Objective: The aim of this study is to evaluate the clinical usefulness of cervicogram as primary screening test of cervical intraepithelial neoplasia.

Methods: Total 294 women who had undergone cervicogram and pathologically diagnosed at YUMC between January and July 2003, were selected. Diagnostic accuracy of Pap smear, cervicogram and Pap smear combined with cervicogram were compared with pathologic diagnosis. Statistical analysis was performed by chi-square test (SPSS version 11.0).

Results: 1. Among 294 women, Pap smears were normal in 130 cases (44.2%) and abnormal in 164 cases (55.8%). The diagnostic accuracy between Pap smear and histology was as follows: sensitivity 72.0%, specificity 64.6%, positive predictive value 72.0%, negative predictive value 64.6%, false positive rate 28.0%, false negative rate 35.4%. 2. Cervicograms were normal in 202 cases (68.7%) and abnormal in 92 cases (31.3%). The diagnostic accuracy between cervicogram and histology was as follows: sensitivity 39.6%, specificity 79.2%, positive predictive value 70.7%, negative predictive value 31.0%, false positive rate 29.3%, false negative rate 49.0%. 3. Among 130 women with normal Pap smear, cervicogram were normal in 101 cases (77.7%) and abnormal in 29 cases (22.3%). The diagnostic accuracy between cervicogram with normal Pap smear and histology was as follows: sensitivity 26.1%, specificity 79.8%, positive predictive value 41.4%, negative predictive value 66.3%, false positive rate 58.6%, false negative rate 33.7%. 4. Among 164 women with abnormal Pap smear, Cervicograms were normal in 101 cases (61.6%) and abnormal in 63 cases (38.4%). The diagnostic accuracy between cervicogram with abnormal Pap smear and histology was as follows: sensitivity 44.9%, specificity 78.3%, positive predictive value 84.1%, negative predictive value 32.7%, false positive rate 15.9%, false negative rate 67.3%.

Conclusion: Although adjunctive use of cervicogram to Pap smear in initial screening of cervical intraepithelial neoplasia showed higher specificity, higher negative predictive value and lower false negative rate compared to Pap smear alone, consideration in terms of lower sensitivity, lower positive predictive value, higher false positive rate and cost-effectiveness should be given in lieu of clinically applying cervicogram with Pap smear as initial screening test.