3D Printing Bones And Soy To Combat Bone Cancer

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Osteosarcoma is a kind of bone cancer. It affects mostly children and young adults and is a leading cause of cancer-related death in children. The disease is often treated with surgery to remove the tumor and chemotherapy before and after surgery. Due to bone damage and side effects of the chemotherapy, graduate student Naboneeta Sarkar and Professor Susmita Bose in WSU's School of Mechanical and Materials Engineering are looking at soy to offer a gentler post-surgery treatment. Soy beans contain chemicals called isoflavones which have been shown to reduce the growth of tumors without harming normal cells.

Researchers 3-D printed bone-like structures that contained three different soy chemicals. The mixture was injected into the bones of rats with bone cancer and others that were healthy. They found that the soy chemicals reduced the growth of cancer and improved the health of normal bone cells. One c chemical reduced cancer cells by 90%!
The results suggests that natural, and non-toxic, soy products have the potential to be a viable treatment for some cancers.

Source
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