



盆腔肿瘤联合多脏器切除的策略、技术与功能重建

Multivisceral Resection for Pelvic Tumors: Strategies, Surgical Techniques and Functional Reconstruction

골반 종양에 대한 다장기 합병 절제술의 전략, 술기 및 기능 재건

姓名：王剛成

Name: Wang Gangcheng

郑州大学第一附属医院腹盆部肿瘤外科

Department of Abdominal and Pelvic Oncology, The First Affiliated Hospital of Zhengzhou University

정저우대학 제일부속병원 복부골반 종양외과

DECLARATION OF INTERESTS

I have no interests to declare.

Contents

—.

盆腔肿瘤联合多脏器切除的背景

Background of Combined Multiorgan Resection for Pelvic Tumors

—.

盆腔肿瘤联合多脏器切除常用手术入路

Surgical Approaches for Multivisceral Resection of Pelvic Tumors

—.

盆腔肿瘤联合多脏器切除后功能重建

Functional Reconstruction after Multivisceral Resection in Pelvic Tumors



盆腔肿瘤联合多脏器切除的背景

Background of Combined Multiorgan Resection for Pelvic Tumors

골반 종양 다장기 합병 절제술의 배경



盆腔肿瘤联合多脏器切除的背景

Background of Combined Multiorgan Resection for Pelvic Tumors

盆腔局部晚期肿瘤治疗的需要:

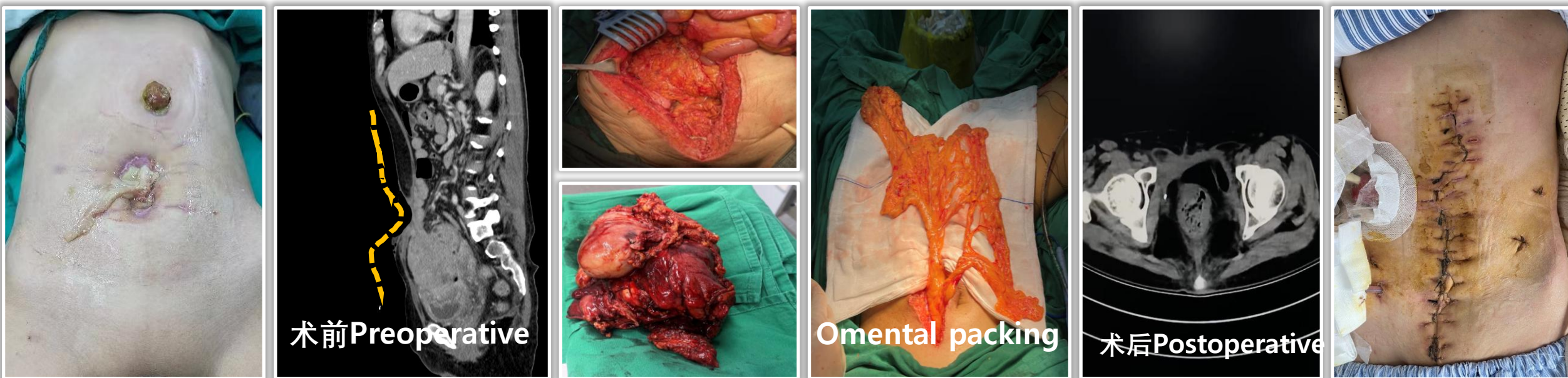
Treatment Needs for Locally Advanced Pelvic Tumors:

- 子宫恶性肿瘤、肉瘤侵犯膀胱、尿道、直肠，甚至骶尾骨
- Malignant uterine tumors and sarcomas invading the bladder, urethra, rectum, and even the sacrum.
- 宫颈癌、卵巢癌侵犯膀胱及直肠
- Cervical and ovarian cancers invading the bladder and rectum
- 膀胱癌侵犯子宫阴道或直肠
- Bladder cancer invading the uterus, vagina, or rectum
- 盆腔巨大肿瘤或骶前肿瘤侵犯膀胱、子宫阴道、直肠等
- Large pelvic tumors or presacral tumors invading the bladder, uterus, vagina, rectum, and etc.
- 盆腔肿瘤放射治疗后膀胱阴道瘘或直肠阴道瘘
- Vesicovaginal fistula or rectovaginal fistula following pelvic tumor radi



子宫癌肉瘤侵犯膀胱、直肠、腹壁，伴膀胱腹壁瘘、阴道直肠瘘

Uterine carcinosarcoma invading the bladder, rectum and abdominal wall, complicated by vesicoabdominal fistula and rectovaginal fistula.



切除全子宫、膀胱、阴道、腹壁，直肠切除吻合（Dixon），带蒂大网膜填塞盆腔

Total hysterectomy, cystectomy, vaginectomy and abdominal wall resection were performed; rectal resection and anastomosis (Dixon) followed by pelvic packing with pedicled omentum.

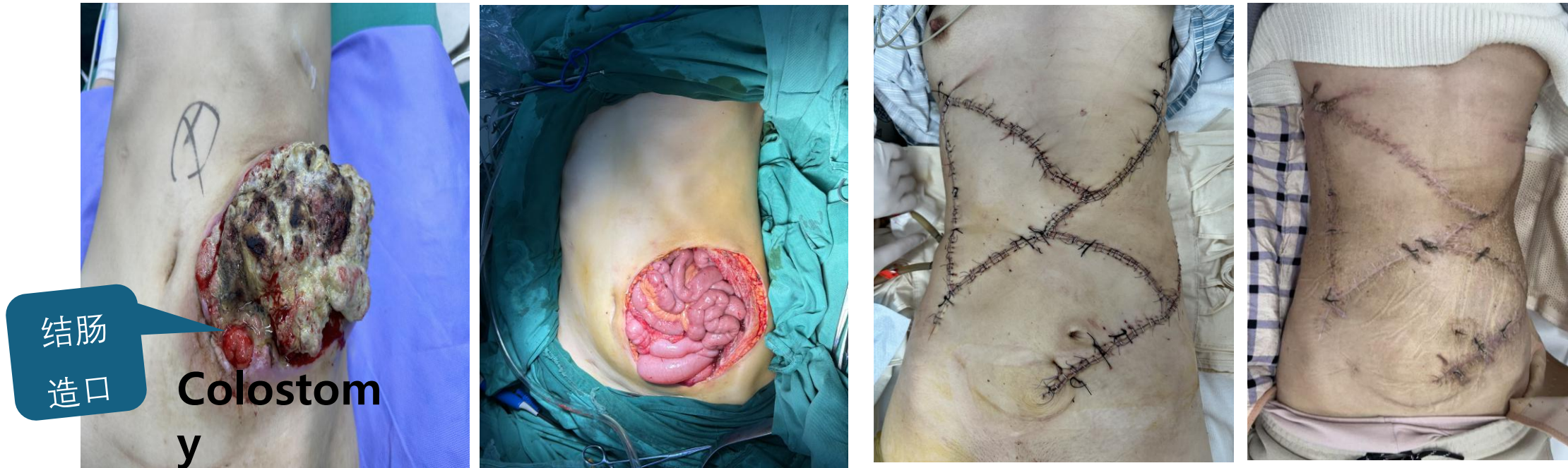
6

术后已随访39个月余，Postoperative follow-up has been completed for over 39 months.



