

Introduction to Human Disease



Dr Sonia Fernandez

Contact Details

Unit website URL: <http://www.lms.uwa.edu.au>

Unit coordinator: Dr Sonia Fernandez

Email: sonia.fernandez@uwa.edu.au

Phone: 9224 0223

Location: 2nd floor MRF Building, near RPH

Consultation hours: By appointment

Unit deputy coordinator: Dr Ben Dessauvagie

Email: ben.dessauvagie@health.wa.gov.au

Location: Anatomical Pathology, PathWest, FSH

Consultation hours: By appointment

Unit Overview

- Provides a broad understanding of human disease processes
- Divided into 1 or 2 week modules
 - Pathological process “disease mechanism”
 - Examples of human diseases
- Level 2 unit – will provide broad coverage of major disease processes with a greater depth of knowledge provided in Level 3 units
- A “showcase” of pathology aiming to:
 - Give a broad understanding of human disease processes
 - Illustrate pathological processes with examples of diseases resulting from these pathological processes

Unit Outline

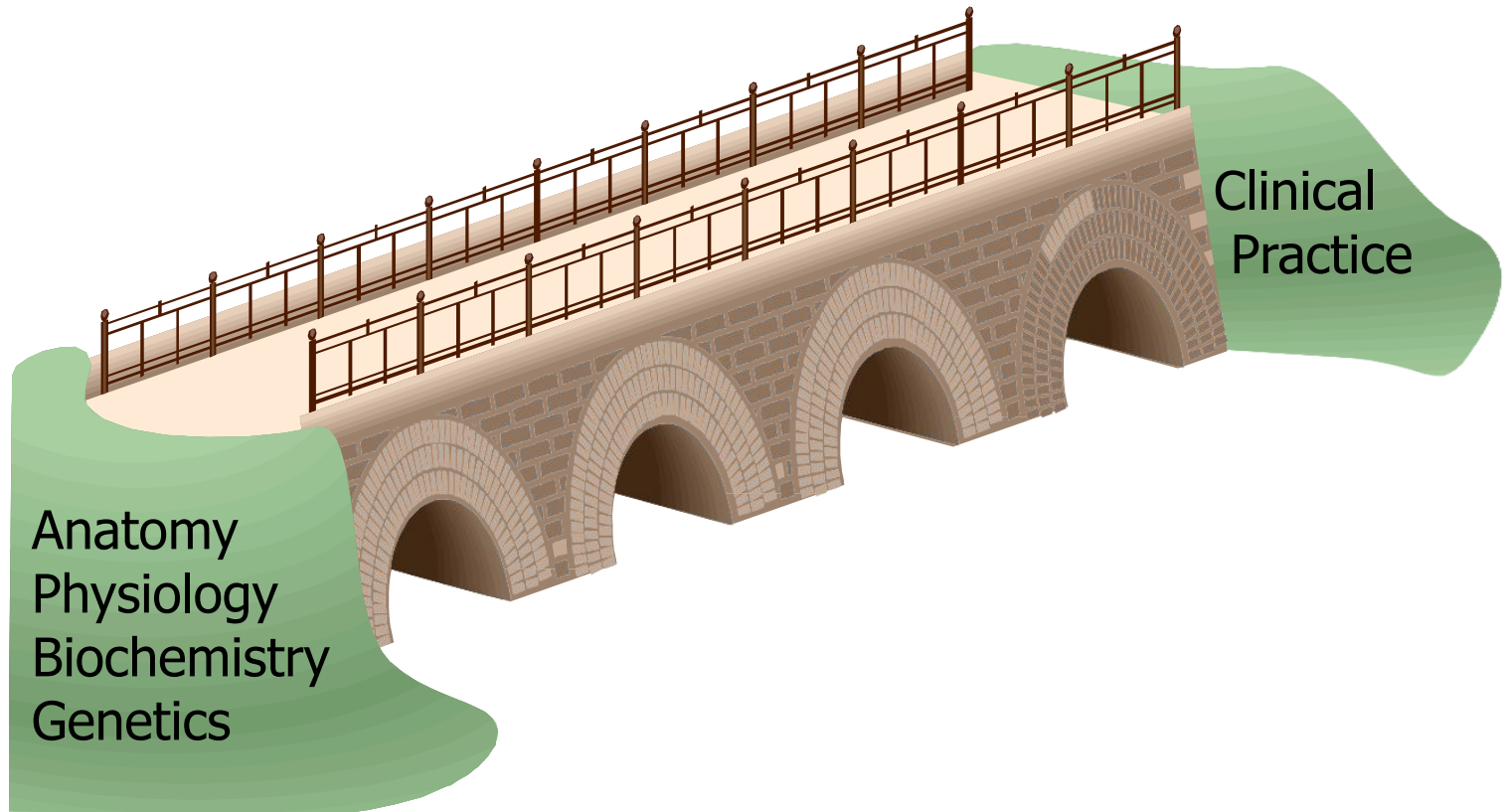
Week No.	Module
1	Introduction
2	Inflammation
3	Immunity and disease
4	Lifestyle and disease
5	Blood vessels and disease
6	Blood and blood disorders
7	Neoplasia 1
8	Forensic Pathology & Mid Sem Test
9	Neoplasia 2
10	Environment and disease
11	Infection and disease
12	Genetics and disease
13	Research and course review

