

a
Anemia



The logo of the World Health Organization is centered in the background. It features a white caduceus (a staff with two snakes entwined and wings at the top) superimposed on a white map of the world. This central emblem is encircled by a wreath of olive branches. The entire logo is set against a solid blue background.

Men < 130g/l
Women
<120g/l

World Health Organization

Anaemia

- Independent risk factor
- Increase 30 day mortality
 - Hb<10 x4 increase

Musallam et al Oct 2011

Not removed by blood transfusion

Cardiopulmonary Exercise Testing



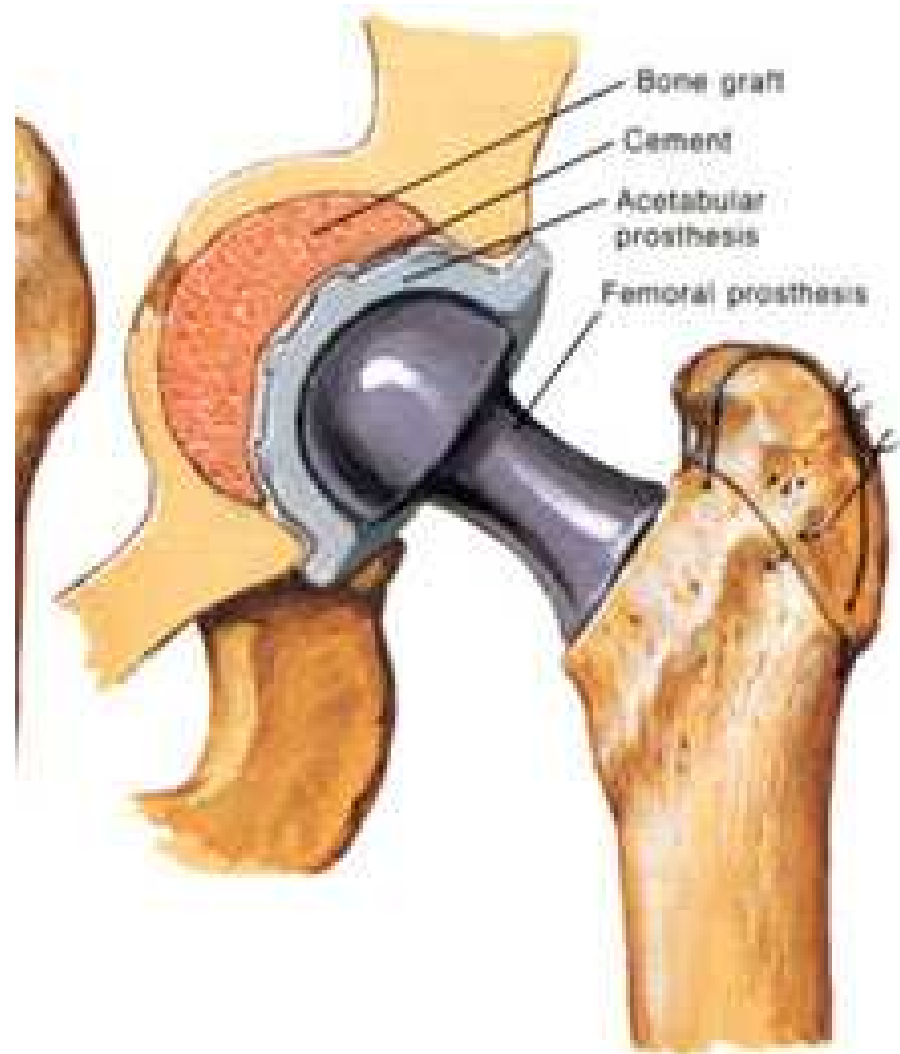
Anaerobic threshold
decreased by 0.39 ml/kg/min for every drop in g/l HB

INTENSIVE CARE UNIT



RD&E Elective Hip Arthroplasty

Anaemia increases
length of stay
from 3-4 days



British Committee for Standards in Haematology Guidelines and management of Anaemia 2015

Anaemic patients are at risk of
transfusion, increased mortality and
morbidity

Recomendations

- We should detect and treat anaemia pre-operatively
- Patients should be counselled about the risks and allowed to defer non urgent surgery until treated

Detecting Anaemia
Whose job is it anyway?

