

THE STAR  
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## A case for immunotherapy

ACCORDING to Cancer Research UK, there were 17 million new cases of cancer worldwide in 2018, with more than four in 10 of new cases involving the lung, female breast, bowel or prostate.

By 2030, it is estimated that cancer incidence rates will increase by 62%.

Traditionally, the mainstays of cancer treatment are surgery, chemotherapy, radiation, and targeted therapy.

In recent times, you can add immunotherapy to the picture.

In 2018 alone, five new immunotherapies were approved by the US Food and Drug Administration (FDA) for the treatment of liver, lung, colorectal, skin and lymphoma cancers.

Immunotherapy is essentially treatment that uses the body's own immune system to help fight cancer.

The idea is not new, having purportedly been proposed in the late 19th century.

It is only in recent times that enough progress has been made to make the treatment a reality.

There are many different pathways in the immune system that can be harnessed to fight cancer, hence the emergence of different types of immunotherapy. Some of these include:

- Monoclonal antibodies
- Oncolytic virus therapy
- T-cell therapy
- Cancer vaccines

This "manipulation" of the immune system to help fight cancer can bring about various possible benefits:

- The possibility for long-term cancer remission

The concept of "immunomemory", where the body's immune system is trained to recognise cancer cells, may lead to longer-lasting remissions.

- The issue of side-effects

Since immunotherapy specifically targets cancer cells, the side



There are a few types of immunotherapy, depending on the pathway in the immune system that is targeted.

effects may be different from chemotherapy and radiation therapy.

Both chemotherapy and radiation may damage healthy cells, leading to side effects such as hair loss and nausea/vomiting, amongst others.

The side effects of immunotherapy are related to stimulation of the immune system, and can range from minor symptoms to major ones.

There's much yet to be learnt about the possibilities of immunotherapy for cancer. But what is welcome is the extra option it offers in the fight against cancer.