

Abstract Submitted
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AFM method to detect differences in adhesion of silica beads to cancer and normal epithelial cells¹ IGOR SOKOLOV, Clarkson University, SWAMINATHAN IYER, University of Western Australia, RAVI GAIKWAD, CRAIG WOODWORTH, Clarkson University — To date, the methods of detection of cancer cells have been mostly based on traditional techniques used in biology, such as visual identification of malignant changes, cell growth analysis, specific ligand-receptor labeling, or genetic tests. Despite being well developed, these methods are either insufficiently accurate or require a lengthy complicated analysis. A search for alternative methods for the detection of cancer cells may be a fruitful approach. Here we describe an AFM study that may result in a new method for detection of cancer cells in vitro. Here we use atomic force microscopy (AFM) to study adhesion of single silica beads to malignant and normal cells cultured from human cervix. We found that adhesion depends on the time of contact, and can be statistically different for malignant and normal cells. Using these data, one could develop an optical method of cancer detection based on adhesion of various silica beads.

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