

# ADULT HAEMATOLOGY GP Pathway Guides

DRAFT V.3 16<sup>th</sup> April 2020



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## B Symptoms

- Weight loss >10% over 6 months
- Drenching sweats,
- Unexplained fever >38°C

## Lymphadenopathy

Lymphadenopathy- look for causes

### Lymphadenopathy associated with:

- B symptoms
- Liver and spleen enlargement
- Rapidly increasing in size
- Generalised lymphadenopathy
- Cytopenias

Refer to Haematology on urgent (suspected cancer) pathway

Localised unexplained adenopathy  
 OR  
 Concerns of metastatic node

Appropriate referral to surgical team or ENT for biopsy/ radiological biopsy (US or CT guidance)

## Causes:

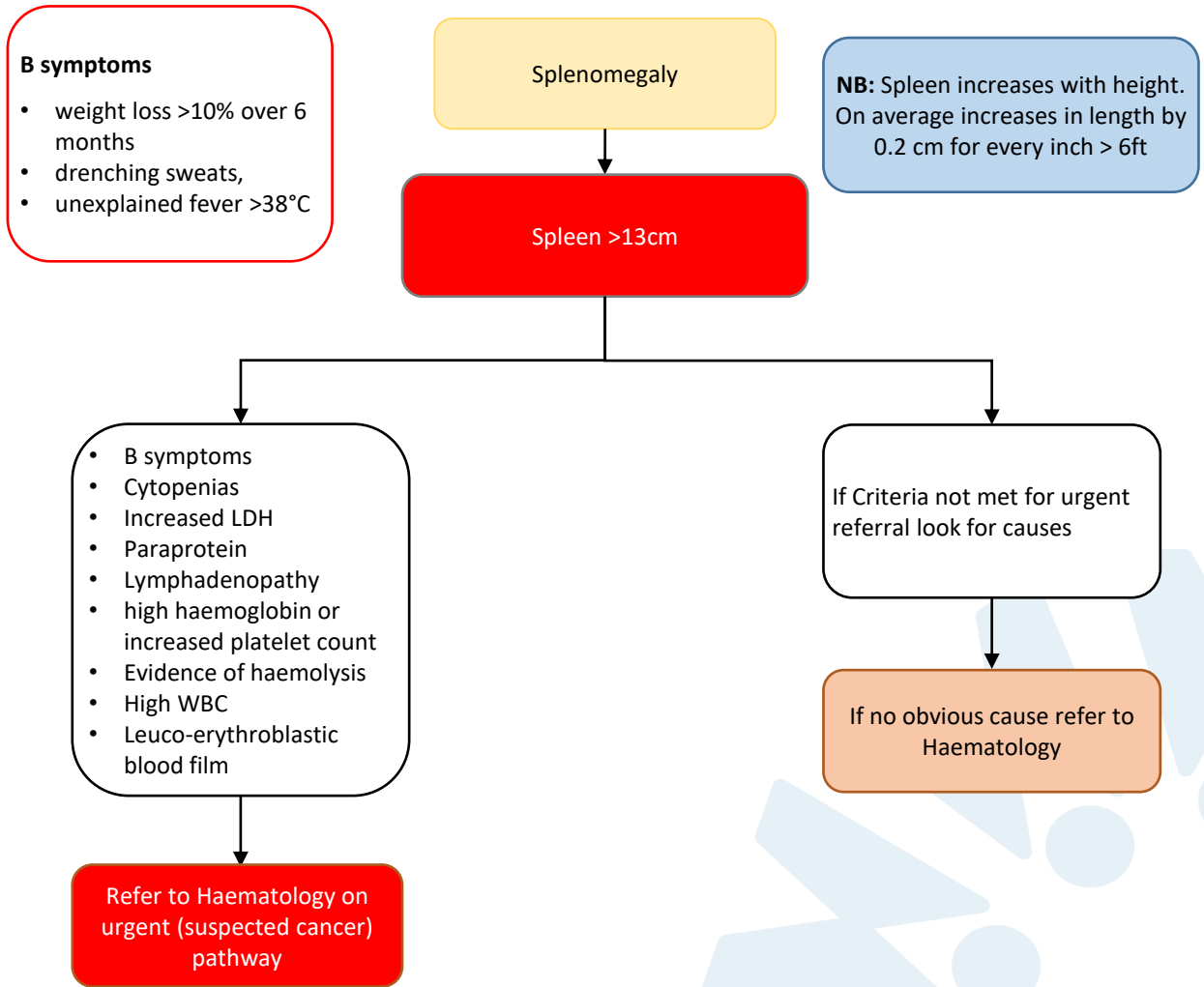
- Acute and chronic bacterial infections
- Syphilis
- Auto immune conditions
- Malignancy (haematological/ metastatic)
- Viral infections (including HIV, EBV, CMV)

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- Causes**
- Infections – Viral (HIV, EBV, CMV) and parasitic
  - Alcohol
  - Liver disease
  - Cardiac failure
  - Autoimmune
  - Lymphoproliferative disorders
  - Myeloproliferative disorders (such as CML or myeloproliferative disorders)
  - Haemolysis

