

Tumor markers of uterine cervical cancer: a new scenario to guide surgical practice?

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ABSTRACT

Since the introduction of Pap smear screening, the incidence and mortality of cervical cancer (CC) have been reduced drastically in USA and in other western states. Nevertheless, CC still remains the main cause of death from gynecological cancer in developing countries where screening programs are scant or inexistent. This evidence highlights the efficacy of screening, and the wide use of Human Papilloma Viruses (HPV) vaccines in developed countries. More and more people are, consequentially, undergoing a screening procedure, usually combined with HPV DNA test, increasing the early diagnosis of intraepithelial HPV-related lesions. The long transit time from early cervical lesion to invasive cancer provides an opportunity to identify pre-cancerous lesions where treatment result is maximum. In fact, when an invasive CC occurs, the overall survival rate strictly depends on stage of disease with an average survival of 70% at 5 years. Under the pressure of this reality, researches have made efforts to individuate cancer markers as indicator of specific cancer events. Some markers were showed to be able to detect those intraepithelial lesions have more chance to evolve to invasive forms (p16ink4a, p16, E-cadherin, Ki67, pRb, p53). Markers such as CEA, SCC-Ag, CD44, have been developed to detect invasive forms. Although cancer markers actually are not used only for early diagnosis, they may be useful in others fields of application such as evaluation and monitoring of treatments to improve diagnosis and treatment of CC.