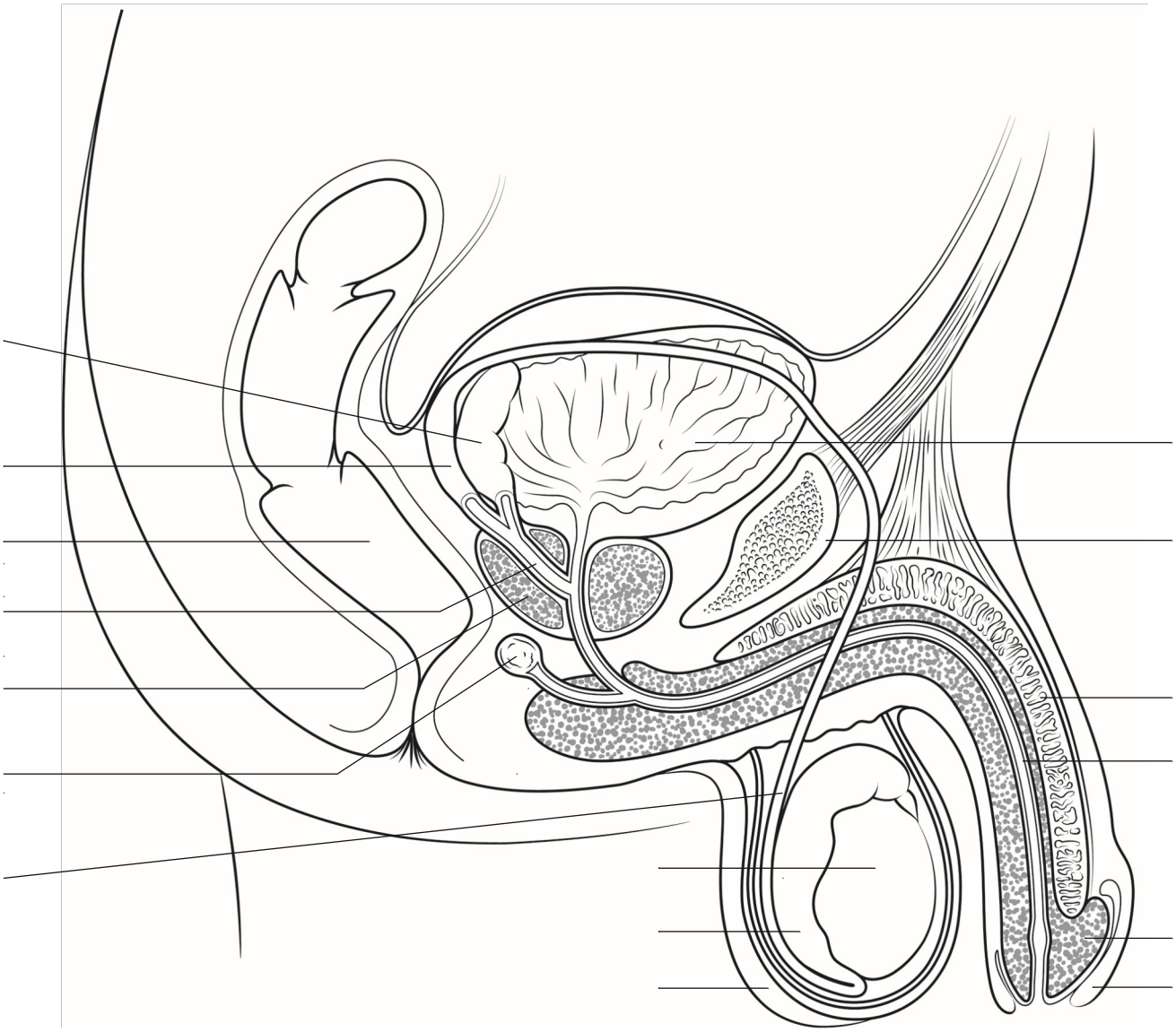
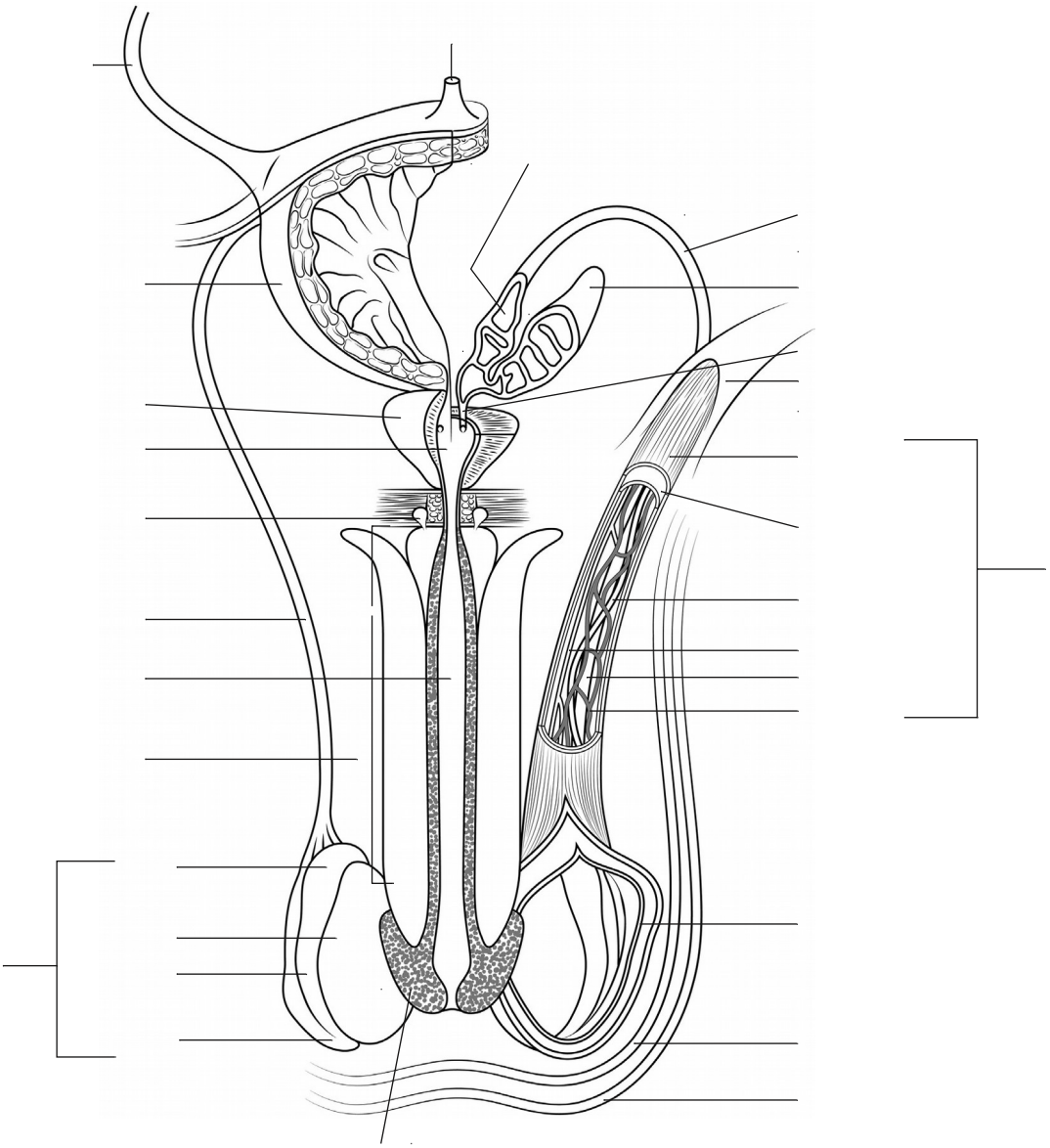
Chapter 1

