

British Society for
Haematology
Listening • Learning • Leading



Careers in Haematology

Guide for Medical Students and Junior Doctors

Haematology is the medical speciality concerned with blood disorders. Your non-medical friends however will always think that you're the one who sticks the needle in their arm! It is a fascinating, diverse and challenging speciality, which is incredibly fast-moving and always rewarding.



What are the attractions of haematology?

- Dealing with a wide variety of benign and malignant conditions
- Being involved in the whole patient journey: assessing a new patient; performing their diagnostic tests; interpreting the pathology (blood film and marrow aspirate); treating them and managing the complications
- Having a variety of working environments: the out-patient clinic; the ward; the haematology laboratory
- Being able to request and interpret cutting edge diagnostics including immunophenotyping, cytogenetics and sequencing
- Developing a close therapeutic relationship with a group of patients and their families
- Dealing with serious conditions that are usually treatable and in many cases curable
- Working in areas in which there is intense research activity at the levels of molecular pathology, translational research, large clinical trials and

national service delivery

- Working with committed colleagues who work as a team to deliver outstanding patient care.

What conditions do haematologist's treat?

Haematology is a broad speciality that offers diverse and interesting career options. In general, conditions treated by haematologist's fall under the following areas:



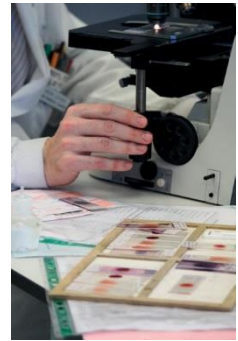
Malignant haematology

This covers conditions such as acute and chronic leukaemia, lymphoma and other lymphoproliferative conditions, myeloma, myelodysplasia and myeloproliferative conditions. These can all be considered as cancers of haemopoietic and lymphoid cells. Clonal disorders arising from these cells are often challenging to understand and treat. They range from diseases that are an

immediate threat to life, to conditions that are among the most indolent known in medicine. One of the most satisfying aspects of treating these patients is to be able to use new therapies developed as a direct consequence of the latest scientific breakthroughs. These include chemotherapy, radiotherapy and genetically engineered antibodies and lymphocytes.

Bone Marrow Transplantation

Bone marrow transplantation is one of the oldest and most successful forms of regenerative medicine with several hundreds of transplants performed annually in the U.K. Although family donors are the first port of call, many patients need to find a donor from the worldwide network of volunteers. Many medical students have volunteered to be on the donor registry. Alternatives to adult volunteers are the stem cells contained in the umbilical cords donated after delivery of the newborn. Transplants are routinely offered to selected patients with malignant haematological disease or bone marrow failure syndromes. Clinical trials are showing benefits to patients with other diseases too, so this is an area where knowledge continues to expand rapidly.



Coagulation disorders

Both inherited (e.g. haemophilia, von Willebrand's disease) and acquired bleeding disorders (such as traumatic & surgical bleeding, lack of platelets) are included. Haemophilia care is generally coordinated by haemophilia comprehensive care centres in which a dedicated multidisciplinary team manages patients from birth to death. Although modern clotting factor products have greatly reduced the morbidity associated with these conditions, many clinical challenges remain including genetic counselling for affected families and the management of acquired inhibitors to clotting factors. However, haemophilia care is only half of the story as thrombosis and thrombophilia are becoming the predominant part of the workload of the 'clotting doctor'. The field of thrombosis is now rapidly changing due to the introduction of novel anticoagulants and new approaches to diagnosing and treating thrombotic conditions such as the antiphospholipid syndrome and thrombotic thrombocytopenic purpura. The number one safety issue in hospitals the prevention of hospital-acquired venous thromboembolism is an important part of a clotting doctors work.

Red cell haematology

This includes sickle cell disease, thalassaemia, aplastic anaemia and haemolytic anaemia. To the surprise of many, haematologists do not (or at least should not) have clinics full of patients with iron deficiency anaemia as this is really a gastroenterology or gynaecology problem. In addition to addressing the treatment of the conditions themselves (which involves careful initiation of transfusion programmes, powerful immunosuppressant drugs and sometimes stem cell transplantation), careful attention has to be paid to the complications of treatment such as iron overload.

Blood transfusion

This covers far more than knowing about the ABO system! Haematologists are heavily involved in developing and implementing transfusion policy in every trust around the country. This includes blood conservation and transfusion safety.



NHS Blood and Transplant also employs haematologists who are involved at a national (and sometimes international) level promoting appropriate blood use and being involved in blood product development. An increasing emphasis on evidence-based transfusion practice has led to a welcome expansion of clinical trials in this area.

Paediatric haematology

This is an extremely exciting, demanding but very rewarding sub-specialty of haematology. Although specialist paediatric haematologists generally have a paediatric background and train specifically in paediatric haematology, many adult haematologists, especially those working in district general hospitals and those with on-site neonatal units will be required to advise on, and sometimes directly manage, haematological problems in children. Therefore, all haematology trainees spend at least six months of their training programme learning about childhood blood disorders.

This training includes exposure to a wide variety of conditions including autoimmune thrombocytopenic purpura, acute leukaemia, congenital coagulation disorders, neonatal red cell and platelets disorders and primary bone marrow failure syndromes.

Adult haematology trainees who develop an interest in paediatric haematology during their paediatric attachment also have the option to complete training in paediatric haematology but depending on their previous training may need to undertake a period of core paediatric training.

Obstetric haematology

This is a fast growing area of medicine covering the diagnosis and management of haematological problems of pregnancy. Thrombosis and post-partum haemorrhage remain leading causes of maternal death and a large number of haematological conditions are associated with fetal loss.

