

Solid tumour test menu

The Sonic Genetics solid tumour test menu ranges from single gene FISH probes to comprehensive genomic profiling.



Comprehensive genomic profiling

FoundationOne[®]CDx is a validated pan-cancer comprehensive genomic profile assay^{1,2} that provides coverage of more than 300 genes known to drive cancer, using technology which interrogates relevant, cancer-related regions within these genes. It also covers non-coding genes and intronic regions (non-coding regions). The assay uses a platform that evaluates base substitutions, insertions, deletions, copy number alterations and rearrangements, together with tumour mutational burden (TMB) and microsatellite instability (MSI). This pan-cancer comprehensive service provides a personalised genomic profile of your patient's tumour, to inform clinical decision making.^{1,2} Where possible, FoundationOneCDx reports link your patient's genomic profile to potential therapies and international clinical trials which have shown therapeutic benefit.

We also facilitate access to FoundationOne[®]Liquid CDx, which is a liquid biopsy comprehensive genomic profiling service for patients with solid tumours.^{3,4,5}

Cost (for solid or liquid biopsy): \$3,590*

Genomic profiling

The full Find It[®] Cancer Hotspot panel provides coverage of more than 140 hotspots (targets) across no less than 30 genes. The full Find It panel is designed to provide clinically relevant and actionable information for common mutations found in most solid tumour types, for \$595.*

If the patient has NSCLC, metastatic melanoma, metastatic colorectal cancer or glioma, and meets the appropriate Medicare rebate criteria, they will be able to access the full Find It panel at a discounted price of \$350.*

Both the focused (detailed below) and full Find It panels provide guidance when choosing targeted therapies. They can also identify resistance mutations and include potentially relevant Australian clinical trial options for your patient.

Focused mutation testing (including EGFR, KRAS/NRAS, BRAF, IDH1 and IDH2)

The focused Find It Cancer Hotspot panels provided by Sonic Genetics test key genes for non-small cell lung cancer (NSCLC), melanoma, colorectal cancer and glioma, at no cost to the patient[†]. We also provide focused breast, endometrial and GIST panels for \$350* (no Medicare rebate).

FISH probes (e.g. ROS1, ALK, PTEN)

FISH probes provide genetic information on specific gene loci, identifying copy number alterations and rearrangements. This testing methodology allows for quick turnaround times compared to NGS technology. Costing of FISH testing is complex, due to the numerous Medicare rebates available. For accurate and up-to-date pricing, please contact Sonic Genetics or your local Sonic pathology practice.

A comprehensive library of FISH probes is available. Please review our website or contact your local Sonic pathology practice if you are interested in a specific gene or FISH test. For further information, please visit sonicgenetics.com.au/our-tests/oncology-solid-malignancies.

Gene signature assay

Prosigna[®] is a clinically validated gene expression assay, designed to assess the risk of distant recurrence in women with hormone receptor-positive breast cancer. Prosigna also determines the tumour's intrinsic subtype (luminal A, luminal B, HER2-enriched, basal-like), which can provide insight into the patient's potential response to chemotherapy. This information can be used to help in decision-making regarding adjuvant chemotherapy.

Prosigna testing is performed in Australia to ensure results are issued within 10 business days, following sample receipt in the laboratory.

Cost: \$3,300*

1. Frampton G, et al. *Nat Biotechnol.* 2013; 31(11):1023-1031
2. FoundationOneCDx Technical Specifications, 2020
3. Clark T, et al. *J Mol Diagn.* 2018; 20(5):686-702

