

**Reproductive #1 – Histology: Urinary System**

1.1) Cells lining the urinary tract are essentially impermeable to salts and water, and increase in thickness from a two-cell layer at the calyces to a four- or five-cell layer in the ureter. What type of cells are these?

- a) Simple columnar, ciliated epithelium
- b) Simple cuboidal epithelium
- c) Stratified squamous epithelium
- d) Pseudostratified columnar epithelium
- e) Transitional stratified epithelium

1.2) Which of the following is NOT found in or surrounding urothelium throughout the excretory passages?

- a) Dense collagenous lamina propria
- b) Loosely spiraled inner longitudinal layer
- c) Muscularis mucosae and submucosal layer
- d) Tightly spiraled outer circular layer

1.3) Although most of the bladder is derived from cloaca, what part is derived from embryonic mesonephric ducts?

- a) Ureter openings
- b) Internal urethral sphincter
- c) Trigone
- d) Detrusor muscle
- e) Bladder wall

1.4) Which of the following lines the penile (spongy) urethra and distal portion of the membranous urethra in men?

- a) Simple columnar, ciliated epithelium
- b) Simple cuboidal epithelium
- c) Stratified squamous epithelium
- d) Pseudostratified columnar epithelium
- e) Transitional stratified epithelium

1.5) Which of the following lines the terminal portion of the male and female urethra?

- a) Simple columnar, ciliated epithelium
- b) Simple cuboidal epithelium
- c) Stratified squamous epithelium
- d) Pseudostratified columnar epithelium
- e) Transitional stratified epithelium

2.1) At what phase of meiosis I are sister chromatids arranged in a tetrad?

- a) Interphase
- b) Prophase
- c) Metaphase
- d) Anaphase
- e) Telophase and cytokinesis

2.2) What phase of mitosis are chromosomes aligned at the plate that is equidistant from two centrosome poles?

- a) Interphase
- b) Prophase
- c) Metaphase

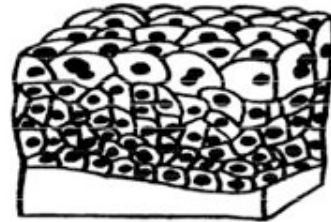
- d) Anaphase
  - e) Telophase and cytokinesis
- 2.3) What is the result of meiosis? ( $n = \text{haploid}$ )
- a) One  $4n$  cell
  - b) Two  $2n$  cells
  - c) One  $2n$  cell
  - d) Four  $1n$  cells
  - e) Four  $2n$  cells
- 2.4) What is the result of mitosis? ( $n = \text{haploid}$ )
- a) One  $4n$  cell
  - b) Two  $2n$  cells
  - c) One  $2n$  cell
  - d) Four  $1n$  cells
  - e) Four  $2n$  cells

### **Reproductive #2 – Histology: Male Reproductive System**

- 1) The thick, dense connective tissue capsule that covers each testis is called the:
- a) Tunica albuginea
  - b) Tunica vaginalis
  - c) Tunica vasculosa
  - d) Seminiferous tubule
  - e) Epididymis
- 2) Which of the following involves rhythmic contractions that create peristaltic waves to help move spermatozoa through the seminiferous tubules?
- a) Sertoli (sustentacular) cells
  - b) Leydig (interstitial) cells
  - c) Myoid cells (tunica propria)
  - d) Spermatogenic cells
- 3) Which of the following are large, polygonal eosinophilic cells that contain lipid droplets and crystals of Reinke (rod-shaped cytoplasmic crystals)?
- a) Sertoli (sustentacular) cells
  - b) Leydig (interstitial) cells
  - c) Myoid cells (tunica propria)
  - d) Spermatogenic cells
- 4.1) Which of the following spermatogonia is the direct precursor to primary spermatocytes?
- a) Type A dark (Ad)
  - b) Type A pale (Ap)
  - c) Type B (B)
- 4.2) Prophase I of the spermatocyte phase lasts approximately:
- a) 2-hours
  - b) 24-hours
  - c) 2-days
  - d) 16-days
  - e) 22-days

- 5) Which spermatid phase (spermiogenesis) is distinguished by the presence of PAS-positive granules called pro-acrosomal granules?
- Golgi phase
  - Cap phase
  - Acrosome phase
  - Maturation phase
- 6) What portion of the mature sperm contains enzymes that are essential for penetration of the zona pellucida of the ovum?
- Acrosome
  - Neck piece
  - Mitochondrial sheath
  - Principle piece
  - End piece
- 7.1) A drug is given that affects the initial phases of spermatogenesis to aid in a patient's infertility complaints. How much time would it take for the effects of this drug to be seen (active sperm in the ejaculate)?
- 4.6-days
  - 16-days
  - 22-days
  - 48-days
  - 86-days
- 7.2) Which of the following secretes inhibin, plasminogen, and transferrin, and contains characteristic inclusion bodies of Chardcot-Bottcher?
- Sertoli (sustentacular) cells
  - Leydig (interstitial) cells
  - Myoid cells (tunica propria)
  - Spermatogenic cells
- 8) The blood-testes barrier isolates the genetically different and therefore antigenic haploid germ cells from the immune system of the adult male. It is formed by cell junctional complexes between which type of cells?
- Sertoli (sustentacular) cells
  - Leydig (interstitial) cells
  - Myoid cells (tunica propria)
  - Spermatogenic cells
- 9) Which of the following is lined with pseudostratified columnar epithelium and is made of highly coiled masses (6 to 10) whose base forms the head of the epididymis?
- Seminiferous tubule
  - Rete testes
  - Coni vasculosi
  - Duct of the epididymis
  - Halo cells
  - Ductus (vas) deferens
- 10) Which of the following is NOT true?
- The seminal vesicles secrete viscous material containing fructose, which can be used to identify specimens as ejaculate
  - The peripheral zone is the most common site of prostatic carcinomas

- c) The transitional zone is the site of benign prostatic hyperplasia in older men
  - d) The central zone of the prostate is easily palpable by digital rectal exam
  - e) The bulbourethral (Cowper) glands secrete mucous-like material containing galactose upon sexual stimulation to lubricate the penile urethra
- 11) Semen contains fluid from many parts of the secretory tract, is alkaline to help neutralize the acidic vagina, contains about 20% morphologically abnormal sperm, and about 25% immotile sperm. Which of the following describes semen that contains sperm with poor motility?
- a) Aspermia
  - b) Azoospermia
  - c) Oligospermia
  - d) Asthenozoospermia
  - e) Teratozoospermia
- 12) Where would this (image) type of epithelium be found?
- a) Kidney collecting duct
  - b) Urinary bladder
  - c) Male seminal vesicle
  - d) Female reproductive system
  - e) Male vas deferens and bulbourethral glands



### Reproductive #3 – Histology: Female Reproductive System

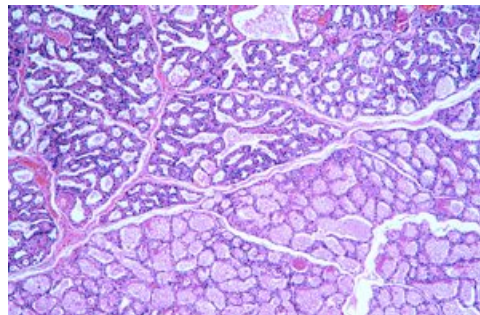
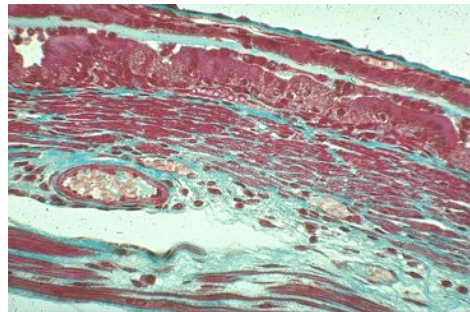
- 1) Which of the following is considered an external structure?
- a) Ovaries
  - b) Clitoris
  - c) Vagina
  - d) Uterus
  - e) Uterine tubes
- 2) Which of the following is attached to the uterus by the ovarian ligament, which is a remnant of the gubernaculum?
- a) Superior pole of the ovary
  - b) Inferior pole of the ovary
  - c) Ovarian cortex
  - d) Ovarian medulla
  - e) Broad ligament
- 3.1) Balbiani bodies (localized accumulation of cellular components) and annulate lamellae (stacked nuclear envelopes/pores) are seen in which of the following?
- a) Primordial follicle
  - b) Primary follicle
  - c) Secondary follicle
  - d) Mature (Graafian) follicle
  - e) All of the above
- 3.2) Which of the following is an acidophilic layer that separates the oocyte from the follicle cells?
- a) Theca interna
  - b) Theca externa
  - c) Zona pellucida

- d) Membrana granulosa
  - e) Stratum granulosum
- 3.3) Which of the following is a thin, highly vascularized layer of cuboidal cells that secretes steroids in response to LH?
- a) Theca interna
  - b) Theca externa
  - c) Zona pellucida
  - d) Membrana granulosa
  - e) Stratum granulosum
- 3.4) At what stage does the cumulus oophorus become the corona radiata and show Call-Exner bodies between granulose cells?
- a) Primordial follicle
  - b) Primary follicle
  - c) Secondary follicle
  - d) Mature (Graafian) follicle
  - e) All of the above
- 4.1) A surge of FSH and LH is induced in the adenohypophysis 24-hours before ovulation and the first meiotic division of the primary oocyte resumes. At what stage does the oocyte become arrested until it becomes fertilized?
- a) First meiotic division, prophase
  - b) First meiotic division, metaphase
  - c) Second meiotic division, prophase
  - d) Second meiotic division, metaphase
  - e) Second meiotic division, anaphase
- 4.2) Which of the following is also known as the stigma and represents a bulge in the germinal epithelium that becomes elevated, ruptures, and forcefully expels the oocyte?
- a) Fimbriae
  - b) Macula pellucida
  - c) Maternal pronucleus
  - d) Stratum granulosum
  - e) Zona pellucida
- 5) Which of the following is a post-fusion reaction that results in a release of  $\text{Ca}^{++}$  from the ooplasmic stores and leads to increasing ovum surface area and membrane reorganization?
- a) Capacitation
  - b) Acrosome reaction
  - c) Fast block to polyspermy
  - d) Cortical reaction
  - e) Zona reaction
- 6) Which of the following is associated with the corpus luteum of menstruation, not the corpus luteum of pregnancy?
- a) Ovarian leuteotropins (estrogens, IGF-I, IGF-II)
  - b) HCG produced by the trophoblast of the chorion
  - c) LH and prolactin
  - d) Insulin and testosterone
  - e) Corpus albicans

- 7) At which of the following times would neural apoptosis inhibitory protein (NAIP) be present within most of the ovarian follicles (preventing atresia)?
- Fetal development
  - Early post-natal life
  - Puberty
  - Early adulthood
- 8.1) Which of the following portions of the fallopian tube is the site of fertilization?
- Infundibulum
  - Ampulla
  - Isthmus
  - Uterine (intramural) part
- 8.2) Which of the following layers of the fallopian tubes contains Peg cells, which secrete nutrients for the ovum?
- Serosa
  - Muscularis
  - Mucosa, ciliated
  - Mucosa, non-ciliated
- 9) What layer of the uterine wall is thick and is sloughed off at menstruation?
- Endometrium, stratum functionalis
  - Endometrium, stratum basale
  - Myometrium
  - Perimetrium
- 10.1) The secretory phase of the fertility cycle begins a day or two after ovulation (14th day) and coincides with the functional corpus luteum. Thus, this phase is regulated by:
- Estrogen
  - Progesterone
  - Testosterone
  - Luteinizing hormone
  - Follicle stimulating hormone
- 10.2) What implantation cycle is affected by mifepristone (RU486)?
- Zygote
  - Morula
  - Blastocyst
  - Decidua basalis
  - Decidua capsularis
  - Decidua parietalis
- 11) The transition zone between the vagina and cervix is a common site of cervical dysplasia and HPV-related cancer. What epithelial transition is seen here?
- Vaginal simple squamous to cervical simple columnar
  - Vaginal simple columnar to cervical simple squamous
  - Vaginal simple squamous to cervical stratified columnar
  - Vaginal stratified squamous to cervical simple columnar
  - Vaginal stratified squamous to cervical stratified columnar
- 12.1) Which of the following portions of the placenta secretes hCG and hCS (hPL)?
- Syncytiotrophoblast
  - Cytotrophoblast

- c) Endometrium
  - d) Chorion
- 12.2) Which of the following developmental portions of blood vessels of the villi is the maternal component of the placenta?
- a) Chorion laeve
  - b) Chorion (villous) frondosum
  - c) Placenta (decidual) septa
  - d) Cotyledons
  - e) Basal plate
- 12.3) Which of the following components of the fetoplacental (endocrine) unit is similar to thyroid stimulating hormone (TSH) and stimulates T4 secretion by the maternal thyroid?
- a) Human chorionic gonadotropin (hCG)
  - b) Human chorionic somatomammotropin (hCS, hPL)
  - c) IGF-I and IGF-II
  - d) Endothelial growth factor (EGF)
  - e) Relaxin
  - f) Leptin
- 13) Which layer of the vaginal wall contains glands, such as lubrication mucus?
- a) Inner mucosal layer
  - b) Intermediate muscular layer
  - c) Outer adventitial layer
  - d) There are no glands in the vaginal wall
- 14) What type of cells make up the vulva, which includes the mons pubis, labia majora, labia minora, clitoris, lesser vestibular (Skene) glands and greater vestibular (Bartholin) glands?
- a) Simple squamous epithelium
  - b) Simple cuboidal epithelium
  - c) Stratified squamous epithelium
  - d) Stratified cuboidal epithelium
  - e) Transitional epithelium
- 15) Which of the following is most likely to develop along the milk line?
- a) Lymph node
  - b) Accessory nipple
  - c) Bartholin cyst
  - d) Excess hair
  - e) Human papillomavirus (HPV)
- 16) Mammary glands are modified apocrine glands that develop under the influence of sweat glands. In patients with suspected breast cancer, pressure on what portion of the breast results in a peau d'orange appearance?
- a) Connective tissue, elastin
  - b) Connective tissue, collagen
  - c) Adipose (fat) tissue
  - d) Suspensory (Cooper) ligaments
  - e) Areola (Montgomery) glands
- 17) Which of the following decreases during pregnancy within the breast?

- a) Mammary glands  
 b) Plasma cells  
 c) Lymphocytes  
 d) Eosinophils  
 e) Adipose tissue
- 18) Which of the following components of milk (or colostrum) is a merocrine secretion?  
 a) Protein  
 b) Lipid  
 c) Vitamin A  
 d) Sodium and chloride  
 e) Carbohydrate and potassium
- 19.1) Which of the following stimulates proliferation of the lactiferous duct components of the mammary gland?  
 a) Prolactin  
 b) Estrogen  
 c) Progesterone  
 d) Adrenal glucocorticoids  
 e) hCS
- 19.2) Which of the following stimulates proliferation of the alveoli component of the mammary gland?  
 a) Prolactin  
 b) Estrogen  
 c) Progesterone  
 d) Adrenal glucocorticoids  
 e) hCS
- 20.1) What is this an image of (H&E)?  
 a) Cervix  
 b) Vagina  
 c) Uterus  
 d) Mammary gland  
 e) Placenta
- 20.2) What is this an image of (H&E)?  
 a) Cervix  
 b) Vagina  
 c) Uterus  
 d) Mammary gland  
 e) Placenta



#### Reproductive #4 – Microbiology: Sexually Transmitted Diseases

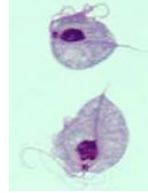
*Match the discharge with the sexually transmitted disease:*

- |                   |                          |
|-------------------|--------------------------|
| 1) Chlamydial     | a) Frothy yellow         |
| 2) Gonorrhea      | b) Cottage cheese, itchy |
| 3) Trichomoniasis | c) Purulent              |
| 4) Vaginosis      | d) Malodorous            |
| 5) Yeast          | e) Watery                |



6) A teenage girl complains of vaginal itching and burning. Sexual history reveals numerous sexual partners. Her gynecologist performs a pelvic exam and finds a greenish, foul-smelling thin discharge from the vagina. A wet mount of the discharge reveals mobile ameba (shown), each with 1 nucleus and 5 flagella. The patient is started on metronidazole. Which of the following is most likely?

- a) *Neisseria gonorrhoeae*
- b) *Treponema pallidum*
- c) *Chlamydia trachomatis*
- d) *Candida albicans*
- e) *Trichomonas vaginalis*
- f) *Gardnerella*, *Mobiluncus*, or *Lactobacilli*



7) A sexually active man seeks medical attention for a wart-like lesion developing on his genitals. He recalls a painless ulcer on his genitals over a month ago, but now is concerned because papules are appearing in his armpits and palms as well. Recently, he has suffered fever and chills, and the doctor notices a nontender, generalized lymphadenopathy. The doctor questions the man about the health of his sexual partners. A dark field analysis confirms the doctor's suspicion of the etiology and the patient is prescribed penicillin G. Which of the following is most likely?

- a) *Neisseria gonorrhoeae*
- b) *Treponema pallidum*
- c) *Chlamydia trachomatis*
- d) *Candida albicans*
- e) *Trichomonas vaginalis*
- f) *Gardnerella*, *Mobiluncus*, or *Lactobacilli*

8) A woman is brought to the Emergency Room complaining of a vaginal discharge and RUQ abdominal pain. On history, the patient reports having many sexual partners. Pelvic exam reveals cervical motion tenderness, and labs of vaginal discharge detect numerous PMNs but no organisms on Gram stain. The doctor makes a diagnosis based on these findings and administers doxycycline and ceftriaxone. Later, surgeons, concerned about the patient's abdominal pain, rule out cholecystitis by imaging, but laparoscopy reveals adhesions around the patient's liver capsule. Which of the following is most likely?

- a) *Neisseria gonorrhoeae*
- b) *Treponema pallidum*
- c) *Chlamydia trachomatis*
- d) *Candida albicans*
- e) *Trichomonas vaginalis*
- f) *Gardnerella*, *Mobiluncus*, or *Lactobacilli*

9) A patient presents to the Emergency Room with complaints of an "itchy crotch." History reveals she was put on broad-spectrum antibiotics for a major infection recently. Pelvic exam reveals a white, chunky vaginal discharge. Lab testing shows growth on Sabouraud dextrose agar (SDA) showing budding with germ tubes. The patient is started on fluconazole. Which of the following is most likely?

- a) *Neisseria gonorrhoeae*
- b) *Treponema pallidum*
- c) *Chlamydia trachomatis*
- d) *Candida albicans*

- e) *Trichomonas vaginalis*
- f) *Gardnerella, Mobiluncus, or Lactobacilli*

10) A teenager complains of pain during sexual intercourse and irregular inter-menstrual bleeding. She has also begun to experience lower abdominal pain. A pelvic exam reveals a yellow mucopurulent discharge; during the exam, the cervix begins to bleed. Gram stain of discharge reveals Gram-negative intracellular diplococci. The teenager reports that she has been sexually active with several partners over the last year. One of her partners, a male, comes to the same clinic complaining of dysuria and profuse yellow urethral discharge. Which of the following is most likely?

- a) *Neisseria gonorrhoeae*
- b) *Treponema pallidum*
- c) *Chlamydia trachomatis*
- d) *Candida albicans*
- e) *Trichomonas vaginalis*
- f) *Gardnerella, Mobiluncus, or Lactobacilli*

Match the lesion with the sexually transmitted disease:

- 11) Indurated, painless, ulcer      a) Genital herpes (Herpes Simplex Virus 2)
  - 12) Painful ulcers with vesicles      b) Chancroid (*Haemophilus ducreyi*)
  - 13) Painful ulcer      c) Donovanosis (*Klebsiella granulomatis*)
  - 14) Painless, beefy red heaped ulcer      d) Primary syphilis (*Treponema pallidum*)
- 15) A patient presents with a copper-colored mucocutaneous body rash, nickel and dime lesions on the hands and soles, and flu-like symptoms including a headache, fever, and myalgia. History reveals a painless penile ulcer about four months prior. What stage of syphilis is this patient in?

- a) Initial contact
- b) Primary
- c) Secondary
- d) Latent
- e) Tertiary

16) Which of the following is a non-treponemal test?

- a) VDRL
- b) RPR
- c) FTA-ABS
- d) MHA-TP
- e) A & B
- f) C & D

17) What is the treatment of choice for tabes dorsalis (tertiary neurosyphilis)?

- a) Penicillin
- b) Penicillin G
- c) Penicillin V
- d) Doxycycline
- e) Ceftriaxone

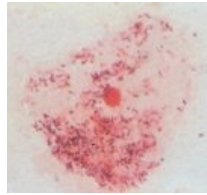
18) A patient presents with a cloudy, purulent urethral discharge. Testing shows Gram-negative bean-shaped diplococci within PMNs. What is the major virulence factor for this infection?