直肠癌术后复发侵犯腹壁、结肠，无远处转移

Recurrent rectal cancer invading the abdominal wall and colon, without distant metastasis

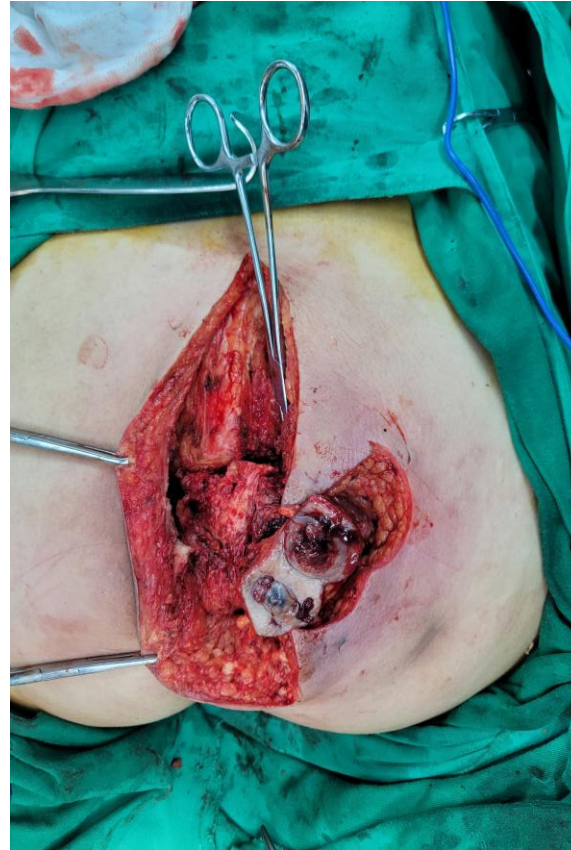


术后已随访12个月余

Postoperative follow-up completed over 12 months

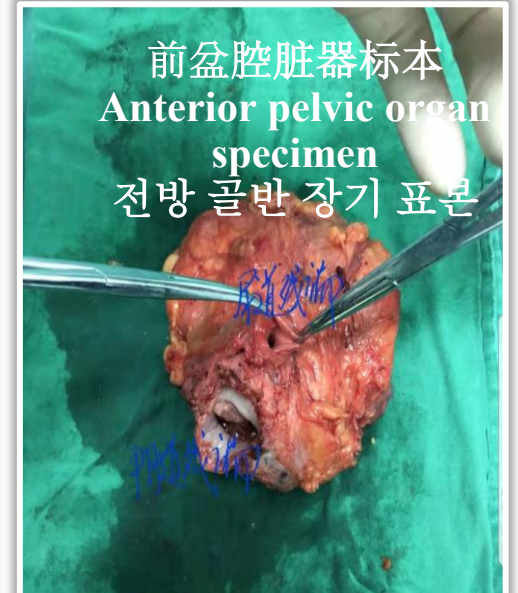
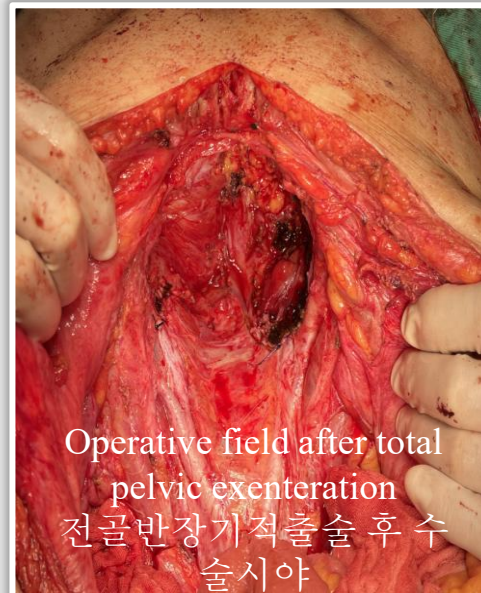
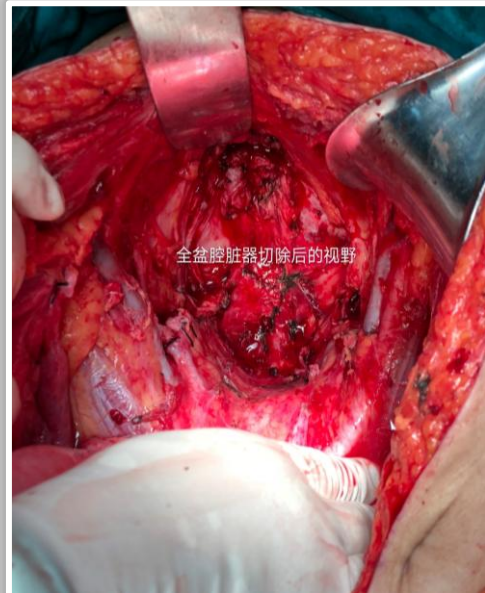
骶前肿瘤侵犯阴道、直肠、臀大肌、骶骨

Presacral tumor invading the vagina, rectum, gluteus maximus and sacrum



宫颈癌术后放化疗后局部中心型复发行全盆腔脏器切除

Total pelvic exenteration for centrally recurrent cervical cancer after postoperative chemoradiotherapy



联合脏器切除，彻底去除“**责任病灶**”，实现R0切除

Combined visceral resection for radical removal of the responsible lesion, Achieve R0 resection

