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A sexually transmitted parasitic cancer

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Cancer is not a contagious disease but two exceptions have come to light, in the dog and in the marsupial Tasmanian devil. Canine transmissible venereal tumor (CTVT) is sexually transmitted between dogs and was the first tumor to be experimentally transplanted in 1876. Using forensic DNA markers we have shown [1] that a single malignant clone of CTVT cells has colonized dogs worldwide. Thus the tumor has evolved into an independent parasite, which has long outlived its original host, possibly a wolf. CTVT represents the oldest known malignant cell in continuous propagation, and challenges the concept of increasing genome instability in cancer progression. As an allograft, CTVT defies natural transplantation barriers. Can human tumor cells similarly be transmitted from one person to another?

References

1. Murgia C, Pritchard JK, Kim SY, Fassati A, Weiss RA: **Clonal origin and evolution of a transmissible cancer.** *Cell* 2006, **126**:477-487.