What is Pathology?

- Pathology
 - The scientific study of disease (patterns, causes, mechanisms and effects)
- Disease:
 - A condition in which the normal function (homeostasis) of some part or organ of the body is disturbed
 - A condition of the organism which limits its life in either its powers, enjoyment or duration (WHO)

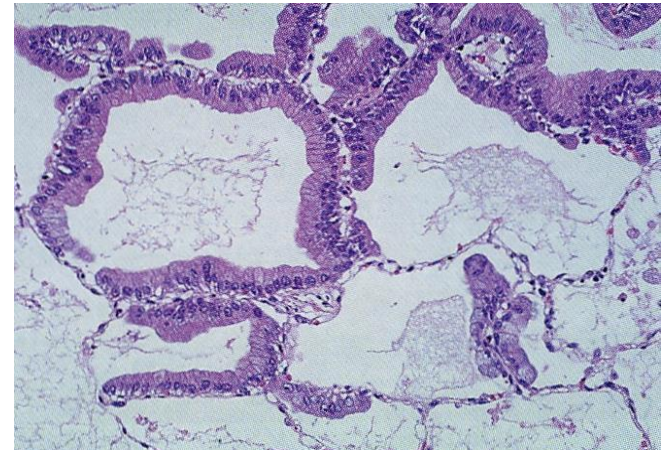
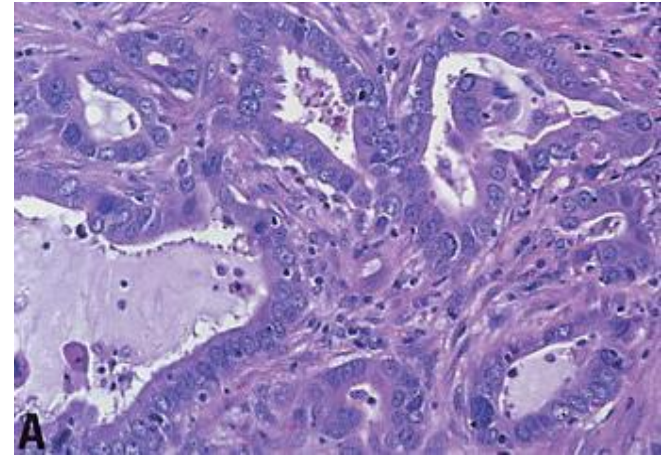
What is Pathology?

