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Billing

Medlab Pathology will Bulk-Bill patients who provide a current health care, Pensioner or Veteran affairs card.

Collection Centres

Medlab Pathology has many collection centres with more being added regulary. For your nearest collection centre details, visit our website on:

www.medlab.com.au

Home collections

Our team of experienced home collectors ensure collection of samples from patient homes, hospitals, nursing homes or workplaces as required. Contact our customer service department to schedule a time that is convenient to your patients.

NB: There will be no extra charge to patients for this service.

(02) 8745 6549

Electronic result downloads

HL7 or PIT file electronic result downloads are available to your preferred practice management software immediately upon completion and verification of test results. Please contact our IT helpdesk for further inquiries regarding this service.

(02) 8745 6553

Courier network

Our extensive courier network ensures prompt pick-up of samples as well as delivery of hard-copy reports and supplies throughout the day,
7 days a week.

(02) 8745 6573

MEDLAB PATHOLOGY

"A truly independent laboratory committed to you and your patients"

Spring/Summer 2014

Medlab Pathology welcomes you to our new Spring/Summer 2014 Newsletter.

There are several articles this issue, which will be of interest to all Health Care Practitioners. – 'Testing for Peanut Allergy' and 'Hereditary Haemochromatosis' being just two.

Also in this issue some important Laboratory updates, regarding collection procedures/information from the Lab.

Also, please check out the link for our new Interactive Web Site!

We hope that you will enjoy this Newsletter, if you require any contact information, please see the last page for our Laboratory Directory.

Regards,

The Medlab Team

New way of testing for peanut allergy

Peanut is the most common cause of food anaphylaxis presentations to Australian emergency departments.

Current testing to confirm peanut allergy relies on the detection of IgE antibody to peanut by skin prick testing (SPT) and/or serum specific IgE testing (formerly known as the RAST test). These tests use crude peanut allergen and misclassification is more likely to occur when low or borderline levels are obtained (i.e. false positive and negative reactions).

The SPT and sslgE to peanut are useful when strongly positive (e.g. > 8 mm for peanut SPT or > 15 KuA/L for peanut sslgE). Above this cut-off, the patient is likely (> 95% likelihood) of having an allergic reaction to peanut. These tests are also useful when negative (e.g. < 3 mm for peanut SPT or < 0.35 KuA/L for peanut sslgE), indicating a high probability (> 95% chance) of tolerating peanut. The predictive value between these cut-offs (3-8 mm for SPT or > 0.35 to < 15 KuA/L for sslgE) of differentiating peanut allergy vs. peanut tolerance is poor.

Component resolved diagnostic testing (CRD) has been introduced to assist in the diagnosis of food allergy. Instead of a crude peanut extract, individual, purified recombinant peanut proteins are utlisied. These peanut proteins are named Arah proteins. Whilst 10 Arah proteins exist, Arah 1,2,3 and 8 appear to be the most important in peanut allergy diagnosis.

When is CRD testing for peanut Arah useful?

- When the patient has never eaten peanut or has had a reaction in the distant past AND the peanut SPT or sslgE level is in the "grey zone" between 3-8 mm or > 0.35 to < 15 KuA/L respectively

- When the patient is having oral symptoms to peanut (e.g. itchy mouth only) and is birch allergic (on SPT or sslgE). These patients are more likely to be Arah8 positive, and appear to be at less risk of severe reactions.

When is CRD testing for peanut allergy not useful?

- When the patient has had a recent allergic reaction (an sslgE to peanut is all that is required)

- When the patient has never eaten peanut or has had a reaction in the distant past, but the peanut SPT or sslgE to peanut is > 8 mm or > 15 kuA/L respectively, already suggesting a high likelihood of reacting to peanut

What to order and how to interpret results?

When ordering a peanut CRD, order an sslgE (i.e. RAST) to:

- Arah 1,2,3,8
- Birch pollen
- Peanut

This profile gives us the best information to assist in interpreting the patient's risk of reaction to peanut. Arah2 is the best predicator of allergic reactions. Patients with Arah2 levels > 1 KuA/L are likely to react, whilst those with levels < 0.1 KuA/L, are more likely to be tolerant. Patients with values in between require assessment by an Allergy specialist to determine whether a medically supervised peanut challenge is warranted.

Can CRD peanut testing determine the risk of anaphylaxis?

In one study, children with sslgE against Arah2 AND 1 or 3, were more often reported by their parents to have had peanut anaphylaxis (50% rate of anaphylaxis) compared to those reacting to Arah2 alone (9% rate of anaphylaxis). This still meant 50% of children with Arah2 AND 1 or 3 profile did not have a prior history of peanut anaphylaxis. Consequently we currently do not recommend using these test as an accurate means of predicting peanut anaphylaxis. However patients who do react to Arah 2 AND 1 or 3, are much more likely to react to peanut on ingestion.

