MYCN copy number tied to poor features in neuroblastoma

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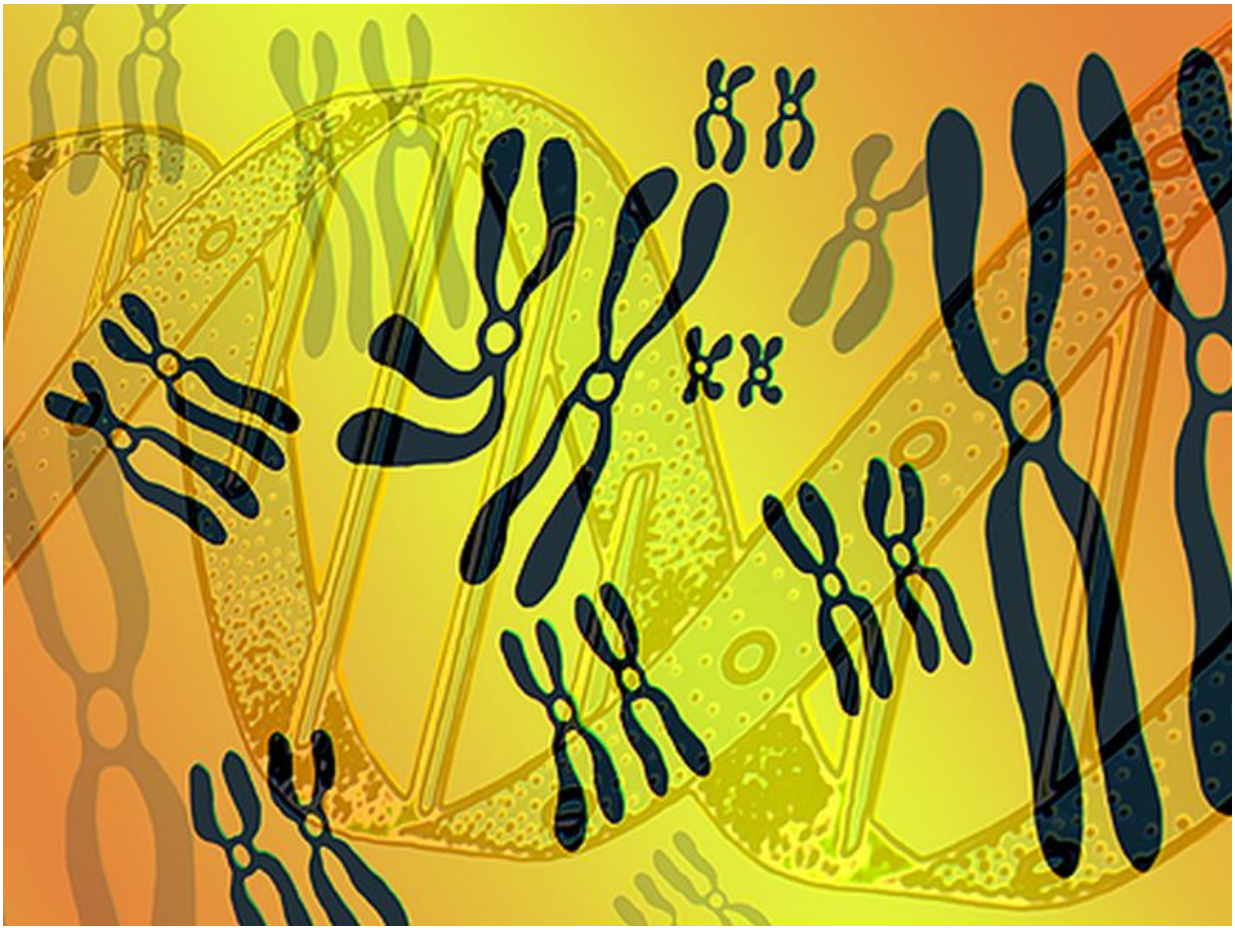

(HealthDay)—The rate of unfavorable features is increased in

association with increasing *MYCN* copy number in patients with neuroblastoma, according to a study published online July 11 in *Cancer*.

Kevin Campbell, M.D., from Harvard Medical School in Boston, and colleagues conducted a retrospective study involving patients with *MYCN* wild-type tumors, *MYCN* gain (two- to four-fold increase), or high-level *MYCN* amplification (MNA; more than four-fold increase). The authors examined ordered associations between *MYCN* copy number category and features of interest.

The researchers found that 79.1 percent of the 4,672 patients had *MYCN* wild-type tumors, 2.8 percent had *MYCN* gain, and 18.1 percent had MNA. The percentage of patients with an unfavorable feature was lowest, intermediate, and highest in the *MYCN* wild-type, the *MYCN* gain, and the MNA categories, respectively (P MYCN gain category. Inferior event-free survival and overall survival were seen for patients with *MYCN* gain compared with *MYCN* wild-type. *MYCN* gain correlated with the lowest response rate after chemotherapy among patients with high-risk disease. A significantly increased risk for death was seen among patients with non-stage 4 disease and patients with non-high-risk disease with *MYCN* gain.

"Increasing *MYCN* copy number is associated with an increasingly higher rate of unfavorable clinical/biological features, with 11q aberration being an exception," the authors write.

More information: Abstract
Full Text (subscription or payment may be required)