- a) Capsule

- b) Teichoic acid
  - c) Pili
  - d) Toxin
  - e) M protein
- 19) A young male presents with complaints of a hot swollen knee. Aspiration of the septic knee is sent to the lab. History reveals cloudy urine. Lab results reveal Gram-negative bacteria that grows on chocolate agar. Which of the following is most likely?
- a) *Neisseria gonorrhoeae*
  - b) *Treponema pallidum*
  - c) *Chlamydia trachomatis*
  - d) *Haemophilus influenzae*
  - e) *Haemophilus ducreyi*
- 20) Which of the following describes the chlamydial bodies with regard to life cycle? (EB = Elementary Body, RB = Reticulate Body)
- a) EBs & RBs are for extracellular multiplication
  - b) EBs & RBs are for intracellular multiplication
  - c) EBs are for extracellular and RBs are for intracellular multiplication
  - d) EBs are for intracellular and RBs are for extracellular multiplication
- 21) What clinical syndrome and complication of chlamydia is most seen in neonates?
- a) Urethritis and Reiter syndrome
  - b) Conjunctivitis and interstitial pneumonia
  - c) Bartholinitis and dermatitis
  - d) Salpingitis and arthritis
  - e) Conjunctivitis and arthritis
- 22) Which of the following is associated with lymphogranuloma venereum (LGV), a type of chlamydial infection seen in third world countries involving inguinal buboes?
- a) *Chlamydia trachomatis*, serotype A, B, or C
  - b) *Chlamydia trachomatis*, serotype D-K
  - c) *Chlamydia trachomatis*, serotype L1, L2, or L3
  - d) *Chlamydia psittaci*
  - e) *Chlamydia pneumoniae*
- 23) A young female patient presents to the gynecologist with an apparent eye infection after a referral from an ophthalmologist. History reveals the patient had ejaculate in her eye. Which of the following is most likely?
- a) *Chlamydia trachomatis*, serotype A, B, or C
  - b) *Chlamydia trachomatis*, serotype D-K
  - c) *Chlamydia trachomatis*, serotype L1, L2, or L3
  - d) *Chlamydia psittaci*
  - e) *Chlamydia pneumoniae*
- 24) Which of the following causes a chancroid (soft chancre)?
- a) *Chlamydia trachomatis*
  - b) *Treponema pallidum*
  - c) *Klebsiella granulomatis*
  - d) *Haemophilus ducreyi*
  - e) Herpes Simplex Virus 2

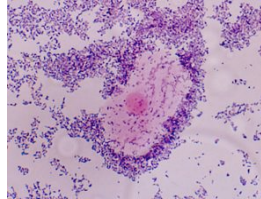
25) A young female presents with excessive, malodorous vaginal discharge. Testing of the discharge reveals a fishy amine-like odor on KOH whiff-test, vaginal pH > 4.5, and epithelial cells as shown. Metronidazole is started. Which of the following is most likely?

- a) *Neisseria gonorrhoeae*
- b) *Treponema pallidum*
- c) *Chlamydia trachomatis*
- d) *Candida albicans*
- e) *Trichomonas vaginalis*
- f) *Gardnerella vaginalis*



26) What is shown in this image?

- a) Howell-Jolly body
- b) Yeast cell
- c) Clue cell
- d) Donovan body
- e) Germ tube



27) A man presents with a history of vesicles on his penis that broke down and form painful, shallow ulcers. Local lymph nodes swollen and the patient has mild constitutional symptoms. The clinician believes the virus is latent in the sacral dorsal root ganglion neurons at this time. Which of the following is most likely?

- a) Herpesviridae Cytomegalovirus (CMV)
- b) Herpesviridae Simplexvirus 1 (HSV-1)
- c) Herpesviridae Simplexvirus 2 (HSV-2)
- d) Papovaviridae Papillomavirus (HPV)
- e) Herpesviridae Varicellovirus (VZV)

28) At a preterm evaluation, a 31-year-old pregnant mother reports pain on urination and a burning, itching sensation in the genital area. A careful exam of her vagina reveals a vesicular rash. The physician confirms a diagnosis with a Tzank smear of the lesion showing multinucleated giant cells with intranuclear inclusion bodies. The mother is given an antiviral with assurance that the infection will likely resolve, but she is informed that should the infection persist her child will have to be delivered via caesarean section to prevent neonatal disseminated infection or encephalitis. Which of the following is most likely?

- a) Herpesviridae Cytomegalovirus (CMV)
- b) Herpesviridae Simplexvirus 1 (HSV-1)
- c) Herpesviridae Simplexvirus 2 (HSV-2)
- d) Papovaviridae Papillomavirus (HPV)
- e) Herpesviridae Varicellovirus (VZV)

29) What is the treatment of choice for systemic HSV infections?

- a) Valacyclovir
- b) Famicyclovir
- c) Ganciclovir
- d) Ribavirin
- e) Acyclovir

30) The Human Papillomavirus Quadrivalent Vaccine, Recombinant (Gardasil) protects from what two specific serotypes associated with cervical cancer?

- a) Serotypes 6 and 11

- b) Serotypes 11 and 16
  - c) Serotypes 16 and 18
  - d) Serotypes 18 and 6
  - e) Serotypes 11 and 18
- 31) Which of the following patients would likely have immunity to Human Immunodeficiency Virus (HIV)?
- a) Patient with CXCR4 expression
  - b) Patient with CCR5 expression
  - c) Patient with CXCR4 mutation
  - d) Patient with CCR5 mutation
- 32) Which of the following would be present after KOH preparation?
- a) *Neisseria gonorrhoeae*
  - b) *Treponema pallidum*
  - c) *Chlamydia trachomatis*
  - d) *Candida albicans*
  - e) *Trichomonas vaginalis*
- 33) What stage of the HIV replication cycle involves gp120?
- a) Absorption
  - b) Penetration or uptake
  - c) Reverse transcriptase
  - d) Ligation
  - e) Integration
  - f) Translation
  - g) Assembly
  - h) Budding and release
- 34) What is the last step in the development of AIDS from an HIV infection, occurring much later than the previous step?
- a) Functional changes in CD4 cells
  - b) Failure to eliminate infection
  - c) Loss of control of latently carried microorganisms
  - d) Depressed immune response
  - e) Virus persists; CD4+ counts decrease
- 35) Which of the following infections is NOT opportunistic (e.g. not seen in AIDS)?
- a) Hairy leukoplakia with raised white lesions of oral mucosa, predominantly along the lateral aspect of the tongue, due to Epstein-Barr virus infection
  - b) Extensive oral candidiasis
  - c) Kaposi's sarcoma with brown pigmented lesions on the upper extremities
  - d) Pneumocystis pneumonia, with extensive infiltrates in both lungs
  - e) Cytomegalovirus retinitis showing scattered exudates and hemorrhages, with sheathing of vessels
  - f) Cryptosporidiosis with mature schizont
  - g) All of the above are opportunistic infections
- 36) What is the mean incubation period of opportunistic infections seen in AIDS?
- a) 4-months
  - b) 8-months
  - c) 2-years

- d) 4-years
  - e) 8-years
- 37) A patient presents with intense itching in his pubic region and eyebrows. Examination reveals nits (eggs) attached to public hairs. Permethrin cream is prescribed. Which of the following is most likely?
- a) Granuloma inguinale (*Calymmatobacterium granulomatis*)
  - b) Pediculoses pubis (*Phthirus pubis*)
  - c) Non-specific urethritis (*Mycoplasma Ureaplasma*)
  - d) Lymphogranuloma venereum (*Chlamydia trachomatis* L1, L2, L3)
  - e) Genital warts (Papillomavirus)

**Reproductive #5 – Physiology: Male Reproductive**

- 1) On a follow-up visit, a young male is found to have darker, coarser, and curlier pubic hair above the pubis. Along with enlargement of the scrotum and testes, their penis length has increased. What stage of puberty is this?
- a) Stage 1
  - b) Stage 2
  - c) Stage 3
  - d) Stage 4
  - e) Stage 5
- 2) Spermarchy occurs at about 13.4 years, which occurs during the same genital stage time as the pubertal spurt. When does this occur?
- a) Stages 1-2
  - b) Stages 2-3
  - c) Stages 3-4
  - d) Stages 4-5
  - e) After stage 5
- 3) Where is sperm created?
- a) Hypothalamus-pituitary
  - b) Tunica albuginea
  - c) Rete testis
  - d) Seminiferous tubules
  - e) Epididymis
- 4) Which of the following is true of the inhibin and feedback inhibition within the hypothalamo-pituitary-gonadal axis?
- a) Inhibin is created by the Leydig cells and inhibits the hypothalamus
  - b) Inhibin is created by the Leydig cells and inhibits the pituitary
  - c) Inhibin is created by the Sertoli cells and inhibits the hypothalamus
  - d) Inhibin is created by the Sertoli cells and inhibits the pituitary
- 5) GnRH is released in a pulsatile manner and the pituitary will not release LH or FSH if constantly stimulated (e.g. birth control pill). A pump may be implanted to ensure pulsatile release of hypogonadal GnRH. In endometriosis, high levels of estrogen are produced; Which of the following would produce constant GnRH to slow down the production of estrogen?
- a) Leuprolide
  - b) Ethinyl estradiol and drospirenone

- c) Ethinyl estradiol and norethindrone
  - d) Medroxyprogesterone
  - e) Mifepristone
- 6) Which of the following describes the LH and FSH frequency response to GnRH?
- a) High-frequency GnRH stimulates FSH beta-subunit and low-frequency GnRH stimulates LH beta-subunit
  - b) High-frequency GnRH stimulates LH beta-subunit and low-frequency GnRH stimulates FSH beta-subunit
  - c) High-frequency GnRH stimulates LH and FSH beta-subunit
  - d) Low-frequency GnRH stimulates LH and FSH beta-subunit
- 7) Which of the following describes the LH and FSH releasing effect of the alpha-subunit by GnRH and estrogens?
- a) GnRH and estrogens stimulate the alpha-subunit
  - b) GnRH and estrogens inhibit the alpha-subunit
  - c) GnRH stimulates the alpha-subunit and estrogens inhibit the alpha-subunit
  - d) GnRH inhibits the alpha-subunit and estrogens stimulate the alpha-subunit
- 8) Where is testosterone aromatized?
- a) Hypothalamus
  - b) Pituitary
  - c) Rete testis
  - d) Seminiferous tubules
  - e) Epididymis
- 9) Inhibin antagonizes activin action and:
- a) Stimulates alpha-subunit
  - b) Inhibits alpha-subunit
  - c) Inhibits LH beta-subunit
  - d) Stimulates FSH beta-subunit
  - e) Inhibits FSH beta-subunit
- 10) Inhibin, activin, and follistatin are produced in the testes and pituitary. What is the action of follistatin?
- a) Inhibin agonist
  - b) Inhibin antagonist
  - c) Activin agonist
  - d) Activin antagonist
- 11) Which of the following would be found closest to the center of the seminiferous tubule (lumen)?
- a) Pre-meiotic spermatogonia
  - b) Post-meiotic spermatogonia
  - c) Sertoli cells
  - d) Leydig cells
- 12) Which of the following is increased by both LH binding the Leydig cells and FSH binding the Sertoli cells?
- a) Testosterone production
  - b) Androgen binding protein production
  - c) Estradiol production
  - d) Inhibin production

## e) Spermatogenesis

*Match the state with the hormonal changes:*

	Testosterone	LH	FSH
13) Primary hypogonadism	a) Decreased	Increased	Increased
14) Pituitary hypogonadism	b) Decreased	Decreased	Decreased
15) Anabolic steroid therapy	c) Increased	Decreased	Decreased
16) Inhibin infusion	d) Decreased	Decreased	Increased
17) Constant GnRH infusion	e) No Change	No Change	Decreased

18) In an experiment designed to test the effects of castration on hormone secretion, 20 rats were orchidectomized and allowed to recover for 2 weeks. Following this period, several hormones were measured. Changes in hormone secretion would include:

- a) Decreased gonadotropin-releasing hormone (GnRH)
  - b) Decreased prolactin
  - c) Increased activin
  - d) Increased inhibin
  - e) Increased luteinizing hormone (LH)
- 19) A 22-year-old male patient presents to his physician for fertility screening. He complains of inability to impregnate his wife regardless of what he refers to as “numerous frequent attempts.” Physical examination reveals a muscular male with smaller than normal testes but is otherwise unremarkable. He reports that he frequently uses anabolic steroids to gain muscle mass. Laboratory testing would most likely reveal:
- a) Decreased testosterone
  - b) Decreased LH
  - c) Elevated sperm count
  - d) Increased LH
  - e) Increased GnRH
- 20) Where is sperm primarily stored?
- a) Seminiferous tubules
  - b) Epididymis
  - c) Vas deferens
  - d) Ejaculatory duct
  - e) Prostatic urethra
- 21) Spermatogenesis takes approximately how many days?
- a) 7
  - b) 28
  - c) 44
  - d) 69
  - e) 96
- 22) Spermatid maturation into spermatozoa occurs at what stage of spermatogenesis?
- a) Spermatocytogenesis
  - b) Meiosis
  - c) Spermiogenesis
  - d) Spermiation
- 23) Mitochondria are contained within what portion of the sperm?
- a) Acrosome
  - b) Head
  - c) Nucleus



- d) Middle piece (neck)
  - e) Tail
- 24) What is the primary sensory area of the penis?
- a) Prostate gland
  - b) Spongy urethra
  - c) Corpora cavernosa
  - d) Corpus spongiosum
  - e) Glans penis
- 25) Which of the following describes neuronal nitric oxide (NOS) and its action to cause penile erection?
- a) Stimulated by testosterone and parasympathetic system, constricts muscle
  - b) Stimulated by testosterone and parasympathetic system, relaxes muscle
  - c) Stimulated by testosterone and sympathetic system, constricts muscle
  - d) Stimulated by testosterone and sympathetic system, relaxes muscle
- 26) What is the primary mechanism of erection?
- a) Mechanical stimulation, neural messaging, S2-S4, penile erection
  - b) Neural messaging, S2-S4, penile erection
  - c) Mechanical stimulation, spinal cord S2-S4, penile erection
- 27) Nitric oxide (NO) binds to guanylate cyclase, converts to cGMP, goes to a cGMP-dependent protein kinase, and causes erection. Blocking which of the following phosphodiesterases would prevent the breakdown of cGMP to GMP, thus leading to prolonged erection?
- a) PDE1
  - b) PDE2
  - c) PDE3
  - d) PDE4
  - e) PDE5
- 28) Which of the following spinal levels is responsible for phase 1 (neuromuscular) of the ejaculation reflex via alpha1-adrenergic stimulation?
- a) T5-T9
  - b) T10-T11
  - c) T12-L2
  - d) L2-L4
  - e) S2-S4
- 29) Which of the following increases with age?
- a) Release of endogenous opioids during ejaculation
  - b) Phase 1 ejaculation
  - c) Phase 2 ejaculation
  - d) Orgasm refractory period
  - e) Strength of erection
- 30) What accounts for a majority of male ejaculatory fluid (semen)?
- a) Sperm (first fraction)
  - b) Vas deferens fluid
  - c) Prostate fluid
  - d) Seminal vesicle fluid
- 31) Which of the following is NOT a seminal component from the prostate gland?

- a) Clotting enzyme
  - b) Profibrolysin
  - c) Fructose
  - d) Ca<sup>++</sup>
  - e) Alkaline (pH)
- 32) If an ejaculated sperm is put directly into an egg, will fertilization likely occur?
- a) Yes
  - b) No
- 33) Which of the following occurs during capacitation?
- a) The sperm head gains cholesterol and becomes more permeable to Ca<sup>++</sup>
  - b) The sperm head loses cholesterol and becomes more permeable to Ca<sup>++</sup>
  - c) The sperm head gains cholesterol and becomes less permeable to Ca<sup>++</sup>
  - d) The sperm head loses cholesterol and becomes less permeable to Ca<sup>++</sup>
- 34) Which of the following causes orchitis leading to destruction of the seminiferous tubular epithelium?
- a) Mumps
  - b) Measles
  - c) Cryptorchidism
  - d) Genital duct stricture
  - e) Excess temperature
- 35) What is testicular temperature maintained at with aid from the cremasteric reflex?
- a) 6-degrees C above body temperature
  - b) 3-degrees C above body temperature
  - c) At body temperature
  - d) 3-degrees C below body temperature
  - e) 6-degrees C below body temperature
- 36) What effect does morphine have on sperm quality or quantity?
- a) Increases far above 200 million/mL
  - b) Decreases below 20 million/mL (infertility)
  - c) Affects sperm morphology (shape)
  - d) Affects sperm motility
  - e) Destroys sperm acrosome
- 37) Which of the following decreases after the pituitary causes a testosterone spike at the onset of puberty?
- a) Facial hair
  - b) Chest hair
  - c) Vocal cord thickness
  - d) Axillary hair
  - e) Head hair
- 38) A 70-year-old man presents to his physician complaining of inability to complete intercourse. He reports that he can achieve erection, but cannot maintain it long enough to ejaculate. He indicates that this problem started about a year ago but has gradually worsened, and he is embarrassed and depressed. His wife is a 53-year-old woman that is sexually healthy, and they attempt intercourse 4-5 times per week. After taking a detailed sexual history, the physician concludes that his problem is physiological. Potential causes include:

- a) Decreased nitric oxide release
- b) Increased guanylate cyclase in penile smooth muscle
- c) Increased parasympathetic nervous system (PNS) action
- d) Penile smooth muscle relaxation
- e) Penile vein occlusion

**Reproductive #6 – Physiology: Female Reproductive**

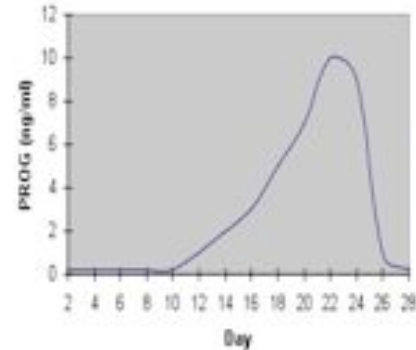
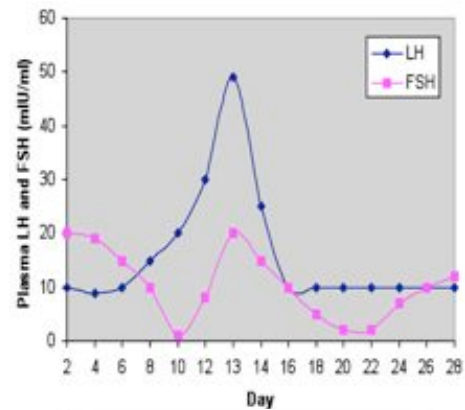
- 1) The areola and papillae project beyond the breast tissue, and menarche begins at what stage of puberty?
  - a) Stage 1
  - b) Stage 2
  - c) Stage 3
  - d) Stage 4
  - e) Stage 5
- 2) Which of the following specifically inhibits FSH, but not LH?
  - a) Dopamine
  - b) Estradiol
  - c) Inhibin
  - d) Androgen
  - e) Progesterone
- 3) Chronic high levels of which of the following leads to a positive feedback loop in the hypothalamo-pituitary-ovary axis?
  - a) Dopamine
  - b) Estrogen
  - c) Inhibin
  - d) Androgen
  - e) Progesterone
- 4) At what location does ovum fertilization occur?
  - a) Fimbria
  - b) Oviduct
  - c) Uterus
  - d) Vagina
  - e) Ovary
- 5) What phase of the ovarian cycle is the most variable, lasting 10-16 days?
  - a) Ovulatory phase
  - b) Luteal phase
  - c) Follicular phase
  - d) Menstrual phase
- 6) Granulosa cells are made, releasing increasing amounts of estradiol (but low progesterone) during what phase of the ovarian cycle?
  - a) Ovulatory phase
  - b) Luteal phase
  - c) Follicular phase
  - d) Menstrual phase
- 7) Progesterone and estrogen are high during what phase of the ovarian cycle?
  - a) Ovulatory phase

- b) Luteal phase
  - c) Follicular phase
  - d) Menstrual phase
- 8) Estrogen is low and progesterone is high during what phase of the ovarian cycle?
- a) Ovulatory phase
  - b) Luteal phase
  - c) Follicular phase
  - d) Menstrual phase
- 9) What phase is the primordial follicle (oocyte) arrested in?
- a) Prophase I
  - b) Metaphase I
  - c) Anaphase I
  - d) Prophase II
  - e) Metaphase II
- 10) At puberty there are approximately 200,000 oocytes. How many exist at age 30?
- a) About 400,000
  - b) About 200,000
  - c) About 100,000
  - d) About 50,000
  - e) About 25,000
- 11) What causes the proliferation of granulosa cells?
- a) Estradiol
  - b) Testosterone
  - c) LH
  - d) FSH
  - e) Prolactin
- 12) Theca cells produce androgens (e.g. testosterone) that diffuse into granulosa cells and are stimulated by:
- a) Estradiol
  - b) Testosterone
  - c) LH
  - d) FSH
  - e) Prolactin
- 13) Which of the following is NOT a function of estrogen?
- a) Increase granulosa cell proliferation
  - b) Increase endometrial cell proliferation
  - c) Enhance secondary sex characteristics
  - d) Thicken cervical mucus
- 14) During the luteal surge (LH surge) phase, granulosa cell growth increases estradiol to higher than normal levels. What effect does this have?
- a) Positive feedback to inhibit LH
  - b) Positive feedback to inhibit FSH
  - c) Negative feedback to inhibit LH
  - d) Negative feedback to inhibit FSH
  - e) Negative feedback to inhibit LH & FSH
- 15) Which of the following decreases following the luteal surge (ovulation phase)?

