

References for Chapter 2

Haematology

2.1 Full blood count

2.1.1 Haemoglobin

Low haemoglobin (anaemia)

Hampshire Hospitals NHS Foundation Trust (2018) *Anaemia*. Available at: <https://gp-portal.westhampshireccg.nhs.uk/wp-content/uploads/2019/12/Anaemia-HHFT.docx>

NICE (updated 2023) *Suspected cancer: recognition and referral* [NG12]. Available at: www.nice.org.uk/guidance/ng12

Turner, J., Parsi, M. and Badireddy, M. (2023) Anemia. *StatPearls*. Available at: www.ncbi.nlm.nih.gov/books/NBK499994/

Iron-deficiency anaemia (IDA)

British Dietetic Association (BDA) (undated) Iron. Available at: www.bda.uk.com/resource/iron-rich-foods-iron-deficiency.html

NICE (updated 2023) *Suspected cancer: recognition and referral* [NG12]. Available at: www.nice.org.uk/guidance/ng12

NICE (revised 2024) *CKS Anaemia – iron deficiency*. Available at: <https://cks.nice.org.uk/anaemia-iron-deficiency>

Snook, J., Bhala, N., Beales, I.L. *et al.* (2021) British Society of Gastroenterology guidelines for the management of iron deficiency anaemia in adults. *Gut*, 70(11): 2030–2051. doi: 10.1136/gutjnl-2021-325210

Vitamin B12 deficiency

British Dietetic Association (BDA) (undated) *Other sources of B12*. Available at: <https://www.bda.uk.com/static/5378b751-58bd-4e85-b15b360d8165a3f8/Practical-guide-other-sources-of-B12.pdf>

NICE (revised 2024) *CKS Anaemia – B12 and folate deficiency*. Available at: <https://cks.nice.org.uk/topics/anaemia-b12-folate-deficiency>

Folate deficiency

NICE (revised 2024) *CKS Anaemia – B12 and folate deficiency*. Available at: <https://cks.nice.org.uk/topics/anaemia-b12-folate-deficiency>

Raised haematocrit (erythrocytosis)

Keohane, C., McMullin, M.F. and Harrison, C. (2013) The diagnosis and management of erythrocytosis. *BMJ*, **347**: f6667; doi: 10.1136/bmj.f6667.

NICE (revised 2024) *CKS: Polycythaemia / erythrocytosis*. Available from: <https://cks.nice.org.uk/topics/polycythaemia-erythrocytosis>

South Wales Cancer Network (2015) *GP referral guidelines*. Available from: <https://executive.nhs.wales/functions/networks-and-planning/cancer/wcn-documents/clinician-hub/csg-pathways-and-associated-documents/haem-gp-referral>

2.1.2 White cell count

Neutropenia (neutrophils $<1.5 \times 10^9/L$)

Manchester University NHS Foundation Trust (2022) *Adult haematology GP pathway guides*. Available at: <https://mft.nhs.uk/app/uploads/2020/08/Haematology-GP-Pathway-Guide.pdf>

Newcastle upon Tyne Hospitals NHS Foundation Trust (2020) *GP adult haematology guidelines*. Available from www.newcastle-hospitals.nhs.uk/wp-content/uploads/2021/02/Adult-haematology-guidelines-v9.pdf

South Wales Cancer Network (2015) *GP referral guidelines*. Available from: <https://executive.nhs.wales/functions/networks-and-planning/cancer/wcn-documents/clinician-hub/csg-pathways-and-associated-documents/haem-gp-referral>

Lymphopenia (lymphocyte count $<1.5 \times 10^9/L$)

Brass, D., McKay, P. and Scott, F. (2014) Investigating an incidental finding of lymphopenia. *BMJ*, **348**: g1721; doi: 10.1136/bmj.g1721.

