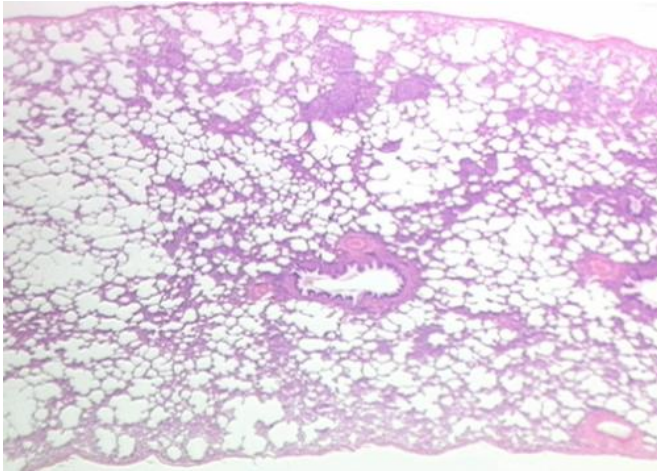


# New study on the role of monocytes in sarcoidosis

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Lung tissue. Credit: Rutgers University

The cause of the inflammatory lung disease sarcoidosis is unknown. In a new study, researchers at Karolinska Institutet have investigated whether a type of immune cell called a monocyte could be a key player in sarcoidosis pathogenesis and explain why some patients develop more severe and chronic disease than others. The study, which is published in the *European Respiratory Journal*, opens new possibilities for future diagnostic and therapeutic methods.

Sarcoidosis is an inflammatory disease that in 90 percent of cases affects the lungs, but can also attack the heart, skin and lymph system. The cause of the disease is not yet established, and there is currently no cure.

Common symptoms of acute sarcoidosis are [high fever](#), purple patches on the lower legs, swollen ankles and muscular/arthritis pain.

## Most common in Sweden

While some 30 percent of patients recover after a couple of years, others can suffer extensive lung damage that in exceptional cases requires a [lung transplant](#).

Approximately 16,000 people live with the disease in Sweden, and 1,200 are newly diagnosed every year, making the Sweden the most affected in the world. Most patients are between 30 and 60 years of age.

In a new study, researchers at Karolinska Institutet, Karolinska University Hospital and Umeå University have shown how certain [white blood cells](#) called monocytes could be a vital marker in understanding the inflammatory process of sarcoidosis.

Although monocytes are part of the immune system, they can, under certain circumstances, aggravate the inflammatory process in body tissue. Knowledge of the part played by monocytes in sarcoidosis has so far been limited.

## Elevated monocyte levels

The researchers also found that the higher level of monocytes in people diagnosed with the disease makes it possible to assess the risk of a more progressive disease process.

With the results come new possibilities for identifying biomarkers for sarcoidosis and for more personalized care.

"If we identify at an earlier stage who risks being seriously affected by the [disease](#), it can hopefully lead to prophylactic and more efficacious treatment," says the paper's last author Anna Smed Sörensen, docent at the Department of Medicine, Solna, Karolinska Institutet. "Eventually, our research could mean fewer cases of chronic sarcoidosis."

The results are based on 108 individuals with

sarcoidosis and 30 healthy controls that were followed over a two-year period.

**More information:** Rico Lepzien et al. Monocytes in sarcoidosis are potent TNF producers and predict disease outcome, *European Respiratory Journal* (2021). [DOI: 10.1183/13993003.03468-2020](https://doi.org/10.1183/13993003.03468-2020)

Provided by Karolinska Institutet

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