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## REVIEW ARTICLE

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# Problem in Atypical Squamous Cells

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It is well known that cervical cancer is the most common cancer affecting women in developing countries, including Thailand. The incidence of cervical cancer did not reduce satisfactorily due to insufficient screening. Pap smear is the easy, widely used and economical screening method. Bethesda system has been used for reporting since 1988<sup>(1)</sup>. This article will cover only about atypical squamous cell which nowadays report by Bethesda 2001<sup>(2)</sup>.

### Atypical squamous cells (ASC)

In general, ASC should not be reported in more than 5% of all Pap smear test. The rate of ASC in tumor clinic was not more than 3 times comparing with squamous intraepithelial lesion (SIL)<sup>(3)</sup>. Bethesda system 2001 categorized ASC into 2 groups:

- ASC, of undetermined Significance (ASC-US)
- ASC, cannot exclude HSIL (ASC-H)

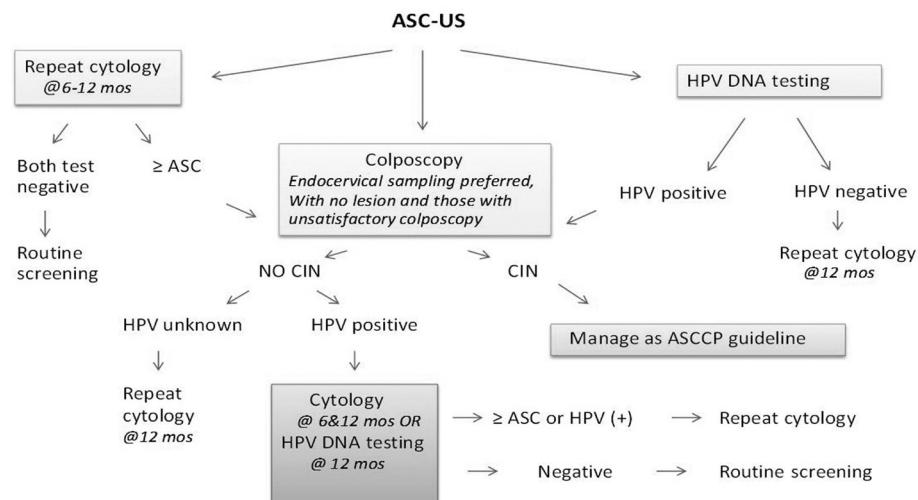
### ASC-US

Shape and size of ASC-US is similar to superficial cell or intermediate squamous cell. It has normochromatic or slightly hyperchromatic nucleus, smooth border, circular or oval shape and 2.5-3 times bigger than intermediate cell. Also, nucleus:cytoplasm ratio is greater<sup>(3)</sup>.

Among the report of ASC, ASC-US is the most frequently found 90-95%. After subsequent investigation, it was shown to be cervical intraepithelial neoplasia (CIN) 1, CIN2&3 and cancer in 10-20%, 3-5%, and 0.1-0.2%, respectively<sup>(4)</sup>.

However, the study done in Chiangmai, one of the high incidence region of cervical cancer of Thailand, showed higher incidence than previous study. Two hundred and eight women with ASC-US was shown to be CIN1, CIN2&3, AIS and cancer in 12.5%, 10.1%, 1.4%, and 2.4%, respectively<sup>(5)</sup>.

The American Society for Colposcopy and Cervical Pathology (ASCCP) suggests guideline for ASC-US as the following diagram.



**Fig. 1.** Management of women with ASC-US<sup>(4)</sup>

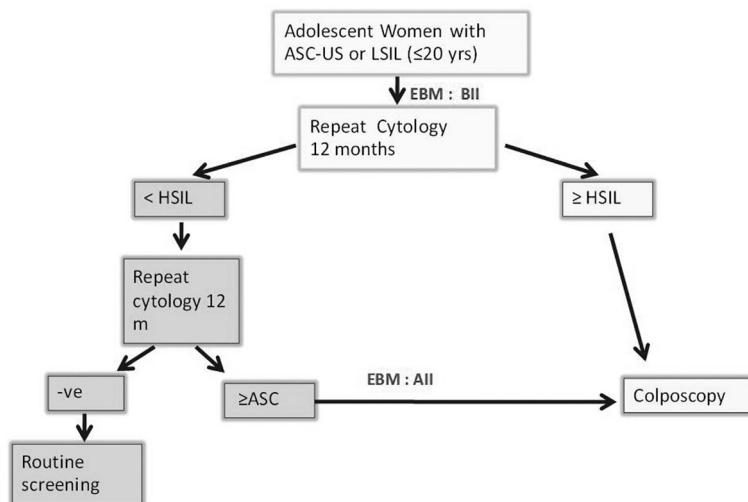
ASC-US can be managed in three ways such as the following triage options:

- Follow up Pap smear at 6<sup>th</sup> and 12<sup>th</sup> month
- Immediate colposcopy, endocervical curettage (ECC) is preferred in case without and unsatisfactory colposcopy. If the result is normal, follow up Pap smear at 12<sup>th</sup> month should be done.

