Elevated serum ferritin (CRP < 5mg/L)

**Transferrin saturation > 50%**
- Check iron studies
  - Repeat on a fasting sample

**FASTING transferrin saturation > 50%**
- **IRON OVERLOAD LIKELY**
  - Send 2 x EDTA samples for Hereditary Haemochromatosis (HH) genotyping ***

**2 x HH genes**
- Routine referral to hepatology

**<2 x HH genes**
- Patient at low risk of significant iron overload in absence of other risk factors ****

**Transferrin saturation < 50%**
- IRON OVERLOAD EXCLUDED

Clinical assessment:
- Alcohol history
- Liver disease
- Metabolic syndrome (BMI, BP, DM2, lipids)
- Inflammatory conditions
- Malignancy
- Renal failure
- Thyrotoxicosis

Check:
- FBC
- CRP/ESR
- U&E
- LFTs*
- HbA1c**
- Lipids**
- TFTs**

Advise appropriate interventions:
- Alcohol abstinence
- Improved glycaemic control
- Weight reduction
- Lowering triglycerides

* Abnormal LFTs: Consider viral hepatitis screening and / or abdominal US
** HbA1c, Lipids, TFTs: If clinically indicated / not checked in previous 12 months
*** Genetic testing: Ensure appropriate patient consent is obtained
**** Risk factors for secondary iron overload – multiple transfusions or iron infusions, chronic iron replacement, iron-loading anaemias (thalassaemia, chronic haemolytic, sideroblastic, dyserythropoietic anaemia), chronic liver disease due to alcohol, Hepatitis B/C, NASH

Ferritin reference intervals:
- **Male**: 30 – 400ug/L
- **Female (under 60y)**: 30 – 150ug/L
- **Female (over 60y)**: 30 – 260ug/L

Ferritin levels increase throughout life with significant increases post-menopause in female patients.