Male Reproductive System

Anatomy Knowledge Check

Instructions: Enter the names of the anatomical structures shown in the following drawings. Upon completion, check your answers with the figures in chapter 18 of the text.





Qualifier Activity

Instructions: Using the material in chapter 18, identify the appropriate qualifier value for each of these procedure statements:

1. Rerouting the right vas deferens to the opposite side to maintain fertility

2. Move the prepuce to take over the function of missing penile skin

3. Move the prepuce to take over the function of missing urethra

Code Building Exercise

Instructions: Answer the questions following each of the exercises.

Exercise 1: (RESECTION) 0VT00ZZ 0VT30ZZ (EXCISION) 07BC0ZX 07BC0ZX 0VBQ0ZX

PREOPERATIVE DIAGNOSIS: Prostate cancer, stage T3b

POSTOPERATIVE DIAGNOSIS: Prostate cancer, stage T3bN0

PROCEDURES PERFORMED: Radical retropubic prostatectomy and bilateral pelvic lymph node dissection

SPECIMEN: Prostate with seminal vesicles, vas deferens and bilateral pelvic lymph nodes

DESCRIPTION: The patient was brought to the operating room and regional anesthesia was achieved. His lower abdomen and genitalia were prepped and draped in a sterile manner. A lower midline abdominal incision between the umbilicus and the symphysis pubis was then made, dividing the rectus abdominis muscle bellies. Bilateral pelvic lymph node dissections were performed for staging because the status was unknown for disease spread. Thus, these were sent for frozen section. Surgery continued.

The fat and endopelvic fascia was then incised bilaterally at reflections with the lateral pelvic sidewalls. Dissection of the prostate was then performed from the apex to the base of the prostate, preserving neovascular tissue bilaterally. At the base of the prostate, seminal vesicles were dissected free and the proximal vas deferens were clipped and divided. The prostate was divided from the bladder neck circumferentially while avoiding injury to the ureters. The entire specimen was removed intact from the operative field. Hemostasis was achieved and irrigation performed. Frozen section returned with no lymph node involvement.

The bladder neck was then anastomosed to the urethra in a standard tennis-racket-type closure over an 18-French Foley catheter reinserted per urethra. The connection was shown to be watertight. Percutaneous drains were placed bilaterally and secured at the skin level with connection to Hemovac suction. Closure was then performed at the fascial level with a #1 PDS suture and at the skin level with staples. A dry sterile dressing was applied.

Questions:

1.1. What procedures are performed in this operative episode?

Radical retropubic prostatectomy and bilateral pelvic lymph node dissection

1.2. The prostatectomy is described as “radical.” Does this indicate that the seminal vesicles and vas deferens are included in the prostatectomy code?

