**ASCOT Long Term Follow-up**

ASCOT was an international randomised trial which recruited over 19,000 participants. The trial aimed to find out the best treatments to reduce the risk of heart disease. First, participants were randomly allocated to blood pressure lowering with an amlodipine-based regime or with blood pressure lowering with an atenolol-based regime. Second, participants were randomly allocated to LDL-cholesterol lowering with atorvastatin or placebo. The trial showed that (i) cholesterol lowering with atorvastatin reduced the risk of heart disease by about 35% and (ii) that although an amlodipine-based regime did not reduce the risk of heart disease, it reduced the risk of stroke by about 25%.

The long term follow up of ASCOT has two main aims: (1) To assess the effect of blood pressure lowering on dementia, major vascular diseases (such as heart attack and stroke) and chronic illnesses like diabetes; and (2) To assess the effect of LDL-cholesterol lowering on dementia, major vascular diseases (such as heart attack and stroke) and chronic illnesses like diabetes. This is because the lifetime benefit of these treatments is likely to have been underestimated in the 5-year trial follow-up.

Patients with higher blood pressure or higher LDL cholesterol have an increased risk of developing dementia, but there is no evidence that lowering either blood pressure or LDL-cholesterol reduces the risk of developing this debilitating condition. A randomised trial like ASCOT with very long follow-up (which is necessary since dementia is an insidious condition which takes many years to develop) represents a unique opportunity to directly assess the effect of surgery on dementia risk. This question is highly relevant. If we demonstrate that blood pressure lowering with amlodipine or LDL-lowering with atorvastatin not only lowers the risk of stroke but also prevents dementia, many more patients will be considered for blood pressure lowering thereby reducing the burden of disease posed by dementia.

For this follow-up study, we will use an existing linkage between ASCOT participants and the ONS mortality dataset, provided by NHS Digital on behalf of ONS, sourced from Civil Registration Data. We will obtain mortality data (date of death) held by NHS Digital. NHS Digital already hold the identifiers from participants in the ASCOT trial, from your previous consent to mortality linkage.

We will use this existing linkage to additionally link participants to hospital NHS electronic health records (hospital admissions, hospital out-patient and A&E attendances along with mental health information). This will allow us to compare rates of important health outcomes, including all cardiovascular events and dementia, experienced by participants in different randomised groups.

The data that we receive and analyse will be identified by an anonymised trial number only, and will not be identified by name, date of birth, NHS number or address. With the trial number, we will link to the original ASCOT database, an additionally biological information collected during the trial (i.e. blood tests). This information received from NHS Digital will be imported into a database held securely by Imperial College London (Data Controller), and used solely for academic research purposes. Before analysing this complete dataset (including information already provided by trial participants with information from NHS Digital) patient identifiers will be removed. Importantly, whilst the information received is specific to each trial participant, no individual person will be identifiable in any publication arising from this work. Anonymous results of the study may be made available to collaborators and relevant bone fide researchers according to the Imperial College London data sharing policy - <http://www.imperial.ac.uk/research-and-innovation/support-for-staff/scholarly-communication/research-data-management/imperial-policy/>

To find out more about this long term follow up please see the protocol document -

[insert link to protocol .pdf]

**What to do next?**

ASCOT participants originally consented to their medical records being accessed

and do not need to take any further action if they agree to the data linkage proposed.

However, if participants decide they do not want their study data to be linked in this way they can withdraw from this follow-up, without affecting their current medical care, by contacting the ASCOT Study who would require your identifiers to then inform NHS Digital that you no longer wish to be part of the cohort. NHS Digital will then remove your identifiers from the study.

The ASCOT study office does not hold any identifying information about participants, so is unable withdraw you from the study. If you have further questions, please contact the ASCOT study team at the following email address:

**Email**: y.green@imperial.ac.uk