- Link between basic biological sciences and clinical practice



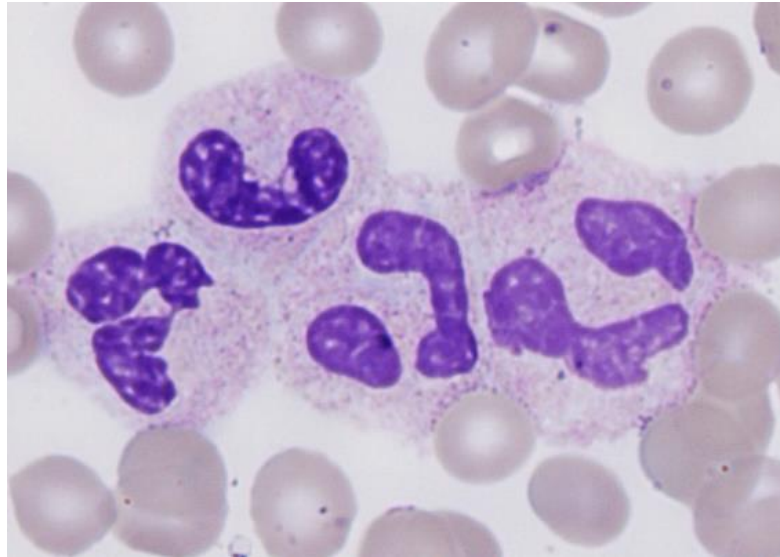
Week 1: Introduction

- Essential for one or more of diagnosis, prognostication, treatment
- Education necessary to understand:
 - nature of disease mechanisms
 - derangements of normal anatomy, physiology, and biochemistry
 - how the above relate to manifestations seen in patient
- Scientific research
 - Cellular and molecular basis of disease
 - Foundation upon which modern medicine is based
- Introduction to ePractical resources and cell/tissue collection & processing



Week 2: Inflammation

- Inflammatory process
- Cells
- Tissues
- Clinical examples



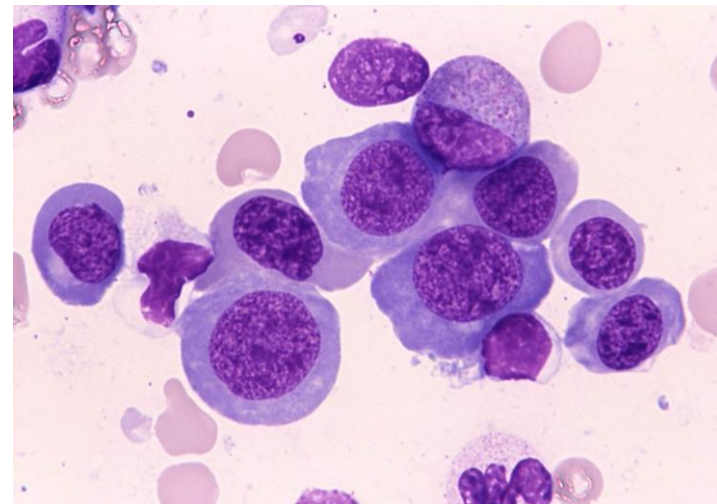
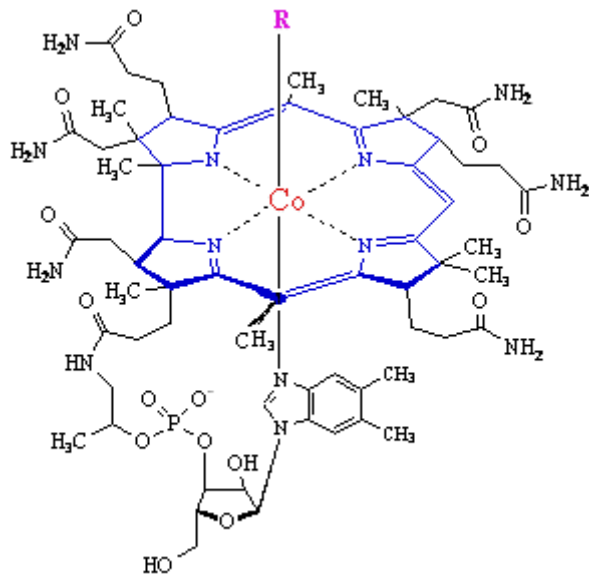
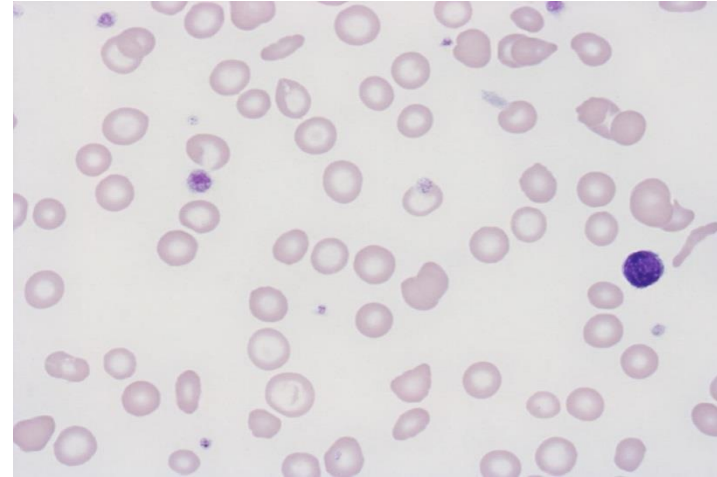
Week 3: Immunology & disease