THIS MEANS IT IS A TOTAL RESECTION

1.3. How many codes are needed for the pelvic lymph node dissection?

Two codes because it is bilateral

1.4. What is the qualifier for these codes?

X for diagnostic

1.5. What code(s) should be assigned?

(RESECTION) 0VT00ZZ 0VT30ZZ (EXCISION) 07BC0ZX 07BC0ZX 0VBQ0ZX

Case Studies

Instructions: Assign ICD-10-PCS codes to the following cases.

Case 1: Operative Report (reposition) 0TSD0ZZ (release) 0VNS0ZZ

NOTE: Do not code the introduction of local anesthesia on this case.

PREOPERATIVE DIAGNOSIS: Glanular hypospadias with chordee

POSTOPERATIVE DIAGNOSIS: Glanular hypospadias with chordee

PROCEDURES: Hypospadias repair and chordee repair

INDICATIONS FOR PROCEDURE: An 8-month-old male who was not able to be circumcised at birth secondary to hypospadias and chordee. He is here today for repair, which was performed without contraindications.

OPERATIVE NOTE: Informed consent was obtained. The patient was brought to the operating room, placed supine on the procedure table, given general anesthetic, and prepped and draped per protocol. A penile block was administered utilizing 7.5 mL of 0.25 percent Marcaine without epinephrine for purposes of achieving postoperative analgesia. A hold suture was placed through the glans penis allowing for dorsal and antral retraction, and then the urethral meatus was exposed with the hypospadias pickups. A tourniquet was applied. The backplate was incised and 7-0 Vicryl suture was used to advance the urethral meatus to the level of the epithelium and the glans to create a normal urethral meatus. The tourniquet was removed. Hemostasis was meticulous.

Attention was then turned to the shaft of the penis, and a degloving incision was then made around the penis with care being taken to preserve adequate room for Firlit collars. All chordee tissue was released. There was a significant amount of ventral chordee, which was taken down with degloving of the penis. The penile skin was then split in the midline, and the skin edges were unfurled. Hemostasis was found to be meticulous and was obtained with Bovie cautery, and then the skin was approximated to the mucosal collar at the 12 o'clock position with a single interrupted 6-0 Monocryl suture. The edges were then trimmed to fit and secured to either aspect of the ventral collar, which was widely split at this point. The minimal redundant skin was excised. The skin edges were then reapproximated on the side around the coronal sulcus with interrupted 6-0 Monocryl suture in simple fashion. Tegaderm was applied. The patient was awakened and transferred to the recovery room in stable condition. At the end of the case, sponge and needle counts were correct and hemostasis was meticulous.

Case 2: Operative Report (RELEASE PENIS) (TWO CODES) (FORESKIN TRANSFER) 0VNS0ZZ0VXTXZS

PREOPERATIVE DIAGNOSIS:	Hidden penis
POSTOPERATIVE DIAGNOSIS:	Same
PROCEDURE:	Buried penis repair and foreskin transfer for coverage

INDICATIONS: The patient was diagnosed with hidden or buried penis with deficient ventral skin, requiring genital skin transfer. Circumcision had been delayed until the time of this procedure. Risks, benefits and complications of the procedure were discussed with the patient's family today. Consent was signed.

PROCEDURE DESCRIPTION: Under general anesthesia, a 5-0 Prolene traction suture was placed in the glans. A circumferential incision was made on the inner foreskin to create a 5 mm coronal collar, and the penis was full

degloved with a ventral incision. There were thick fibrotic bands of dysgenic scar that were tethering the penis into the suprapubic fat pad that we cut down to the level of the penopubic and penoscrotal base and by doing so, we released the penis to full length. This left a ventral area of the penis that needed skin coverage. We fixed the penopubic junction Dartos to the dorsal shaft of the underlying penis with a 5-0 PDS suture placed between the overlying dermis to Buck's fascia in the midline. This suture was performed to prevent retraction of the penis back into the fat pad. We then repeated this suture on the ventral aspect of both sides, fixing the Dartos fascia to the urethral spongiosum.