- a) Androgen levels
  - b) LH levels
  - c) Estradiol levels
  - d) Progesterone levels
- 16) After the follicle becomes the corpus luteum, what hormone does it produce?
- a) Progesterone
  - b) Estradiol
  - c) LH
  - d) FSH
  - e) Prolactin
- 17) Which of the following is true of the endometrial proliferative phase?
- a) Estrogen is increased and progesterone is increased
  - b) Estrogen is decreased and progesterone is decreased
  - c) Estrogen is increased and progesterone is decreased
  - d) Estrogen is decreased and progesterone is increased
- 18) The endometrial proliferative phase occurs during the follicular phase of the menstrual cycle. Endometrial proliferation during this phase is due to:
- a) Progesterone
  - b) Estradiol
  - c) LH
  - d) FSH
  - e) Prolactin
- 19) A woman presents to her physician complaining that her menstrual cycles are irregular. She reports that she menstruates each month, but she cannot predict when. After reporting the dates during which her last 5 periods started, her physician concluded that her cycle is normal, but that it is a 35-day cycle. She reports that she wants to try to get pregnant, but cannot predict when ovulation will occur. Her physician will tell her that she should expect to ovulate on day:
- a) 10
  - b) 17
  - c) 20
  - d) 21
  - e) 25
- 20) A woman brought her 8-year-old daughter to the emergency room complaining of vaginal bleeding. Physical exam revealed the presence of breasts and pubertal hair. Physical examination of the vagina and central nervous system and reproductive tract imaging studies revealed no other abnormalities. The best treatment for this patient would probably be:
- a) Synthetic estrogen
  - b) Synthetic follicle-stimulating hormone (FSH)
  - c) Synthetic gonadotropin-releasing hormone (GnRH)
  - d) Synthetic inhibin
  - e) Synthetic luteinizing hormone
- 21) A young female presents to her physician complaining of painful menstrual periods that have worsened over the last few months. She assumed that she was experiencing premenstrual cramps, but the pelvic pain gradually worsened to the point that her day-to-

day functions were compromised. She reports that her gynecologist diagnosed her with dysmenorrhea and prescribed oral contraceptives, but the pain became more severe and felt sharp and stabbing. Laparoscopy revealed that the patient has endometriosis, and that there is considerable growth that is causing her pain. Laparoscopic surgery was performed to remove the growth implants and hormonal treatment was started to retard the reoccurrence of the painful growths. The most effective hormone for treating this condition is:

- Estrogen
  - Gonadotropin-releasing hormone (GnRH)
  - Follicle stimulating hormone (FSH)
  - Follistatin
  - Luteinizing hormone (LH)
- 22) An experiment with 20 to 24-year-old women measured LH and FSH over their 28-day cycle. The time period during which the follicle undergoes the most rapid growth and maturation is days:
- 2-12
  - 12-14
  - 14-16
  - 16-20
  - 21-28
- 23) An experiment designed to characterize the endometrial cycle measured plasma progesterone levels over the 28-day cycle. The endometrial secretory phase peaks during days:
- 0-5
  - 5-10
  - 10-15
  - 15-22
  - 22-28
- 24) Which of the following aids in mucus secretion for intromission of the penis during intercourse?
- Glans clitoridis
  - Bartholin glands
  - Corpora cavernosa
  - Bulbus vestibuli
  - Labia minora
- 25) Fertilization occurs how long after ovulation?
- 5-10 minutes
  - 30-minutes
  - 2-4 hours
  - 8-25 hours
  - 2-4 days
- 26) How long does it take for sperm to reach the ampulla after ejaculation into the vaginal canal?
- 5-10 minutes



- b) 30-minutes
  - c) 2-4 hours
  - d) 8-25 hours
  - e) 2-4 days
- 27) How long does it take for the sperm to penetrate the zona pellucida via the acrosome reaction prior to the fusion of the male and female pronuclei, forming a zygote?
- a) 5-10 minutes
  - b) 30-minutes
  - c) 2-4 hours
  - d) 8-25 hours
  - e) 2-4 days

**Reproductive #7 – Physiology: Fertilization & Pregnancy**

- 1) Which of the following is true of the second reduction?
- a) Occurs cortical reaction
  - b) Involves the first polar body and female pronucleus
  - c) Involves the first polar body and a zygote
  - d) Involves the second polar body and female pronucleus
  - e) Involves the second polar body and a zygote
- 2) What stage of embryonic development involves an inner cell mass and implants at about six days post-fertilization?
- a) Zygote
  - b) Early cleavage
  - c) Morula
  - d) Blastocyst
- 3) During endometrial preparation (9-10 days post-fertilization), which layer contains endometrial glands?
- a) Zona compacta
  - b) Zona spongiosa
  - c) Zona basalis
- 4) Which of the following is NOT a function of hCG secreted from the blastocyst?
- a) Blocks LH action
  - b) Sustain corpus luteum
  - c) Immunosuppressive
  - d) Promotes trophoblast growth
  - e) Promotes placenta development
- 5) What is the mechanism by which the zona pellucida degrades (hatching) 6-7 days following ovulation?
- a) Blastocyst increases pH
  - b) Uterine secretions wash it away
  - c) Endometrium creates lytic factors
  - d) Inner cell mass engulfs it
  - e) It auto-degrades at a set time
- 6) Which of the following implantation processes involves ligand-receptor interaction?
- a) Apposition
  - b) Adhesion

- c) Cytotrophoblast proliferation
  - d) Syncytiotrophoblast proliferation
- 7) Which of the following eventually develops into an embryo?
- a) Endometrial stroma
  - b) Syncytiotrophoblast
  - c) Cytotrophoblast
  - d) Inner cell mass
  - e) Uterine lumen
- 8) What type of cells invade the primary chorionic villi (cytotrophoblast proliferation) to create the secondary chorionic villi?
- a) Ectoderm
  - b) Endoderm
  - c) Mesoderm
  - d) All of the above
  - e) None of the above
- 9) The PO<sub>2</sub> of the intravillous space is about 30-35mmHg. What is the approximate oxygen saturation of the maternal blood at this location?
- a) 25%
  - b) 45%
  - c) 65%
  - d) 85%
  - e) 100%
- 10) Fetal blood has a low affinity for CO<sub>2</sub>, which is driven off by a concentration gradient. What is the approximate oxygen saturation of fetal blood?
- a) 25%
  - b) 45%
  - c) 65%
  - d) 85%
  - e) 100%
- 11) Which of the following has maternal-placental exchange via receptor-mediated endocytosis?
- a) Large molecules
  - b) Urea and creatinine
  - c) Steroid hormones
  - d) Glucose
  - e) Amino acids
- 12) Which of the following has maternal-placental exchange via facilitated diffusion?
- a) Large molecules
  - b) Urea and creatinine
  - c) Steroid hormones
  - d) Glucose
  - e) Amino acids
- 13) Which of the following is NOT a function of hCS1 and hCS2 (hPL)
- a) Maintain corpus luteum in first trimester
  - b) Convert glucose to fatty acids
  - c) Convert glucose to ketones



- d) Development of maternal mammary glands
- 14) Pregnancy last proximately how many days from ovulation?
- a) 192
  - b) 228
  - c) 266
  - d) 294
  - e) 365
- 15) Which of the following cardiac changes does NOT occur with pregnancy?
- a) Cardiac output increases 35-40% in first trimester
  - b) Increased heart rate and stroke volume at term
  - c) Increased blood volume by as much as 45%
  - d) Increased estrogen and progesterone
  - e) Decreased plasma and RBCs
- 16) Which of the following respiratory changes does NOT occur with pregnancy?
- a) Decreased reserve volume
  - b) Increased PCO<sub>2</sub>
  - c) Increased tidal volume
  - d) Increased CVA to increase thoracic diameter
  - e) Progesterone and estrogen stimulate medullary respiratory center
- 17) Which of the following gastrointestinal changes does NOT occur with pregnancy?
- a) Increased motilin
  - b) Increased gastrin
  - c) Decreased esophageal peristalsis
  - d) Increased gastric reflux
  - e) GI changes mostly due to progesterone
- 18) Which of the following renal changes seen in pregnancy is a concern in preeclampsia?
- a) Increased GFR
  - b) Increased renin levels
  - c) Increased renal plasma flow
  - d) Increased urine frequency
- 19) What additional amount of folate does the pregnant woman need?
- a) 30grams
  - b) 400 to 800mg
  - c) 40 to 80mg
  - d) 4 to 8mg
  - e) 0.4 to 0.8mg
- 20) Which of the following is NOT a function of prostaglandins from the uterus, placenta, and fetus?
- a) Stimulates uterine contractions
  - b) Potentiates oxytocin effect
  - c) Potentiates progesterone and relaxin effect
  - d) Soften, dilate, and thin the cervix
- 21) Which of the following is true?
- a) Estrogen increases oxytocin receptors on the uterus
  - b) Estrogen decreased oxytocin receptors on the uterus

- c) Progesterone increases oxytocin receptors on the uterus
  - d) Progesterone decreases oxytocin receptors on the uterus
- 22) Ferguson reflex involves pressure on the uterine walls causing a release of:
- a) LH
  - b) FSH
  - c) Estrogen
  - d) Oxytocin
  - e) Prolactin
- 23) What is the secretory unit for lactation?
- a) Myoepithelial cells
  - b) Alveolus
  - c) Milk duct
  - d) Lactiferous duct
  - e) Lactiferous sinus
- 24) In the first few days following birth, lactation fluid is colostrum. What component of mother's milk is low and the reason why infants should not be given cow's milk?
- a) Sugar
  - b) Fat
  - c) Cations
  - d) Anions
  - e) Protein
- 25) What does the sucking reflex cause?
- a) Increased dopamine
  - b) Increased milk production
  - c) Increased milk ejection
  - d) Decreased oxytocin
  - e) Decreased colostrum production
- 26) How does suckling inhibit the ovarian cycle (for up to 18-24 months)?
- a) Increases GnRH
  - b) Decreases GnRH
  - c) Increases prolactin
  - d) Decreases prolactin
  - e) Increases oxytocin

### **Reproductive #8 – Pharmacology: Gonadal Hormones & Inhibitors**

- 1) Along with mestranol and quinestrol, which of the following is a synthetic steroid estrogen?
- a) Estrone
  - b) Estriol
  - c) Ethinyl estradiol
  - d) Diethylstilbestrol
  - e) Chlorotrianisene
- 2) Which of the following commonly used estrogens is used in the drugs Yasmin, Loestrin, Norlestrin, and Ovcon?
- a) Ethinyl estradiol
  - b) Micronized estradiol

- c) Estradiol cypionate
  - d) Estropipate
  - e) Quinestrol
  - f) Diethylstilbestrol
- 3) Which of the following is NOT true of estrogens?
- a) Effects are mainly due to protein synthesis via translation of RNA
  - b) Bound to SHBG in blood before entering cell
  - c) Binds to receptor isoforms alpha and beta within the cell
  - d) Binding to receptors causes tighter binding with heat shock proteins
  - e) Rapid effects involve intracellular signaling
- 4) Estrogens decrease which of the following?
- a) Production of proteins (CGB, TBG, SHBG)
  - b) Adipose production of leptin
  - c) Blood coagulability
  - d) HDL and TGs
  - e) LDL and plasma cholesterol
- 5) Which of the following is NOT an indication for the clinical use of estrogens?
- a) Primary hypogonadism
  - b) Central hypergonadism
  - c) Postmenopausal hormone therapy
  - d) Dysmenorrhea
  - e) Oral contraceptives
- 6.1) Which of the following, used in the “morning after” pill, has a risk of adenocarcinoma of the vagina?
- a) Estrone
  - b) Estriol
  - c) Ethinyl estradiol
  - d) Diethylstilbestrol
  - e) Chlorotrianisene
- 6.2) Risk of what type of cancer can be reduced by giving progestin along with estrogens?
- a) Breast cancer
  - b) Endometrial carcinoma
  - c) Adenocarcinoma of the vagina
  - d) Small cell lung cancer
  - e) Mesothelioma
- 7) Which of the following is a natural progestin?
- a) Progesterone
  - b) Hydroxyprogesterone
  - c) Dimethisterone
  - d) Desogestrel
  - e) Gestodene
- 8) What urine measurement can be done to determine the metabolism of progesterone?
- a) Hydroxyprogesterone glucuronide
  - b) Ethinyl estradiol glucuronide
  - c) Pregnenediol glucuronide

- d) Progestin glucuronide
  - e) Vanillylmandelic acid
- 9) Which of the following is NOT an effect of progestational agents?
- a) Promote ketogenesis
  - b) Decrease Na<sup>+</sup> reabsorption and increases aldosterone secretion
  - c) Decrease basal body temperature
  - d) Increase response to CO<sub>2</sub>
  - e) Act as a depressant and hypnotic
- 10) What is the major therapeutic use of progestins?
- a) Hormonal contraception and replacement
  - b) Prolonged anovulation and amenorrhea
  - c) Endometriosis
  - d) To test estrogen secretion
  - e) To test estrogen responsiveness
- 11) What is the major risk of using progestin plus estrogen replacement therapy compared with estrogen alone?
- a) Reduced HDL levels
  - b) Increased blood pressure
  - c) Thromboembolism
  - d) Breast cancer risk
  - e) Increased libido
- 12) What major affect is the basis of hormonal contraception?
- a) Change in cervical mucus
  - b) Change in uterine endometrium
  - c) Change in uterine motility
  - d) Change in uterine tube secretions
  - e) Change in pituitary function
- 13.1) Which of the following is implanted as six tubes to prevent contraception?
- a) Norethindrone
  - b) L-Norgestrel
  - c) Ethynodiol
  - d) Desogestrel
  - e) Norgestimate
- 13.2) Which of the following is the common daily progestin used in drugs such as Micronor, Nor-QD, and Camila?
- a) Norethindrone
  - b) L-Norgestrel
  - c) Ethynodiol
  - d) Desogestrel
  - e) Norgestimate
- 14) Which of the following is NOT an effect of estrogens and progestins?
- a) Depressed ovarian function
  - b) Uterine hypertrophy and polyps
  - c) Bleeding disorders
  - d) Increased serum TGs and cholesterol
  - e) Increased skin pigmentation and acne

- 15) What other clinical use due combined estrogens and progestins have beyond oral contraception?
- a) Decrease the side effects of phenytoin
  - b) Reduce risk of teratogenicity
  - c) Polycythemia vera
  - d) Endometriosis
  - e) Cervical metaplasia
- 16) Risk of which of the following decreases with the use of combined estrogens and progestins?
- a) Endometrial and ovarian cancer
  - b) Subarachnoid hemorrhage
  - c) Venous thromboembolic disease
  - d) Breakthrough bleeding
  - e) Migraine headaches
- 17) Why are oral contraceptives contraindicated in adolescents?
- a) Risk of thromboembolic events
  - b) Risk of clotting specifically in those who smoke
  - c) Drug interactions with antimicrobials
  - d) Risk of liver disease and asthma
  - e) Risk of damage to epiphyseal plates
- 18) Progestins alone may be used when estrogen is contraindicated or as long-term single-use therapy such as depot medroxyprogesterone acetate (DMPA). Most patient taking progestins alone develop which of the following?
- a) Hypertension
  - b) Hepatic disease
  - c) Abnormal bleeding
  - d) Psychosis
  - e) Thromboembolism
- 19) Which of the following estrogen and progesterone inhibitors and antagonists is given with a prostaglandin 48-hours later to cause uterine contraction?
- a) Tamoxifen
  - b) Raloxifene
  - c) Mifepristone
  - d) Danazol
  - e) Anastrozole
- 20.1) Which of the following can be used for advanced breast cancer in postmenopausal women and may cause hot flashes and increase the risk of endometrial cancer?
- a) Tamoxifen
  - b) Raloxifene
  - c) Mifepristone
  - d) Danazol
  - e) Anastrozole
- 20.2) A patient with endometriosis develops deepening of the voice, headaches, hot flashes, edema, decreased breast size, and changes in libido. What drug was she likely given?
- a) Tamoxifen

- b) Raloxifene
  - c) Mifepristone
  - d) Danazol
  - e) Anastrozole
- 21) Clomiphene likely works by increasing secretions of gonadotropins and estrogens by inhibiting estradiol negative feedback. What is the clinical use of this drug?
- a) To induce ovulation
  - b) To reduce endometriosis
  - c) In combination with oral contraceptives
  - d) To eliminate the risk of multiple pregnancies (twins)
  - e) To prevent postmenopausal hot flashes and depression
- 22.1) Which of the following is NOT a clinical use of androgens?
- a) Gynecological disorders
  - b) Atherosclerosis
  - c) Osteoporosis
  - d) Growth stimulation
  - e) Anabolic agents in trauma
- 22.2) Which of the following is NOT an anti-androgen, which may be used in advanced prostatic carcinoma?
- a) Ketoconazole
  - b) Finasteride
  - c) Cyproterone
  - d) Flutamide
  - e) Testosterone cypionate
  - f) Spirinolactone
- 22.3) Which of the following forms of male contraception is as reliable as female contraception?
- a) Testosterone
  - b) Testosterone and testosterone enanthate
  - c) Testosterone and danazol
  - d) Cyproterone
  - e) None of the above
- 23.1) Which of the following is only available in oral form?
- a) Methyltestosterone
  - b) Fluoxymesterone
  - c) Testosterone proprionate
  - d) Testosterone enanthate
  - e) Testosterone cypionate
  - f) Testosterone
- 23.2) Which of the following is available as a topical gel or transdermal?
- a) Methyltestosterone
  - b) Fluoxymesterone
  - c) Testosterone proprionate
  - d) Testosterone enanthate
  - e) Testosterone cypionate
  - f) Testosterone

- 24) Which of the following is NOT an adverse effect of androgens and anabolic agents?
- a) Acne and clitoral enlargement
  - b) Azoospermia
  - c) Lower LDL, raise HDL
  - d) Gynecomastia
  - e) Erythrocytosis
- 25) Gossypol is used to destroy the seminiferous epithelium without altering endocrine function, thus resulting in reduced sperm count. What is the major adverse effect?
- a) Hyperkalemia
  - b) Hypokalemia
  - c) Hypercalcemia
  - d) Hypocalcemia
  - e) Hybernemia
- 26) Most drugs used in the treatment of erectile dysfunction (ED), including sildenafil, verdenafil, and tadalafil, are PDE-5 inhibitors. For those who do not respond, alprostadil may be used. What phosphodiesterase isoform is this drug an analog for?
- a) PDE-1
  - b) PDE-2
  - c) PDE-3
  - d) PDE-4
- 27) Oxytocin (Pitocin) may be given intravenously to a pregnant mother to induce labor. How is the drug administered to postpartum women to induce lactation?
- a) IV
  - b) IM
  - c) Subcutaneous
  - d) Sublingual oral gel
  - e) Nasal spray

### Reproductive #9 – Pathology

- 1) Which of the following may result in ascending urinary tract infections and is associated with exstrophy of the bladder?
- a) Phimosis
  - b) Hypospadias
  - c) Epispadias
  - d) Condyloma acuminatum
  - e) Squamous cell carcinoma of the penis
- 2) Which of the following is frequently caused by repeated infections and may cause ischemia of the glans penis?
- a) Phimosis
  - b) Hypospadias
  - c) Epispadias
  - d) Condyloma acuminatum
  - e) Squamous cell carcinoma of the penis
- 3) Condyloma acuminatum (“venereal warts”) is a benign tumor caused by human papillomavirus (HPV) with clear vacuolization of the prickle cells (koilocytosis). What serotypes are responsible?

- a) Types 6 and 11
  - b) Types 11 and 16
  - c) Types 16 and 18
  - d) Types 18 and 6
  - e) Types 11 and 18
- 4) Squamous cell carcinoma of the penis is uncommon in the United States due to the practice of male circumcision. HPV is found in about half of patients with cancer and is associated with what serotypes?
- a) Types 6 and 11
  - b) Types 11 and 16
  - c) Types 16 and 18
  - d) Types 18 and 6
  - e) Types 11 and 18
- 5) Cryptorchidism (undescended testes) can occur due to defects of the transabdominal phase, controlled by mullerian-inhibiting substance, or the inguinoscrotal phase, controlled by androgen-induced release of calcitonin gene-related peptide from the genitofemoral nerve. These patients are at increased risk of:
- a) HPV
  - b) Squamous cell carcinoma of the penis
  - c) Condyloma acuminatum
  - d) Prostate cancer
  - e) Germ cell tumors
- 6) Atrophy of the testis can occur in atherosclerosis of old age, mumps, cryptorchidism, hypopituitarism, and irradiation. What genetic disorder also leads to testicular atrophy?
- a) Fragile X syndrome
  - b) Klinefelter syndrome
  - c) Turner syndrome
  - d) Duchenne muscular dystrophy
  - e) Down syndrome
- 7.1) Which of the following involves caseating granulomatous inflammation?
- a) Non-specific epididymitis and orchitis
  - b) Granulomatous orchitis
  - c) Gonorrhea inflammation orchitis
  - d) Mumps inflammation orchitis
  - e) Tuberculosis inflammation orchitis
  - f) Syphilis inflammation orchitis
- 7.2) Which of the following is characterized by edema, neutrophil infiltration, macrophages, and lymphocytes and may be caused by Pseudomonas or E. coli in men over the age of 35?
- a) Non-specific epididymitis and orchitis
  - b) Granulomatous orchitis
  - c) Gonorrhea inflammation orchitis
  - d) Mumps inflammation orchitis
  - e) Tuberculosis inflammation orchitis
  - f) Syphilis inflammation orchitis



7.3) Which of the following first involves the testes, may produce gummas with interstitial inflammation or lymphocytic and plasma cell inflammation, and in most cases is not accompanied by epididymitis?