- Normal immunity
- Overactive vs underactive
- Allergy
- Autoimmunity
- Immunodeficiency



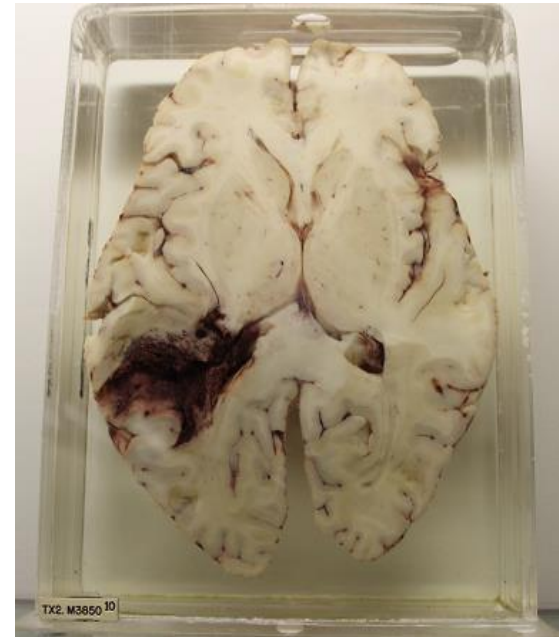
Week 4: Lifestyle & disease

- Nutrition
- Diabetes
- Alcohol
- Iron metabolism



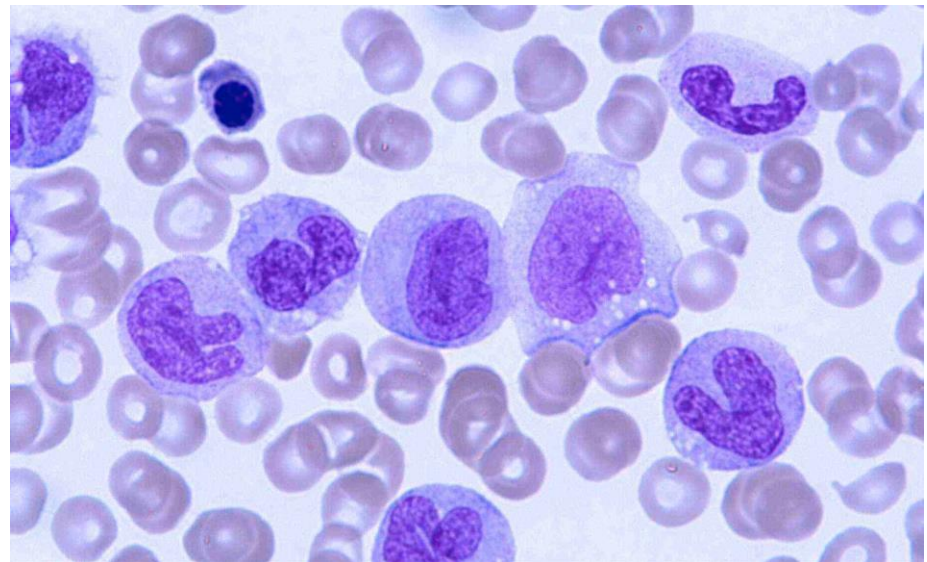
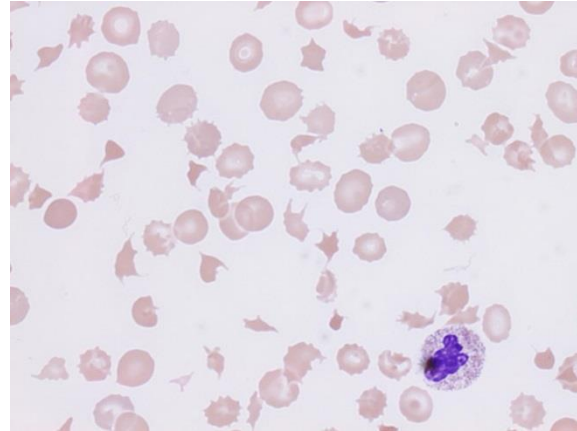
Week 5: Blood vessels & disease