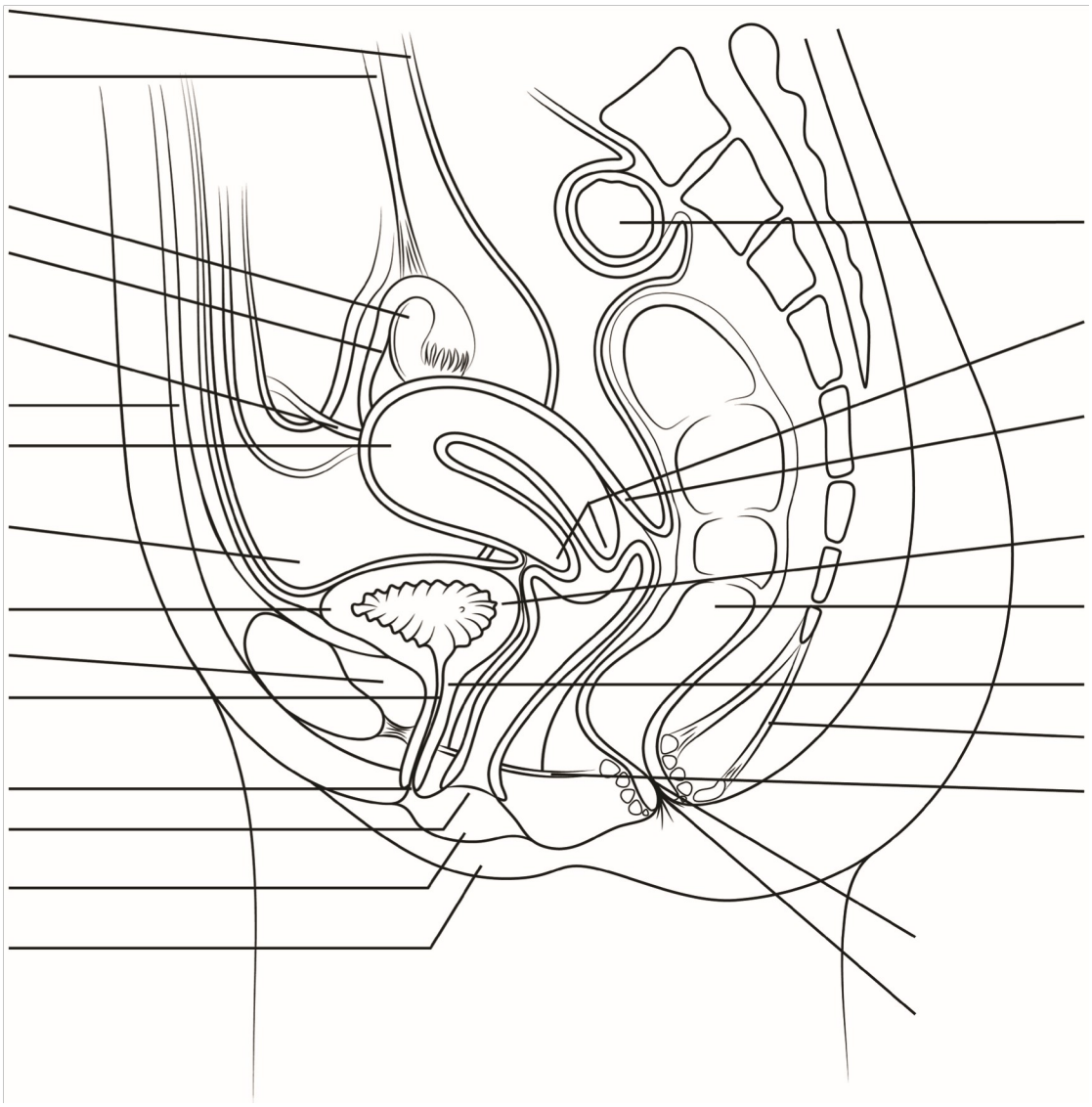
Next, the skin flap was secured from the distal shaft to the coronal collar at the 12 o'clock position. We then demucolized the foreskin flap and discard this remainder of the inner foreskin. We brought the flap around ventrally and secured the skin to the lateral coronal collar. We then created a ventral midline by joining the edges of the flap in the midline. We then closed the midline skin with 5-0 fast absorbing gut interrupted stitches. The penis had normal appearance of traction. We placed Dermabond to the entire suture line after cleaning with sterile saline. He tolerated the procedure well.

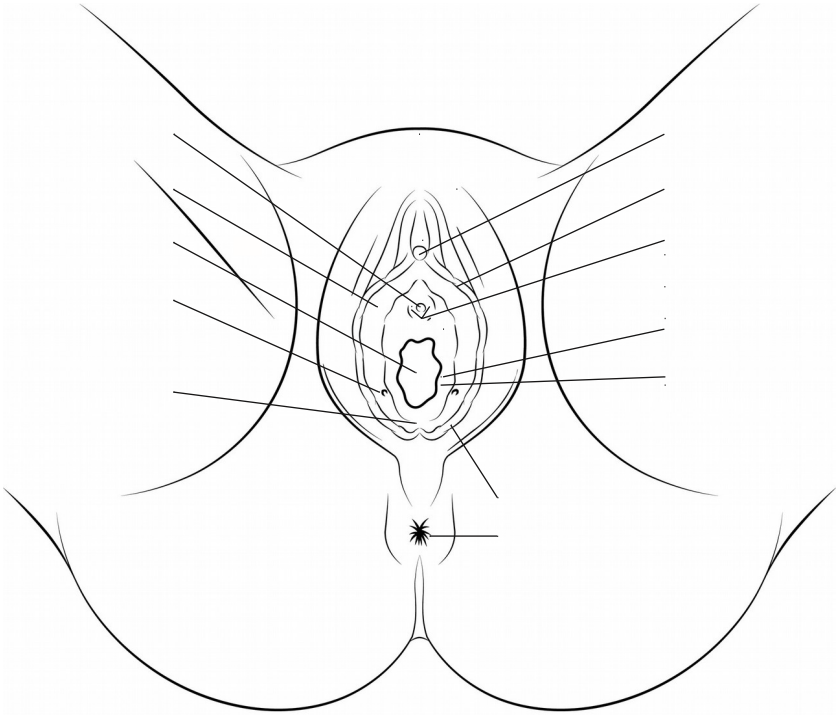
Chapter 1

Female Reproductive System

Anatomy Knowledge Check

Instructions: Enter the names of the anatomical structures shown in the following drawings. Upon completion, check your answers with the figures in chapter 19 of the text.





Qualifier Activity

Instructions: Using the material in chapter 19 and the female reproductive tables, identify the appropriate qualifier value for each of these procedure statements:

1. Resection of the body of the uterus without removing the cervix

2. Bypass the left fallopian tube to the right fallopian tube using a synthetic substitute

3. Move a fallopian tube to a different location on the uterus to maintain fertility

Code Building Exercise

Instructions: Answer the questions following each of the exercises.