- a) Non-specific epididymitis and orchitis
- b) Granulomatous orchitis
- c) Gonorrhea inflammation orchitis
- d) Mumps inflammation orchitis
- e) Tuberculosis inflammation orchitis
- f) Syphilis inflammation orchitis

8) Why is testicular torsion considered a urologic emergency?

- a) Intense pain may cause dangerously high blood pressure
- b) Intense pain along parasympathetic nerves leads to severe vomiting
- c) Venous plexus occlusion may lead to hemorrhagic infarction
- d) Twisting of spermatic cord creates micro-clots, increasing stroke risk
- e) Testicular torsion is not considered a urologic emergency

9.1) A patient presents with testicular pain. Testing reveals hCG being secreted from syncytial cells and cancer metastasis from the testicles. Which of the following is most likely?

- a) Classic seminoma
- b) Spermatocytic seminoma
- c) Embryonal carcinoma
- d) Yolk sac tumor
- e) Choriocarcinoma
- f) Teratoma
- g) Mixed germinal cell tumor

9.2) A clinician finds metastatic cancer on a patient's radiograph. Testing of the patient reveals testicular cancer despite no testicular enlargement and hCG secretion from syncytiotrophoblastic cells. Which of the following is most likely?

- a) Classic seminoma
- b) Spermatocytic seminoma
- c) Embryonal carcinoma
- d) Yolk sac tumor
- e) Choriocarcinoma
- f) Teratoma
- g) Mixed germinal cell tumor

9.3) A 30-year-old man presents with very enlarged testicles. Testing reveals metastatic cancer and pathology shows lymphocytic infiltration, PAS positive staining, and polygonal neoplastic cells with clear cytoplasm. Which of the following is most likely?

- a) Classic seminoma
- b) Spermatocytic seminoma
- c) Embryonal carcinoma
- d) Yolk sac tumor
- e) Choriocarcinoma

9.4) A 2-year-old boy is found to have a testicular tumor. Schiller-Dulvan bodies are found around capillaries. Testing reveals alpha-fetoprotein. Which of the following is most likely?

- a) Classic seminoma
  - b) Spermatocytic seminoma
  - c) Embryonal carcinoma
  - d) Yolk sac tumor
  - e) Choriocarcinoma
  - f) Teratoma
  - g) Mixed germinal cell tumor
- 10) A boy with precocious puberty is found to have a rare testicular cancer. Pathology reveals intracytoplasmic rod-shaped crystals (Reinke crystals). Which of the following is most likely?
- a) Mixed germinal cell tumor
  - b) Leydig (interstitial) cell tumor
  - c) Spermatocytic seminoma
  - d) Sertolic cell tumor (androblastoma)
  - e) Teratoma
- 11) A testicular mass is found on physical exam of a patient. Testing reveals the patient has primary malignant lymphoma of the testis. Which of the following is most likely true about this patient?
- a) Has Down syndrome
  - b) Has Fragile X syndrome
  - c) Is an infant
  - d) Is an adolescent
  - e) Is elderly
- 12.1) Prostatitis is diagnosed based on the finding of more than 15 leukocytes in a high power field containing milked prostatic secretions. If Gram-negative rods are found as well as a boggy tender prostate, which of the following is most likely?
- a) Non-bacterial prostatitis
  - b) Chronic bacterial prostatitis
  - c) Granulomatous prostatitis
  - d) Acute bacterial prostatitis
- 12.2) A patient with suspected prostatitis is found to have eosinophilia within thick prostatic secretions. Which of the following is most likely?
- a) Non-bacterial prostatitis
  - b) Chronic bacterial prostatitis
  - c) Granulomatous prostatitis
  - d) Acute bacterial prostatitis
- 13) An elderly man presents with hesitancy on urination, dysuria, and poor stream. After a rectal exam finds a nodular mass on the prostate, the man is started on finasteride. Which of the following is most likely?
- a) Chronic prostatitis
  - b) Acute prostatitis
  - c) Benign prostatic hyperplasia
  - d) Rectal fissure
  - e) Adenocarcinoma of the prostate
- 14) An older black male presents with lower back pain and complains of trouble urinating. A rectal exam reveals a solid mass in the peripheral zone of the posterior lobe

of the prostate. Labs show increased serum PSA and prostatic acid phosphatase. The patient is scheduled for a radiograph of his spine. Which of the following is most likely?

- a) Chronic prostatitis
  - b) Acute prostatitis
  - c) Benign prostatic hyperplasia
  - d) Rectal fissure
  - e) Adenocarcinoma of the prostate
- 15) Which of the following is the earliest morphologic evidence of ovulation found in the endometrium?
- a) Gland mitoses
  - b) Tortuosity of glands
  - c) Basal vacuolation
  - d) Secretion
  - e) Stromal edema
  - f) Predecidual reaction
  - g) Leukocytic infiltration
- 16) A young female presents with pelvic pain, adnexal tenderness, fever, and vaginal discharge. Pelvic inflammatory disease (PID) is suspected. What is the most likely cause?
- a) Chlamydiae
  - b) Staphylococci
  - c) Enteric bacteria
  - d) Gonococci
  - e) Streptococci
- 17) A female presents with a mass at the 5-o'clock vaginal position on the labia majora. The patient complains of pain and discomfort. History reveals a recent Staphylococcus infection. Which of the following is most likely?
- a) Pelvic inflammatory disease
  - b) Vulvular dystrophy
  - c) Bartholin gland cyst
  - d) Skene gland obstruction
  - e) Benign tumor of the vulva
- 18) A patient presents with vaginal discomfort and itching. Examination reveals a pale-gray skin near at the vulva. Pathology reveals thickening (acanthosis) and hyperkeratosis, likely from rubbing the skin to relieve pruritus. Which of the following is most likely?
- a) Pelvic inflammatory disease
  - b) Vulvular dystrophy
  - c) Bartholin gland cyst
  - d) Skene gland obstruction
  - e) Benign tumor of the vulva
- 19) A female presents with a sharply circumscribed nodule on the interlabial fold. The nodule has a tendency to ulcerate and bleed. Excision and testing reveals a tumor similar to a sweat gland tumor. Which of the following is most likely?
- a) Bartholin gland cyst
  - b) Papillary hidradenoma
  - c) Lichen simplex chronicus
  - d) Condyloma acuminatum

- e) Lichen sclerosus
- 20) A patient presents with a pruritic, red, crusted, sharply demarked lesion on the labia majora. A clear separation “halo” is seen from surrounding tissue. Cell stain with acid-Schiff. Which of the following is most likely?
- a) Condyloma acuminatum
  - b) Embryonal rhabdomyosarcoma
  - c) Extramammary Paget disease
  - d) Clear cell adenocarcinoma
  - e) Carcinoma and valvular intraepithelial neoplasia (VIN)
- 21.1) Which of the following is rare, associated with HPV, and involves the lesions of the lower 2/3rds metastasizing to the inguinal nodes and lesions of the upper 1/3 metastasizing to the iliac nodes?
- a) Benign tumor of the vagina
  - b) Squamous cell carcinoma
  - c) Clear cell adenocarcinoma
  - d) Embryonal rhabdomyosarcoma
- 21.2) A 4-year-old girl presents with a polypoid, rounded, grape-like cluster (botryoide) protruding from the vagina. Which of the following is most likely?
- a) Benign tumor of the vagina
  - b) Squamous cell carcinoma
  - c) Clear cell adenocarcinoma
  - d) Embryonal rhabdomyosarcoma
- 22) A female presents with suspected cervicitis. Lab testing shows squamous metaplasia and mucous (nabothian) cysts. Culture shows endogenous vaginal aerobes and anaerobes (strep, staph, enterococci, E. coli). What else would you expect to find?
- a) Frothy discharge with PMNs
  - b) Grape-like tumors
  - c) Clear cell adenocarcinoma
  - d) Inguinal node metastasis
  - e) Decreased vaginal pH
- 23) A patient presents with complains of spot bleeding. Pelvic examination reveals growths that are soft and mucoid. Simple curettage reveals they are composed of loose fibromyxomatous stroma. Which of the following is most likely?
- a) Endocervical polyps
  - b) Invasive squamous cell carcinoma
  - c) Extramammary Paget disease
  - d) Cervical intraepithelial neoplasia
  - e) Primary adenocarcinoma
- 24) Koilocytosis would fall under what Bethesda System classification for a Papanicolaou (“Pap”) smear?
- a) Reactive Changes
  - b) ASC, ASG
  - c) Low Grade SIL
  - d) High Grade SIL
  - e) Microinvasion (<3mm)

- 25) Why are Pap smears so effective in the prevention of cervical cancer, such that they have made this form of cancer the 8th leading cause of death when it was the primary cause of cancer death in women about 50 years ago?
- a) The cervical transition zone always contains diffuse atypia
  - b) Carcinoma in situ is easily found with PAS stain
  - c) Most cervical cancers are preceded with a precancerous lesion
  - d) Koilocytotic atypia is found in 100% of cancer cases
  - e) Visual cervical examination during Pap smear can find over 95% of cancers
- 26) A female presents with abnormal vaginal bleeding, pain, and discharge. History reveals she has an intrauterine contraceptive device. Which of the following is most likely?
- a) Endometriosis
  - b) Adenomyosis
  - c) Endometritis
  - d) Dysfunctional uterine bleeding
  - e) Endometrial hyperplasia
- 27) A teenage girl presents with severe colicky dysmenorrhea, dyspareunia, and pelvic pain. If the patient is found to have endometrial islands of tissue in the uterine wall, which of the following is most likely?
- a) Endometriosis
  - b) Adenomyosis
  - c) Endometritis
  - d) Dysfunctional uterine bleeding
  - e) Endometrial hyperplasia
- 28) Which of the following causes of abnormal uterine bleeding is mostly seen in adolescents?
- a) Complications of pregnancy
  - b) Precocious puberty
  - c) Endometrial atrophy
  - d) Coagulation disorders
  - e) Organic lesions
- 29) Which of the following involves abnormal proliferation of the glands, involves inactivation of the PTEN gene, and may eventually develop into adenocarcinoma?
- a) Endometriosis
  - b) Adenomyosis
  - c) Endometritis
  - d) Dysfunctional uterine bleeding
  - e) Endometrial hyperplasia
- 30) A 60-year-old post-menopausal women presents with complaints of vaginal bleeding. History reveals obesity, diabetes, hypertension, and infertility. If adenocarcinoma of the endometrium is found outside of the uterus but not outside the true pelvis, what stage would this patient be classified as?
- a) Stage I
  - b) Stage II
  - c) Stage III
  - d) Stage IV

- 31) Endometrial polyps project into the cavity, may cause abnormal bleeding, and have been associated with use of what drug?
- a) Tamoxifen
  - b) Sildenafil
  - c) Mifepristone
  - d) Danazol
  - e) Anastrozole
- 32) An African American female presents with increased menstrual bleeding. A uterine fibroid is found and it is determined to be the most common of all tumors in women. Which of the following is most likely?
- a) Leiomyoma
  - b) Leiomyosarcoma
  - c) Adenocarcinoma
  - d) Carcinosarcoma
  - e) Adenosarcoma
  - f) Stromal sarcoma
- 33) A postmenopausal women presents with gynecological complains. Pelvic exam reveals a fleshy, bulky polypoid protruding into the cervix. Biopsy reveals differentiated stroma with a variety of malignant mesodermal components including muscle, cartilage, and osteoid. Which of the following is most likely?
- a) Leiomyoma
  - b) Leiomyosarcoma
  - c) Adenocarcinoma
  - d) Carcinosarcoma
  - e) Adenosarcoma
  - f) Stromal sarcoma
- 34) Chromosomal translocation of t(7;17)(p15;q21) cause the fusion of two genes, which results in a different protein that is capable of causing:
- a) Leiomyoma
  - b) Leiomyosarcoma
  - c) Adenocarcinoma
  - d) Carcinosarcoma
  - e) Adenosarcoma
  - f) Stromal sarcoma
- 35) A young adult female presents with lower abdominal pain. She is found to have suppurative salpingitis caused by gonococci. What is she at risk for?
- a) Ovarian tumor
  - b) Ectopic pregnancy
  - c) Polycystic ovarian disease
  - d) Endometrial cancer
  - e) Cervical metaplasia
- 36) Which of the following may be detected on pelvic exam and is associated with a BRCA mutation?
- a) Cysts of the fallopian tubes (Cyst hydatid of Moragini)
  - b) Polycystic ovarian disease (Stein-Leventhal syndrome)
  - c) Tumor of the fallopian tubes

- d) Stromal sarcoma
  - e) Leiomyoma
- 37) A young woman presents with hirsutism, amenorrhea, and obesity. If Stein-Leventhal syndrome is suspected, what lab values would be expected?
- a) Increased LH and FSH
  - b) Decreased LH and FSH
  - c) Increased LH and decreased FSH
  - d) Decreased LH and increased FSH
- 38.1) A clinician, suspecting an ovarian tumor, finds the CA-125 tumor marker. Further testing reveals Psammoma bodies (laminated calcified concretions). Which epithelial stromal-type tumor is most likely?
- a) Serous cystadenoma
  - b) Papillary serous cystadenocarcinoma
  - c) Mucinous cystadenoma
  - d) Mucinous cystadenocarcinoma
  - e) Brenner tumor
  - f) Endometrioid tumor
  - g) Clear cell adenocarcinoma
  - h) Cystadenofibroma
- 38.2) Post-mortem pathology of a woman's ovaries reveals an epithelial stroma-type tumor that has cells resembling the transitional cells of the urinary bladder. Which of the following is most likely?
- a) Serous cystadenoma
  - b) Papillary serous cystadenocarcinoma
  - c) Mucinous cystadenoma
  - d) Mucinous cystadenocarcinoma
  - e) Brenner tumor
  - f) Endometrioid tumor
  - g) Clear cell adenocarcinoma
  - h) Cystadenofibroma
- 38.3) Which of the following epithelial stroma-type ovarian cancers involves a bilateral, unilocular benign cyst lined with ciliated epithelium?
- a) Serous cystadenoma
  - b) Papillary serous cystadenocarcinoma
  - c) Mucinous cystadenoma
  - d) Mucinous cystadenocarcinoma
  - e) Brenner tumor
  - f) Endometrioid tumor
  - g) Clear cell adenocarcinoma
  - h) Cystadenofibroma
- 38.4) A female presents with ascites and hydrothorax (Meigs syndrome). Testing reveals a sex-cord stromal tumor that does not secrete hormones. Which of the following is most likely?
- a) Ovarian fibroma-thecoma
  - b) Granulosa-Theca cell tumor
  - c) Sertoli-Leydig cell tumor

- 38.5) A young girl presents with precocious puberty. Testing reveals an estrogen-secreting sex-cord stromal tumor with Call-Exner bodies (follicles filled with eosinophilic secretions). Which of the following is most likely?
- Ovarian fibroma-thecoma
  - Granulosa-Theca cell tumor
  - Sertoli-Leydig cell tumor
- 38.6) Which of the following ovarian tumors of germ cell origin secretes very high levels of hCG?
- Teratoma
  - Dysgerminoma
  - Yolk sac tumor
  - Choriocarcinoma
- 38.7) Which of the following ovarian tumors of germ cell origin produces alpha-fetoprotein and has a glomerulus-like structure (Schiller-Duval body)?
- Teratoma
  - Dysgerminoma
  - Yolk sac tumor
  - Choriocarcinoma
- 39) A patient is found to have an ovarian tumor with mucin-producing signet-ring cells (Krukenberg). Where did this tumor most likely metastasize from?
- Cervix
  - Endometrium
  - Lumbar spine
  - Lymph node
  - GI tract
- 40) Which of the following types of epithelial tumors of the ovary involves large amounts of solid or papillary tumor mass, with fixation or nodularity of the capsule?
- Benign
  - Borderline
  - Malignant
- 41) A pregnant woman develops premature rupture of the membranes (PROM). An ascending bacterial infection affects the umbilical cord. Which of the following is most likely?
- Chorioamnionitis
  - Acute funisitis
  - Chronic villitis
  - Spontaneous abortion
  - Toxemia of pregnancy
- 42) Placental inflammation and infection (e.g. chronic villitis) classically involves all of the following EXCEPT:
- Toxoplasmosis
  - Malaria
  - Rubella
  - CMV
  - HSV
- 43) What is the most common cause of spontaneous abortion?



- a) Unknown with no genetic abnormalities
  - b) Inflammatory disease
  - c) Trauma
  - d) Infection
  - e) Defective implantation
- 44) Which of the following refers to symptoms of hypertension, proteinuria, and edema (pre-eclampsia)?
- a) Gestational trophoblastic disease
  - b) Acute funisitis
  - c) Chronic villitis
  - d) Spontaneous abortion
  - e) Toxemia of pregnancy
- 45) A female presents in her fourth month of pregnancy with vaginal bleeding and a very large abdomen for her stage of gestation. Testing shows very high levels of hCG. Which of the following trophoblastic diseases is most likely?
- a) Hydatidiform mole
  - b) Invasive mole
  - c) Gestational choriocarcinoma
  - d) Ectopic pregnancy
  - e) Germ cell tumor
  - f) Placental site trophoblastic tumor
- 46) Which of the following presents with low hCG and involves proliferating intermediate trophoblasts, which are larger than cytotrophoblasts but mononuclear, unlike syncytial cells?
- a) Hydatidiform mole
  - b) Invasive mole
  - c) Gestational choriocarcinoma
  - d) Ectopic pregnancy
  - e) Germ cell tumor
  - f) Placental site trophoblastic tumor
- 47) Which of the following may be confused with a sign of invasive breast carcinomas?
- a) Supernumerary nipple
  - b) Accessory axillary breast tissue
  - c) Inversion of the nipple
  - d) Acute mastitis
  - e) Periductal mastitis
- 48) Which of the following is associated with smokers?
- a) Acute mastitis
  - b) Periductal mastitis
  - c) Mammary duct ectasia
  - d) Accessory axillary breast tissue
  - e) Inversion of the nipple
- 49) Which of the following is a presenting sign of both fat necrosis of the breast and breast carcinoma?
- a) Painless palpable mass
  - b) Skin retraction

- c) Density on mammogram
  - d) Calcifications
  - e) All of the above
- 50.1) A breast biopsy of a solid mass extending into the duct lumen finds more than 4 cell layers above the basement membrane. This patient is told they are at an increased risk for cancer and currently have which of the following?
- a) Fibroadenoma of the breast
  - b) Phyllodes tumor of the breast
  - c) Epithelial hyperplasia
  - d) Nonproliferative fibrocystic change
  - e) Sclerosing adenosis
- 50.2) A breast biopsy of a cystic dilation of the ducts reveals blue to brown (blue-dome) coloration that resemble the epithelium of sweat glands. Which of the following is most likely?
- a) Fibroadenoma of the breast
  - b) Phyllodes tumor of the breast
  - c) Epithelial hyperplasia
  - d) Nonproliferative fibrocystic change
  - e) Sclerosing adenosis
- 51) A 30-year-old woman finds a painless firm mass on her breast. Physical examination reveals a freely movable, sharply circumscribed, firm mass on the upper outer quadrant of the breast. Mammogram shows a large “popcorn” calcification. Which of the following is most likely?
- a) Fibroadenoma of the breast
  - b) Phyllodes tumor of the breast
  - c) Epithelial hyperplasia
  - d) Nonproliferative fibrocystic change
  - e) Sclerosing adenosis
- 52) A 60-year-old woman finds a lump in her breast. Biopsy reveals hypercellular stroma with cysts that take on a leaf-like appearance. Which of the following is most likely?
- a) Fibroadenoma of the breast
  - b) Phyllodes tumor of the breast
  - c) Epithelial hyperplasia
  - d) Nonproliferative fibrocystic change
  - e) Sclerosing adenosis
- 53.1) Which of the following has a high association with BRCA 1 gene mutation?
- a) Invasive ductal carcinoma
  - b) Comedocarcinoma
  - c) Papillary-cribriform carcinoma
  - d) Invasive lobular carcinoma
  - e) Medullary carcinoma
- 53.2) A patient presents with a pimple-like tumor. Exam reveals pus can be extruded from the tumor. Lab testing shows pleomorphic cells arranged around areas of central necrosis. Which of the following is most likely?
- a) Invasive ductal carcinoma
  - b) Comedocarcinoma

