ARCHIVE FAQs

What is clonal haematopoiesis?

Clonal haematopoiesis (CH) is a common finding in older people when a genetic mutation (a small change to your DNA) is detected within a small number of haematopoietic stem cells. Haematopoietic stem cells are cells that give rise to different types of blood cells.

Up to 1 in 10 people over the age of 60 years will have CH. People with CH do not have any symptoms. CH is only diagnosed after a genetic test is performed on the blood.

CH has been linked to increased inflammation and an increased risk of cardiovascular diseases. However, we still do not know how CH influences the development of these conditions. CH has also been associated with the development of blood cancers but the risk of developing these cancers is rare and likely less than 1 percent per year.

Who gets CH?

The exact causes of CH are still unknown but some factors have increased risk of developing CH:

1) Increased age
2) Previous radiation therapy or chemotherapy

CH cannot be passed on to other people or be pass down to offspring, however more research is needed.

What is ARCHIVE? Why are we studying ARCHIVE?

ARCHIVE stands for the **A**ge-**R**elated **C**lonal **H**aematopoiesis in an **HIV E**valuation cohort.

People with HIV are at risk of developing heart problems, cancer, and inflammation compared with people without HIV, even if their HIV is well controlled. The goal of the ARCHIVE study was to find out if there is a link between HIV and CH and whether CH contributed to these problems.

What did the ARCHIVE study involve?

446 participants (220 with HIV and 226 without HIV) over the age of 55 were recruited to participate in this study. Each participant consented to have a blood test to look for CH and basic blood results. Participants also consented to fill out a health questionnaire.

What did we find?

In our study, our main findings are:

1) CH was more common in participants with HIV than participants without HIV.
2) Participants with HIV and CH also had higher levels of certain blood cell counts and markers of inflammation.
3) We did <u>not</u> find that participants with HIV and CH had a higher rate of medical conditions such as heart problems or blood cancers, however larger studies are needed.

What further research is required?
More studies are required to confirm the findings in our study as well to find out why CH is more common in people with HIV.

If I have HIV and have CH am I at risk of health consequences?
The ARCHIVE study has not found any adverse health consequences of CH in participants with HIV but more research is required.

There are no specific treatments for CH. In general, regardless of HIV and CH status, people should:

1) Adhere to a healthy diet and lifestyle
2) Regular monitoring of blood pressure and cholesterol
3) Stop smoking (if they smoke)

I have HIV. Do I need to get tested for CH?
Testing for CH is not recommended based on the results of this study as doctors and researchers are still understanding the effects of CH. Overall, the risk of having blood cancer if you have CH is very low.