CONDITION: ABNORMAL PAP SMEAR (ICD9 795.1)

Revised October 2001

AEROMEDICAL CONCERNS: The purpose of the pap smear screening test is to detect premalignant conditions of the cervix. When positive, regardless of the nature of the underlying abnormality, this may be devastating news to the female aircrew member. Concern over the potential findings and the delay often associated with definitive diagnosis is most certainly a detractor to aviation duties. If cytology is positive for malignant cells, it is 95% predictive of cervical cancer. (See Cervical Carcinoma APL)

WAIVERS: Pap smears are not required for initial flight applicants. Pap smears resulting in a diagnosis of benign cellular changes with or without atypia (inflammation, infection, repair, reactive) require evaluation with subsequent treatment and follow-up and require local flight surgeon review only.

Rated aviation personnel may be followed locally for Atypical squamous cells of undetermined significance (ASCUS), and Low–grade squamous intraepithelial lesions (LGSIL) with no waiver action required and filed as "Information Only". High Grade squamous intraepithelial lesions (HGSIL) and carcinoma in situ (CIS) are considered non-waiverable until satisfactory treatment is achieved (See Cervical Carcinoma APL).

INFORMATION REQUIRED: OB/GYN consultation is required.

FOLLOW-UP: Annual OB/GYN consultation. High risk patients will require serial cytological studies as indicated for their class of disease.

TREATMENT: Treat underlying etiology of inflammatory changes [Human Papilloma Virus (HPV), bacteria, Trichomonas vaginalis, Herpes simplex virus, etc.]. Cryosurgery, laser therapy, loop electrosurgical excision procedure (LEEP), and electrocoagulation are methods used most commonly to treat LGSIL.HGSIL lesions require laser, LEEP or definitive surgical therapy. CIS is often treated with hysterectomy but cervical conization may be considered for patients who desire pregnancy. Close monitoring is required.

DISCUSSION: Cervical cancer is the end result of progressive cervical epithelial alterations. Risk factors include multiple sexual partners, early first coitus (< 20 years of age), young age of first pregnancy, lower socioeconomic status, smoking, male partners with multiple sexual partners, current or prior infection with HPV, condylomata, or herpes simplex infection, HIV infection, abuse of alcohol or other substances, and immunosuppression. Approximately 36% of treated CIS cases progress to invasive cervical cancer. 75% of lower grade dyplasias regress or persist without treatment with the remaining number progressing over various time intervals. The average time for progression of HGSIL to CIS varies and often depends on HPV serotype and can vary

from just a few months to several years. Screening may reduce the risk of death from cervical cancer by as much as 80%.

A review of current data in the AEDR indicates that in the past 15 years, screening revealed only four cases of CIS on initial exams and only three of these were disqualified. Other initial cases involved dysplasia of various degrees, and the majority of these cases went on to enter aviation service after treatment.

REFERENCE: Noble, *Textbook of Primary Care Medicine, Chapter 44, Gynecologic Neoplasms, 3rd Ed.*, 2001, p. 378-381.