- c) Papillary-cribriform carcinoma
  - d) Invasive lobular carcinoma
  - e) Medullary carcinoma
- 53.3) A female presents with complaints of her breast “looking like an orange.” Examination reveals a tumor. Biopsy shows pinpoint streaks of chalky white elastotic stroma. The pathologist mentions a distinct grinding sound while cutting the tumor with a scalpel. Which of the following is most likely?
- a) Invasive ductal carcinoma
  - b) Comedocarcinoma
  - c) Papillary-cribriform carcinoma
  - d) Invasive lobular carcinoma
  - e) Medullary carcinoma
- 53.4) Single filed chords of cells infiltration stroma, Indian files, is the hallmark of:
- a) Invasive ductal carcinoma
  - b) Comedocarcinoma
  - c) Papillary-cribriform carcinoma
  - d) Invasive lobular carcinoma
  - e) Medullary carcinoma
- 54) A woman is found to have unilateral erythematous eruption with scale crust. After the patient describes pruritus, the clinician believes she has Paget disease. What would this patient also likely have?
- a) Gynecomastia
  - b) Papillary-cribriform carcinoma
  - c) Invasive carcinoma
  - d) Comedocarcinoma
  - e) Angiosarcoma
- 55) A man presents complaining about breast enlargement. Palpation reveals a button-like subareolar enlargement. Examination reveals normal testicular size. Which of the following is most likely?
- a) Marijuana and heroin use
  - b) Klinefelter syndrome
  - c) Leydig cell tumor
  - d) Sertoli cell tumor
  - e) Liver cirrhosis
- 56) Which of the following is NOT true of breast cancer in men when compared with women?
- a) BRCA2 mutations may be involved
  - b) Nipple discharge is a common symptom
  - c) Ulcerations are more common in men
  - d) Distant metastasis (e.g. brain, liver) is unlikely
  - e) Risk factors are the same as in women
- 57) A patient underwent a mastectomy for breast cancer and is now undergoing radiation therapy. A bulky, palpable mass is found on the skin of the breast area. Stewart-Treves syndrome is suspected, as a complication to the mastectomy. Which of the following is most likely the cause of the current tumor?
- a) Angiosarcoma

- b) Invasive carcinoma
- c) Comedocarcinoma
- d) Gynecomastia
- e) Keloid

**Reproductive #10 – Clinical: Obstetrics & Gynecology Textbook Questions**

- 1) A couple comes in to see you because they have been unsuccessfully trying to conceive for the past 14 months. After a thorough history, you learn that the woman has never been pregnant and that the man has fathered no children to his knowledge. You also learn that the timing of their intercourse has been appropriate for conception. As an initial workup, what do you do next?
- a) Semen analysis for the husband and menstrual tracking, ovulation tracking, and thyroid-stimulating hormone, follicle-stimulating hormone, and prolactin levels for the wife
  - b) Semen analysis and testicular biopsy for the husband and ovulation tracking, hysterosalpingogram, and laparoscopy for the wife
  - c) Offer the couple clomiphene citrate (Clomid) because it has few side effects and the best success rate in couples with unexplained infertility
  - d) Refer the couple to an infertility specialist capable of performing in vitro fertilization
  - e) Do nothing because this couple is not “technically” infertile until they have been trying to conceive for 18 months
- 2) A 41-year-old G3 P2 Caucasian woman presents with heavy, prolonged vaginal bleeding. She has no other complaints. Up until 8 months ago she had regular monthly menses, which lasted 4 to 5 days. Over the past 8 months, her periods have become progressively heavy and a bit longer. The current bleeding episode began 13 days ago. She has no other significant medical history. On physical exam she weighs 122 pounds and her blood pressure is 117/68. On pelvic exam she has a small amount of blood in the vaginal vault. Her uterus is normal size, nontender, and mobile. Her ovaries are not palpable. The patient had a normal Pap smear 3 months ago and no history of abnormal Pap smears. On pelvic ultrasound, she has an 8cm uterus with a normal myometrium and normal endometrial-myometrial junction. The endometrium is 14mm and there is a 2cm by 1.2cm lesion in the uterine cavity. Her beta-hCG, TSH, and endometrial biopsy are all normal. Which of the following is the most likely cause of this patient’s bleeding?
- a) Endometrial polyp
  - b) Endometrial hyperplasia
  - c) Fibroid uterus
  - d) Adenomyosis
  - e) Dysfunctional uterine bleeding
- 3) A 47-year-old G3 P3 black female comes in to see you for a second opinion. She has had fibroids all of her life and has always had regularly timed menses, but they were very heavy. She has never bled after intercourse or between her periods. She has become accustomed to these symptoms but is concerned because her last period lasted 10 days and she was changing her menstrual pad nearly every 2 to 3 hours. Her TSH and endometrial biopsy were within normal limits. Her hematocrit at the visit is 31%. A repeat pelvic U/S shows a multifibroid uterus that is 18cm in overall size. Three years ago her

uterus was 15cm in size and 4 years before that it was 13cm in size. Her primary gynecologist has suggested that she may need a hysterectomy and she wants your opinion. In this situation, the patient's symptoms would best be treated with:

- a) Oral contraceptive pills
  - b) Total abdominal hysterectomy
  - c) Depo-lupron
  - d) Hysteroscopic myomectomy
  - e) Abdominal myomectomy
- 4) A 29-year-old G3 P1 presents complaining of no menses for 4 months after stopping her birth control pills. She is concerned that the use of the oral birth control pills (OCPs) has left her with amenorrhea. The patient has had no recent changes in weight, exercises two to three times a week, and notes no particular changes in either her work or home life. Her obstetric history includes a therapeutic abortion at age 21, a normal spontaneous delivery at age 25, and a miscarriage at age 27. After the dilation and curettage at the time of miscarriage, the patient was hospitalized with an infection of her uterus. Since that time she has taken OCPs. Given this history, which of the following is the most likely etiology of this patient's amenorrhea?
- a) Vaginal agenesis
  - b) Asherman's syndrome
  - c) Mayer-Rokitansky-Küster-Hauser syndrome
  - d) Testicular feminization
  - e) Hypogonadotropic hypogonadism
- 5) What is the mainstay treatment for epithelial ovarian cancer?
- a) Radiation therapy alone
  - b) Surgery alone
  - c) Surgery followed by chemotherapy
  - d) Surgery followed by radiation therapy
  - e) Chemoradiation alone
- 6) What is the absolute contraindication for the use of estrogen-containing oral contraceptives include?
- a) A history of migraine headaches
  - b) A history of pulmonary embolism
  - c) Current smoking
  - d) Symptomatic fibroid uterus
  - e) Current hypertension
- 7) Ultrasound is the primary diagnostic tool for which cause of third trimester bleeding?
- a) Uterine rupture
  - b) Placental abruption
  - c) Placental previa
  - d) Cervical neoplasm
  - e) Vaginal laceration
- 8) A 22-year-old G2 P0 at 33 weeks' gestation is found to have a BP of 166/114mmHg on routine office visit. Her BP at her first prenatal visit at 7 weeks was 124/72. Her urine dip at this most recent visit shows 3+ protein although it previously had 0 to trace protein. The patient is also complaining of a persistent headache although she has no history of

migraines. Her ALT and AST are elevated at 92 and 105. After starting on an antihypertensive agent, magnesium sulfate, and betamethasone, what do you do next?

- a) Order bed rest for the remainder of the pregnancy
  - b) Order bed rest until week 37, then amniocentesis for fetal lung maturity, then delivery
  - c) Immediate induction of labor for anticipated vaginal delivery
  - d) Immediate delivery via cesarean section
  - e) Continue expectant management
- 9) The 22-year-old patient above has a last menstrual period of May 4th, 2006. What is the estimated date of confinement using the Nägele rule?
- a) January 11th, 2007
  - b) January 12th, 2007
  - c) February 4th, 2007
  - d) February 11th, 2007
  - e) February 12th, 2007
- 10) Which of the following is the most predictive risk factor for recurrent preterm labor?
- a) History of spontaneous abortion
  - b) Prior preterm delivery
  - c) Large fetus
  - d) Cigarette smoking
  - e) Teenage pregnancy
- 11) Which of the following has the highest correlation with congenital abnormalities?
- a) Alcohol
  - b) Caffeine
  - c) Cocaine
  - d) Opiates
  - e) Smoking tobacco
- 12) A returning patient presents for her pelvic ultrasound results. She is a 32-year-old G2 P1011 who presents with menorrhagia for the past year. She denies any intermenstrual bleeding or postcoital spotting. However, when her menses come, she needs to wear an overnight pad and a super tampon at the same time. For the first 3 days, she has to change her pad and tampon about every 2 hours. She's already ruined several pairs of pants and has had to leave work twice for heavy bleeding. Her pelvic ultrasound is notable for an 8cm uterus with two intramural fibroids about 2cm each. She has a third fibroid that is 3.1cm. About one-half of that fibroid is reported as being submucosal. Her ovaries are both normal. Her TSH from last visit was normal, her hematocrit is 33%, and her endometrial biopsy showed proliferative endometrium. She wants your advice for what to do next. How would this patient be best managed?
- a) Intravenous estrogen
  - b) Oral contraceptive pills
  - c) Hysteroscopic myomectomy
  - d) Abdominal myomectomy
  - e) Abdominal hysterectomy
- 13) A 19-year-old G3 P1 patient with a history of miscarriage in her last pregnancy presents to the emergency department with some vaginal spotting, no cramping, and no abdominal pain. Her physical examination reveals a slightly enlarged uterus, no

tenderness, and a closed cervical os. A serum beta-hCG level is sent off and returns 346. A pelvic ultrasound shows no intrauterine pregnancy, a 2cm left ovarian cyst, and no free fluid. Your diagnosis of this patient is which of the following?

- a) Threatened abortion, rule out ectopic pregnancy
  - b) Ectopic pregnancy
  - c) Inevitable abortion
  - d) Missed abortion
  - e) Normal pregnancy
- 14) In the 19-year-old patient above, when should a repeat beta-hCG be drawn?
- a) 24-hours
  - b) 48-hours
  - c) 72-hours
  - d) 1-week
  - e) It does not need to be drawn again
- 15) A 29-year-old G0 woman presents for a routine examination. Her physical examination is entirely normal; however, her Pap smear shows a high-grade squamous intraepithelial lesion (HSIL). She is otherwise healthy and is a moderate smoker. You perform an immediate colposcopy and the biopsies read as squamous cell carcinoma in situ (CIS). The patient would like to preserve her fertility if possible. How would you manage this patient?
- a) Simple hysterectomy
  - b) Cryotherapy
  - c) Loop electrosurgical excision procedure
  - d) Radical hysterectomy
  - e) Cold-knife cone biopsy
- 16) A 27-year-old non-pregnant woman comes to the emergency room department complaining of a vaginal discharge. On speculum exam, you observe that she has a mucousy yellow discharge and that her cervix appears erythematous. On bimanual exam, the patient has cervical motion tenderness, no uterine tenderness, and no adnexal tenderness. Her temperature is 36.7C degrees, white blood cell count is 8.4, and the rest of the vital signs and laboratory results are within normal limits. The treatment of choice for this patient is:
- a) Azithromycin 1g PO for 7 days
  - b) Doxycycline 100mg PO BID for 7 days
  - c) Ceftriaxone 250mg IM times 1 and doxycycline 100mg PO BID for 7 days as an outpatient
  - d) Cefoxitin 2g IV Q6h and doxycycline PO as an inpatient
  - e) Ampicillin, gentamicin, and clindamycin IV as an inpatient
- 17) A 32-year-old G2 P2 patient is 7 days' postpartum after repeat cesarean section. She presents to labor and delivery complaining of fever and chills. She is breastfeeding and her breasts are sore and tender. In your differential diagnosis of fever in this patient, which of the following is unlikely because of the timing of the presentation?
- a) Endomyometritis
  - b) Wound infection
  - c) Mastitis
  - d) Pyelonephritis

- e) Onset of lactation, or milk letdown
- 18) A 32-year-old woman presents for her first prenatal visit. She has a history of two singleton births, at 39 and 40 weeks; a twin birth at 28 weeks; and two miscarriages. All four of her children are alive and well. Which of following is her designation of gravidity (G) and parity (P)?
- a) G5 P3024
  - b) G5 P2224
  - c) G6 P3024
  - d) G6 P2124
  - e) G6 P2224
- 19) A 19-year-old G1 P0 at 38 weeks' gestation presents to labor and delivery. On arrival, she is having contractions every 2 to 3 minutes and claims that her water broke 2 days earlier but that she didn't come in because she hadn't reached her due date. She has a temperature of 101.2F degrees, heart rate of 110, blood pressure of 116/72mmHg, and uterine tenderness on palpation. The fetal heart rate is in the 170s with small accelerations and no decelerations. Which of the following is your diagnosis of this patient?
- a) Labor
  - b) Preterm labor
  - c) Chorioamnionitis
  - d) Maternal fever
  - e) Preterm rupture of membranes
- 20) During your pediatric gynecology rotation, you see a 13-year-old girl who is brought in by her mother. The daughter has been very healthy and is a great student and an avid gymnast. The mother is concerned that her daughter has not yet begun to menstruate. The mother had her own menarche at age 11 and she is concerned that something is wrong with her daughter. After a thorough history you perform a physical examination that reveals age-appropriate pubic and axillary hair and breast buds, which the mother says developed 1 year ago. What assessment about this patient's pubertal development is likely to be most accurate?
- a) She was right to be concerned since something is most likely wrong with her daughter's development
  - b) Her daughter will most likely begin to menstruate around age 14
  - c) Her daughter is ahead of the expected pubertal development and should be evaluated for precocious puberty
  - d) Her daughter most likely has a congenital abnormality, which is responsible for the lack of menses
  - e) The daughter very likely has an eating disorder, which is responsible for the lack of menses
- 21) A healthy 28-year-old G0 comes in to see you for increasingly painful periods. She and her husband have been trying to conceive for the past year. The patient reports regular menses each month, which are normal in length and amount of blood. However, a couple days before her menses are due to begin she gets severe abdominal pain and cramping. The pain usually subsides within a day or two of her menses beginning. More recently, her pain is lasting through her entire period and she misses at least a day or two of work each month. She is also beginning to have pain with intercourse as well. She



takes ibuprofen with minimal pain relief for at least 7 days each month. Her only other medication is the Ortho-Evra birth control patch, which she stopped using 1 year ago. On exam, her uterus is retroverted and not easily mobile. There is nodularity noted on the uterosacral ligaments. A pelvic ultrasound reveals a normal uterus and normal bilateral adnexa. What is the most appropriate initial management for this patient?

- a) Diagnostic laparoscopy
  - b) Oral contraceptive pills and NSAIDs
  - c) Depot Lupron with estrogen add-back
  - d) Danazol
  - e) Expectant management
- 22) A 25-year-old G1 P0 at 9 weeks' gestation presents for her initial prenatal visit. She has no medical or surgical history and has a certain LMP that is consistent with her examination. The patient has donated blood in the past and knows that she is Rh negative. In which of the following situations would the patient be cared for without being treated with RhoGAM?
- a) First trimester bleeding
  - b) Second trimester bleeding
  - c) Routinely at the beginning of the third trimester
  - d) Contractions at 34 weeks' gestation
  - e) At the time of an amniocentesis
- 23) A 52-year-old woman presents with no menses for 10 months, hot flashes, vaginal dryness, and mood swings. Her medical history is otherwise without complications. Her physical examination is within normal limits and her thyroid and pituitary function are normal. Her FSH is elevated and her endometrial biopsy shows inactive endometrium with no evidence of hyperplasia or cancer. She has no liver or renal dysfunction and has never been diagnosed with cancer or abnormal vaginal bleeding. How would you counsel this patient regarding the use of combination hormone replacement therapy?
- a) She still has her uterus so she should use progestin therapy alone
  - b) She still has her uterus so she should use estrogen and progestin therapy
  - c) HRT will increase her risk of osteoporosis
  - d) HRT will decrease her risk of breast cancer
  - e) HRT will decrease her risk of uterine cancer
- 24) A 23-year-old G1 P0 at week 38 is being managed with magnesium sulfate while she undergoes induction of labor for severe preeclampsia. She received a 4g bolus followed by a constant infusion of 1g/hr. However, the nurse found the patient to have absent patellar reflexes and a respiratory rate of 6/min. The patient can be aroused but is very drowsy. In addition to discontinuing the magnesium, what should your next management step be?
- a) Administer terbutaline
  - b) Intubate immediately
  - c) Administer calcium gluconate
  - d) Give betamethasone
  - e) Do nothing further
- 25) A 28-year-old class A2 diabetic at 34 weeks gestation presents for a prenatal appointment. In addition to managing her insulin regimen and performing routine counseling, you also discuss plans for delivery. In general, in the well-controlled, insulin-

requiring gestational diabetic woman, which mode and timing of delivery is usually employed?

- a) Expectant management, away the natural onset of labor
  - b) Offer cesarean section in labor
  - c) Offer expectant management until week 42, and vaginal delivery in labor
  - d) Offer induction of labor between weeks 39 and 40 of gestation
  - e) Offer cesarean section if expected fetal weight is > 4,000g
- 26) A 37-year-old G7 P6 with a dichorionic/diamnionic, vertex/vertex twin gestation at 38 weeks presents to labor and delivery for induction of labor. She is started on oxytocin and begins having contractions after several hours. The patient progresses slowly over the next 16 hours until she is 5cm dilated and, at this point, develops a fever and fetal tachycardia. The woman is diagnosed with chorioamnionitis and antibiotic therapy is started. She delivers the babies vaginally 6 hours later. Right after delivery of the second infant, there is a large, continuous hemorrhage from the vagina. The most likely cause of this is:
- a) Vaginal laceration
  - b) Cervical laceration
  - c) Uterine atony
  - d) Uterine rupture
  - e) Placenta accreta
- 27) A 27-year-old G1 P0 African American woman presents at 16 weeks' gestation for a prenatal visit. She has had one prior prenatal visit and no known medical complications of pregnancy. Which of the following genetic tests would only be offered if one of the other tests was positive?
- a) Screening for thalassemia
  - b) Screening for sickle-cell anemia
  - c) Amniocentesis
  - d) Expanded maternal serum alpha-fetoprotein
  - e) Screen for cystic fibrosis
- 28) A 69-year-old woman presents for her annual examination. Her last menstrual period was 20 years ago. She has had no vaginal bleeding since then. During the process of performing her pelvic examination, you notice a thinning and whitening of the vulva and perianal area. When questioned, the patient reports that she has never noticed the changes before. On further questioning the patient has an atrophic vulva with fusion of the labia majora and minora. What would you do next?
- a) Treat with topical testosterone
  - b) Treat with topical ketoconazole
  - c) Treat with topical corticosteroid
  - d) Treat with vaginal estrogen
  - e) Biopsy representative areas of the lesion
- 29) A young woman presents with a recent dilation and evacuation of the uterus for a complete molar pregnancy. She is not being followed with weekly beta-hCG levels to monitor for recurrent disease. Initially, her beta-hCG levels declined. Unfortunately, the levels then plateaued and, 8 weeks after evacuation began to rise. They have continued to rise over the past 2 weeks. The patient has not been sexually active since the evacuation and has been reliably taking oral contraceptive pills. You inform her of the rising levels

and your suspicion of a persistent/invasive molar pregnancy. The evaluation for metastatic disease is negative. Together you make a plan for her follow-up care. How do you manage her disease at this stage/

- a) Continue expectant management
  - b) Repeat D&C
  - c) Total abdominal hysterectomy
  - d) Single-agent chemotherapy
  - e) Multi-agent chemotherapy
- 30) Which of the following is a tocolytic whose mechanism of action is to directly block the influx of calcium into smooth muscle cells?
- a) Indomethacin
  - b) Nifedipine
  - c) Magnesium sulfate
  - d) Betamethasone
  - e) Terbutaline
- 31) A 34-year-old G3 P1102 presents for routine prenatal visit at 32 weeks' gestational age. Fetal heart tones are measured at 140 by Doppler. Fundal height is 28 centimeters, slightly increased from 27 centimeters at her last visit 3 weeks ago. The patient undergoes an ultrasound evaluation, which demonstrates an estimated fetal weight of 2,120g, the 44th percentile for age, and an obvious scarcity of amniotic fluid with an amniotic fluid index (AFI) of 3. Which of the following conditions could be responsible for oligohydramnios in this pregnancy?
- a) Poorly controlled maternal diabetes
  - b) Fetal renal agenesis
  - c) Fetal duodenal atresia
  - d) Maternal-fetal Rh incompatibility
  - e) Fetal tracheo-esophageal fistula
- 32) Which of the following can help in differentiating secondary lupus flare from preeclampsia?
- a) Catheterized urinalysis
  - b) Platelet count
  - c) Serial blood pressure measurements
  - d) Complement levels (C3, C4)
  - e) Transaminitis
- 33) A 21-year-old G0 presents for her first gynecologic exam. She states that she is not sexually active and is a virgin. She is a college senior who plays volleyball on the club team and has no significant medical history. She has regular menses with some mild dysmenorrhea. On speculum exam, you observe a small raised lesion 0.5cm in diameter on the face of the cervix. It is smooth and blue in color with the appearance of a bubble underneath the cervical surface. What is your diagnosis?
- a) Bartholin cyst
  - b) Nabothian cyst
  - c) Skene gland cyst
  - d) Cervical dysplasia
  - e) Cervical cancer

34) A 25-year-old nulliparous female presents to her gynecologist with chief complaint of infertility. She states that she and her husband have been trying to get pregnant for the past year. She has regular periods that she considers somewhat heavy associated with cramping pain during the first 2 to 3 days of her menses. She undergoes a hysterosalpingogram which confirmed tubal patency but demonstrated an irregular uterine cavity surface consistent with submucosal leiomyomata (fibroids). Considering this patient's desire for a pregnancy, what is the most appropriate treatment for her fibroids?

