Complete Surgical Cytoreduction in Advanced Ovarian Cancer – How far should we go?

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Verbal discolsure

- I have nothing to disclose conflict of interest.

Incidence distribution of female genital cancer in Korea

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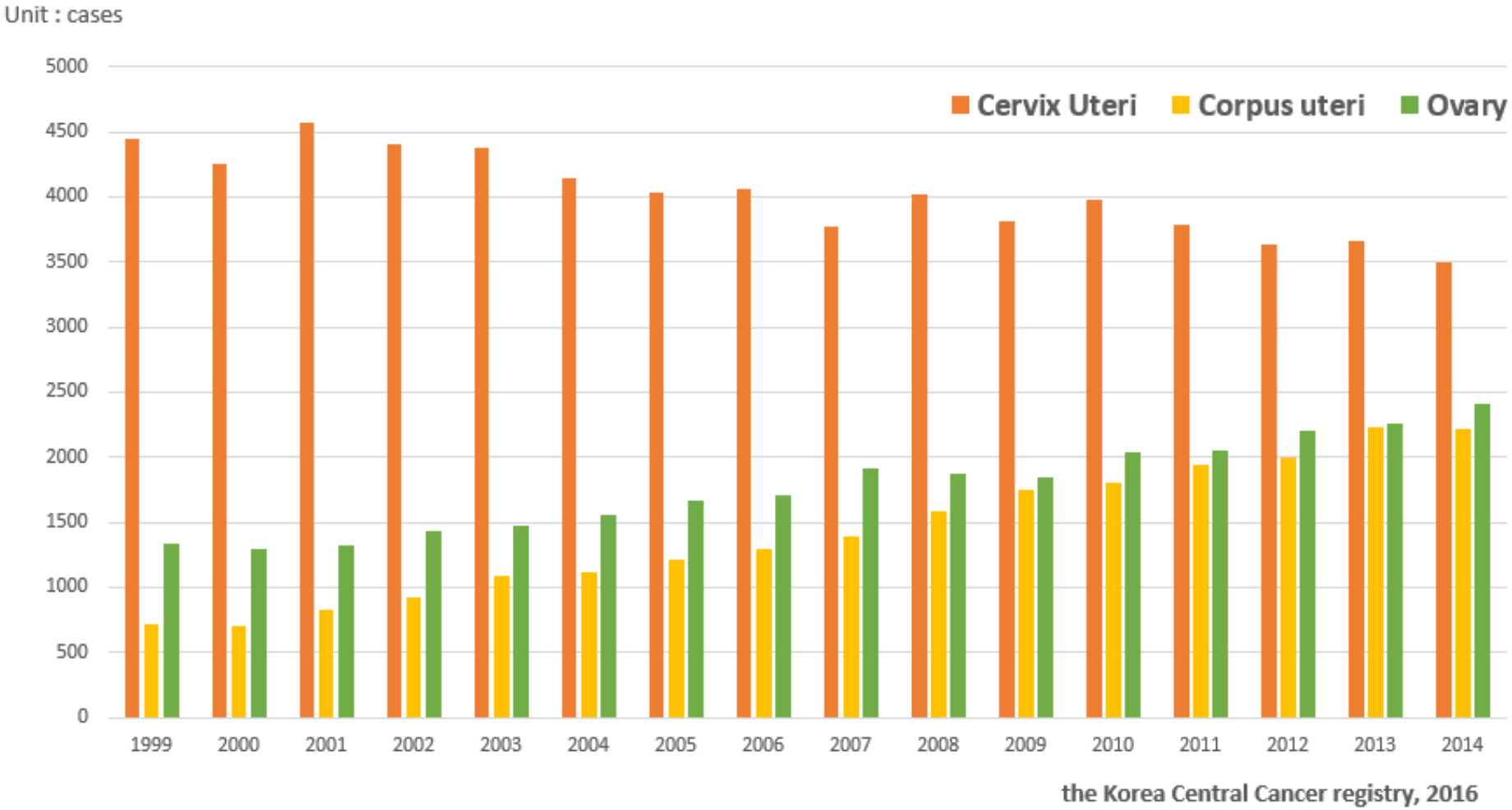
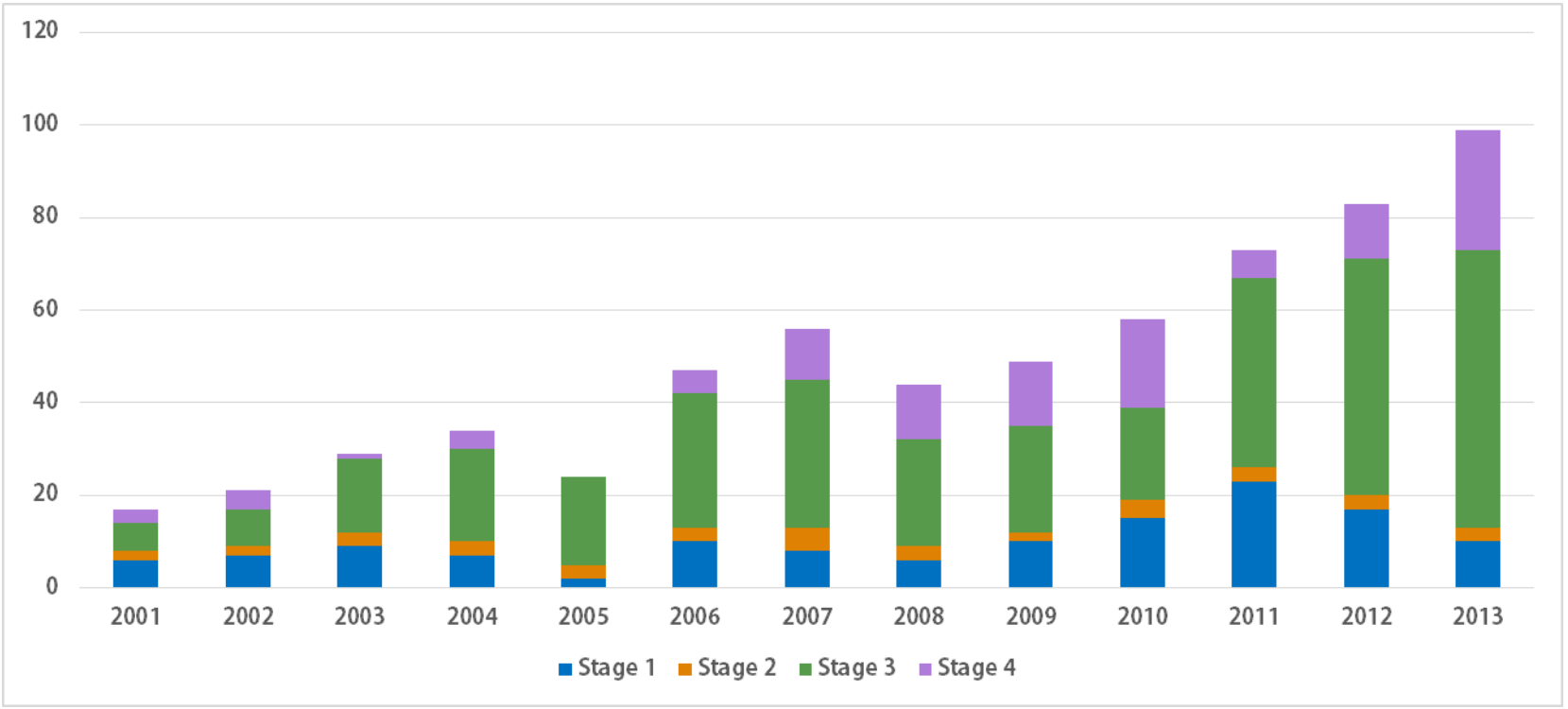


Cases and stage distribution of primary epithelial ovarian cancer at NCCK



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Stage 1_2	8	9	12	10	5	13	13	9	12	19	26	20	13
Stage 3_4	9 (53%)	12 (57%)	17 (59%)	24 (71%)	19 (79%)	34 (72%)	43 (77%)	35 (79%)	37 (76%)	39 (67%)	47 (64%)	63 (76%)	86 (87%)

Why ovarian cancer is the most important cancer at my office?

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- Rapidly increasing disease
- Long term treatment:
  - Cervical cancer, corpus cancer; 2-3 months
  - Ovarian cancer; 5-6 months
- Advanced disease
  - ≅ 90%
- Frequent recurrence
  - ≅80%

⇒ Patient pooling: > 70%

Why ovarian cancer is the most interesting cancer to me?

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- Survival difference according to institutional and physician's policy.
- What factors make survival difference in ovarian cancer?
  - age, stage, cell type, ascitis, chemosensitivity, etc... : unmodifiable factor
  - Post-op residual tumor size: modifiable factor

What is the meaning of post-op residual tumor size?

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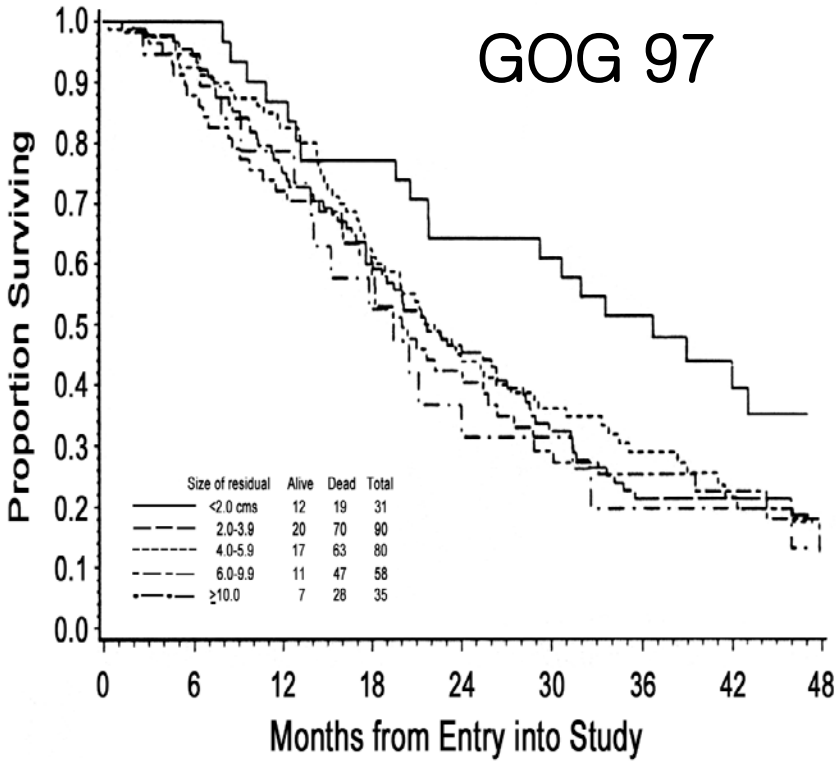
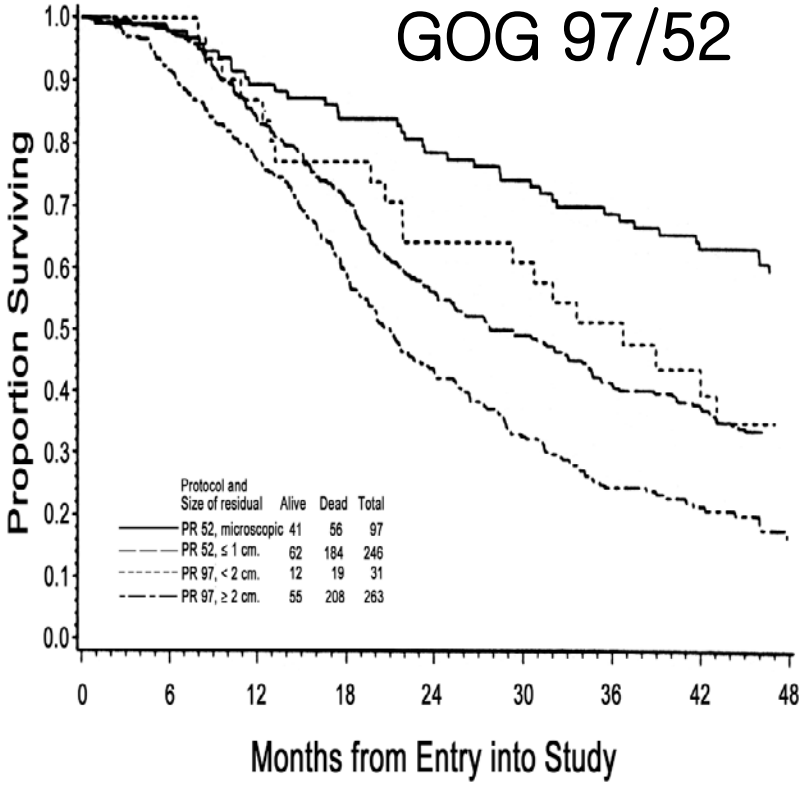
GOG 97



Maximum diameter of residual tumor. <2.0cm, >2.0cm, >4.0cm, >6.0cm, ≥10.0cm

GOG 97/52



Maximum diameter of residual tumor microsocpic, ≤1.0cm, <2.0cm, ≥2.0cm

Hoskins WJ et al. AJOG 170:974, 1994

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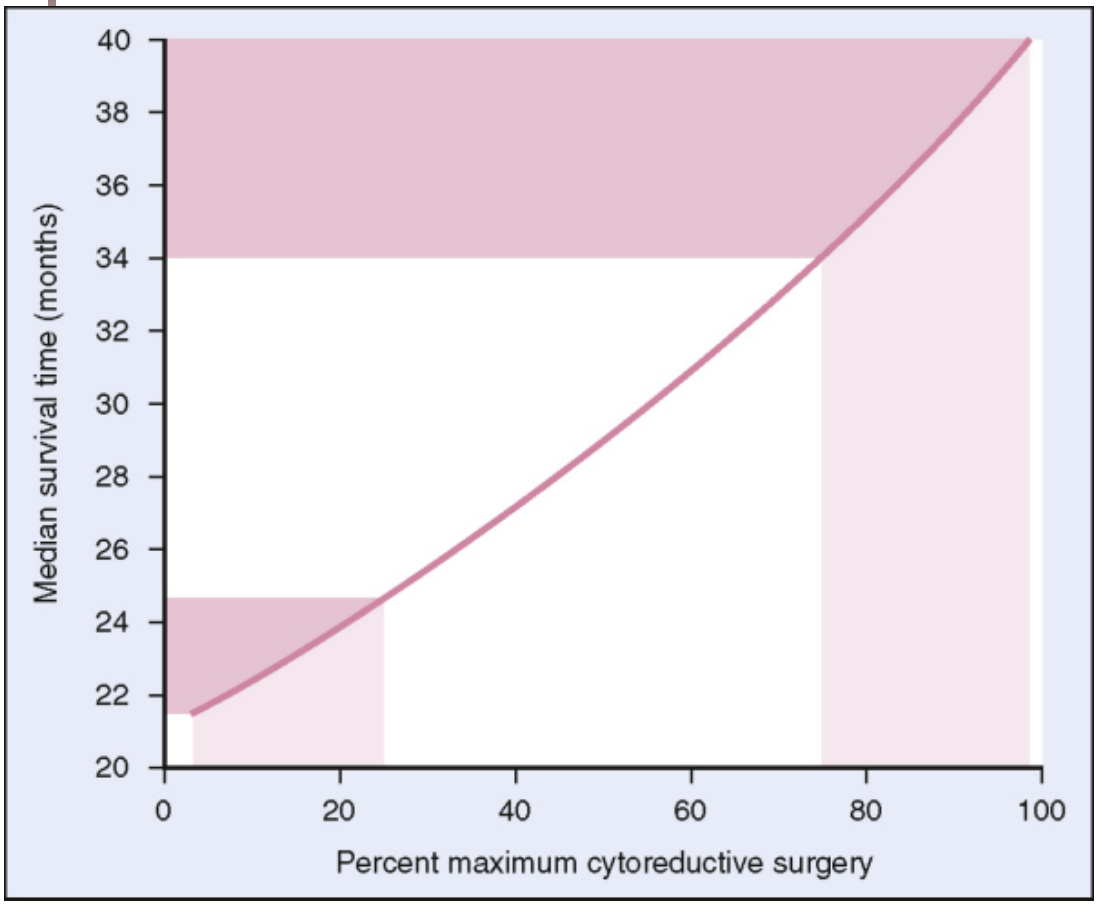
Optimal surgery vs Survival



Simple linear regression analysis

Meta analysis:

81 cohort study

6,885 pts

Optimal surgery rate ↑: 10%

Median survival time↑: 5.5%

Optimal surgery <1cm

Bristow RE, et al. J Clin Oncol 2002

What is 'optimal' residual tumor, really?

- Optimal: complete cytoreduction to a visibly disease-free state (microscopic residual).
- Sub-optimal: residual disease measuring ≤1cm in maximal diameter.
- Non-optimal: residual disease measuring >1cm in maximal diameter

Chi DS et al. Gynecol Oncol 2006; 103: 559.
Armstrong DK et al. N Eng J Med 2006; 354: 34.
GCIG consensus meeting 2012
Chang SJ et al. Gynecol Oncol. 2013; 130: 493

What kinds of procedure are needed to achieve no macroscopic in surgical management of advanced ovarian cancer?

