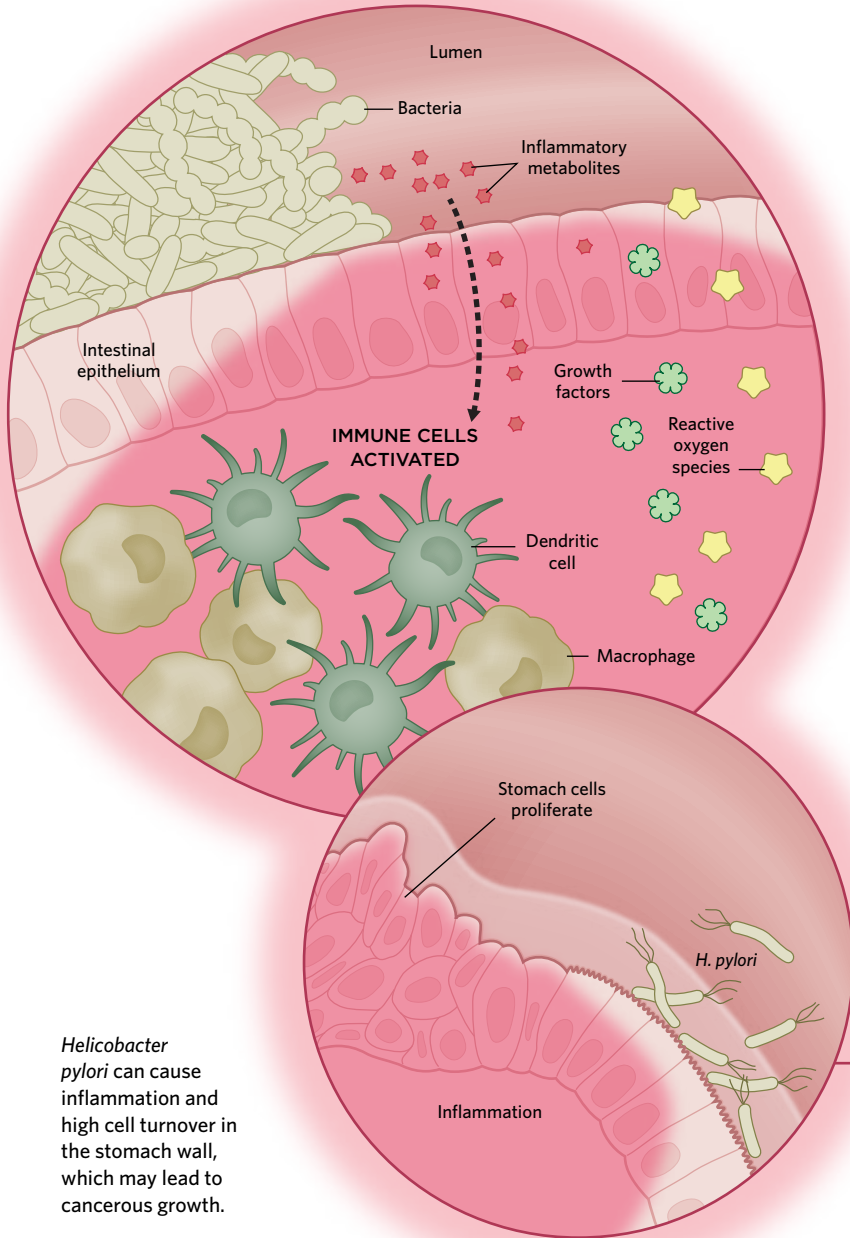


HOW THE MICROBIOME PROMOTES CANCER

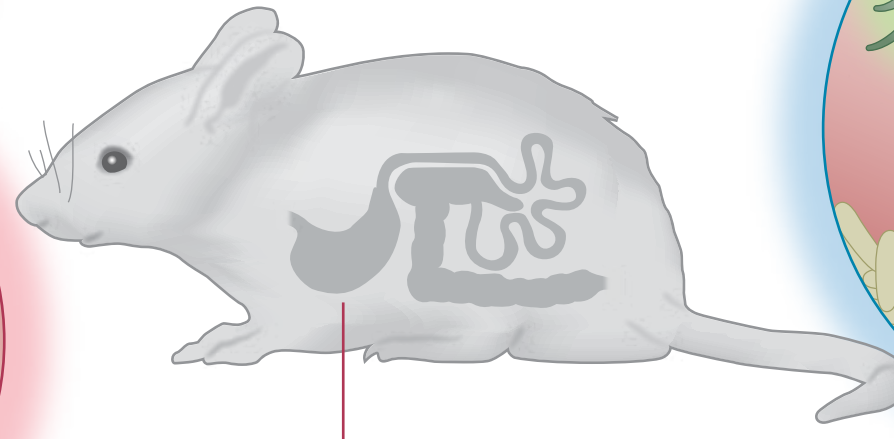
Gut bacteria can dial up inflammation locally in the colon, as well as in other parts of the body, leading to the release of reactive oxygen species, which damage cells and DNA, and of growth factors that spur tumor growth and blood vessel formation.



Helicobacter pylori can cause inflammation and high cell turnover in the stomach wall, which may lead to cancerous growth.

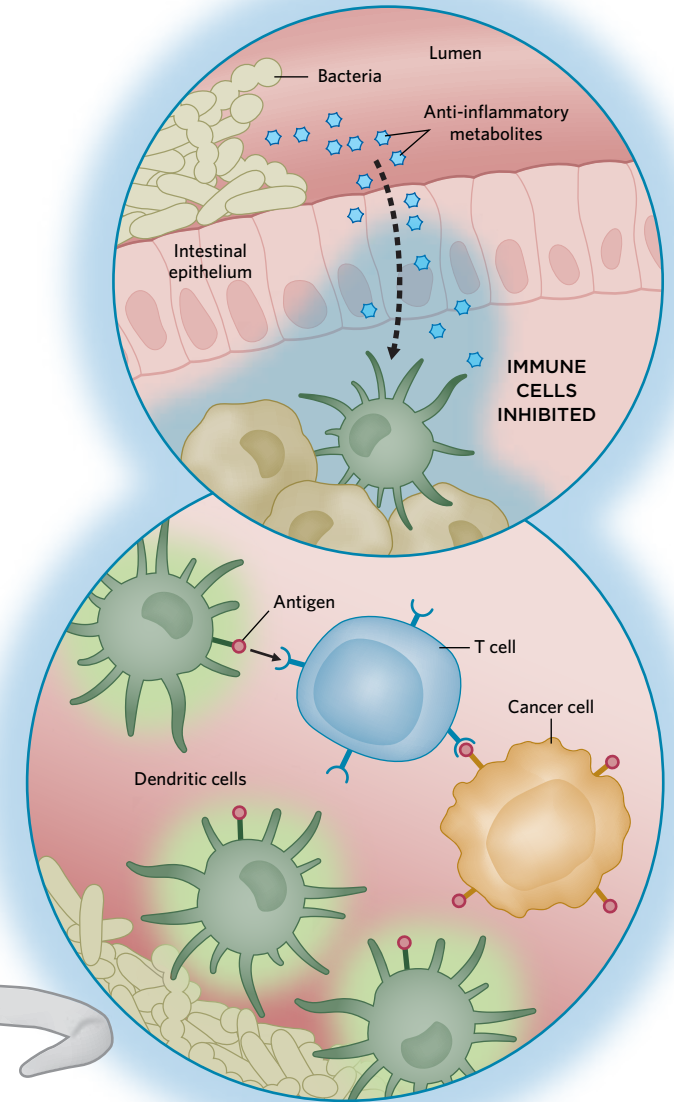
IMMUNE INFLUENCE

In recent years, research has demonstrated that microbes living in and on the mammalian body can affect cancer risk, as well as responses to cancer treatment. Although the details of this microbe-cancer link remain unclear, investigators suspect that the microbiome's ability to modulate inflammation and train immune cells to react to tumors is to blame. Here are some of the hypotheses that have come out of recent research in rodents for how gut bacteria shape immunity and influence cancer.



HOW THE MICROBIOME STEMS CANCER

Gut bacteria can also produce factors that lower inflammation and slow tumor growth.



Some gut bacteria (e.g., *Bifidobacterium*) appear to activate dendritic cells, which present cancer-cell antigens to T cells that in turn kill the cancer cells.