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Polycomb in the prostate

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Prostate cancer becomes fatal when associated with metastasis. In the October 10 Nature, Varambally et al. describe a microarray-based analysis of genes whose expression is altered in metastatic prostate cancer (Nature 2002, 419:624-629). They identified 55 genes that were upregulated in metastatic tumors relative to localized ones, and found that the gene encoding the polycomb-group protein Enhancer of zeste homolog 2 (EZH2) was significantly upregulated in metastatic cells and correlated with cancer progression. Disruption of EZH2 expression by RNAi caused growth inhibition and growth arrest at the G2- to M-phase transition in the cell cycle. Overexpression of EZH2 in cancer cells caused repression of a subset of genes, and this required the EZH2 'SET' domain and endogenous histone deacetylase activity.

References

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