

Depressed patients are less responsive to chemotherapy

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A brain-boosting protein plays an important role in how well people respond to chemotherapy, researchers report at the ESMO Asia 2016 Congress in Singapore.

A study has found that [cancer patients](#) suffering [depression](#) have decreased amounts of brain-derived neurotrophic factor (BDNF) in their blood. Low levels make people less responsive to [cancer](#) drugs and less tolerant of their side-effects.

Lead author Yufeng Wu, head of oncology, department of internal medicine, Affiliated Cancer Hospital of Zhengzhou University, Henan Cancer Hospital, Zhengzhou, China, said: "It's crucial doctors pay more attention to the mood and emotional state of patients. "Depression can reduce the effects of chemotherapy and BDNF plays an important role in this process."

Low mood is common among cancer patients, especially the terminally ill. BDNF is essential for healthy brain function and low levels have already been linked with mental illness. This study aimed to discover how depression influenced outcomes for people with advanced lung cancer.

Researchers recruited 186 newly diagnosed patients receiving chemotherapy. To assess their state of mind, they were asked to rate their depression levels the day before treatment began. Quality of life details, overall survival and other data were also collected. This allowed researchers to compare this information with the patients' mood scores.

Results showed that those whose cancer had spread to other organs were the most depressed and this severely decreased their tolerance to chemotherapy. It was associated with vomiting, a reduction in white blood cells, and prolonged hospital stays. The impact of severe depression was even greater. It reduced the length of time that patients

lived with the disease without it getting worse.

Researchers found that BDNF clearly boosted the number of tumour cells killed by chemotherapy. Patients with [severe depression](#) had lower levels of the protein in the blood so their bodies were not as effective at fighting cancer. This reduced their chance of surviving the disease.

"Our aim now is to prescribe drugs such as fluoxetine to depressed patients and study their sensitivity to [chemotherapy](#)," added Wu. Commenting on the results of the research, Ravindran Kaneshvaran, consultant medical oncologist and assistant professor, Duke-NUS Medical School, Singapore, said: "The link between depression and poor outcomes among these patients is significant and can be associated with the downregulation of brain derived neurotrophic factor.

"This finding can perhaps lead to new ways to treat depression in these [patients](#) which in turn may prolong their lives. Further research is needed to establish the effects of different anti-depressant drugs on BDNF levels."

Provided by European Society for Medical Oncology

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