- The heart & blood vessels
- Bleeding & Clotting
- Heart attack
- Stroke
- “Economy class syndrome”



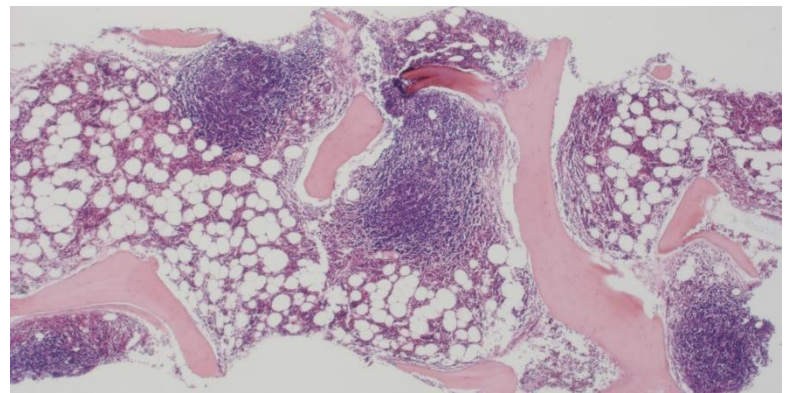
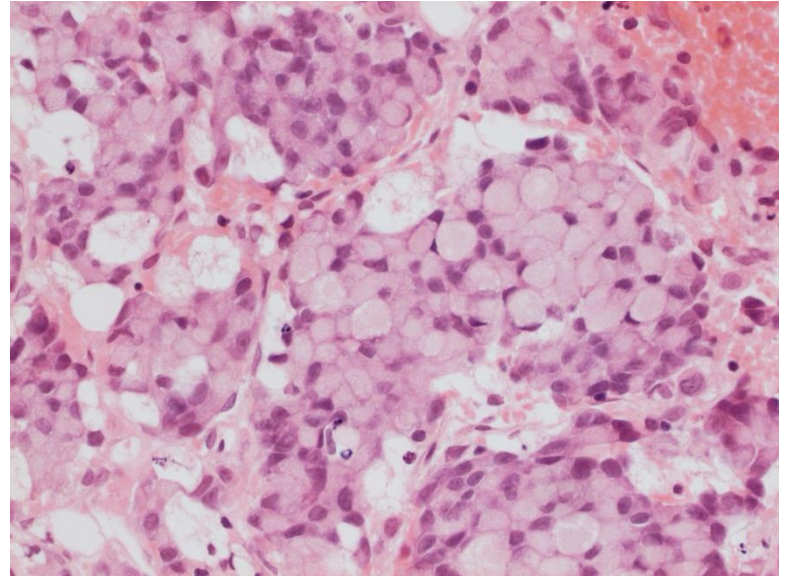
Week 6: Blood & blood disorders

- Haematology
- Anaemia
- Leukocyte disorders
- Leukaemia
- Transfusion



Weeks 7 & 9: Neoplasia (cancer)