Exercise 1: (OCCLUSION BILATERAL) 0UL78DZ

PREOPERATIVE DIAGNOSIS: Multiparity, family complete

POSTOPERATIVE DIAGNOSIS: Multiparity, family complete

PROCEDURE: Hysteroscopic sterilization by Essure

INDICATIONS: The patient is a 39-year-old, G4, P4 who has completed her family planning and desires a permanent form of sterilization. The procedure and details of risks and benefits were explained. All questions were answered and consent was signed.

PROCEDURE DETAILS: The patient was given general anesthesia and prophylactic IV antibiotics. The patient was then placed in the dorsal lithotomy position with the legs supported using stirrups. All pressure points were padded. The patient was then prepped and draped in usual sterile fashion. A straight cath was inserted into the bladder and 100 cc of clear yellow urine was obtained.

A weighted speculum was inserted into the vagina. The anterior lip of the cervix was visualized and grasped using a single-tooth tenaculum. The hysteroscope was then introduced through the cervix using normal saline solution as the distending media. The hysteroscope was advanced into the uterine cavity. The ostia were visualized bilaterally. There were no gross abnormalities noted. Attention was then turned to the left ostium which was cannulated using the Essure device. The Essure device was advanced and deployed per protocol. On deployment, it was noted that coils were protruding from the ostium. Attention was then turned to the right ostium, which in a similar manner was cannulated using the Essure device. It was deployed per protocol. On deployment, there were coils noted to be protruding from the ostium. The hysteroscope was then removed slowly, visualizing the uterine cavity and cervix as the scope was withdrawn. The scope was removed and the single-tooth tenaculum was removed from the anterior lip of the cervix. Good hemostasis was confirmed. The weighted speculum was removed from the vagina. The patient tolerated the procedure well and was transferred to the recovery room in stable condition.

Questions:

1.1. What procedures are performed in this operative episode?

sterilization by occlusion of fallopian tubes with intraluminal device

1.2. Was the same approach used for all procedures? What approach value is assigned?

Yes the same approach was used. The value that was used for the approach was via natural opening endoscopic with a value of 8

1.3. What is the objective of the procedure? What root operation is assigned?

Sterilization by occlusion. Root operation occlusion

1.4. Are the coils coded as a device? If so, what device value is assigned?

Yes the coils are a device because they are intraluminal with a value of D

1.5. Is any other root operation assigned? Why or why not?

No because the fallopian tubes are being occluded and the hysteroscope is part of the procedure

1.6. What code(s) should be assigned?

(OCCLUSION BILATERAL) 0UL78DZ

Case Studies

Instructions: Assign ICD-10-PCS codes to the following cases.

Case 1: Operative Report 0UB90ZZ B3.2 GUIDELINE

PREOPERATIVE DIAGNOSIS:	Symptomatic uterine fibroids with future fertility needs
POSTOPERATIVE DIAGNOSIS:	Symptomatic uterine fibroids with future fertility needs
PROCEDURE:	Abdominal myomectomy

PROCEDURE DETAILS: The patient is a 28-year-old G1 P1 with a history of heavy vaginal bleeding resulting in symptomatic anemia. Medical management has failed. The risks and benefits were fully explained and consent was signed.

Under general anesthesia, the patient received prophylactic IV antibiotics. The patient was placed in the dorsal supine position with all pressure points padded. She was prepped and draped in the usual sterile fashion for a Pfannenstiel incision. A perineal and vaginal prep was performed as well and an indwelling Foley was placed.

A Pfannenstiel incision was made using the scalpel and carried down through subsequent layers including the fascia using the scalpel and Bovie electrocautery. The rectus muscles were then divided at midline and the peritoneum was identified and entered sharply. The peritoneal incision was extended superiorly and laterally using a Metzenbaum. The bladder was visualized and retractors were placed. The uterus was the identified and exteriorized through the incision. Two fibroids were found. Fibroid #1 is 3.1 cm and found in the right anterior wall. Fibroid #2 is 2.7 cm and found in the left anterior wall in a more cephalad position. Intestines were packed out of the way. Vasopressin was injected into the uterus along the planned incision lines. Bovie was used to incise the myometrium while maintaining hemostasis. Fibroid #1 was grasped using a towel clamp and enucleated from the surrounding tissue using the blunt end of the knife handle. The stalk of the fibroid was cauterized the Bovie and the fibroid was removed as a specimen. On inspection, it was noted that the uterine cavity was not entered. Fibroid #2 was removed in the same fashion. No other fibroids were located on final inspection. The myometrium was reapproximated in both places in layers using 0-Vicryl absorbable suture in running locked stitches. The serosa was imbricated using 3-0 Vicryl in a baseball stitch. Good hemostasis was noted. The uterus, tubes and ovaries were then placed back into the abdomen. The cavity was irrigated and the peritoneum was closed with 2-0 Vicryl. The wound was then closed in layers. Marcaine was administered at the incision site for pain control. The incision was reinforced with Steri-strips. The patient tolerated the procedure well.

