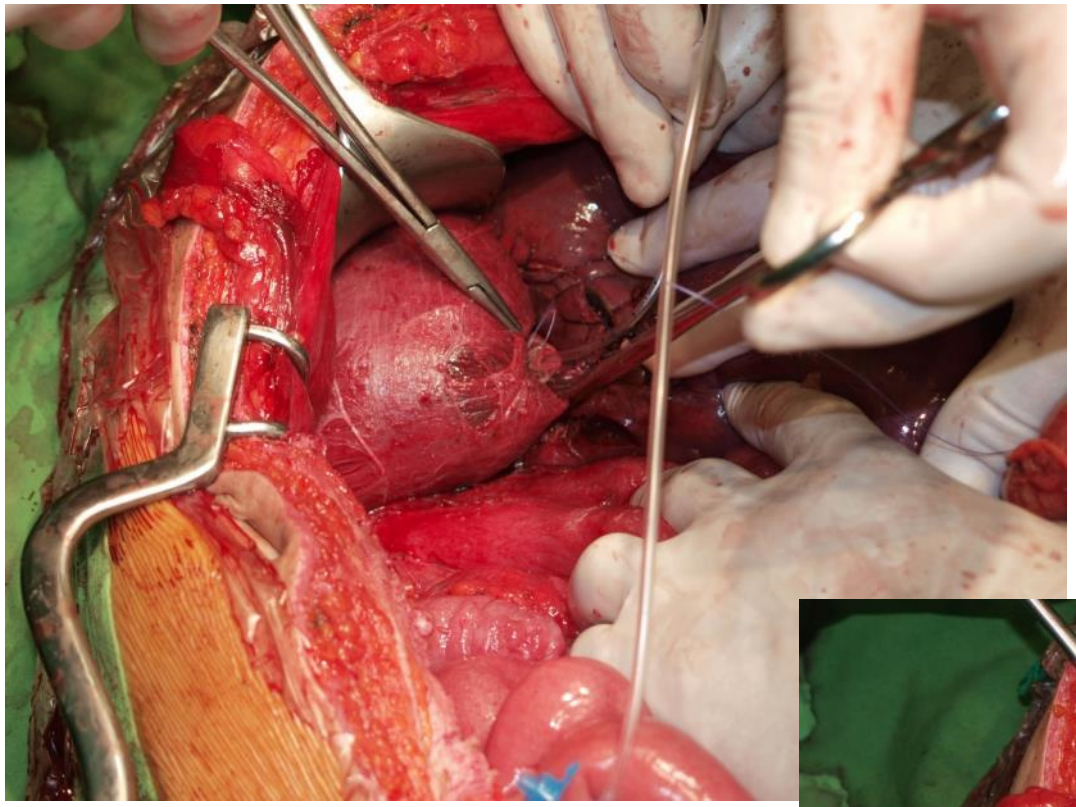


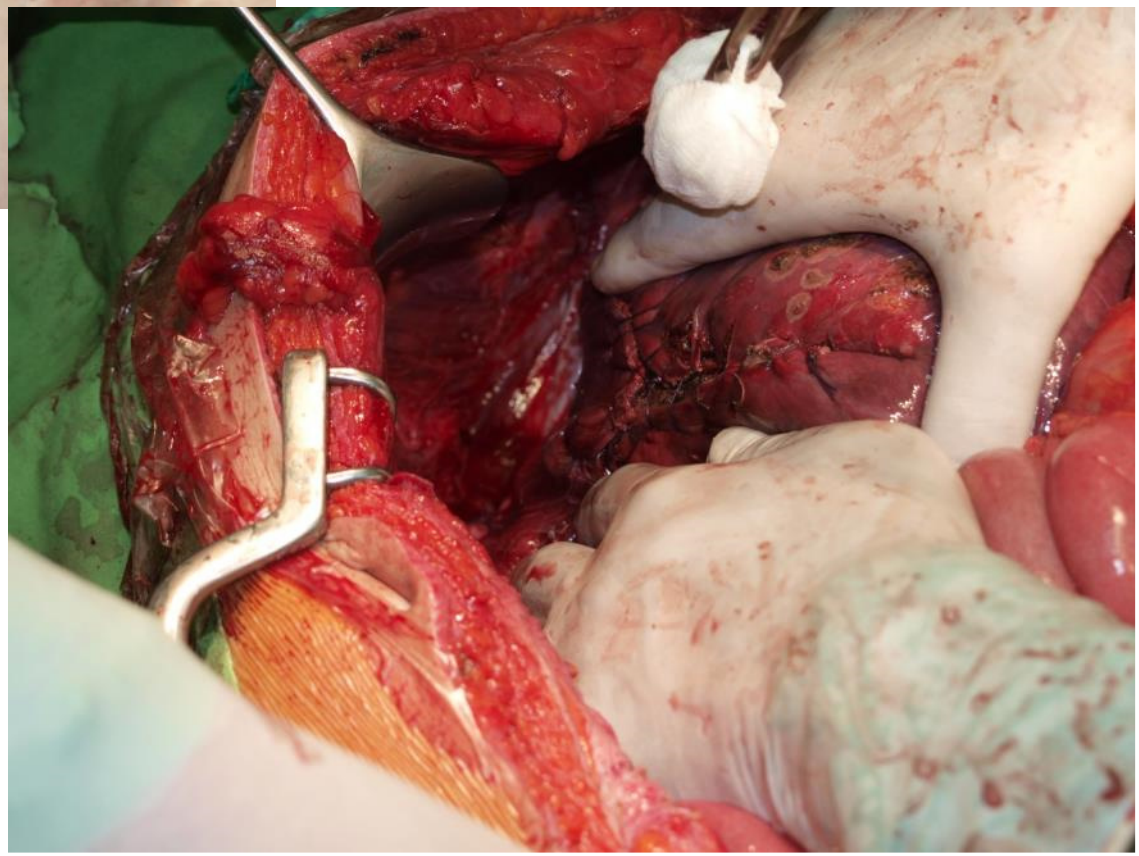