EVERYONES

Timing of Assessment

- In General Practice, when referral is considered.
- During the diagnostic pathway, e.g. when a suspicious lesion is found at endoscopy, or at a cancer MDT meeting.
- In the surgical clinic. Management options are then discussed at the pre-assessment visit.
- At the pre-assessment visit, with additional visits being necessary to start treatment.

Management options

- The cause and severity of anaemia
- The anticipated peri-operative blood loss
- The time available between diagnosis and surgery
- Whether surgery may safely be postponed

Choices?

Blood Transfusion vs Iron

- Transfusion increases 90 day mortality(OR 2.2)
 - *Pederson et al 2009*
- Transfusion increases risk of death(OR 1.29)
 - *Glance et al 2011*
- May increase tumour reoccurrence and infectious complications
 - *Girolamo et al 2003*

Role of Iron in Perioperative Anaemia

Goodnaugh et al BJA 2011

- Shown to decrease transfusion requirements
- Decrease length of stay

PREVENT Trial underway

Substandard care?

Oral vs IV Iron

Oral Iron

Advantages

- Outpatient treatment
- Cheap
- Good safety profile

Disadvantages

- Takes >2 months to work
- Unpleasant side effects
- Poor compliance
- Incompatible with proton pump inhibitors

IV Iron

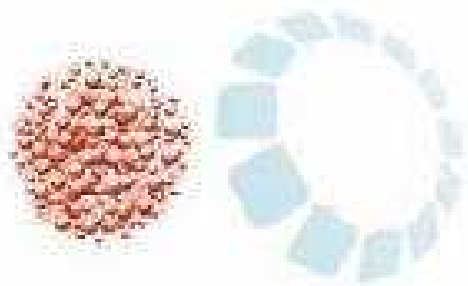
Advantages

- Fast acting
- Good compliance

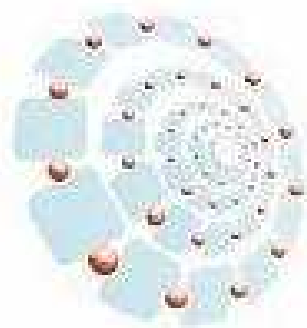
Disadvantages

- Anaphylaxis 1:1,000,000
- CARPA – complement activated pseudoallergy
- FISHBANE – mimics anaphylaxis
- Infection
- Must be given in hospital
- Expensive

Iv iron




Components



Delivery System



Release

An anatomical illustration of the human digestive system, showing the esophagus, stomach, small intestine, and large intestine. The large intestine is highlighted in a bright red and yellow color, indicating it is the focus of the image. The background is a dark red color.

Preparation for Surgery for Colorectal patients

Decision for iv
Iron at MDT

- anaemic patients for major surgery identified Hb <120g/l for women and <130g/l for men
- referral to IBD service:
rde-tr.GastroDayUnit@nhs.net