Case 2: Operative Report 4 codes 0UT94ZZ, 0UT74ZZ, 0UT24ZZ, 8E0W4CZ

PREOPERATIVE DIAGNOSES: Large fibroid uterus with menometrorrhagia, pelvic pain and pelvic mass

POSTOPERATIVE DIAGNOSES: Same

PROCEDURES PERFORMED: Robotically-assisted total laparoscopic hysterectomy with bilateral salpingo- oophorectomy

FINDINGS: Upon laparoscopic eval, the uterus was markedly enlarged as well with multiple large fibroids present. The previously seen suspected pelvic mass was a fibroid that was dissecting to the lateral aspects of the left side of the pelvis. Ovaries bilaterally were noted to be normal as were the fallopian tubes.

DESCRIPTION OF PROCEDURE: After the patient was prepped and draped in usual manner for a vaginal and abdominal procedure, a VCare uterine manipulator was placed within the uterine cavity, insufflated in place. The cup was then seated against the cervix and secured. This was then followed by placement of a Veress needle into the abdominal cavity, 4 liters of CO_2 was insufflated at this point. This was then followed by placement of 8-mm port cephalad to the umbilicus, and a laparoscopic port was placed with the laparoscope. The laparoscopy evaluation was performed and findings noted as above. The right and left 8-mm ports were placed and the left upper quadrant assistant port was then placed. The patient was placed in steep Trendelenburg and then docked to the da Vinci robot. The instruments were then brought into the field of dissection. Hysterectomy was then started by incision into the round ligaments bilaterally and then the utero-ovarian ligaments and fallopian tube. This freed the uterus for manipulation towards the vascular pedicles. The bladder flap was then able to be performed and dissection of the bladder flap over the areas, especially on the left side was performed where the large fibroids were. Once the fibroids were able to be isolated, the blood supply to those fibroids was able to be cauterized and cut and then the fibroid able to be removed or set to one side. The vascular pedicles were then able to be cauterized and cut on each side using the VasoSeal device. Once this was completed, the bladder flap was completed and the VCare ring was then used as a guide to dissect the vaginal cuff and incised the colpotomy. Once this was completed, the large uterus was made to one side as were the previously excised fibroids.

Adequate hemostasis was seen at this time. The fallopian tubes and ovaries on each side were able to be excised, performing bilateral salpingo-oophorectomy. The ovaries and tubes were placed into the vagina for removal. The large fibroids and large fibroid uterus was then able to be removed through the vagina. Suction irrigation was completed and all fluid removed. The vaginal cuff was then closed with a running locking stitch of V-Loc suture. The ports were then used to express the CO_2. The patient was undocked from the da Vinci robot and all instruments were removed. At this point, closure of the port sites was performed with 0 Vicryl suture on the fascia and then subcuticular closure of the incisions using 4-0 Monocryl. The sites were infiltrated using 0.25% Marcaine. This was then followed by evaluation of the vaginal vault. The vaginal cuff was found to be completely closed and no bleeding evident. The procedure was then terminated.

ESTIMATED BLOOD LOSS: Approximately 300 mL including the large amount of blood that was within the large fibroid uterus.

Case 3: Operative Report 2 CODES

0UT58ZZ (RESECTION OF RIGHT FALLOPIAN TUBE)
0UT08ZZ (RESECTION OF RIGHT OVARY)

PREOPERATIVE DIAGNOSIS: Right lower quadrant pain; concern for torsion.

POSTOPERATIVE DIAGNOSIS: Right lower quadrant pain; concern for torsion, with right ovarian and tubal torsion.

NAME OF PROCEDURE: Diagnostic laparoscopy with right salpingo-oophorectomy

SPECIMENS REMOVED: Right tube and RIGHT ovary

FINDINGS: Right tube and right ovarian torsion with no return of blood supply; suspect old torsion. Normal appendix with normal upper abdomen survey, left tube, ovary and uterus were all normal.

INDICATIONS: The patient and family were counseled on risks, benefits and alternatives of the procedure, including risk of pain, bleeding, infection, risk of anesthesia, risk of damage to surrounding organs, or any unforeseen complications of surgery. Also discussed fertility and hormone production expectations with only 1 ovary, if one needed to be removed.

DESCRIPTION OF PROCEDURE: The patient was taken back to the OR and prepped and draped in the normal sterile fashion. After being placed in supine position, an approximately 1-cm incision was made in the umbilicus and carried down until the underlying fascia was identified and incised. The underlying peritoneum was also grasped and incised, and a 5-mm port was placed into the abdomen. Opening pressure was approximately 2 mmHg. After significant insufflation, the camera was inserted and found to have a right tubo-ovarian torsion. Right and left lower quadrant ports were placed, with the right one being a 5-mm port, and the left one being a stab incision with no port. Instruments were used to detorse the ovary, which was torsed approximately 2-1/2 times. No return of blood supply after watching for approximately 7 to 10 minutes. Secondary to this, it was decided to proceed with a salpingo-oophorectomy on the right side. This was accomplished with a LigaSure, which cut, sealed and divided the tissue in a stepwise fashion until the necrotic tissue was removed. Operating site was found to be hemostatic. Pelvis was irrigated with normal saline.

Upper abdomen was visualized and normal. Appendix was visualized and normal. Uterus, left tube and left ovary were normal and fairly well-approximated to the sidewall. Specimen was removed by expanding the umbilicus incision and placing the specimen in the EndoCatch bag. The specimen was then sent to Pathology.

A 3rd inspection of the abdomen revealed hemostatic operating sites, and ports were removed under direct visualization. The fascia was closed with 2-0 Vicryl, and skin was closed with 4-0 Monocryl after being injected with local. The incisions were then covered with Dermabond. The patient tolerated the procedure well and returned to recovery room in stable condition.

