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Chinese researchers use traditional ink for cancer treatment

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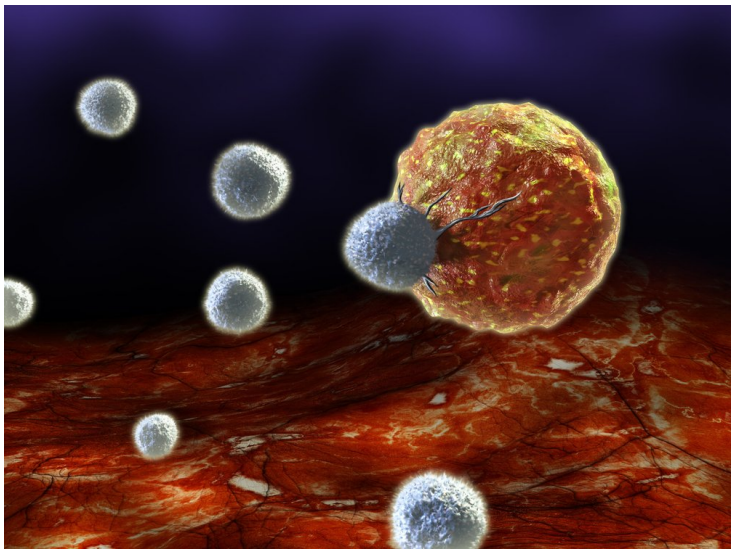

A group of Chinese researchers have reported that a Chinese traditional ink could noninvasively and effectively treat cancer cells that spread, or metastasize, to lymph nodes.

Photothermal therapy is an emerging noninvasive treatment option in which nanomaterials are injected and accumulate in cancer cells. A laser heats up the nanomaterials, and this heat kills the cells. Many of these nanomaterials are expensive, difficult-to-make and toxic. However, a traditional Chinese ink called Hu-Kaiwen ink (Hu-ink) has similar properties to the nanomaterials used in Photo thermal therapy.

The researchers analyzed Hu-ink and found that it consists of nanoparticles and thin layers of carbon. When Hu-ink was heated with a laser, its temperature rose by 131 degrees Fahrenheit, much higher than current nanomaterials.

Under the photo thermal therapy, the Hu-ink killed cancer cells in a laboratory dish, but under normal conditions, the ink was non-toxic. This was also the scenario observed in mice with tumors. The researchers also noted that Hu-ink could act as a probe to locate tumors and metastases because it absorbs near-infrared light, which goes through skin.