Patient informed
in Clinic

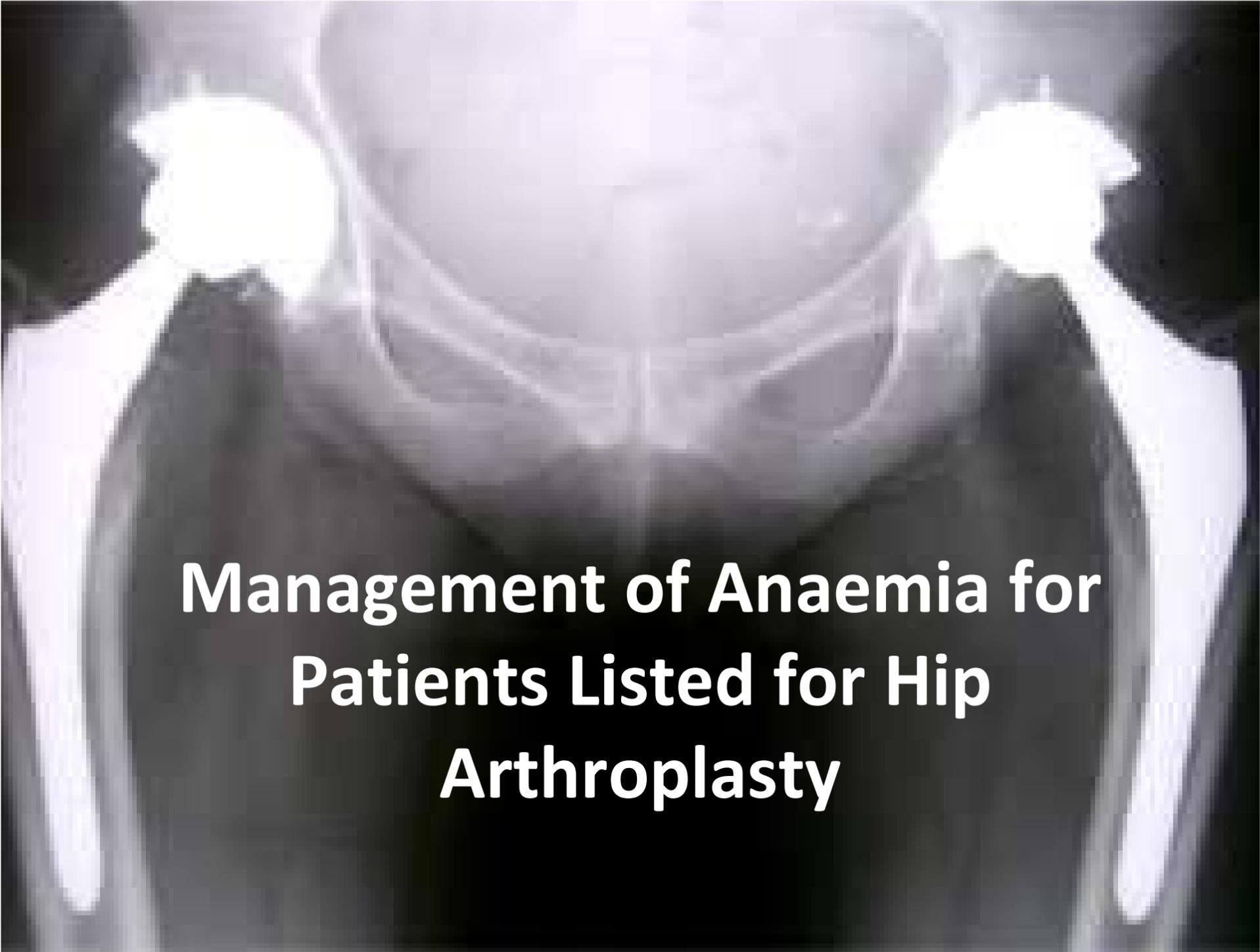
- iv iron patient information leaflet given
- Doctor to prescribe ferrinjet 1000mg if patient over 50kgs, for under 50kg prscribe 20mg/kg

iv iron at Gastro
Day Unit

- Blood taken for Hb, TIBC, ferritin and CRP pre infusion
- Proforma filled in for audit

