



Tumour Gene Mutation Testing

EGFR, KRAS & BRAF (V600E)

WITH THE INCREASING USE OF TYROSINE KINASE INHIBITORS FOR VARIOUS CANCER TYPES,

the accurate detection of specific gene mutations within a tumour is now important to enable clinicians to select the right treatment with the best response outcomes.

Healthscope Pathology now offers a range of tumour gene mutation tests. All are performed on formalin-fixed paraffin embedded tissue. The tests can be ordered individually or in any combination.

Providing services since 1936, Healthscope Pathology operates throughout Australia, New Zealand, Singapore and Malaysia.

Healthscope Pathology has purpose built, state-of-the-art service and molecular research laboratories which ensure the highest standard of testing.

EPIDERMAL GROWTH FACTOR RECEPTOR (EGFR)

Increased activity at the epidermal growth factor receptor (EGFR) has been shown to occur within a variety of tumours, including non-small cell lung cancer. Over-expression of the EGFR may occur by a somatic mutation or chromosomal alteration.

The EGFR is the target for a number of novel tyrosine kinase inhibitors. Recent studies have identified that virtually all patients who respond to Gefitinib (Iressa) were found to have a somatic mutation within the kinase domain of the EGFR gene (exons 18-21). A similar association has been reported for responsiveness to Tarceva (Erlotinib), another small molecule directed at the kinase domain of the EGFR protein.

KRAS

KRAS is one of many molecules downstream in the EGFR signalling pathway that is responsible for controlling critical cell functions such as proliferation. A wide range of cancers have mutations in KRAS that render the KRAS protein constitutively active regardless of whether the EGFR cell surface receptor is stimulated or inhibited. Drugs that function as EGFR inhibitors (cetuximab and panitumumab) have been shown to be less effective against KRAS-mutated colorectal cancer.

BRAF (V600E)

BRAF mutations are found in approximately 15% of colorectal cancers (CRC), 60-70% of melanomas and approximately 45% of papillary thyroid carcinomas.

A common mutation in the BRAF gene (V600E) has been shown to activate the kinase activity of BRAF. This mutation is associated with resistance to the tyrosine kinase inhibitors, Panitumumab and Cetuximab in metastatic colorectal cancer.

SAMPLE REQUIRED

Formalin-fixed paraffin embedded tumour tissue.

RESULT AVAILABILITY

5-7 working days from sample receipt with laboratory.

MEDICARE REBATE

No. At the time of printing there are no Medicare rebates available for any of these tests.

If you have any questions or require further information, please contact our Customer Service Centre.

1300 453 688

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