UNIVERSITY of OTAGO

Te Whare Wānanga o Otāgo

15 September 2021

Targeted use of vitamin C (ascorbate) to prevent cardiovascular disease and leukaemia

An inevitable consequence of being alive is that our cells acquire genetic mutations; in fact mutations start with the very first cell division after our fertilisation. We have mutations in our skin, gut, prostate, breast and every other tissue. This is also true in the bone marrow and the blood. In fact, by the age of 50, if we look hard enough we can find mutated blood cells in nearly everyone.

We are particularly interested in mutations in a gene called TET2. Mutations in TET2 can be found in up to 20% of healthy people over the age of 50. TET2 mutations are reasonably common in some of the blood cancers. There is some evidence that cells with TET2 mutations can be suppressed by vitamin C. However, the evidence is certainly not yet strong enough to do this routinely. This study will gather more evidence to see if vitamin C might be useful.

We are interested in recruiting reasonably healthy people over the age of 65 years. Unfortunately you will not be able to take part if you are already taking vitamin C supplements or if you take medications that can interact with ascorbate (warfarin, tricyclic anti-depressants and phenothiazines).

For this study we will ask you to get a blood sample (including a blood count). If we can detect a low level of TET2 mutation we will invite you to take Vitamin C daily for 2 months and to get three more blood tests.

If you are interested in taking part please contact Professor Ian Morison by email ian.morison@otago.ac.nz

Or Department of Pathology, Dunedin School of Medicine, 03 479 7170,

[This project has been reviewed and approved by the University of Otago Human Ethics Committee, (Health). Reference: H21/061]