

Cancer is threatening Tasmanian devils

February 1 2006

Australian scientists say a deadly facial-tumor disease threatening a carnivorous Australian marsupial known as the Tasmanian devil might be infectious.

The malignant tumors, which prevent the animals from eating, affect the marsupials on more than half of the island of Tasmania.

Anne-Maree Pearse of the department of primary industries, water and environment in Prospect studied proposed cancer cells dislodged from one animal are transplanted to another as a result of bites inflicted during fights.

Analyzing the tumor's chromosomes, the authors show that instead of the normal 14 chromosomes, there were 13 grossly abnormal ones. But the chromosomal rearrangements were identical in tumors from different animals.

A chromosomal mutation found in the non-infected tissue of one animal was absent in the animal's tumor, indicating the tumor could not have grown from the animal's own tissue, as happens with most cancers.

The authors suggest close kinship and low genetic diversity among Tasmanian devils reduces their immune response to transplanted cancer cells, making it more likely that they will take hold.

The study appears in this week's issue of the journal Nature.

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