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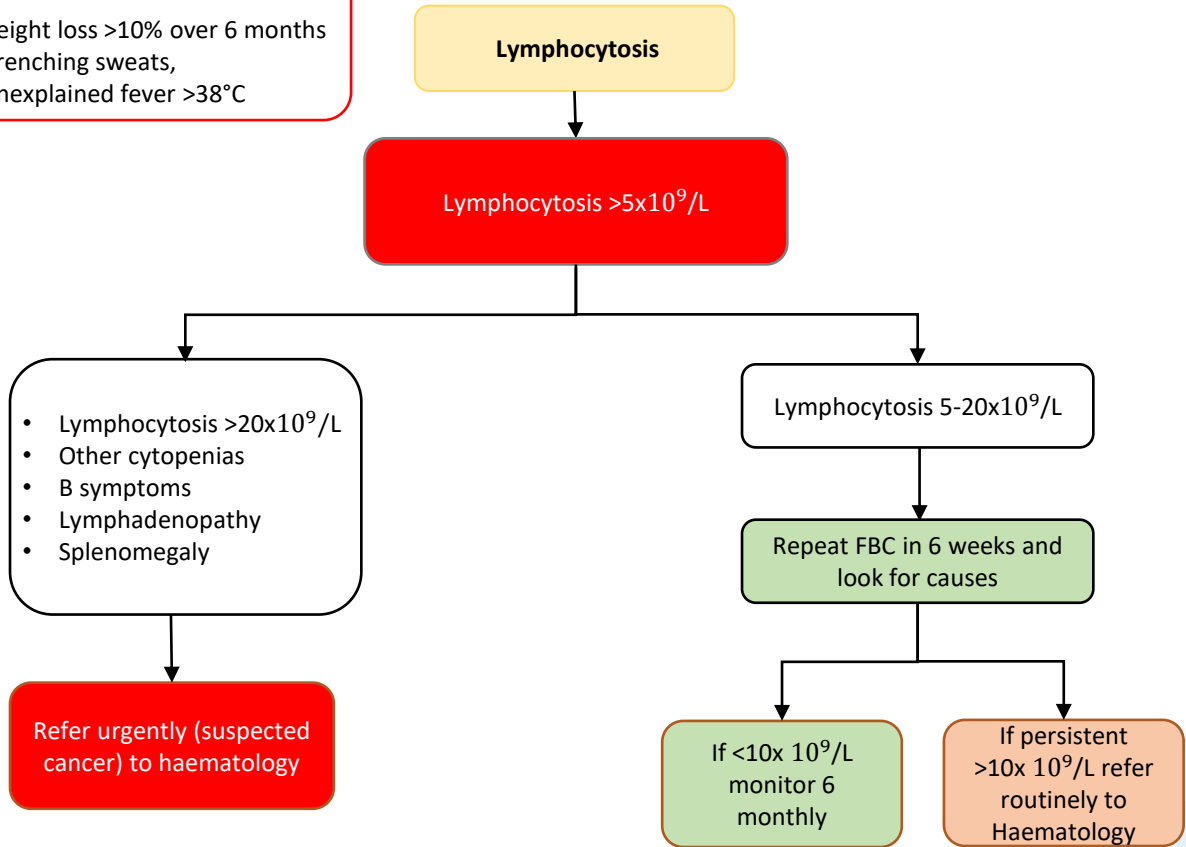
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## B Symptoms

- Weight loss >10% over 6 months
- Drenching sweats,
- Unexplained fever >38°C



## Causes:

- Smoking
- Viral infections especially Glandular fever
- Lymphoproliferative disorders (such as CLL)
- Bacterial infections
- Post-splenectomy
- Rheumatoid arthritis

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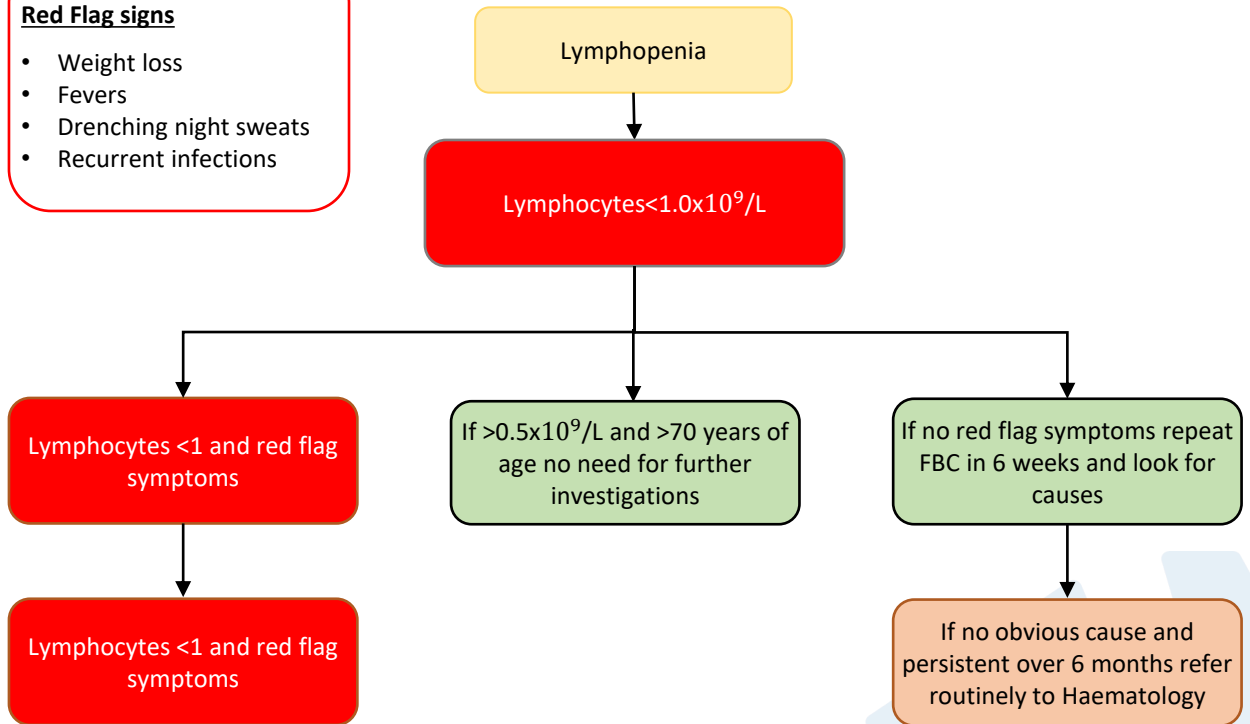
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## Red Flag signs

- Weight loss
- Fevers
- Drenching night sweats
- Recurrent infections



## Causes:

- Elderly patients
- Infections including HIV, hepatitis B and C
- Excess alcohol
- Malnutrition
- Medications-steroids, chemotherapy
- Systemic immune conditions
- Systemic illness(renal, cardiac, liver failure, malignancy)
- Lymphoma

