Bone cancer treatment ineffective, despite promising laboratory data

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Ewing sarcoma is the second most common type of primary bone cancer seen in children and young adults. Patients with relapsed or refractory Ewing sarcoma have a poor outcome with conventional therapies. Cytarabine decreases the levels of a certain key protein in Ewing sarcoma cells and has demonstrated preclinical activity against Ewing sarcoma cell lines in the laboratory. Treatment of Ewing sarcoma that relapses is difficult. A new study published in *Pediatric Blood & Cancer* evaluated a phase II clinical trial of a potential new treatment approach for relapsed Ewing sarcoma using cytarabine.

Ten patients were treated. While one patient's tumor stayed stable in size for approximately 4 months while receiving the drug, none of the ten patients had smaller tumors after treatment with cytarabine. This result is disappointing since laboratory studies indicated that cytarabine might be an effective drug for these patients. In addition, these patients with Ewing sarcoma developed lower blood counts than expected from these doses of cytarabine. The fact that the drug was not found to be effective is yet another example in which laboratory data do not always translate into success in treating patients.

"Cytarabine is not an effective agent for patients with Ewing sarcoma and this drug should be used with caution in heavily pretreated patients with solid tumors due to the significant impact of the drug on blood counts," says Steven DuBois, co-author of the study. This study demonstrates the difficulties of extending promising therapeutic targets observed in the laboratory to effective treatments in patients. It also

emphasizes the need for more predictive preclinical models.

Source: Wiley