Study Examines High Rate of Rare Mesothelioma Among Young Women in Eastern China

HONOLULU – A research team led by Michele Carbone, director of Thoracic Oncology at the University of Hawai‘i Cancer Center in collaboration with scientists at New York University, and Zhejiang Cancer Hospital in Hanghzou, China, discovered an unusually high rate of a rare form of mesothelioma among young women in Eastern China.

Mesotheliomas are malignant cancers usually caused by exposure to asbestos. Most occur in the chest cavity of older men who have worked in the asbestos industry. However, UH Cancer Center researchers found a rare form of mesothelioma infrequently linked to asbestos exposure in young women in Eastern China.

"This localized epidemic of peritoneal mesothelioma in Eastern China is unique. The finding gives us the opportunity to study these women, identify the causes, and develop preventive strategies in China and throughout the world. We want to save many women from this deadly disease," said Michele Carbone.

The new study published in JAMA Oncology examined tumors diagnosed as mesothelioma from 2002 through 2015 at two Chinese hospitals – one in Hangzhou, China, where there is no asbestos industry and one in Yuyao, China, located in the Chinese textile industrial area, where most patients are exposed to asbestos.

Researchers found the male-to-female ratio of mesothelioma was 1 to 4 compared to 4 to 1 in the U.S, and the pleural (chest cavity mesothelioma)-to-peritoneal ratio was 1 to 3 compared to 5 to 1 in the US. Also, only 1 of 14 peritoneal malignant mesothelioma cases in Hangzhou was associated with asbestos.

"In recent years we have seen an increase around the world of peritoneal mesothelioma in young women not exposed to asbestos, and the cause is still unknown," said Carbone.

"These new findings allow UH Cancer Center researchers to study the causes and develop critical preventive strategies," said Randall Holcombe, UH Cancer Center director. "The collaborative study highlights the importance of the Center’s location in Hawai‘i, making us the cancer research bridge between Asia and the United States."

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