4. FoundationOneLiquid CDx Technical Specifications, 2020
5. Woodhouse R, et al. *PLoS ONE.* 2020; 15(9): e0237802

Solid tumour test menu

Genetic testing by tumour type		
Tumour type	Molecular testing	FISH/IHC testing
Breast cancer ^a	Focused Find It panel; Full Find It panel; Prosigna; FoundationOneCDx	ER, PR, HER2 IHC; HER2 ISH
Colorectal cancer ^a	Focused Find It panel; Full Find It panel; FoundationOneCDx	Mismatch repair gene IHC: MLH1, MSH2, MSH6, PMS2
Endometrial cancer	Focused Find It panel; Full Find It panel; FoundationOneCDx	MMR IHC, p53 IHC
GIST	Focused Find It panel; Full Find It panel; FoundationOneCDx	
Glioma	Focused Find It panel; Full Find It panel; FoundationOneCDx	1p/19q co-deletion FISH; EGFR amplification by FISH
Lung cancer	Focused Find It panel; Full Find It panel; FoundationOneCDx	ALK IHC, ALK FISH; ROS1 IHC, ROS1 FISH; PD-L1 IHC; TFE3 MiT translocation; COL1A1-PDGFB; ETV6-NTRK3; NTRK 1/2/3
Melanoma	Focused Find It panel; Full Find It panel; FoundationOneCDx	
Sarcoma	Please contact your local Sonic pathology practice	Please refer to the FISH probe table below or contact your local Sonic Histopathologist.
Thyroid	ThyroSeq; FoundationOneCDx	
Any solid tumour	Full Find It panel; FoundationOneCDx; FoundationOneLiquid CDx	Please refer to our FISH catalogue at sonicgenetics.com.au or contact your local Sonic Histopathologist.

Comprehensive genomic profiling	
Name	Genes tested
FoundationOneCDx	Validated pan-cancer test (324 genes, TMB and MSI gene signatures)
Clinical utility	
Provides a comprehensive genomic profile designed to highlight alterations that may lead to additional treatment options for the doctor and patient to consider. Potentially relevant global clinical trials may also be included in the report.	

Genomic profiling	
Name	Genes tested
Full Find It panel [†]	Pan-cancer (≥30 genes)
Clinical utility	
Provides information on hotspot mutations. This can assist in therapy selection and identifies potentially relevant national clinical trials.	

Focused mutation testing		
Name	Genes tested	Clinical utility
Breast Find It panel	AKT1, ERBB2 (HER2), ESR1, PIK3CA	
Colorectal Find It panel [†]	BRAF, KRAS, NRAS, PIK3CA	
Endometrial Find It panel	CTNNB1, PIK3CA, POLE, TP53	Provides information on hotspot mutations. This can assist in therapy selection and identifies potentially relevant national clinical trials.
GIST Find It panel	BRAF, KIT, PDGFRA	
Glioma Find It panel [†]	BRAF, IDH1, IDH2, TP53	
Melanoma Find It panel [†]	BRAF, KIT, NRAS	
NSCLC Find It panel [†]	BRAF, EGFR, ERBB2, KRAS, MET	

Selected FISH probes		
Name	Relevant tumour type	Additional supporting tests
ALK FISH [†]	Lung cancer	ALK IHC; PD-L1 IHC
CIC/DUX4 FISH [†]	Ewing-like sarcoma	DUX4 IHC
EGFR FISH	Relevant for a number of tumour types, but primarily useful in gliomas	
FOXO1 FISH [†] (a.k.a FKHR)	Alveolar rhabdomyosarcoma (RMS)	
FUS/DDIT3 FISH [†]	Myxoid liposarcomas	
MDM2 FISH [†]	Soft tissue tumours, osteosarcomas, oesophageal carcinomas	Also useful to distinguish between lipomas/lipomatous tumour/well-differentiated liposarcomas; malignant undifferentiated tumours/dedifferentiated liposarcomas; variety of benign tumours and liposarcomas
MYCN FISH	Neuroblastomas	
PTEN FISH	Glioblastomas	
ROS1 FISH [†]	NSCLC	ROS1 IHC; PD-L1 IHC
SS18 FISH [†]	Synovial sarcoma	
EWSR1 FISH [†]	Ewing sarcoma	
USP6 FISH [†]	Primary aneurysmal bone cyst, nodular fasciitis, or myositis ossificans	
1p/19q co-deletion FISH [†]	Oligodendrogliomas and oligoastrocytomas	IDH1 R132H IHC; Glioma focused NGS panel

^aCorrect at time of printing.

[†]Partial rebate may be available, subject to Medicare criteria being met.

[‡]Medicare rebates available, subject to Medicare criteria being met.

[§]Germline testing for hereditary cancer syndromes also available.

Sonic Genetics is offering FoundationOne on behalf of Roche Products Pty Limited, ABN 70 000 132 865, Level 8, 30-34 Hickson Road, Sydney NSW 2000.

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