

## What is FerriScan®?

FerriScan® is a magnetic resonance imaging (MRI) based technology for the non-invasive measurement of liver iron concentrations (LIC).

A patient's MR images are sent to Resonance Health for a FerriScan® analysis where the LIC is quantified using our patented technology.

Key features of FerriScan®:

- Accurately measures liver iron levels across a large range of LIC measurements
- Non-invasive
- Centralised data analysis ensures results can be compared between clinics
- Resonance Health provides quality assured analysis at our ISO certified data analysis facility.
- FerriScan® has regulatory approval - FDA, TGA, CE Mark, Medsafe and Health Canada

## Haemochromatosis and Iron Overload

Hereditary haemochromatosis is an inherited condition that causes high iron absorption from a person's diet. The condition is caused by an abnormal gene or genes that control iron absorption and is common in countries where the population is largely of Northern European origin. Approximately 1 in 200 people of Northern European descent are homozygous for the most common hereditary haemochromatosis gene.

However, not every individual who has the abnormal gene exhibits symptoms of the disease. Some people may test negative for the abnormal gene but still suffer from haemochromatosis. Determination of the magnitude of body iron stores will identify individuals who would benefit from phlebotomy therapy.

**Early detection is the key to preventing damage from iron overload. Accurate assessment of the iron concentration in the liver can play an important role in the diagnosis and treatment planning for haemochromatosis.**

## Serum Ferritin

There is a weak correlation between serum ferritin and LIC as results are confounded by factors such as inflammation. Serum ferritin is used for monitoring trends in patient iron loading but does not provide reliable information on the degree of patient iron loading.

## Liver Biopsy

In the past, liver iron concentration was only able to be measured by liver biopsy, an invasive and often painful procedure. FerriScan® provides an alternative that is a more accurate, non-invasive, safer and quicker procedure.

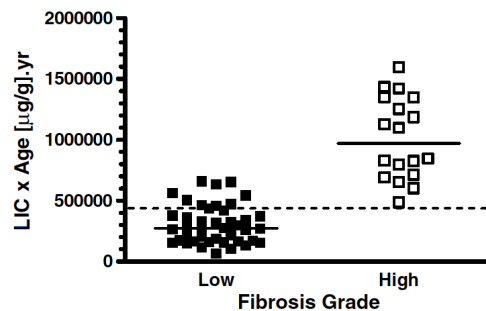
## Genetic Testing (HFE)

The two major mutations of HFE attributable to iron loading are C282Y and H63D. People who inherit the HFE gene mutation from both parents are at the greatest risk of developing haemochromatosis. Nonetheless, negative genetic testing may not rule out hereditary haemochromatosis.

## Why is the measurement of LIC Important?

A patient's LIC value is the best measure of total body iron stores. High LIC over a prolonged period causes liver damage. Liver damage (high grade fibrosis) is a risk factor for hepatocellular carcinoma (HCC). FerriScan® enables clinicians to measure LIC at diagnosis so that the risk of liver damage can be assessed. The LIC measurements are not affected by the presence of fibrosis or cirrhosis.

The graph below demonstrates how LIC multiplied by the age at diagnosis is a good predictor of liver damage.



[Taken from Olynyk et al, Am J Gastroenterolgy 2005; 100: 837.]

## The FerriScan® Process

The FerriScan® process involves four simple steps:

1. Patients are required to spend approximately 20 minutes in the MRI instrument. *No contrast agent is administered.*
2. Image data are transmitted electronically to the FerriScan® Service Centre through a secure internet link.
3. The service uses a patented methodology for processing the MR images to generate a liver iron concentration (LIC) result.
4. LIC reports are made available to the MRI centre through the secure link within two working days.

Please visit us at [www.resonancehealth.com](http://www.resonancehealth.com) for further information or send an email to [info@ferriscan.com](mailto:info@ferriscan.com)

*FerriScan® is a service proudly delivered*