Information Leaflet

Liverpool Women's NHS Foundation Trust

Microarray Leaflet

Introduction

The doctor looking after you / your child has decided to request a test called a microarray. This leaflet aims to explain what this test involves and the possible outcomes.

What are chromosomes and genes?

Each person has about 20,000 pairs of genes. They work like instructions that determine things such as the colour of our eyes, how many fingers and toes we have and how tall or short we are. Genes are so small that they cannot be seen, even under a powerful microscope. They are arranged along strands, rather like beads along a string. These strands are called chromosomes and are inside most of the cells in our body.

Most cells in a person's body contain 23 pairs of chromosomes (46 in total), which can be seen down the microscope. To help tell which chromosome is which, each pair has been given a number. Pair number 1 is the largest; pair number 2 is the next largest and so on right down to pair number 22 which is the smallest. The remaining two chromosomes (X and Y) are called the sex chromosomes and they determine whether a person is male (XY) or female (XX).

Everyone has some small variations on their chromosomes, but not all of these will cause problems. However, some people who have certain changes in the number or structure of their chromosomes may have a variety of problems, including developmental delay, learning and behavioural problems, heart defects, unusual fingers or toes and many others.

What is a microarray?

A microarray test looks at the chromosomes in fine detail and can pick up tiny pieces of missing or extra chromosome that may cause a range of developmental and health issues. Missing pieces of chromosome are called deletions, and extra pieces are called duplications.

What happens now?

A blood sample will be needed from you or your child and sent to our laboratory for a microarray test. Results may take approximately 12 weeks and the doctor will contact you once the results are known.

If the laboratory has a sample of DNA stored from a previous genetic test, it may be possible to test this DNA sample although a new blood sample may be required in certain circumstances.

Results

There are four possible outcomes from the microarray:

1. The chromosomes may appear entirely normal. However, a normal microarray test does not rule out all genetic conditions as there may still be changes in individual genes, which cannot be detected by a microarray test.
2. The test may reveal a change which is highly likely to account for the problems that you or your child has, and you would be offered an appointment to discuss this further.
3. We may identify a change that we do not know the significance of – in other words, we do not know if it may be the cause of the issue. In this case, further investigation may be needed such as getting DNA samples from parents. However, some changes will remain uncertain.
4. There is also a very small chance that we could detect something unrelated to you / your child's current problems but may have implications for you, your child or your family's future health e.g. early onset cancer or heart disease. You would be offered an appointment to discuss this further.

If you need more advice about the microarray test, please contact the doctor who has offered you the test.

This leaflet can be made available in different formats on request. If you would like to make any suggestions or comments about the content of this leaflet, then please contact the Patient Experience Team on 0151 702 4353 or by email at pals@lwh.nhs.uk

Liverpool Women's NHS Foundation Trust
Crown Street
Liverpool
L8 7SS

Tel: 0151 708 9988
Issue Date: 09/01/2024
Reference: Cli_2024-382-v1
Review Date: 09/01/2027