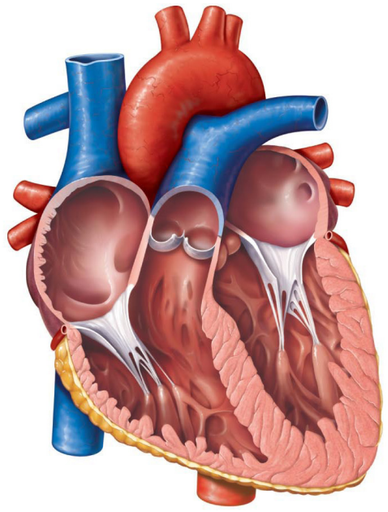
Ordering and costs
sslgE to Arah 1,2,3 and 8 is now available at MedLab.
If assistance with interpretation is required, please call Dr Sam Mehr, Immunologist/Allergist, at MedLab laboratory.

Hereditary Haemochromatosis

Hereditary haemochromatosis (HH) is a relatively common condition in which excessive absorption of iron leads to greatly increased iron stores in the body (iron overload). It is an adult onset condition with the first symptoms developing in patients with overt disease between the ages of 30 and 60 years. The excess iron is deposited in the parenchymal cells of the liver, heart, pancreas and other organs. Complications of untreated haemochromatosis include liver fibrosis and cirrhosis, hepatocellular carcinoma, diabetes mellitus, cardiomyopathy, arrhythmias, impotence, arthritis and premature death.
The gene involved in HH is called the HFE gene. Mutations in this gene can lead to impaired regulation of iron storage and iron overload. The frequencies of the various HFE genotypes in the Australian population are shown in the following table:

HFE Genotype	Frequency
No identifiable gene mutation	2/3
Heterozygous H63D	1/6
Heterozygous C282Y	1/10
Compound (double) heterozygote (C282Y/H63D)	1/50
Homozygous H63D	1/100
Homozygous C282Y	1/200

Approximately 90% of Australians with HH have been found to be homozygous for the C282Y mutation, and it is estimated that 60-70% of C282Y homozygotes will develop iron overload during their lifetime. In contrast, only about 1% of people who are compound or double heterozygote for the C282Y and H63D mutations (i.e. inherited one copy of the C282Y mutation from one parent and one copy of the H63D mutation from the other parent) develop HH. Persons who are heterozygous for either C282Y or H63D, or homozygous for H63D carry a very small risk of developing HH. Nonetheless, all patients with iron overload (on the basis of clinical symptoms and/or iron studies results) require appropriate follow up regardless of their HFE gene test result.
The Medicare Benefits Schedule (MBS) covers the cost of HFE gene testing for patients with raised serum ferritin or transferrin saturation levels on more than one occasion, or for a 10 relative of a person diagnosed with HFE-related HH. Most laboratories will test for the C282Y and H63D gene mutations. Some labs also test for the S65C mutation which appears to account for about 1% of individuals affected clinically by HH. Medlab Pathology currently collects and forwards blood samples for HFE gene testing to the Department of Medical Genomics at Royal Prince Alfred Hospital in Camperdown, Sydney which performs studies for all three mutations – C282Y, H63D and S65C.
For assistance with interpretation of hereditary haemochromatosis HFE gene testing results, please contact Dr Luke Soo, Supervising Pathologist in Haematology on (02) 8745 6500.



References
Kowdley K et al (2012). HFE-Associated Hereditary Haemochromatosis. In RA Pagan et al (eds). Gene Reviews. Seattle (WA): University of Washington. Genetics in Family Medicine: The Australian Handbook for General Practitioners 2007, accessed 21 August 2014, <http://www.gpgenetics.edu.au>

Medlab has changed to high sensitive Troponin I

Rapid advances in immunoassay technologies and the international adoption of traceable troponin calibration standards have allowed manufacturers to develop and calibrate troponin assays with very high analytic sensitivity and precision.

At Medlab, Troponin is now tested using the new high sensitive troponin I (hsTnI) assay. The assay specifications are as follows

(1) The result is reported in ng/L, whilst the previous troponin assay was in ug/L (conversion: 1,000 ng/L = 1ug/L). However, comparison of results obtained using the two different assays is not recommended.

(2) Detection of cTnI in a significant proportion of the reference population, thereby allowing for a more accurate calculation of the 99th percentile upper reference limit (URL).

(3) Gender specific cut-offs will be used and displayed on the individual reports.
Male - <26 ng/L and Female <16 ng/L

Clinical Utility

A recent article in the Medical Journal of Australia suggests that request of a single troponin test is reasonable in primary care to exclude the possibility of acute myocardial infarction in asymptomatic low-risk patients whose symptoms resolved at least 12 hours prior. For patients with symptoms suggestive of acute coronary syndrome, hospitalisation should be the default option. *

*G Marshall, N Wijeratne, D Thomas. Should general practitioners order troponin tests?. MJA 2014;201:155-157.