POSSIBLE DISCOVERY OF BIOMARKER FOR ASBESTOS EXPOSURE AND MESOTHELIOMA

The discovery by UH Cancer Center researchers may provide the first biomarker to detect people exposed to asbestos and those who may have developed mesothelioma.

HONOLULU – University of Hawai‘i Cancer Center researchers may have discovered the first biomarker of asbestos exposure, precisely that the serum levels of a protein called HMGB1 are increased among asbestos workers compared to people who have not been exposed to asbestos. Moreover, they discovered that a specific form of the HMGB1 protein identifies those who have developed mesothelioma.

The discovery published in Clinical Cancer Research is relevant to the several million people in the US and many more worldwide that may have been exposed to asbestos, according to the researchers.

People exposed to asbestos are at high risk of developing mesothelioma, a cancer of the lining that covers the lungs and abdomen.

"HMGB1 serum levels were high among workers who had been heavily exposed to asbestos and, by testing for HMGB1 acetylation we were able to identify those who had mesothelioma," said Haining Yang, M.D., Ph.D., associate professor in the UH Thoracic Oncology Program.

"This is a significant finding because it may help identify people exposed to asbestos that are at risk of mesothelioma and they may be monitored for early detection that is associated with better responses to therapy," said Michele Carbone, MD, PhD, director of the UH Cancer Center's Thoracic Oncology Program.

Before offering this test the researchers plan to validate the results in a larger study. They aim to open a clinical trial to validate these findings later in 2016. The trial is expected to take up to 4 years to complete.

"If the results are validated in a clinical trial we will have a very powerful test for screening for asbestos exposure and mesothelioma," said Dr. Yang.

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