盆腔肿瘤联合多脏器切除的背景

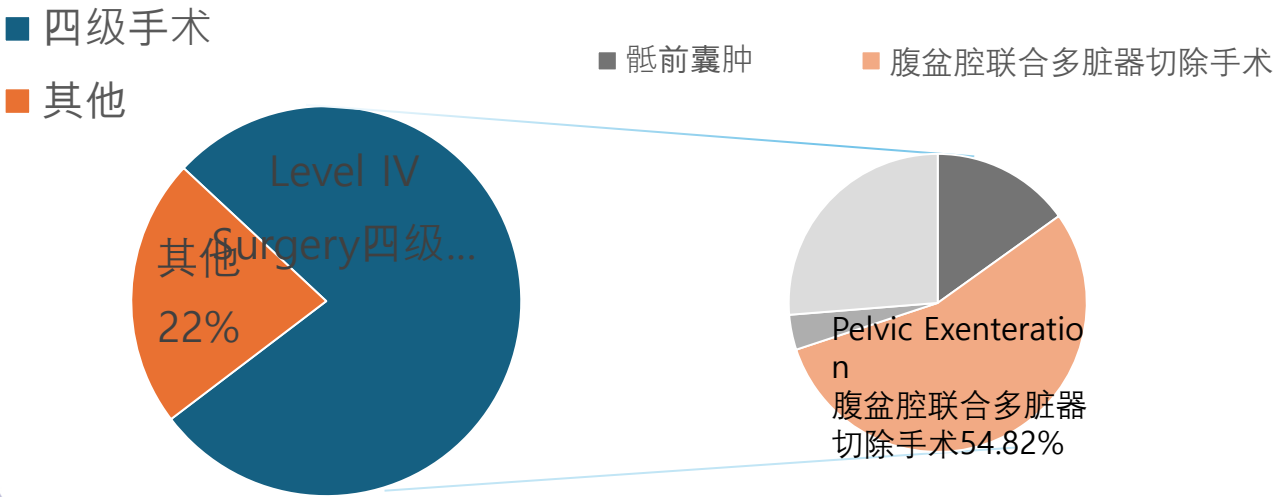
Background of Combined Multiorgan Resection for Pelvic Tumors

自2025年1月1日至2025年12月31日，科室共完成1014台手术。四级手术共完成788台，占比78%。腹盆腔联合多脏器切除手术共完成432台，占四级手术54.82%。

From January 1, 2025 to December 31, 2025, a total of 1,014 operations were performed in the department.

Among them, 788 were Grade IV operations, accounting for 78%.

A total of 432 abdominopelvic combined multivisceral resection procedures were completed, accounting for 54.82% of all Grade IV operations.



四级手术名称 Level IV Surgery Name	计数 Count	占比 Percentage
骶前囊肿 Sacral cyst	119	15.10%
腹盆腔联合多脏器切除手术 Pelvic Exenteration	432	54.82%
放化疗后瘻 Post-chemoradiotherapy fistula	30	3.81%
其他 Other	207	26.27%
合计 Total	788	



盆腔肿瘤联合多脏器切除常用手术入路

Surgical Approaches for Multivisceral Resection of Pelvic Tumors

골반 종양 다장기 합병 절제술의 주요 수술 접근법

盆腔肿瘤联合多脏器切除的主要操作技巧 Key Operative Techniques for Multivisceral Resection of Pelvic Tumors

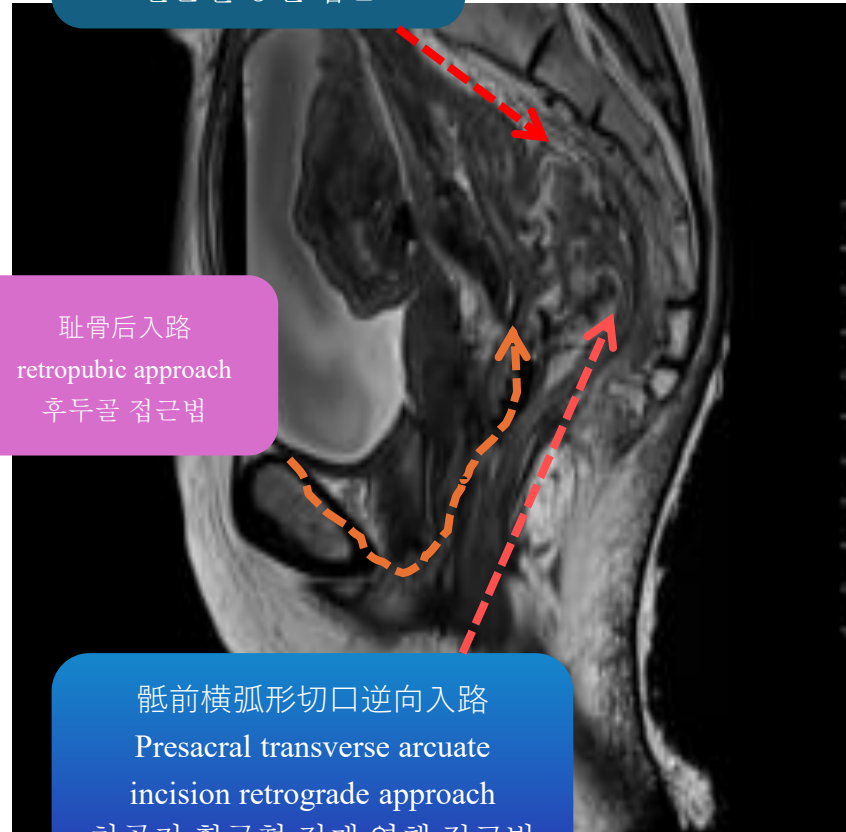
- 先检查小肠的长度及质量
- First assess the length and quality of the small intestine.
- 触摸两侧髂血管的位置, 判断是否受侵犯
- Identify the **bilateral iliac vessels** and assess for tumor invasion.
- 双合诊联合腹部触诊, 判断肿瘤的活动性及与盆壁关系
- Bimanual examination combined with abdominal palpation to assess tumor mobility and its relationship with the pelvic sidewall.
- 查找输尿管的位置 Identify the ureters.
- **盆腔多脏器联合切除的手术入路:** Surgical Approaches for Pelvic Multivisceral Resection

盆腔肿瘤多脏器联合切除的手术入路 Surgical Approaches for Multivisceral Resection of Pelvic Tumors

- 通过疏松间隙入路
- Approach through loose gap
- 느슨한 틈을 통해 접근

- 骶前间隙入路
- 髂外血管下方入路
- 耻骨后入路
- 膀胱入路
- 骶前横弧形切口入路
- 会阴侧方入路
- Presacral space approach
- Inferior external iliac vessel approach
- Retropubic approach
- Bladder approach
- Presacral transverse arc incision approach
- Lateral perineal approach