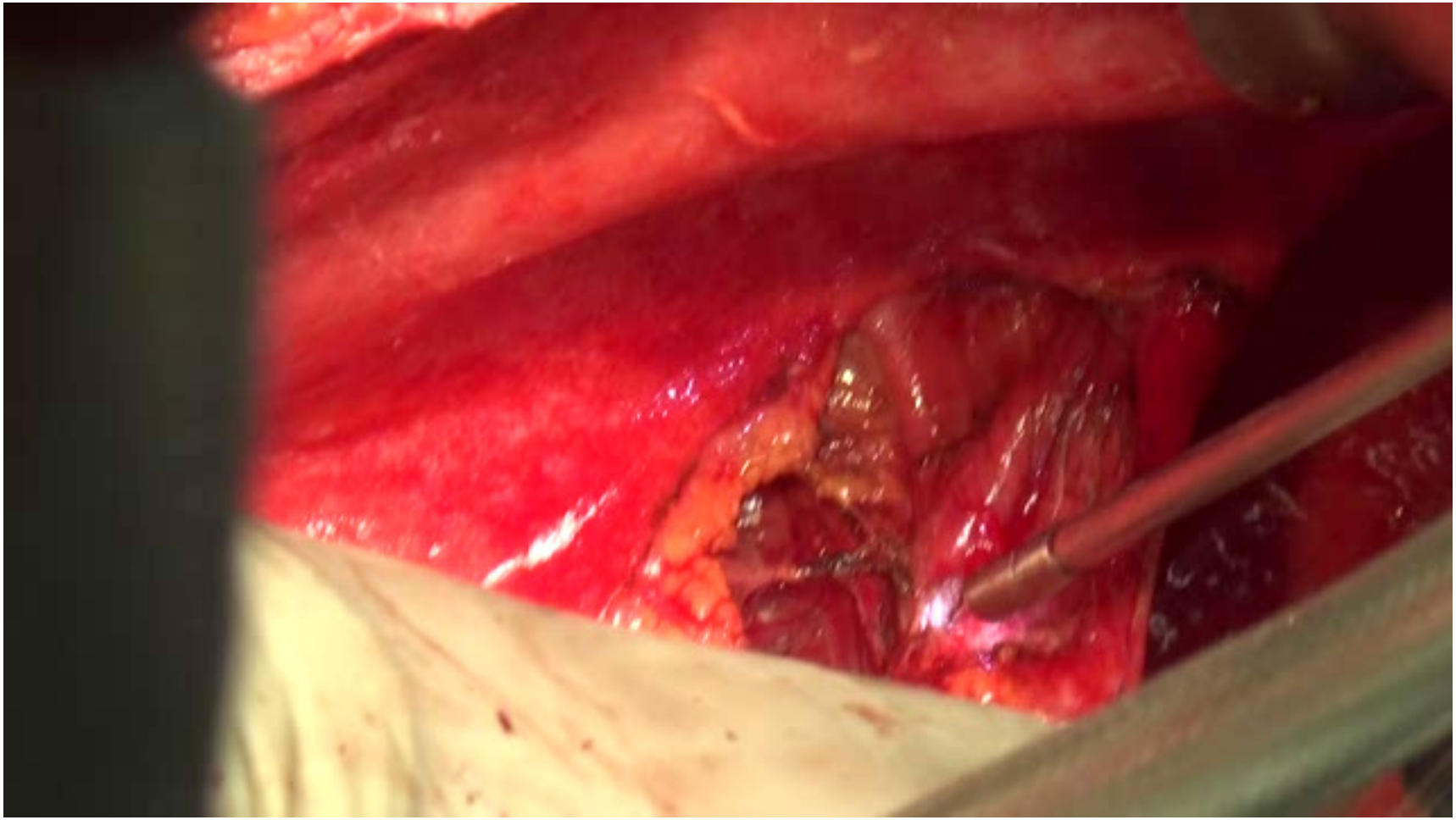


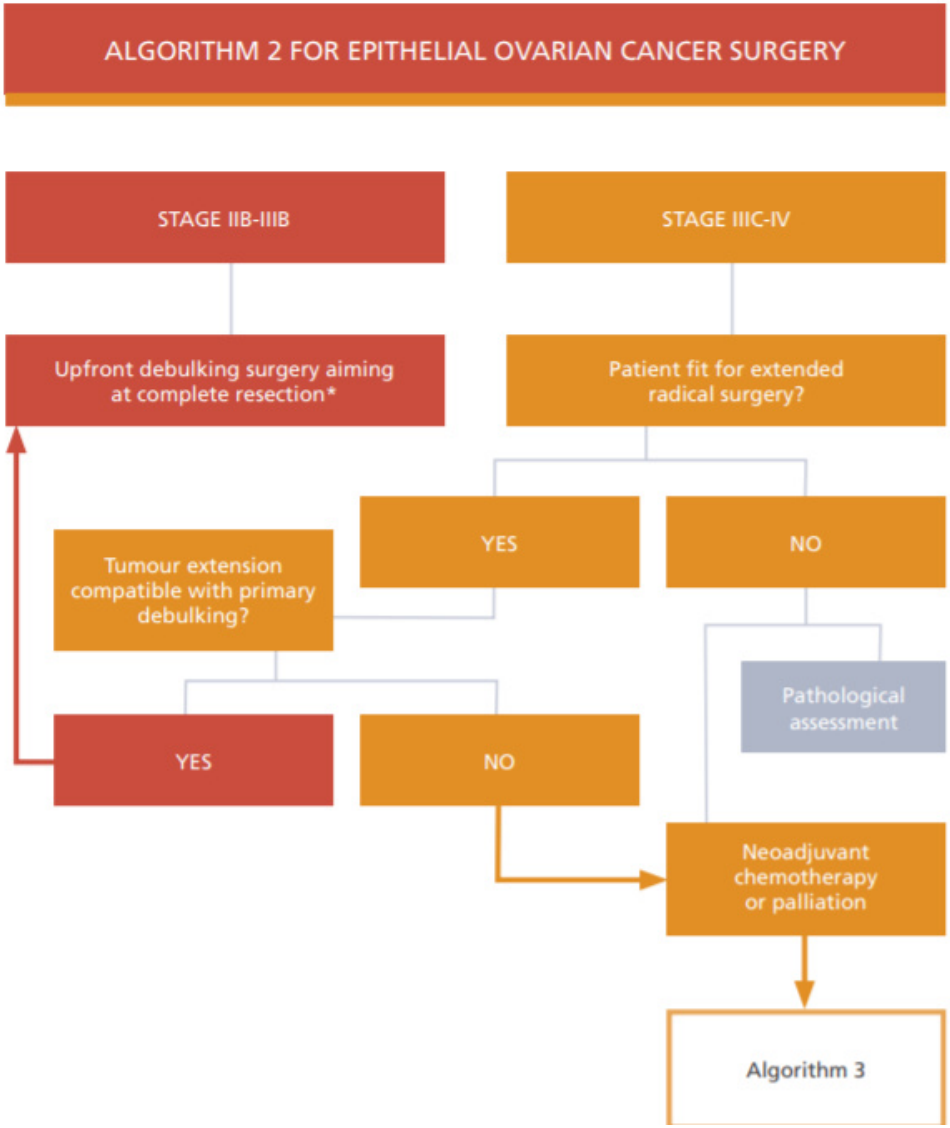