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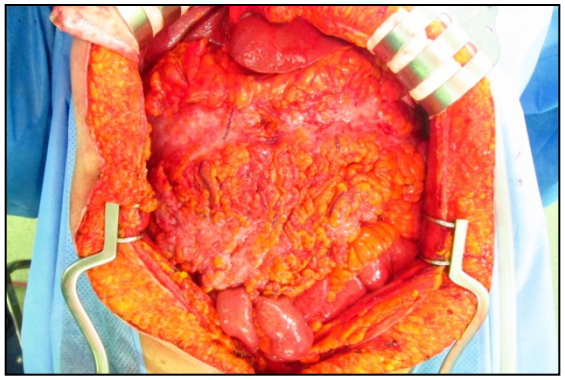
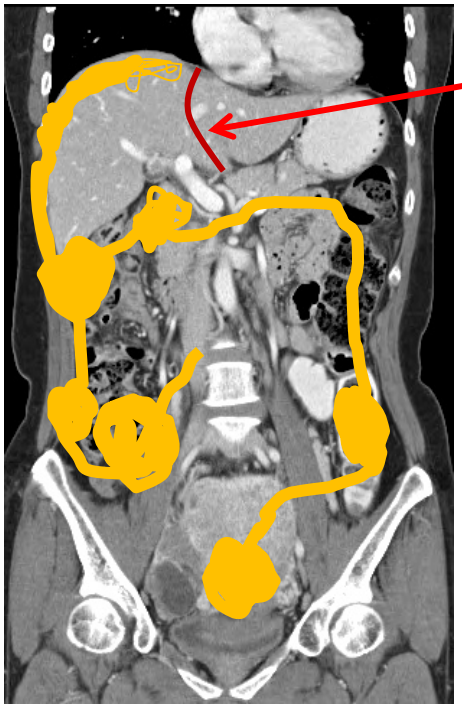
- Peritoneal cavity is a large single space
  - Omental cake
- Tumor cells deposit at the parietal peritoneum and most dependent position
- Tumor cells migrate clockwise due to the peristalsis of small and large bowel
  - Ileocecal area, right paracolic gutter, Morrison's pouch, right diaphragm, left paracoloic gutter, PCDS





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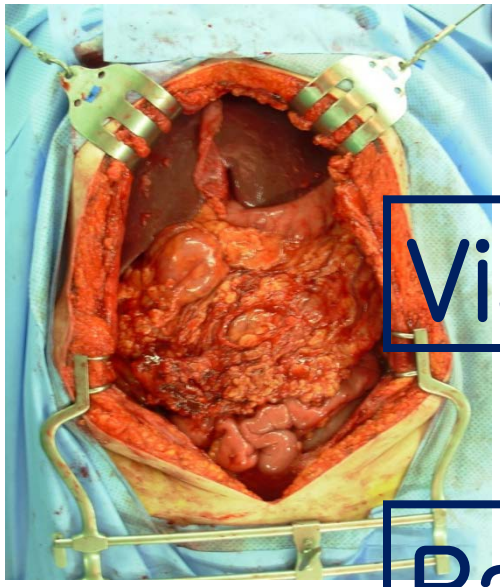
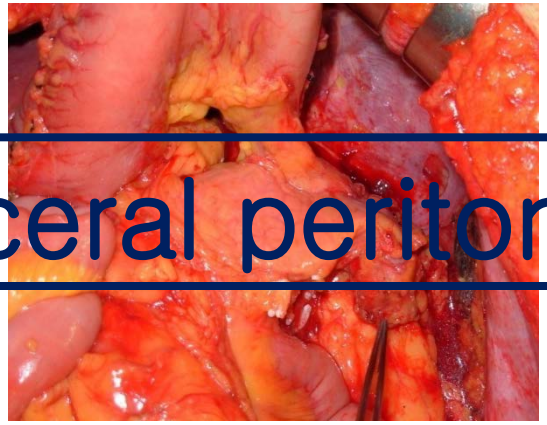
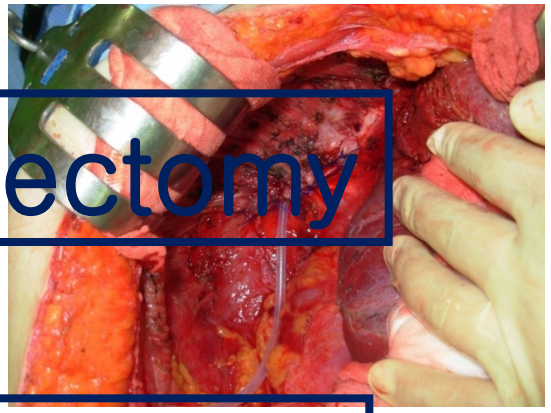
To achieve no macroscopic disease at surgery for advanced ovarian cancer

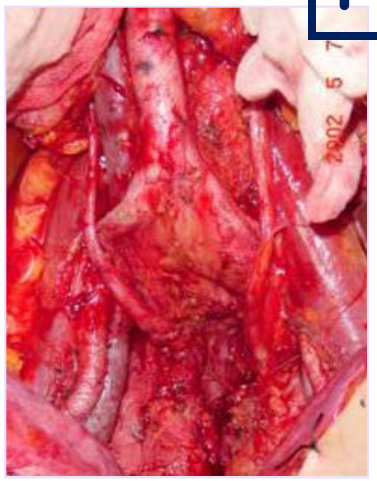


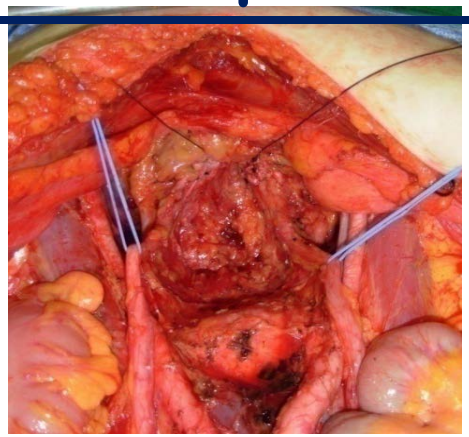


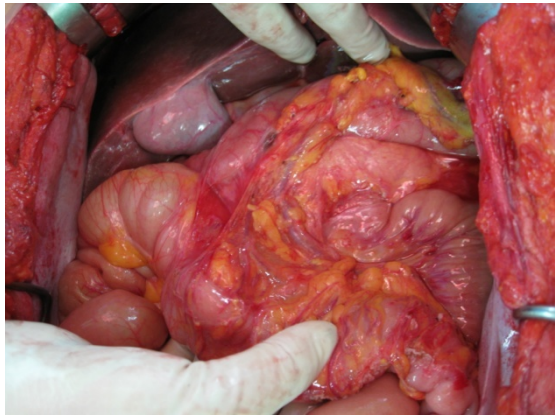


Visceral peritonectomy

Parietal peritonectomy







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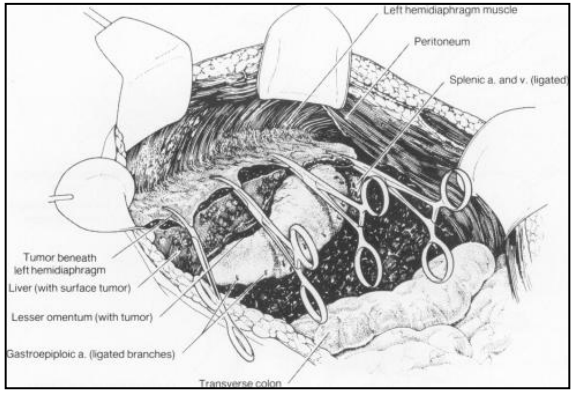
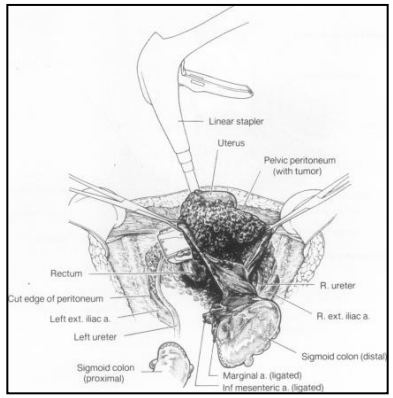
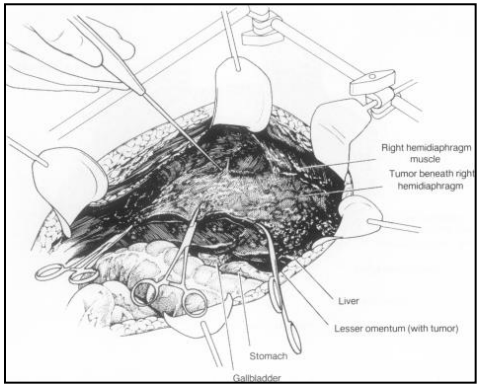
Peritonectomy procedure

Sugarbaker PH: Ann Surg (1995) Jan;221:29-42

Washington Cancer Center: 1997. 6. 9 - 7. 4







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Peritonectomy procedure

10th Symposium & Live Surgery of KSPSM
2016. 8. 26-27

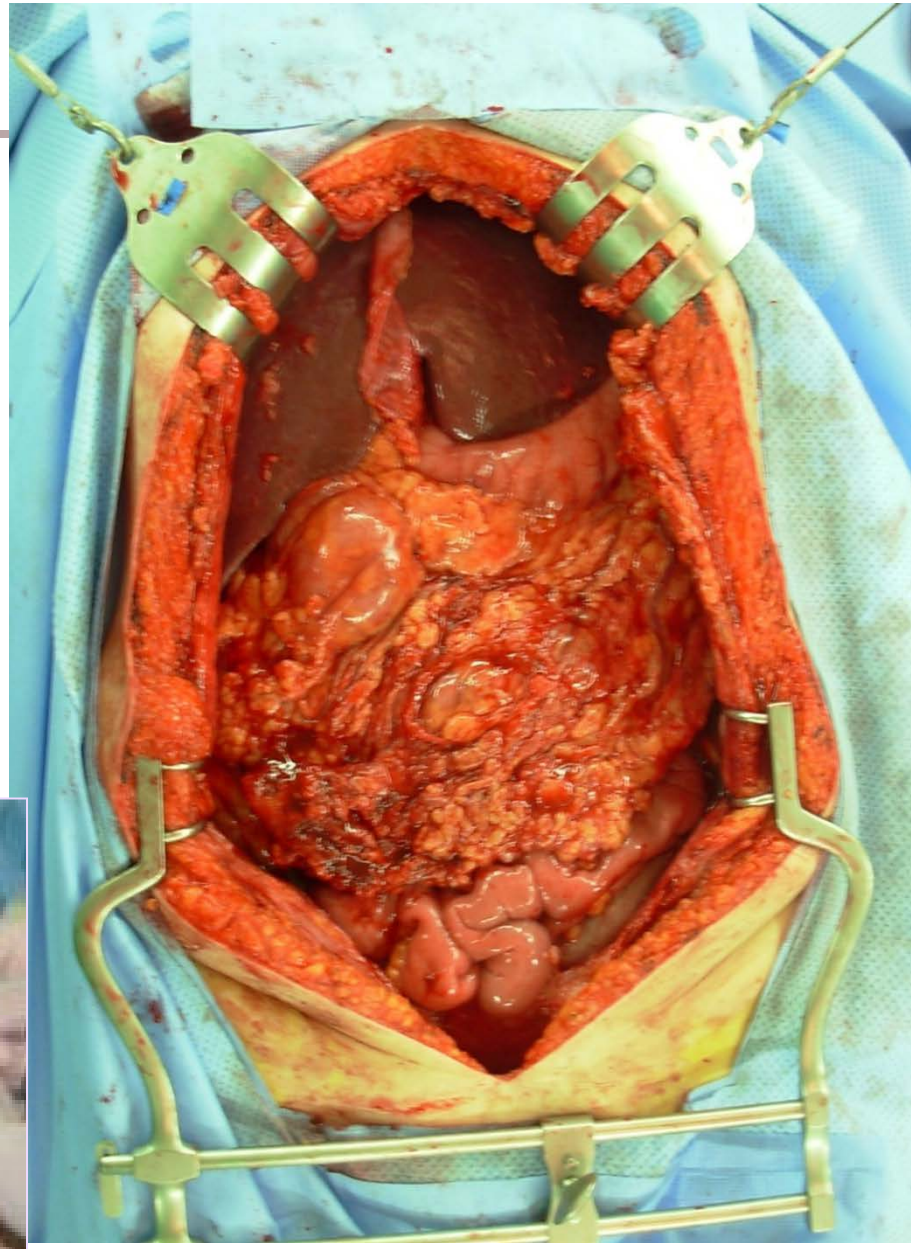
Patient preparation at OR

- Skin disinfection
  - Upper margin of breast to both knee joint
  - Down to flank which contact with operation table

- Operation table that perineal approach accessable

❖ Peritoneal exposure

- **Upper part**
  - Kent retractor
- **Lower part**
  - Balfour retractor

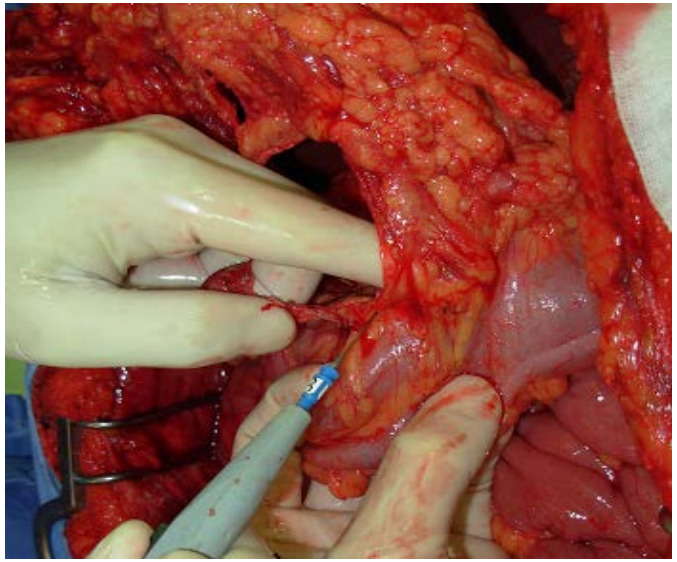


❖Good light source

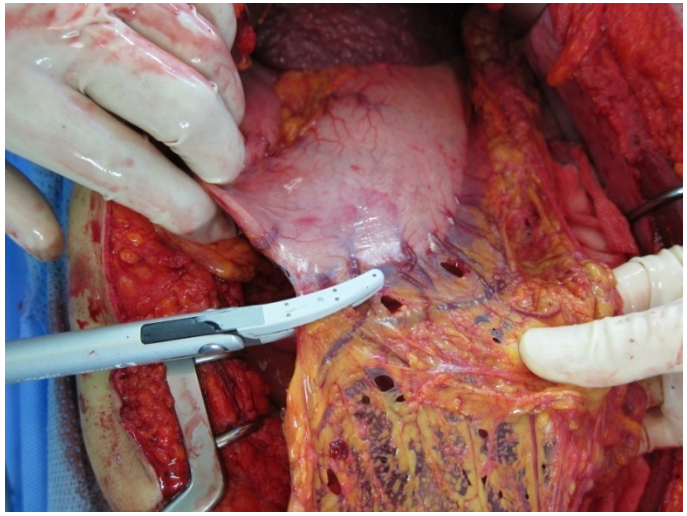
Illuminator

Omentectomy

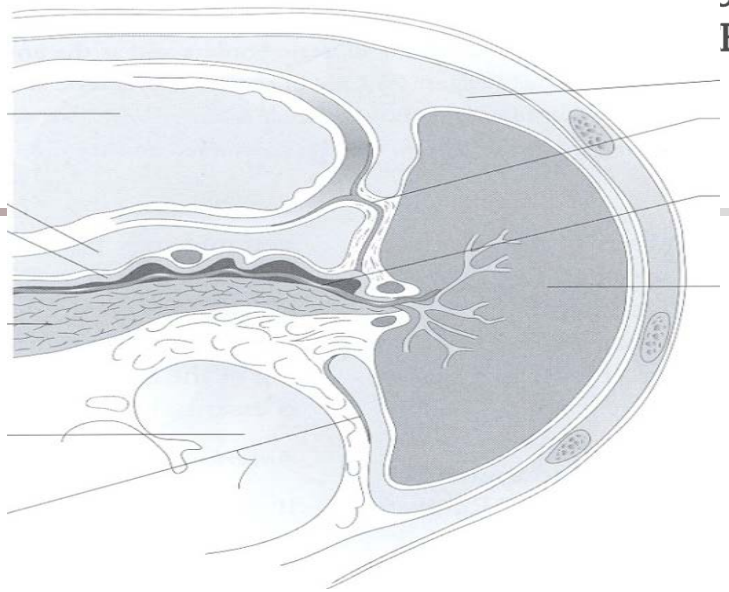
1. Division from transverse colon to exposure of lesser sac with monopolar electrocautery



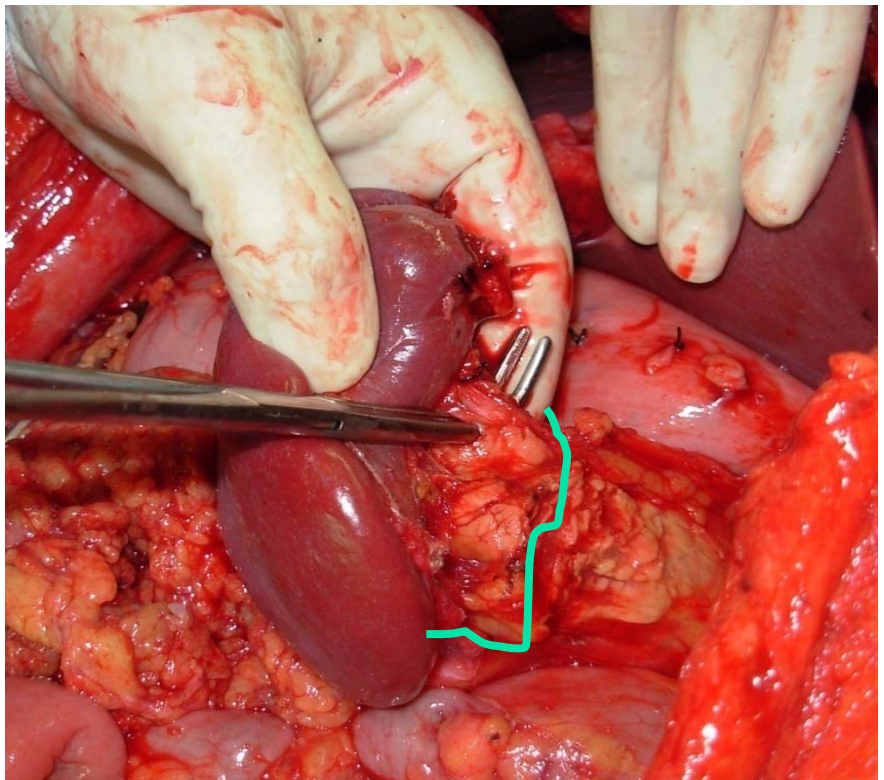
2. Division from greater curvature of stomach with Ligasure® application at gastroepiloic arteries