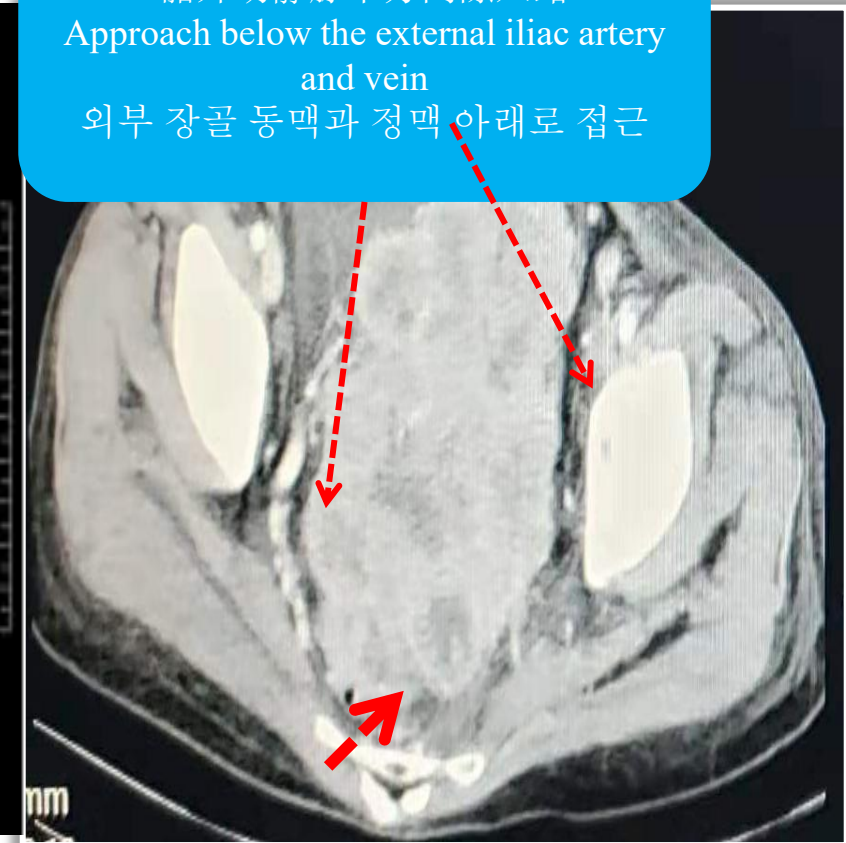
骶前间隙入路
Presacral space approach
천골전 공간 접근



耻骨后入路
retropubic approach
후두골 접근법

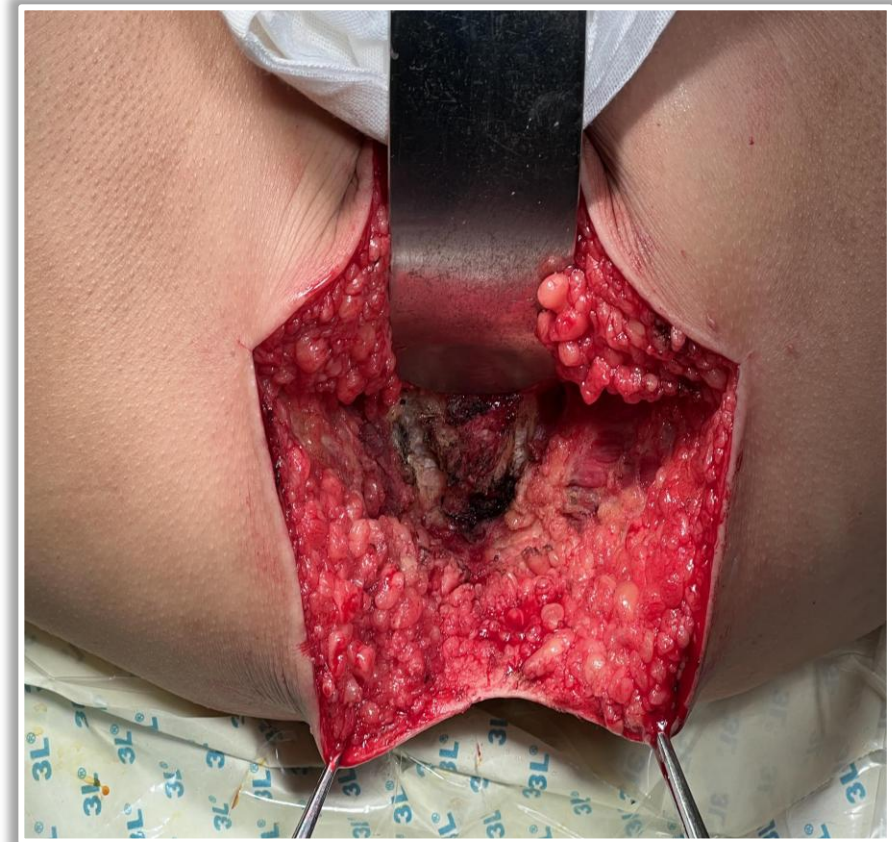
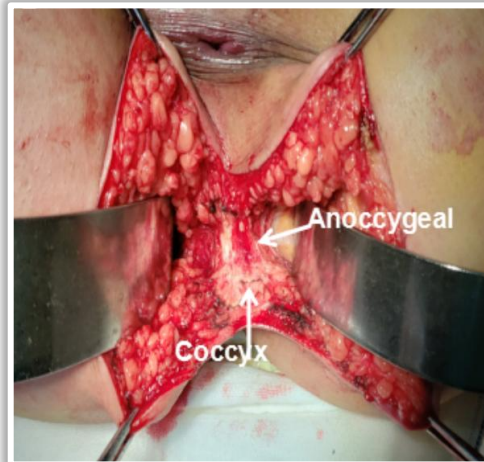
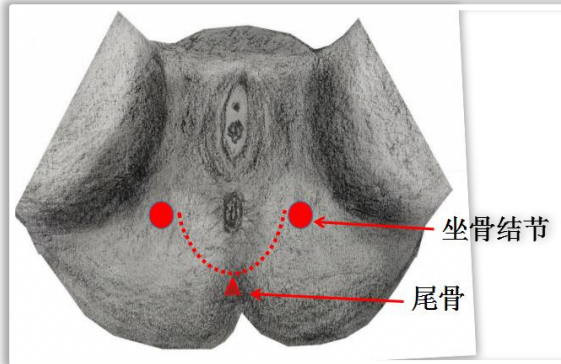
骶前横弧形切口逆向入路
Presacral transverse arcuate
incision retrograde approach
천골전 횡궁형 절개 역행 접근법

髂外动静脉下方间隙入路
Approach below the external iliac artery
and vein
외부 장골 동맥과 정맥 아래로 접근



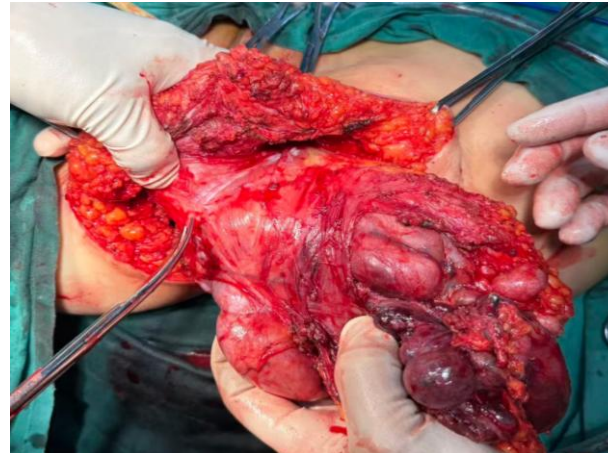


- 骶前横弧形切口入路 (Wang's切口), 以我的姓氏命名
- Presacral transverse arcuate incision approach (Wang's incision)
- 천골전횡궁절개법(왕절개)



这个切口以我的姓氏命名
This incision is named after my surname.