# Argon plasma diaphragm small bowel



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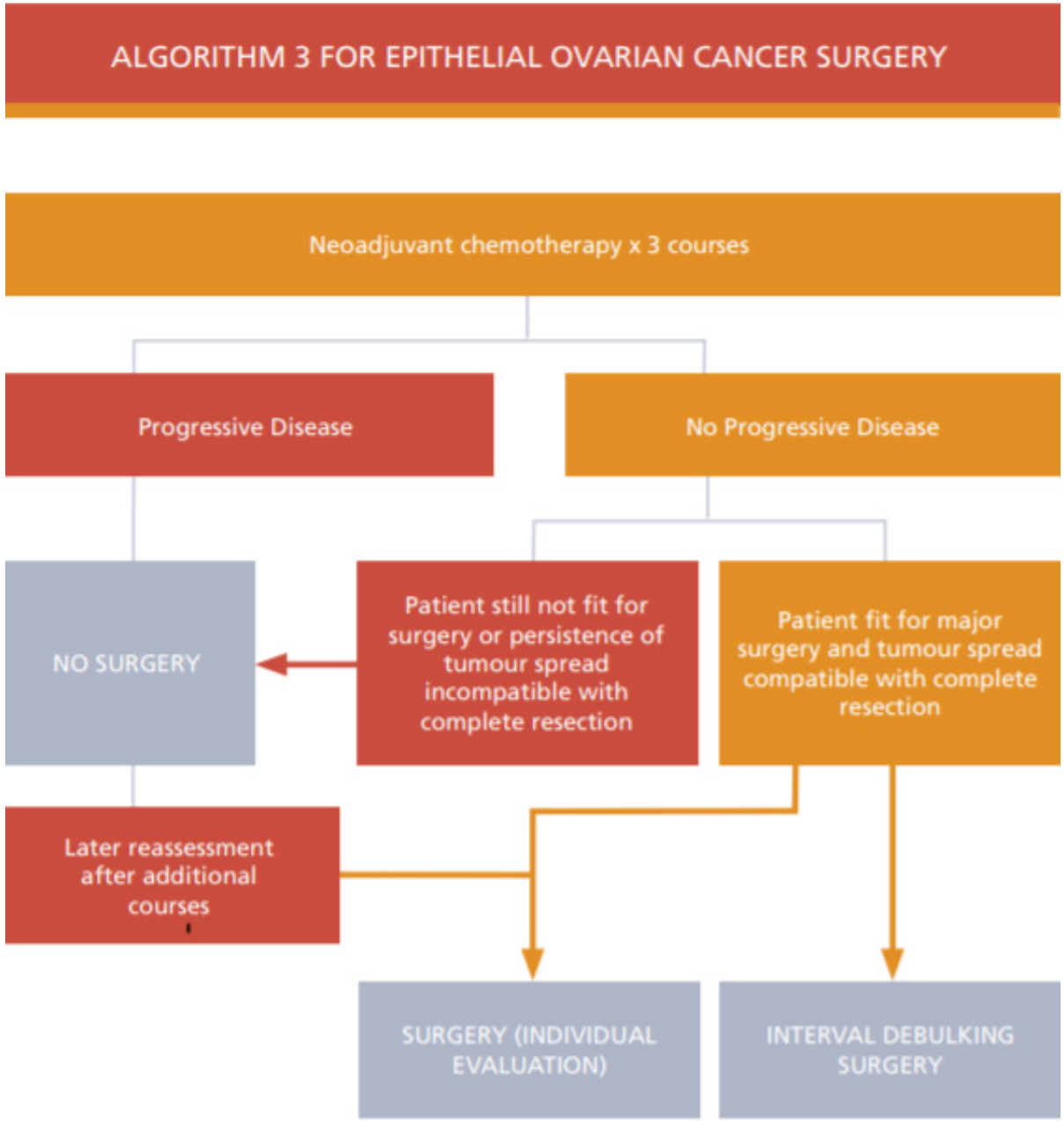


