

## Arthritis induced by cancer therapy may persist after stopping treatment



Inflammatory arthritis caused by immune checkpoint inhibitor drugs can become a long-term problem, but it can be treated.

### INTRODUCTION

Immune checkpoint inhibitors are a type of immunotherapy used to treat cancer. There are several drugs in this group, and they are used in more than 10 cancer types. This type of treatment for cancer is now very common and there are hundreds of thousands of people being treated around the world. Although the treatments are very positive for many people, there is a risk of developing an autoimmune disease such as inflammatory arthritis. This is a side effect of the way the drugs interact with and activate the immune system.

### WHAT DID THE AUTHORS HOPE TO FIND?

The authors wanted to find out whether people continued to have symptoms of inflammatory arthritis after stopping immune checkpoint inhibitor for their cancer, and how long these symptoms lasted. They were also interested in whether there were any groups of people who were more likely to have persistent arthritis. Lastly, they were interested in whether using an immunosuppressive treatment for the arthritis had an impact on how well the tumour responded to the cancer therapy.

### WHO WAS STUDIED?

The study looked at 60 people with inflammatory arthritis that started while they were taking an immune checkpoint inhibitor for cancer. Everyone was being treated at a single clinic in the United States, and everyone was over the age of 18.

### HOW WAS THE STUDY CONDUCTED?

This was a prospective observational study. This means that the people involved were observed over a period of time and measurements taken, but there was no study intervention or medicine being tested. The authors collected information about each person including what type of cancer and treatment they had, how long they received treatment for, and whether they had any other side effects. They also measured how severe the arthritis was, and how well the tumour responded. Everyone in the study was seen by a rheumatologist after they stopped taking their immune checkpoint inhibitor.

### WHAT WERE THE MAIN FINDINGS OF THE REVIEW?

The authors found that 6 months after stopping cancer immunotherapy, nearly half of people still had symptoms of inflammatory arthritis. Persistent arthritis was more likely in people who had a longer duration of immune checkpoint inhibitor use, people taking combination immunotherapy, and people with previous side effects from their immunotherapy. Treating the arthritis with immunosuppressive medicines did not seem to affect how well the tumour responded to therapy, although larger studies are needed to confirm this.

### ARE THESE FINDINGS NEW?

Yes. Although there were previous reports, this is the first study to show that inflammatory arthritis lasts for a long time even after immune checkpoint inhibitors are stopped.

### WHAT ARE THE LIMITATIONS OF THE STUDY?

The study included only people who had been referred to rheumatology because of their inflammatory arthritis – not any other groups of people taking immune checkpoint inhibitors. This may mean it looked at people with more severe arthritis, and so the results might not apply to people with milder symptoms. The study took place at a single clinic, which limited the number of people included. Also, some people died from their underlying cancer before the study was finished.

### WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

This study is a first step of recognising that rheumatological side effects from cancer immunotherapy may become chronic problems. This is a key message to spread to doctors who take care of patient who have been treated with immune checkpoint inhibitors. The study provides insight into which people are at highest risk for developing persistent inflammatory arthritis, and who might need close monitoring for joint-related symptoms and early referral to a rheumatologist.

### WHAT DOES THIS MEAN FOR ME?

If you are being treated with an immune checkpoint inhibitor for your cancer, you may get some symptoms of inflammatory arthritis such as joint pain and stiffness. These may last even after you stop taking the immune checkpoint inhibitor. However, inflammatory arthritis can be treated, and the medicines to help your joints should not affect your cancer treatment. It is very important that you do not stop taking any medicines you have been prescribed without medical advice.

If you have any concerns about your disease or its treatment, you should speak to your doctor.

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