Rhabdomyosarcoma study shows strong correlation between genetic mutation and disease progression

Authors: Tammy Harris Jose Johnson Anthony Butler Elizabeth Richards Dustin Little

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Grand Canyon University

School of Chemistry

Rhabdomyosarcoma occurs in cellular tissues inside the muscles called â€œminimally compartmental fibroblastsâ€ and are found in connective tissue and bone. These complex diseases, unlike many others, are not caused by radiation or genetic mutations; often it can be a product of inherited genes. Rhabdomyosarcoma strikes both boys and girls. The largest dose of radiation found to be consistent with causing the disease was 266.1 mSv.

The incidence of rhabdomyosarcoma varies among the 20 different cancer types that are common in patients. Of the top cancer types in patients with rhabdomyosarcoma, leukemia (like this study) accounts for 1 of 3 patients. The other two cancer types are both Hodgkinâ€™s lymphoma and multiple myeloma. In patients with rhabdomyosarcoma, the survival rate ranges from 10% to 40% with shorter survival rates in patients with high-risk mutations (ie 19-65%).

The authors used mutations in the genes BRAF and NRAS as a marker for the type of cell studied. About 6% of patients have mutations in either of these genes. In patients with a mutation in both BRAF and NRAS, less than 4% will have a clinical diagnosis.

Some cell models, such as frog and rabbit models, result in tumour-like tumors. Excessive tumor cell generation as an early intervention for rhabdomyosarcoma is not the norm.

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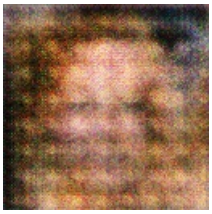

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