- a) Uterine artery embolization
- b) Combined oral contraceptives
- c) Depot medroxyprogesterone
- d) Hysteroscopic myomectomy
- e) Total hysterectomy

35) Which of the following would be an absolute contraindication for a trial of labor after cesarean and attempt at vaginal birth after cesarean (VBAC)?

- a) A classic cesarean section for transverse presentation
- b) An emergent low-transverse cesarean section for non-reassuring fetal status
- c) A low-vertical cesarean section for cephalopelvic disproportion
- d) A scheduled low-transverse cesarean section for active herpes simplex lesions
- e) A low-transverse cesarean section for breech presentation

36) A 21-year-old G1 P0 at 42 weeks' gestation presents with mild contractions every 4 to 5 minutes and a cervical examination of 1cm dilation, 50% effaced at -2 station. The fetal heart rate tracing reveals a baseline in the 140s with repetitive variable decelerations. The patient has had routine prenatal care and a normal fetal survey at 18 weeks' gestation. Which of the following is the most likely cause of these decelerations?

- a) Uteroplacental insufficiency
- b) Maternal hypotension
- c) Oligohydramnios
- d) Fetal acidemia
- e) Fetal head compression

37) A 23-year-old G0 P0 woman presents to the emergency room complaining of a sudden onset of LLQ pain which began a few hours ago. The pain is now dull and achy but persistent. She has regular menses and is not sexually active. Her last period was 4.5 weeks ago. She says that she is a few days overdue for her menses. This is not typical for her. She denies any nausea, vomiting, or diarrhea. She is afebrile, normotensive, and her abdominal exam is notable for moderate LLQ tenderness with palpation. She has no rebound, her abdomen is not rigid, and she has no involuntary guarding. Her labs show a hematocrit of 38% and a beta-hCG that is negative. A pelvic ultrasound reveals a 4cm complex left ovarian cyst and a small amount of complex free fluid in the cul-de-sac. After a few hours' observation, you reexamine the patient and her exam has improved a bit and a repeat hematocrit is 37%. How would you proceed with this patient?

- a) Take her to the OR for a left ovarian cystectomy
- b) Start her on an oral contraceptive pill to suppress cyst formation and reevaluate her at her next annual visit
- c) Reassure her and have her follow up in 2 week, if stable, then repeat the pelvic ultrasound in 60 to 90 days

- d) Reassure her that all is well and prescribe an NSAID for her discomfort
  - e) Take her to the OR for a left oophorectomy
- 38) Which of the following actions would likely worsen shoulder dystocia?
- a) Suprapubic pressure
  - b) Fundal pressure
  - c) Increased flexion of the hips
  - d) Delivery of the posterior arm
  - e) Episiotomy
- 39) A 42-year-old G3 P3 comes in to see you for a second opinion. She has had fibroids all of her life but her periods have always been regular and she has never had postcoital spotting or intermenstrual bleeding until recently. Over the past year or so, her periods have become very heavy with more cramping and she also had some prolonged menses lasting 7 to 10 days (normal for her is 4 days). She is sexually active with her husband but had a tubal ligation after their last child was born. Her TSH was normal and her beta-hCG was negative. Her FSH level showed her to be premenopausal. Her pelvic ultrasound showed an 8cm uterus with two 2cm intramural fibroids. There was thickening of the junction between the endometrium and myometrium up to 15mm in some locations. The junction was indiscernible in other places. Her ovaries were both normal. This was confirmed on pelvic MRI. Her primary gynecologist has suggested that she may need a hysterectomy and she wants your opinion. In this situation, the patient's symptoms would best be treated with:
- a) Total abdominal hysterectomy and bilateral salpingo-oophorectomy
  - b) Hysteroscopic myomectomy
  - c) Abdominal myomectomy
  - d) Total abdominal hysterectomy
  - e) Vaginal hysterectomy
- 40) A 24-year-old graduate student presents 36 hours after she and her partner experienced a condom break while having an intercourse. She is using no other form of contraception and her last menstrual period started 2 weeks ago. She is in the middle of her graduate studies and does not wish to be pregnant at this time. What do you tell this patient?
- a) You have nothing to offer her because there is no way to prevent pregnancy once a contraceptive accident has occurred
  - b) You have nothing to offer her because, although there is a "morning after" pill, it must be given within the first 24 hours after unprotected intercourse
  - c) Take 2, 35g birth control pills now, and 2 more 24 hours from now
  - d) Take 1, 0.75mg levonorgestrel now, and another 12 hours from now
  - e) It is very unlikely that she will get pregnancy and she should come back if she doesn't get a period within 6 weeks
- 41) A 36-year-old G1 with a singleton pregnancy at 27 weeks' gestation presents for routine prenatal care and undergoes diabetes screening with a 50g oral glucose load. Her serum glucose 1-hour after glucose administration is 147. What is the next appropriate action for this patient?
- a) Have patient return for diabetic teaching and nutritional counseling
  - b) Have patient recording fasting and postprandial glucose readings via glucometer

- c) Have patient return for 3-hour 100g glucose tolerance test
  - d) Have patient return for fasting serum glucose
  - e) Have patient return for hemoglobin A1c
- 42) Which of the following is a normal maternal physiologic change of pregnancy that contributes to dyspnea of pregnancy?
- a) Decreased tidal volume
  - b) Decreased PaCO<sub>2</sub>
  - c) Increased total lung capacity
  - d) Increased expiratory reserve volume
  - e) Decrease in minute ventilation
- 43) A 17-year-old G1 presents in term labor and progresses to complete dilation and +3 station. She pushes for 2 hours and progresses to +4 station but cannot deliver the fetal head. Which of the following is a theoretical benefit to performing a mediolateral episiotomy compared to a median (or midline) episiotomy?
- a) Less painful for patient
  - b) Decreased risk of infection
  - c) Ease of repair
  - d) Decreased risk of fourth-degree laceration
  - e) Improved healing
- 44) A 29-year-old G2 P1001 with a singleton pregnancy at 35 weeks' gestation presents for routine prenatal visit. As part of her visit, her physician performs Leopold maneuvers and suspects her fetus is in the breech position. An ultrasound confirms breech positioning, and the patient is counseled on her options for delivery. She has a history of previous vaginal delivery at term, delivering an 8lb 3oz baby. She would prefer a vaginal delivery. What would you recommend for this patient?
- a) Recheck fetal position at 37 weeks and if still breech, attempt external version
  - b) Recheck fetal position at 39 weeks and if still breech, repeat cesarean section
  - c) Admit to L&D at 35 weeks, administer an epidural, and attempt external version as version is more successful earlier in gestation
  - d) Plan for repeat cesarean section at 39 weeks as fetus is unlikely to spontaneously convert to a vertex position
  - e) Wait for spontaneous labor and if still breech, repeat cesarean section
- 45) A 23-year-old woman presents with multiple lesions on her labia and perineum. These tender ulcers have been causing discomfort for 36 hours. The patient also complains of dysuria and fatigue. On physical exam, she also has bilateral inguinal adenopathy. A Tzanck prep of one of the lesions reveals multinucleated giant cells. The woman is concerned that this was transmitted sexually and would like to be tested for other sexually transmitted diseases. Which of the following tests should be ordered?
- a) Rapid plasma reagin (RPR)
  - b) HIV
  - c) Chlamydiazyme DNA probe
  - d) Gonorrhea culture or DNA probe
  - e) All of the above
- 46) Which of the following regimens can be used to cure the 23-year-old patient above?
- a) Acyclovir 400mg PO TID
  - b) Ceftriaxone 250mg IM x 1

- c) Azithromycin 1g PO x 1
  - d) Metronidazole 500mg PO BID
  - e) None of the above
- 47) A colleague asks for your opinion with a patient she is currently examining. The patient is a 37-year-old G2 P2 who is presenting with postcoital spotting. Her menstrual periods are regular in amount and timing. She has never had this symptom before and has had the same sexual partner, her husband, for 8 years. On exam she has normal external female genitalia and a normal vagina. Her cervix shows no discharge or cervical motion tenderness. The cervical os is noted to contain a 3mm fleshy pedunculated mass. Her uterus is normal in size, mobile, and nontender. Her last Pap smear was 6 months ago and was negative for malignancy. How would this patient be best managed?
- a) Observation and menstrual calendar
  - b) Repeat Pap smear
  - c) Pelvic ultrasound
  - d) Remove the mass in the office at that time
  - e) Abdominal hysterectomy
- 48) A 17-year-old gymnast presents in generally good health except for the absence of menses. She states that she developed breasts later than her friends and never began menstruation. On physical examination, she has Tanner stage V development of breasts and pubic hair. On speculum exam, her cervix appears normal and she has a normal bimanual exam. The most likely etiology of this patient's primary amenorrhea is:
- a) Anorexia nervosa
  - b) Gonadal agenesis
  - c) Transverse vaginal septum
  - d) Testicular feminization
  - e) Hypogonadotropic hypogonadism
- 49) A 46-year-old woman was diagnosed with metastatic breast cancer. She underwent mastectomy and axillary node dissection, which showed positive lymph node involvement. She underwent breast reconstruction at the same time as her primary surgery. The tissue was sent for estrogen and progesterone receptor evaluation and both were positive. What would be your next step in treatment?
- a) No further therapy is needed
  - b) Chemotherapy and hormone therapy
  - c) Chemotherapy alone
  - d) Hormone therapy alone
  - e) Radiation therapy alone
- 50) A 27-year-old woman presents complaining of foul-smelling vaginal discharge. On exam she has a gray-green discharge and the cervix has punctate epithelial papillae, giving it a "strawberry" appearance. On wet prep a unicellular organism with flagella can be seen. This organism is most likely:
- a) *Candida albicans*
  - b) *Trichomonas vaginalis*
  - c) *Gardnerella vaginalis*
  - d) *Bacteroides fragilis*
  - e) *Haemophilus ducreyi*

51) A 27-year-old G1 P0 at 40 weeks' gestation presents to labor and delivery in active labor. Over the course of several hours, she progresses from 3cm to 8cm dilation. At this point, she is in:

- a) Stage I of labor, latent phase
- b) Stage I of labor, active phase
- c) Stage II of labor, latent phase
- d) Stage II of labor, active phase
- e) Stage III of labor

52) A 27-year-old woman presents to the emergency department complaining of vaginal discharge and abdominal pain. On physical examination, she has a temperature of 38.1C degrees and on abdominal exam has tenderness in the right upper quadrant and lower abdomen with minimal peritoneal signs. On speculum exam, the patient has a mucousy yellow discharge. On bimanual exam, she has cervical motion tenderness and bilateral adnexal tenderness. Her white blood cell count is 14.3 and a pelvic ultrasound shows a normal uterus and normal ovaries bilaterally. The most likely diagnosis for this patient is which of the following?

- a) Cervicitis
- b) Endomyometritis
- c) Pelvic inflammatory disease
- d) Tubo-ovarian abscess
- e) Appendicitis

53) A 68-year-old woman presents with vulvar pruritus for the prior year that has been increasing over the past few months. She has tried antifungal medications, which seem to help but the symptoms always return and have persisted for several months. She went through menopause at age 49 and has not been sexually active for 10 years. She does not use douching products and is not on any antibiotics. On physical examination, you note thin white epithelium of the labia, perineum, and perianal area, which is consistent with lichen sclerosis. How do you proceed?

- a) Wide local excision of the lesion
- b) Perform a punch biopsy of the vulvar lesion
- c) Use cryotherapy to eradicate the lesion
- d) Culture the vagina and treat with a long course of antifungals
- e) Treat with moderate-potency topical steroids

54) A 29-year-old G3 P2 at 38 weeks' gestation presents to labor and delivery complaining of the sudden onset of abdominal pain and bright-red vaginal bleeding. On examination, her uterus is firm and tender to palpation and the tocodynamometer reveals regular contractions every 1 to 2 minutes. The fetal heart monitor shows no evidence of fetal distress. The patient had a normal ultrasound at week 34 that showed the infant in the vertex presentation. Which of the following is the most likely diagnosis in this patient?

- a) Labor
- b) Premature rupture of membranes
- c) Placenta accreta
- d) Placenta previa
- e) Placental abruption



55) A 45-year-old G4 P4 Caucasian female comes in to see you for an annual exam. During this time she mentions that she has had some pelvic pressure and an uncomfortable sensation in her vagina, which has worsened over the past year or so. She describes a pressure sensation in her vagina, which feels as if she is “sitting on a small ball.” She also complains of urinary frequency but denies any leaking of urine or irregular bleeding. Her past obstetric/gynecologic history is notable for four term spontaneous vaginal deliveries and two of the children were over 10 pounds at birth. She has regular menses and denies any symptoms of menopause. She has no major medical problems. She has worked for a national package delivery business for the past 15 years. As such, she loads and unloads heavy boxes much of the day. Her pelvic exam is notable for a large bulging anterior vaginal wall. In this situation, how would the patient’s symptoms best be treated?

- a) Bladder suspension/sling procedure
- b) Vaginal pessary
- c) Anterior colporrhaphy
- d) Anticholinergic drugs
- e) Kegel exercises

56) A 23-year-old woman presents with a single papule on her right labia. It is nontender and approximately 1cm in diameter. The rest of her physical exam is negative except for palpable inguinal adenopathy. She has never had lesions like this before. She last had intercourse 2.5 weeks ago and wants to be tested for sexually transmitted diseases. Which of the following would likely not be ordered in a routine STI screen?

- a) Gonorrhea culture or DNA probe
- b) Chlamydiazyme DNA probe
- c) Rapid plasma reagin
- d) HIV
- e) HSV Ab titers

57) Dark-field microscopy is performed on the above patient, revealing motile spirochetes. You treat this patient with which of the following?

- a) Azithromycin 1g PO
- b) Acyclovir 400mg PO TID
- c) Acyclovir 400mg IV TID
- d) Benzathine penicillin G 2.4 M units x 1
- e) Penicillin G 2.4 M units IV Q4h

58) A 43-year-old G2 P1 Caucasian female presents with involuntary loss of urine. Her history is notable for a radical hysterectomy and bilateral salpingo-oophorectomy for cervical cancer. Unfortunately, she had a recurrent of her cancer but it was controlled with pelvic radiation. She is feeling well but is concerned about constantly leaking urine. The leaking is painless but continuous. When methylene blue is instilled into the bladder in a retrograde fashion, there is no blue leakage onto the vaginal tampon. However, when indigo carmine is intravenously administered, the dye leaks onto the tampon. What is the most likely source of this patient’s incontinence?

- a) Urethrovaginal fistula
- b) Vesicovaginal fistula
- c) Ureterovaginal fistula
- d) Overflow incontinence

- e) Genuine stress urinary incontinence
- 59) A 27-year-old G1 P0 at 40 weeks' gestation presents to labor and delivery with contractions every 6 to 8 minutes. Of the following findings, which is the most worrisome on the fetal heart tracing?
- a) Repetitive early deceleration, minimal variability
  - b) No heart rate deceleration, minimal variability
  - c) Repetitive late deceleration, absent variability
  - d) No heart rate decelerations, moderate variability
  - e) Repetitive variable deceleration, moderate variability
- 60) You are seeing a patient in follow-up after your partner started her on hormone replacement therapy (HRT) 3 months ago. She had severe menopausal symptoms including hot flashes, vaginal atrophy, and mood swings. She has no history of liver disease, cancer of any kind, DVT, or pulmonary embolism. She has never been diagnosed with abnormal vaginal bleeding. She is very happy with the symptom relief she has received but wonders how long she should continue using HRT. What do you recommend for her?
- a) Continuous therapy for the next 5 years and then stop to see if symptoms return
  - b) You inform her that there's no risk in continuing HRT indefinitely
  - c) You suggest she continue HRT until her symptoms are completely gone
  - d) You recommend a 6- to 12-month course and then changing to other options to address any remaining symptoms
  - e) You apologize for your colleague and explain that she should have never been started on HRT and should try other remedies for her symptoms
- 61) A 23-year-old G1 P0 at 35 weeks' gestation presents with a vaginal gush of fluid. On sterile speculum examination, the patient has a pool of clear fluid in the vagina and is nitrazine and fern positive. She is contracting every 3 to 4 minutes, and her cervix on visualization appears to be dilated 2 to 3cm. Which of the following is the best course of action?
- a) Tocolysis with magnesium or terbutaline
  - b) Betamethasone and tocolysis
  - c) Betamethasone and no tocolysis
  - d) Expectant management
  - e) Amnio/dye test
- 62) A 19-year-old woman presents with complaints of no periods for the past 7 months. During this time she started college and feels her stress level has increased. The patient has also changed her eating habits, which has led to a weight decrease from 120 to 105 pounds. She has noted no other changes in her health. Which of the following tests should be ordered initially?
- a) Thyroid-stimulating hormone (TSH), prolactin
  - b) Beta-hCG, prolactin, TSH
  - c) Follicle-stimulating hormone, Beta-hCG
  - d) Prolactin, beta-hCG, DHEAS
  - e) Testosterone, beta-hCG
- 63) The labs ordered for the 19-year-old patient above were all normal. Which of the following would be the best way to assess this patient's estrogenization?
- a) Progesterone challenge test

- b) ACTH stim test
  - c) LH/FSH ratio
  - d) Estradiol levels
  - e) Endometrial biopsy
- 64) A 29-year-old G0 has been a type 1 diabetic for 17 years and now presents for pregestational counseling. In addition to the standard pregestational advice such as checking a rubella titer and to take folic acid, you counsel her regarding tight blood sugar control prior to becoming pregnant. Assuming that the patient lowers her HgbA1c prior to pregnancy, the risk of which of the following complications will be unchanged?
- a) Caudal regression syndrome
  - b) Cardiac anomalies
  - c) Fetal macrosomia
  - d) Neural tube defects
  - e) All of the above
- 65) A 43-year-old patient presents with a 2cm breast mass in the right upper quadrant of her left breast. On examination in your office there is no skin change, nipple discharge, enlarged lymph nodes, or tenderness. She has no known family history of breast cancer. She reports the mass has not changed after her menstrual cycle and the mass is still present. An ultrasound shows that the mass is not a cyst. You obtain a mammogram, which is negative. What is the next management step for this patient?
- a) No further follow-up is needed
  - b) Follow with clinical exams
  - c) Reexamine at her annual exam in 4 months
  - d) Excisional biopsy
  - e) Fine-needle aspiration or core biopsy
- 66) A 19-year-old woman presents with a complaint of 6 months of amenorrhea. She notes that she has not had a period since starting college last fall. The patient notes no weight loss during that time and has, in fact, gone from 173 to 181 pounds over the past few months but believes the weight gain is secondary to change in diet during college. She denies nipple discharge, frequent headaches, and vaginal discharge. She notes no other symptoms. Which of the following tests is most likely to be abnormal, indicating her diagnosis?
- a) Thyroid-stimulating hormone
  - b) Follicle-stimulating hormone
  - c) Prolactin
  - d) Luteinizing hormone
  - e) Beta-hCG
- 67) A 38-year-old G0 P0 woman comes in to see you at the urging of her friend. She is concerned because she has not had a period in 8 months. She regrets not coming in sooner but she is 275 pounds and felt embarrassed about her weight. She says that she has skipped menstrual periods all of her life and has never had a regular monthly period. She denies headaches, visual changes, or nipple discharge. She denies any hot flashes, mood swings, or vaginal dryness. She and her husband have tried to conceive for years but have been unable to become pregnant. They still desire a child. Her past medical history is notable for morbid obesity, hypertension, and infertility. Her TSH and PRL are both normal and her FSH is at a premenopausal level. You perform an endometrial biopsy,

which shows complex endometrial hyperplasia without atypia. What would be the most important next step in her management?

- a) Progestin therapy and repeat an endometrial biopsy in 3 to 6 months
- b) OCPs for menstrual regulation
- c) Progesterone for menstrual regulation
- d) Abdominal hysterectomy
- e) Recommend weight loss

68) A 52-year-old menopausal patient comes in for a complaint of involuntary leaking urine. These episodes occur without warning and may happen any time during the day or night. The leaking occasionally occurs with coughing or laughing but there is no clear association between her leaking and any specific activity. Occasionally, if she even sees a bathroom, she feels the urge to void. This has become more and more of a problem for her since she has an active work life and social life. You perform some simple tests in your office and send her for further urodynamic testing. Her physical exam is largely unremarkable. Her urinalysis and cultures are negative. Urodynamic evaluation shows the presence of spontaneous bladder contractions even after filling the bladder with small amounts of fluid. What treatment would you offer this patient?

- a) Bladder suspension/sling procedure
- b) Vaginal pessary
- c) Kegel exercises
- d) Anticholinergics
- e) Anterior colporrhaphy

69) A 17-year-old G1 P0 presents for a first prenatal visit. She has had minimal symptoms, but she has gained 10 pounds over the past 2 to 3 months. She does not know when her last menstrual period (LMP) was. Which of the following would be the most useful to determine her estimated date of delivery?

