

# Signaling to Tumors

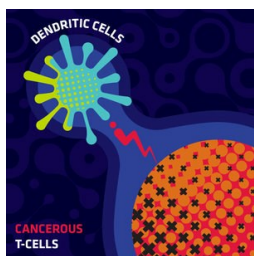
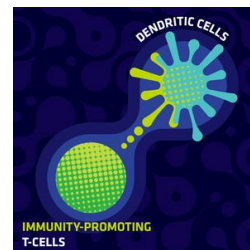
HEALTH, MOLECULAR BIOSCIENCES, INFOGRAPHICS, RESEARCH

Most treatments for cancer involve finding ways to try to blast malignancies out of existence: burning tumors through radiation, poisoning them with chemotherapy or cutting them out with surgery. New cancer research is investigating a gentler alternative: enlisting the help of the body itself in fighting cancer growth.

“Tumors are complex organs in and of themselves, and all of the heterogenous cell types talk to each other and promote each other’s survival and proliferation,” says Lauren Ehrlich, an assistant professor of molecular biosciences.

Ehrlich and her team are among a growing number of scientists exploring the role of noncancerous cells in sending signals to tumors that cause cancer’s survival and growth. Here’s one example of what she’s finding.

1. In healthy people, dendritic cells work with immunity-promoting T-cells to fight off illness.

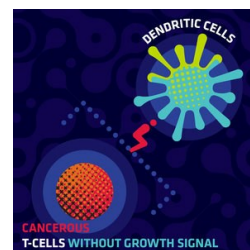


2. But in the case of T-cell acute lymphoblastic leukemia — a cancer that occurs in children — dendritic cells send the wrong message.

3. Cancerous T-cells depend on signals from nearby dendritic cells to grow. When the researchers place the cells in a culture together, the tumor cells proliferate.

4. Without the dendritic cells, the tumor cells in the culture receive no growth signal, so they die. Ehrlich and her team hope next to identify therapies that would help cut off this signal for good.

See more about this and other recent cancer-related discoveries in our post on [12 UT Austin advances in the fight against cancer.](#)



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