Southwest Clinical Senate Council, February 2026

Iron deficiency anaemia, digital and frontline perspectives

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Presenter Declarations

I have the following declarations of relationship with industry:

- None

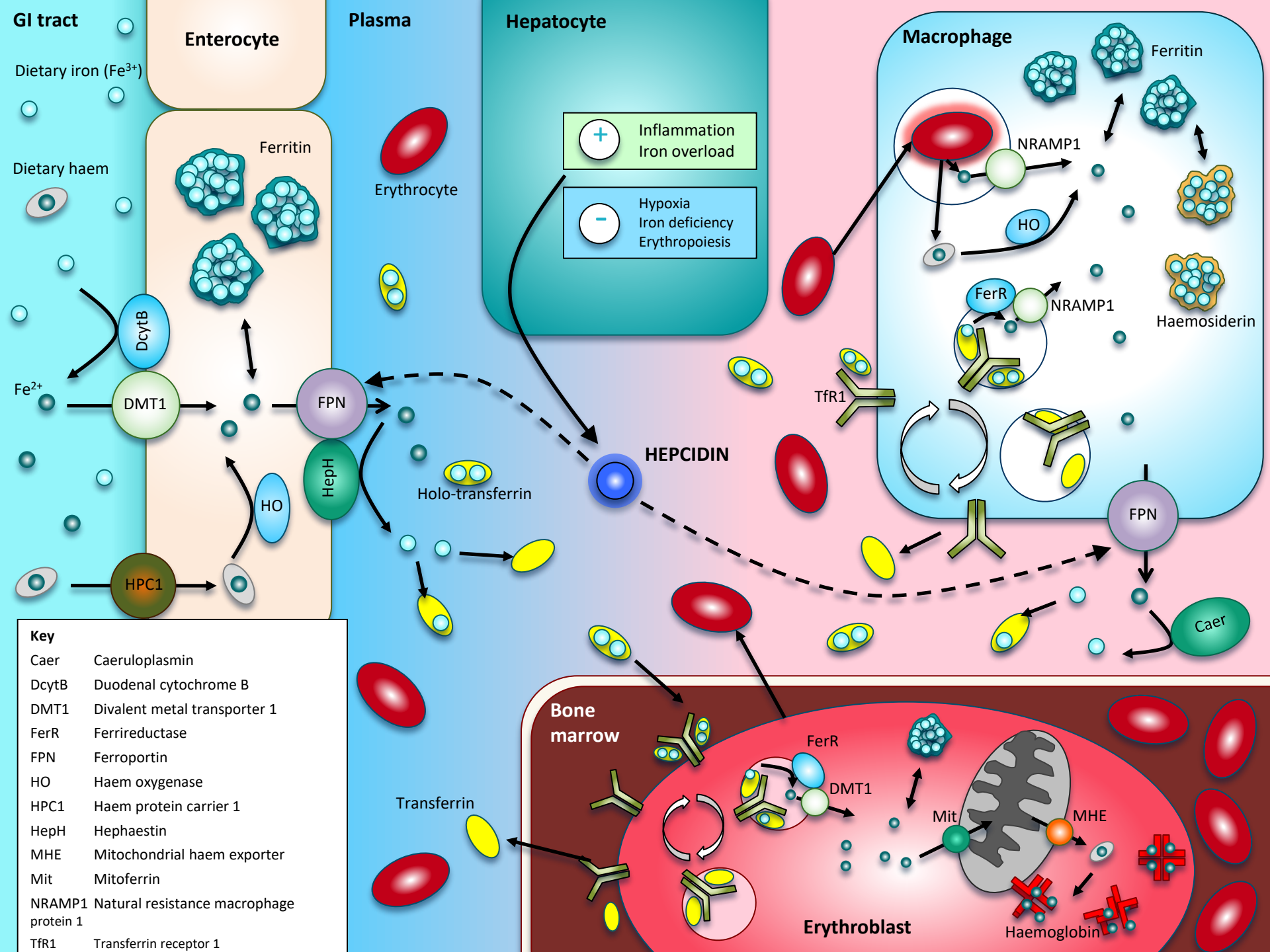
What I'll cover today

- Pathway for diagnosing ID
- Developing an optimal pathway for post investigational iron therapy

