



How Does Cancer Spread?

Cancer cells often travel to other parts of the body, where they begin to grow and form new tumors that replace normal tissue. This process is called *metastasis*, which requires multiple events to occur.

Once a tumor is formed, cells can break free from the initial mass and travel to other parts of the body to start a new tumor. But how does this cell initially break off and move? Cancer cells secrete a mixture of digestive enzymes that degrade the *basal lamina* (proteins that cells are attached to keep them in place) and allow them to escape. Once a clear path is open, the cell can begin to move. Cells have a special organelle called the cytoskeleton that allows them to travel. Once the cells have crossed the basal lamina, they can spread through the body in several ways.

Now that the cell has broken off of the tumor and navigated through the basal lamina, it can spread to distant organs through two paths: the circulatory (blood) system or the lymphatic system. Both systems contain fluid that is transported throughout the body via an arrangement of vessels. Think of these as the "super highways" of the body, transporting substances to far distances, quickly and efficiently. If a free cancer cell enters one of these systems, it can go anywhere in the body it wants.

Once the metastatic cell has reached its new destination, the cell must successfully "set up shop" in a new organ to form a secondary tumor. This process is called *colony formation*. The metastatic cell must create favorable surroundings within a foreign environment that will allow for their growth and survival. It must re-penetrate through the vessel or walls, continue to multiply, and eventually form into a new tumor. This new tumor is called a metastatic (or *secondary*) tumor. This process can happen multiple times to form multiple metastatic tumors.

Cancer can originate and metastasize almost anywhere in the body that contains cellular tissue.

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[How do cancer treatments work? »](#)

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