Loss of ZNF516 protein expression is related with HR-HPV infection and cervical preneoplastic lesions

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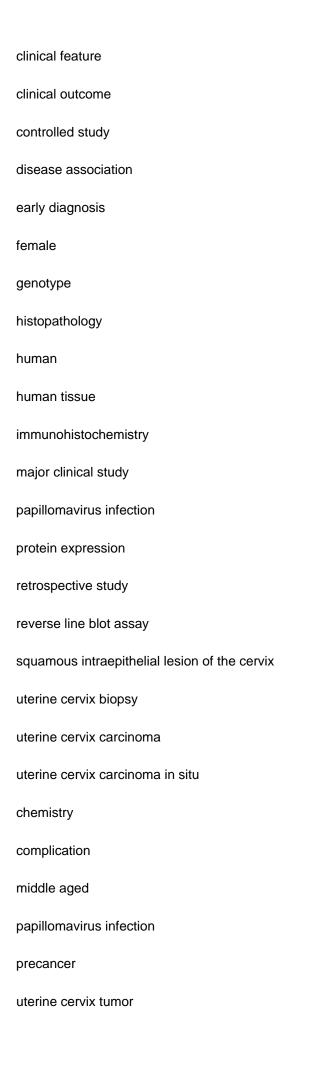
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Purpose: Cervical cancer is an important health issue among women worldwide. Cervical smear and human papillomavirus detection are the most used screening methods to detect preneoplastic and neoplastic lesions. However, as neither can predict cervical development, new markers are needed for this disease. ZNF516, a potential tumor suppressor gene, has been found altered in cervical cancer. The objective of this study was to determine ZNF516 immunohistochemistry frequency in cervical biopsies and its association with clinicopathological parameters, to evaluate its potential as marker in cervical lesions. Methods: A retrospective series of 452 formalin-fixed, paraffin-embedded (FFPE) cervical biopsies, obtained between 2002 and 2007, were selected for immunohistochemistry of ZNF516, p16 and Ki-67 markers. Human papillomavirus genotyping was performed on 272 of these samples through reverse line blot assay. Results: An inverse relation between ZNF516 expression and cervical lesions grade (P < 0.001) was observed, given this protein was found mainly expressed in normal tissues, while was decreased in cervical lesions. As expected, the proliferation markers p16 and Ki-67 were found highly expressed in cervical cancer compared to normal tissues, and inversely correlated to ZNF516 expression (P < 0.01). High

oncogenic risk-Human papillomavirus presence also was related to the lack of ZNF516 expression und

in cervical lesions (P < 0.05), and the detection of these two parameters showed a high sensitivity
(70.9%) for preneoplastic lesions detection. Conclusions: The loss of ZNF516 expression was fou
in cervical lesions, and its detection potentially could be used as a complementary marker of early
diagnosis in cervical lesions. © 2018, Springer-Verlag GmbH Germany, part of Springer Nature.
Cervical cancer
Human papillomavirus
Immunohistochemistry
Ki-67
p16
ZNF516
biological marker
Ki 67 antigen
protein p16
unclassified drug
zinc finger protein
ZNF516 protein
DNA binding protein
tumor marker
ZNF516 protein, human
adolescent
adult
aged
Article
assay
cancer risk



very elderly
virology
young adult
Adolescent
Adult
Aged
Aged, 80 and over
Biomarkers, Tumor
DNA-Binding Proteins
Female
Humans
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Papillomavirus Infections
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Retrospective Studies
Uterine Cervical Neoplasms
Young Adult