When to test for IDA

- Be aware of 'at risk groups', but also that ~1/3 of the global population are anaemic
  - Poor diet (all age groups)
  - Women and Children mostly
  - Malabsorption inc Coeliac Disease
  - Pregnancy when Hb below cut-off
- Tiredness, fatigue, hair-loss, restless legs, pica!
- History of bleeding, regardless of the Hb

How Iron moves around the body



Key

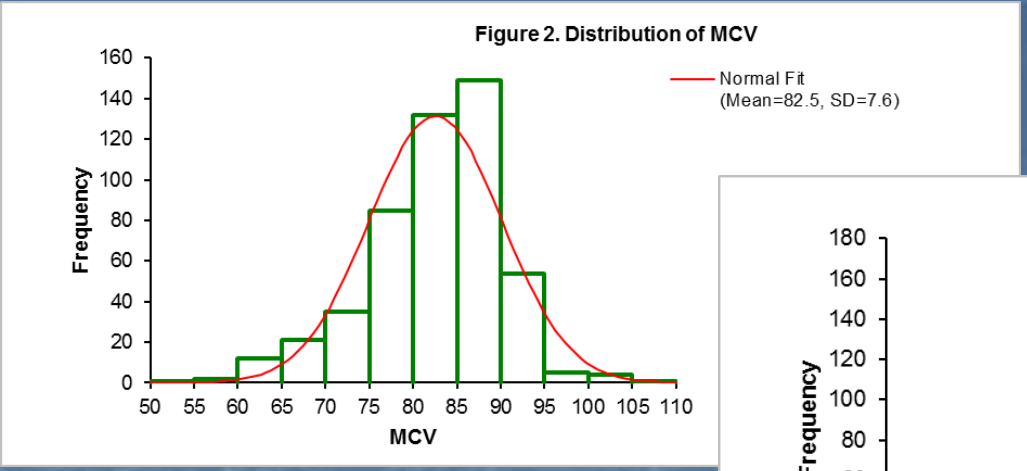
Caer	Caeruloplasmin
DcytB	Duodenal cytochrome B
DMT1	Divalent metal transporter 1
FerR	Ferrireductase
FPN	Ferroportin
HO	Haem oxygenase
HPC1	Haem protein carrier 1
HepH	Hephaestin
MHE	Mitochondrial haem exporter
Mit	Mitoferrin
NRAMP1	Natural resistance macrophage protein 1
TfR1	Transferrin receptor 1

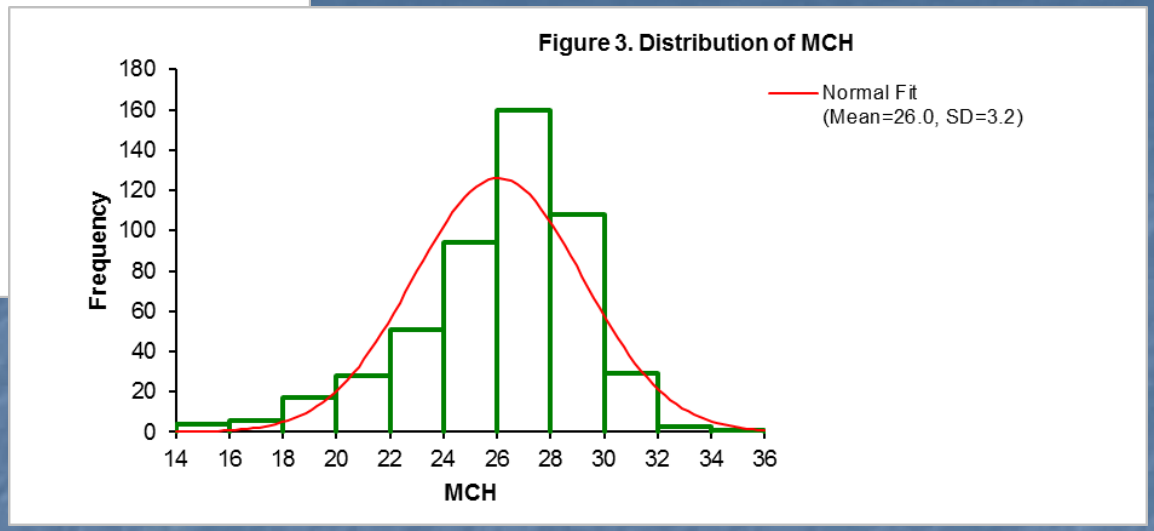
Typical case scenario

- M is a 36 year old woman with 2 children aged 6 and 8.
- Presents to GP with increasing fatigue. Nothing abnormal dietary-wise. Periods heavy but normal for her. Concerned that hair thinning and brittle nails. No relevant FHx

