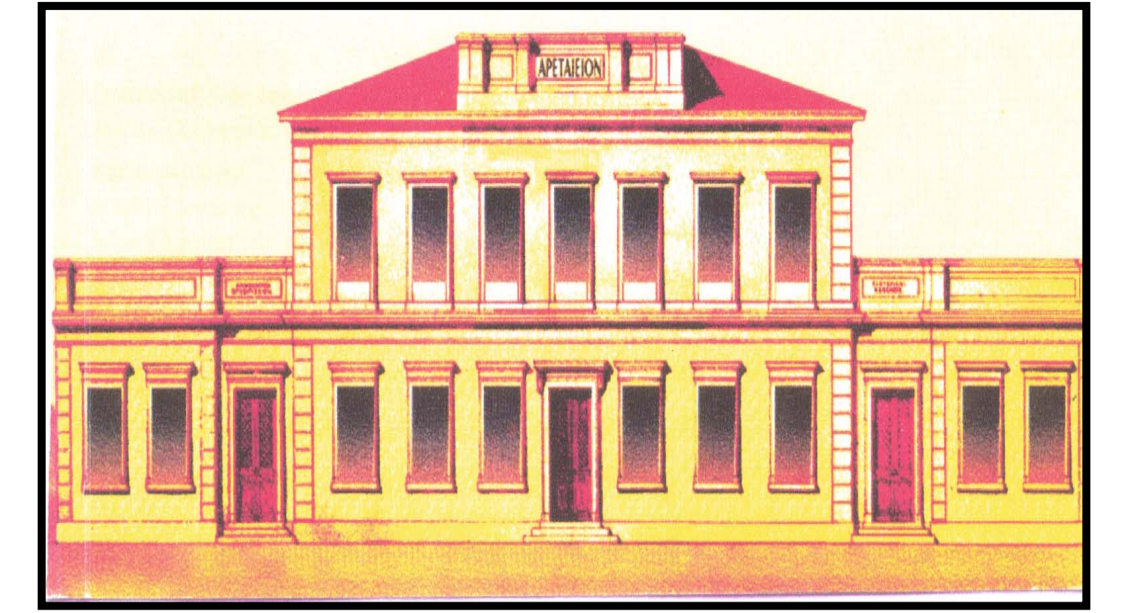




# Is bacterial vaginosis associated with cervical (pre)neoplasia in asymptomatic reproductive age women?



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**Objectives:** Early detection of cervical cell abnormalities by Papanicolaou (Pap) smear has reduced the risk of cervical cancer development. It has been suggested that other factors besides human papillomavirus (HPV) infection, might be involved in the malignant progression. Cervical inflammation has been proposed as one of the cofactors in cervical carcinogenesis, because disturbance of the vaginal microflora is associated with an increased risk of acquisition of HPV infection. Bacterial vaginosis, which sometimes can be asymptomatic, is a clinical entity quite common in women all over the world and is characterized by an increased production of N-nitrosamines by *Gardnerella vaginalis*, which are carcinogenic. We aimed to evaluate a possible association between the presence of *G. vaginalis* in asymptomatic reproductive age women with cervical (pre)neoplasia.

**Methods:** Asymptomatic women with inflammatory changes on routinely performed Pap smear and recalled for cultures in the last year were included in the study. Vaginal and cervical cultures were performed under standard conditions. A wet mount as well as a gram-stained smear were examined under microscope to obtain valuable information about the microorganisms present and to apply Nugent criteria for the diagnosis of bacterial vaginosis.

**Results:** For this preliminary study we included 77 women with bacterial vaginosis and 41 women with negative cultures (normal flora present), who served as controls. In the bacterial vaginosis group cervical cytology was normal in 64 (83.1%) and abnormal in 13 (16.9%) cases. Epithelial cell abnormalities included 7 cases of atypical squamous cells of undetermined significance (ASCUS), 5 cases of low-grade squamous intraepithelial lesions (LGSIL) and one case of high-grade squamous intraepithelial lesions (HSIL). In the controls, normal cervical cytology was present in 38 (92.7%) and abnormal in 3 (7.3%), including 2 cases of ASCUS and 1 LGSIL. All patients with epithelial cell abnormalities were referred for colposcopy and managed according to standard practices, while women with bacterial vaginosis were treated with metronidazole.

Cytology	BV (n=77)	NF (n=41)
Normal	64 (83,1%)	38 (92,7%)
ASCUS	7	2
LGSIL	5	1
HGSIL	1	0

**Conclusion:** The higher prevalence of abnormal cytology in the group of women diagnosed with bacterial vaginosis stresses the need for cervical cytology screening in these patients. Further research on women with bacterial vaginosis is needed to study the causal relationship between *G. vaginalis* infection and cervical (pre)neoplasia.