- 骶前横弧形切口入路 (Wang's切口), 切除盆腔、骶前巨大肿瘤
- Presacral transverse arcuate incision approach (Wang's incision)



Resection of a huge pelvic and presacral tumor



- 骶前横弧形切口入路 (Wang's切口), 切除复杂的骶前囊肿
- Transverse Curvilinear Presacral Incision Approach (Wang's Incision) for Resection of Complex Presacral Cysts

截石位骶前横弧形切口入路 骶前囊肿切除术

Resection of presacral cyst via transverse arcuate presacral incision in the lithotomy position

王刚成

Wang Gangcheng

郑州大学第一附属医院

The First Affiliated Hospital of Zhengzhou University

腹盆部肿瘤外科

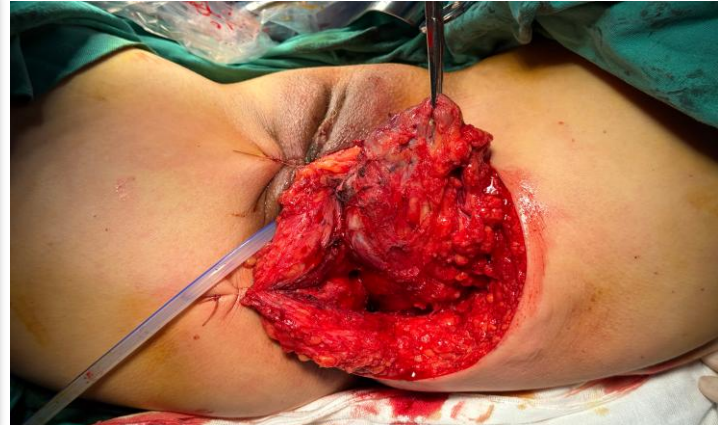
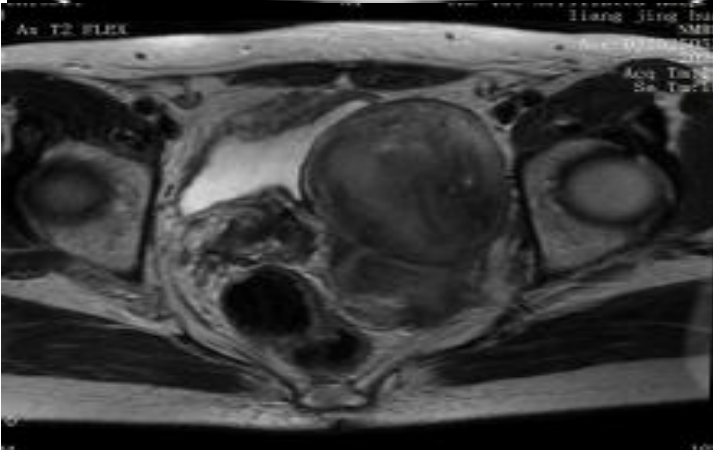
Department of Abdominal and Pelvic Oncology Surgery

16





- 会阴侧方切口入路 (Wang's切口I型)
- Lateral perineal approach (Wang's incision type I)
- 측면 회음부 접근법(Wang 절개 유형 I)

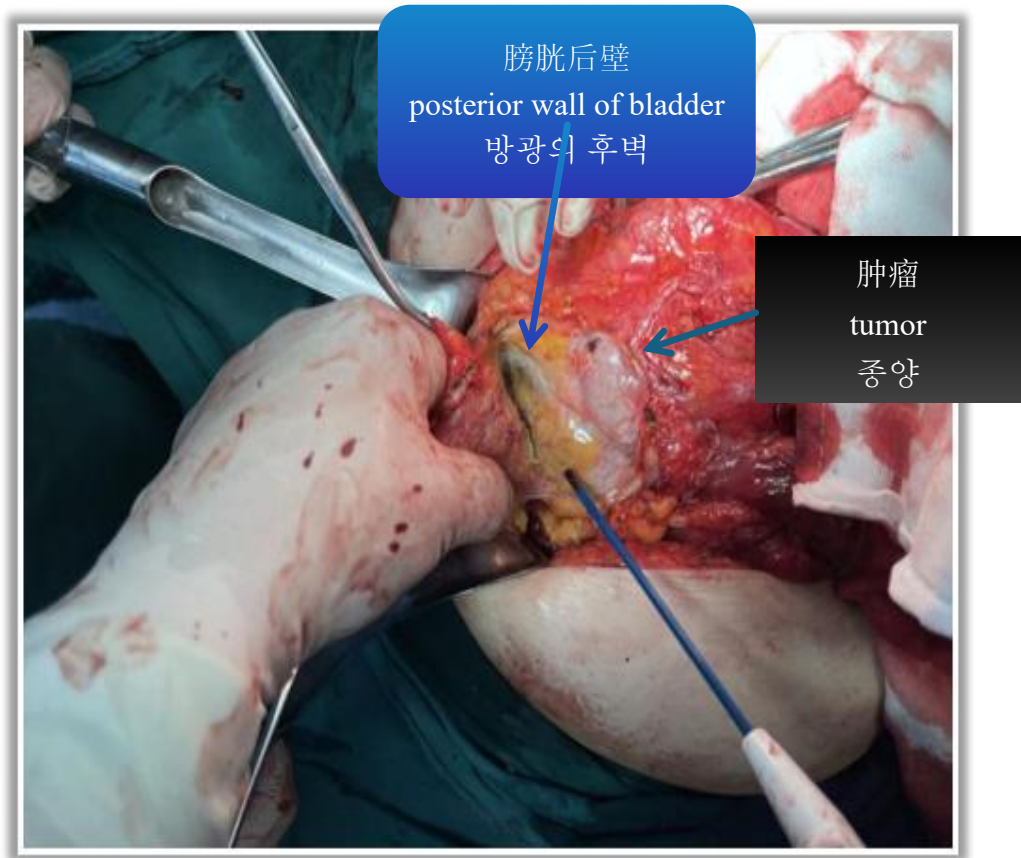
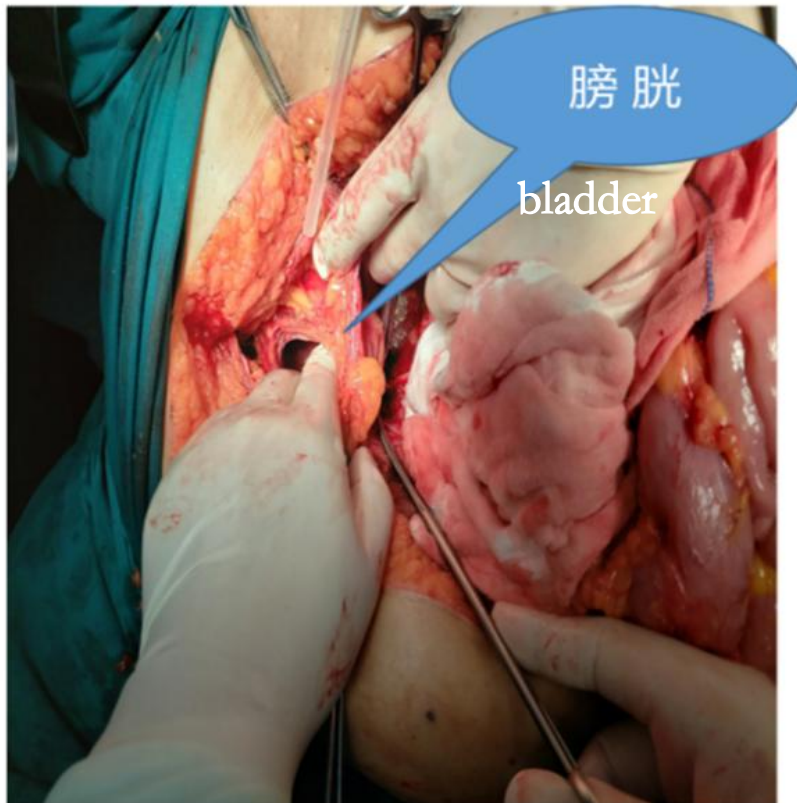