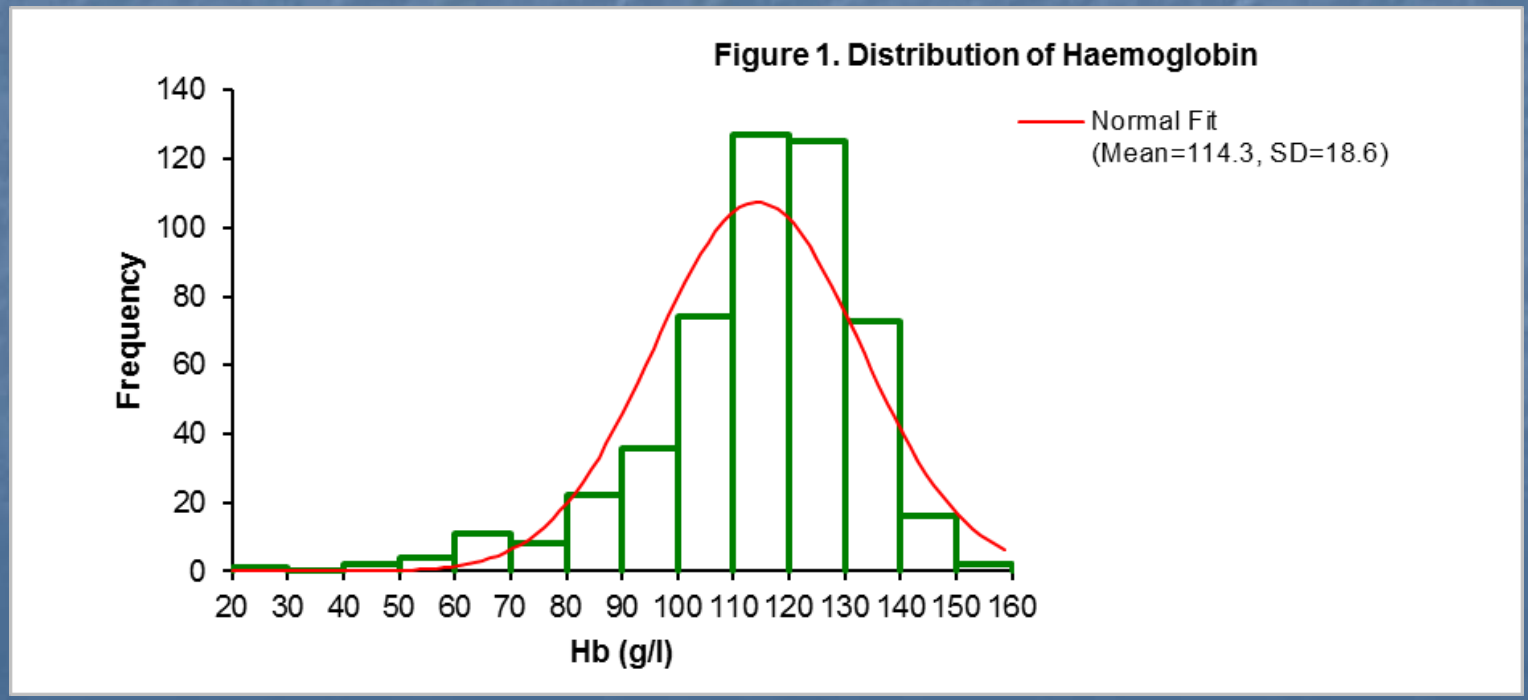
Bloods done

- Hb 118g/l (normal >120g/l)
- Blood count otherwise unremarkable:
  - MCV 82fl (normal)
- Haematinics may or may not have been done at the same time
  - If not requested: Once FBC seen, can return for haematinic testing
  - If requested: Ferritin (and other haematinics) should be back within 24 hours