C. HPV DNA testing. If result is normal, follow up Pap smear at 12<sup>th</sup> month should be done.

Management in cases with HIV infection or menopause similar to general cases. Pregnant woman can wait until postpartum period, but ECC is contraindicated. For woman under 21 years old, follow up Pap smear at 12<sup>th</sup> month should be done first.

### ASCUS: In Adolescent women



**Fig. 2.** Management of adolescent women with ASC-US<sup>(4)</sup>

Some conditions might be misunderstood as ASCUS such as inflammatory cell, post irradiated cell, decidual cell, parakeratosis, atrophy and folate deficiency<sup>(3)</sup>.

### ASC-H

ASC-H is usually an isolated cell or being in a group of less than 10 cells. Its size is metaplastic with nucleus 1.5-2.5 times larger than metaplastic cell. Border is not well circumscribed, irregular shape, hyperchromasia and increased nucleaus:cytoplasm

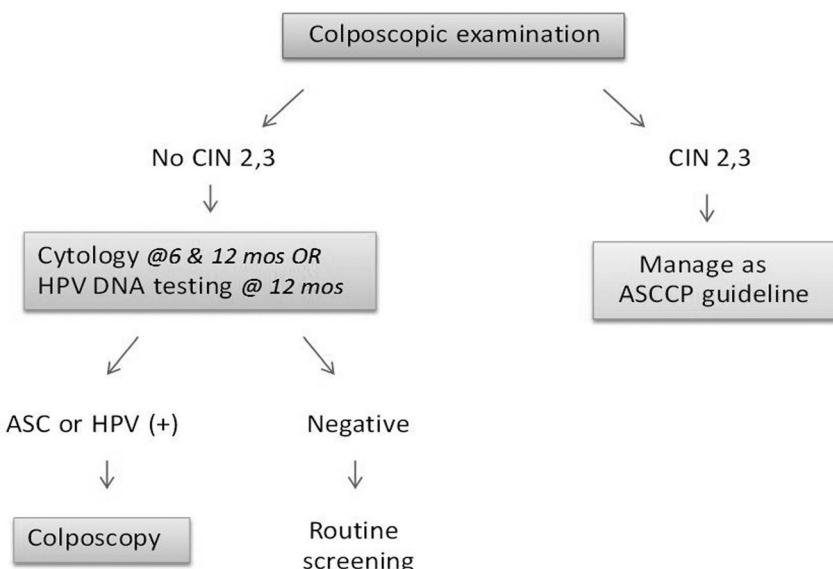
ratio<sup>(3)</sup>.

Five percent of Pap smear result was reported as ASC-H. After subsequent investigation, 20-50% was shown to be CIN2&3 and 8% turned to be cancer<sup>(4)</sup>.

The study taken place in Chiangmai, showed 85 women with ASC-H to be CIN1, CIN2&3, cancer, and cases without lesion in 7.1%, 61.2%, 8.2%, and 23.5%, respectively<sup>(6)</sup>.

ASCCP suggest guideline for ASC-H as the following diagram.