- What causes cancer
- Types of cancer
- Cancer genetics
- How we diagnose cancer
- How cancer spreads
- Colon, Cervix, Lung, Skin
- Breast cancer
- Leukaemia



Week 8: Forensic pathology

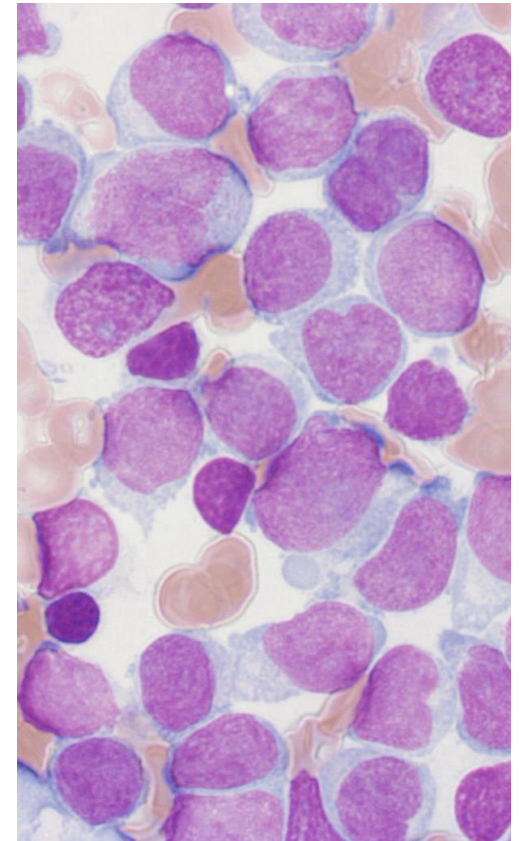
- What is forensic pathology?
- Natural disease
- Cause of unexplained or violent deaths
- Trauma

Note: The **Mid-Semester Test** is scheduled for this week in place of an e-learning prac



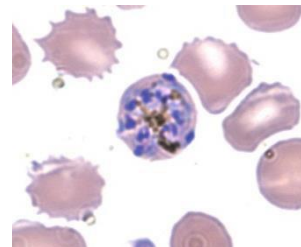
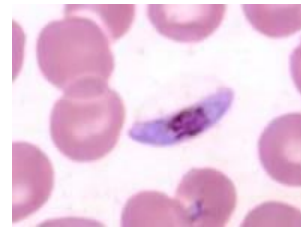
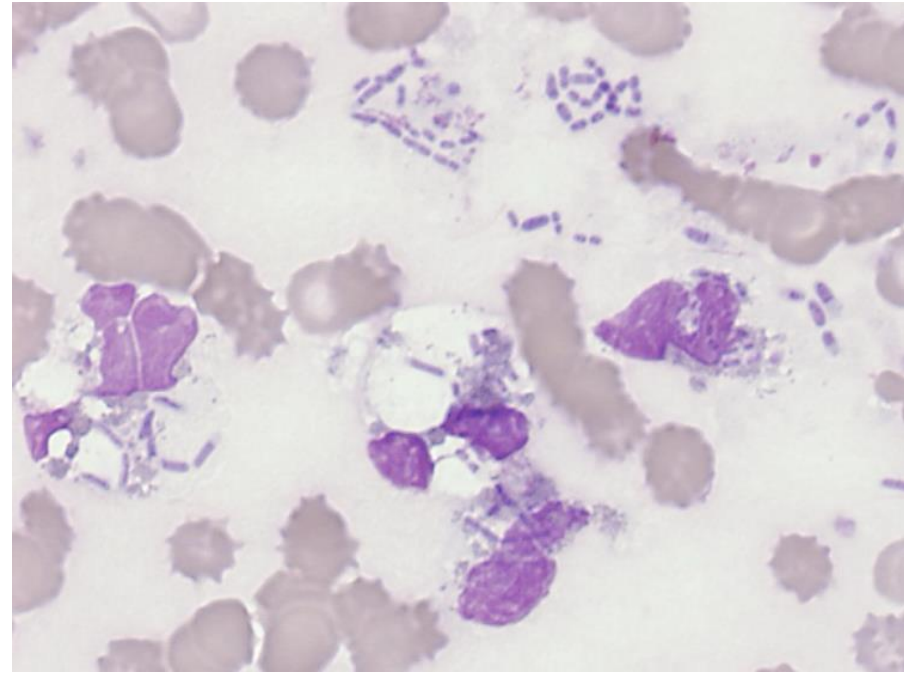
Week 10: Environment & disease

