



Piecing together the causes of myeloproliferative neoplasms

Myeloproliferative neoplasms (MPNs) are a group of blood cancers that affect around 3 per 100,000 people in the UK. Patients often experience life limiting symptoms and treatments vary depending on the type of MPN, genetic mutations present and severity of disease. The aim of the study is to identify factors that may cause MPNs in order to identify ways to prevent it.

A UK-wide study called the MOSAICC study will commence in 2019 to piece together the causes of MPNs.

The study has so far received funding from MPN Voice to interview (by telephone questionnaire) 500 patients with MPN and 500 controls living in the UK. Leukaemia and Lymphoma NI will fund the collection of DNA and RNA for genetic analysis. Later studies will enable us to explore how lifestyle, occupational and environmental factors may lead to the development of MPNs.

How can you help?

Given that we will be speaking to 500 patients with MPNs we would really like to make the best use of this opportunity to collect additional information and samples but don't have the funds to do so yet. This is where you could help. Please see below the additional areas that we would like to cover in this study and the projected costs:

1. **Impact of diagnosis:** We would like to identify the impact that being diagnosed with a MPN has on patients and how they can be supported by their family, friends and healthcare teams.

In order to do this we need **£1,160*** to cover printing of the documents and postage of questionnaires to patients to complete in their own time at home and to return them to the study team.

*£1.40 per letter for 500 patients plus return, envelopes £60, logo stamper £50 and colour printing costs £150

For a research assistant to analyse the data and write a report over a 3 month period it will cost an additional **£9,200**.

TOTAL: £10,360

2. **Geospatial Analysis:** Information will be collected on residential address as part of the MOSAICC study. Geospatial analysis can be used to evaluate proximity to possible cancer causing factors. To evaluate this we would require GIS software £1,020 and £9,200 for a research assistant to analyse and report on the findings.

TOTAL: £10,220

3. **Vitamin D:** Levels of Vitamin D at diagnosis predict poorer outcomes in patients with other blood cancers but no research on MPNs has been undertaken. We would like to see if this is the case for MPN patients by collecting vitamin D levels in the study and following patients over time.

For a pilot of 100 patients this would cost **£2,605**. To do this for all MPN patients in the study it would cost **£10,420**. To collect information on MPN patients and controls it would be **£20,420**.

* £185 for serum tubes, cryovials £240, disposable pipette £180, lab processing cost £20 per patient.

TOTAL: £20,420

4. **Microbiome:** A lot of research has been undertaken looking at the role of gut microbiome and how this distinguishes cancer patient groups, is affected by treatment and its link with other medical conditions.

Cost £21,750

TOTAL COST £62,750

IF YOU WOULD LIKE TO MAKE A DONATION OR ORGANIZE A FUNDRAISING EVENT TO SUPPORT THE MOSAICC STUDY [CLICK HERE](#)