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Researchers use metal for killing cancer cells

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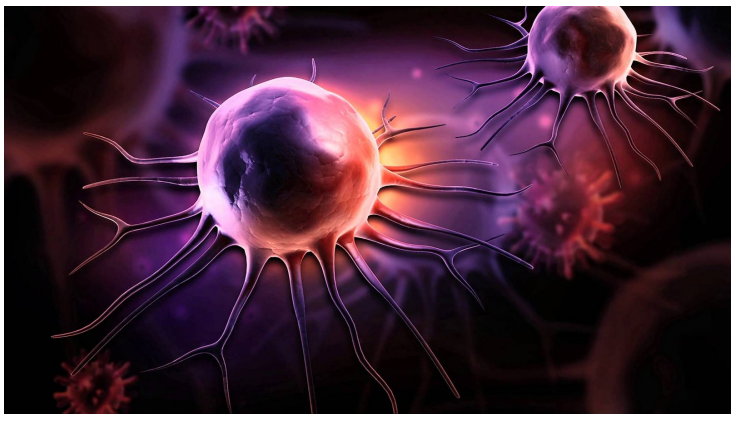

According to a new study conducted by an international collaboration between the University of Warwick in UK and Sun Yat-Sen University in China, iridium, a rare metal, can kill cancer without harming healthy cells.

The team created a compound of iridium and organic materials and then introduced it into a lung cancer tumour grown in the lab. When red laser light is shone onto it through the skin, the compound is activated, converting the oxygen in the tumour into singlet oxygen, a poisonous form of the element that effectively kills the cancer cells from the inside.

Platinum metal is already being used in more than 50 percent of cancer chemotherapies. The potential of other precious metals such as iridium to provide new targeted drugs which attack cancer cells in completely new ways and combat resistance, and which can be used safely with the minimum of side effects, is now being explored.

The team used ultra-high resolution mass spectrometry to highlight which proteins in the cancer cells were being targeted. They found that the compound had damaged proteins that manage heat shock stress and glucose metabolism, which are known to be crucial molecules for cancer’s survival.