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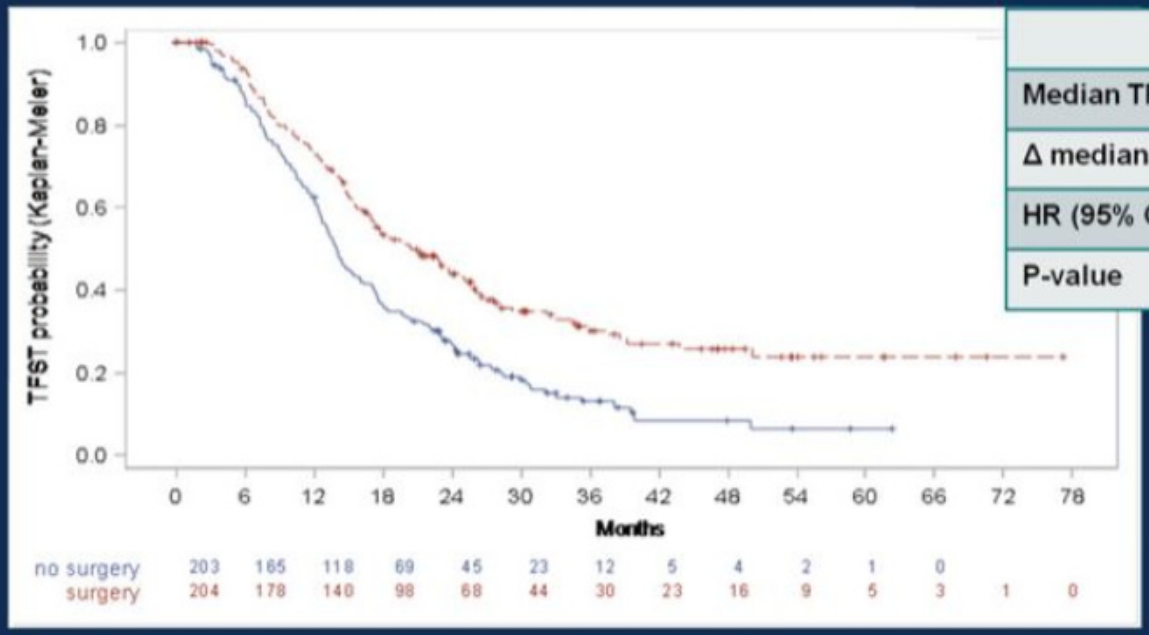
# Randomized controlled phase III study evaluating the impact of secondary cytoreductive surgery in recurrent ovarian cancer: AGO DESKTOP III/ENGOT ov20.