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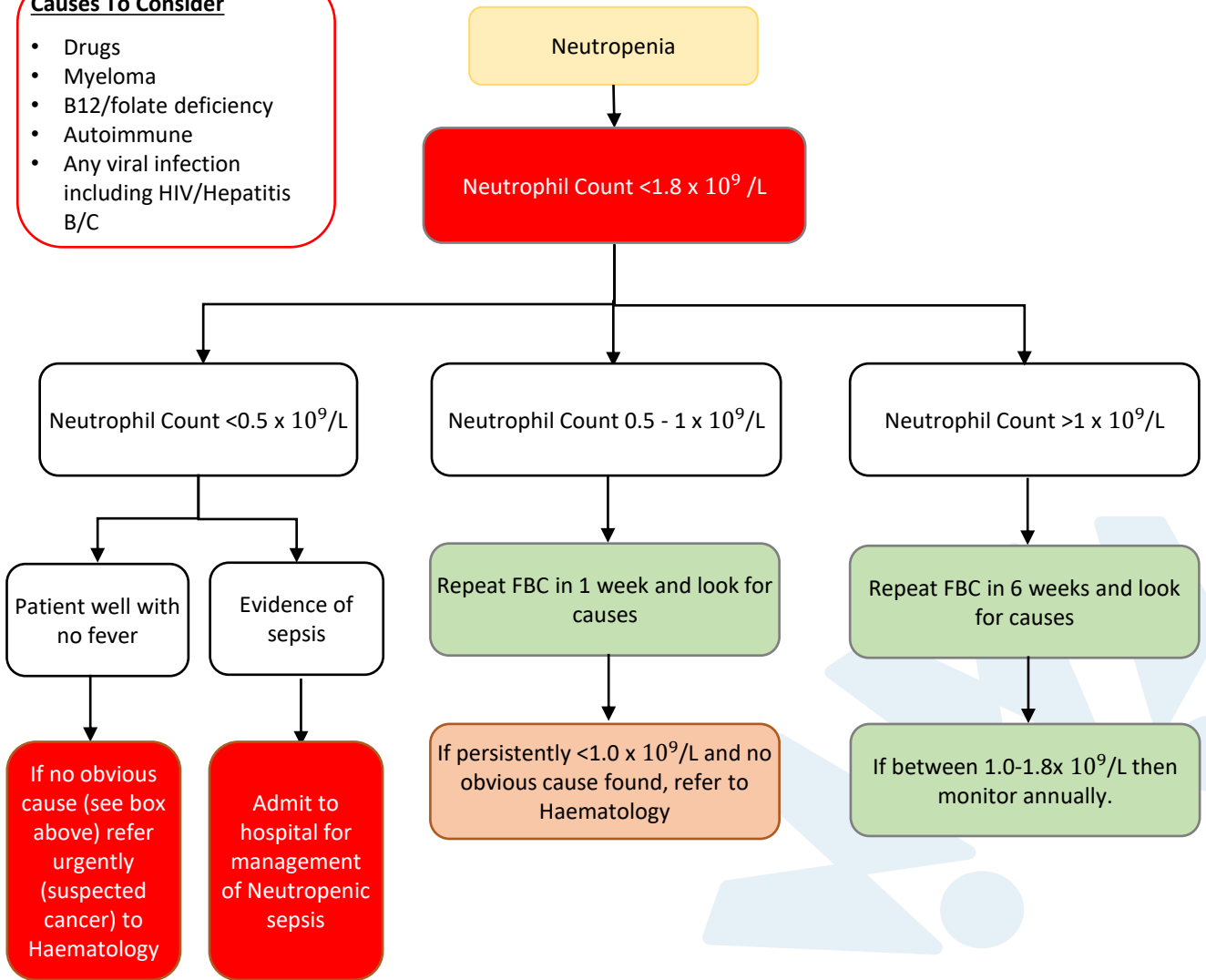
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### Causes To Consider

- Drugs
- Myeloma
- B12/folate deficiency
- Autoimmune
- Any viral infection including HIV/Hepatitis B/C



### Note:

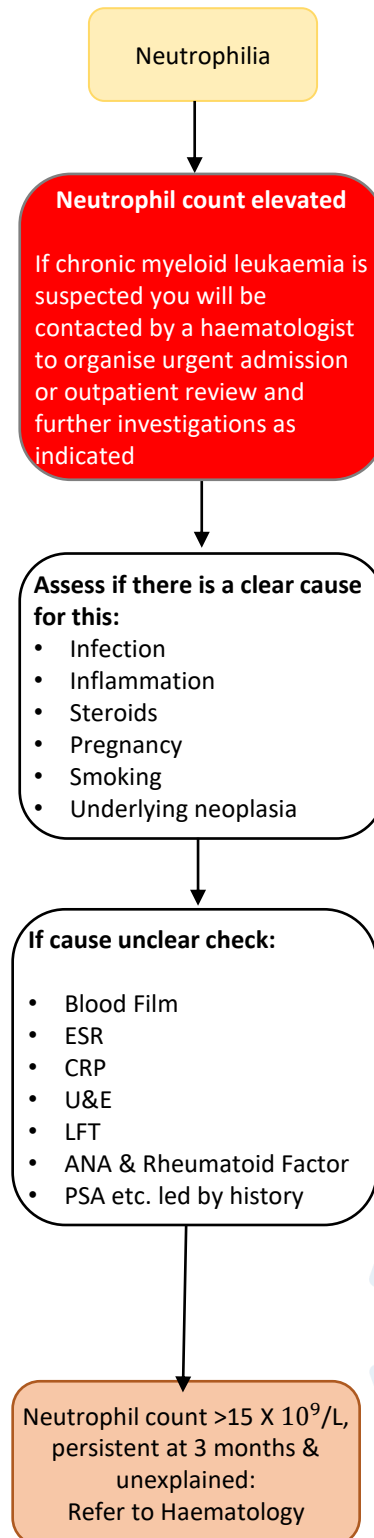
- A neutrophil count of between  $1.5 - 2.0 \times 10^9 /l$  whilst below the normal range is unlikely to be of any clinical significance.
- People of Afro-Caribbean or Middle Eastern ethnicity have a lower normal range for the neutrophil count (constitutional or ethnic neutropenia)  $1 - 1.8 \times 10^9 /l$ . This is of no clinical consequence. Only refer if their neutrophils are  $< 1.0 \times 10^9 /l$  on repeat testing.

