Cancer fight needs evolutionary approach to really understand, treat the disease

By Erin Blakemore
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Is it time to ditch the war on cancer?

Arizona State University professor Athena Aktipis says yes — and that it might be time to learn to live with the disease.
That seemingly unthinkable statement is at the core of “The Cheating Cell,” her book on how evolution can help us understand and treat cancer.

Key word: Treat, not beat.

If the thought of living with cancer rather than eradicating it rubs you the right way, there is good reason.

According to the National Cancer Institute, over 600,000 people die of cancer every year in the United States alone. Cancers are the second leading cause of death in the world. Cancer is not only a brutal killer but also portrayed as a disease people battle in a war with life-or-death stakes.

Arizona State Professor Athena Aktipis (Andrew Jade Photography)
But for Aktipis, that metaphor is counterproductive. Since cancer isn’t a single disease, it’s hard to fight — and because cancer represents evolution itself, it could be impossible to ever stop completely.

Cancer is hundreds of related diseases. They share something critical: cells that divide over and over again and spread into neighboring tissues. But the similarity can end there. Cancers are unique based on where they originate and the genetic profile of the person in whose body they develop.

Aktipis takes an evolutionary approach to cancer, tracing the ways cells “cheat” natural selection and showing how the human body evolved to outsmart many of those threats. She invites readers to put themselves in the role of a cancer cell and learn about the ways in which the disease and the history of human existence are intertwined.

Along the way, she argues for “a new way of looking at cancer — not as something that must be eliminated at all costs, but rather as something that must be controlled and shaped into a companion that we can live with.”

Cancer may not ever be eradicated, she suggests, but humans could one day regain the upper hand.