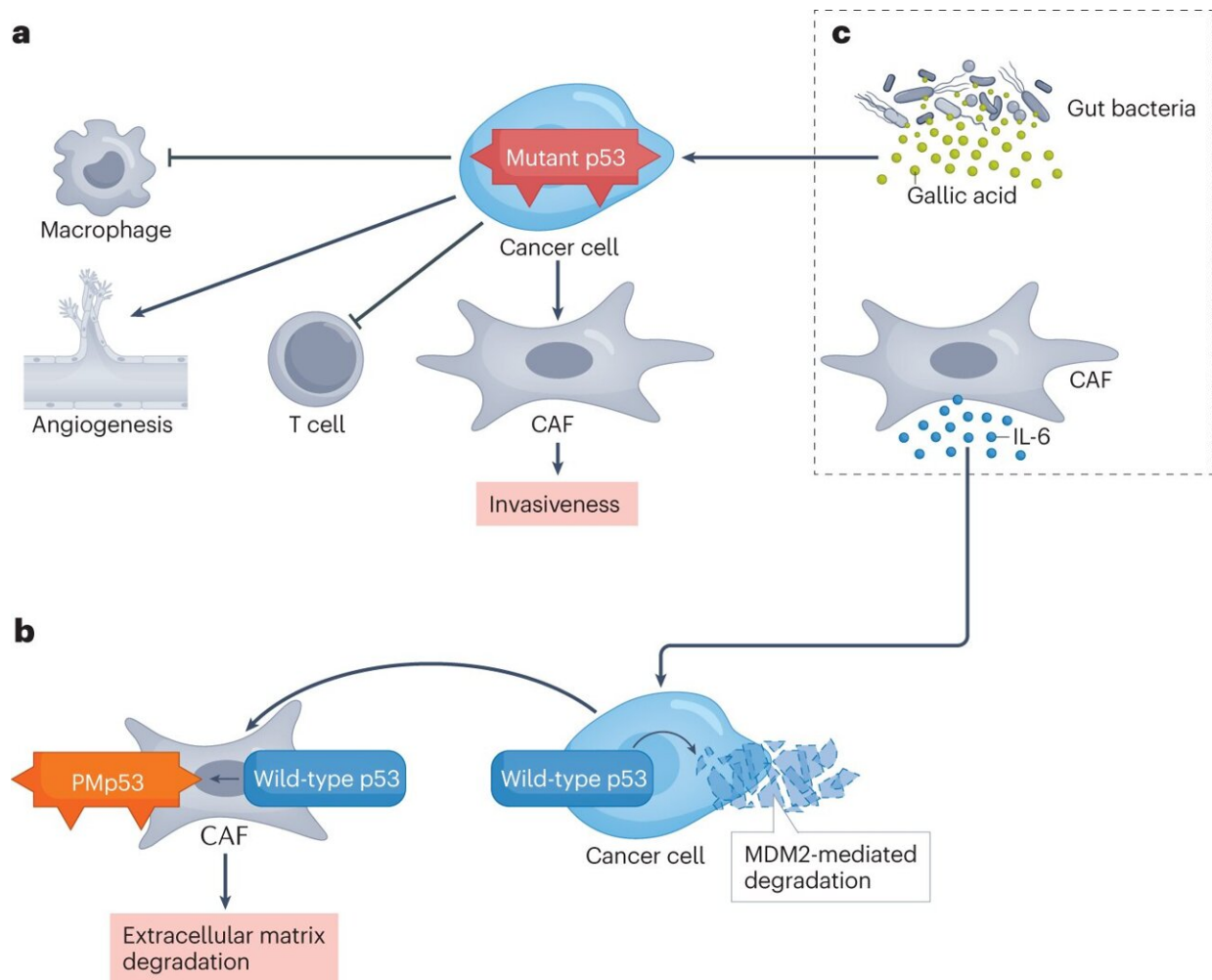


# The role of p53 as a target for novel cancer therapies

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Complex interplay between TP53-mutant cancer cells and their microenvironment. Credit: *Nature Reviews Clinical Oncology* (2023). DOI: 10.1038/s41571-023-00842-2

The p53 tumor suppressor protein is encoded by TP53, the most frequently mutated gene in cancer. A [review article](#) published in *Nature Reviews Clinical Oncology* by Professor Klas G Wiman and colleagues at the Department of Oncology–Pathology describes how p53 could be used as a target for new cancer therapies.

In TP53 wild-type cancer cells, p53 is often inhibited by overexpression of the p53 antagonist MDM2, and agents that disrupt p53-MDM2 binding can restore p53 activity. In TP53-mutant cancer cells, refolding of missense mutant p53 or translational readthrough of nonsense mutant TP53 can reactivate p53 function.

Several p53-targeted compounds are currently being tested in [clinical trials](#) in patients with different types of malignancies, but thus far no such drug has been approved in the clinic. In this review, Wiman and colleagues discuss the [complex interactions](#) between p53 and its microenvironment and suggest strategies for enhancing clinical efficacy of p53-targeted agents.

**More information:** Amos Tuval et al, Pharmacological reactivation of p53 in the era of precision anticancer medicine, *Nature Reviews Clinical Oncology* (2023). [DOI: 10.1038/s41571-023-00842-2](https://doi.org/10.1038/s41571-023-00842-2)

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