

Immune clues to help leukaemia patients safely stop treatment

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Researchers with SAHMRI's Precision Medicine Theme have found a key to better identifying which chronic myeloid leukaemia (CML) patients can stop taking their medication and remain in treatment free remission (TFR).

Dr. Yazad Irani, corresponding author for the team led by Associate Professor Agnes Yong, says this work will save more CML sufferers from the physical and financial cost of treatment with [tyrosine kinase inhibitors](#) (TKIs).

"With TKI treatment, many patients get to the stage where they have no detectable cancer in their [blood](#)," Dr. Irani says.

"About half of these patients can safely stop taking their medication, but it's very difficult to tell who will remain in remission and who will relapse."

The development of TKI treatment for CML patients has been one of the great cancer success stories of this century, enabling about 80 percent of sufferers to lead close to normal lives.

The next frontier in the fight against CML is to discover why only around a quarter of [patients](#) can stop treatment and remain in remission while the majority have to remain on TKIs for life.

The study, published today in the *British Journal of Haematology*,

indicates that the state of a patient's [immune system](#) at the time they stop therapy might predict whether they can remain drug-free.

"Now that we know what to look for, we should be able to predict with far more accuracy who will make a successful attempt at TFR," Dr. Irani says.

"This has broad implications, not least of all that unsuccessful TFR attempts can have a major psychological impact on the patient and can significantly delay their next attempt at stopping treatment."

CML affects the blood and [bone marrow](#), causing overproduction of white blood cells called granulocytes which interferes with normal blood cell production.

Around 330 Australians are diagnosed with CML each year. It is most common in people over 40 years of age but can affect anyone.

More information: Yazad D. Irani et al. Successful treatment-free remission in chronic myeloid leukaemia and its association with reduced immune suppressors and increased natural killer cells, *British Journal of Haematology* (2020). [DOI: 10.1111/bjh.16718](https://doi.org/10.1111/bjh.16718)

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