

A SPATIAL MODEL OF CANCER INITIATION: BASIC RESULTS

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The issue of cancer initiation has been studied from a mathematical perspective in several works, however the vast majority of these works have focused on homogeneously mixing populations. In order to understand cancer initiation in a solidly structured tissue it is necessary to introduce a spatial model of this process. In this talk I will describe a spatial Moran model with selection and mutation that is used to model the cancer initiation process. Specifically I will discuss some of the basic properties of the model that are necessary to understand how and when a cancer initiation event occurs. In a second talk Jasmine Foo will discuss further results of this model. This is based on joint work with Rick Durrett and Jasmine Foo.