Splenectomy

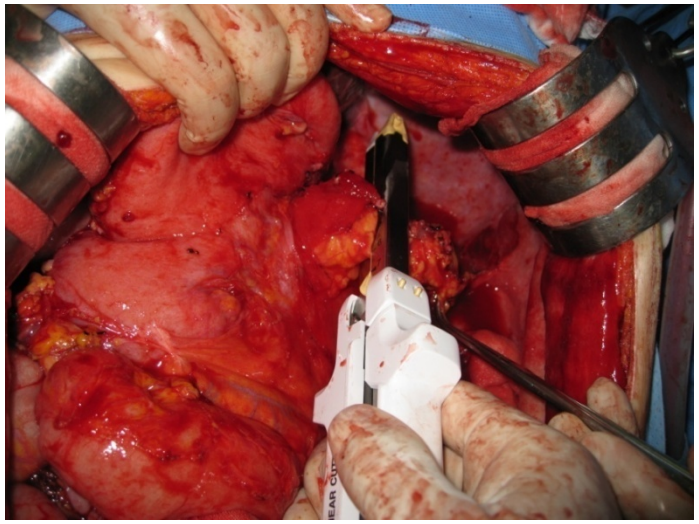


1. Division of ligaments
2. Division of splenic artery and vein
3. Detachment from pancreas tail

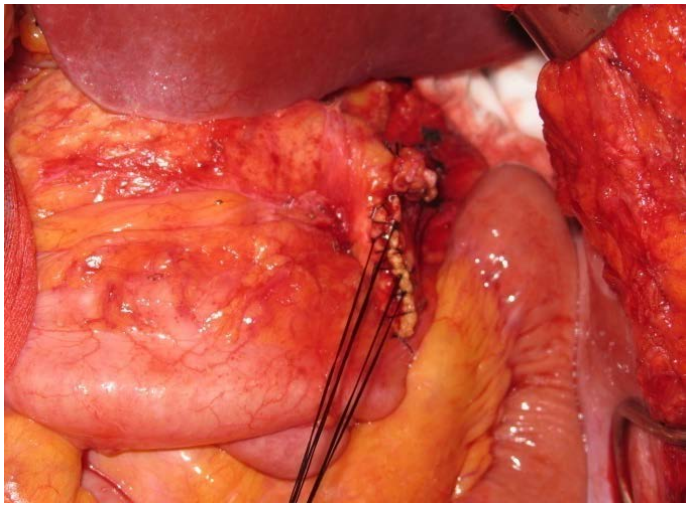


Distal pancreatectomy

❖Apply gold TLC



❖Interrupted suture

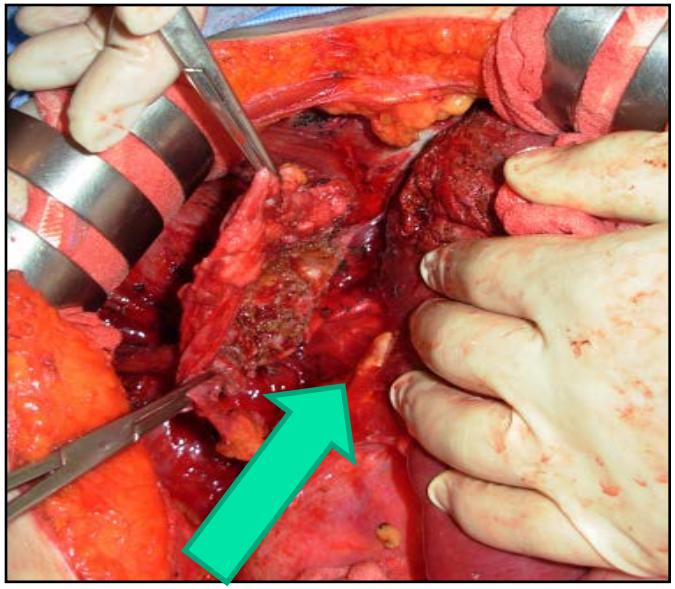


❖Occlusion of pancreatic duct of Wirsung
❖Apply fibrin glue

Diaphragmatic peritonectomy

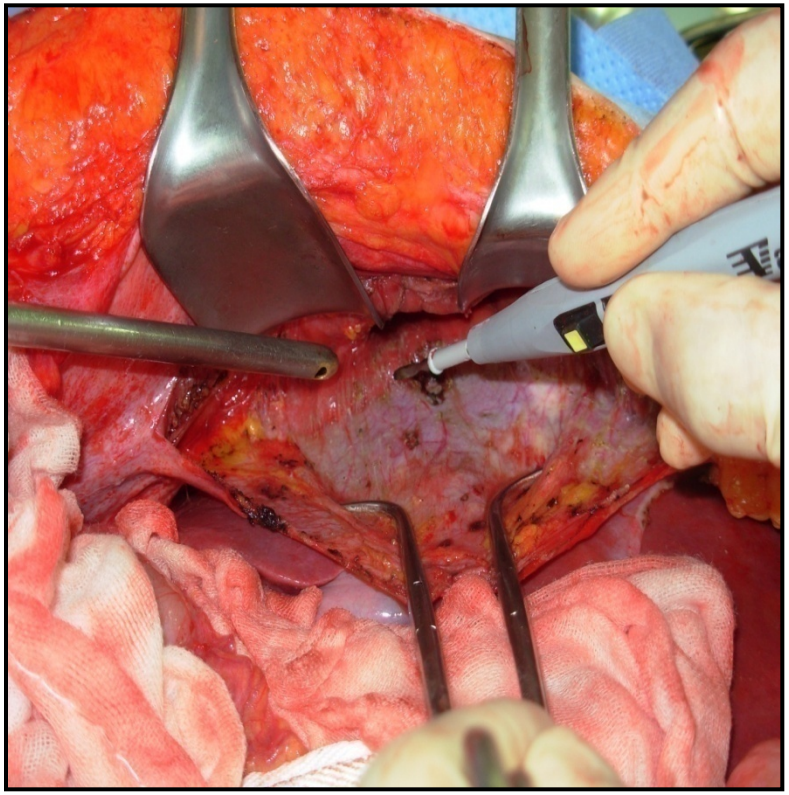
- Maximal elevation of costal margin with Kent self-retractor

- Full mobilization of liver
  - division of coronary and triangular ligament
  - Preservation of hepatic vein

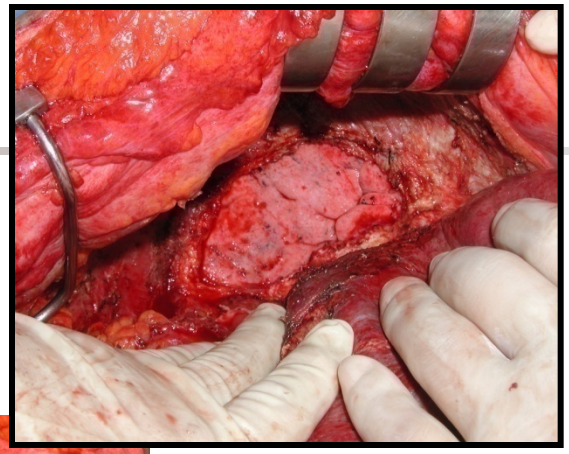


Diaphragmatic peritonectomy

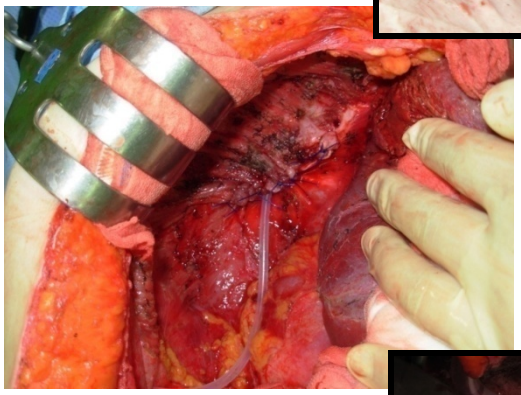
- Initiating the dissection at the free margin of gross disease
  - Monopolar electrocautery
- Counter traction of free peritoneal edge
  - Right angle clamp
  - Sponge stick….



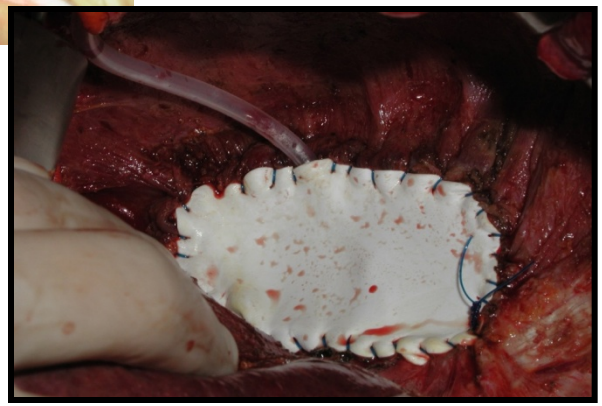
Diaphragmatic resection



- Invasion of diaphragmatic muscle and/or central tendon



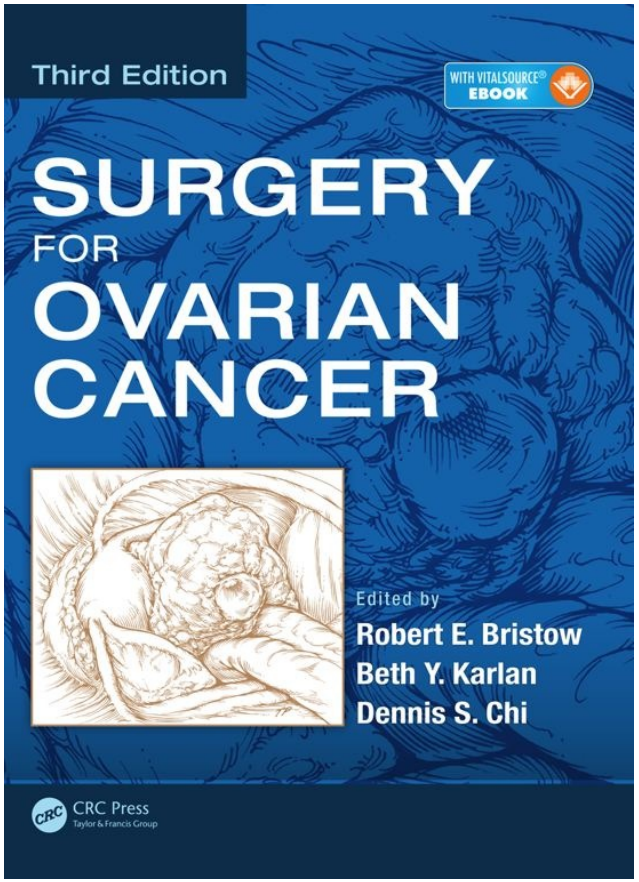
- Usual defect
  - primary suture
  - Ex) 1-0 Prolene ®
- Very large defect
  - Prosthetic material
  - Ex) Gore Tex mash®



- Suction with catheter with full expansion ventilation by anesthesiologist
- Drain may be remained

NCC results

- Duration: 2001. 4 – 2013. 7 (12yr 3 mo)
- No. of patients:
- Primary: > 257 pts
- There were no late complications related to diaphragmatic peritonectomy and/or resection interrupting patient's survival and QOL.



3rd ed. 2016

CHAPTER 10

CYTOREDUCTIVE SURGERY RIGHT UPPER ABDOMEN: DIAPHRAGM

[1] Myong Cheol Lim, M.D., Ph.D., Robert E. Bristow[2], M.D., MBA, and Sang-Yoon Park, M.D., Ph.D.[2]

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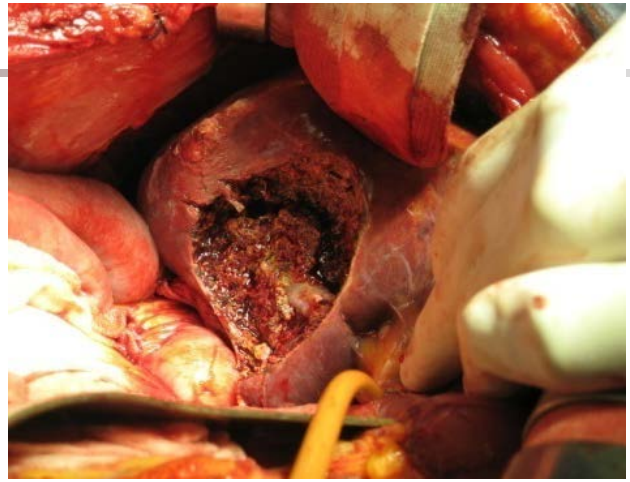
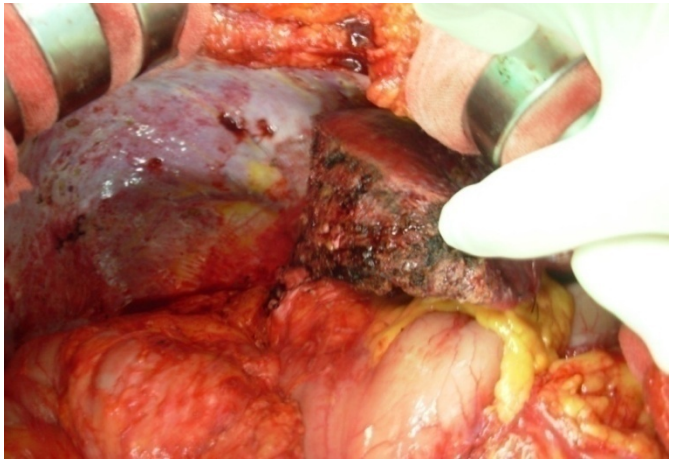
Hepatic resection

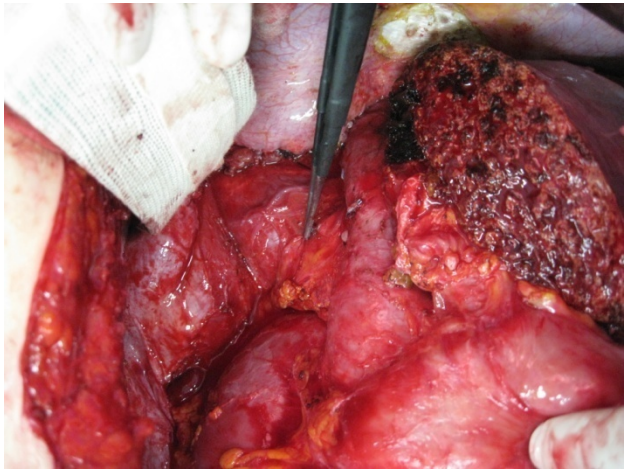
Wedge resection



Right inferior segmentectomy



Right posterior sectionectomy



Right hepatectomy

Performed by hepato-pancreatico-duodenal surgeon

NCC results

- **Duration: 2001. 1 ~ 2008. 1 (7yr)**
- **Hepatic parenchymal metastasis: 19**

- Hematogenous meta.: 16% (3)
- Peritoneal implants: 84% (16)

Conclusion

- **Hepatectomy can be performed with acceptable morbidity.**
- **No statistical difference in survival between Stage IV due to hepatic meta. from peritoneal implants and Stage IIIc.**
- **Hepatic metastases from peritoneal implants could be down staged (stage IIIc) in FIGO staging system.**

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Gynecologic Oncology 112 (2009) 28–34

Gynecologic Oncology

www.elsevier.com/locate/ygyno

The clinical significance of hepatic parenchymal metastasis in patients with primary epithelial ovarian cancer

Myong Cheol Lim [a,b], Sokbom Kang [a], Kyung Soo Lee [a], Sung-Sik Han [c], Sang-Jae Park [c], Sang-Soo Seo [a], Sang-Yoon Park [a,*]

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Available online 17 November 2008

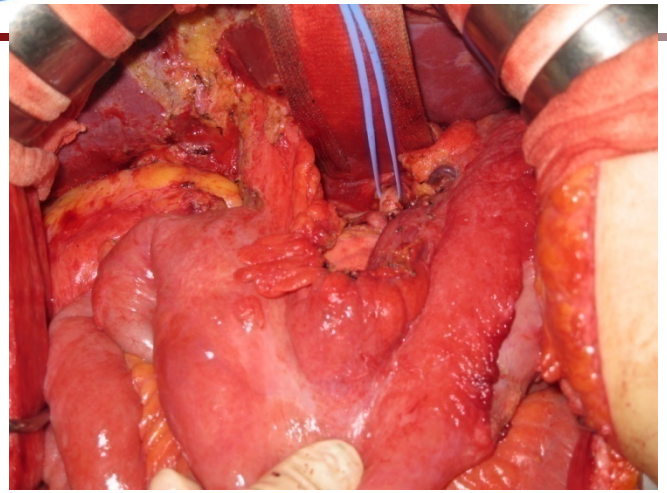
Abstract

Objective. The objective of this study was to determine the clinical significance of hepatic parenchymal metastasis on survival in patients with advanced epithelial ovarian cancer.

Methods. We conducted a retrospective review of ovarian cancer patients with stages IIIc and IV hepatic parenchymal metastasis who were

Gynecologic Oncology 112 (2009) 28–34

Tumor resection of portal hepatis and lesser sec



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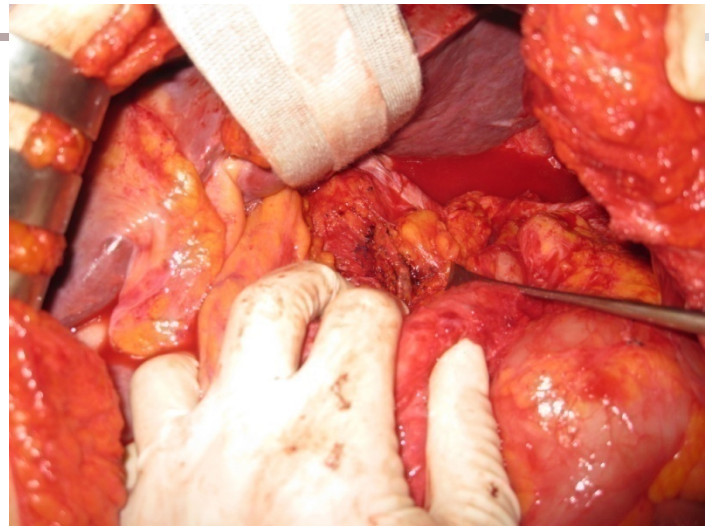

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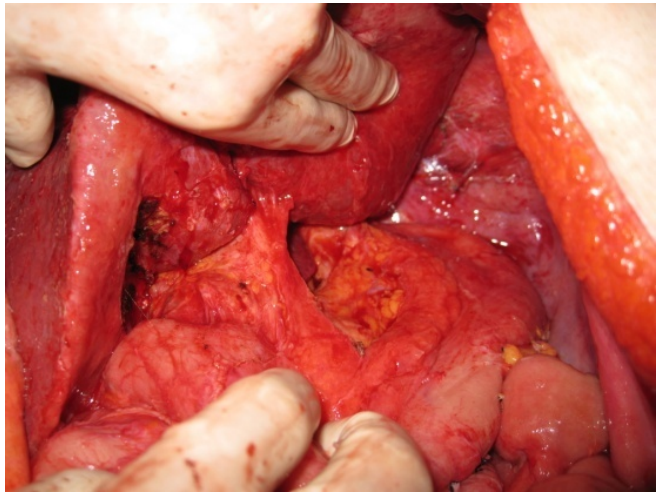

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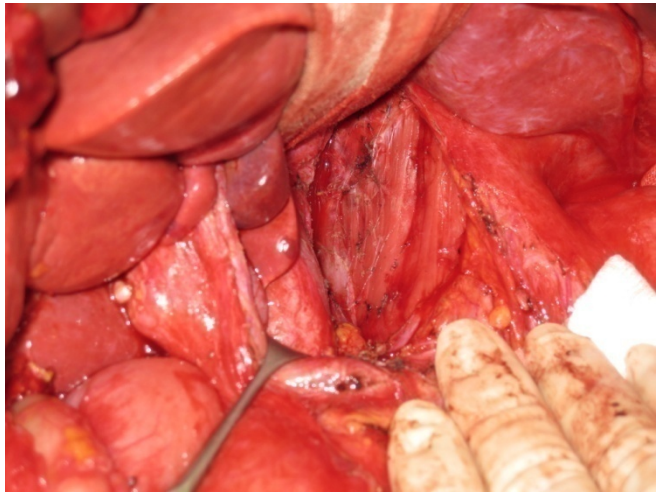

2010.4.6

Performed by hepato-pancreatico-duodenal surgeon

NCC results

- Duration: 2007. 8 ~ 2009. 6 (1yr 10mo)
- Portal hepatic tumor: 11 (primary; 2, 2nd ; 9)
- There was no significant morbidity related to tumor resection of the porta hepatis and mortality associated with surgery.

