The Time of Day You Get Cancer Treatment May Boost Survival

A study found that people with small-cell lung cancer who received immunotherapy before 3 p.m. had better long-term outcomes.

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New findings from a study published in the journal Cancer adds to existing evidence that the time of day one undergoes cancer treatment may impact one's cancer progression and overall survival.

It should be noted that the optimal time to receive treatment may depend on factors such as the type of cancer and an individual's sleep habits.

The retrospective study involved 397 Chinese people with extensive-stage small-cell lung cancer who received the immunotherapy drugs atezolizumab or durvalumab plus chemotherapy between 2019 and 2023.

People who received immunochemotherapy before 3 p.m. experienced the greatest benefits, including significantly longer time without cancer progression and overall survival, compared with those treated later in the day.

Indeed, after adjusting for influencing factors, immunochemotherapy administered earlier in the day was associated with a 52% lower risk of cancer progression and a 63% lower risk of death.

The study adds to existing evidence suggesting that scheduling cancer treatment according to a person's natural circadian rhythm may lead to maximum effectiveness and minimal toxicity due to factors such as peak drug absorption time as well as the vulnerability of cancer cells, as detailed in a 2024 study.

"Adjusting infusion timing is a straightforward and easily implementable intervention that can be adopted across diverse health care settings without additional cost," said senior author Yongchang

Zhang, MD, of Central South University, in a press released about the study. “This study has immediate clinical applicability and the potential to transform current treatment protocols for small-cell lung cancer.”

What’s more, prior research suggests that the timing of chemotherapy for colorectal cancer and immunotherapy for melanoma makes a difference, but the effect may vary by sex.

In addition, a 2023 study found that women who received chemotherapy for lymphoma in the afternoon appeared to respond better and had fewer side effects than women who received treatment in the morning, who had substantially higher rates of disease progression and death; however, this pattern was not observed among men.

Because circadian rhythms vary, researchers emphasize the need to learn how to more precisely adjust the timing of treatment.

To read more, click #Immunotherapy or #Circadian Rhythm. There, you’ll see headlines such as “Can Bright White Light Therapy Treat Cancer-Related Fatigue?” “Surgery After Immunotherapy Boosts Survival for Liver Cancer Patients” and “Why Some Cancer Patients Do Not Benefit From Immunotherapy.”