- a) Physical examination
- b) Maternal perception of fetal movement
- c) Abdominal ultrasound 16 weeks' gestation
- d) Transvaginal ultrasound at 8 weeks' gestation
- e) Her best guess at LMP

70) A 19-year-old woman presents complaining of 7 months of amenorrhea. She notes that she has not had a period since 2 to 3 months after starting college. She notes weight loss during that time from 131 to 114 pounds over the past few months but believes the weight loss is secondary to diet change during college. She also has insomnia, heat intolerance, and occasionally hot flashes. Which of the following tests would most likely indicate her diagnosis?

- a) Thyroid-stimulating hormone
- b) Luteinizing hormone
- c) Prolactin
- d) Beta-hCG
- e) ACTH stim test

71) A 21-year-old G1 P1001 is now 36 hours status post a primary low transverse cesarean section for failure to progress after a prolonged attempt at a vaginal delivery. She is complaining of abdominal pain that is worsening. Her temperature is 38.5C degrees, BP is 115/70mmHg, P106, 97% O2 saturation, and respirations of 16. Her

uterine fundus is exquisitely tender to palpation. Lungs are clear to auscultation, no signs of erythema or tenderness of the breasts, and she has no swelling or pain in her lower extremities. There is no incisional erythema or induration. Labs reveal a WBC of 22 and hematocrit of 34. What is the most appropriate next step to evaluate and treat this patient?

- a) CT of the abdomen and transfuse 2 units of packed RBCs
- b) Do nothing, as these are all normal findings after a cesarean delivery
- c) Culture for *Gonorrhea* and *Chlamydia* and treat with azithromycin
- d) Perform a bimanual exam and start IV clindamycin and gentamycin
- e) Dopplers of the lower extremities and start heparin or lovenox

72) A 68-year-old postmenopausal G4 P4004 is seen in your clinic for her annual exam. She complains of occasional urinary incontinence with sneezing or coughing, and also reports heaviness in the lower abdomen and mild bulging from the vagina that is more prominent at the end of the day. She has no fecal incontinence and no vaginal dryness. Her PMH is significant for obesity, COPD, CHF, and poorly controlled diabetes. She has smoked 1/2 PPD for the last 40 years. Three of her children weighed more than 9lbs at birth. On pelvic exam you note second-degree pelvic relaxation. What treatment would you recommend for this patient?

- a) Placement of a mesh transobturator sling for urethral support
- b) Vaginal hysterectomy and McCall culdoplasty
- c) Anterior colporrhaphy
- d) Posterior colporrhaphy
- e) Placement of pessary and encourage Kegel exercises

73) A 13-year-old girl is brought in by her mother with the concern that menstruation has not yet started. The young girl is well nourished, but not overweight. Her mother was 11-years-old at menarche. She states that her daughter first started developing breast tissue 6 months ago, which is when she started wearing a training bra. Shortly thereafter she started to develop a small amount of pubic and axillary hair. On examination you find that the patient has a small amount of hair covering the labia majora only and does not extend onto the mons pubis. She has development of breast buds and papilla and areolar enlargement, but there is no separation in contour between the breast and areola. What Tanner stage would you assign this patient?

- a) Tanner stage I
- b) Tanner stage II
- c) Tanner stage III
- d) Tanner stage B
- e) Tanner stage C

74) A 16-year-old female presents to your clinic with primary amenorrhea. She is not sexually active and to confirm you check a pregnancy test, which is negative. She had normal breast development that began at age 12 and is now at Tanner stage V. Pelvic exam reveals a blind pouch that represents a very shortened vagina. Abdominal ultrasound reveals bilateral normal appearing ovaries and a pelvic mass consistent with a uterus. Chromosome analysis reveals that she is 46,XX. Which is the most likely diagnosis?

- a) Testicular feminization
- b) Gonadal agenesis
- c) Mayer-Rokitansky-Kuster-Kauser syndrome

- d) Swyer syndrome
  - e) Turner syndrome
- 75) A young married couple returns to your clinic with 2 years of infertility. She has regular menses and per the ovulation predictor kits and basal body temperature charting, she ovulates regularly on day 13 or 14. They have been practicing timed intercourse with no success. Hysterosalpingogram shows that both of her fallopian tubes are patent. Semen analysis collected at the last visit shows that he has a low sperm count, but normal motility and morphology. He is otherwise healthy and takes no medications except for an over-the-counter multivitamin and does not smoke. What is the best recommendation for this couple to achieve conception?
- a) With a low sperm count it will be nearly impossible for this couple to conceive, their best options would be to pursue adoption or donor sperm
  - b) This couple may be able to achieve pregnancy with intrauterine insemination in which washed sperm is inserted into the uterus at the time of ovulation
  - c) This couple should be referred to a reproductive endocrinologist so that intracytoplasmic sperm injection can be performed
  - d) The husband should begin to routinely take warm baths to encourage a better sperm count for the next month
  - e) The next best step for this couple would be for the woman to start clomiphene citrate and practice timed intercourse accordingly
- 76) A 27-year-old G2 P2 returns to your clinic after her Pap smear returned as high-grade squamous intraepithelial lesion (HSIL). On colposcopic exam you note an area on the anterior cervix at the squamocolumnar junction that turns opaque white with administration of acetic acid. A mosaic pattern surrounds this area with small red punctate lesions within the mosaicism. You biopsy this area and send it to pathology. An endocervical curettage is also performed. She tolerated the procedure without any difficulties. The lesion appears to be confined to the ectocervix. The pathology on the cervical biopsy returns as CIN II. The endocervical curetting were within normal limits (negative for dysplasia). What treatment recommendations would you make for this patient?
- a) Repeat Pap and colposcopy in 6 months
  - b) LEEP to be performed in the office
  - c) Cold-knife conization in the operating room
  - d) Two-stage or “top-hat” LEEP procedure
  - e) Hysterectomy
- 77) At the end of her visit for a blood pressure check, a 48-year-old G3 P3 mentions that she has been having an embarrassing problem with leaking a small amount of urine when she coughs, laughs, or sneezes. She denies any dysuria, hematuria, or nocturia and denies the urge to void when hearing running water or passing a ladies room. Mostly, she finds her symptoms to be inconvenient and embarrassing. She’s otherwise healthy and has regular monthly menses and has had three vaginal deliveries. What initial therapy would best address her symptoms?
- a) Bladder suspension/sling procedure
  - b) Vaginal pessary
  - c) Anterior colporrhaphy
  - d) Anticholinergics

- e) Kegel exercises
- 78) A 35-year-old G3 P2 comes to you for help in selecting a new birth control method. She is 2 months' postpartum and no longer breastfeeding. She used combination OCPs in the past but they exacerbated her migraines and she had trouble remembering the pill, given her busy life with her husband and two young children. Her past history is notable for mild depression and obesity. She had mildly heavy but regular periods with moderate uterine cramping that is somewhat controlled with NSAIDs. Her current weight is 214lbs. She denies any history of STDs, ectopic pregnancy, or fibroids. She and her husband are considering having more children but not for a few more years. She is using the hope of a future pregnancy as an inspiration to quit smoking. She is down to one pack per day of cigarettes. What contraceptive method would best meet this patient's needs?
- a) Depo-Provera
  - b) Nuvaring
  - c) Mirena IUD (levonorgestrel IUD)
  - d) ParaGard IUD (copper T IUD)
  - e) Ortho-Evra patch
- 79) Of the following, which classic triad characterizes preeclampsia?
- a) Visual changes, proteinuria, pitting pedal edema
  - b) Headache, visual changes, right upper quadrant pain
  - c) Hypertension, visual changes, right upper quadrant pain
  - d) Hypertension, proteinuria, and nondependent edema
  - e) Hypertension, proteinuria, and pitting pedal edema
- 80) A 39-year-old G2 P1 at 19 weeks' gestation. You sent her for an anatomic fetal survey that showed multiple fetal anomalies incompatible with life. The patient and her husband are devastated. They have received genetic counseling and decided to terminate the pregnancy at this time. Her gestational dating is very accurate and was confirmed with a first trimester ultrasound. They would like to know everything possible about what caused the anomalies and how to prevent a future problem. They ask for your advice regarding methods of termination in their situation. Which method of termination of pregnancy would be most suitable for this couple's needs?
- a) A single dose of RU-486 (mifepristone) followed by vaginal prostaglandin administration
  - b) A single dose of methotrexate followed by vaginal prostaglandin administration
  - c) Suction curettage
  - d) Dilation of the cervix with laminaria, followed by evacuation of the uterus using forceps and suction curettage
  - e) Cervical ripening followed by induction of labor with high-dose oxytocin
- 81) You are seeing a 57-year-old woman who presents with vulvar pruritus for 1 year. Her husband died 4 years ago and she has a new male sexual partner. You perform a wet prep that is negative for yeast, clue cells, and trichomonads. Cervical cultures for gonorrhea and chlamydia are both negative. She had an abnormal Pap smear last year that showed atypical squamous cells, but cervical biopsies and two follow-up Pap smears were negative for dysplasia. Vulvar biopsies reveal a single focus of moderate vulvar intraepithelial neoplasia (VIN). How would you treat this patient?

- a) Antifungal agents
  - b) High-potency topical steroids
  - c) Wide local excision
  - d) Skinning vulvectomy
  - e) Laser ablation
- 82) A 26-year-old G2 P2 woman presents for a routine examination. Her physical examination is entirely normal; however, her pap smear shows atypical squamous cells of undetermined significance (ASC-US). Her high-risk HPV screen is positive. You explain the results to the patient and recommend that she have a colposcopy. Subsequent colposcopy reveals a lesion on the anterior aspect of the cervix. The transformation zone is entirely visualized. The lesion turns white after treatment with acetic acid and both punctations and mosaicism are noted. The cervical biopsy is read as moderate dysplasia (CIN II). Which of the following is the standard of care for management of this patient?
- a) Imiquimod (Aldara) treatment
  - b) Cryotherapy
  - c) Cold-knife cone biopsy
  - d) Loop electrosurgical excision procedure (LEEP)
  - e) Single hysterectomy
- 83) A 15-year-old G0 woman presents with a history of no menarche. Both she and her mother are concerned about this, and want to discuss the possible causes. Of the following, which can cause both primary and secondary amenorrhea?
- a) Asherman syndrome
  - b) Gonadal agenesis
  - c) Anorexia nervosa
  - d) Sheehan syndrome
  - e) Kallmann syndrome
- 84) A 63-year-old G0 P0 woman comes to you with 6 weeks of postmenopausal bleeding. Review of her history reveals menarche at age 10 and menopause at age 54. She has never been on hormone replacement therapy. She reports being overweight most of her life and currently weights 237 pounds and is 5 feet 4 inches tall. She is basically healthy except for borderline hypertension and adult-onset diabetes mellitus, for which she takes oral hyperglycemic agents. A TSH and prolactin are normal. The endometrial biopsy shows grade 1 adenocarcinoma of the endometrium. Which is the patient's most concerning risk factor for endometrial cancer?
- a) Nulliparity
  - b) Obesity
  - c) Early menarche
  - d) Late menopause
  - e) Diabetes mellitus (NIDDM)
- 85) A 49-year-old woman presents complaining of vulvar pain that increases with ambulation and intercourse. She also notes a lump on her right labia that has increased in size over the past 48 hours and is quite painful. The patient has had these same symptoms in the past. On examination she has a 5cm tender cyst on the medial aspect of her right labia, with a surrounding erythema of the labia that extends 1 to 2cm away. What would be your first step in management of this patient?
- a) Sitz baths



- b) Insertion of Word catheter
  - c) Antibiotics
  - d) Biopsy of the cyst and insertion of Word catheter
  - e) Marsupialization of the cyst
- 86) You are seeing a 64-year-old G3 P1 patient for an annual exam. When you ask her about the date of her last menstrual period, you are surprised when she responds that her last period was 2 months ago. When you probe further, you find that she has been having vaginal bleeding every 2 to 3 years for the past 10 years. You begin an evaluation, which shows a normal TSH and prolactin and an elevated FSH level consistent with menopause. Her Pap smear was done 4 months ago at her primary care physician's office and was within normal limits. A pelvic ultrasound shows a 7mm endometrial stripe and a normal myometrium. The adnexa also appear normal. You attempt an endometrial biopsy but the patient has cervical stenosis and you are unable to sample the cavity. You are reassured by your findings thus far. How do you proceed?
- a) Take her to the OR for a cervical dilation and curettage of the uterus
  - b) Take her to the OR for an endometrial ablation
  - c) Take her to the OR for a total abdominal hysterectomy
  - d) Recommend oral estrogen for the likely diagnosis of endometrial atrophy
  - e) Reassure her that a thin endometrial stripe likely exclude cancer so you can follow expectantly
- 87) A 29-year-old G2 P1 comes for prenatal care. She has a history of delivery of a 4,250g baby. She herself had been a big baby at birth. The patient is concerned because her pre-pregnancy weight was 162lbs and she gained 70lbs during this pregnancy. At 26 weeks' gestation the patient had a glucose-loading test of 50g glucose. When her blood glucose level was measured 1 hour later, it was 164. As her obstetrician, what would you do next?
- a) Check a hemoglobin A1c
  - b) Start her on an appropriate insulin regimen
  - c) Check a 3-hour glucose tolerance test
  - d) Start her on an oral hyperglycemia agent
  - e) Start her on a diabetic diet
- 88) A 44-year-old woman comes in with a complaint of unilateral bloody nipple discharge. On examination in your office there is no skin change, nipple discharge, enlarged lymph nodes, or tenderness. There is no mass on clinical breast exam and she has no known family history of breast cancer. A mammogram and ultrasound are both negative. The most likely diagnosis is:
- a) Intraductal papilloma
  - b) Mammary duct ectasia
  - c) Paget disease of the breast
  - d) Carcinoma in situ
  - e) Invasive breast cancer
- 89) A 67-year-old woman presents with light vaginal bleeding. She has no other complaints. The bleeding began 10 months ago and she bled three or four times since then. An endometrial biopsy at that time was negative for hyperplasia and cancer. She has no other medical history. On physical exam she is a thin woman in no apparent distress. Her vagina and introitus are atrophic with no lesions and she has no obvious

hemorrhoids. Her uterus is small and her ovaries are not palpable. Her FSH is elevated to the menopausal level, her TSH is normal, and her prolactin level is normal. The patient had a normal Pap smear 8 months ago and no history of abnormal Pap smears. Her pelvic ultrasound shows a 6cm uterus with 3mm endometrial stripe. You attempt a repeat endometrial biopsy in the office but the os is stenotic and you are unable to obtain an adequate tissue specimen for evaluation. How do you proceed?

- a) Start combination hormone replacement therapy
- b) Start estrogen replacement therapy
- c) Take her to the operating room for a D&C
- d) Take her to the operating room for a hysterectomy
- e) Expectant management

90) A 28-year-old G2 P1 woman with a history of prior cesarean delivery presents at 36 weeks of gestation with a complaint of vaginal bleeding, passing several golf ball sized clots. She notes frequent contractions that begin as menstrual cramps, but have increased over the past hour. As you begin your work-up you consider that risk factors for placental abruption include all of the following except:

- a) Hypertension
- b) Advanced maternal age
- c) Cocaine use
- d) Preterm premature rupture of membranes
- e) Heroin abuse

91) A 33-year-old G3 P0 S3 comes to you for a history of recurrent miscarriage. Each of her miscarriages occurred during the first trimester and presented with heavy but self-limited bleeding. She had a thrombophilia evaluation, which was normal. Evaluation of the uterine cavity with hysterosalpingogram and sonohysterogram both suggest a uterine septum. An MRI was obtained that also showed a uterine septum and no evidence of bicornuate uterus. The remainder of the pelvic and urologic structures appeared to be within normal limits. The patient and her husband would like to conceive again but are very afraid of another miscarriage. How would you advise them to proceed?

- a) Surgical resection of the uterine septum prior to attempting conception again
- b) Inform them that the uterine septum is not related to their history of recurrent miscarriages and they can start attempting pregnancy again
- c) Proceed to infertility evaluation and in vitro fertilization
- d) Plan for a gestational carrier
- e) Attempt to adopt

92) A 53-year-old G0 presents to your clinic as a new patient with the complaints of vaginal bleeding. She is aggravated because over the last 3 years she has continued to have occasional vaginal bleeding occurring every 6 months even though she thought she had gone through menopause at age 51. Since going through menopause, she has been taking an estrogen supplement to relieve the hot flashes. She has never had surgery and is essentially healthy. She does not smoke or drink alcohol. She has no pain with intercourse and denies vaginal dryness. Her last pap smear was just over 3 years ago and she has never had an abnormal Pap or a sexually transmitted infection. Her BMI is 35. On exam you note well-estrogenized vaginal mucosa without signs of atrophy or laceration or abrasion and a normal appearing cervix. How would you proceed in evaluating this patient?

- a) Perform a Pap smear and order an FSH and estradiol level
  - b) Dilation and curettage and endometrial ablation
  - c) Order a CT of the pelvis and perform a Pap smear
  - d) No further evaluation is needed, schedule a total hysterectomy
  - e) Endometrial biopsy, transvaginal ultrasound, TSH, prolactin, FSH, Pap
- 93) A 58-year-old G0 presented for her annual exam last week with complaints of abdominal bloating and heaviness over the last month. She denies vaginal bleeding, unusual or excessive hair growth, or weight loss. Her mother and sister both had breast cancer in their 50s. She has had up-to-date and normal mammograms. Her Pap smear was negative and her bimanual exam at that time was notable for mild adnexal mass with cystic and solid components with multiple septations. There is a similar 3cm mass on the left adnexa. Endometrial stripe is 3mm. There is moderate free fluid noted within the pelvis. She also has an elevated CA-125 and a normal CEA-1 antigen and hCG. What is this patient's most likely diagnosis?
- a) Serous cystadenocarcinoma
  - b) Endodermal sinus tumor
  - c) Sertoli-Leydig cell tumor
  - d) Choriocarcinoma
  - e) Brenner tumor
- 94) An 18-year-old G0 presents to your clinic with primary amenorrhea. She has normal breast development but has limited development of pubic or axillary hair. On pelvic exam you note that she has a foreshortened vagina. Transvaginal and transabdominal ultrasound is unable to identify a uterus. Chromosomal analysis shows that the patient is 46,XY. What is this patient's diagnosis?
- a) Testicular feminization
  - b) Gonadal agenesis
  - c) Mayer-Rokitansky-Kuster-Hauser syndrome
  - d) Swyer syndrome
  - e) Turner syndrome
- 95) A 32-year-old G4 P2022 presents to the infertility clinic and reports 18 months of infertility with her new husband of 3 years. She had no difficulties conceiving her two living children. She had two elective abortions after her children were born and also a D&C following delivery of her second child for retained placenta. Her husband has never fathered any children. His semen analysis shows normal count, motility, and morphology. She has light but regular menses and per the ovulation predictor kits, usually ovulates on day 14. Her endocrine evaluation was normal. How would you best evaluate this couple's infertility?
- a) Repeat semen analysis, perform an endocrine evaluation on the male partner, and perform a testicular biopsy
  - b) Recommend use of clomiphene citrate to induce ovulation along with timed intercourse; no further evaluation is needed
  - c) Until this patient has been infertile for at least 24 months, there is no need for further evaluation
  - d) Perform a pelvic exam, a hysterosalpingogram, and a sonohysterogram to look for intrauterine abnormalities

- e) Perform a transvaginal ultrasound to look for fibroids or polyps that could be the cause of the infertility
- 96) A 31-year-old G3 P2002 presents to labor and delivery with vaginal bleeding at 33 weeks' gestation. She woke up in the middle of the night with bloodstained sheets, and proceeded immediately to the hospital. She has a history of a repeat cesarean section 2 years ago after a primary cesarean section for breech presentation 5 years ago. She reports her baby is moving well, and she is comfortable with stable vital signs. The baby's fetal heart rate tracing is reassuring and the bleeding has slowed substantially. You review her records and notice a second trimester ultrasound report, which identifies the placenta as "low-lying." What is the next immediate step in management?
- a) Perform a contraction stress test to evaluate for fetal well-being
  - b) Perform a cervical examination to evaluate patient for preterm labor
  - c) Obtain a fetal cell stain to evaluate patient for abruption
  - d) Perform a bedside ultrasound to evaluate placental location
  - e) Obtain coagulation studies to evaluate patient for coagulopathy
- 97) A 23-year-old G3 P1102 presents to labor and delivery at 28 weeks' gestation with painful uterine contractions and vaginal bleeding. On tocometry, the patient is found to have frequent low-amplitude contractions occurring every 1 to 2 minutes. FHR tracing demonstrates baseline in the 150s with minimal variability. Upon further questioning, the patient admits to using a substance in the past 12 hours. Which of the following substances could be directly responsible for the events taking place?
- a) Cocaine
  - b) Tobacco
  - c) Alcohol
  - d) Marijuana
  - e) Caffeine
- 98) A 19-year-old G0 presented to the emergency room 3 days ago with gastrointestinal symptoms and abdominal pain. She has had a regular menstrual history and denies any excess hair growth or loss. Her pregnancy test was negative. A CT was performed and an incidental finding of a 4cm right adnexal mass was made. Ultrasound reveals a heterogeneous mass with multiple septations and solid components in the right adnexa and a normal appearing left adnexa. There is flow to the mass and good flow to both ovaries. You were consulted and requested that tumor markers be drawn and to have her follow up in the oncology clinic. The results of the tumor markers are as follows: elevated AFP, normal CA-125, normal LDH, and serum beta-hCG < 5. What is the patient's most likely diagnosis?
- a) Serous cystadenocarcinoma
  - b) Endometrial sinus tumor
  - c) Sertoli-Leydig cell tumor
  - d) Choriocarcinoma
  - e) Brenner tumor
- 99) A 61-year-old postmenopausal female presents for her annual exam without complaints. You notice a white patchy area between the posterior forchette of the vagina and the anus. When questioned about this area, the patient denies any pruritus or irritation. You obtain a biopsy of this area, and the pathology report diagnosis lichen sclerosis. What is the first line treatment for this lesion?

