Theranostics Lab provides a specialised service for the delivery of molecular diagnostics to clinicians and the public.

A core philosophy of the company is to improve public health through effective screening programmes and improve sustainability in medicine by matching the right treatment to the right individual.

We also support a strong social responsibility programme.

Please find more information at www.theranosticslab.com



Clinical Laboratory Services Waitemata District Health Board North Shore Hospital Shakespeare Road, Takapuna North Shore Auckland 0622

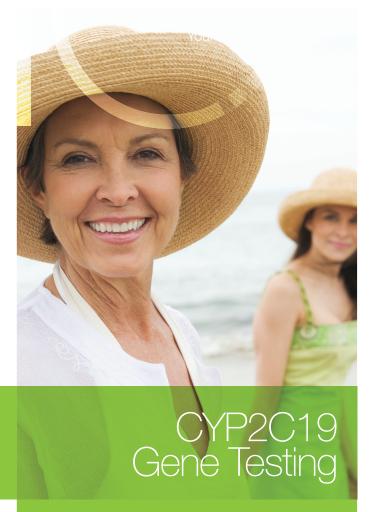
For Technical Advice:

Theranostics Laboratory Phone: 09 486 8325

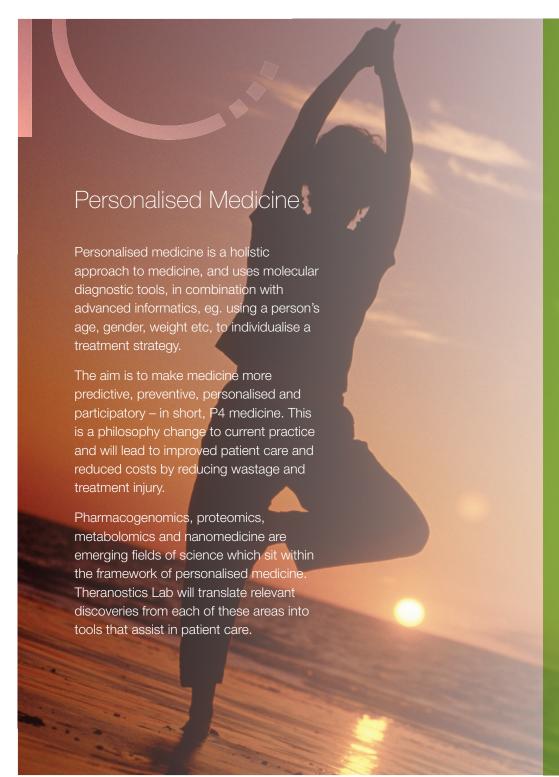
Email: LABADMIN@waitematadhb.govt.nz

For Clinical Advice

Freephone: 0508 GENOME (436 663) Email: info@theranostics.co.nz



Theranostics.





Ordering a Test

Specimen Requirements

4ml EDTA sample

Storage Conditions

4°C

Transport Conditions (if off site)

Keep cooled

Documentation

Provide a request form with patient and clinical details. Requestor information is required for reporting and invoicing.

Availability

The test will be available weekdays with an expected turnaround of 48 hours. In most circumstances, the analysis will occur the same day of arrival.

Reporting

The report will be available or sent electronically. In the event of HL7 not being available, a paper report will be issued.

The cytochrome P450 2C19 (CYP2C19) gene encodes an enzyme which contributes to the metabolism of a large number of clinically relevant drugs and drug classes such as antidepressants (eg. SSRIs),¹ benzodiazepines,² proton pump inhibitors (PPIs),³ and antiplatelet drugs.⁴ Inherited genetic variation in CYP2C19 contributes to interindividual variability in drug response.

Individuals may be poor metabolisers (carrying two copies of a nonresponder gene), intermediate metabolisers (carry one copy of a nonrespoder gene), extensive metabolisers (normal metabolism), or ultrametabolisers.

Antiplatelet Drugs

Poor metabolisers may respond poorly to prodrugs, like clopidogrel, prompting a switch to an alternative antiplatelet drug such as prasugrel or ticagrelor.

SSRIs

Poor metabolisers may be more responsive to drugs such as sertraline or other SSRIs metabolised by the 2C19 enzyme and require a dose reduction.

Proton Pump Inhibitors

Ultrametabolisers will metabolise drugs such as omeprazole (PPI) quickly, making them less effective and reducing the efficacy of H. pylori triple therapy eradication.³ Ultrametabolisers should therefore be given higher doses, or alternative PPIs which are not dependent on this enzyme for clearance.

The prevalence of the nonresponder gene variants is high in Asian and Maori patients, whereas the ultrametaboliser variant is more common in Europeans.

A personalised approach to treatment may be more effective for patients who have failed therapy, or who have adverse reactions to these drugs.



- 1. Brosen K. Therapie. 2004;59(1):5-12.
- 2. Yasumori T, Nagata K, Yang SK, Chen LS, Murayama N, Yamazoe Y, et al. Pharmacogenetics. 1993;3(6):291-301.
- 3. Li XQ, Andersson TB, Ahlstrom M, Weidolf L. Drug metabolism and disposition: the biological fate of chemicals. 2004;32(8):821-7.
- Hulot JS, Bura A, Villard E, Azizi M, Remones V, Goyenvalle C, et al. Blood. 2006;108(7):2244-7.