Study examines bone health in children with leukemia

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In a *Journal of Bone and Mineral Research* study that followed 186 children with Acute Lymphoblastic Leukemia (ALL) for 6 years after initiation of chemotherapy, approximately 1 in 5 children experienced a non-vertebral fracture and 1 in 3 had a new vertebral fracture.

Vertebral fractures were asymptomatic in 39 percent of the children, and approximately 25 percent persisted as vertebral deformities. Older children and those with more severe vertebral collapse were more likely to have persistent vertebral deformity.

Vertebral fractures soon after diagnosis were strong predictors of both vertebral and non-vertebral fractures, and most of the fractures occurred in the first two years of treatment.

"In revealing that vertebral fractures are frequent in children with ALL on chemotherapy, and that older children and those with more severe collapse are at risk for residual vertebral deformities, strategies to prevent vertebral fractures in those at greatest risk for permanent sequelae now merit further study," said lead author Dr. Leanne Ward, of Pediatrics Children's Hospital of Eastern Ontario.

More information: Leanne M Ward et al, Bone Morbidity and Recovery in Children With Acute Lymphoblastic Leukemia: Results of a Six-Year Prospective Cohort Study, *Journal of Bone and Mineral Research* (2018). DOI: 10.1002/jbmr.3447