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Elastic mismatch enhances cell motility YONY BRESLER, BENOIT PALMIERI, MARTIN GRANT, McGill University — In recent years, the study of physics phenomena in cancer has drawn considerable attention. In cancer metastasis, a soft cancer cell leaves the tumor, and must pass through the endothelium before reaching the bloodstream. Using a phase-field model we have shown [1] that the elasticity mismatch between cells alone is sufficient to enhance the motility of thesofter cancer cell by means of bursty migration, in agreement with experiment [2]. We will present further characterization of these behaviour, as well as new possible applications for this model. [1] Palmieri, B. et al. Sci. Rep. 5, 11745; [2] Lee, M. et al. Biophys. J 102, 2731 (2012).

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