Prep for Surgery

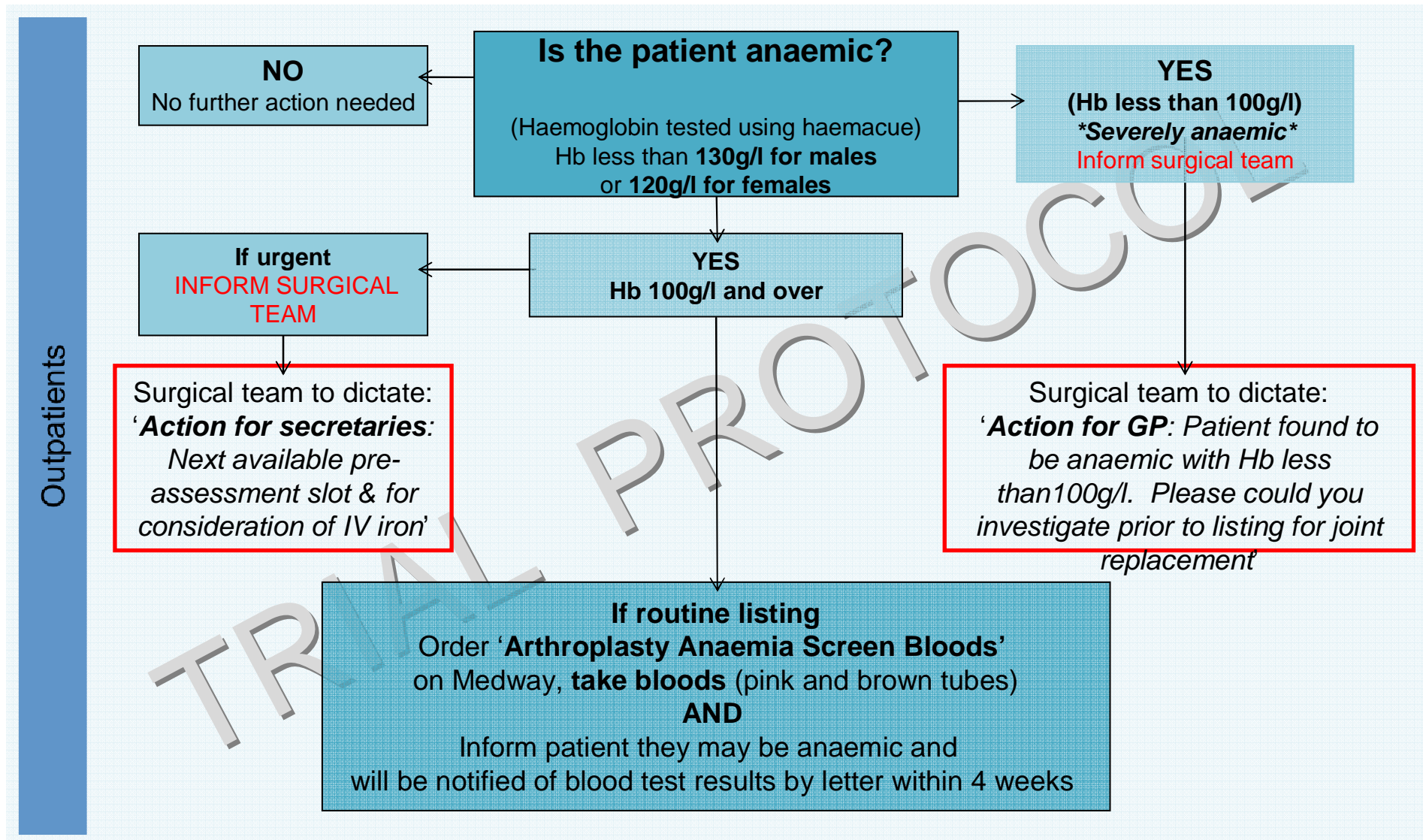
- Hb rechecked 10-14 days later



**Management of Anaemia for
