# How to Gross a Female Pelvic Exenteration for Advanced Sigmoid Colon Cancer

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## Background Information:

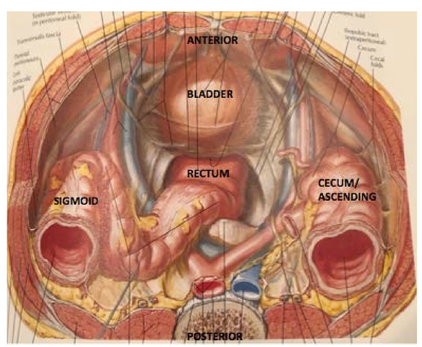
Colorectal cancer is the most common gastrointestinal malignancy and contributes to nearly 10% of all cancer deaths, second only to lung cancer. North America has the highest incidence and disease peaks between 60 to 70 years of age. Colonic adenocarcinomas are distributed along the length of the colon, growing as exophytic masses in the proximal colon and annular, constricting lesions in the distal colon. Colon adenocarcinoma most commonly metastasizes to the liver as a result of portal drainage, but may also metastasize to regional lymph nodes, lungs and bones.

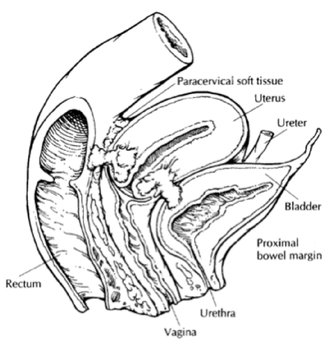
Pelvic exenterations are surgeries performed to treat advanced-stage malignancies that are confined to the pelvis, including cancers of the female reproductive organs (cervix, uterus, ovary, vagina, vulva), cancer that has spread from the colon or rectum to nearby organs, or cancer that has come back in the pelvis after being treated with radiation and/or chemotherapy. These procedures were once performed for palliative purposes, but are now curative. This surgery involves removal of reproductive organs, the bladder or rectum or both, and lymph nodes in the pelvis. An anterior exenteration includes the bladder but not the rectum and a posterior exenteration includes the rectum but not the bladder. A total exenteration includes both the bladder and the rectum.

## Purpose:

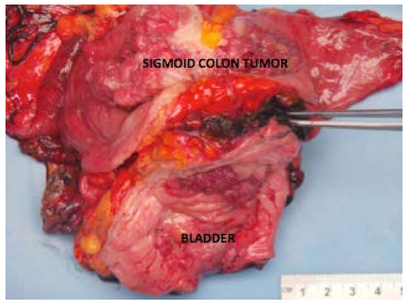
The purpose of this poster is to create a step-wise approach for the gross examination of a female anterior pelvic exenteration. The preparation, gross examination, and section key are displayed to the right.

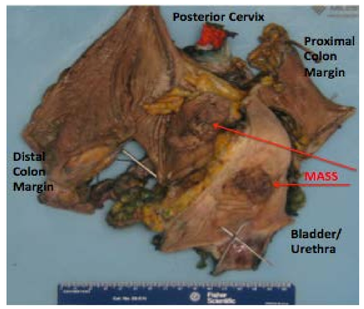
## Illustration of Abdomino-Pelvic Cavity




## Gross Photographs:




## Preparing the Specimen:

1. Identify the components:
   - Colon and/or Rectum, Bladder, Urethra, Ureters, Uterus, Fallopian Tubes, Ovaries
2. Orient the specimen using anatomical landmarks anterior to posterior:
   - Bladder – Anterior
   - Uterus – posterior to bladder
   - Rectum – posterior to uterus
3. Photograph oriented unopened specimen with clean background and ruler for scaling.
Measure each organ separately.
   - **Colorectal segment** (length x diameter)
   - Amount of **peri-colonic fat**
   - **Bladder** dimensions (dome to urethra, laterally, anterior to posterior)
   - **Ureters** (length x diameter of each)
   - **Uterus** dimensions (cornu to cornu, fundus to cervix, anterior to posterior)
   - **Fallopian tubes** (length x diameter, presence/absence of fimbriated ends)
   - **Ovaries** (overall dimensions)
4. Shave **OR** perpendicularly section organ margins, depending on proximity to tumor and place in labeled cassettes with a note designating each cassettes.
   Proximal colon, distal colon, left and right ureters, urethra

5. Ink the specimen according to laboratory protocol.
   - Posterior cervix – orange
   - Anterior bladder – black
   - Right urethra – green, Left urethra – blue
6. Palpate the colon to determine the location of the tumor and open the colon along its length, avoiding cutting through the tumor.

