

What wakes dormant tumor cells

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Prostate tumor cells can be lulled to sleep by a factor released by bone cells, according to a study published online this week in the *Journal of Experimental Medicine*. Disease recurs in up to half of prostate cancer patients after treatment, often as a result of metastases that spread to distant organs.

Kounosuke Watabe and colleagues at Southern Illinois University School of Medicine now show that BMP7, a protein pumped out by cells that line the bone interior, signals [tumor cells](#) to enter a state of hibernation. But this state is reversible. In mice, withdrawal of BMP7 acts like an alarm clock, restarting tumor growth.

Prostate cancer patients bearing tumors that express BMPR2—BMP7's binding partner—show longer recurrence-free survival than those whose tumors lack BMPR2.

These findings suggest that therapies aimed at maintaining or mimicking BMP7 expression may help prevent [prostate tumor](#) recurrence.

More information: Kobayashi, A., et al. 2011. J. Exp. Med. [doi:10.1084/jem.20110840](https://doi.org/10.1084/jem.20110840)

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