

## **Metastatic Colonization by Circulating Tumor Cells**

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Metastasis is the main cause of death from cancer. To colonize distant organs, circulating cancer cells must overcome many obstacles through mechanisms that we are starting to understand. Infiltrating distant tissue, evading immune defenses, adapting to supportive niches, surviving as latent tumor-initiating seeds, and eventually breaking out to replace the host tissue, are key steps for metastatic colonization. These obstacles make metastasis a highly inefficient process, but once metastases are established current treatments frequently fail to provide durable responses. A better understanding of the mechanistic determinants of metastatic colonization is needed to better prevent and treat metastatic cancer. This lecture will cover recent insights into the molecular mechanisms that prime metastasis-initiating for infiltration, survival and outbreak in vital organs.