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**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)