

# Patient Fact Sheet: KRAS Testing

## **What is KRAS?**

Cell growth in the body is controlled by a complex set of communications between proteins. These communications, collectively described as “cell signalling” occur in a carefully controlled and ordered way along “pathways”.

KRAS is one of the proteins in the cell signalling pathway that controls cell growth in a number of different tissues in the body. In normal cells, KRAS is tightly controlled and only becomes active when the cell receives the right signals to grow.

## **What is a KRAS Mutation?**

The KRAS gene contains the genetic(coding) information required to make the K-ras protein. Errors, or mutations, in the KRAS gene result in unregulated production of K-ras proteins, causing rapid uncontrolled cell growth, allowing tumours to grow.

KRAS gene mutations occur in about 40% of colorectal cancers and 30% of “NSCLC”, a type of lung cancer.

## **How can KRAS Mutations be detected?**

A molecular test can be performed on the tumour tissue that has been excised from the patient to determine whether the patient’s tumour cells contain a KRAS mutation. The test specifically looks for mutations in two separate areas of the KRAS gene. The test is performed at Pathlab using well established molecular technology called PCR. The test result may take up to a week to become available.

## **What implications does the test result have for my treatment?**

By testing for KRAS mutations, the information gained can guide the cancer specialist (oncologist) as to the most appropriate treatment for the patient.

## **Who should have this test?**

Patients should discuss their suitability for this test with the specialist treating their cancer. The specialist will be able to explain whether the test is appropriate for the patient, and what the treatment options are likely to be when the test results are known. The specialist should also be able to answer other questions regarding the test including the costs, as well as possible side effects and likely benefits of any ensuing treatment.

For further information on the KRAS test please contact your physician or email our molecular team [molecular.testing@pathlab.co.nz](mailto:molecular.testing@pathlab.co.nz)