Oxford Pre-cancerous Lymphoproliferative Disorders: Analysis and Interception Study (OxPLoreD)

Summer 2026 Newsletter

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We would like to say a huge thank you to everyone who participated in the OxPLoreD study. Your time, commitment and generosity have helped researchers learn more about early blood conditions and how they may change over time.

We value your involvement in this study, which has made important progress towards improving how these conditions are monitored. We are sharing this summary to explain the background of the study, and what the results could mean in the future.

What is the purpose of this study?

OxPLoreD is a UK-wide observational research study investigating early blood and bone marrow conditions that can sometimes develop into blood cancers. The OxPLoreD study recruited **574 participants** from **15 NHS trusts across England**. Participants were aged 16 years or older.

The study focused on people with:

- monoclonal B-cell lymphocytosis (MBL);
- early-stage chronic lymphocytic leukaemia (CLL);
- monoclonal gammopathy of uncertain significance (MGUS);
- smouldering myeloma; and
- asymptomatic Waldenström's macroglobulinaemia.

These conditions are often described as "pre-cancerous" or very early-stage blood disorders. Many people never develop symptoms or require treatment, while others progress to more active disease over time.

However, it can be difficult for doctors to predict which people are most likely to develop progressive disease. Most patients are monitored using an approach known as active surveillance or active monitoring (sometimes referred to as "watch and wait").

The main aim of the OxPLoreD study was to identify clinical, genetic and immune system markers that may predict disease progression more accurately. Researchers also aimed to better understand the biology of these conditions and how they change over time. Participants did not receive experimental treatment as part of OxPLoreD.

Although OxPLoreD included several early blood disorders, the first analyses completed and presented internationally focused on participants with MBL and early-stage CLL. This is partly because OxPLoreD ran during the COVID-19 pandemic, making it difficult for participants to attend hospital. This meant that some procedures could not be carried out that would have been beneficial to the study analysis.

Why is this research important?

People diagnosed with these early-stage blood disorders may live for many years without needing treatment. However, uncertainty about whether the condition will progress can cause anxiety and affect quality of life.

Current methods used to estimate risk are helpful but are not precise enough for individual patients. Better prediction tools could help doctors:

- improve understanding of disease biology;
- tailor monitoring and follow-up more appropriately;
- reduce unnecessary hospital visits for people at very low risk;
- provide patients with clearer information about their likely outlook;
- identify patients who may benefit from future early-treatment studies.

The study also investigated other important health issues linked to these conditions, including infections, blood clots, bone fractures, other cancers, and quality of life.

Researchers used advanced techniques, including whole genome sequencing, RNA sequencing and single-cell analysis, to study genetic changes associated with disease progression.

What did taking part involve?

Participants were followed over time for up to 5 years.

1. Start of Study

First study visit (baseline) at hospital or clinic

2. Follow-up

Follow-up visits or phone calls over time

Research staff stayed in touch to check health and collect information

3. Up to 5 Years

Participants were followed for up to 5 years

4. Additional Visits

Additional visits arranged if the disease progressed

Up to 5 years

STUDY ASSESSMENTS (ALL PARTICIPANTS)

At each visit or phone call, researchers collected information to help understand how participants' health and condition may change over time.

Medical history and physical examinations
Information about overall health

Blood tests
Samples to check health

Saliva samples
For genetic analysis

Quality of life questionnaires
About wellbeing and quality of life

Monitoring of infections and other health problems
Tracking any infections or other health issues

Information about treatments and disease progression
Records of treatments and changes in condition

OPTIONAL RESEARCH PROCEDURES

Some participants chose to consent to additional research procedures.

Bone marrow samples
A small sample of bone marrow to study cells in more detail

CT or MRI scans
Imaging scans to gather more information about health

Additional blood sampling
Extra blood samples for advanced laboratory research

LONG-TERM FOLLOW-UP INFORMATION (OPTIONAL)

Participants also had the option to allow researchers to collect long-term follow-up information from NHS datasets and cancer registries.

What were the main findings?

The study confirmed that an existing clinical prediction tool called the **International Prognostic Score for Early-stage CLL (IPS-E)** can help identify people at low risk of disease progression in early-stage CLL and MBL.

People classified as low risk were very unlikely to require treatment within five years, while people in higher-risk groups were more likely to progress. Importantly, in the UK we now know that this is about one-third of people diagnosed with MBL or early-stage CLL through their GP.

The study also showed that detailed genetic testing can improve risk prediction beyond current clinical tools alone.

Researchers found that:

- Many important genetic changes are already present in the earliest stages of disease;
- High-count MBL and early-stage CLL are very closely related conditions, with many shared biological features. Some genetic patterns were linked to faster progression and earlier need for treatment;
- Other genetic features were associated with very stable disease and low risk of progression; and
- Combining genetic information with existing clinical scores improved the ability to separate higher-risk and lower-risk patients.

The research also showed that even patients with similar clinical features may have very different underlying disease biology.

Samples and clinical information collected from participants with MGUS, smouldering myeloma and Waldenström's macroglobulinaemia are continuing to support ongoing genomic and immunological research aimed at understanding why some early blood disorders remain stable while others progress to active cancer.

How could this research benefit patients in the future?

Because OxPLoreD is the first prospective study evaluating the IPS-E, we can now implement this tool in clinical practice to improve the care of people living with early blood disorders by enabling more personalised monitoring and risk assessment.

The results show that the IPS-E score could be used to determine the way patients are managed in the future.

For example, people with intermediate or high-risk IPS-E:

- may benefit from closer monitoring
- could be offered future early-intervention clinical trials aimed at controlling CLL before symptoms develop

Those with low-risk IPS-E may not require the same level of surveillance.

Researchers are continuing to analyse samples and long-term follow-up data from all study groups to see whether adding genetic or immune markers to the IPS-E will reduce the number of people in the intermediate group and help classify these as either low IPS-E and high-IPS-E

The data and samples are also analysed for so-called "neo-epitopes" (part of a cell that is recognised by the immune system) that might be used in future in an anti-CLL vaccine to try and harness the patient's own immune system to keep CLL in check.

Who organised and funded the study?

The study was sponsored by **The University of Oxford** and managed by the **Oncology Clinical Trials Office (OCTO)**.

The research team would like to extend their thanks to the participants and their families for their participation and valuable contributions to this study. Furthermore, we would like to thank the following participating organisations for their support with this research:

Oxford University Hospitals NHS Foundation Trust

The Clatterbridge Cancer Centre NHS Foundation Trust

University Hospitals Plymouth NHS Foundation Trust

University Hospitals Dorset NHS Foundation Trust

The Dudley Group NHS Foundation Trust

Epsom and St Helier University Hospitals NHS Trust

James Paget University Hospitals NHS Foundation Trust

King's College Hospital NHS Foundation Trust

University Hospitals of Leicester NHS Trust

The Newcastle upon Tyne Hospitals NHS Foundation Trust

Northumbria Healthcare NHS Foundation Trust

Nottingham University Hospitals NHS Trust

Somerset NHS Foundation Trust

South Tyneside and Sunderland NHS Foundation Trust

St George's University Hospitals NHS Foundation Trust

UKCLL Support Group

Leukaemia Care UK

The study was funded by **Janssen Pharmaceuticals**.

The OxPLoreD results were written by scientists at The University of Oxford. ChatGPT Edu v5.5 was used to support the language, structure and image generation in this document. All AI output was edited, reviewed and approved by members of the study team.