Case 4: Operative Report 2 CODES DESTRUCTION 0U5B8ZZ (DESTRUCTION OF ENDOMETRIUM) 30233N1 (TRANSFUSION OF NONAUTOLOGOUS RBC)

PREOPERATIVE DIAGNOSIS: Severe menorrhagia

POSTOPERATIVE DIAGNOSIS: Severe menorrhagia

PROCEDURE: Novasure endometrial ablation

INDICATIONS: This patient is a 43-year-old who was seen last month in Observation for extremely heavy bleeding, requiring transfusion of 1 unit of packed cells. She is in the process of being worked up for menorrhagia, with the possibility of endometrial ablation. She started bleeding uncontrollably yesterday and was admitted. The bleeding was controlled with a Bakri balloon and she received 3 units of packed cells. She is taken to the OR today for definitive treatment with Novasure to destroy the endometrium. She states she desires no further fertility and her family is complete.

PROCEDURE DETAILS: Under general anesthesia, preop prophylactic antibiotics were given. The patient was then placed in the dorsal lithotomy position with the legs supported using stirrups. The patent was then prepped and draped in sterile fashion. The bladder was emptied of 180 cc of clear yellow urine with a straight catheter.

A weighted speculum was inserted into the vagina and the anterior lip of the cervix was grasped with a single-tooth tenaculum. Marcaine was injected at the 4 and 8 o'clock position as a paracervical block. The hysteroscope was introduced through the cervix and advanced into the fundus of the uterus under direct visualization using distending media. Inspection of the entire uterine cavity was performed with no abnormalities were noted. The distance between the fundus and the cervix was noted, as well as the length of the cervix. The hysteroscope was then removed. The NovaSure was introduced through the cervix and advanced to the fundus. The NovaSure was released and rotated side to side to measure the cavity width. The test was performed and no leakage of gas was noted. The NovaSure was then set and deployed at a burn time of 100 seconds. Following this, a period of 120 seconds was provided for cooling of the equipment. The NovaSure was fully retracted and the hysteroscope was reintroduced and the cavity was examined. Good ablation results were noted throughout and found to be successful. The hysteroscope was removed as well as the tenaculum and the weighted speculum. The patient tolerated the procedure well.

Case 5: Operative Report 3 CODES

0UL60ZZ (Occlusion of LEFT fallopian tubes)

0UB50ZZ (excision of RIGHT fallopian tubes)

0HBAXZZ (EXCISION OF VULVA, EXTERNAL APPROACH)

PREOPERATIVE DIAGNOSES:	Multiparity, desires sterilization Vulvar skin tag
POSTOPERATIVE DIAGNOSES:	Multiparity, desires sterilization Vulvar skin tag
NAME OF PROCEDURES:	Tubal sterilization by bilateral salpingectomy. Excision of vulvar skin tag

DESCRIPTION OF OPERATION: Under general anesthesia in the dorsal lithotomy position, the patient was prepped and draped in the usual sterile fashion. A suprapubic transverse incision of 3 cm was made. This was carried down to the level of the fascia by blunt dissection. The fascia was identified and incised, and the incision was carried laterally in both directions. The pyramidalis muscles were divided and the peritoneal cavity entered sharply. Using a previously placed Hulka tenaculum, the uterus was brought up to the subperitoneal area. The left fallopian tube was grasped near its insertion into the uterus with a Babcock. Then, using a second Babcock, the tube was walked its entire length until the fimbriated end was well identified. The Babcock was replaced in the middle of the tube and a knuckle of tube raised. A suture was placed both proximally and distally and a 1-cm portion of tube excised. The mesosalpinx was suture ligated with a single figure-of-eight stitch. There was no active bleeding following these maneuvers. The suture used was 0 chromic. On the right, the fallopian tube was somewhat more difficult to mobilize. The fimbriated end was abnormally shaped and clubbed. It appeared nonpatent. The fimbriated end was well mobilized and elevated. A 2-cm portion of the deformed fimbria was excised, suture ligated, and cauterized. No active bleeding was noted. At this point, the instruments and lap sponge were removed. The anterior fascia was closed with a 0 Vicryl suture. Subcutaneous tissue was reapproximated with 0 Vicryl suture and the skin closed using a running subcuticular 4-0 Vicryl.

Attention was then directed to the vulva, where an approximately 1.5-cm skin tag that was discolored was noted in the upper portion of the labia minora just lateral to the clitoris. This area was grasped with an Allis and local anesthesia placed in the base. Using a scalpel, a football shaped incision was made, excising the skin tag. Hemostasis was achieved with electrocautery. A running subcuticular Vicryl stitch was used to close the skin. The wound was dressed with antibiotic ointment. At this point, the procedure was terminated. The patient tolerated the procedure well and left the operating room in good condition. The estimated blood loss was 5 cc.

Cross-Code Puzzle—Chapters 14 through 19

Instructions: The procedures covered in this puzzle correspond to the topics covered in chapters 14 through 19. Research of the procedure description may be required.

