

# Patient Fact Sheet: EGFR Testing

## What is EGFR?

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”.

Epidermal Growth Factor Receptor, or EGFR, is a receptor on the surface of the cell. It is part of the cell signalling pathway that controls cell growth in a number of different tissues in the body. In normal cells, EGFR production and activation is tightly controlled and it helps to control the growth of many different cells in the body.

## What is an EGFR mutation?

Mutations (or errors) that occur during replication of the EGFR gene allow this receptor to send uncontrolled signals via cell signalling pathways to the inside of the cell, resulting in uncontrolled cell proliferation, leading to tumour growth.

## How can EGFR 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 contains this mutation. The test specifically looks for mutations in the EGFR 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 but in general takes just a few days.

## Who should have this test?

Up to 60% of patients with Non-Small Cell Lung Cancer (NSCLC) have uncontrolled EGFR receptor activity due to mutations in the EGFR gene. Patients should discuss their suitability for this test with the specialist treating their cancer (oncologist). The specialist will be able to explain whether the test is appropriate for the patient. 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.

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

By testing for EGFR mutations, the information gained from the results can guide the cancer specialist as to the most appropriate treatment for the patient.

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