FBC of adults with serum ferritins of 10,11 or 12mcg/l



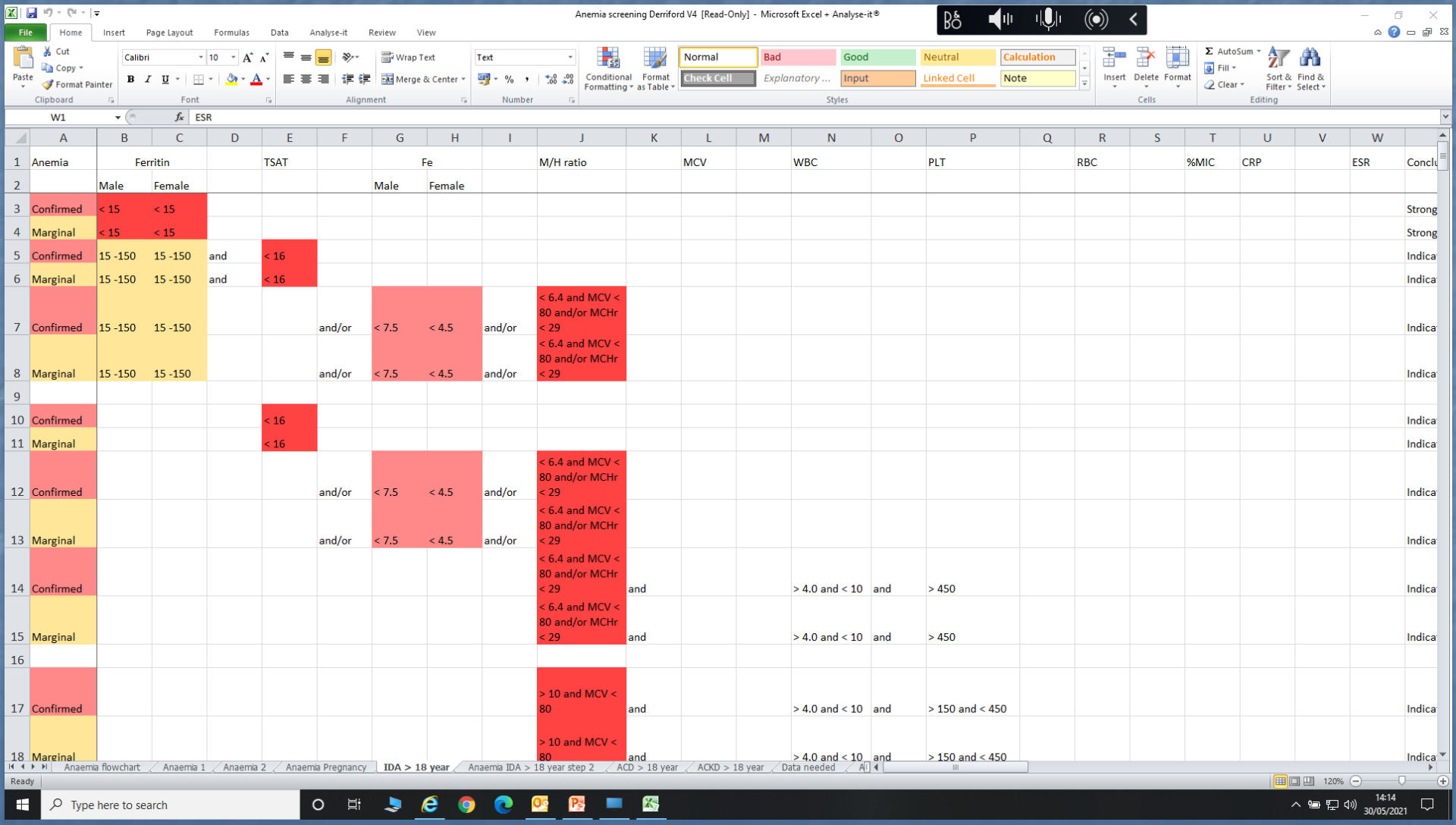
Wouldn’t it be better if?

- When the blood count returns abnormal that we reflex test?
- That this follows an evidence-based algorithm?

