

## The 2014 Bethesda System and Pap-Smear

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### Dear Editor,

Bethesda style reporting system, such as the system used in the cervix, is employed to report thyroid cytopathology and pancreaticobiliary tract cytology and urine cytology. Therefore, it is beneficial for gynecologists, endocrinologists, thyroid surgeons, gastroenterologists, general surgeons, and urologists (1).

The Bethesda system (TBS) was modified in 2014, which altered compared to the 2001 version. According to the new evidence in 2014, the TBS is enhanced. The evidence includes an additional understanding of human papilloma virus (HPV) biology, HPV vaccination in at least hundred countries, and the high utilization of liquid base cytology in decades. It is also noteworthy that additional screening options such as Pap test with high-risk HPV (i.e., co-testing) and primary high-risk HPV test are also considered (2). The following explanations can reveal the reason to modify TBS.

1. If the number of squamous cells is less than 5000 in the liquid base cytology, it is inadequate and HPV DNA test cannot be precisely analyzed (3).

2. The general categorization section declares that the reporting system of the endometrial cell for females is altered through 40 - 45 years old. Since the normal endometrial cell can exfoliate, detected in Pap smear, the reporting age altered. It leads to increase of the predictive value. It is noteworthy that the working group suggested that endometrial evaluation should be done only in postmenopausal situations and stated in the educational note.

3. The interpretation (result) section, non-neoplastic finding subsection and the following items are added which are optional to report.

a. Keratotic changes: Keratin formation is not a normal process in a squamous cell of cervix and vagina. HPV, trauma and pessary are the main reasons of keratotic changes. It should be considered that cervical cancer are ruled out when the keratotic changes reported (4).

b. Tubal metaplasia: While metaplasia is a benign process, an excess estrogen happens and turns it as a patho-

logic process.

c. Pregnancy-associated changes: True stromal decidual nature of the cells in pregnancy, such as smudgy chromatin with nucleolus, can be mistaken with a high-grade squamous intraepithelial lesion. Therefore, changes associated with pregnancy should be reported as a normal process (5).

4. In the inflammation section, the lymphocytic (follicular) cervicitis was added. Due to the high-prevalence of sexually transmitted diseases, cellular changes consistent with herpes simplex and cytomegalovirus were added in the organism section.

5. In squamous epithelial abnormality section, the two-tiered classification system for low-grade squamous intraepithelial lesion (LSIL) and high-grade squamous intraepithelial lesion (HSIL) were approved again. On the other hand, squamous abnormality as LSIL and a few cells suggestive of concurrent HSIL were not added to the report. In glandular cell abnormality section, there is difference with the last Bethesda system.

6. The following notes were added after the other malignant neoplasm section:

a. In adjunctive testing, provide a brief description of the test method(s);

b. And report the result to be easily understood by the clinician.

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