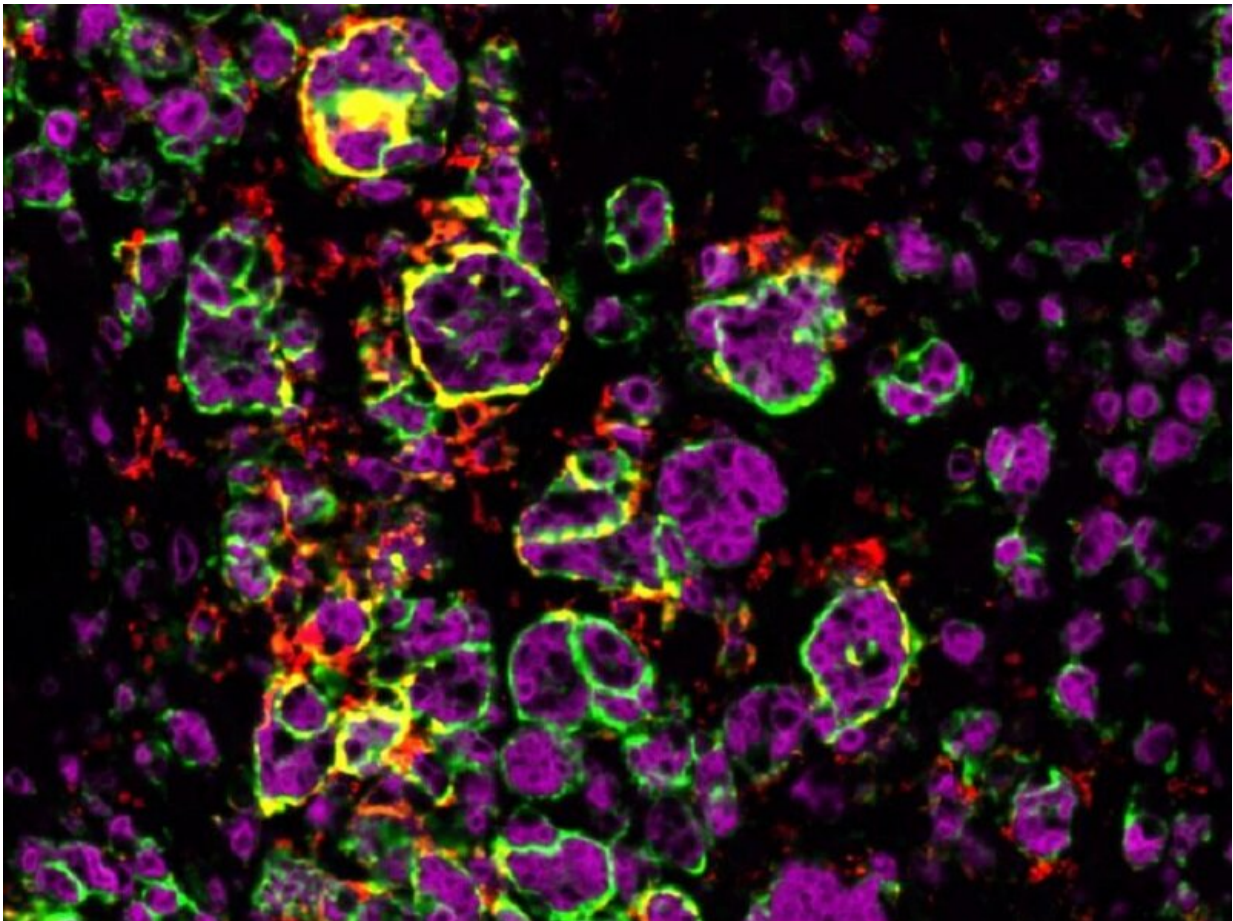


# Testosterone is an ally of macrophages in the battle against adrenal cancers

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Macrophages attacking adrenal tumor in male mouse. Credit: © Julie Olabe CNRS/GReD

Why are cancers of the adrenal glands more common among women? Why are prognoses worse for them? A team of scientists led by a CNRS researcher answers these questions in an article published on October 14, 2022 in *Science Advances*.

They demonstrate that, in [male mice](#), there is greater recruitment of immune cells known as [macrophages](#), which can eliminate [tumor cells](#). Hence, aggressive tumor progression is scarcely seen in male mice; while in female mice, macrophages do not slow the growth of tumors, which eventually metastasize. Through molecular analyses, the team determined that recruitment of tumor-fighting macrophages depends on testosterone.

After simple administration of the hormone to females, macrophages able to eradicate tumor cells were rallied to battle. On the basis of these findings, the scientists conducted another study using data on humans, which revealed the same difference in macrophage recruitment rates between men and women with adrenal cancers.

This discovery suggests the potential of hormonal stimulation as a treatment for this type of cancer, whose five-year survival rate is less than 30%.

**More information:** James Wilmouth et al, Sexually dimorphic activation of innate antitumour immunity prevents adrenocortical carcinoma development, *Science Advances* (2022). [DOI: 10.1126/sciadv.add0422](#). [www.science.org/doi/10.1126/sciadv.add0422](http://www.science.org/doi/10.1126/sciadv.add0422)

Provided by CNRS

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