

# Lupus



Autoimmune/Inflammatory | Allogeneic Stem Cell Transplant



Lupus is a chronic disorder of the immune system that results in too many antibodies being produced. This causes inflammation that may affect multiple organs of the body. It is thought lupus may be inherited, although hormone activity and viral infections have also been implicated as causative agents. It is neither infectious nor contagious.

Lupus predominantly affects Afro-Caribbean, Chinese and Asian origin females at an incidence rate of 50 to 100 per 100,000. It is most commonly associated with hormonal changes such as pregnancy, menopause and puberty. Most lupus sufferers are unable to work full time or are considered disabled. Currently, 50,000 people may have lupus in the UK, costing £7,913 per patient per annum.

## Current Research

Current treatments focus on the reduction of antibodies and symptomatic relief of pain associated with the disease.

## Clinical Trials

There is one current clinical trial (NCT00278590) recruiting patients to look at the use of allogeneic stem cell transplant. This is not due to complete until July 2014.

## Cell Line

Current work using mesenchymal stem cells (MSC) elucidating the immune-modulatory effect of MSCs in the body – particularly in pro-inflammatory disease models – shows some promise for a more effective treatment.

## Animal Studies

Mice work shows that transplantation of mesenchymal stem cells (MSC) would induce repair of the immune system, possibly by T cell regulation.

## Patient Studies

A patient study was undertaken using allogeneic MSCs in four sufferers. At 12 to 18 months follow up, there was evidence of disease remission, shown by improvement in serological markers and renal function.

## Summary

The use of cord blood, bone marrow and peripheral blood-derived stem cells of haematopoietic lineage have been shown to be effective, but follow up and long-term progression has yet to be confirmed.

## References

<http://www.ncbi.nlm.nih.gov/pubmed/19489103>

Stem Cells. 2009 Jun;27(6):1421-32. Mesenchymal stem cell transplantation reverses multiorgan dysfunction in systemic lupus erythematosus mice and humans. Sun L, Akiyama K, Zhang H, Yamaza T, Hou Y, Zhao S, Xu T, Le A, Shi S.

<http://www.lupusuk.org.uk/what-is-lupus/so-its-lupus>

<http://clinicaltrials.gov/ct2/show/NCT00278590>

Allogeneic Stem Cell Transplantation in Systemic Lupus Erythematosus.

[http://www.lupus.org/webmodules/webarticlesnet/templates/new\\_researchlfa.aspx?articleid=1144&zoneid=31](http://www.lupus.org/webmodules/webarticlesnet/templates/new_researchlfa.aspx?articleid=1144&zoneid=31)

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