

## ASC/SIL Ratio as a Quality Control Indicator for PAP Smear Cytology in a Tertiary Care Teaching Hospital

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**DOI:** 10.56018/20250601



### Abstract

**Introduction:** Atypical squamous cells (ASC) refer to cytologic changes suggestive of Squamous Intraepithelial Lesion (SIL), but which are qualitatively or quantitatively insufficient for a definitive interpretation as such. This study aims to calculate number of cases in particular age group and calculate ASC/SIL ratio reporting using quality metrics like Atypical Squamous Cells (which include both atypical squamous cells of undetermined significance and atypical squamous cell -cannot rule out high-grade squamous intraepithelial lesion)/Squamous Intraepithelial Lesion (ASC/SIL) ratio. Bethesda system suggests that ASC/SIL ratio for an individual or laboratory should be less than 2:1 or 3:1. **Material & Methods:** The present study was conducted in the Dept. of Pathology at tertiary care teaching hospital, Ahmedabad, Gujarat. Cases from December 2022 to December 2024 were taken. The study included conventional pap-stained smears of ASCUS, ASC-H, LSIL, HSIL and SCC. A total of 536 cases were studied. ASC/SIL ratio was calculated. ASC component included ASC-US and ASC-H. SIL component included LSIL, HSIL, and SCC. **Results:** Out of the total 536 cases, 356 cases were ASCUS and ASC-H and 180 cases were LSIL, HSIL, and SCC. ASC/SIL ratio was obtained by dividing the sum of all ASC cases by the sum of all SIL cases. The ratio obtained was 1.97:1 which is below the upper benchmark of 3:1. **Conclusion:** It is essential to have good-quality cytopathology reports for early identification, which enables appropriate management. The most commonly used quality indicator for cervical cytopathology is the ASC/SIL ratio. Bethesda system has suggested that the ratio should be less than 3 and others have suggested that lower ratios are desirable.

**Keywords:** The Bethesda System, PAP smear, Intraepithelial Lesion.