Gynecologic Oncology 121 (2011) 253–257

Contents lists available at ScienceDirect

Gynecologic Oncology

journal homepage: www.elsevier.com/locate/ygyno

Extended cytoreduction of tumor at the porta hepatis by an interdisciplinary team approach in patients with epithelial ovarian cancer

Yong Jung Song [a,1], Myong Cheol Lim [a], Sokbom Kang [a], Sang-Soo Seo [a], Seong Hoon Kim [b], Sung-Sik Han [b,*], Sang-Yoon Park [a,*]

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ARTICLE INFO

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Keywords:
Cytoreductive surgery
Porta hepatis
Ovarian cancer
Residual disease

ABSTRACT

Objective. The objective of this study was to describe the development and experience in resection of tumor at the porta hepatis in patients with ovarian cancer by an interdisciplinary team approach.

Methods. From August 2007 to June 2009, 11 women (2 primary and 9 recurrent ovarian cancers) underwent extended cytoreductive surgery including resection of tumor at the porta hepatis by hepatobiliary surgeons.

Results. Tumor resection at the porta hepatis was required in 7.1% of the patients (11/155) during the study period. The median tumor size of the porta hepatis was 2.0 cm (range, 0.7–4 cm). All visible tumors at the porta hepatis were completely resected with co-operation of hepatobiliary surgeons. Optimal cytoreduction was achieved in all patients. There was no significant morbidity related to tumor resection

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HOW I DO IT

WILEY Journal of SURGICAL ONCOLOGY

Kocher maneuver to facilitate cytoreduction within the foramen of Winslow

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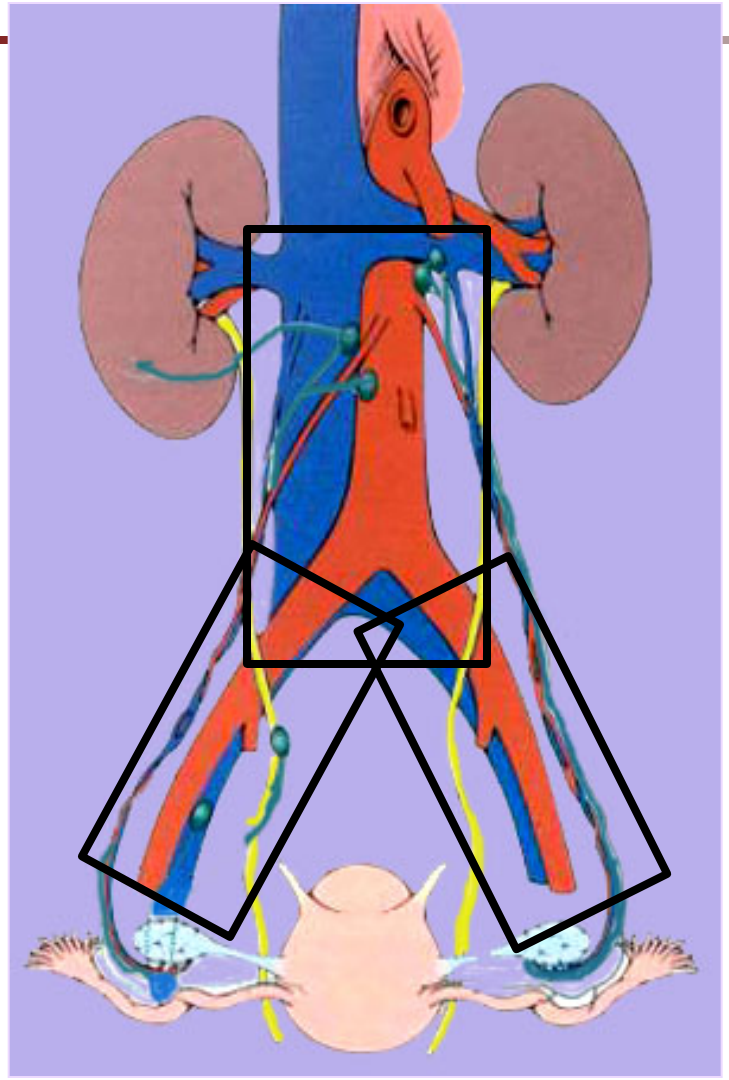
A potential site for incomplete cytoreduction in patients with peritoneal metastases is the foramen of Winslow, especially the posterior aspect of the hepatoduodenal ligament. The Kocher maneuver can be used to rotate the duodenum, head of pancreas, and portal structures 180°. In so doing, the foramen of Winslow is clearly exposed for peritonectomy. Residual tumor at this site is a prominent cause of unnecessary treatment failure in the management of patients with mucinous appendiceal neoplasms.

KEYWORDS
gastrohepatic ligament, hyperthermic intraperitoneal chemotherapy, omental bursa, peritoneal metastases, porta hepatis

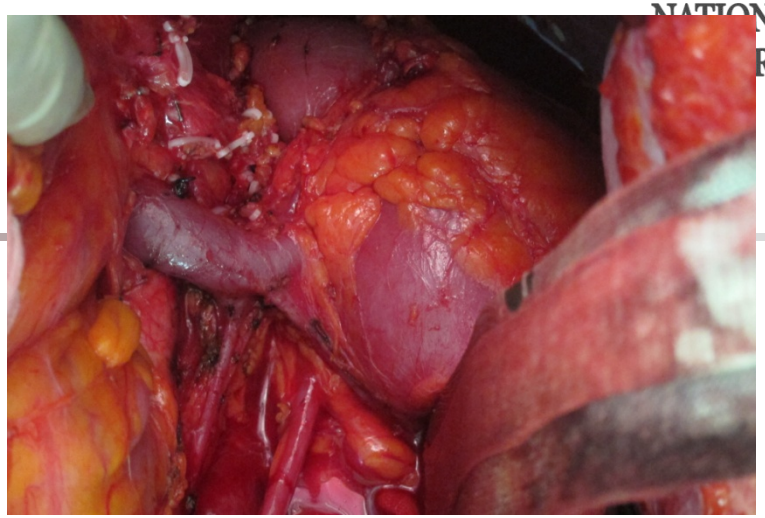
Journal of Surgical Oncology 2017

Pelvic & para-aortic LN dissection



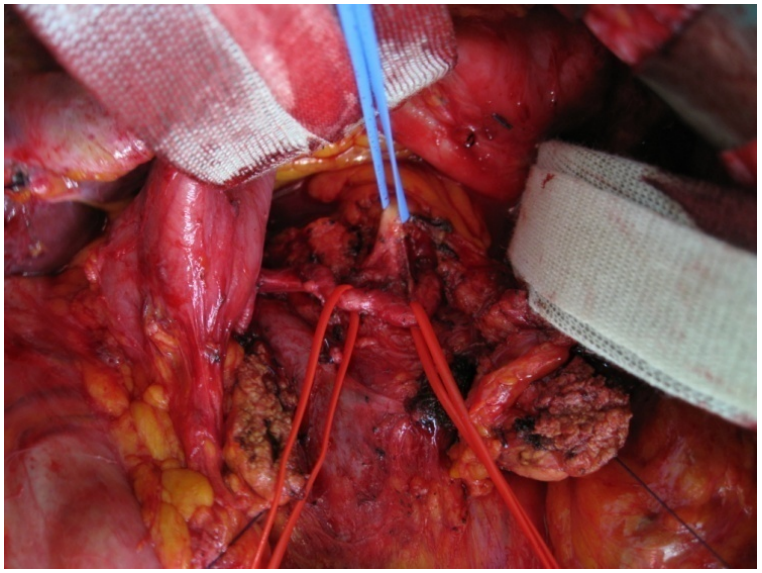
(Greer BE, et al. Atlas of Clinical Gynecolgy 1999)

Supra-renal LND



2012.01.24

2010.03.03



2010.04.16

Performed by hepato-pancreatico-duodenal surgeon

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NCC results

- Duration: 2007. 1 – 2012. 1 (5 yr)
- No. of patients: >16
- Suprarenal LND can be performed safely to achieve the optimal cytoreduction in the surgical management of primary and recurrent ovarian cancer.

Will be presented at 3rd International Video workshop on Radical Surgery in Gy. Oncol. 4. 16. 2012. Prague, Czech

Video-assisted thoracic surgery (VATS)

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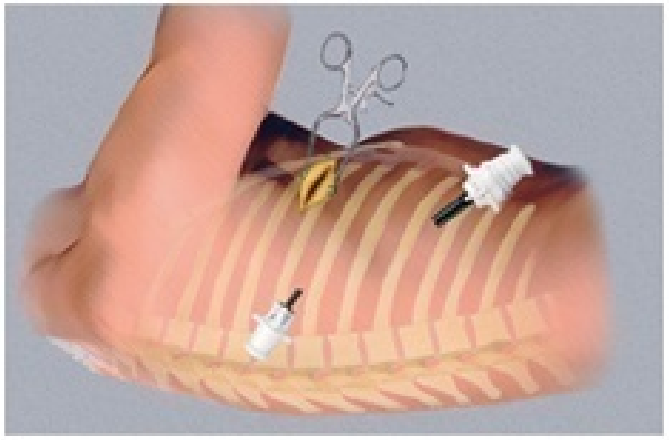
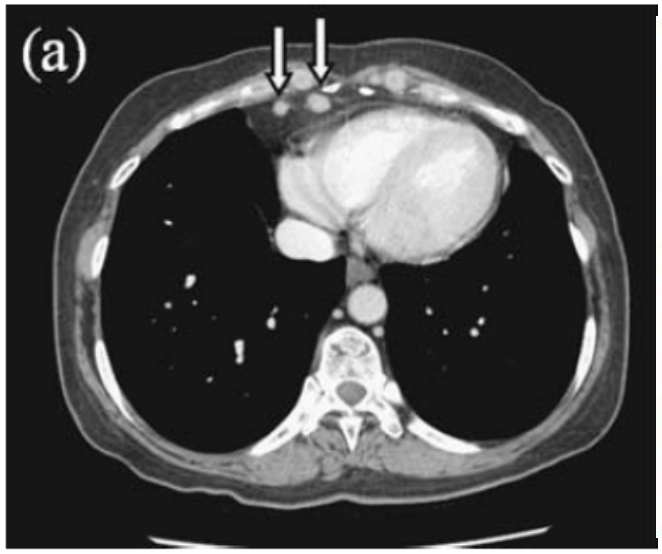
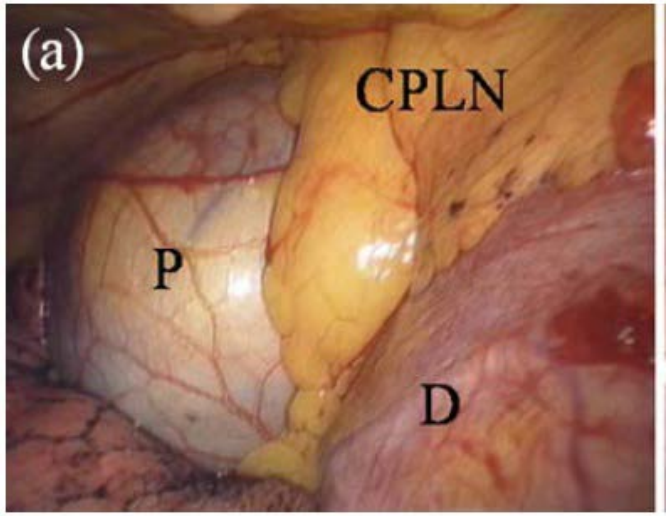
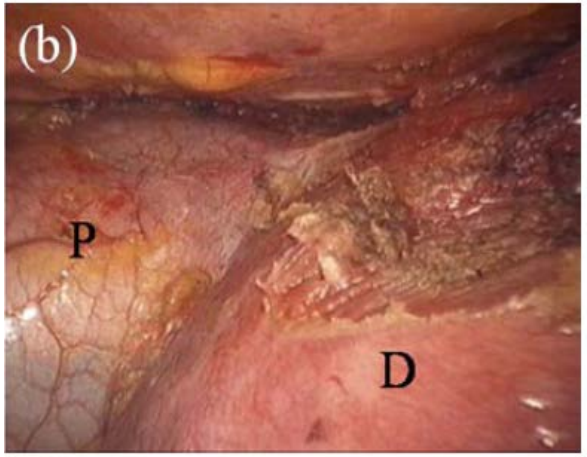








NCC results

- Duration: 2007.6 – 2008.10 (1yr 4 mo)
- No. of patients: 13
  - Suspicious CPLN: 9 pts
  - Suspicious pleural metastasis: 4 pts
- VATS can be performed safely for exact pathological diagnosis and resection of intrathoracic pleural metastasis and CPLN metastasis.

ORIGINAL ARTICLE – GYNECOLOGIC ONCOLOGY

Pathological Diagnosis and Cytoreduction of Cardiophrenic Lymph Node and Pleural Metastasis in Ovarian Cancer Patients Using Video-Assisted Thoracic Surgery

Myong Cheol Lim, MD[1,4], Hyun-Sung Lee, PhD[2], Dae Chul Jung, PhD[3], Ji Young Choi, MD[1,5], Sang-Soo Seo, PhD[1], and Sang-Yoon Park, MD, PhD[1]

[1]Center for Uterine Cancer, Research Institute and Hospital, National Cancer Center, Goyang, Gyeonggi, Korea; [2]Center for Lung Cancer, Research Institute and Hospital, National Cancer Center, Goyang, Gyeonggi, Korea; [3]Department of Radiology, Research Institute and Hospital, National Cancer Center, Goyang, Gyeonggi, Korea; [4]Department of Obstetrics and Gynecology, Kyung Hee University, Seoul, Korea; [5]Department of Obstetrics and Gynecology, Seoul National University Hospital, Seoul, Korea

ABSTRACT

Background. The aim of this study was to assess the benefit of video-assisted thoracic surgery (VATS) in pathological diagnosis and intrathoracic cytoreduction of cardiophrenic lymph node (CPLN) and pleural metastasis on computed tomography (CT) in patients with ovarian cancer.

Methods. We reviewed a database of ovarian cancer patients who underwent VATS from June 2007 to visible intrathoracic diseases were completely resected without major complications, and VATS did not delay planned treatment.

Conclusion. VATS enables the accurate pathological diagnosis and intrathoracic resection of pleural and CPLN metastasis in patients with ovarian cancer with acceptable morbidity. Further studies are needed to confirm the impact of VATS on survival in patients with ovarian cancer.

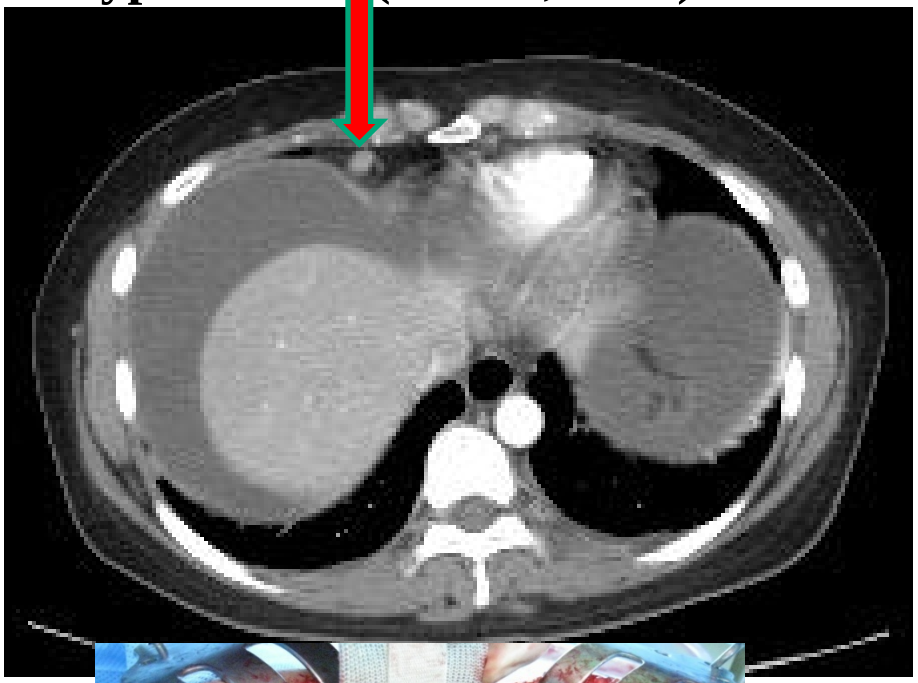
Ann Surg Oncol (2009) 16:1990–1996.
IF; 2.787

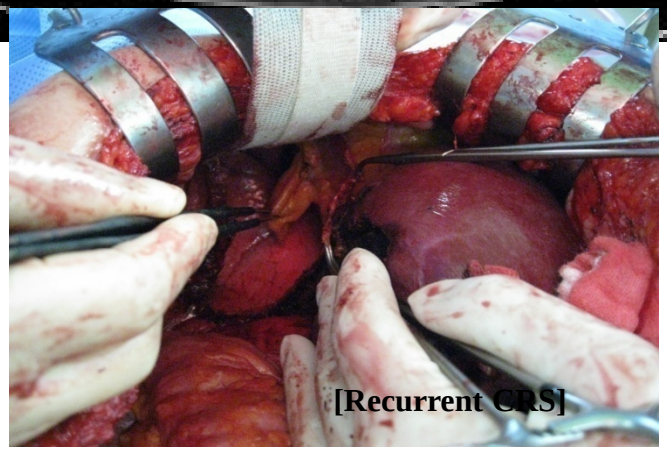
Trans-diaphragmatic thoracic metastatectomy

NATIONAL CANCER CENTER

2008. 12. 8
Biennial NCC Cadaveric study

Typical Case (Dec 10, 2010)





[Recurrent CRS]

NCC results

- Duration: 2008.11 – 2011.12 (3yr 1 mo)
- No. of patients:
  - Primary: > 45 pts
- CPLND trans-diaphragmatic approach is feasible as parts of primary or secondary cytoreductive surgery without significant morbidities.

