

Pathologist Review for Apo E Genotype Testing

Canterbury Health Laboratories will introduce Pathologist review for all Apo E Genotype Requests from 1st September 2020.

Apo E genotyping is indicated in the diagnostic work-up of certain uncommon dyslipidemias, with the homozygous e2 genotype associated with type III hyperlipidemia.

The e4 allele is associated with Alzheimer disease (AD), however, Apo E genotyping is not part of the diagnostic work up for Alzheimers disease. The predictive value of apo E genotyping is too low for this analysis to be useful in the diagnosis of AD in symptomatic patients nor should it be performed in asymptomatic patients. Testing in asymptomatic individuals may cause harm and should not be performed. This position is supported by international consensus statements.¹⁻³

Criteria for acceptance:

- Appropriate requests from specialist neurologists, psychiatrists, geriatricians, geneticists, cardiologists, and chemical pathologists will be approved.
- For requests from General Practitioners the clinical indication for testing must be clearly stated on the request form.
- The laboratory will not accept requests without a referral from an appropriate doctor.⁴⁻⁶

If clinical information is not provided, or does not provide appropriate justification for the test, the request may be declined.

Declined tests:

If a test is declined, the specimen will be held for a reasonable period (usually 3 weeks but dependant on the stability of the sample). Medical practitioners seeking approval for a declined test should email the genetics laboratory (genelabtest@cdhb.health.nz), giving the patient's name and NHI number and the clinical justification for the test or call the laboratory Genetic Pathologist.

1. Genetic testing for Alzheimer's disease, Panegyres PK et al. Med J Aust 2000; 172 (7): 339-43
2. Statement on Use of Apolipoprotein E Testing for Alzheimer Disease. Farrer, LA et al. JAMA. 1995;274(20):1627-1629
3. Apolipoprotein E genotyping in Alzheimer's disease, National Institute on Aging/Alzheimer's Association Working Group, Lancet 1996;347(9008):1091-1095
4. HGSA position Statement – 'Online DNA testing' accessed via <https://www.hgsa.org.au/resources/hgsa-policies-and-position-statements> (6/8/20)
5. HGSA Position Statement – 'Predictive and Pre-symptomatic Genetic Testing in Adults and Children' accessed via <https://www.hgsa.org.au/resources/hgsa-policies-and-position-statements> (6/8/20)
6. RCPA Position Statement – 'Genetic Tests that are Marketed Directly to Consumers' accessed via <https://www.rcpa.edu.au/Library/College-Policies> (6/8/20)