

## Fighting cancer with help from the body's internal clock

Chi Van Dang generally declines to discuss the science that made him famous.

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Instead of doing so, Dang [a leading authority on cancer metabolism] uses his soapbox at every research meeting, lecture and blue-ribbon panel to advocate for something else: a simple yet radical tweak to how oncologists administer cancer drugs.

The approach, known as chronotherapy, involves timing delivery of drugs to minimize side effects while maximizing effectiveness. The idea is to synchronize therapy with the body's natural 24-hour rhythms — the circadian clock — and striking when cancer cells are most vulnerable or when healthy cells are least sensitive to toxicity (or, ideally, both).

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It is not an entirely new concept. Some trials in the 1980s and 1990s showed dramatic reductions in toxicities and extended survival times among cancer patients who were treated in a clock-optimized fashion. But mostly “it’s just always been on the fringe,” says Dang. “There weren’t that many card-carrying cancer biologists like me getting into it.”

Until now.

Researchers are finding new ways to administer old drugs and they are devising clever tactics for rewiring aberrant clocks. ... Last year, the NCI — the largest funder of cancer research in the world — put out a call for grant applications from scientists seeking to understand how circadian processes affect tumor development and the responses of patients to therapy.

**Read full, original post:** [How to ruin cancer's day](#)