

1. Which of the following best characterizes endometrial cells examined on a pap smear:

D. Both A and C are correct

Answer: D. Endometrial cells are about the same size as neutrophils and the nucleus of an intermediate cell. The size is important to characterize because atypical cells may be only slightly larger. It is also important to remember that endometrial cells are usually on expected during the first 12 days of the cycle, and should always be reported in women over 40. (*The Bethesda System for Reporting Cervical Cytology*. Solomon D., et al. 2nd edition. 2004. and "Cytopathology." Berman S. *The Osler Institute*. 2004.)

2. To assess the ovarian function of a woman who has undergone a hysterectomy in the past, which of the following is the best method?

C. Gentle scrape of the lateral mid vaginal wall

Answer: C. A vigorous scrape of the epithelium near the cervical os is characteristic of a traditional screening pap smear. In contrast, when assessing hormonal status, the interest is in the maturation of the very superficial cells. The vaginal wall is a better location because it is much more sensitive to blood estrogen levels than the epithelium around the cervical os. ("Cytopathology." Berman S. *The Osler Institute*. 2004. and *Practical Principals of Cytopathology*, DeMay, RM. 1999.)

3. All of the following are features of Trichomonas infection EXCEPT:

C. Usually associated with Leptothrix bacteria

Answer: C. Leptothrix is usually associated with Trichomonas infection, but the converse is not true. Trichomonas organisms are usually fuzzy small pear shaped organisms often with red granules in the cytoplasm. A faint nucleus should be visible. They thrive in an elevated pH. (*Practical Principals of Cytopathology*, DeMay, RM. 1999.)

4. The cells illustrated in Case #1 on the website best illustrate which of the following:

D. Navicular cells

Answer: D. Navicular cells

5. All of the following can be accurately diagnosed on screening pap smear EXCEPT:

B. Chlamydia infection

Answer: B. It is not appropriate to diagnose Chlamydia infection on pap smear. It can be suggested in a comment, but is no longer appropriate as a diagnosis. ("Cytopathology." Berman S. *The Osler Institute*. 2004.)

6. Which of the following is the best diagnosis for the process depicted by the images for Case #2 viewed on the website:

B. Radiation changes

Answer: B. These images represent radiation changes. The pleomorphism of the nuclei combined with the streaming of the cells is most consistent with radiation changes. If the nuclei were more uniform, repair would be the best answer. All of this being said, a history should be sought to confirm diagnostic suspicions.

7. Within the laboratory, which of the following is true with regards to the Atypical Squamous Cells diagnosis rate?

C. It should not exceed 2 – 3 times the diagnosis rate of Low Grade SIL

Answer: C. With the new 2004 Bethesda System, the goal was to increase reproducibility and decrease the rates of ASC. The rate of ASC diagnosis should not be more than 2 – 3 times the rate of the diagnosis of low grade SIL. Rates above this should prompt reeducation and closer scrutiny. In general, the ASC rate should not exceed 5% of cases. (*The Bethesda System for Reporting Cervical Cytology*. Solomon D., et al. 2nd edition. 2004. and "Cytopathology." Berman S. *The Osler Institute*. 2004.)

8. Which of the following is the best diagnosis for the process depicted by the images for Case #3 viewed on the website:
A. Repair

Answer: A. These images represent repair changes. As discussed in the previous question, if there were more nuclear pleomorphism, it would be suspicious for radiation changes.

9. The presence of *Actinomyces* in cervical cytology is often associated with which of the following:
A. IUD use

Answer: A. *Actinomyces* is often and classically associated with IUD usage. (*The Bethesda System for Reporting Cervical Cytology*. Solomon D., et al. 2nd edition. 2004. p. 32.)

10. The cells illustrated in Case #4 on the website best illustrate which of the following:

B. Low grade dysplasia

Answer: B. The cells in the lower right represent LGSIL (specifically koilocytes). Note the dark, hyperchromatic, enlarged nuclei with surrounding clearing. The nuclei of low grade dysplasia are significantly larger than those of intermediate cells (those cells which serve as the relative size indicator in cervical cytology).

11. The cells illustrated in Case #5 on the website best illustrate which of the following:

C. High Grade dysplasia

Answer: C. This case illustrates high grade dysplasia. The cells are not as large as those seen in the previous low grade dysplasia case. The nuclei are dark and hyperchromatic, but the cytoplasm is less than that seen in LGSIL. It is difficult to see in the website images, but note the irregularity of the nuclear membrane and nuclear chromatin pattern.

12. The cells illustrated in Case #6 on the website best illustrate which of the following:

E. HSV infection

Answer: E. This case illustrates HSV infection identified on cervical cytology.

Notes for question set:¹

¹ PathMD strives for the highest quality and accuracy. However, the *PathMD: Board Review Letter* is for review purposes and not meant for clinical decision making. It should not be used in place of review of primary reference texts and the current medical literature. If inaccuracies are identified, please notify us so that a correction may be published. (info@PathMD.com)