### Management of women with ASC-H



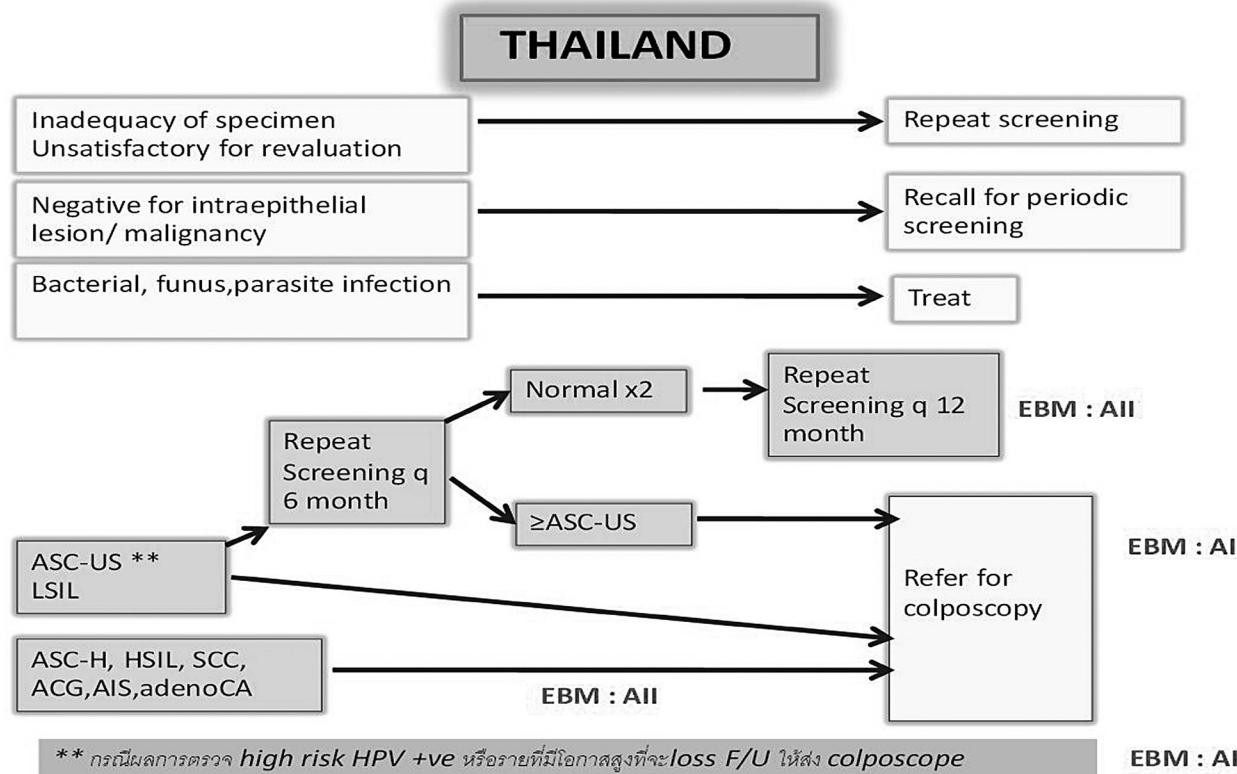
**Fig. 3.** Management of women with ASC-H<sup>(4)</sup>

Colposcopy is suggested in ASC-H. If the result is normal, follow up Pap smear at 6<sup>th</sup> and 12<sup>th</sup> month or HPV DNA testing at 12<sup>th</sup> month should be done. American college of Obstetricians and Gynecologists (ACOG) suggests ECC in every condition, except in pregnancy<sup>(7)</sup>.

Some conditions might be misunderstood as

ASC-H such as reactive endocervical cells, nuclear degeneration, squamous metaplasia, repair cell and atrophy<sup>(3)</sup>.

In Thailand, guideline for management in abnormal Pap smear from the Royal Thai College of Obstetricians and Gynaecologists is similar to ASCCP, as in diagram.



**Fig. 4.** Management of women with abnormal cervical cytology in Thailand

Ref.: Gynecologic oncology committee, the Royal Thai College of Obstetricians and Gynecologists 2006

## Conclusion

Proper follow of the guidelines of management in abnormal cervical cells could help reducing the incidence of cervical cancer and detecting high-grade precancerous lesion. However, accuracy in interpreting cytology and recognition some benign conditions may misleading to abnormal Pap smear. Therefore, in case of atypical squamous cell, careful taking of clinical history and cytologic review are very helpful in taking care of patients.

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1. 18-year female old with Pap smear shows ASC-US, what is the further management?
  - A. Colposcopy
  - B. HPV DNA Testing
  - C. Follow up Pap smear at 6 month
  - D. Follow up Pap smear at 12 month
2. What condition gives similar result as ASCUS?
  - A. Reactive endocervical cells
  - B. Nuclear degeneration
  - C. Folate deficiency
  - D. Repair cell
3. Female 25 years old with Pap smear shows ASC-H, what is the further management?
  - A. Colposcopy
  - B. HPV DNA Testing
  - C. Follow up Pap smear at 6 month
  - D. Follow up Pap smear at 12 month
4. What condition gives similar result as ASC-H?
  - A. Inflammatory cell
  - B. Nuclear degeneration
  - C. Post irradiation
  - D. decidual cell
5. Pregnant woman 35 years old, GA 12 weeks with Pap smear shows ASCUS. What should you do, except?
  - A. Colposcopy at post partum 6 week
  - B. HPV DNA Testing
  - C. Follow up Pap smear at 6 month
  - D. ECC in case of unsatisfactory colposcopy

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 C. Follow up Pap smear at 6 month  
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