- Pts with OC and 1st relapse after 6+ mos platin-free interval (TFIp) were eligible if they presented with a positive AGO-score (PS ECOG 0, ascites ≤500 ml, and complete resection at initial surgery) and were randomized to 2nd-line chemotherapy alone vs cytoreductive surgery followed by chemo

## AGO DESKTOP III: Outcome 5 (TFST = time to 3rd line)

(AGO–OVAR OP.4; ENGOT-ov20; NCT01166737)




| | Surgery | No surgery |
|---|---|---|
| Median TFST | 21.0 mos | 13.9 mos |
| Δ median TFST | 7.1 mos | |
| HR (95% CI) | 0.61 (0.48 – 0.77) | |
| P-value | < 0.001 | |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# Endometrial cancer

## ESMO-ESGO-ESTRO Consensus Conference on Endometrial Cancer

**Published in 2016** – Ann Oncol 2016; 27: 16-41.

Authors: *N. Colombo, C. Creutzberg, F. Amant, T. Bosse, A. González-Martín, J. Ledermann, C. Marth, R. Nout, D. Querleu, M.R. Mirza & C. Sessa*

***Recommendation 4.10:*** Minimally invasive surgery is recommended in the surgical management of low-and intermediate-risk endometrial cancer

Level of evidence: I

***Recommendation 4.12:*** Vaginal hysterectomy with salpingo-oophorectomy can be considered in patients unfit for the recommended surgery and in selected patients with low-risk endometrial cancer

Level of evidence: IV

***Recommendation 5.2:*** If a lymphadenectomy is performed, systematic removal of pelvic and para-aortic nodes up to the level of the renal veins should be considered

Level of evidence: IV

***Recommendation 5.5:*** Patients with low-risk endometrioid carcinoma (grade 1 or 2 and superficial myometrial invasion <50%) have a low risk of lymph node involvement, and two RCTs did not show a survival benefit. Therefore, lymphadenectomy is not recommended for these patients

***Recommendation 5.6:*** For patients with intermediate risk (deep myometrial invasion >50% or grade 3 superficial myometrial invasion <50%), data have not shown a survival benefit. Lymphadenectomy can be considered for staging purposes in these patients

Level of evidence: II

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# ESMO-ESGO-ESTRO Consensus Conference on Endometrial Cancer

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***Recommendation 5.7:*** For patients with high risk (grade 3 with deep myometrial invasion >50%), lymphadenectomy should be recommended

Level of evidence: IV

***Recommendation 5.8:*** Lymphadenectomy to complete staging could be considered in previously incompletely operated high-risk patients to tailor adjuvant therapy

***Recommendation 6.6:*** In non-EEC (apparent stage I), lymphadenectomy is recommended

Level of evidence: IV

***Recommendation 6.4:*** Complete macroscopic cytoreduction and comprehensive staging is recommended in advanced endometrial cancer

Level of evidence: IV

***Recommendation 4.7:*** Ovarian preservation can be considered in patients younger than 45 years old with grade 1 EEC with myometrial invasion <50% and no obvious ovarian or other extrauterine disease

Level of evidence: IV

drnovakzoltan.hu

# Thank you

- nogyogyaszat@oncol.hu
- info@drnovakzoltan.hu

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