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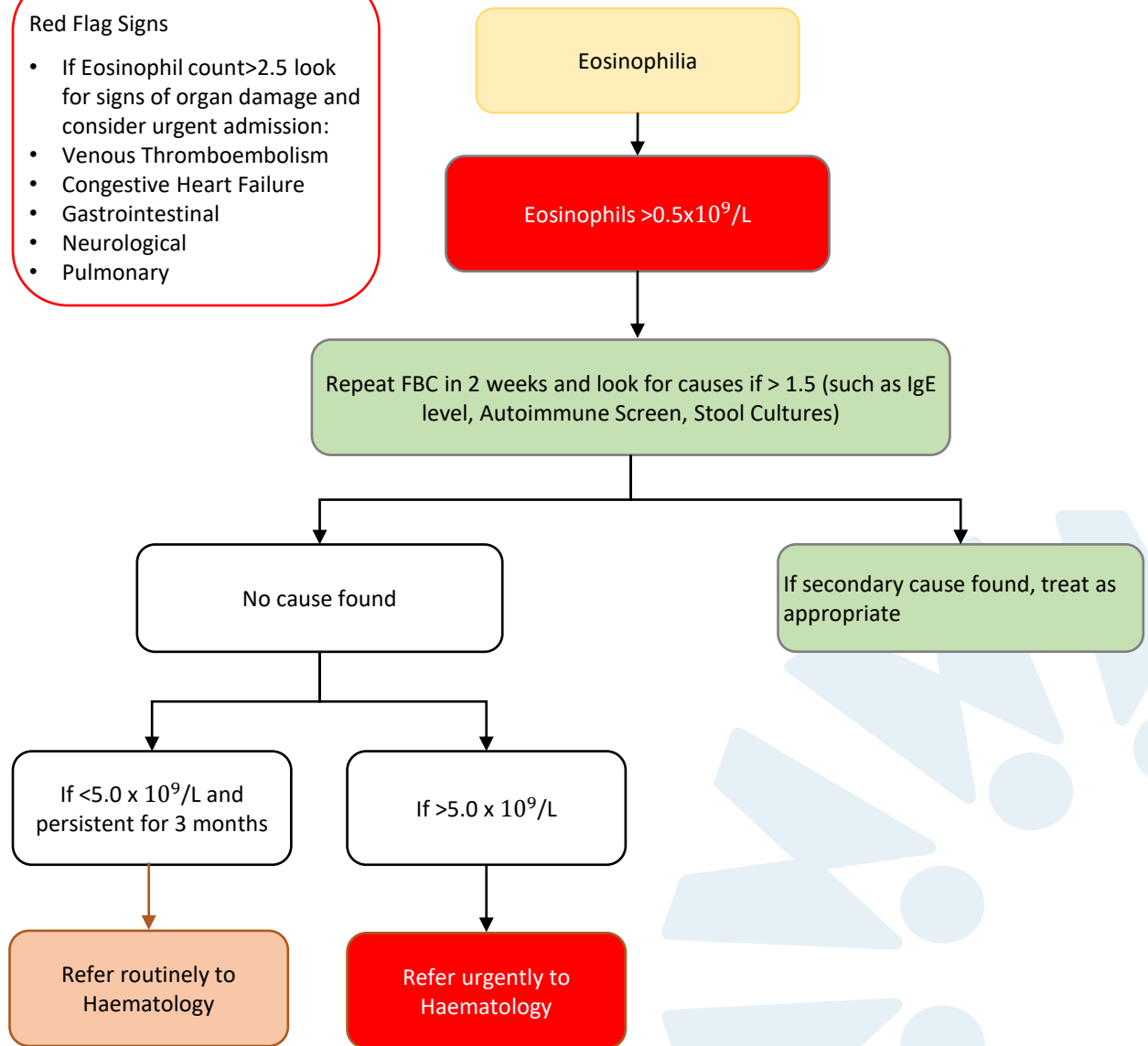
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## Red Flag Signs

- If Eosinophil count > 2.5 look for signs of organ damage and consider urgent admission:
- Venous Thromboembolism
- Congestive Heart Failure
- Gastrointestinal
- Neurological
- Pulmonary



## Causes

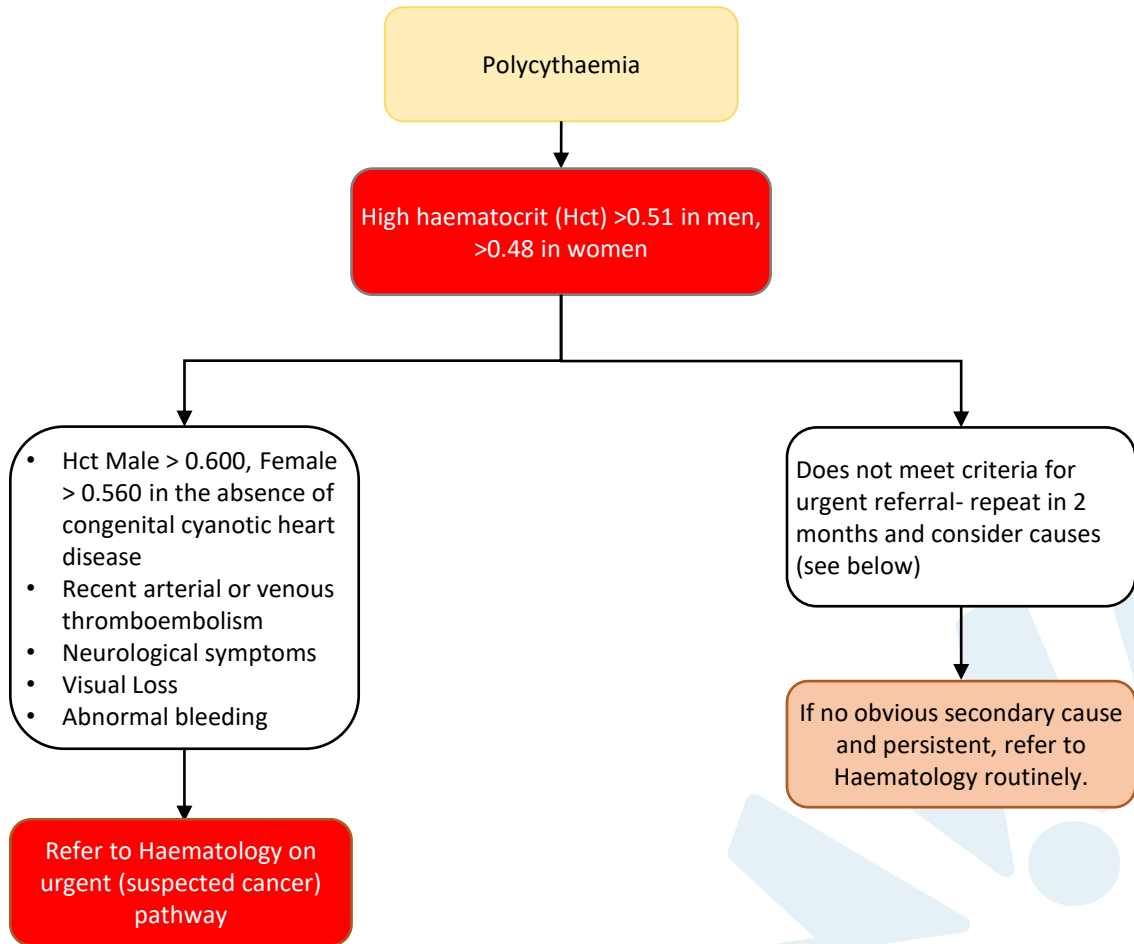
- Asthma / atopic dermatitis / acute urticarial
- Infections: especially those due to parasites (most commonly helminthes - hookworm, schistosomiasis - but also giardiasis or other protozoal infections and strongyloides)
- Drugs (penicillins, carbamazepine, sulphonamides are common but any drug is a possible cause)
- Connective tissue disease (rheumatoid arthritis, polyarteritis nodosa, Wegener's granulomatosis)
- Solid malignancy (breast, renal and lung cancer)
- Respiratory disease (Churg-Strauss syndrome, bronchiectasis, cystic fibrosis)
- Myeloproliferative disorders