Gynecologic Oncology xxx (2013) xxx–xxx

Contents lists available at SciVerse ScienceDirect

Gynecologic Oncology

journal homepage: www.elsevier.com/locate/ygyno

Transabdominal cardiophrenic lymph node dissection (CPLND) via incised diaphragm replace conventional video-assisted thoracic surgery for cytoreductive surgery in advanced ovarian cancer

Heon Jong Yoo [a,1], Myong Cheol Lim [a,1], Yong Jung Song [a,2], Yuh-Seock Jung [b,2], Sun Ho Kim [a,3], Chong Woo Yoo [a,4], Sang-Yoon Park [a,*]

[a] Center for Uterine Cancer, Research Institute and Hospital, National Cancer Center, 323, Ilsan-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, 410-769, Republic of Korea
[b] Research Institute and Hospital, National Cancer Center, 323, Ilsan-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, 410-769, Republic of Korea

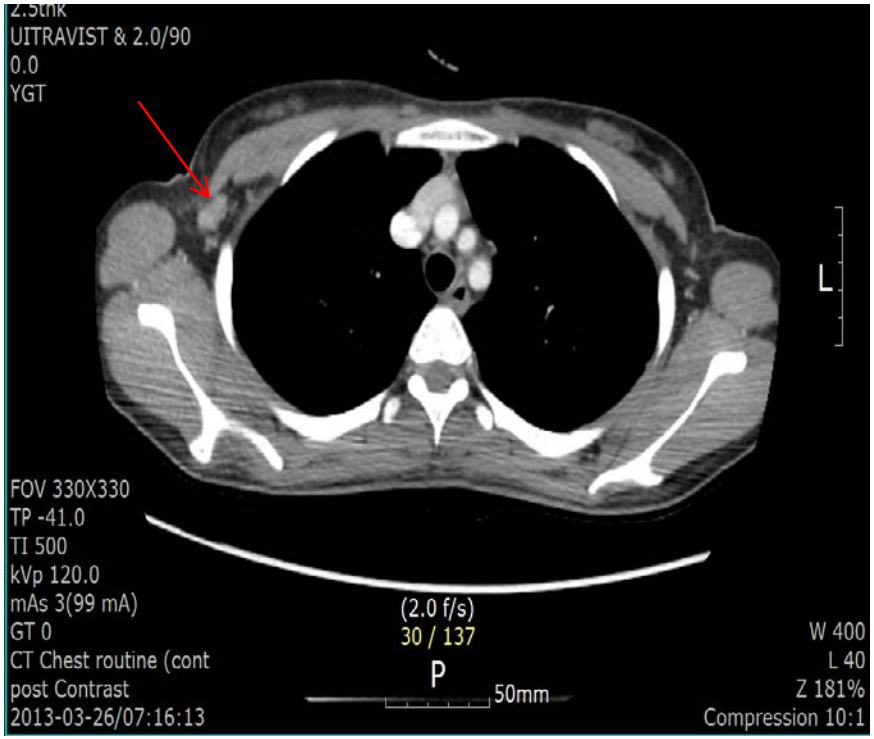
HIGHLIGHTS

- We approach a new procedure for ovarian cancer.
- New procedure is a part of the cytoreductive surgery.
- This can be acquired by gynecology oncologist without significant morbidities.

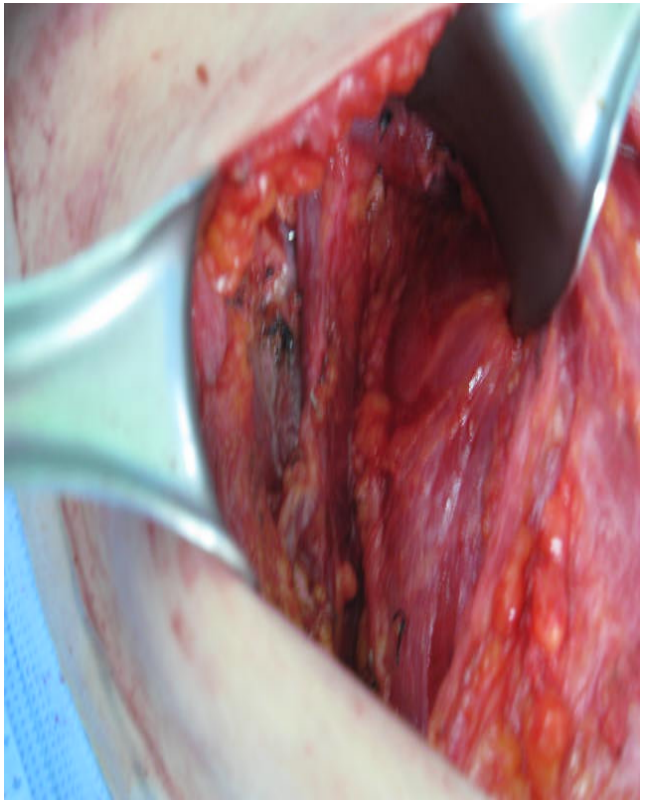
Gynecol Oncol (2013) 129:341–5

Axillar LN dissection

- Chest CT before ALND



- After ALND



Performed by breast surgeon

NCC results

- Duration: 2004. 4 – 2013.12 (9.5yr)
- No. of patients: primary, recurrent: 13 cases
- Location:
  - Rt axilla: 6 cases (46.2%)
  - Both axilla: 4 cases (30.8%)
  - Lt axilla: 3 cases (23.0%)
- There was no significant morbidity related to tumor resection of the axillar lymph nodes

Presented at SGO meeting, Chicago, 2015

Involvement of supraclavicular lymph node

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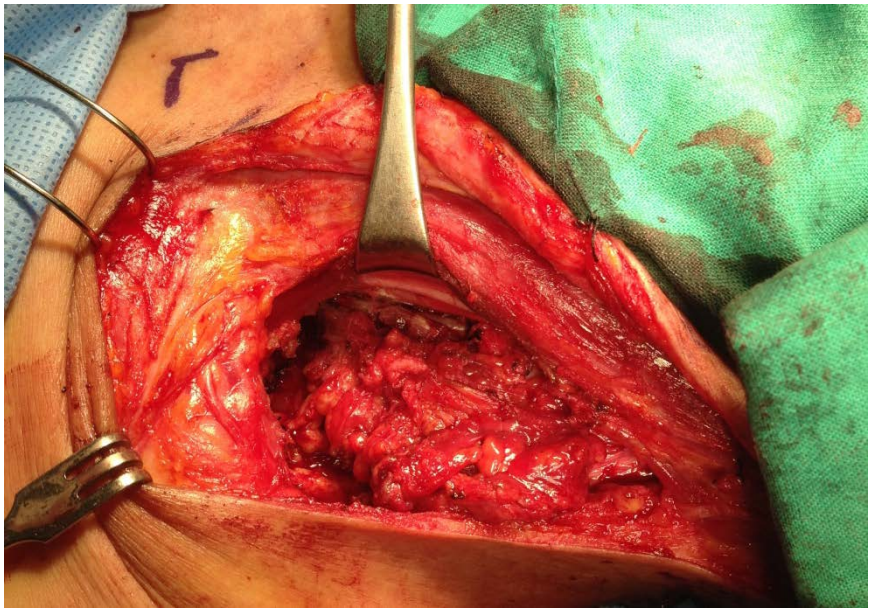
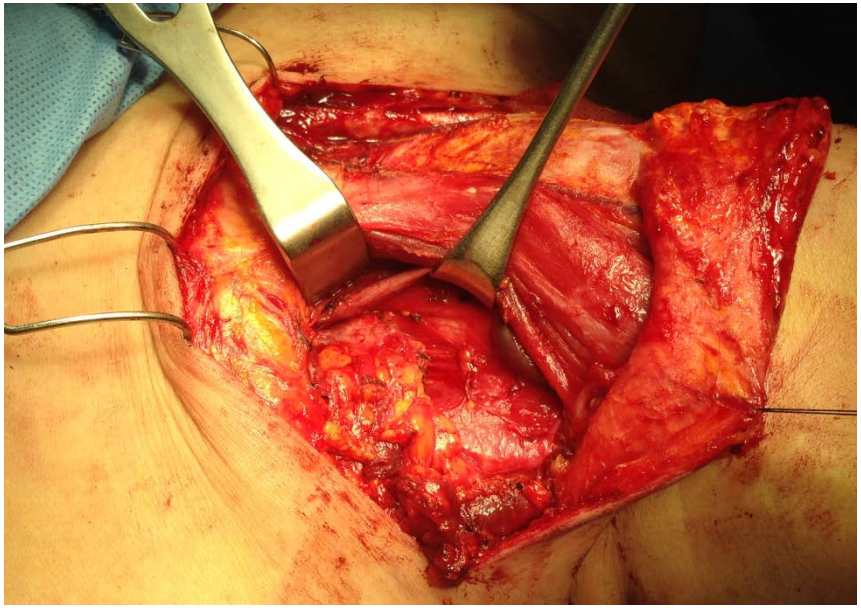
- Resection of supraclavicular lymph node





Performed by ENT surgeon

NCC results

- Duration: 2011. 1 – 2015. 5(4yr 5mo)
- No. of patients: primary, recurrent, 13
- There was no significant morbidity related to tumor resection of the supraclavicular lymph nodes such as cycle leakage, major bleeding
- Minor complication (Seroma) was noted in 1 patient, however overall hospital days were not longered.

Presented at SGO meeting, San Diego, 2016

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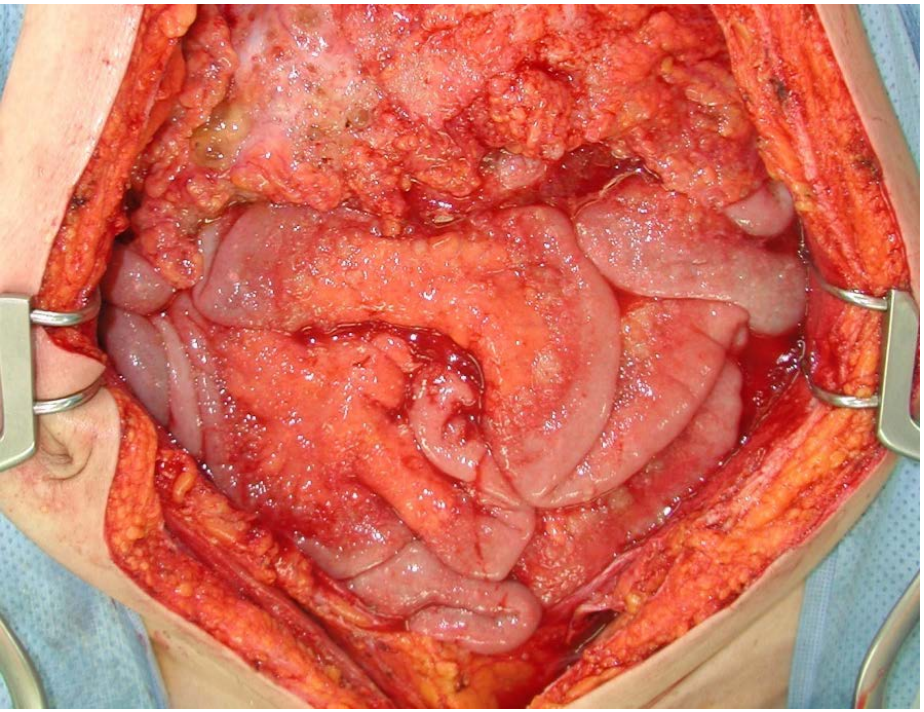
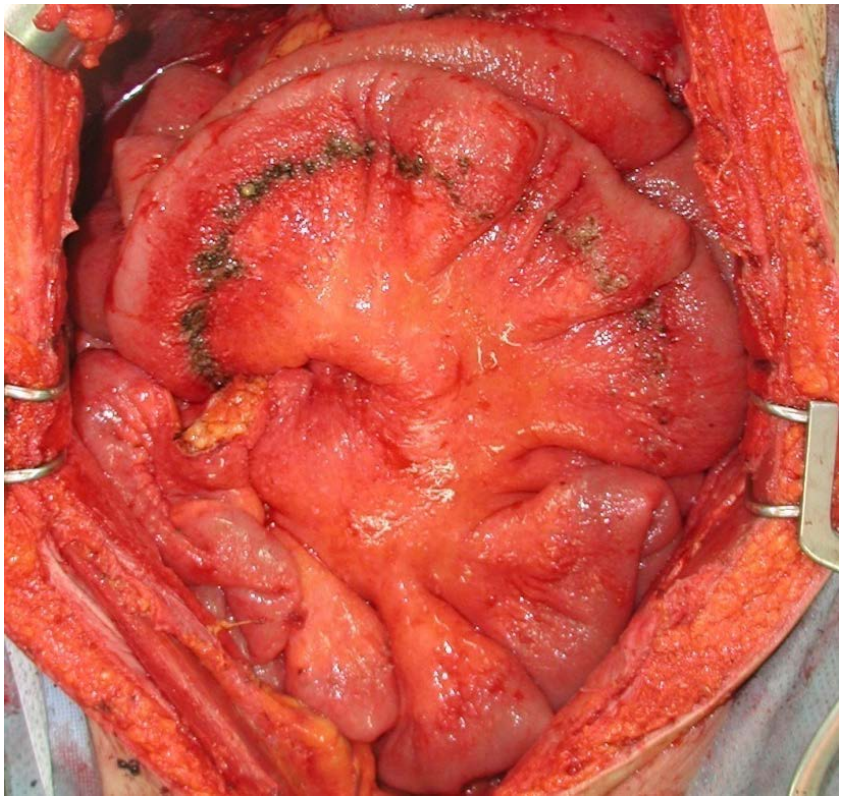
Viceral peritonectomy