Patients Listed for Hip
Arthroplasty**

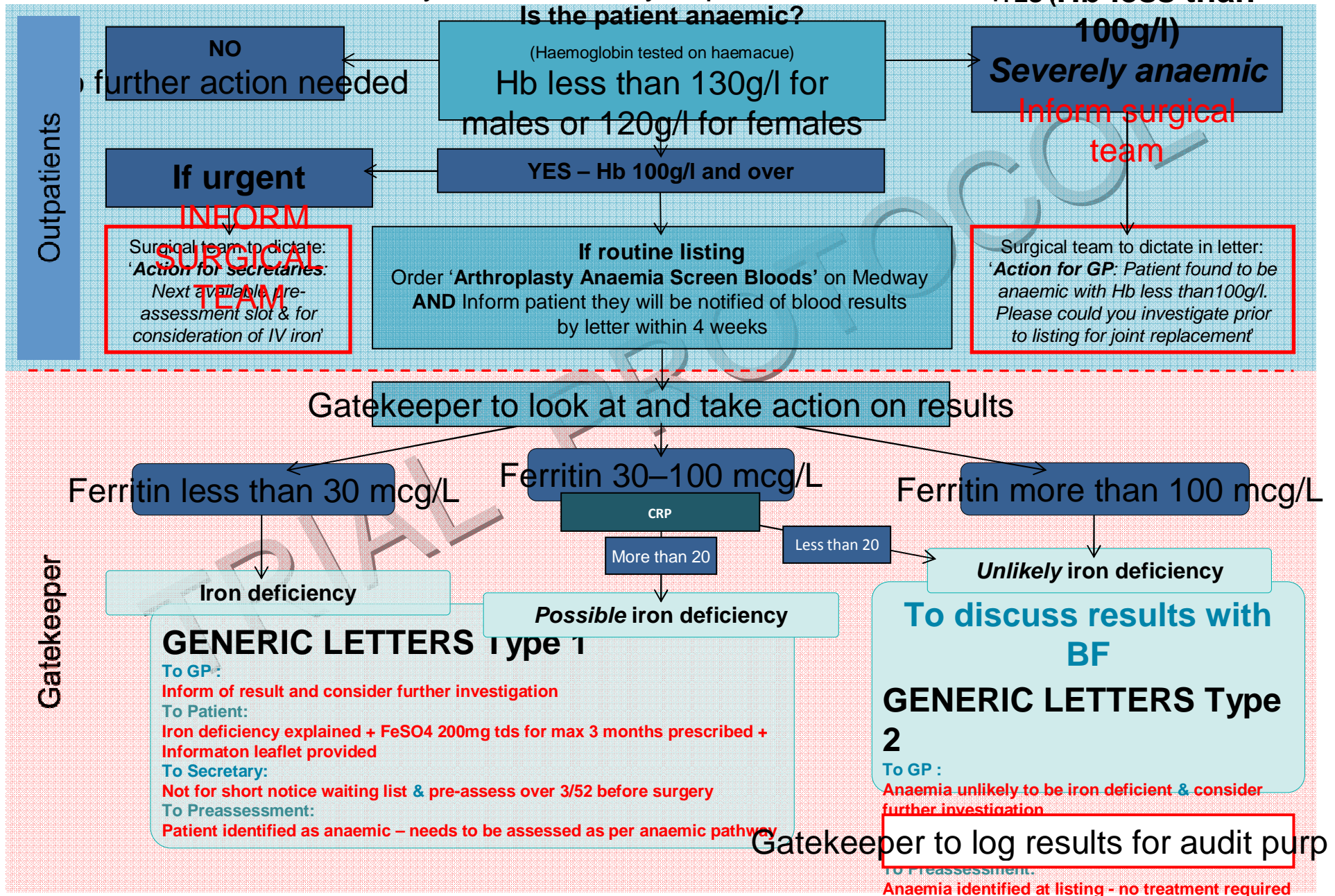
Preparation for Surgery Outpatients Chart

