News Highlights

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Mesothelioma Patients with Germline BAP1 Mutations have Improved Long-Term Survival

by Chantal Jackson

HONOLULU, HI - Dr. Francine Baumann, assistant professor in the Cancer Epidemiology Program at University of Hawai‘i Cancer Center, has provided evidence for enhanced long-term mesothelioma survival linked to a specific germline mutation, BAP1. Her paper: "Mesothelioma Patients with Germline BAP1 Mutations have Seven-Fold Improved Long-Term Survival" was published in Carcinogenesis on November 7, 2014.

Malignant mesothelioma (MM) is a form of cancer associated with exposure to mineral fibers. There is a long latency period between exposure and diagnosis, with a generally poor prognosis. Dr. Baumann and her team used data from the United States Surveillance, Epidemiology, and End Results (SEER) program from 1973-2010 as a population based comparison group, noting that the median survival for MM patients was less than 1 year.

Dr. Baumann's group tested the hypothesis that MM associated with germline BAP1 mutations has a better prognosis compared to sporadic MM; indeed, they determined that the actuarial median survival for MM patients with germline BAP1 mutations was five years. Dr. Baumann explains, "Malignant mesothelioma is a high fatality disease, usually these individuals live less than one year after diagnosis. There is currently no treatment available to increase survival in this group. The current research demonstrates that in cases where the individuals have this BAP1 germline mutation, there is a longer period of survival."

Dr. Baumann highlights the clinical value in this finding, "The information shows a seven-fold increased survival in MM patients with the BAP1 germline mutation. If a clinician observes a high incidence of cancer within a particular family, it is important to test for this mutation and offer treatment based upon prognosis". For example, in sporadic MM, a survival prediction of approximately one year might be approached differently than a prognosis of five years, as seen in the case of BAP1 germline mutations associated with MM. By testing for this mutation, different therapeutic options could be recommended that might ultimately improve the patient’s quality of life.