Hampshire Hospitals NHS Foundation Trust (2018) *Lymphopenia*. Available at: <https://gp-portal.westhampshireccg.nhs.uk/wp-content/uploads/2019/12/Lymphopenia-HHFT.docx>

Manchester University NHS Foundation Trust (2022) *Adult haematology GP pathway guides*. Available at: <https://mft.nhs.uk/app/uploads/2020/08/Haematology-GP-Pathway-Guide.pdf>

Newcastle upon Tyne Hospitals NHS Foundation Trust (2020) *GP adult haematology guidelines*. Available from www.newcastle-hospitals.nhs.uk/wp-content/uploads/2021/02/Adult-haematology-guidelines-v9.pdf

University Hospital Bristol (2016) *Haematology: referral guidelines for primary care*. Available at: <https://remedy.bnssg.icb.nhs.uk/media/yyxnp2uj/uhb-gp-haematology-guidelines-v12.docx>

Leucocytosis (white cell count $>11 \times 10^9/L$)

NICE (updated 2023) *Suspected cancer: recognition and referral* [NG12]. Available at: www.nice.org.uk/guidance/ng12

South Wales Cancer Network (2015) *GP referral guidelines*. Available from: <https://executive.nhs.wales/functions/networks-and-planning/cancer/wcn-documents/clinician-hub/csg-pathways-and-associated-documents/haem-gp-referral>

Neutrophilia (neutrophils $>8 \times 10^9/L$)

Manchester University NHS Foundation Trust (2022) *Adult haematology GP pathway guides*. Available at: <https://mft.nhs.uk/app/uploads/2020/08/Haematology-GP-Pathway-Guide.pdf>

University Hospital Bristol (2016) *Haematology: referral guidelines for primary care*. Available at: <https://remedy.bnssg.icb.nhs.uk/media/yyxnp2uj/uhb-gp-haematology-guidelines-v12.docx>

Lymphocytosis (lymphocytes $>5 \times 10^9/L$)

Manchester University NHS Foundation Trust (2022) *Adult haematology GP pathway guides*. Available at: <https://mft.nhs.uk/app/uploads/2020/08/Haematology-GP-Pathway-Guide.pdf>

South Wales Cancer Network (2015) *GP referral guidelines*. Available from: <https://executive.nhs.wales/functions/networks-and-planning/cancer/wcn-documents/clinician-hub/csg-pathways-and-associated-documents/haem-gp-referral>

University Hospital Bristol (2016) *Haematology: referral guidelines for primary care*. Available at: <https://remedy.bnssg.icb.nhs.uk/media/yyxnp2uj/uhb-gp-haematology-guidelines-v12.docx>

High eosinophils (eosinophilia)

Butt, N.M., Lambert, J., Ali, S. *et al.* (2017) Guideline for the investigation and management of eosinophilia. *Br J Haematol*, **176**: 553. Available at: <https://onlinelibrary.wiley.com/doi/10.1111/bjh.14488>

Manchester University NHS Foundation Trust (2022) *Adult haematology GP pathway guides*. Available at: <https://mft.nhs.uk/app/uploads/2020/08/Haematology-GP-Pathway-Guide.pdf>

Newcastle upon Tyne Hospitals NHS Foundation Trust (2020) *GP adult haematology guidelines*. Available from www.newcastle-hospitals.nhs.uk/wp-content/uploads/2021/02/Adult-haematology-guidelines-v9.pdf

High basophils (basophilia)

Health Improvement Scotland / Right Decision Service (reviewed 2024) *Basophilia (guidelines)*. Available at: <https://rightdecisions.scot.nhs.uk/tam-treatments-and-medicines-nhs-highland/therapeutic-guidelines/haematology/basophilia-guidelines>

Newcastle upon Tyne Hospitals NHS Foundation Trust (2020) *GP adult haematology guidelines*. Available from www.newcastle-hospitals.nhs.uk/wp-content/uploads/2021/02/Adult-haematology-guidelines-v9.pdf

High monocytes (monocytosis)

Health Improvement Scotland / Right Decision Service (reviewed 2024) *Monocytosis (guidelines)*. Available at: <https://rightdecisions.scot.nhs.uk/tam-treatments-and-medicines-nhs-highland/therapeutic-guidelines/haematology/monocytosis-guidelines>

Newcastle upon Tyne Hospitals NHS Foundation Trust (2020) *GP adult haematology guidelines*. Available from www.newcastle-hospitals.nhs.uk/wp-content/uploads/2021/02/Adult-haematology-guidelines-v9.pdf

1.1.3 Platelets

Thrombocytopenia (platelets $<150 \times 10^9/L$)

Manchester University NHS Foundation Trust (2022) *Adult haematology GP pathway guides*. Available at: <https://mft.nhs.uk/app/uploads/2020/08/Haematology-GP-Pathway-Guide.pdf>

South Wales Cancer Network (2015) *GP referral guidelines*. Available from: <https://executive.nhs.wales/functions/networks-and-planning/cancer/wcn-documents/clinician-hub/csg-pathways-and-associated-documents/haem-gp-referral>

