

Preclinical tests may lead to new approach to treat CNS lymphoma

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A drug recently approved for use in multiple myeloma is now being tested for its ability to fight central nervous system (CNS) lymphoma, a deadly cancer of the immune system that can affect the brain, spinal cord and fluid, and eyes. The clinical trial, now open at the three campuses of Mayo Clinic—in Florida, Minnesota and Arizona—follows successful testing of the drug, pomalidomide, in mouse models of CNS lymphoma. Details of the preclinical testing are available in the science journal [PLOS ONE](#).

Approximately 5,000 patients are diagnosed with the disease every year in the United States.

"We believe pomalidomide could be beneficial in patients with this cancer because it does two things that most anti-cancer drugs do not do," says Han Tun, M.D., an oncologist at Mayo Clinic in Florida. "The drug has excellent brain penetration, which is a requirement in treatment of [brain tumors](#). The other interesting thing is that it is not only active directly against [lymphoma cells](#) but also alters the [tumor microenvironment](#)."

Dr. Tun is the senior investigator of the *PLOS ONE* study and the principal investigator for the clinical trial, which is accruing patients.

"Our preclinical study suggests pomalidomide is very promising. Treatment with pomalidomide in mouse models for CNS lymphoma significantly improved the survival and suppressed the tumor growth," he

says. "The phase I clinical trial was developed based on these preclinical results."

Pomalidomide belongs to a class of drugs called immunomodulatory agents. Thalidomide was the first drug in this class and was approved in 2006 for treatment of [multiple myeloma](#), a bone marrow cancer. Pomalidomide was approved for use in multiple myeloma in February.

Provided by Mayo Clinic

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