Cross-Code Puzzle for Chapter 14-19

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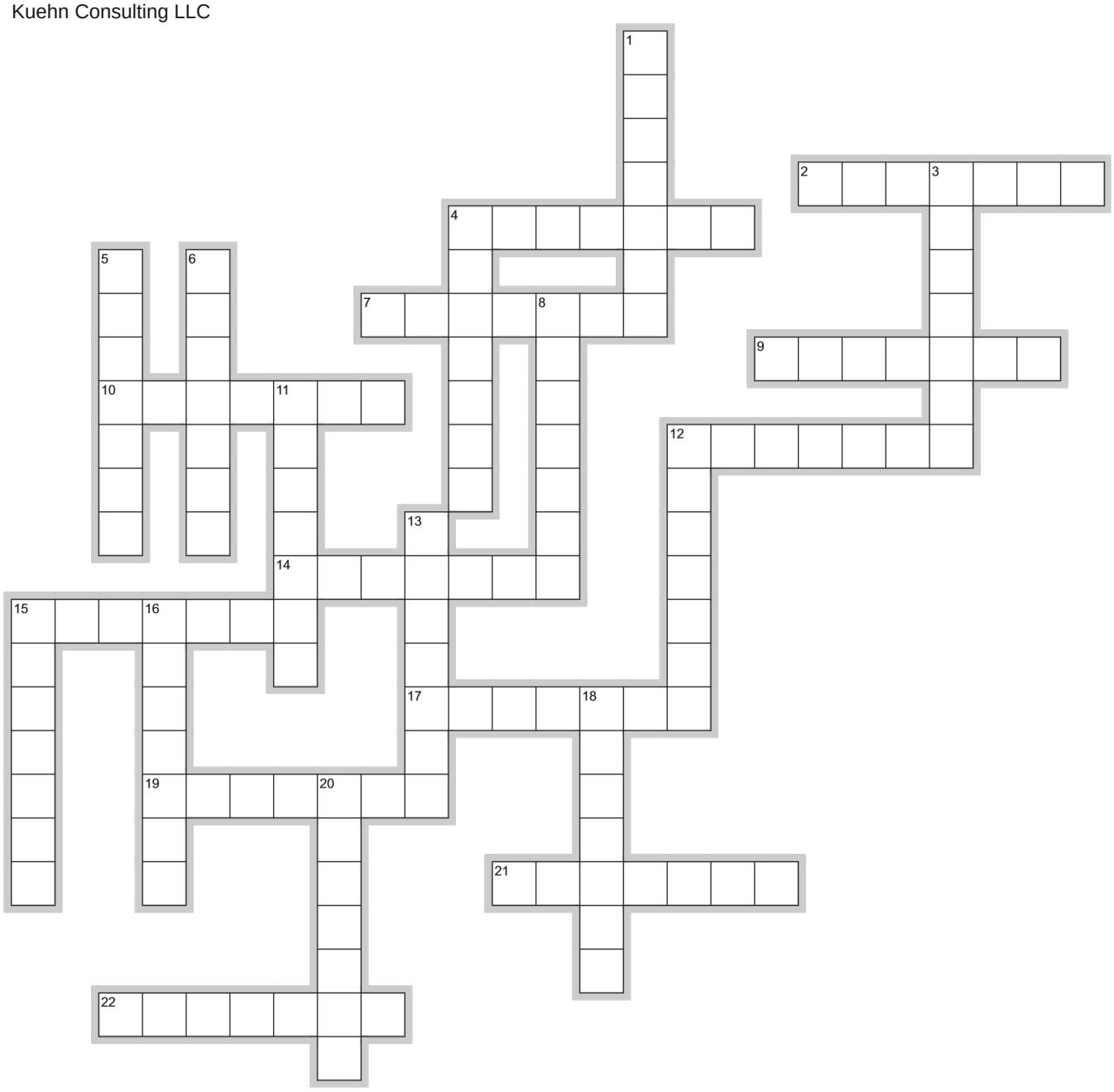

EclipseCrossword.com

Cross-Code Puzzle—Chapters 14 through 19 Clues

Across

2. Right renal transplant from unrelated donor

4. Vaginal suspension from the uterosacral ligaments, open approach

7. Reduction of depressed frontal bone fracture with insertion of plate and screws

9. Posterior fusion of T12-L1 using autograft bone
10. Placement of interbody fusion devices between L2-L3, L3-L4 and L4-L5 using an anterior approach
12. Hysteroscopy with destruction of uterine polyp
14. Bilateral ligation of vas deferens for sterilization, open approach
15. Replantation of a 5 cm × 7 cm piece of scalp skin following injury
17. Fasciotomy for decompression of the left anterior thigh compartment syndrome
19. Open repair of glanular hypospadias
21. Myocutaneous gluteus maximus muscle flap closure of a right stage III hip decubitus ulcer, open approach
22. Electrocautery of five small skin lesions on the perineum

Down

1. Placement of an artificial right testicle with orchiectomy procedure
3. Put back the avulsed right gracilis tendon
4. Bilateral orchiopexy, open approach
5. Complete prostatectomy, open approach
6. Repair of displaced supracondylar fracture of the left humerus with percutaneous fixation
8. Needle drainage of traumatic bursitis of the right elbow
11. Open total hysterectomy
12. Lithotripsy of calculus in right renal pelvis, external
13. Open harvesting of bone from right iliac crest for use in another procedure
15. Cystoscopy with destruction of a bladder tumor
16. Rotational fascia-based flap reconstruction of left forearm defect, open approach after 3rd degree burn
18. Temporary wound cover of the left chest using full-thickness cadaver skin while waiting for epidermal autograft to grow
20. Placement of speculum with cone biopsy of the cervix