7. Rinse the colon and measure the tumor; make note of tumor distance to each margin and location.

8. Open the bladder along the anterior surface in a Y-shaped fashion beginning from the inferior aspect (urethra) to the left and right anterolateral walls. Measure any grossly identifiable tumor(s).

9. Flip the specimen over and bivalve the uterus laterally up to each cornu so that the anterior half is still attached to the bladder and the posterior half is “hanging.”

10. Pin the specimen out on a cork or Styrofoam board and fix in formalin overnight.
   - Pin the colon along its length where the ends and sides have been opened.
   - Pin the anterior apex flap of the bladder back so it fixes in an open fashion and pin the urethra on each side.

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## Grossing the Specimen:

Next day:
At this point, the specimen has fixed in formalin overnight, the measurements have been written down, and the margins taken and held in their respective cassettes. When grossing the specimen, do so as if each organ were a separate part and then describe the tumor and its relationship to each organ. Refer to the CAP protocols to adequately assess the tumor. If questions arise, do not hesitate to ask another PA or pathologist for assistance.

## Sample Dictation:

***Based on the photographed specimen**

Received fresh labeled “Sigmoid colon, uterus, tubes and ovaries, and bladder” is an en bloc resection of sigmoid colon, bladder with portion of urethra, ureteral stumps, uterus with attached cervix and bilateral fallopian tubes and ovaries measuring [ ] cm overall. The specimen is inked as follows: Radial margin – black, Anterior bladder – black, Right urethra – green, left urethra – blue.

The sigmoid colon is [ ] cm in length with a [ ] cm proximal diameter margin and a [ ] cm distal diameter margin. The [intact/disrupted] serosa is tan-pink and smooth with up to [ ] cm of peri-colonic fat. A [ ] cm [color, configuration] mass is noted [ ] cm from the proximal margin and [ ] cm from the distal margin. The mass extends into the [submucosa/muscularis/serosa/pericolonic fat], [ ] cm from the [radial/soft tissue] margin. The remaining mucosa is tan-pink and coarsely folded with no other mass/lesions identified. The uninvolved wall is [ ] cm thick. A lymph node search reveals [ ] probable lymph nodes ranging from [ ] cm up to [ ] cm.

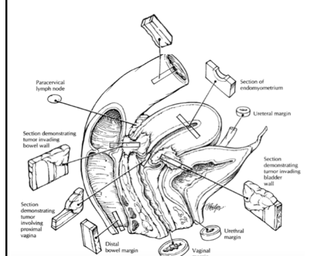
The [intact/disrupted] bladder is [dimensions] cm and covered in [ ] cm of perivesicular fat. There is a [color/configuration/size] mass in the [location], communicating via a fistula with the aforementioned colonic mass containing soft green-grey material, and extending into the [muscularis/serosa/adventitia/perivesicular fat]. The mass is [ ] cm from the right ureteral orifice and [ ] cm from the left ureteral orifice. The remaining mucosa is [ ]. The right ([ ] cm) and left ([ ] cm) ureteral stumps are [probe-patent/stenosed/obstructed] and [grossly unremarkable/grossly involved by tumor]. The mass appears to/does not appear to grossly involve the urethra ([ ] cm). No other mass/lesions or grossly enlarged lymph nodes are identified

The uterus is [ ] cm and has a/an [intact/disrupted] serosa. The attached cervix [ ] cm and distally surrounded by [color/consistency] ectocervical mucosa covering a surface of [ ] cm with a [ ] cm [patent/stenosed] os. The endocervical canal and cervical stroma are [ ]. The triangular endometrial cavity is [ ] cm and lined by [color/consistency] endometrium that is [ ] cm thick. The myometrium is [ ] and [ ] cm thick. The mass does not grossly communicate with the uterus. No discrete mass/lesions are identified.

The right ([ ] cm) and left ([ ]) fallopian tubes are fimbriated and [grossly unremarkable/other description] with a pinpoint lumen. The right ([ ]) and left ([ ]) ovaries are [color/shape/description].

## Sections:

**Colon**:
- Proximal margin
- Distal margin
- Radial margin
- Tumor (representative)
- Tumor with greatest extension
- Regional lymph nodes




**Bladder/Urethra/Ureters:**
- Urethral margin
- Right ureter margin
- Left ureter margin
- Tumor (representative)
- Tumor with greatest extension
- Tumor containing bladder and colon interface
- Right ureteral orifice
- Left ureteral orifice
- Trigone
- Dome
- Right anterior wall
- Left anterior wall
- Right posterior wall
- Left posterior wall
- Right lateral wall
- Left lateral wall
- Perivesicular fat

**Uterus/Fallopian Tubes/Ovaries:**
- Anterior uterine wall to bladder
- Endomyometrium
- Cervix
- Right fallopian tube
- Left fallopian tube
- Right ovary
- Left ovary