University Hospital Bristol (2016) *Haematology: referral guidelines for primary care*. Available at: <https://remedy.bnssg.icb.nhs.uk/media/yyxnp2uj/uhb-gp-haematology-guidelines-v12.docx>

Thrombocytosis (platelets $>450 \times 10^9/L$)

Harrison, C.N., Bareford, D., Butt, N. *et al.* (2010) Guideline for investigation and management of adults and children presenting with a thrombocytosis. *Br J Haematol*, **149**: 352. Available at: doi.org/10.1111/j.1365-2141.2010.08122.x

Mathur, A., Samaranayake, S., Storrar, N.P. and Vickers, M.A. (2019) Investigating thrombocytosis. *BMJ*, **366**: l4183; doi: 10.1136/bmj.l4183 (erratum: *BMJ*, **367**: l4569).

NICE (revised 2021) *CKS scenario: management of platelet count outside the normal range*. Available at: <https://cks.nice.org.uk/topics/platelets-abnormal-counts-cancer/management/management>

NICE (updated 2023) *Suspected cancer: recognition and referral* [NG12]. Available at: www.nice.org.uk/guidance/ng12

University Hospitals of Derby and Burton (2024) *Shared care pathology guidelines: thrombocytosis*. Available at: www.uhdb.nhs.uk/download.cfm?doc=docm93jjm4n19583.pdf&ver=69067

2.2 Reticulocytes

Gaur, M. and Sehgal, T. (2021) Reticulocyte count: a simple test but tricky interpretation! *Pan Afr Med J*, **40**: 3; doi: 10.11604/pamj.2021.40.3.31316.

Rai, D., Wilson, A.M. and Moosavi, L. (2023) Histology, reticulocytes. *StatPearls*. Available at: www.ncbi.nlm.nih.gov/books/NBK542172

2.3 Immunoglobulins / serum protein electrophoresis / serum free light chains / urine Bence Jones proteins

Cook, L. and Macdonald, D.H. (2007) Management of paraproteinaemia. *Postgrad Med J*, **83**: 217; doi: 10.1136/pgmj.2006.054627.

Gloucestershire Hospitals NHS Foundation Trust (undated) *Immunoglobulins*. Available at: www.gloshospitals.nhs.uk/our-services/services-we-offer/pathology/tests-and-investigations/immunoglobulins

Newcastle upon Tyne Hospitals NHS Foundation Trust (2021) *Guidelines for the interpretation and management of immunoglobulins and paraproteins in adults*. Available at: www.newcastle-hospitals.nhs.uk/wp-content/uploads/2021/02/Guideline-immunoglobulins-v7.pdf

NICE (revised 2022) *CKS: multiple myeloma*. Available at: <https://cks.nice.org.uk/topics/multiple-myeloma>

Provan, D. (ed.) (2018) *Oxford Handbook of Clinical and Laboratory Investigation*, 4th edition. Oxford Academic, online edition available at: <https://doi.org/10.1093/med/9780198766537.001.0001>

South Wales Cancer Network (2015) *GP referral guidelines*. Available from: <https://executive.nhs.wales/functions/networks-and-planning/cancer/wcn-documents/clinician-hub/csg-pathways-and-associated-documents/haem-gp-referral>

2.4 Clotting tests

Gloucestershire Hospitals NHS Foundation Trust (undated) *Clotting screen*. Available at: www.gloshospitals.nhs.uk/our-services/services-we-offer/pathology/tests-and-investigations/clotting-screen

Health Improvement Scotland / Right Decision Service (reviewed 2024) *Abnormal coagulation screen and bruising (guidelines)*. Available at: <https://rightdecisions.scot.nhs.uk/tam-treatments-and-medicines-nhs-highland/adult-therapeutic-guidelines/haematology/abnormal-coagulation-screen-and-bruising-guidelines>

Kattula, S., Byrnes, J.R. and Wolberg, A.S. (2017) Fibrinogen and fibrin in hemostasis and thrombosis. *Arterioscler Thromb Vasc Biol*, **37**(3): e13; doi: 10.1161/ATVBAHA.117.308564.

