

Influence of Extracellular Stress on Cancer Cell Studied by Atomic Force Microscopy

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Understanding of the influence of extracellular stresses such as electronic field and thermal heating on cancer is important for the treatment of cancers and has been attracting considerable attraction. Their influences are considered to be determined through the study of cellular membrane and cytoskeleton which are related to the shape and dynamical characteristics of the cancer cell [1]. In this study, we observed the shape and elastic modulus of several human cells using atomic force microscopy (AFM) and related techniques, and the influence of extracellular stresses on the cancer cell was discussed. Figure 1 shows an example obtained for a human *mesothelioma* cell, NCI-H28. A stripe structure unique to NCI-H28 disappeared by applying electronic field. Details will be discussed at the conference.

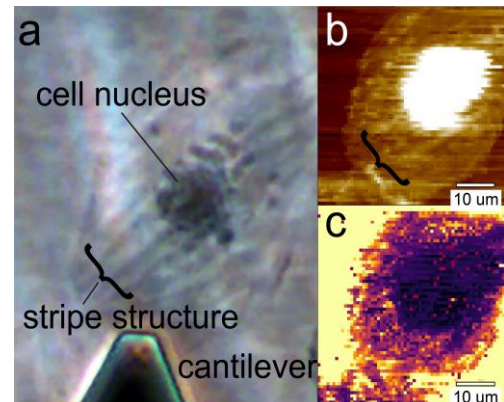


Figure 1 (a) Phase-Contrast image of NCI-H28, (b) AFM topography, (c) Elastic modulus mapping

[1] M. Nagayama *et al.*, *Cell Motility* **50**, 173-179 (2001)