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## Causes

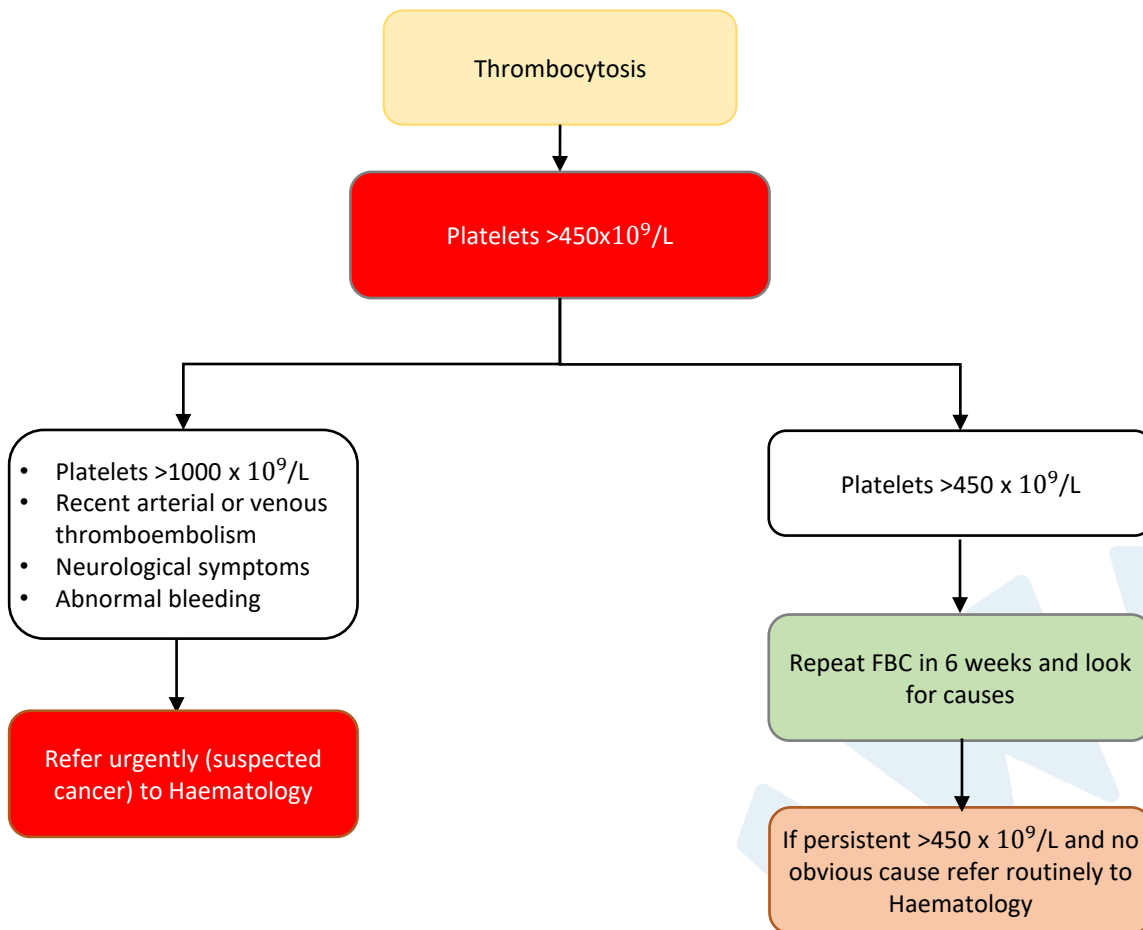
- Drugs – diuretics, testosterone, anabolic steroids
- Lifestyle choices -smoking, alcohol
- Hypoxia

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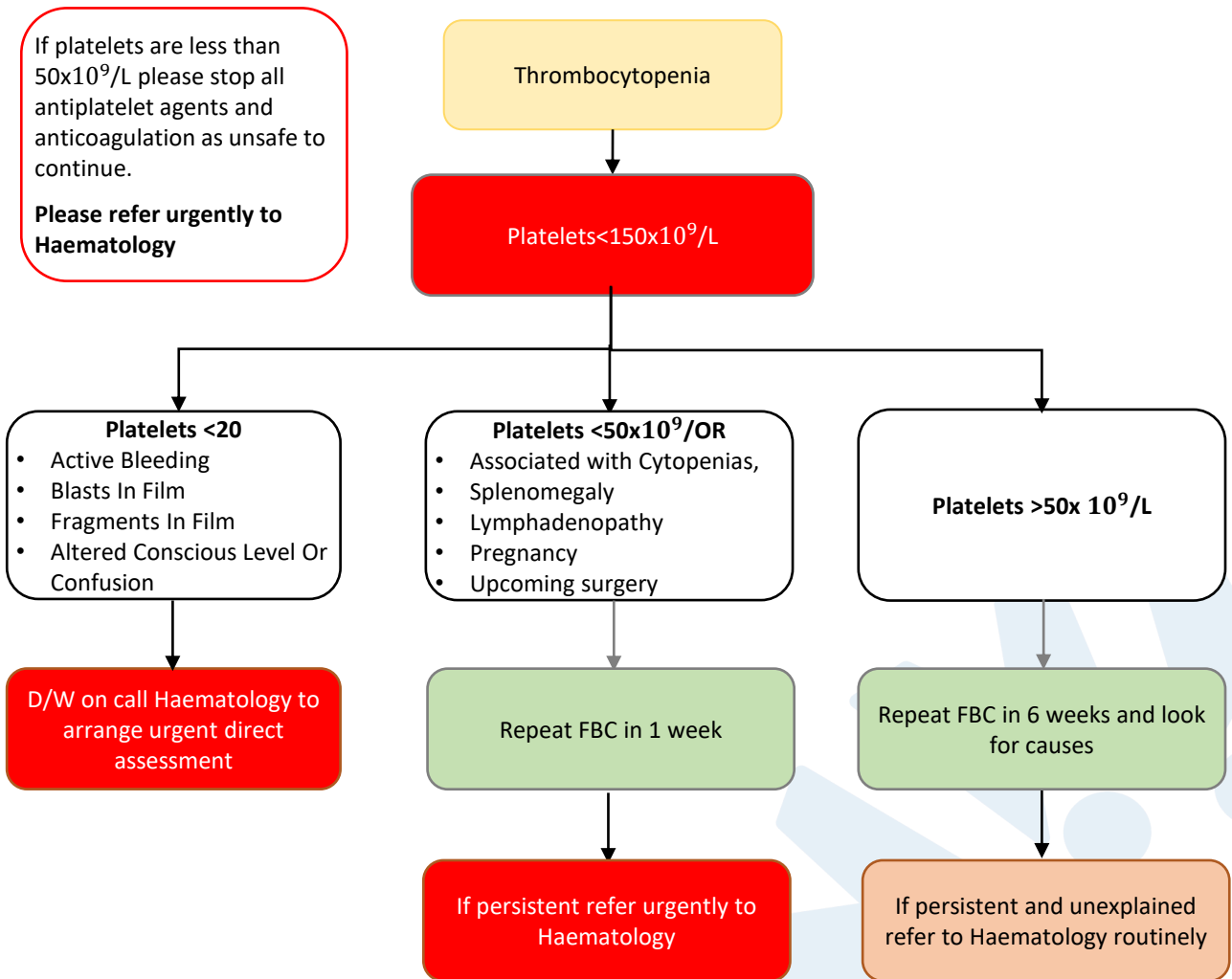
- Causes**
- Iron Deficiency Anaemia
  - Inflammation
  - Infection
  - Post-Splenectomy and Hyposplenism (e.g. Coeliac Disease)
  - Myeloproliferative Disorders
  - Post-Operatively