Preop. Finding



Tumor implant on mesentery

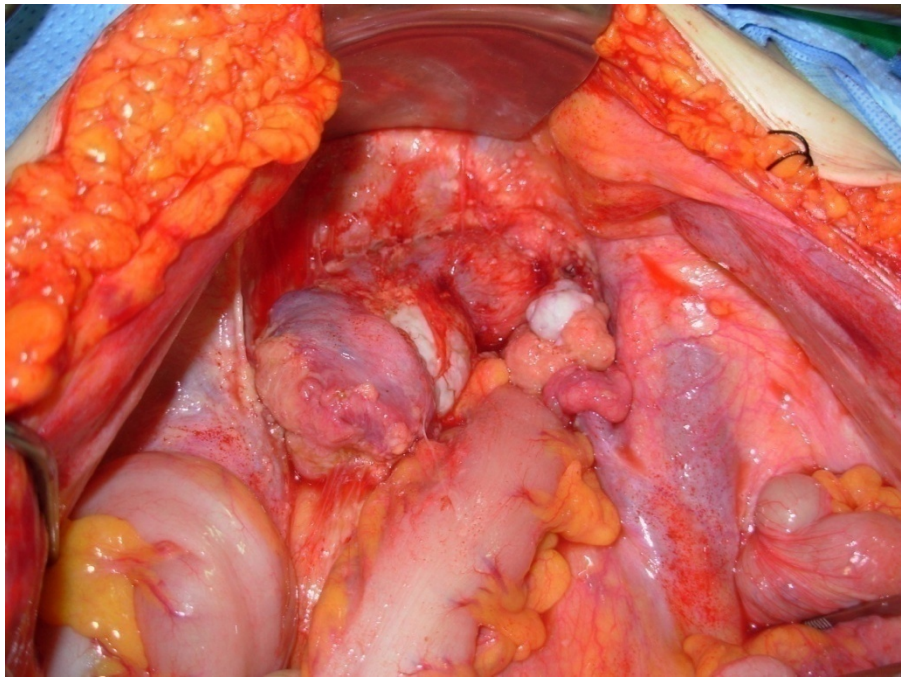
Postop. Finding



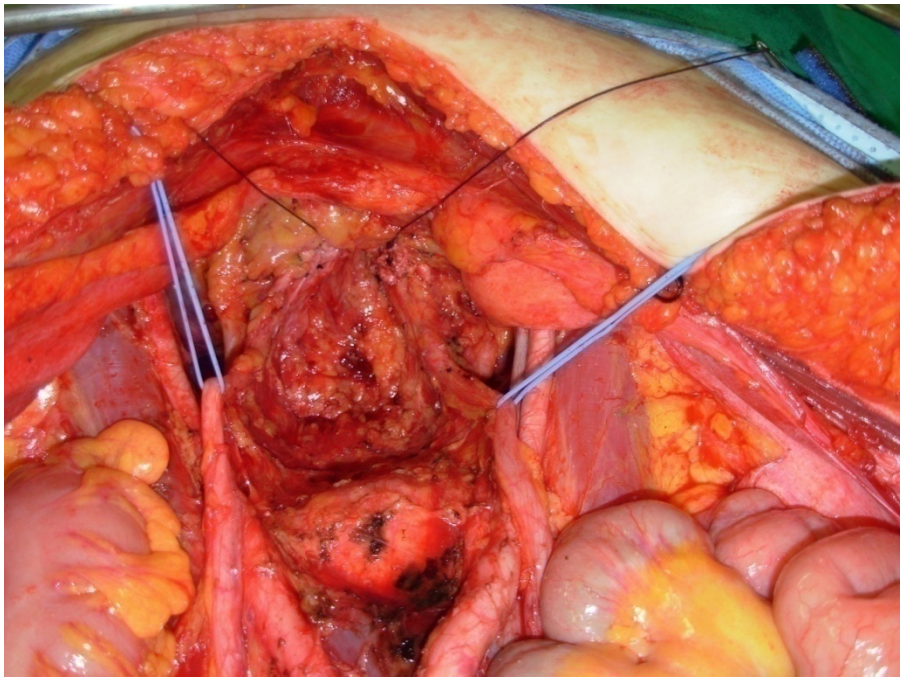
Visceral peritonectomy and fulguration

Pelvic peritonectomy with modified posterior exenteration in ovarian cancer

#Preop. Finding

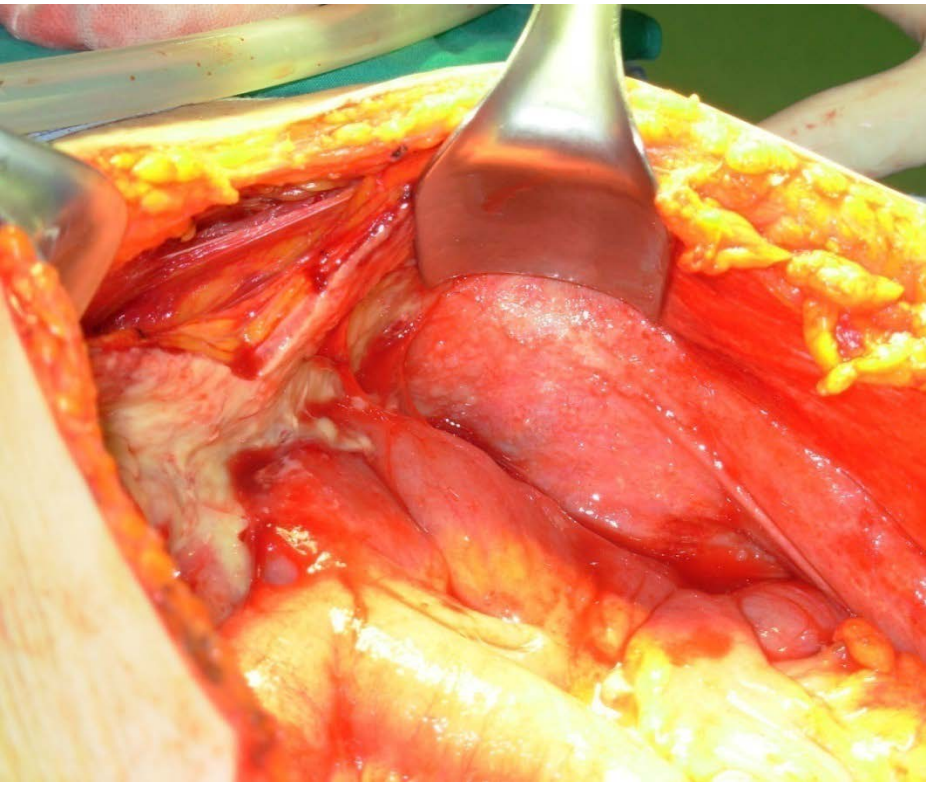


#Postop. Finding

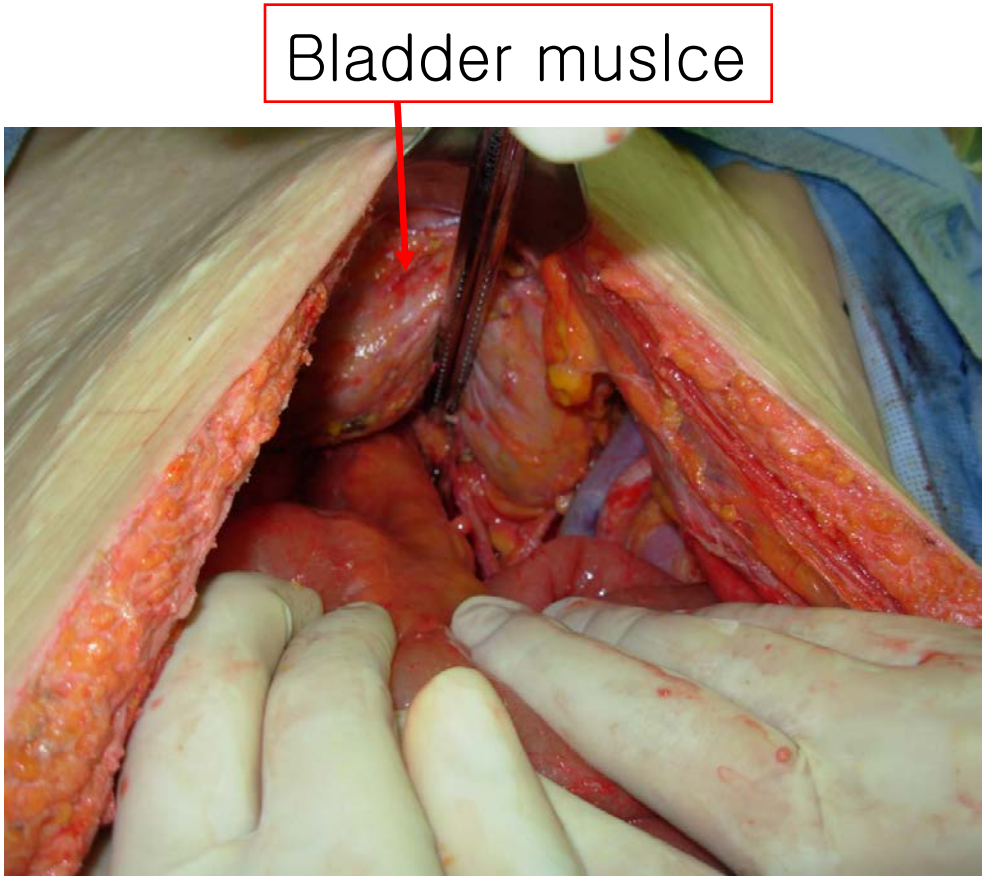


Pelvic peritonectomy
Modified posterior exenteration

#Preop. Finding

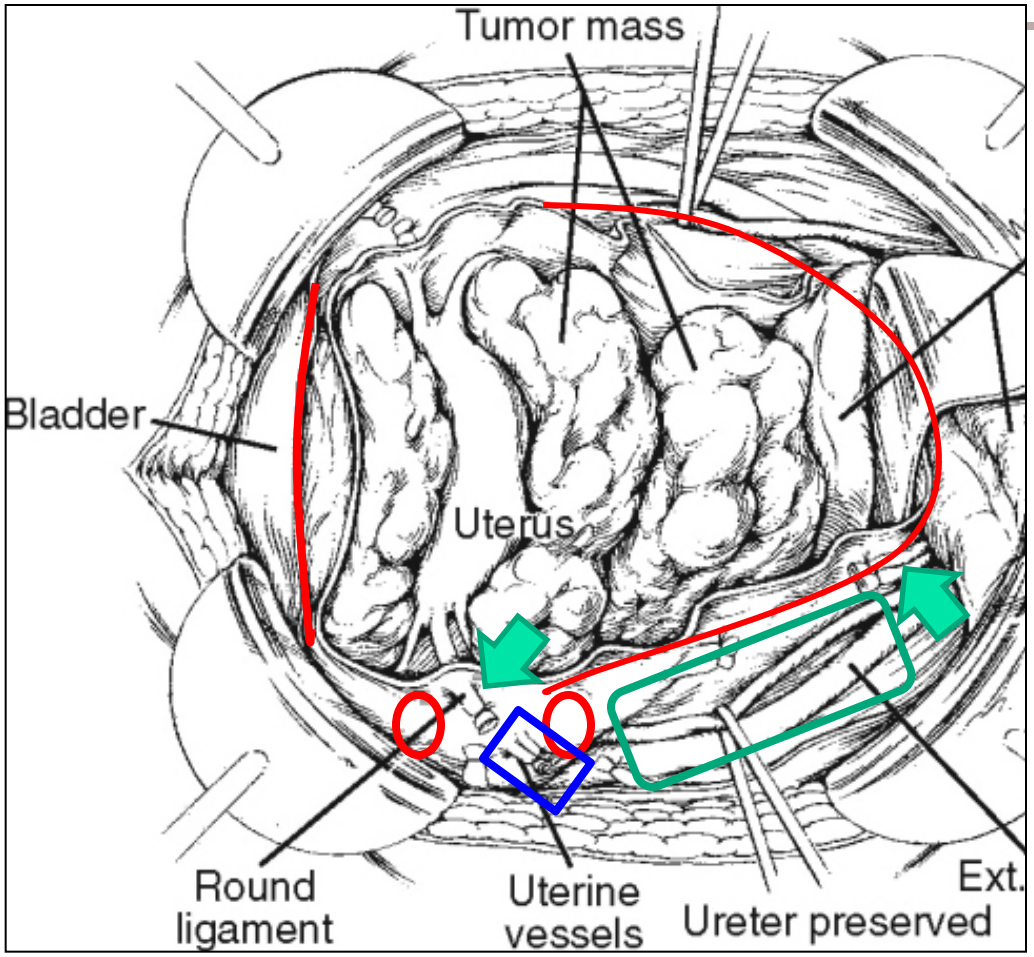


#Postop. Finding



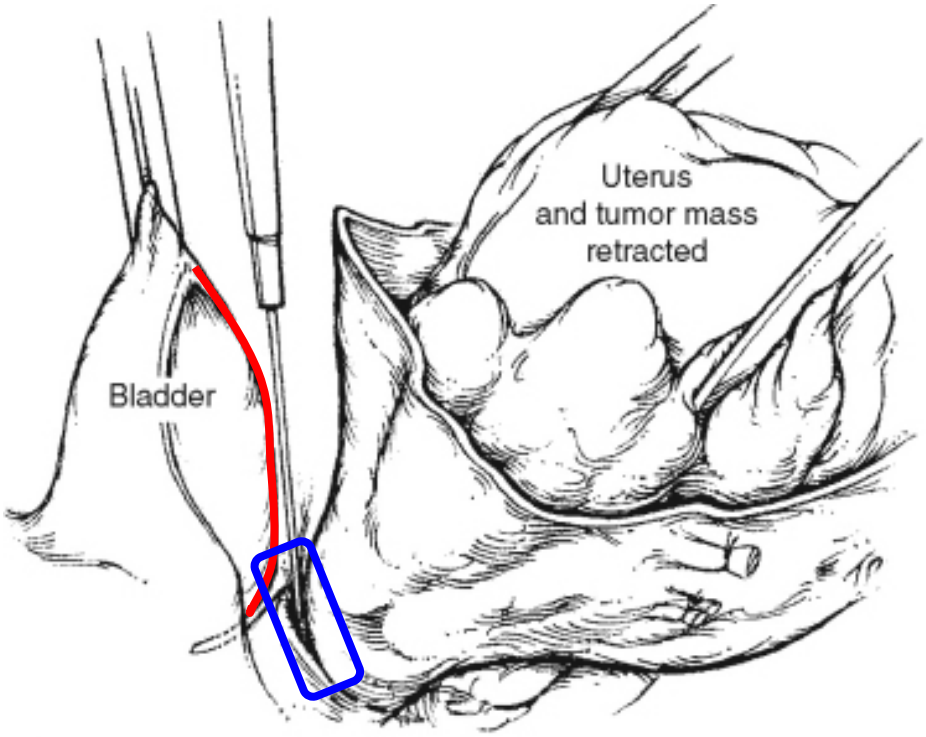
Pelvic peritonectomy
Modified posterior exenteration

Surgical technique



- A circumscribing peritoneal incision
  - Paracolic gutters,
  - Mobilization of cecum, terminal ileum, sigmoid colon
- Exploration of Retzius space
- Exploration of pararectal/paravesical space
- Division of the round ligaments and ovarian vessels
- Ureter mobilization
- Skeletonization and ligation of the uterine vessels

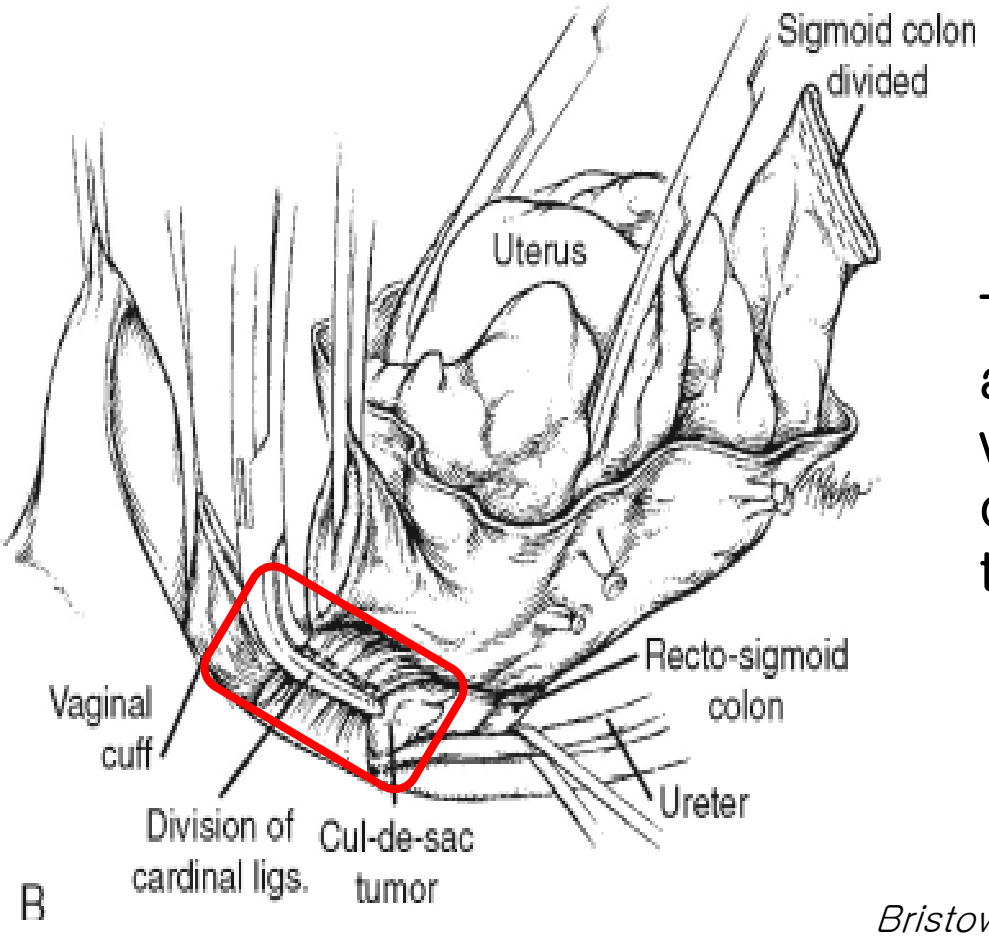
Bristow RE, et al. J Am Coll Surg 197:565–574, 2003



Dissection of the anterior pelvic peritoneal tumor from the bladder dome until pubo-vesico-cervical fascia

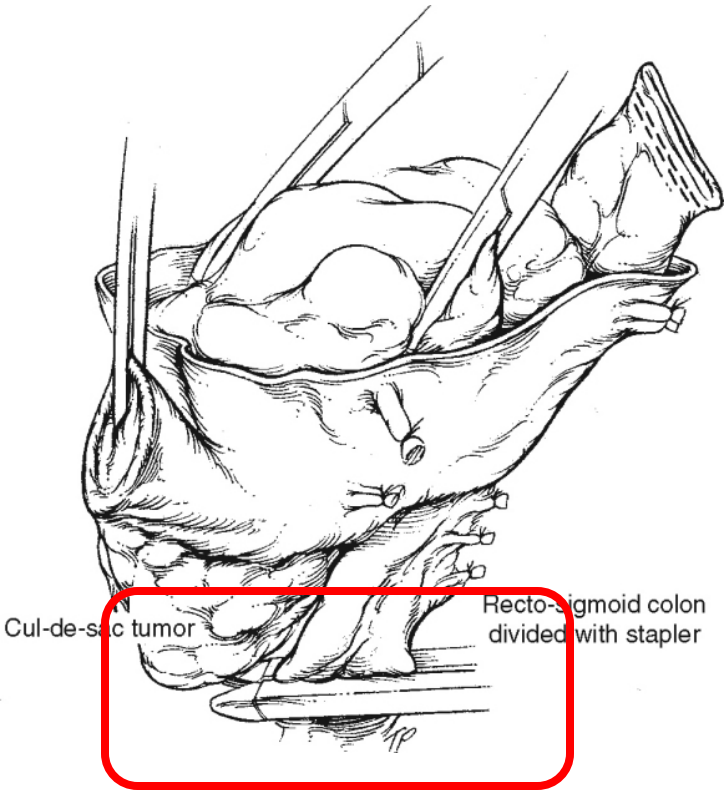
Transverse anterior colpotomy at the proximal vagina

Bristow RE, et al. J Am Coll Surg 197:565-574, 2003



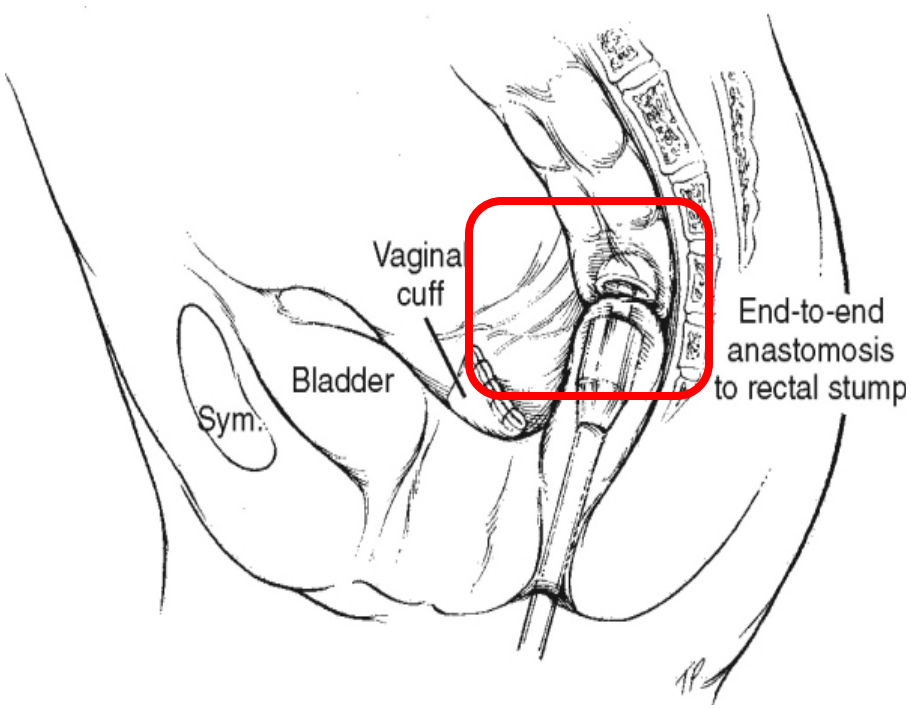
The cardinal ligament attachments are divided between Heaney clamps working in a ventral-to-dorsal direction toward the cul-de-sac tumor mass.

Bristow RE, et al. J Am Coll Surg 197:565-574, 2003



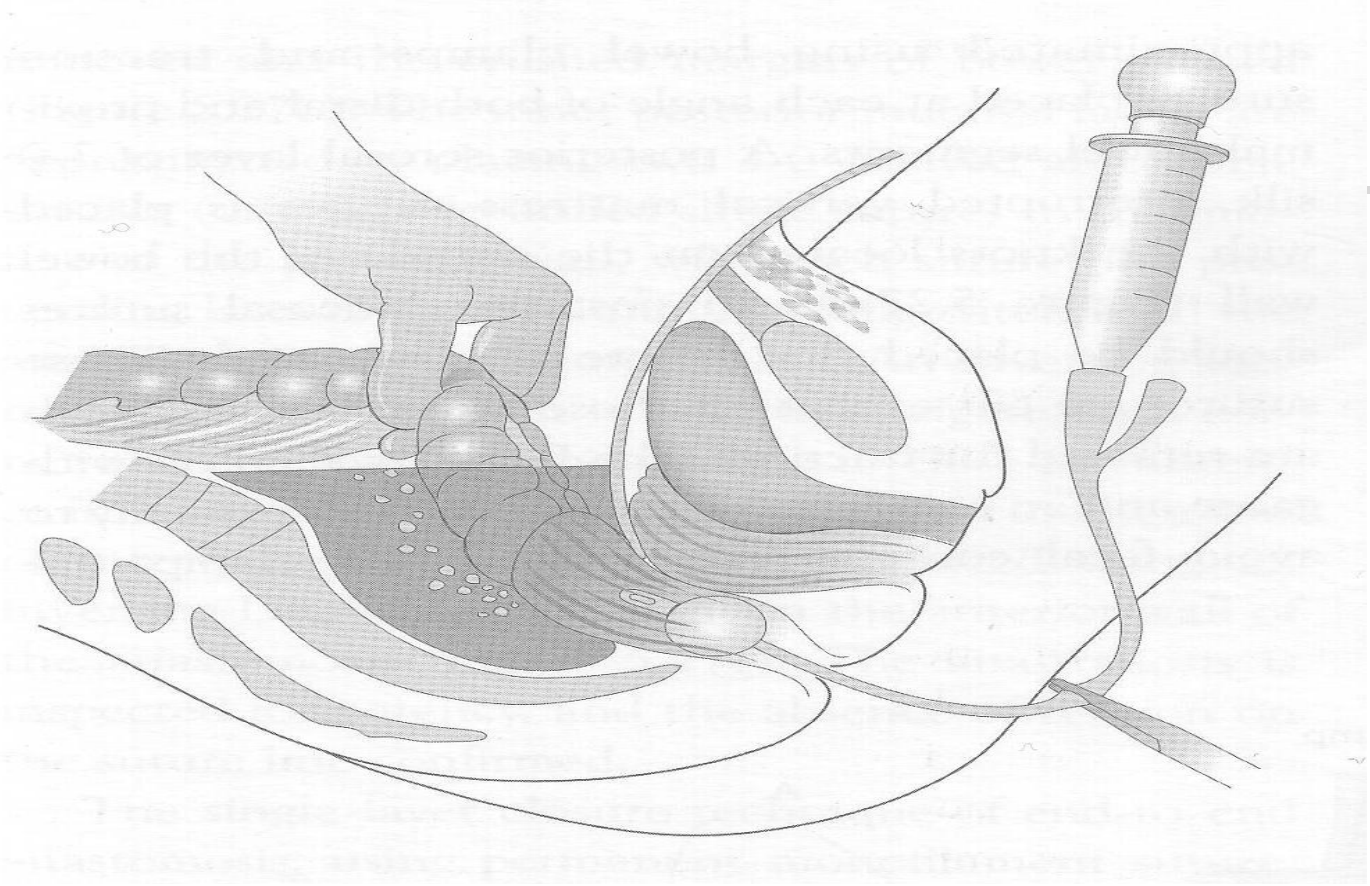
In case of the event of deep or extensive infiltrating disease, the rectosigmoid can be resected en bloc posteriorly.
The distal rectosigmoid colon is divided using an automated stapling device.

