Rats called ACI rats are special because they respond to both estrogen (E) and progesterone (P) with a 100% rate of mammary tumors in ACI rats.

Hormones given to ACI rats after both ovaries removed:
- none: 0%
- E: 0%
- P: 0%
- E + P: 100%

Rat models can be used to study gene and environmental factors together, and identify high risk groups in both rats and humans. 39 genetic polymorphisms and 9 ACI Emca loci.

Mammary cancer in ACI rats is associated with oxidative stress, which can damage cells. Diet and other factors can influence this process.

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