- 会阴侧方切口入路 (Wang's切口I型) , 切除盆腔巨大侵袭性血管粘液瘤
- Lateral Perineal Incision Approach (Wang's Incision Type I) for Resection of Giant Pelvic Aggressive Angiomyxoma (AAM)
- 측면 회음부 접근법(Wang 절개 유형 I)

术前影像 preoperative imaging

- 经膀胱内入路：打开膀胱前壁，在手的指引下分离膀胱后壁与肿瘤粘连
- Transvesical approach: open the front wall of the bladder and separate the posterior wall of the bladder from the tumor adhesion under the guidance of the hand.
- 경방광 접근법: 방광의 앞벽을 열고 손의 안내에 따라 방광의 뒷벽을 종양 유착으로부터 분리합니다.



- 经膀胱内入路：打开膀胱前壁，在手的指引下分离膀胱后壁与肿瘤粘连
- Transvesical approach: open the front wall of the bladder and separate the posterior wall of the bladder from the tumor adhesion under the guidance of the hand.
- 경방광 접근법: 방광의 앞벽을 열고 손의 안내에 따라 방광의 뒷벽을 종양 유착으로부터 분리합니다.

经膀胱内入路 Transvesical Approach

王刚成

Wang Gangcheng

郑州大学第一附属医院

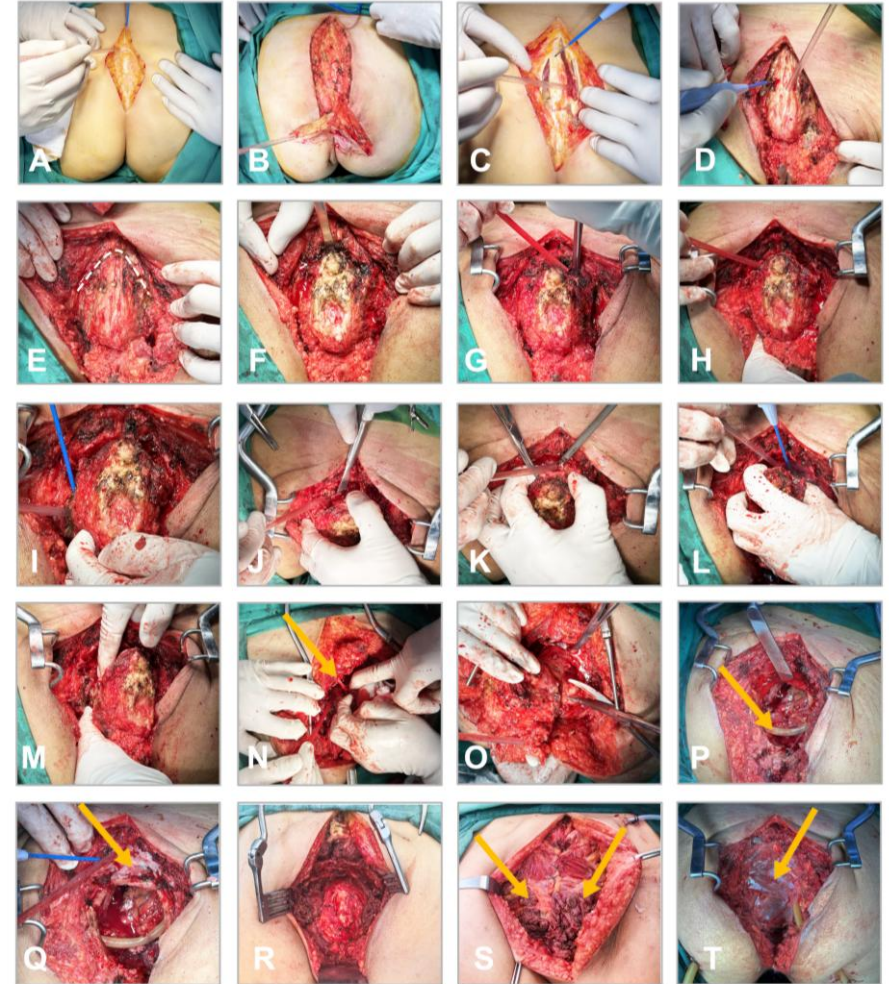
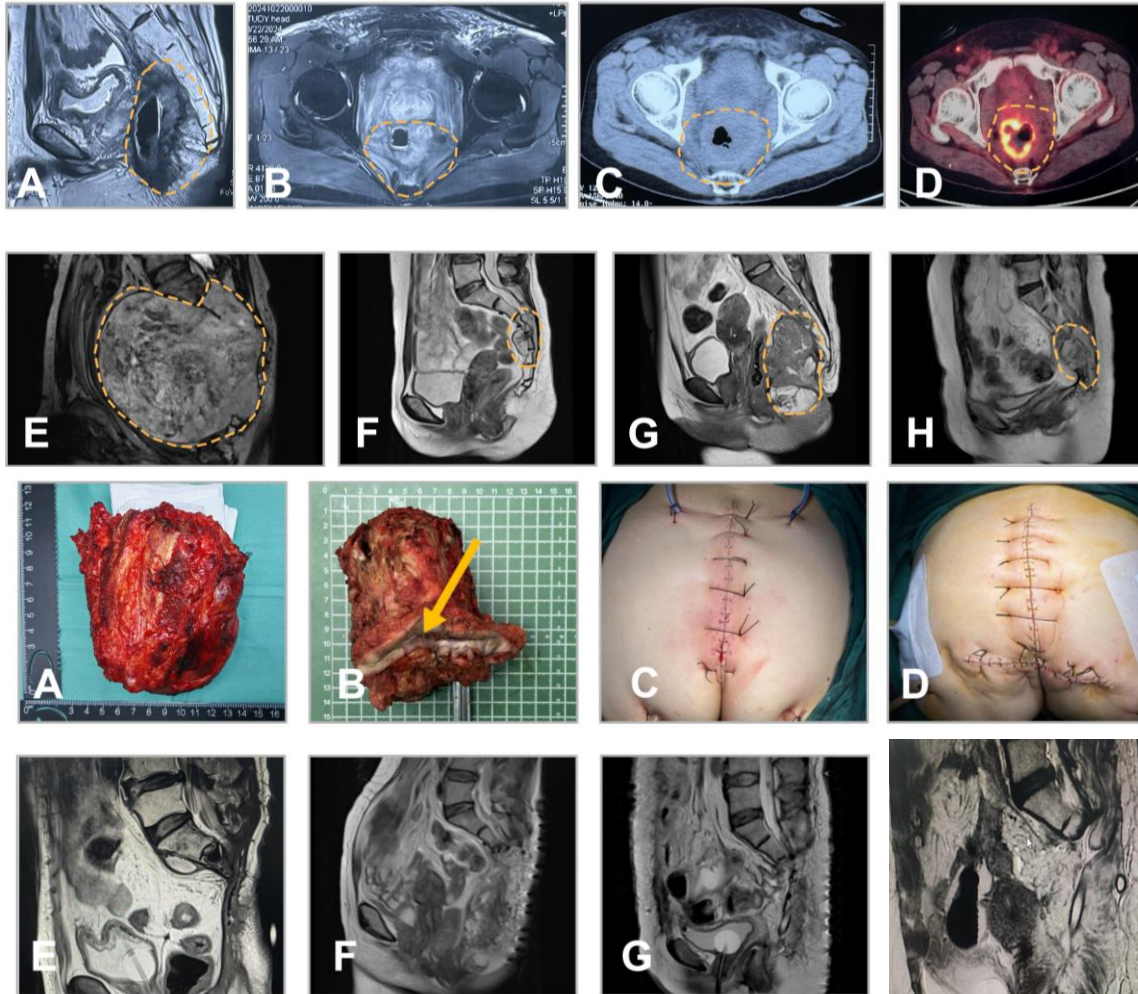
The First Affiliated Hospital of Zhengzhou University

腹盆部肿瘤外科

Department of Abdominal and Pelvic Oncology Surgery

