

Advances in Detecting Rare Cancer Cells
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Metastatic disease, in which cancer spreads from the primary tumor to secondary tumors elsewhere in the body, is the primary cause of cancer death. The process of cancer metastasis involves the spread of cancer cells through blood, lymph, or body cavities following shedding from the primary tumor followed by a process in which these cells establish a new metastatic site and grow to form secondary lesions. These circulating cells are relatively small in number and appear at low concentrations in body fluids, but have the potential to uniquely inform our understanding of cancer and its treatment.

The past 10 years has seen an explosive growth in engineering techniques for capture and analysis of these rare cells. I will summarize work from ours and other groups focused on the detection and downstream analysis of these cells in both fundamental cancer biology and in clinical oncology.