- a) Wide local excision
  - b) Clobetasol cream
  - c) Laser vaporization
  - d) Topical antifungals
  - e) Topical estrogen cream
- 100) A 65-year-old G2 P2002 presents to the urogynecology clinic with complaints of urinary incontinence. She leaks urine occasionally when she coughs, but also leaks urine without any provocation. She often has difficulty making it to the restroom in time. She has even leaked urine shortly after having normal emptying of her bladder. She normally gets up at least 2 to 3 times per night to urinate. Urinalysis and urine culture performed last week at her PCP's office are both negative. What is the most likely diagnosis and appropriate treatment for this type of incontinence?
- a) Stress urinary incontinence, Ditropan (oxybutynin chloride)
  - b) Detrusor overactivity, Detrol (tolterodine)
  - c) Overflow incontinence, cholinergic agent
  - d) Detrusor overactivity, suburethral sling
  - e) Stress urinary incontinence, suburethral ring

### **Reproductive #11 – Ethics**

- 1) Regarding abortion, the Supreme Court believes the requirement of parental consent without any alternative procedure to determine a girl's capacity to decide for her self was:
- a) Constitutional
  - b) Unconstitutional
  - c) Legal in 34 states only
  - d) Legal in Alaska and Hawaii
  - e) No ruling; decision up to the parents
- 2) Which of the following is NOT a case for therapeutic abortion?
- a) Ectopic pregnancy
  - b) Acute fatty liver of pregnancy
  - c) Severe abdominal pain
  - d) Incest
  - e) Rape
- 3) The Supreme Court struck down the 1965 Griswold v. Connecticut ruling saying there is a zone of privacy, meaning what two adults do in the privacy of their own home is their own business. What was the original Griswold v. Connecticut ruling?
- a) Contraception is mandatory for those under 18 engaging in sexual intercourse
  - b) Abortion is illegal even in cases of rape
  - c) Those intending on aborting a fetus must post their names at the city hall
  - d) Birth control pills are illegal to use
  - e) Couples determined to engage in sodomy are not granted abortion rights
- 4) Which of the following cases allowed abortion (1970 Texas) and was reaffirmed by the Supreme Court in 1973?
- a) Bobbitt v. Bobbitt
  - b) Griswold v. Texas
  - c) Ryan White CARE Act
  - d) Roe v. Wade

- 5) Approximately 3,000,000 live births occur in the United States each year. How many abortions currently take place annually?
- 25,000
  - 50,000
  - 100,000
  - 250,000
  - 1,000,000
- 6) In 2005, Susan Torres died of cardiopulmonary arrest while pregnant in her first trimester. She was pronounced brain-dead (forebrain) although she still retained primitive brainstem functions. The dilemma was to allowing the child to die or keeping her on life support until minimal gestation age. What is the minimal gestation age for delivery?
- 10-weeks
  - 15-weeks
  - 25-weeks
  - 30-weeks
  - 32-weeks
- 7) A report mentioned in the Washington Post (2005 David Brown) said there have been 11 cases since 1970 of pregnant mothers who were brain-dead. What was the outcome in most of these cases, where the pregnancy was prolonged by 10-weeks on average?
- Successful
  - Unsuccessful
- 8) What was the outcome of Susan Torres case?
- Child born and led healthy life
  - Child died before delivery
  - Child died weeks after delivery
  - Child died at age 12 due to birth defects
- 9) Which of the following adult tissues has NOT been reported to contain stem cells?
- Liver
  - Brain
  - Skin
  - Bone marrow
  - Pancreas
- 10) Which of the following describes reproductive cloning?
- Makes a complete physical copy
  - Preserves only the DNA
  - Involves an enucleated final product
  - Can only be accomplished in sheep
- 11) In 1997, President Clinton and the "Report and Recommendation of the National Bioethics Advisory Commission" said that:
- It is morally unacceptable for any public sector to attempt to create a child using somatic cell nuclear transfer
  - It is morally unacceptable for any private sector to attempt to create a child using somatic cell nuclear transfer
  - It is morally unacceptable for any public or private sector to attempt to create a child using somatic cell nuclear transfer

- d) It is illegal for anyone to attempt to create a child using somatic cell nuclear transfer
  - e) It is illegal for anyone to attempt to create a mammal using somatic cell nuclear transfer
- 12) How does cloning affect hybrid vigor?
- a) It increases it
  - b) It decreases it
  - c) It does not affect it
- 13) Which of the following means to agree by expressing acquiescence, which is a more passive idea used in medical cases involving minors?
- a) Acceptance
  - b) Compliance
  - c) Submission
  - d) Consent
  - e) Assent
- 14) Which of the following is NOT an element of medical “consent” in children?
- a) Achieve developmentally appropriate awareness of disease
  - b) Achieve complete understanding about prognosis
  - c) Describe tests and treatments
  - d) Assess level of understanding
  - e) Establish level of willingness
- 15) A 16-year-old boy requires a below-the-knee amputation that provides a good chance of cure for cancer. The boy is the quarterback for the state football all-star team and states “I’d rather die than lose my leg; football is my life.” Which of the following may have the best impact at improving this child’s outlook toward their disease treatment?
- a) Force the child to sign paperwork for the procedure
  - b) Have the parents sign the paperwork and tell the child “this is for your own good, you’ll understand when you grow up”
  - c) Have the child meet a young amputee
  - d) Have the child meet an amputee war veteran
  - e) Nothing will positively impact the child due to their developmental age
- 16) Which of the following is true regarding blood donation and Jehovah’s Witnesses?
- a) If a child is a Jehovah’s Witness but the parents are not, the child may refuse a blood transfusion
  - b) If parents are Jehovah’s Witnesses, they may legally refuse a blood transfusion for their child
  - c) If parents are Jehovah’s Witnesses, a physician may give blood to the child without a court order when the parents refuse the transfusion
  - d) Jehovah’s Witnesses believe blood is not to be eaten but may always be medically transfused
- 17) Which of the following is NOT considered an emancipated minor?
- a) Self-supporting
  - b) Engaged to be married
  - c) Pregnant and seeking diagnosis and treatment for venereal disease
  - d) Currently a parent
  - e) Military

- 18) Which of the following is true of Pennsylvania Law and minors?
- a) They may decline a test for illicit drugs
  - b) Physicians must provide birth control to minors without telling the parents
  - c) Physicians must provide birth control to minors and alert parents
  - d) They may decline a birth control test
  - e) They are considered emancipated at age 16
- 19) A clinician working at Planned Parenthood is interviewing a minor who engages in risky sexual behavior and illicit drug use. The clinician does not feel this child is responsible and declines her contraception. Is this legal?
- a) Yes
  - b) No
- 20) Baby K was born with anencephaly (no forebrain). The dilemma between the clinicians and the mother was regarding:
- a) Abortion
  - b) Cesarean section
  - c) The use of blood products
  - d) The use of a mechanical ventilator
  - e) The use of palliative agents (morphine)
- 21) Baby K's mother stated, "All human life has value. God will work a miracle if that is his will. God, and not other humans, should decide the moment of her daughter's death." Which of the following would have been the most beneficial for Baby K's mother?
- a) An ethics committee
  - b) An emergency physician
  - c) A team of pediatricians
  - d) A psychiatrist
  - e) A chaplain
- 22) Which of the following describes the requirements of the EMTALA law for Emergency Departments in hospitals that receive Medicare funding?
- a) Treat and stabilize
  - b) Treat and transfer
  - c) Stabilize only
  - d) Treat, stabilize, and cure
  - e) Treat, stabilize, and provide additional care (e.g. cosmetic surgical repair)
- 23) In the case of Baby K, respiratory support was the mainstay treatment given by emergency physicians to remain within EMTALA. What other palliative treatment could the clinicians have given, legally, that would have provided comfort while Baby K died?
- a) Blood transfusion
  - b) Indomethacin
  - c) Acetaminophen
  - d) Epinephrine
  - e) Morphine
- 24) Circumstances that allow personal gain to supersede your fiduciary responsibility are specifically considered to be:
- a) Conflicts of interests
  - b) Disclosure statements
  - c) Professional



- d) Aspiring to integrity
  - e) Honorable
- 25) A clinician discusses a case of anaphylactic shock in a patient you recently saw. The clinician mentions you charted “ALLERGIC TO PCN => anaphylaxis” and would like you to revise the chart, removing that text. What should you do?
- a) Modify the chart by removing the text
  - b) Document in the chart what the clinician said
  - c) Bring this situation to the attention of a superior
  - d) Remove your name from the chart completely
- 26) Which of the following was NOT a component of the Baby M surrogate pregnancy contract, which involved the same lawyer between both parties?
- a) Bear a child in exchange for \$10,000
  - b) Miscarriage prior to 4th month results in no payment
  - c) Still birth results in \$1,000 payment
  - d) Amniocentesis finding a defect results in abortion on demand of the father
  - e) The surrogate mother is allowed to form a relationship with the fetus
- 27) Which of the following did NOT occur after the birth of Baby M?
- a) The surrogate mother refused the \$10,000
  - b) The surrogate mother disappeared with Baby M
  - c) The court ruled the contract was valid and enforceable
  - d) The appeals court ruled the contract was valid and enforceable
- 28) Which of the following did NOT occur in the case of the Corey Triplets?
- a) Bimber (surrogate) gave birth to premature children who spent 6 days in ICU
  - b) Flynn (biological father) visited babies for an hour on birthday then 6 days later to take them home
  - c) Bimber was given temp custody due to lack of visitation
  - d) A judge voided the contract, as it did not list a legal mother
  - e) The anonymous egg donor sued for parental rights to the triplets
  - f) Bimber was given full custody and rights to the children
- 29) A pregnant mother in her late third trimester presents to the emergency department in imminent labor. Examination and testing reveals transverse positioning and the child will most likely not live through birth. Further testing of the mother reveals extreme hypotension. As a clinician, you feel the mother may die during birth and recommend a cesarean section. The mother refuses saying she “wants to deliver naturally.” What do you do?
- a) Stabilize the mother, knowing the child will likely die but that you are not impeding on her wishes
  - b) Perform the emergency cesarean section
  - c) Do nothing; let nature take its course
  - d) Give the mother drugs to defer labor and contact the hospital’s chaplain and ethics committee

### **Reproductive #12 – Extra: Common Fractures of the Knee & Lower Leg**

- 1) Sudden flexion of the knee against a forcefully contracted quadriceps usually occurs in young adults and results in what type of patellar fracture?
- a) Transverse

- b) Stellate (comminuted)
  - c) Longitudinal (marginal)
  - d) Osteochondral
- 2) A knee x-ray shows multiple bony fracture fragments of the patella after the patient received a direct impact of the knee by a baseball bat. What type of fracture is this?
- a) Transverse
  - b) Osteochondral
  - c) Longitudinal (marginal)
  - d) Stellate (comminuted)
- 3) A patient presents with knee pain after being hit by a car in a crosswalk. The patient is able to actively extend their knee and has not lost extensor mechanism. Which of the following types of patellar fractures is most likely?
- a) Transverse
  - b) Osteochondral
  - c) Longitudinal (marginal)
  - d) Stellate (comminuted)
- 4) A football player presents with knee pain due to being tackled while twisting. X-ray shows patellar dislocation and fracture. What type of fracture is most likely?
- a) Transverse
  - b) Osteochondral
  - c) Longitudinal (marginal)
  - d) Stellate (comminuted)
- 5) A patella alta is evaluated in a transverse radiograph comparing the length of the patellar tendon to the patella itself. What should this ratio be?
- a) 0.2 to 0.4
  - b) 0.4 to 0.8
  - c) 0.8 to 1.2
  - d) 1.2 to 1.6
  - e) 1.6 to 2.0
- 6) What x-ray view is helpful in identifying marginal vertical fractures?
- a) AP, knee extended
  - b) Transverse
  - c) AP, knee flexed
  - d) Oblique
  - e) Sunrise
- 7) Which of the following is NOT recommended in the management of patellar fractures?
- a) Rest, ice, compression, elevation (RICE)
  - b) Narcotic analgesia
  - c) NSAIDs
  - d) Crutches and full knee brace
  - e) Immobilization with knee at 20-degree angle
- 8) Open reduction and internal fixation (ORIF) may be needed for patellar fractures with lost extensor mechanism or transverse fractures greater than:
- a) 1mm
  - b) 2mm
  - c) 3mm

- d) 4mm
  - e) 5mm
- 9) Aminoglycosides or piperacillin-tazobactam are recommended for gross open knee fracture with contamination. Which of the following is an anti-staphylococcal antibiotic used for minor open fractures of the knee?
- a) Cefazolin
  - b) Methotrexate
  - c) Doxycycline
  - d) Penicillin
  - e) Levofloxacin
- 10) A Toddler's fracture is categorized as:
- a) Proximal extra-articular tibial fracture
  - b) Tibial shaft fracture
  - c) Proximal fibula fracture
  - d) Stress fracture
- 11) Damage to the nervous structures of the anterior compartment of the lower leg would result in loss of sensation at the first dorsal foot web space and an inability to:
- a) Extend the knee
  - b) Flex the knee
  - c) Plantarflex the foot
  - d) Dorsiflex the foot
- 12) Damage to what compartment of the leg would result in loss of sensation at the lateral inferior one-third of the leg and lateral portion of the fifth digit?
- a) Anterior compartment
  - b) Lateral compartment
  - c) Superficial posterior compartment
  - d) Deep posterior compartment
- 13) A patient presents with severe pain and paresthesia in the lower leg. Compartment syndrome is diagnosed and a fasciotomy is scheduled. What compartment should be surgically opened if the patient cannot evert their foot and has no sensation on the dorsal aspect of their foot?
- a) Anterior compartment
  - b) Lateral compartment
  - c) Superficial posterior compartment
  - d) Deep posterior compartment
- 14) A patient presents after a car accident where their knee hit the dashboard. They have tenderness and swelling over the proximal tibia. They have ligamentous laxity with varus deformity and hemarthrosis. The fracture is easily visible on AP x-ray. Which of the following is most likely?
- a) Proximal extra-articular tibial fracture
  - b) Tibial shaft fracture
  - c) Proximal fibula fracture
  - d) Stress fracture
- 15) In which class of tibial tubercle fracture is the patient unable to extend their knee against gravity?
- a) Type I

- b) Type II
  - c) Type III
- 16) Which of the following is a very late finding and unreliable in the diagnosis of compartment syndrome?
- a) Pain
  - b) Pallor
  - c) Pulseless
  - d) Paresthesia
  - e) Pressure
- 17) Open tibial fractures increase the risk of developing osteomyelitis by:
- a) 2 times
  - b) 3 times
  - c) 4 times
  - d) 5 times
  - e) 6 times
- 18) A fracture of the proximal fibula that occurs with an associated distal tibial fracture, ankle fracture, or deltoid ligament tear is known as:
- a) Charcot joint fracture
  - b) Greenstick fracture
  - c) Lisfranc fracture
  - d) Maisonneuve fracture
  - e) Monteggia fracture
  - f) Pelligrini-Stieda fracture
- 19) A new military recruit presents with a stress fracture after a several mile march in full gear. Where is the fracture most likely located?
- a) Femur
  - b) Metatarsal
  - c) Navicular
  - d) Fibula
  - e) Tibia
- 20) What is the approximate sensitivity of the technetium diphosphate bone-scanning test used in stress fractures?
- a) 100%
  - b) 92%
  - c) 88%
  - d) 82%
  - e) 50%

AnswerKey	12.1) A	32) D	<b>Repro #6</b>	17) A
<b>Repro #1</b>	12.2) E	33) A	1) D	18) B
1.1) E	12.3) A	34) C	2) C	19) E
1.2) C	13) D	35) G	3) B	20) C
1.3) C	14) C	36) E	4) B	21) A
1.4) D	15) B	37) B	5) C	22) D
1.5) C	16) D		6) C	23) B
2.1) B	17) E	<b>Repro #5</b>	7) B	24) E
2.2) C	18) A	1) C	8) A	25) C
2.3) D	19.1) B	2) C	9) A	26) A
2.4) B	19.2) C	3) D	10) E	
	20.1) E	4) D	11) D	<b>Repro #8</b>
<b>Repro #2</b>	20.2) D	5) A	12) C	1) C
1) A		6) B	13) D	2) A
2) C	<b>Repro #4</b>	7) C	14) E	3) D
3) B	1) E	8) B	15) B	4) E
4.1) C	2) C	9) E	16) A	5) B
4.2) E	3) A	10) D	17) C	6.1) D
5) A	4) D	11) B	18) B	6.2) B
6) A	5) B	12) B	19) D	7) A
7.1) E	6) E	13) A	20) C	8) C
7.2) A	7) B	14) B	21) B	9) C
8) A	8) C	15) B	22) A	10) A
9) C	9) D	16) E	23) D	11) D
10) D	10) A	17) B	24) B	12) E
11) D	11) D	18) E	25) D	13.1) B
12) B	12) A	19) B	26) A	13.2) A
	13) B	20) B	27) B	14) C
<b>Repro #3</b>	14) C	21) D		15) D
1) B	15) C	22) C	<b>Repro #7</b>	16) A
2) B	16) E	23) D	1) D	17) E
3.1) A	17) B	24) E	2) D	18) C
3.2) C	18) C	25) B	3) B	19) C
3.3) A	19) A	26) A	4) A	20.1) A
3.4) C	20) C	27) E	5) C	20.2) D
4.1) D	21) B	28) C	6) B	21) A
4.2) B	22) C	29) D	7) D	22.1) B
5) D	23) B	30) D	8) C	22.2) E
6) E	24) D	31) C	9) C	22.3) E
7) D	25) F	32) B	10) D	23.1) B
8.1) B	26) C	33) B	11) A	23.2) F
8.2) D	27) C	34) A	12) D	24) C
9) A	28) C	35) D	13) A	25) B
10.1) B	29) E	36) C	14) C	26) A
10.2) C	30) C	37) E	15) E	27) E
11) D	31) D	38) A	16) B	

**Repro #9**

1) C	38.2) E	16) C	62) B	6) C
2) A	38.3) A	17) E	63) A	7) A
3) A	38.4) A	18) D	64) C	8) C
4) C	38.5) B	19) C	65) E	9) E
5) E	38.6) D	20) B	66) E	10) B
6) B	38.7) C	21) A	67) A	11) C
7.1) E	39) E	22) D	68) D	12) B
7.2) A	40) C	23) B	69) D	13) E
7.3) F	41) B	24) C	70) A	14) B
8) C	42) B	25) D	71) D	15) C
9.1) C	43) E	26) C	72) E	16) A
9.2) E	44) E	27) C	73) B	17) B
9.3) A	45) A	28) E	74) C	18) D
9.4) D	46) F	29) D	75) B	19) B
10) B	47) C	30) B	76) B	20) D
11) E	48) B	31) B	77) E	21) E
12.1) D	49) E	32) D	78) C	22) A
12.2) C	50.1) C	33) B	79) D	23) E
13) C	50.2) D	34) D	80) E	24) A
14) E	51) A	35) A	81) C	25) C
15) C	52) B	36) C	82) D	26) E
16) D	53.1) E	37) C	83) C	27) D
17) C	53.2) B	38) B	84) B	28) F
18) B	53.3) A	39) E	85) D	29) B
19) B	53.4) D	40) D	86) A	
20) C	54) C	41) C	87) C	<b>Repro #12</b>
21.1) B	55) E	42) B	88) A	1) A
21.2) D	56) D	43) D	89) C	2) D
22) E	57) A	44) A	90) E	3) C
23) A		45) E	91) A	4) B
24) C	<b>Repro #10</b>	46) E	92) E	5) C
25) C	1) A	47) D	93) A	6) E
26) C	2) A	48) E	94) A	7) E
27) B	3) B	49) B	95) D	8) C
28) D	4) B	50) B	96) D	9) A
29) E	5) C	51) B	97) A	10) B
30) C	6) B	52) C	98) B	11) D
31) A	7) C	53) B	99) B	12) C
32) A	8) C	54) E	100) B	13) B
33) D	9) D	55) C		14) A
34) F	10) B	56) E	<b>Repro #11</b>	15) C
35) B	11) A	57) D	1) B	16) C
36) C	12) C	58) C	2) C	17) D
37) C	13) A	59) C	3) D	18) D
38.1) B	14) B	60) D	4) D	19) E
	15) E	61) D	5) E	20) A