Bristow RE, et al. J Am Coll Surg 197:565-574, 2003



Intestinal continuity is reestablished using a circular end-to-end anastomosis (CEEA) automated stapling device.

Bristow RE, et al. J Am Coll Surg 197:565-574, 2003



The security of the anastomosis:

- Confirm two complete “donuts”
- Air leakage test

Bristow RE, et al. J Am Coll Surg 197:565-574, 2003

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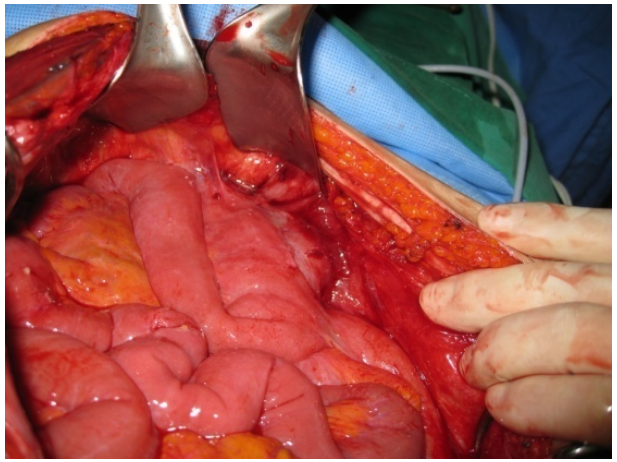
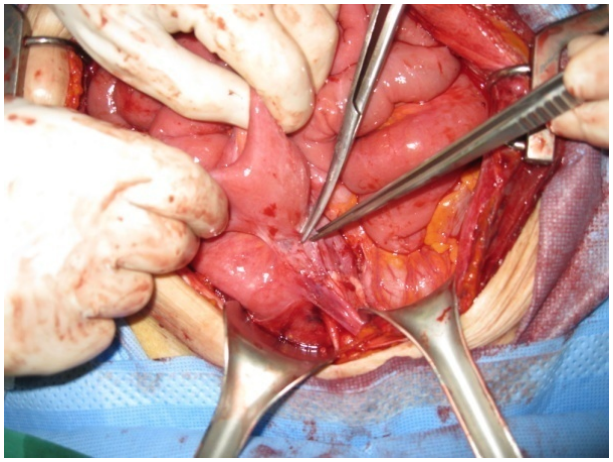
Case presentation

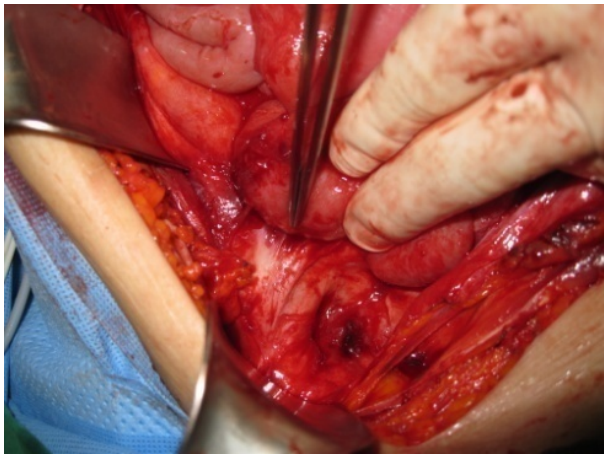
- Kang 00: 65/F
  - 2009. 12. 2: open and biopsy at an university hospital
    - Pathology: SCC moderate differentiated, ovary
  - Transfer to NCC: 2010. 1. 4
  - Op. date: 2010. 1. 13



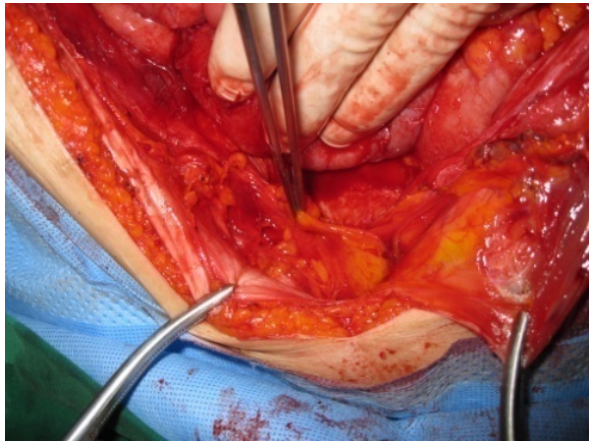
Pelvic cavity obliterated due to mass and adhesion



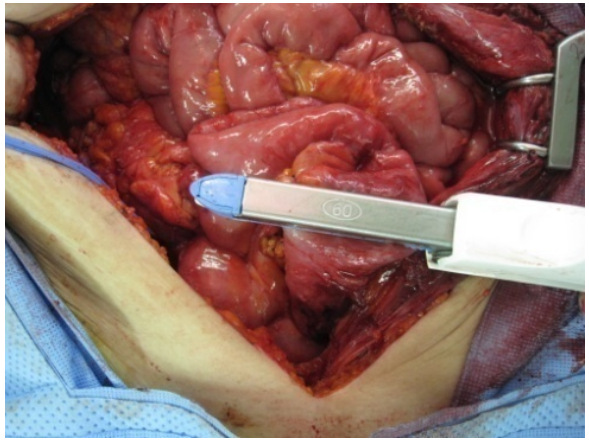
adhesiolysis



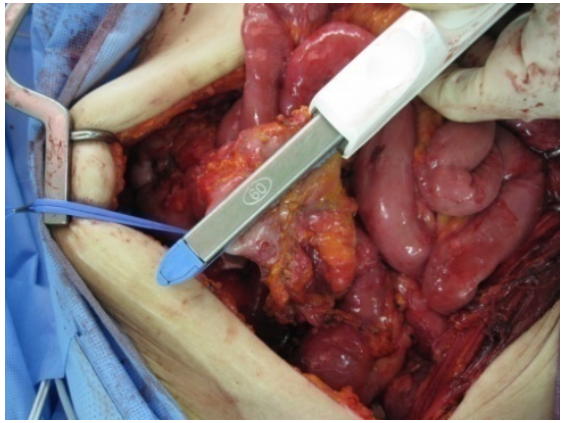
Mobilization of mass at right pelvic side wall



development of Letzius space



division of distal ileum



division of ascending colon

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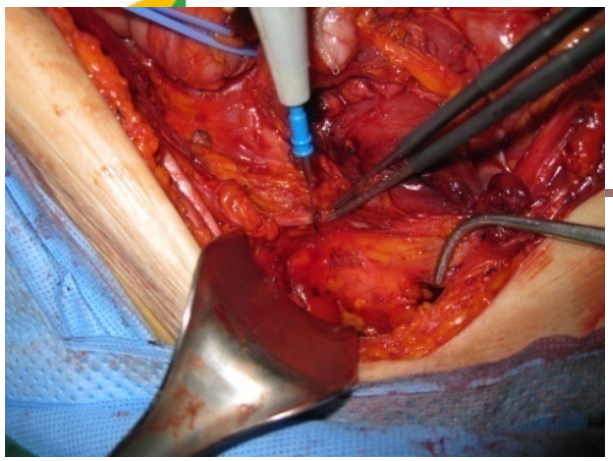
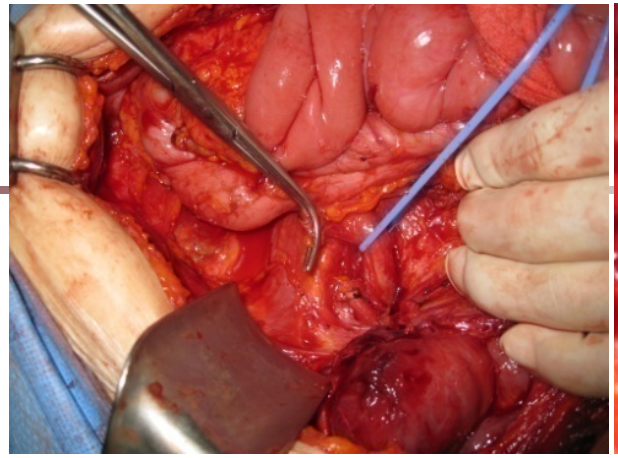
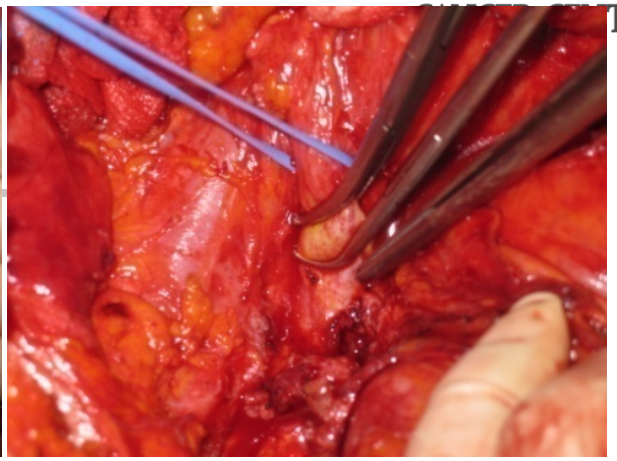


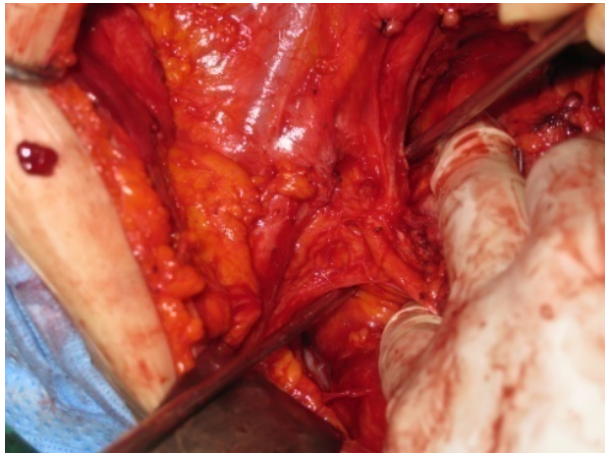
division of round lig.



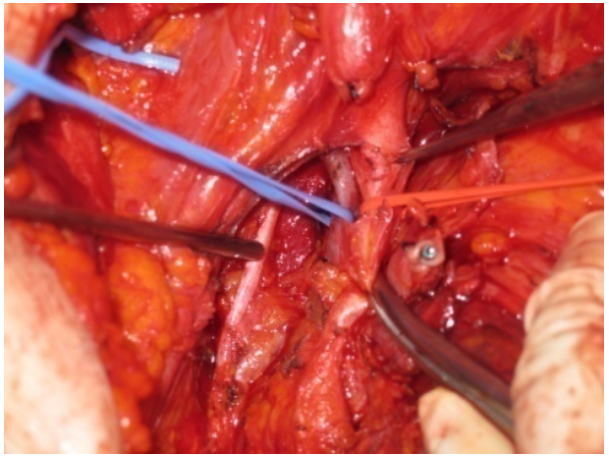
division of IP lig.



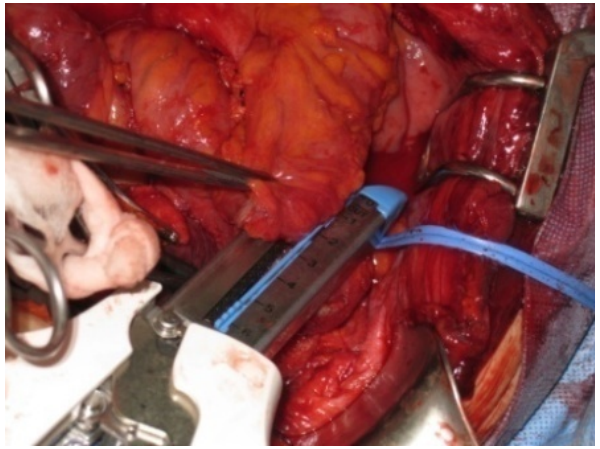
division of ureter



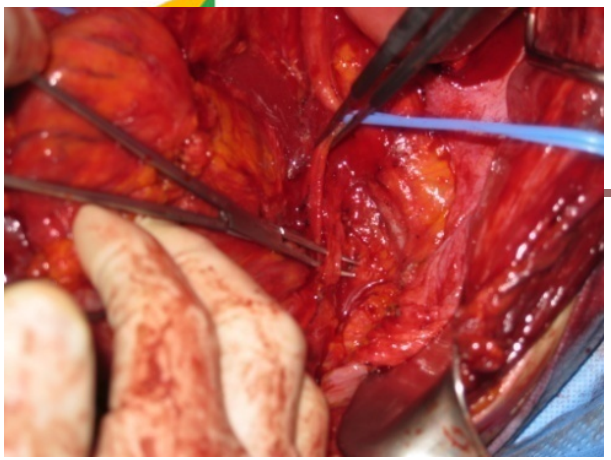
exploration of para-
rectal & vesical space



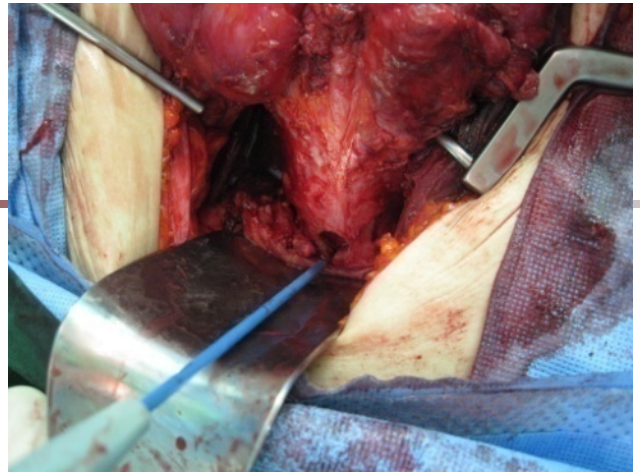
cutting of hypogastric a. & v.



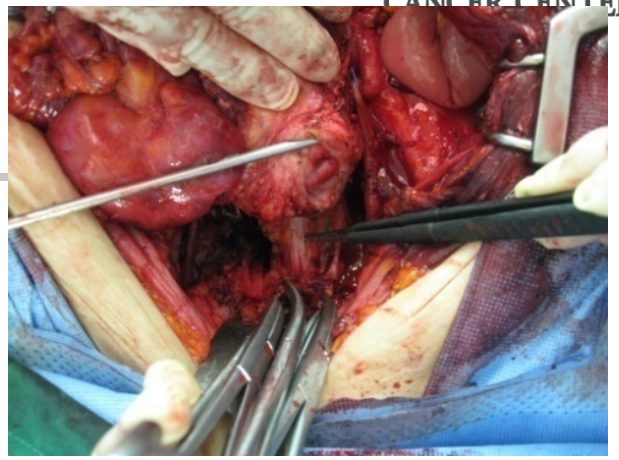
division of sigmoid colon



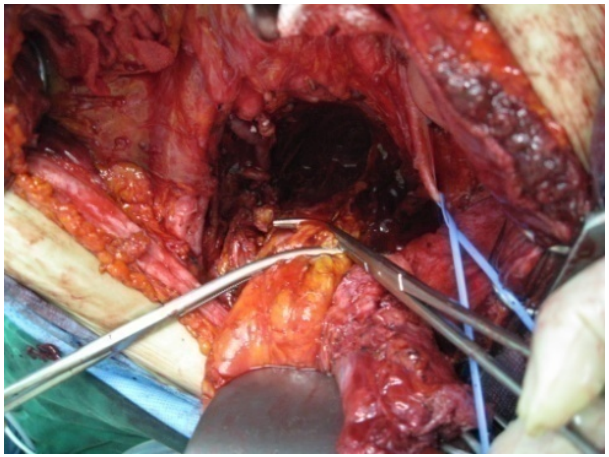
division of left uterine a.



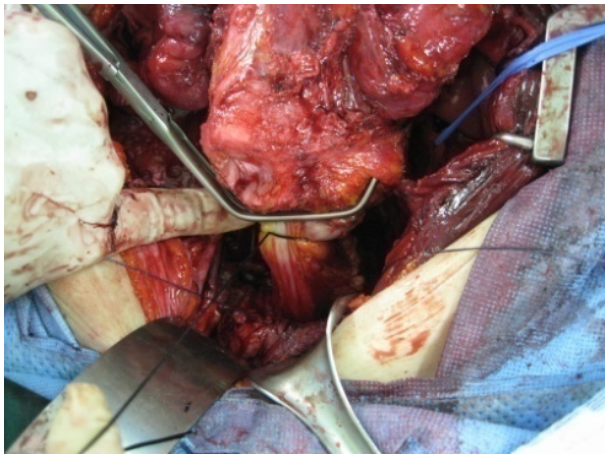
opening ant. vaginal wall



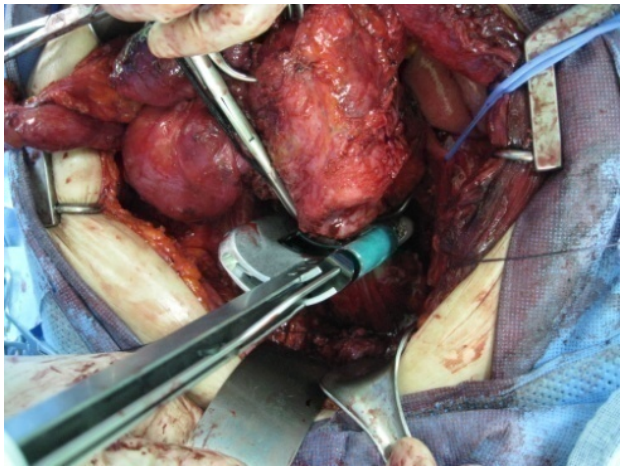
exposure of rectal serosa



division of inf. hemorrhoidal a.