Newcastle upon Tyne Hospitals NHS Foundation Trust (2020) *GP adult haematology guidelines*. Available from www.newcastle-hospitals.nhs.uk/wp-content/uploads/2021/02/Adult-haematology-guidelines-v9.pdf

NICE (revised 2021) *CKS: Bruising*. Available at: <https://cks.nice.org.uk/bruising>

Raber, M.N. (1990) *Coagulation tests*. In: Walker, H.K., Hall, W.D. and Hurst, J.W. (eds) *Clinical Methods: the history, physical, and laboratory examinations*, 3rd edition. Butterworths. Available at: www.ncbi.nlm.nih.gov/books/NBK265

2.5 Blood film comments

Adewoyin, A.S. and Nwogoh, B. (2014) Peripheral blood film – a review. *Ann Ib Postgrad Med*, **12**: 71–9.

Doust, J. (2003) Diagnostic and management strategies for anaemia in adults. *Aust Fam Physician*, **32**: 889–94.

Provan, D. (ed.) (2018) *Oxford Handbook of Clinical and Laboratory Investigation*, 4th edition. Oxford Academic, online edition available at: <https://doi.org/10.1093/med/9780198766537.001.0001>

2.6 Inflammatory markers: CRP/ESR/PV

Bristol, North Somerset and South Gloucestershire ICB (2024) REMEDY: BNSSG referral pathways & Joint Formulary. *Inflammatory marker testing*. Available at:

<https://remedy.bnssg.icb.nhs.uk/adults/investigations/inflammatory-marker-testing>

Provan, D. (ed.) (2018) *Oxford Handbook of Clinical and Laboratory Investigation*, 4th edition. Oxford Academic, online edition available at: <https://doi.org/10.1093/med/9780198766537.001.0001>

University Hospital Bristol (2016) *Haematology: referral guidelines for primary care*. Available at: <https://remedy.bnssg.icb.nhs.uk/media/yyxnp2uj/uhb-gp-haematology-guidelines-v12.docx>

Watson, J., Jones, H.E., Banks, J. *et al.* (2019) Use of multiple inflammatory marker tests in primary care: using Clinical Practice Research Datalink to evaluate accuracy. *Br J Gen Pract*, **69(684)**: e462-e469. doi: 10.3399/bjgp19X704309.

Top of FormBottom of Form

2.8 Iron studies and ferritin

2.8.1 Iron studies

Balendran, S. and Forsyth, C. (2021) Non-anaemic iron deficiency. *Aust Prescr*, **44(6)**: 193–196. doi: 10.18773/austprescr.2021.052.

Kelly, A.U., McSorley, S.T., Patel, P. and Talwar, D. (2017) Interpreting iron studies. *BMJ*, **357**: j2513: doi:10.1136/bmj.j2513. (erratum: *BMJ*, **357**: j3175).

2.8.2 Ferritin

Al-Naseem, A., Sallam, A., Choudhury, S. and Thachil, J. (2021) Iron deficiency without anaemia: a diagnosis that matters. *Clin Med (Lond)*, **21(2)**: 107–113. doi: 10.7861/clinmed.2020-0582.

Cullis, J.O., Fitzsimons, E.J., Griffiths, W.J., Tsochatzis, E. and Thomas, D.W., on behalf of the British Society for Haematology (2018) Investigation and management of a raised serum ferritin. *Br J Haematol*, **181**: 331–340: doi: 10.1111/bjh.15166.

Fitzsimons, E.J., Cullis, J.O., Thomas, D.W., Tsochatzis, E. and Griffiths, W.J., on behalf of the British Society for Haematology (2018) Diagnosis and therapy of genetic haemochromatosis (review and 2017 update). *Br J Haematol*, **181**: 293–303. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/bjh.15164?sid=nlm%3Apubmed>

Kelly, A.U., McSorley, S.T., Patel, P. and Talwar, D. (2017) Interpreting iron studies. *BMJ*, **357**: j2513: doi:10.1136/bmj.j2513. (erratum: *BMJ*, **357**: j3175).

Pagana, K.D., Pagana, T.J. and Pagana, T.N. (2024) *Mosby's® Diagnostic & Laboratory Test Reference*, 17th edition. Elsevier.

Rao, L.V and Snyder, L.M. (2020) *Wallach's Interpretation of Diagnostic Tests*, 11th edition. Wolters Kluwer Health.

Stewart, S., Evans, W., Turnbull, I. *et al.* (2023) Managing raised ferritin in primary care. *BMJ*, **382**: e076750: doi:10.1136/bmj-2023-076750.