Jasmine Foo* (jfoo@cbio.mskcc.org), 415 E 68th St, New York, NY 10065, and Kevin Leder and Franziska Michor. A Multi-type Branching Process Model of Tumor Expansion.

We consider a stochastic model of tumor expansion using multi-type branching processes. Each time a cell replicates, mutation may occur with small probability $u$. A mutation confers a change in fitness or birth rate on the daughter cell, which is randomly chosen from a specific distribution. We analyze the behavior of this process and its dependence on this mutational fitness distribution. (Received September 22, 2009)