What makes a good haematologist?

Haematologists are stereotypically thought of as scientific, nerdy types who love nothing more than curling up with a good blood film and reciting the vitamin K-dependent clotting factors! The reality is that they are a group of people who enjoy team working, have an eye for detail and an aptitude for science, display intellectual curiosity and are enthusiastic communicators.



Haematologists often look after their patients for many years. This is immensely satisfying but can be demanding too, since they may have to deliver bad news to distressed patients and families. Dealing with these situations can at times be emotionally exhausting and it is important to have a resilient personality and a supportive network.

What are the disadvantages of haematology?

The FRCPath exam! Make no mistake, this is a rigorous examination. However, you are examined ONLY in haematology – not in microbiology or histopathology. Haematology trainees have a reputation for knowing their stuff and the stimulus of studying for an exam certainly helps build up the knowledge base. Passing the exam is an excellent and necessary preparation for life as a consultant.

What are the academic opportunities in haematology?

Haematology trainees may have the opportunity to do research leading to either an MD or a PhD although this is by no means essential. Many cutting edge discoveries regarding the molecular mechanisms of disease and their subsequent applications in clinical practice have occurred first in haematological conditions. Blood research is therefore incredibly interesting and fast moving. Those interested in an academic career might do research either before or after their specialist training. This enables easier progression to a clinician scientist or academic haematologist position.

How do I get into haematology?

The standard route is to undertake core medical training and attain membership of the Royal College of Physicians or the Royal College of Paediatrics and Child Health. Specialist entry occurs at ST3 and training is then generally for 5 years.



The FRCPath exam then involves 2 parts:

- Part 1: consists of an essay paper and an MCQ paper. This can be taken after 18 months of speciality training
- Part 2: consists of a clotting paper, a transfusion paper, blood film and bone marrow interpretation and a viva.

Note: Only certain deaneries can provide paediatric haematology training therefore early advice should be sought in the application process.

Further information

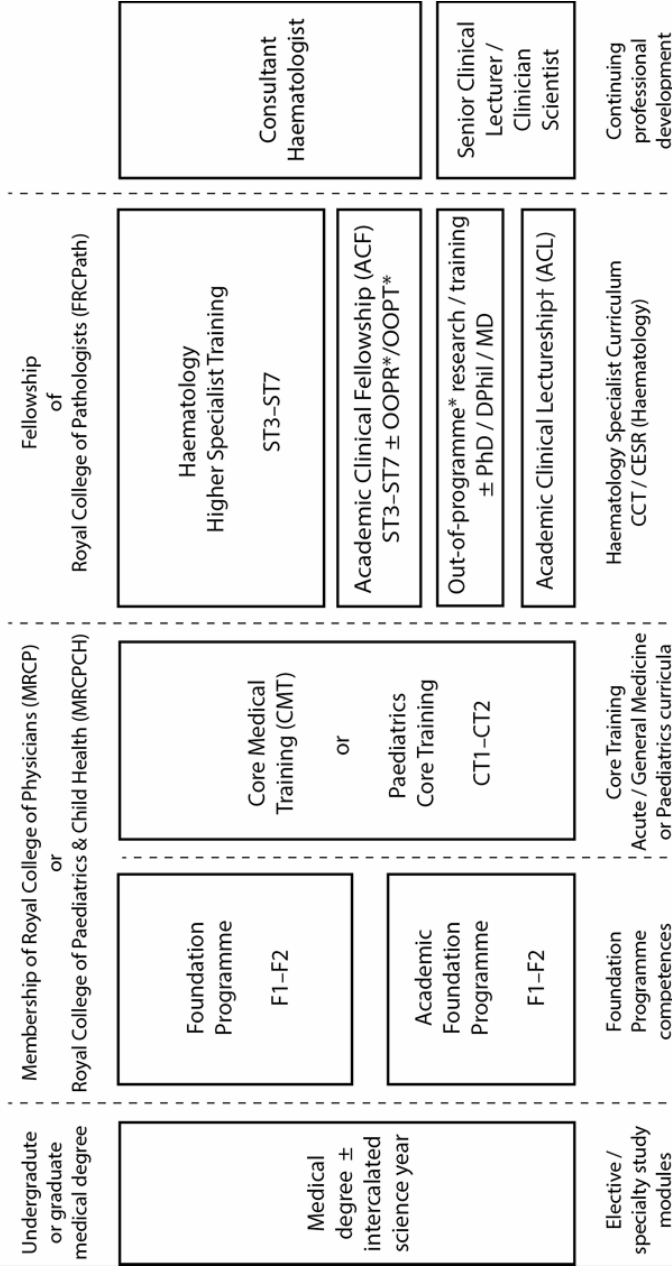
Royal College of Pathologists:

www.rcpath.org

Joint Royal Colleges of Physicians Training Board:

www.jrcptb.org.uk

Haematology training pathway



F1/F2 – Foundation training year 1/2; CT1/CT2 – Core Training (medicine or paediatrics) year 1/2; ST3–7 speciality training years 3–7; OOPR – out of programme research; OOPT – out of programme training; * up to three years may be taken for an OOPR/OOPT of which one year may be credited towards training time during the ST3-7 period with prospective approval; †PhD/DPhil/MD required for ACL eligibility; CCT – Certificate of Completion of Training; CESR – Certificate of Eligibility for Specialist Registration.

Text: Original text by Dr G Collins, Consultant Haematologist, Oxford Radcliffe Hospitals NHS Trust, and updated by members of the Education Subcommittee of the British Society for Haematology.

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