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## Causes

- Spurious result from clumping – please look at blood film report and repeat using citrated sample
- Immune thrombocytopenic purpura (ITP)
- Alcohol
- Liver dysfunction
- Medications
- B12/folate deficiency
- HIV/Hepatitis B/C
- Bone marrow failure/infiltration

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**End Organ Damage:**

- Hypercalcaemia
- Unexplained renal impairment
- Anaemia or other cytopenias
- Bone pain or pathological fracture

**Paraprotein on Serum Protein Electrophoresis**

- Paraprotein <30
- SFLC ratio <8 or >0.1
- No Immunoparesis
- No End Organ Damage

Any of following:

- Paraprotein >30
- SFLC ratio >8 or < 0.1
- Immunoparesis (low IgM/G/A)
- End Organ Damage
- Lymphadenopathy
- Splenomegaly

**Low Risk MGUS**

- IgG <15
- IgM and IgA <10
- SFLC ratio <8 or >0.1
- No Organ Damage

**High Risk MGUS**

- IgG>15
- IgM and Ig A>10

**Urgent (suspected cancer) referral to Haematology**

Non-urgent referral to Haematology

**Urgent referral to Haematology**

**Note:**

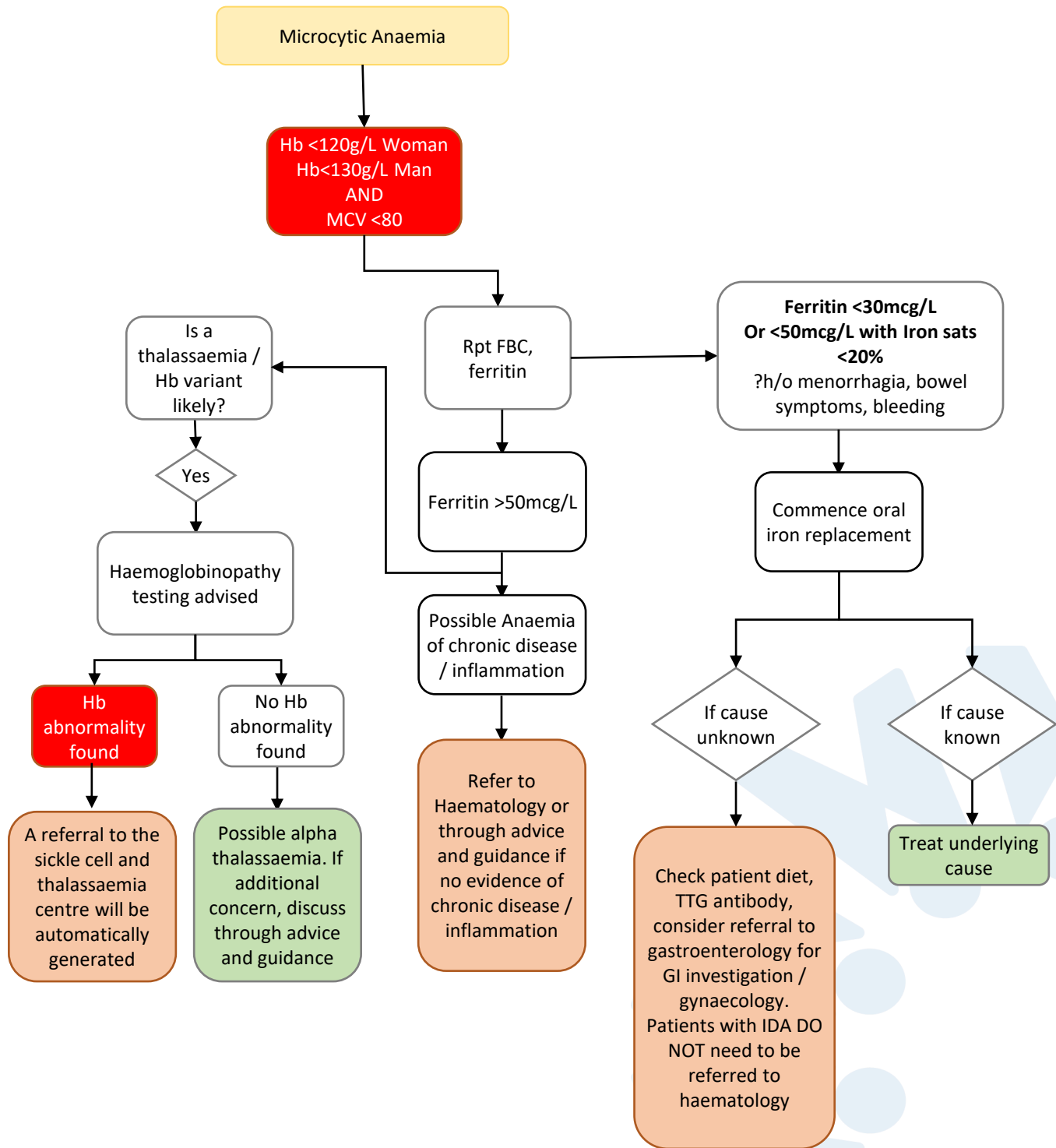
If there are concerns regarding the interpretation of paraprotein or Serum Free Light Chain results please discuss with the Haematology team.

