

## Molecular epidemiology of Human Papillomaviruses in breast cancer, Golestan province of Iran

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### **Abstract**

**Background and objectives:** Breast cancer is the most prevalent one in women. Some of the common causative factors are genetic background, nutritional and environmental factors. Viruses are believed as a risk factor in this cancer, too. Recent studies reported that Human Papillomaviruses can be one of the possible risk factors of breast cancer. This study focused on investigation of the papillomavirus genome in tissues of breast cancer in Golestan province, Iran.

**Material and Methods:** This descriptive analytical study was done from 2005 until 2008. The Samples were obtained from women admitted to the hospitals in Gorgan and Gonbad cities. All breast biopsy or mastectomy tissues were confirmed by the pathologists for breast cancer. DNA was extracted and PCR done by using general primers (GP5 + / GP6 + and MY09/MY11) for detection of papillomavirus genomes.

**Results:** The Subjects are 231 patients aged  $47 \pm 12/72$ , the youngest 20 and the oldest 84. They are from Gorgan (N=122) and Gonbad (N=109) The result Shows That The Subjects Suffer from infiltrating ductular Carcinoma(31.4%), infiltrating duct Carcinoma (60.1%) and intraductal Lobular Carcinoma (4.3%) and The rest from other kinds of Cancer. Papilloma Virus genome is not found in These Samples.

**Conclusion:** Based on paradoxical results from different parts of the world, upon the presence or absence of papillomavirus genome in breast cancer samples, to show the role of this virus in the development of breast cancer more studies are needed.

**Key words:** Breast Cancer, Papillomaviruses, Golestan Province