Jamming Cellular Machinery To Kill Cancer

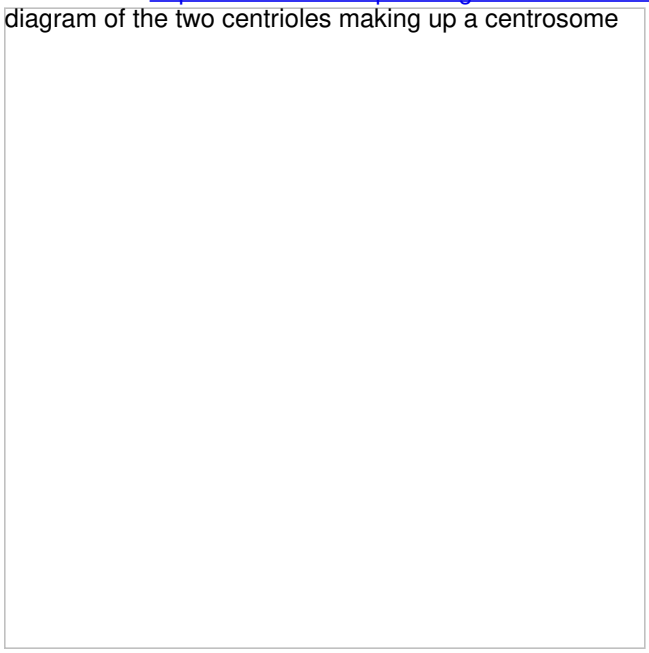
diagram of the two centrioles making up a centrosome

Scientists at Johns Hopkins and the University of Oxford are researching new ways to selectively kill breast cancer cells. In their effort to find targets that would allow cancer cells to be killed and spare normal cells, the researchers focused in on a small cell structure called a *centrosome*. Centrosomes consist of two of 2 hollow tubes called*centrioles.* Centrosomes help cells divide, but many cells don't need them. The researchers showed that the breast cancer cells needed centrosomes to divide.

When analyzing breast cancer cells, they found higher levels of aprotein called TRIM37, which controls centrosomes. The scientists used a drug to disrupt the normal activity of the protein and remove the centrosomes. Normal cells could still divide in the presence of the drug. The breast cancer cells, on the other hand, either stopped growing or died. The treatment is still in the testing stage, using lab-grown cells and cells from patients, but the researchers are hoping a similar drug will work in patients.

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