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Hb <120g/L Woman  
 Hb <130g/L Man  
 AND  
 MCV >80

- Check:**
- FBC
  - Blood Film
  - UE/LFT
  - TFT
  - Vit B12
  - Folate
  - Ferritin
  - Iron Saturations
  - Reticulocyte count
  - Serum Immunoglobulins
  - Serum Free Light Chains

All tests normal or reticulocytes low or picture unclear

Consider advice and guidance if not anaemia of chronic inflammation

Paraprotein detected

Check calcium and suggest referral to Haematology for paraprotein investigation Exclude other causes of anaemia

Deranged renal function

Suggest referral to renal team

Elevated reticulocyte count

Look for evidence of bleeding or haemolysis and refer to appropriate department

Thyroid function abnormal

Treat thyroid dysfunction and repeat testing 4-6 weeks

Ferritin <50mcg/L, low Vit B12 or Folate

Suggest replace deficiency and assess for underlying cause

Note: Markers of haemolysis include a raised reticulocyte count and high bilirubin and LDH.

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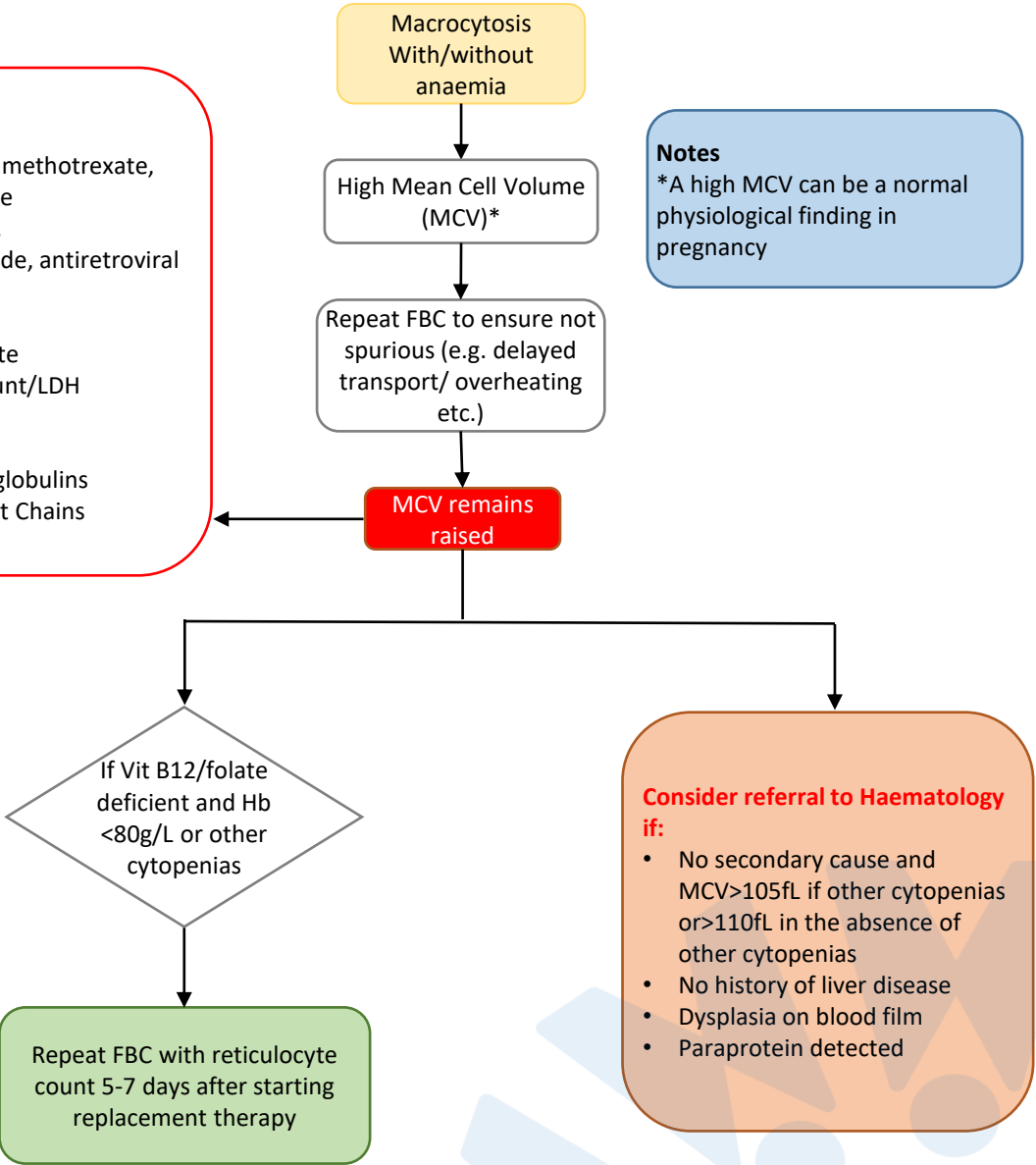
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- Check**
- Alcohol history
  - Medication (e.g. methotrexate, metformin, some anticonvulsants, hydroxycarbamide, antiretroviral drugs etc.)
  - Blood Film
  - Vit B12 and folate
  - Reticulocyte count/LDH
  - LFT
  - TFT
  - Serum immunoglobulins
  - Serum Free Light Chains
  - Family history

