**ANSWERS: CHAPTER 10**

**MATCHING**

1. p  7. f  13. g  19. c  
2. u  8. j  14. i  20. o  
3. k  9. e  15. s  21. d  
4. h  10. r  16. m  22. t  
5. q  11. l  17. w  23. x  
6. a  12. b  18. n  24. v

**IMAGE LABELING**

1. diaphragm  
2. liver  
3. serosal bowel implants  
4. colon  
5. nodes  
6. ovaries  
7. pleura  
8. omentum  
9. stomach  
10. pelvic peritoneal implant  
11. liver edge ascites  
12. right lobe of liver  
13. left lobe of liver  
14. stomach  
15. transverse colon  
16. left paracolic gutter  
17. small bowel  
18. cul-de-sac  
19. rectum  
20. right paracolic gutter

**MULTIPLE CHOICE**

1. c  6. c  11. c  16. b  
2. d  7. d  12. b  17. a  
3. a  8. b  13. a  18. d  
4. c  9. a  14. b  19. c  
5. b  10. d  15. c  20. b

**FILL-IN-THE-BLANK**

1. poor  
2. confined to the ovary  
3a. BRCA1  
3b. BRCA2  
4a. air  
4b. water  
4c. diet  
5a. septations  
5b. solid  
6a. pelvic cul-de-sac  
6b. paracolic gutters  
6c. right  
7a. pelvic organs  
7b. peritoneal  
7c. lymphatic

8. peritoneal  
9a. 25  
9b. 90  
10. epithelial  
11a. alpha fetoprotein  
11b. lactate dehydrogenase  
11c. carcinoembryonic antigen  
11d. human chorionic gonadotropin  
12a. CT  
12b. intravenous  
12c. oral  
13. EV ultrasound  
14a. benign  
14b. malignant  
15. peristalsis  
16a. signet ring  
16b. mucoid  
17. ovarian  
18. late  
19. laparotomy  
20. epithelium

**SHORT ANSWER**

1. Factors that determine ovarian cancer prognosis are:
   1. The stage or extent of the disease when it is first diagnosed
   2. The tumor grade (the histopathologic classification or the degree of cellular differentiation)
   3. The extent of residual disease after initial surgical excision
   4. The tumor response to types of treatment given

   Stage I ovarian cancer is confined to the ovary. Its survival rate with early detection is 90%.

2. Ovarian cancer is similar to breast cancer due to the fact that a strong family history (maternal or sibling) places a woman at a significantly higher risk. Genetics is a criterion for screening studies. Women with a positive family history for ovarian cancer should consult specialists about their individual risk.

3. Ovarian cancer. Laboratory detection of malignancies, including ovarian carcinoma searches for telltale substances in the serum or plasma of patients who harbor a malignancy. Cancer cells, or the patient’s immune system, produces substances, which may be proteins, hormones, or enzymes. These substances have been termed “tumor markers.”
4. Ovarian carcinoma results in significant laboratory elevations of certain tumor markers. No assay is unique to the ovary or sensitive enough for use as a screening test; although, in a patient with a known pelvic mass, certain laboratory tests may be helpful in the diagnosis. Keep in mind, some assays used clinically as a marker of disease status help in the diagnosis of recurrent ovarian cancer through continued monitoring. Also, a decreasing level indicates effective therapy, whereas an increasing level indicates tumor recurrence. CA 72-4 and CA 15-3 are two newly identified markers that can be used in combination with CA 125. Frequently, elevation of these three antigens suggests malignancy. As a screening tool, the sensitivity of CA 125 in detection of early ovarian cancer is low and a normal antigen level (<35 U/ml) does not necessarily exclude the presence of disease.

5. Pelvic physical examination; medical imaging, beginning with transabdominal and transvaginal approach to include power and color Doppler, radiography, CT scan, MRI, and PET scan. Laboratory assays (CA 125, AFP, CEA, hCG, LDH, CA 72-4, CA 15-3).

**IMAGE EVALUATION/PATHOLOGY**

1. Images A and B demonstrate an ovary with a multiseptated cyst displaying projections extending internally (open arrows). Image B shows flow in the thick separating membrane (long arrows). The complex fluid, cystic septations, and complex fluid suggest ovarian malignancy. A C8-4v transducer collected these images (seen at image top center).

2. This is a transabdominal transverse pelvis demonstrating the uterus, right ovary with a simple cyst (small open arrow), distended urinary bladder (large open arrow), uterus (thick arrow), and left adnexal dermoid (thin arrow).

3. The long arrows are directed at an ovary afflicted with a Krukenberg tumor, usually metastatic from gastrointestinal cancer, marked by areas of mucoid degeneration and by the presence of signet-ring cells. The open arrow reveals hypervascularity of the septations and solid intraluminal nodules. Both views are endovaginal sagittal images.

4. This image reveals a pre-predominately solid mass with a heterogeneous internal echo texture complete with septations.

5. Both images were collected using 3-D multiplanar technology with surface rendering. Image A demonstrates the internal architecture of a simple cyst with a smooth regular wall. The surface rendering in image B clearly shows internal wall projections (arrow) into an ovarian cyst.

**CASE STUDY**

1. The well-circumscribed mass (arrowhead) in the right upper lobe of the lung has the expected radiographic appearance of a metastasis. Primary lung cancer frequently relocates to the ovary in the form of a Krukenberg tumor, which demonstrates with areas of mucoid degeneration. They are usually bilateral and solid in appearance, and the prognosis is poor.

2. Due to the clinical information stating amenorrhea, the patient’s age, and findings of pelvic mass on physical examination, dysgerminoma is the suspected diagnosis based on ultrasound. Dysgerminoma occurs in adolescents or young women and is often solid. It can be the cause of amenorrhea. Image A shows a surgical example of dysgerminoma. These tumors are solid with a gray, fleshy, and lobulated cut surface. They are principally solid with some cystic areas, as seen with TV ultrasound.