

Study finds association between genetic mutation and age at diagnosis for common childhood cancer

March 13 2012

Certain mutations of the gene ATRX were associated with age at diagnosis in children and young adults with advanced-stage neuroblastoma, a cancer that grows in parts of the nervous system, according to a study in the March 14 issue of *JAMA*.

Neuroblastoma is the most common extracranial (outside the cranium) solid [tumor](#) of childhood and accounts for 15 percent of all cancer-related deaths in children. "Half of the patients (50 percent) with [neuroblastoma](#) present with metastatic disease; with current treatment approaches, the [age](#) at [diagnosis](#) has proven to be one of the most powerful predictors of outcome. The [probability](#) of overall [survival](#) is 88 percent in infants [age: less than 18 months at time of diagnosis], 49 percent in children [age: 18 months - less than 12 years], and only 10 percent in adolescents or [young adults](#) [age: 12 years or older]," according to background information in the article. "Genetic [mutations](#) associated with neuroblastoma and its clinical course are not completely understood."

Nai-Kong V. Cheung, M.D., Ph.D., of the Memorial Sloan-Kettering [Cancer](#) Center, New York, and colleagues conducted a study to identify genetic mutations that are associated with age at diagnosis in patients with metastatic neuroblastoma. Whole genome sequencing was performed of DNA from diagnostic tumors and their matched germlines (those cells of an individual that have [genetic](#) material that could be

passed to offspring) from 40 patients with metastatic neuroblastoma obtained between 1987 and 2009. Age groups at diagnosis included infants (0-

Citation: Study finds association between genetic mutation and age at diagnosis for common childhood cancer (2012, March 13) retrieved 28 March 2023 from

<https://medicalxpress.com/news/2012-03-association-genetic-mutation-age-diagnosis.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.