20

- 肿瘤局部侵犯骶骨—连同部分骶骨切除
- Local tumor invasion of the sacrum—along with partial **sacrum resection**
- 천골 부분 절제와 함께 천골의 국소 종양 침범을 평가하기 위한 수술 전 방사선 사진 검토



- 肿瘤局部侵犯骶骨—连同部分骶骨切除
- Local tumor invasion of the sacrum—along with partial **sacrum resection**
- 천골 부분 절제와 함께 천골의 국소 종양 침범을 평가하기 위한 수술 전 방사선 사진 검토

**How to swiftly, safely, and effectively
excise the sacrum (S2 and below)
affected by tumor invasion?**

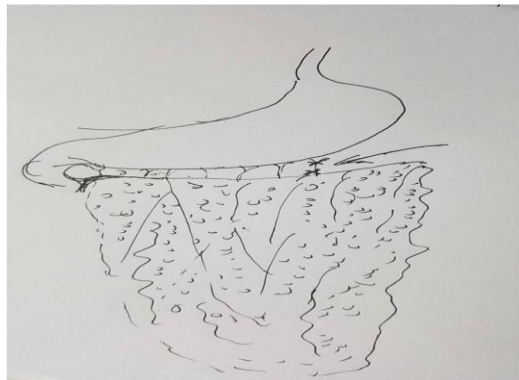


盆腔肿瘤联合多脏器切除后的盆腔功能重建

Function reconstruction after Multivisceral Resection for Pelvic Tumors

골반 종양에 대한 다장기 합병 절제술 이후의 기능 재구성

- 盆底功能重建修复—带蒂大网膜填塞盆底
- Pelvic floor function reconstruction and repair—pedicled omentum filling of the pelvic floor
- 골반저 기능 재건 및 복구 -- 골반저의 유경 장막 충전

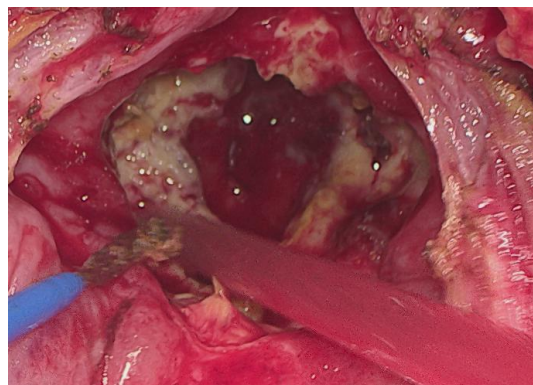


游离带蒂大网膜

Mobilization of the pedicled greater omentum

王刚成
Wang Gangcheng
郑州大学第一附属医院
The First Affiliated Hospital of Zhengzhou University
腹盆部肿瘤外科
Department of Abdominal and Pelvic Oncology Surgery

