

British Society for  
**Haematology**

Listening • Learning • Leading



## Careers in Haematology



A guide for medical students  
and junior doctors

# About haematology:

Haematology is the medical speciality concerned with blood disorders. Your non-medical friends however will always think that you are 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, from 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

## 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.



Malignancies in haematology 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 UK.

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.

## What conditions do haematologists treat?

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

- Malignant haematology
- Bone marrow transplantation
- Coagulation disorders
- Red cell haematology
- Blood transfusion
- Paediatric haematology
- Obstetric haematology



## Coagulation disorders

Both inherited (e.g. haemophilia, von Willebrand's disease) and acquired bleeding disorders (such as traumatic and 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 doctor's 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.



# 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.

## Paediatric haematology

This is an extremely exciting, demanding but very rewarding sub-specialty of haematology.

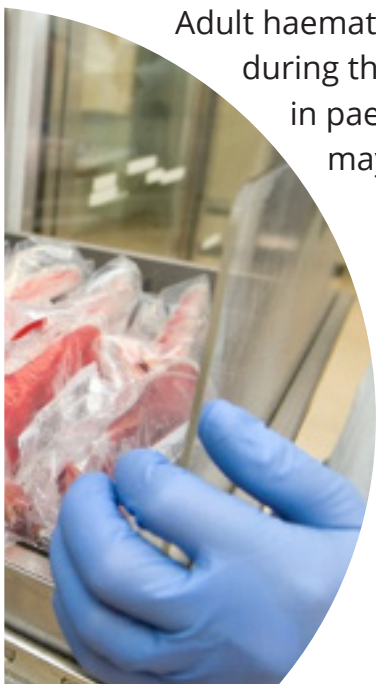
Although specialist paediatric haematologists generally have a paediatric background and train specifically in paediatric haematology, many adult haematologists, especially those working in district general hospitals and those with on-site neonatal units will be required to advise on and sometimes directly manage, haematological problems in children. As a result, 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.

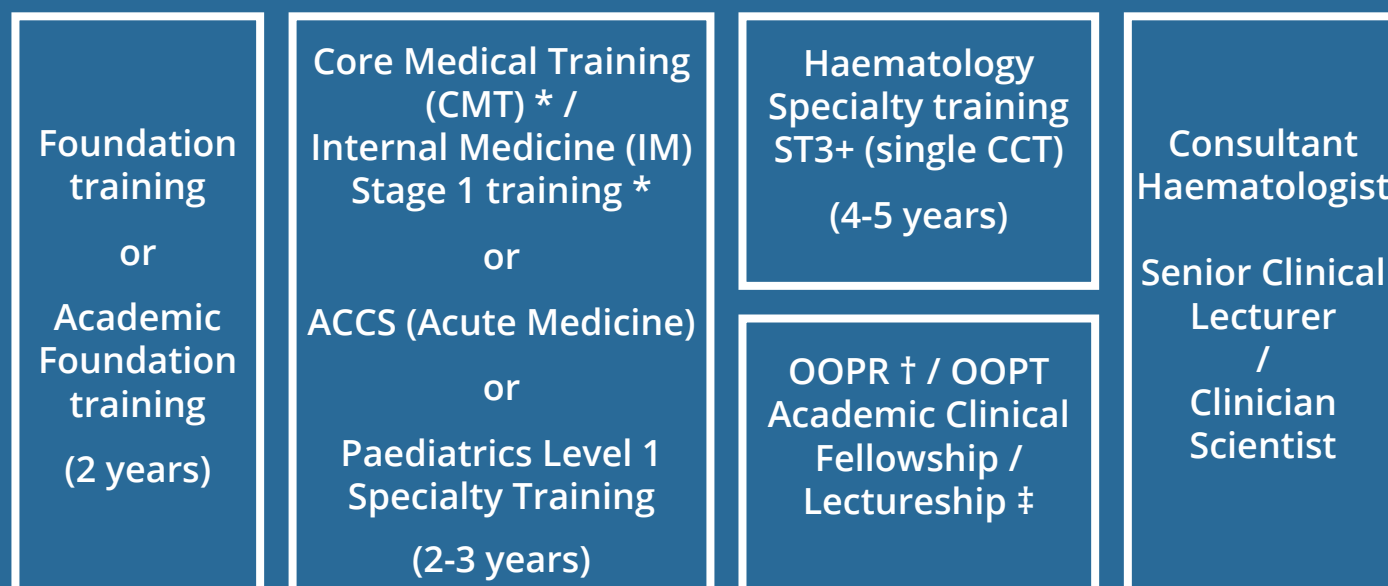


# Haematology training pathways

Membership of Royal College of Physicians (MRCP) or Membership of Royal College of Paediatrics and Child Health (MRCPCH)

Fellowship of the Royal College of Pathologists (FRCPath)

Continuing Professional Development



\* Internal Medicine (IM) Stage 1 training will replace Core Medical Training (CMT) from August 2019; ACCS – Acute Care Common Stem; OOPR – Out of Programme Research; † up to three years is allowed out of programme to study for a higher degree e.g. PhD/DPhil/MD; OOPT – Out of Programme Training; ‡ PhD/DPhil/MD required for Academic Clinical Lectureship (ACL) eligibility; CCT – Certificate of Completion of Training.

## 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, although in 2019 medical training pathways are changing. More information can be found at <https://www.jrcptb.org.uk/new-internal-medicine-curriculum>.

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 and is generally taken towards the end of ST5 or during ST6

Note: Only certain deaneries can provide paediatric haematology training therefore early advice should be sought in the application process. In total 24 months of paediatric training is required to practice paediatric haematology as a consultant.

## 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.

## Further information

Read about the pathways current trainees and consultants have followed into haematology at <https://www.b-s-h.org.uk/membership/meet-our-members/>

Tweet us **@BritSocHaem** or ask a question about **#blooducation**. For more general queries email [info@b-s-h.org.uk](mailto:info@b-s-h.org.uk). Find us on Facebook **@BritishSocietyforHaematology**

The Joint Royal Colleges of Physicians Training Board and Royal College of Pathologists websites at <https://www.jrcptb.org.uk/specialties> and <https://www.rcpath.org> have more information of medical and pathology specialty training pathways.

For details of person requirements for ST3 selection into haematology visit <https://www.st3recruitment.org.uk/specialties/haematology>

**Careers in Haematology**  
*A guide for medical students and junior doctors*

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