**Notes**  
\*A high MCV can be a normal physiological finding in pregnancy



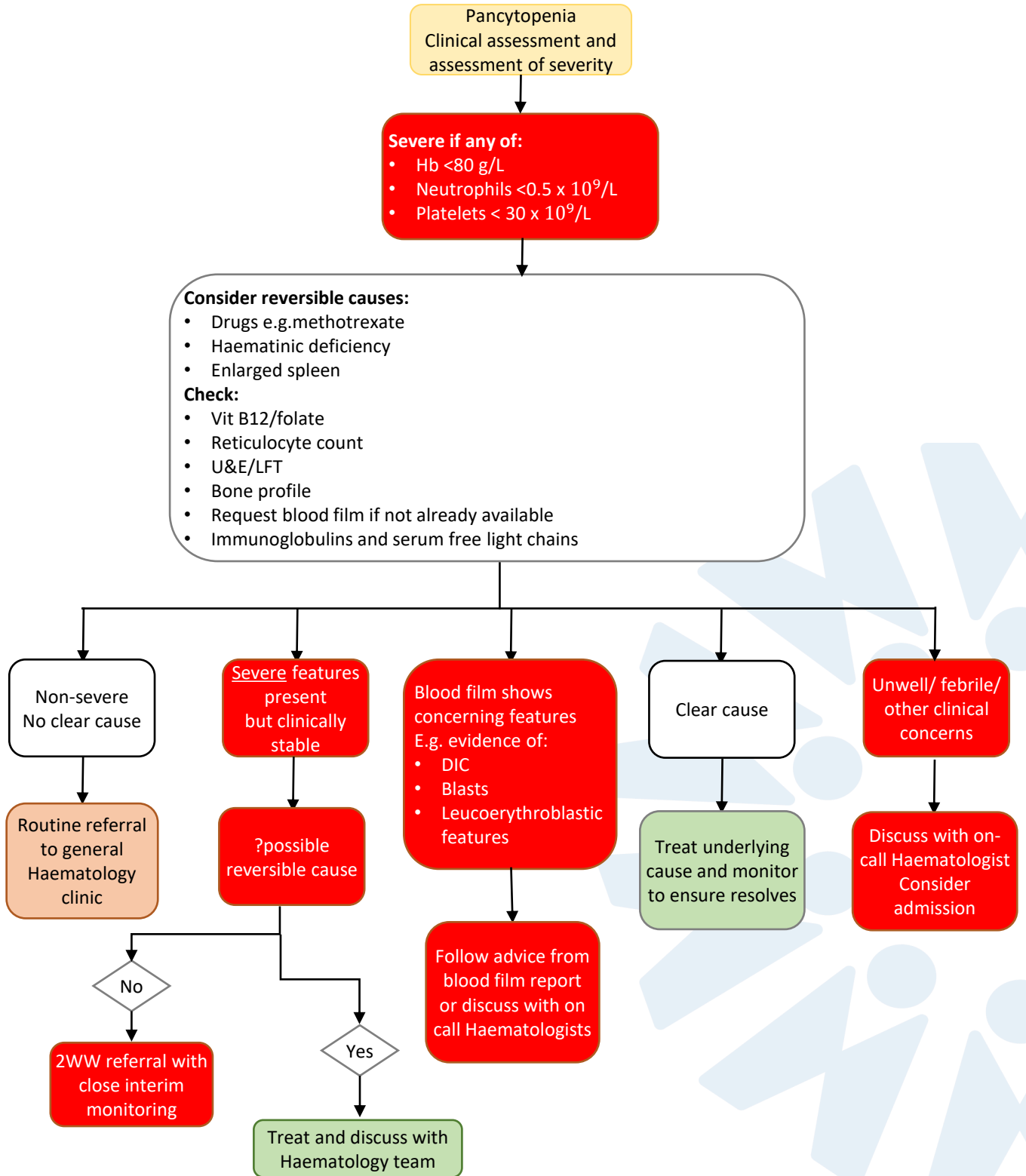
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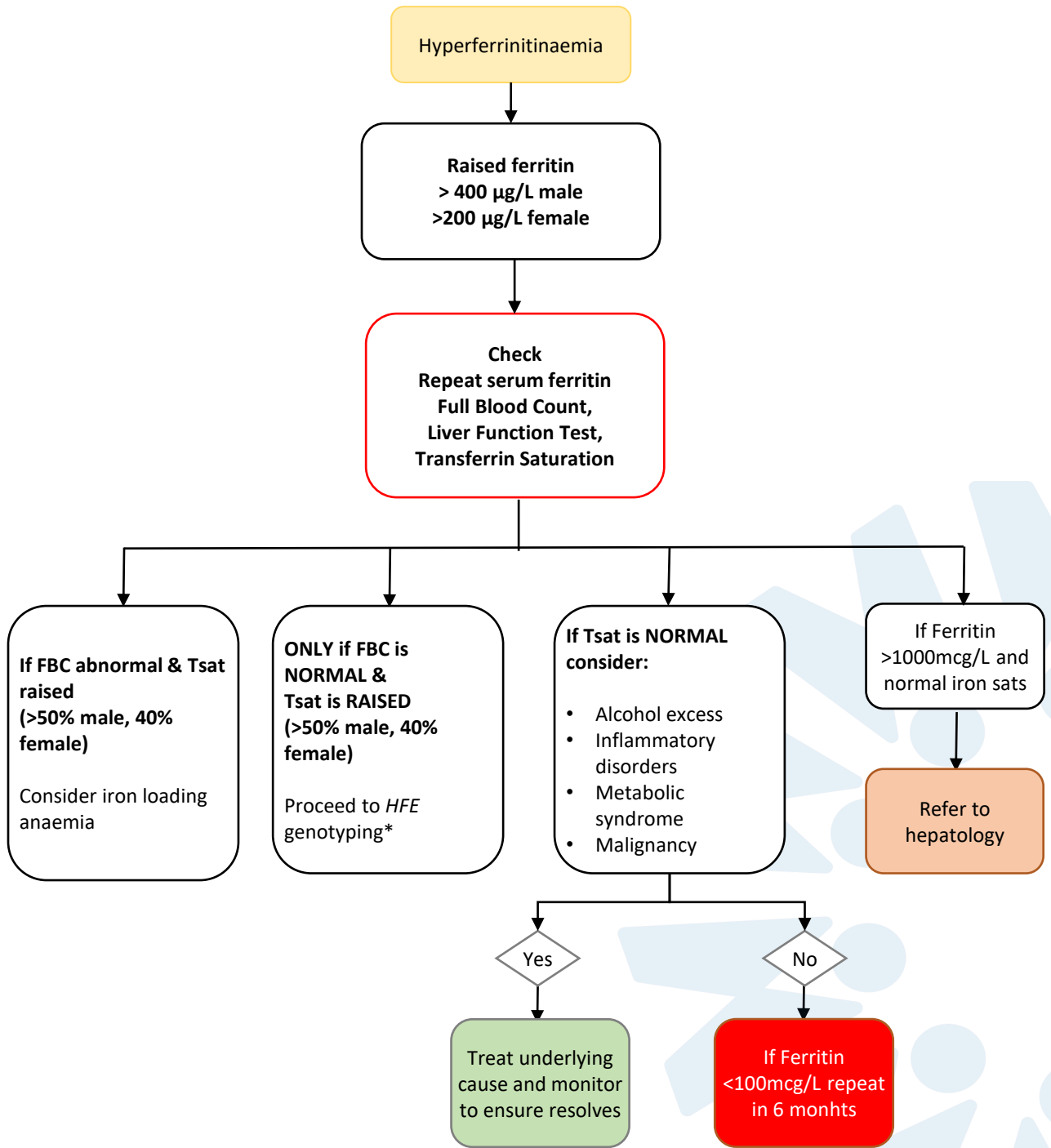


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*\*Note: it is recommended to screen ADULT first degree relatives (siblings) of known C282Y HOMOZYGOTES ONLY for genetic haemochromatosis due to their increased risk for C282Y homozygosity. Screening should be performed by iron studies and ferritin, with genetic testing reserved for those with abnormal results. HFE testing can be performed in primary care and does not require referral to haematology or clinical genetics (see text).*

*HFE testing in children is inappropriate as this is an adult onset condition.*

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