Anaemia screening flowchart for all patients listed for hip replacement



Preparation for Surgery Gatekeeper Chart

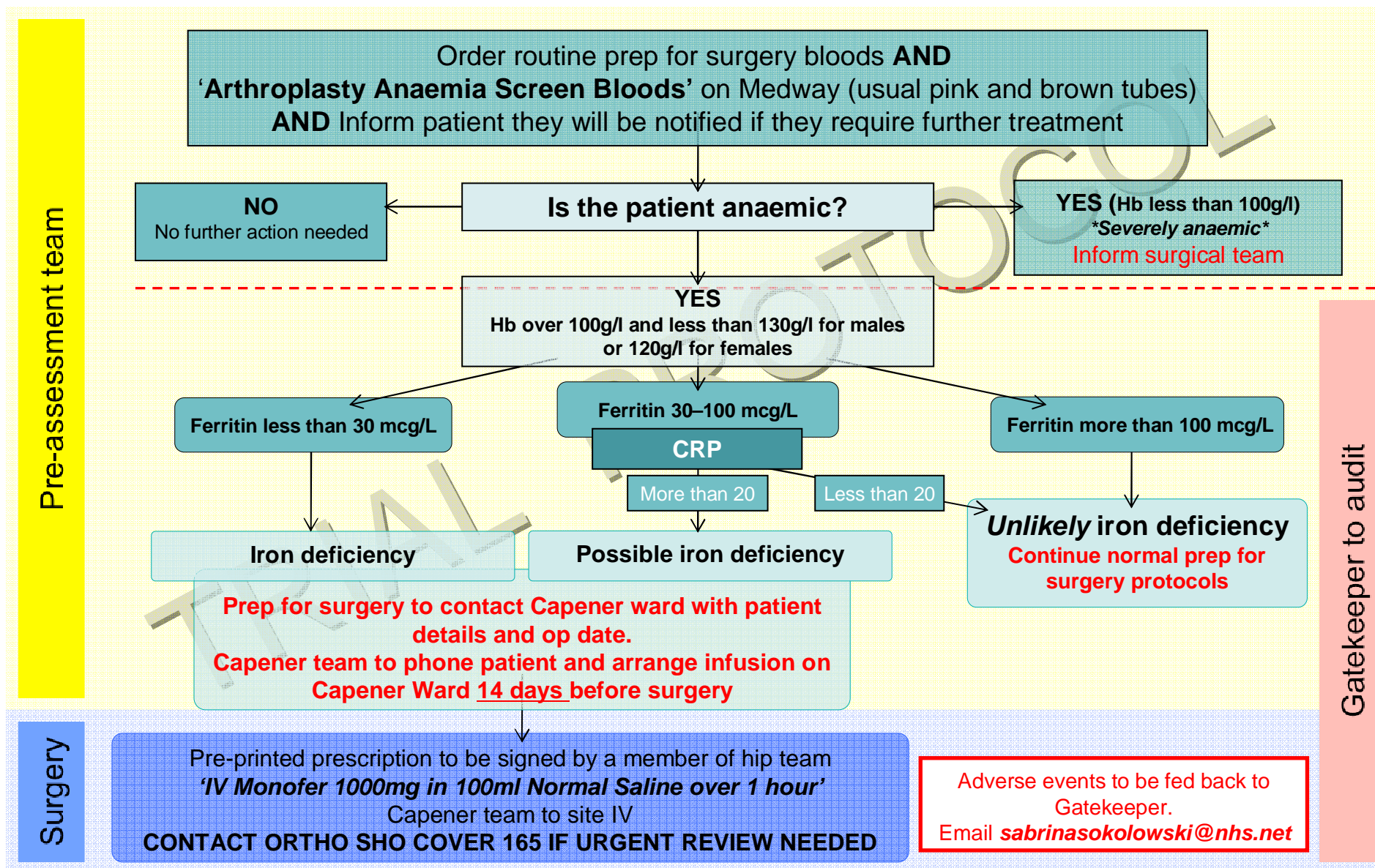
Flowchart to identify iron deficiency in patients listed for hip replacement



Preparation for Surgery Pre-assessment / Day surgery Chart

Flowchart for hip replacement patients previously identified with anaemia in OPD

Patients identified by clinic letter from surgeon or gatekeeper. To include **ALL DIRECT LISTINGS & STAGED BILATERALS***



*Staged bilateral = hip replacement on other side within last 6 months

- Always treat anaemia
- Iron should be the first alternative
- Oral initially
- Iv iron is safe