Examination

1. All of the following are negative aspects regarding surgical biopsy EXCEPT
   a. It often requires general anesthesia.
   b. Cosmetic defects can be considerable depending on the skill of the surgeon.
   c. When the lesion is completely removed, sampling error often occurs.
   d. It can cause scarring, which may have an effect on future mammogram imaging.
   e. Cosmetic defects can be considerable depending on the amount of tissue removed.

2. The major advantage of open surgical biopsy is
   a. that it rarely requires general anesthesia.
   b. that it is relatively inexpensive compared to other biopsy alternatives.
   c. it rarely if ever causes scarring, and thus, it has no effect on future mammogram imaging.
   d. there is no sampling error when the lesion is completely removed as verified by specimen radiography.
   e. that cosmetic defects are almost always minimal.

3. The failure rate of excisional biopsy in non-palpable mammographically detected abnormalities in the literature is approximately ____ when the lesion is localized by an experienced radiologist, and excised by an experienced surgeon.
   a. 2%
   b. 5%
   c. 8%
   d. 10%
   e. 15%

4. All of the following led to the quest for a simpler image-guided procedure that could be performed in the office EXCEPT
   a. the complexity of the surgical excisional biopsy
   b. the high costs
   c. the need of scheduling operating room time
   d. the use of general anesthesia
   e. the failure rate of the procedure

5. Small flecks of calcium that are seen on mammograms may not be seen on
   a. spiral CT images
   b. upright mammography machine images
   c. ultrasound images
   d. MRI images
   e. dedicated prone table mammography images

6. Regarding ultrasound guided breast biopsy, all of the following are true EXCEPT
   a. the procedure involves finding the lesion on ultrasound.
   b. it requires the need of general anesthesia
   c. patients do not need pain medications following the procedure
   d. routine activities are not usually limited
   e. recovery time is generally negligible and not more than 24 hours
7. The most common problem that is seen following an ultrasound guided breast biopsy is
   a. infection
   b. a bruise at the biopsy site
   c. deep venous thrombosis
   d. bleeding
   e. superficial venous thrombosis

8. All of the following are advantages of the ultrasound guided breast biopsy EXCEPT
   a. the ability to perform biopsies that are not sonographically evident
   b. the accessibility of all areas of the breast including the axilla
   c. the capability for multi-directional sampling
   d. the lack of radiation exposure
   e. the ability to see the needle under real time

9. Regarding early studies of 14-gauge stereotactic core biopsy, the reported agreement between the
   results of the needle biopsy and surgery was
   a. 65-72%
   b. 70-78%
   c. 75-83%
   d. 80-86%
   e. 87-96%

10. Regarding stereotactic breast biopsy, a problem that has occurred with upright mammography units
    that is not seen with the dedicated prone tables is
    a. the need for more space
    b. that they are more expensive machines
    c. the fact that the patient cannot watch the procedure as it happens
    d. a slightly higher risk of fainting during the procedure.
    e. that the units cannot be attached to existing mammography machines

11. All of the following are true regarding the dedicated prone tables for performing stereotactic breast
    biopsy EXCEPT
    a. They are more expensive than the upright units
    b. They require a room all to themselves
    c. They have a decreased likelihood of patient motion
    d. They have the benefit of having the table acting as a physical and psychological barrier between the patient and
        the procedure
    e. They have less working room

12. Regarding the procedure for stereotactic breast biopsy using a dedicated prone table, the localizing
    images are taken, usually at _______ from each other, and the area of interest is then marked on these
    images.
    a. forty-five-degree angles
    b. thirty-degree angles
    c. twenty-degree angles
    d. ten-degree angles
    e. five-degree angles

13. All of the following are true regarding the disadvantages of fine needle aspiration breast biopsy
    EXCEPT
    a. Because only cells are retrieved, it is difficult, although not impossible, to make a definitive diagnosis of the type
        and grade of the cancer.
    b. The making of adequate smears on the slides is somewhat difficult.
    c. The procedure is invasive and the needed materials are expensive.
d. Because only cells are obtained, it is often difficult to tell if the samples are adequate for evaluation at the time of the procedure.

e. Many facilities have a trained cytopathologist on the premises of the breast center at the time of the biopsy to say whether or not the sample is adequate for diagnosis and this makes the procedure much more expensive.

14. Which breast biopsy procedure is likely to need a second procedure with more tissue sampled in order to clarify the type of lesion identified?
   a. fine needle aspiration biopsy
   b. core needle biopsy
   c. open surgical biopsy
   d. the use of a vacuum assisted suction device
   e. stereotactic breast biopsy

15. All of the following are true regarding core needle biopsy EXCEPT
   a. It has largely replaced fine needle aspiration biopsy.
   b. There are less sampling errors when compared to fine needle aspiration biopsy.
   c. It more accurately distinguishes between intraductal and invasive carcinoma.
   d. It uses a larger needle, usually a 14-gauge, as compared to the smaller 26-gauge needle used in fine needle aspiration biopsy.
   e. It does not require a special biopsy gun that is used with fine needle aspiration biopsy.

16. The size of the sample that is obtained with core needle biopsy gives the pathologist enough tissue to do all of the following EXCEPT
   a. make a definitive diagnosis
   b. determine if there is lymph node involvement
   c. determine the grade of the tumor
   d. evaluate the hormone receptor status
   e. determine the exact type of the tumor

17. All of the following are advantages of the vacuum assisted suction devices EXCEPT
   a. Only a single insertion of the probe into the breast is needed.
   b. The price of the vacuum assisted devices is inexpensive.
   c. Less precise targeting is needed
   d. A faster retrieval of a number of specimens can be obtained.
   e. Contiguous larger samples can be obtained.

18. Which breast biopsy probe has the advantage of being able to insert a 2mm tissue marker at the end of the procedure?
   a. a vacuum assisted suction device probe
   b. a 14-gauge core biopsy needle
   c. a 14-gauge stereotactic biopsy needle
   d. the 26-gauge needle used in FNAB
   e. an 11-gauge core biopsy needle

19. For the issue of concordance, if the pre-test evaluation shows findings that are suspicious for malignancy and biopsy is recommended, this is consistent with which category?
   a. BI-RADS 1
   b. BI-RADS 2
   c. BI-RADS 3
   d. BI-RADS 4
   e. BI-RADS 5

20. Regarding concordance, all of the following statements are true EXCEPT
   a. If the radiologist did specimen radiography and proved there were calcifications, & the pathologist states no
calcifications were found, it is the job of the radiologist to let the pathologist know that there are definitely calcifications in the specimen.

b. The pathologist reading the core biopsy samples also evaluates concordance.

c. Routinely, the pathologist reading the needle biopsy sample is not provided with the relevant image findings, so that the pathologist can make an unbiased assessment of the tissue sample.

d. If the biopsy is for calcifications and yet no calcifications are identified in the biopsy sample, it is the job of the pathologist to let the radiologist know this.

e. It is the job of every breast center performing biopsies to compare the pre-test and post-test results for concordance to assure that the lesion was adequately sampled and evaluated.