CDS
(Clinical Decision Support System)

- A decision support system that is focused on using knowledge management in such a way as to achieve improved healthcare delivery and patient care based on targeted clinical knowledge, patient data and other healthcare information
- We use Abbott systems but could be equally applicable to other lab platforms

Develop CDS



Anemia	Ferritin			TSAT		Fe			M/H ratio		MCV		WBC		PLT		RBC		%MIC	CRP		ESR	Conclu
	Male	Female				Male	Female																
Confirmed	< 15	< 15																					Strong
Marginal	< 15	< 15																					Strong
Confirmed	15 -150	15 -150	and	< 16																			Indica
Marginal	15 -150	15 -150	and	< 16																			Indica
Confirmed	15 -150	15 -150			and/or	< 7.5	< 4.5	and/or	< 6.4 and MCV < 80 and/or MCHr < 29														Indica
Marginal	15 -150	15 -150			and/or	< 7.5	< 4.5	and/or	< 6.4 and MCV < 80 and/or MCHr < 29														Indica
Confirmed				< 16																			Indica
Marginal				< 16																			Indica
Confirmed					and/or	< 7.5	< 4.5	and/or	< 6.4 and MCV < 80 and/or MCHr < 29														Indica
Marginal					and/or	< 7.5	< 4.5	and/or	< 6.4 and MCV < 80 and/or MCHr < 29														Indica
Confirmed									< 6.4 and MCV < 80 and/or MCHr < 29	and			> 4.0 and < 10	and	> 450								Indica
Marginal									< 6.4 and MCV < 80 and/or MCHr < 29	and			> 4.0 and < 10	and	> 450								Indica
Confirmed									> 10 and MCV < 80	and			> 4.0 and < 10	and	> 150 and < 450								Indica
Marginal									> 10 and MCV < 80	and			> 4.0 and < 10	and	> 150 and < 450								Indica

Why not?

- Current funding means that reflex tests not funded
  - We are currently piloting this for one large local GP Practice
- Has required significant Clinical Scientist input for development (only one Haematology CS in the Peninsula)

Appropriate digital next steps

- Reflex testing based upon evidence base
- That can potentially advise next steps

- In the case scenario the Hb is 118g/l. Serum b12 and folate normal, but serum ferritin is low at 10mcg/l
- Next step is to review guidance
- Next step is oral iron therapy

We don't need any more tests. But sometimes we do....

Haematology	Chemistry & Immunoassay
Hb	ZPP
Serum ferritin	STfR
MCH	Serum iron,
MCV	TIBC
Retic count	transferrin saturation
%hypo or %HRC	Serum Epo
CHr, Ret-He, MCHr, LHD%	Hepcidin
Bone marrow	Response to Iron

IDA Guideline:

OPEN ACCESS

British Society of Gastroenterology guidelines for the management of iron deficiency anaemia in adults

Jonathon Snook [1], Neeraj Bhala [2], Ian L P Beales [3], David Cannings [1], Chris Kightley [4], Robert PH Logan [5], D Mark Pritchard [6], Reena Sidhu [7], Sue Surgenor [1], Wayne Thomas [8], Ajay M Verma [4], Andrew F Goddard [9]

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ABSTRACT

Iron deficiency anaemia (IDA) is a major cause of morbidity and burden of disease worldwide. It can generally be diagnosed by blood testing and remedied by iron replacement therapy (IRT) using the oral or intravenous route. The many causes of iron deficiency include poor dietary intake and malabsorption of dietary iron, as well as a number of significant gastrointestinal (GI) pathologies. Because blood is iron-rich it can result from chronic blood loss, and this is a common mechanism underlying the development of IDA—for example, as a consequence of menstrual or GI blood loss. Approximately a third of men and postmenopausal women presenting with IDA have an underlying pathological abnormality, most commonly in the GI tract. Therefore optimal management of IDA requires IRT in combination with appropriate investigation to establish the underlying cause. Unexplained IDA in all at-risk individuals is an accepted indication for fast-track secondary care referral in the UK because GI malignancies can present in this way, often in the absence of specific symptoms. Bidirectional GI endoscopy is the standard diagnostic approach to examination of the upper and lower GI tract, though radiological scanning is an alternative in some situations for assessing the large bowel. In recurrent or refractory IDA, wireless capsule endoscopy plays an important role in assessment of the small bowel.