- 盆底功能重建修复—腹直肌肌瓣修补宫颈癌放疗后膀胱阴道瘘（无肿瘤复发）
- Rectus Abdominis Muscle Flap Repair for Vesicovaginal Fistula Following Radiotherapy in Cervical Cancer (No Tumor Recurrence)



带蒂腹直肌肌瓣行盆底功能重建 并保护膀胱后壁

Pelvic floor functional reconstruction with a pedicled rectus abdominis muscle flap and protection of the posterior bladder wall

王刚成

Wang Gangcheng

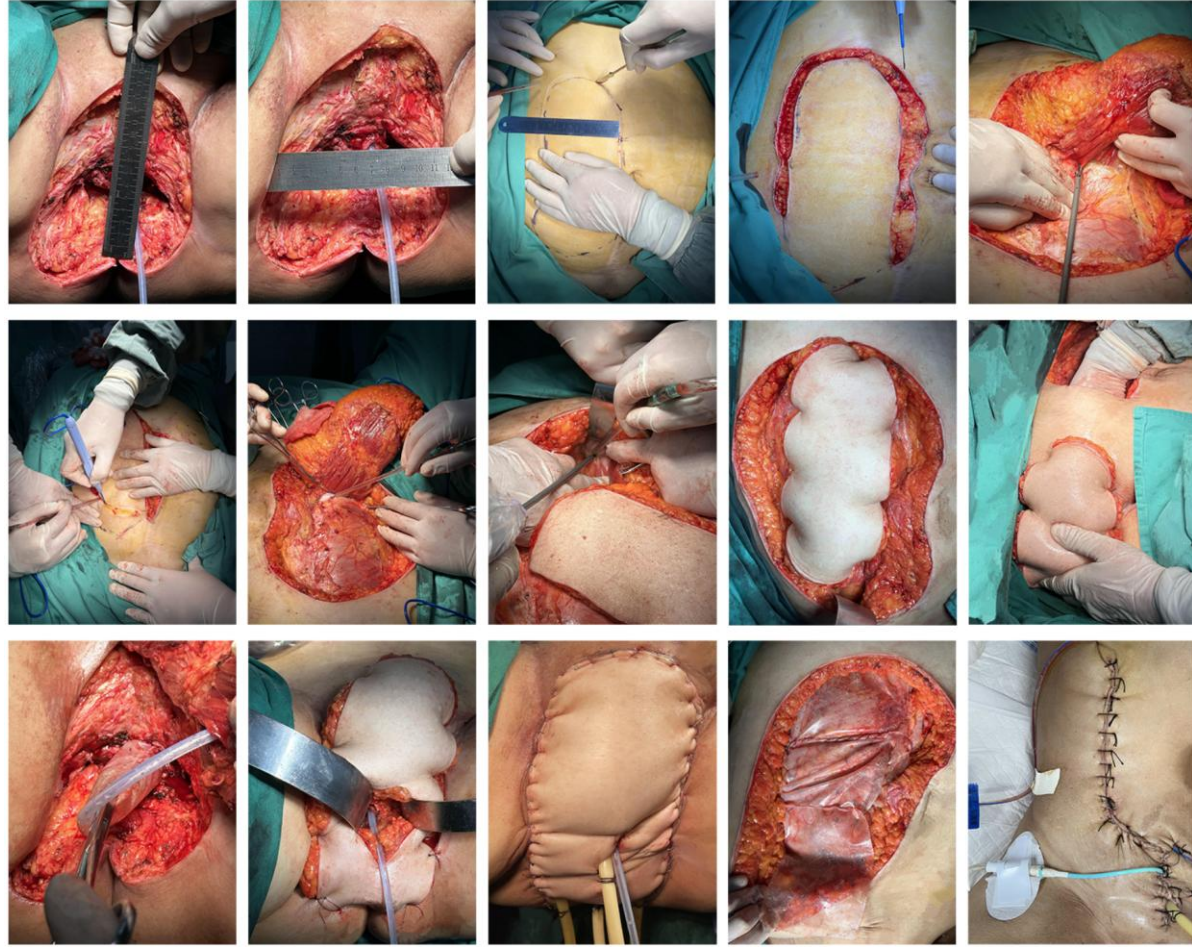
郑州大学第一附属医院

The First Affiliated Hospital of Zhengzhou University

腹盆部肿瘤外科

Department of Abdominal and Pelvic Oncology Surgery

- 放疗后复发性外阴癌扩大切除及腹直肌肌皮瓣功能重建
- Extended Resection and Functional Reconstruction with Rectus Abdominis Myocutaneous Flap for Recurrent Vulvar Carcinoma After Radiotherapy



- 放疗后复发性外阴癌扩大切除及腹直肌肌皮瓣功能重建
- Extended Resection and Functional Reconstruction with Rectus Abdominis Myocutaneous Flap for Recurrent **Vulvar Carcinoma After Radiotherapy**



- 臀大肌肌瓣或臀大肌肌皮瓣用于盆底填塞并功能重建
- **Gluteus Maximus Muscle Flap or Myocutaneous Flap for Pelvic Floor Packing and Functional Reconstruction**



- 臀大肌肌瓣或臀大肌肌皮瓣用于盆底填塞并功能重建
- **Gluteus Maximus Muscle Flap or Myocutaneous Flap for Pelvic Floor Packing and Functional Reconstruction**

左侧带蒂臀大肌肌瓣游离 Mobilize the pedicled gluteus maximus flap on the left side

王刚成

Wang Gangcheng

郑州大学第一附属医院

The First Affiliated Hospital of Zhengzhou University

腹盆部肿瘤外科

Department of Abdominal and Pelvic Oncology Surgery

29



这是我编写的一本书，主要内容为腹盆部肿瘤涉及多专业、多器官疑难手术的理念及技术，及一些盆腔常见顽固并发症的处理

This book, written by myself, focuses on the principles and techniques of challenging multi-disciplinary, multi-organ operations for abdominopelvic tumors, together with management strategies for common intractable pelvic complications.

郑大一附院腹盆部肿瘤外科 王刚成

Wang Gangcheng, Department of Abdominal and Pelvic
Oncology Surgery, First Affiliated Hospital of
Zhengzhou University

Wang Gangcheng, 정저우대학교 제1부속병원 복부 및
골반 종양외과

13937152656@163.com



Thanks



2026년 대한부인종양학회 하계학술대회 제20차 젊은의사 워크숍 제9차 분과전문의 연수강좌 제1차 부인종양간호사 연수강좌 & 카데바 워크숍

일자 2026년 8월 8일(토) - 9일(일)

장소 위례 밀리토피아 마린 호텔 / 가톨릭대학교 응용해부연구소



대한부인종양학회
Korean Society of Gynecologic Oncology