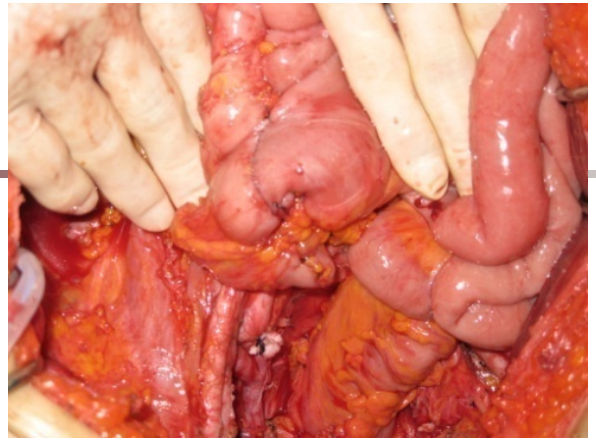


clamping with Satinsky clamp



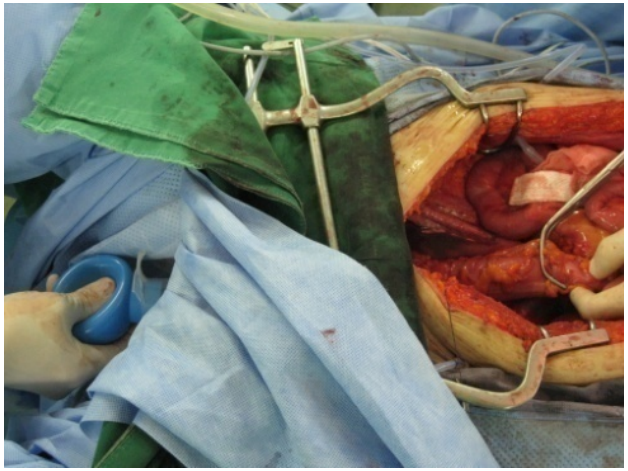
application of CONTOUR™

trans-ureteroureterostomy



ileocecal anatomosis

descending colo-rectal anatomosis



air leakage test

Op. name: Pelvic peritonectomy, modified posterior exenteration, ileocecetomy, LAR and reanatomosis, ureteroureterostomy, TOM
Duration of op.: 10 hrs
Transfusion: 2 pt

2017.1.24

Pelvic peritonectomy with modified PE during cytoreductive surgery in patients with ovarian cancer patients

- Duration: 2001. 4 – 2005. 5 (4 yr 1mo)
- No. of patients: 60 (primary 46, 2nd 14)
- Results:
  - no macroscopic: 43.5%, <0.5mm: 89.2%
  - Complications: 1 leakage, 1 fistula

Summary

- LAR in primary and recurrent ovarian cancer permitted a high rate of complete debulking and survival with acceptable rates of morbidity and mortality.
- We conclude that gynecology cancer surgeons should be trained in pelvic peritonectomy with modified PE.

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The benefits of low anterior en bloc resection as part of cytoreductive surgery for advanced primary and recurrent epithelial ovarian cancer patients outweigh morbidity concerns

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LAR during pelvic exenteration for gynaecological malignancy

- Duration: 2001. 4 – 2006. 12 (5 yr 8 mo)
- Patients:
  - Consecutive 162 patients
    - Excluding 17 patients
      - total colectomy: 9
      - Hartmann's procedure: 6
      - Infralevator-type PE: 2
    - The remaining 145 patients
      - Ovary, PPC, tubal cancer: 122
      - Em: 11
      - Cx ca: 12
        - Without prophylatic ileostomy: 122
        - With prophylatic ileostomy: 23
- Leakage result
  - 3 patients (2.1%)

Conclusion

- Although patients with gynaecological malignancy carry considerable risks associated with anastomotic leakage, carefully executed LAR anastomosis during pelvic exenteration was found to be safe.

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Original article

Outcomes of colorectal anastomoses during pelvic exenteration for gynaecological malignancy

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Background: Although pelvic exenteration is frequently indicated during surgery for gynaecological malignancy, performing a colorectal anastomosis remains contentious because of concern about leakage. This study evaluated the safety of performing a low colorectal anastomosis during pelvic exenteration for gynaecological malignancy.

Methods: Between April 2001 and December 2006, 145 consecutive patients underwent low colorectal anastomosis without (122) or with (23) a stoma after pelvic exenteration for advanced primary or recurrent gynaecological malignancy. Subjects were assessed in terms of five patient-, four disease- and two surgery-related variables. The proportion of patients with each risk factor for leakage was found, and the rate of symptomatic anastomotic leakage was determined.

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Totoal colectomy during cytoreductive surgery in patients with epithelial ovarian cancer patients

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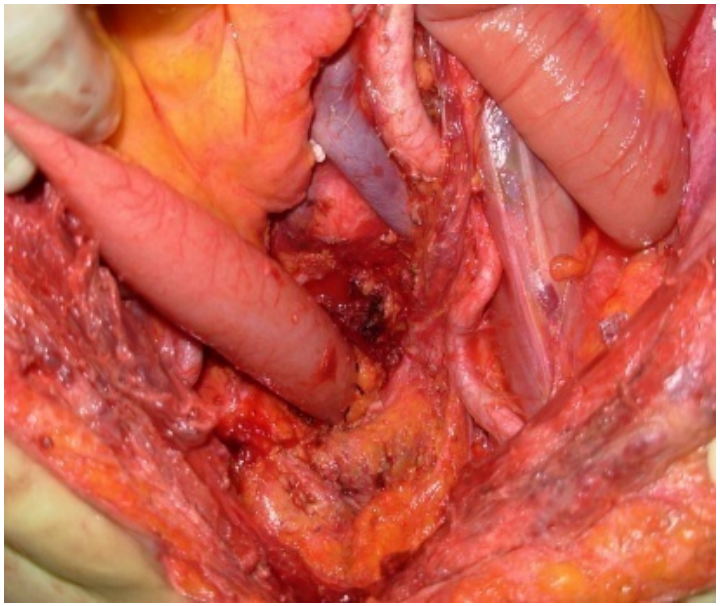
- Duration: 2003. 1 - 2007. 12 (4yr 11 mo)
- Patients:
  - Total colectomy: 22
    - Ileorectal anatomosis; 21
      - Prophylactic ileostomy: 2
    - Permanent ileostomy: 1



- Fistula: 0
  - Restoration of previous bowel function; 12mo (6-20mo)
  - Overall satisfaction (good/very good); 72.7%

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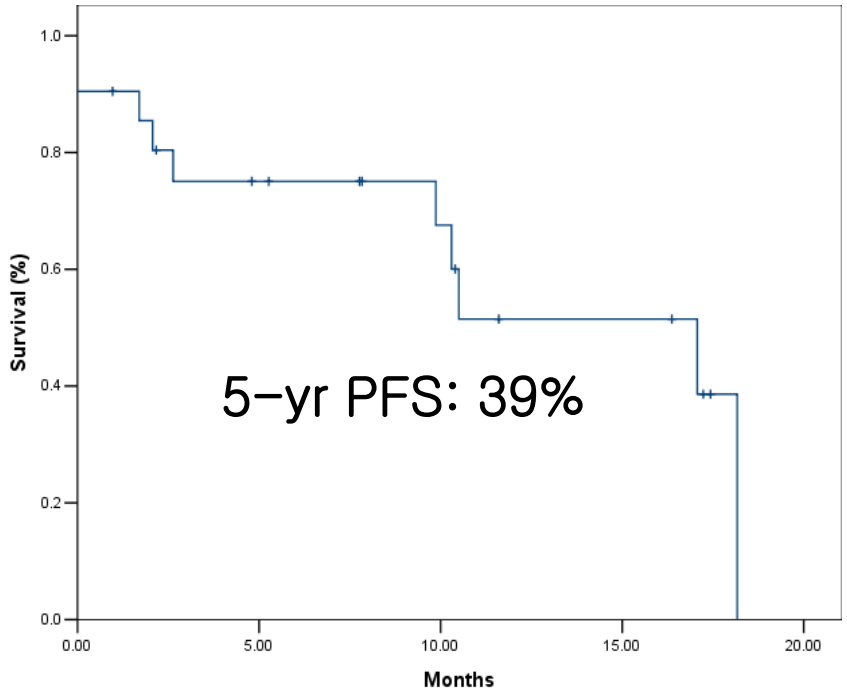
Survival after total colectomy

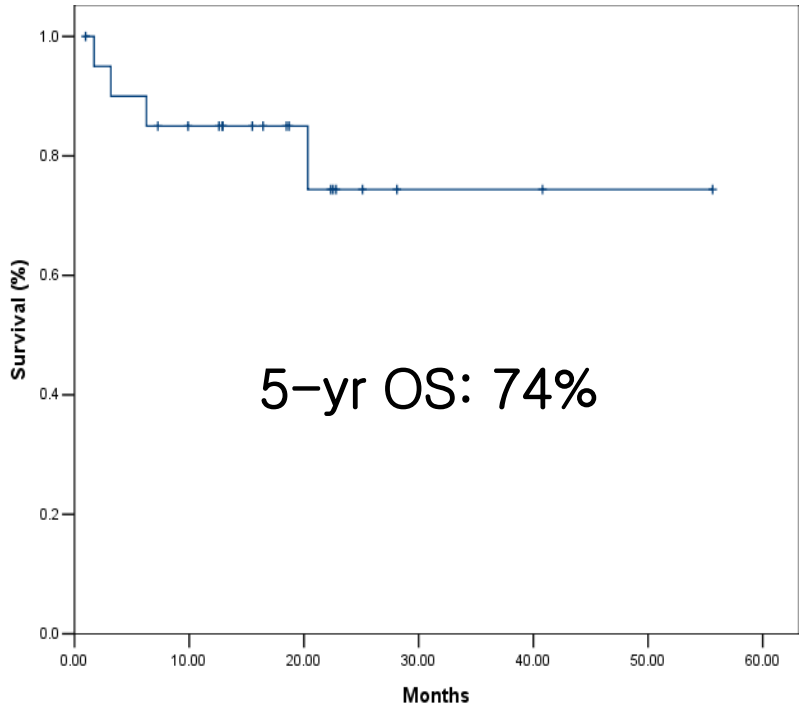
No. of patients: 22

The median follow-up: 16 months (range, 2-56)

Progression free survival



Overall survival



Conclusion

- Total colectomy is a feasible and safe procedure in terms of minimizing residual tumor in most patients with advanced Müllerian cancer with acceptable morbidities.

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Total colectomy as part of primary cytoreductive surgery in advanced Müllerian cancer

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ABSTRACT

Objective. To investigate morbidities and surgical outcomes of total colectomy conducted during primary cytoreductive surgery in advanced Müllerian cancer.

Methods. The authors reviewed the medical records of 22 patients with stage IIIC or IV advanced Müllerian cancer that underwent total colectomy at the National Cancer Center Korea between January 2003 and December 2007.

Results. Total colectomy was performed in 22 patients, of whom 2 (9.1%) underwent prophylactic ileostomy and 1 (4.5%) permanent ileostomy. Optimal cytoreduction (residual tumor <1 cm) was possible in 20 patients (90.9%). Median times at passage of flatus and initiation of tolerable diet were days 4 (2–10) and 6 (4–18) postoperatively, respectively. Nine postoperative morbidities, not directly related to ileo-rectal anatomosis, occurred in 7 patients (31.8%) and were successfully managed conservatively. No fistula

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Survial data (National Cancer Center Korea)

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- Duration: 2001. 1 – 2015. 12 (15yrs)
- Inclusion criteria:
  - FIGO IIIC, IV
    - Epithelial ovarian, tubal, primary peritoneal cancer
- Exclusion criteria:
  - Primary surgery performed in other hospital except that for biopsy
- Total No. of patients: 571
  - PDS: 300 (53%)
  - IDS: 271 (47%)
- EMR based retrospective study

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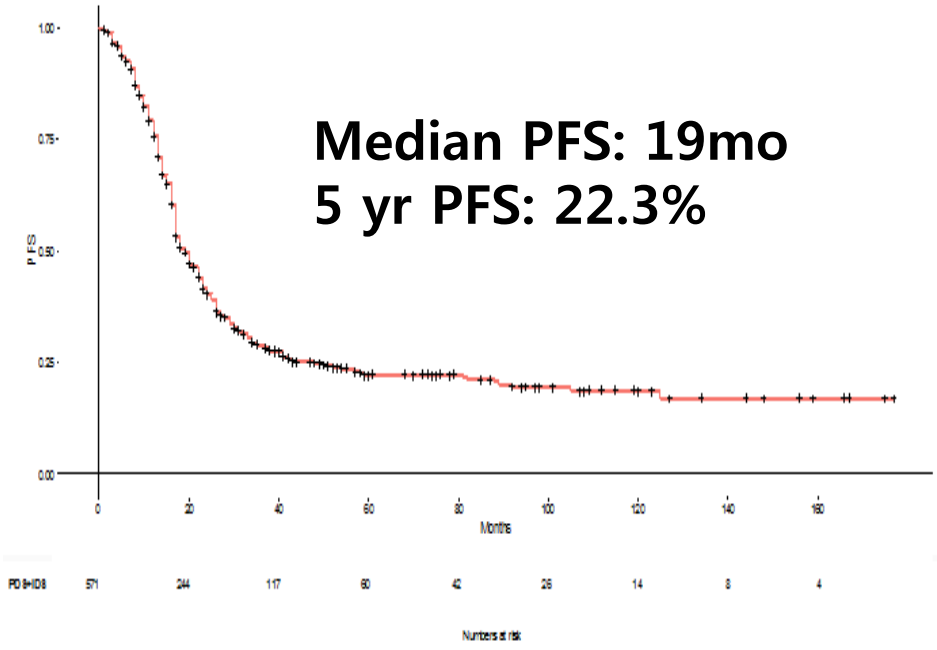
Total survival (PDS + IDS)

PFS



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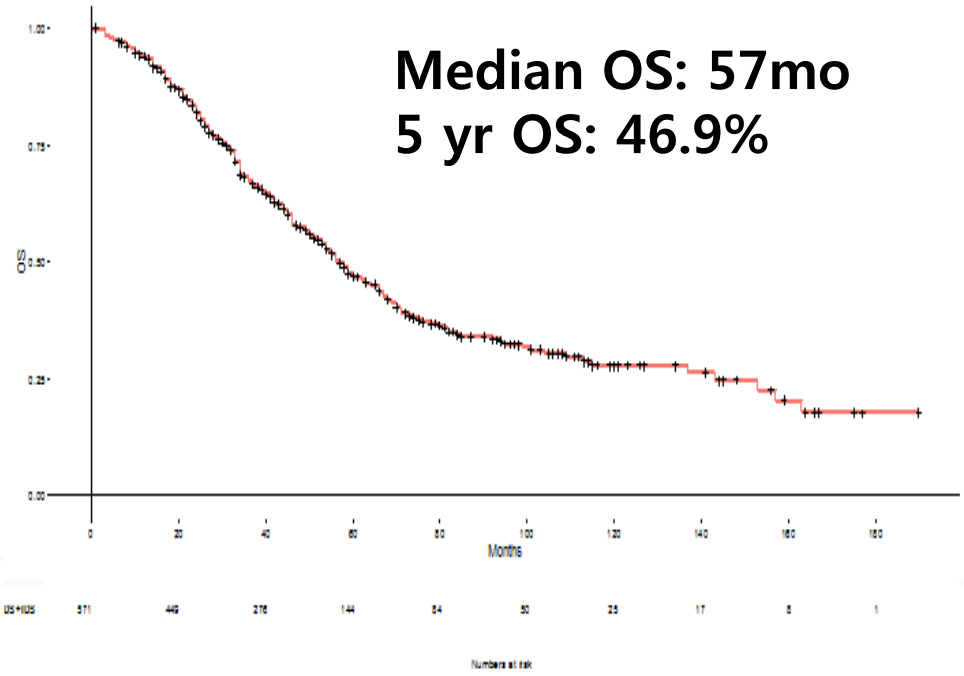

Kaplan-meier analysis

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Original Article

Check for updates

Survival outcomes after extensive cytoreductive surgery and selective neoadjuvant chemotherapy according to institutional criteria in bulky stage IIIC and IV epithelial ovarian cancer

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ABSTRACT

Objective: To investigate the survival outcomes in patients with bulky stage IIIC and IV ovarian cancer, treated by primary debulking surgery (PDS) and selective use of neoadjuvant chemotherapy (NAC) according to institutional criteria.
Methods: Medical records for advanced ovarian cancer patients who were treated at National Cancer Center (NCC) between December 2000 and March 2009 were retrospectively reviewed in the comprehensive cancer center. Bulky stage IIIC and IV ovarian cancer cases were included. Current NCC indication for NAC is determined based on patients' performance status and/or computerized tomography (CT) findings indicating difficult cytoreduction.

Summary

- What is the goal of surgical treatment in advanced ovarian cancer?
  - No macroscopic residual
- What kind of surgery are needed?
  - Visceral and peritoneal peritonectomy including multiple organ resection
- But, postop. complications inturrupting chemotherapy should be avoided.

- In order to perform these jobs
  - Knowledgement of anatomy
  - Acquirement of surgical skill for intraperitoneal oragans
  - Application of up-to-date surgical apparatus
  - Experienses for postop. management

❖ Rapport with patients and her relatives

❖ Institutional support

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❖ Multi-disciplinary approach

- **Intramural**
  - **Fellows, residents, interns**
- **Extramural**
  - **GS (colorectal, hepatic, gastric)**
  - **CS, OS**
  - **Anesthesia**
  - **Nursing staff**

❖ Courage

❖ Endurance

❖ unfailing faith~

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Thoracic surgeons

ENT

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Anesthesiology

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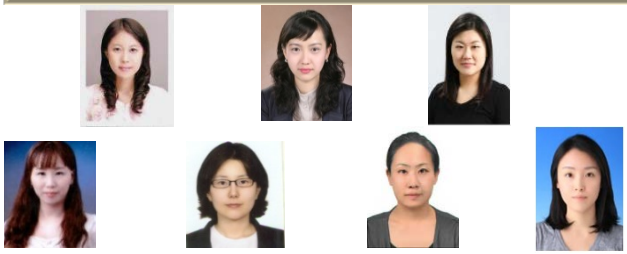

Thank you very much for your attention!