IDA may present in primary care or across a range of specialties in secondary care, and because of this and the insidious nature of the condition it has not always been optimally managed despite the considerable burden of disease— with investigation sometimes being inappropriate, incorrectly timed or incomplete, and the role of IRT for symptom relief neglected. It is therefore important that contemporary guidelines for the management of IDA are available to all clinicians. This document is a revision of previous British Society of Gastroenterology guidelines, updated in the light of subsequent evidence and developments.

EXECUTIVE SUMMARY OF RECOMMENDATIONS AND PRACTICE STATEMENTS

Background

1. Iron deficiency anaemia (IDA) is common, and a major cause of morbidity worldwide (*evidence quality—high, consensus—100%, statement strength—strong*).
2. IDA can be caused by a range of GI pathologies including cancer, and so GI investigation on an urgent basis should be considered in adults with a new diagnosis of IDA without obvious explanation (*evidence quality—high, consensus—85%, statement strength—strong*).

Definitions

3. We recommend that anaemia is defined as a haemoglobin (Hb) concentration below the lower limit of normal for the relevant population and laboratory performing the test (*evidence quality—medium, consensus—100%, statement strength—strong*).
4. We recommend that iron deficiency should be confirmed by iron studies prior to investigation. Serum ferritin is the single most useful marker of IDA, but other blood tests (eg, transferrin saturation) can be helpful if a false-normal ferritin is suspected (*evidence quality—medium, consensus—92%, statement strength—strong*).
5. We recommend that a good response to iron therapy (Hb rise ≥10 g/L within a 2-week timeframe) in anaemic patients is highly suggestive of absolute iron deficiency, even if the results of iron studies are equivocal (*evidence quality—medium, consensus—100%, statement strength—strong*).

Initial clinical assessment

6. We recommend taking a detailed history, as it may provide important clues as to the cause(s) of IDA in the individual case (*evidence quality—low, consensus—100%, statement strength—strong*).
7. We recommend that initial investigation of confirmed IDA should include urinalysis or urine microscopy, screening for coeliac disease (CD) and in appropriate cases, endoscopic examination of the upper and lower GI tract (*evidence quality—moderate, consensus—85%, statement strength—strong*).
8. CD is found in 3%–5% of cases of IDA, and we recommend that it should be routinely screened for serologically, or on small bowel biopsy at the time of gastroscopy (*evidence quality—high, consensus—84%, statement strength—strong*).
9. Age, sex, Hb concentration and mean cell volume are all independent predictors of risk of GI cancer in IDA, and need to be considered as part of a holistic risk assessment. It follows that the cancer risk in iron deficiency without anaemia is low (*evidence quality—high, consensus—92%, statement strength—strong*).

Cannot tolerate oral iron…

- Or despite ‘concordance’ no significant response
- Follow available guidance

- Intravenous iron therapy

Iron infusion services

- This patient would not be accepted through SDEC
- Referral to specialist
  - Has to be in a healthcare setting
  - Has to have a responsible clinician
  - Gastroenterology, Medical, Haematology
  - At UHP it is Haematology……..me!

IV iron service

- ~430 patient episodes in the past 5 years
- Seen in clinic to assess:
  - Clinical picture
  - Appropriate investigations
  - Therapies tried/failed
  - Risks/benefits explained
- If applicable request and prescribe iv iron
  - I generally use Ferinject fixed dose 1g, although some I do treat more on second week

- Patient leaves PIU with a blood form
  - Because we cannot request bloods on GP systems if they have their bloods at GP
- Makes contact via email or by phone
  - Generic email. Currently forwarded to me
  - I look up results*see next slide
  - I dictate email to patient & GP
  - I either send another form for 3 months (most often used timeframe) or arrange more iv iron
  - They leave PIU with another form

*What about PKB?

- Someone still needs to interpret but if we pre-define triggers that's less of an issue
- For many of the requests that come under my name the results may harbour significant abnormalities, which are best explained before seen.

Suggestions

- This doesn't need to be led by me. I am training another clinical scientist to do the clinic instead
- We are working with Dr Whiteley, Director of Lexacom to scope out possibilities to streamline communications with patients.
- EPR's (currently not in place at UHP) may already have this functionality of course.

Suggestions

- Do you have any suggestion or next steps please?
- We believe that we provide a valuable service, how do we ensure its correct use?

Thank You