- Environmental agents and disease
- Smoking
- Radiation
- Asbestos



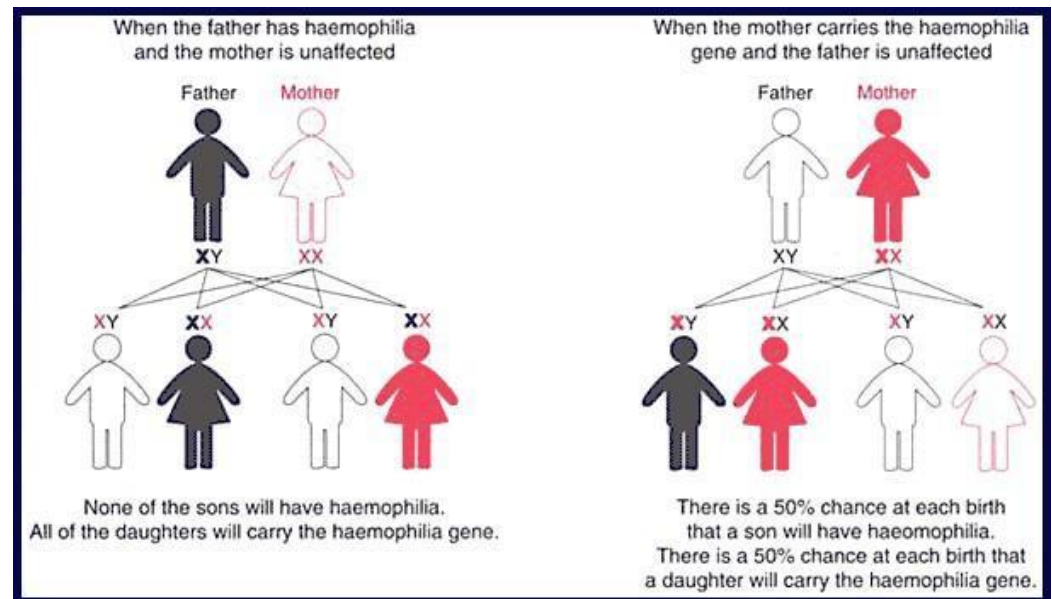
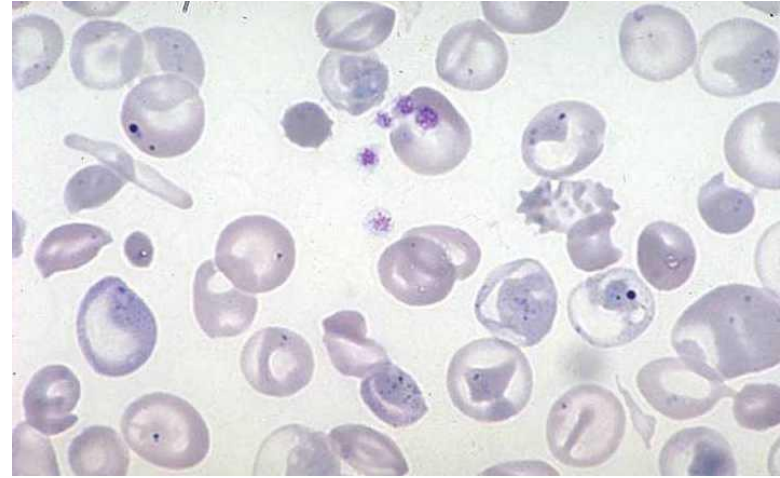
Week 11: Infection & disease

- Infection and disease
- How we diagnose infections
 - Bacterial
 - Viral
- Tuberculosis
- Malaria



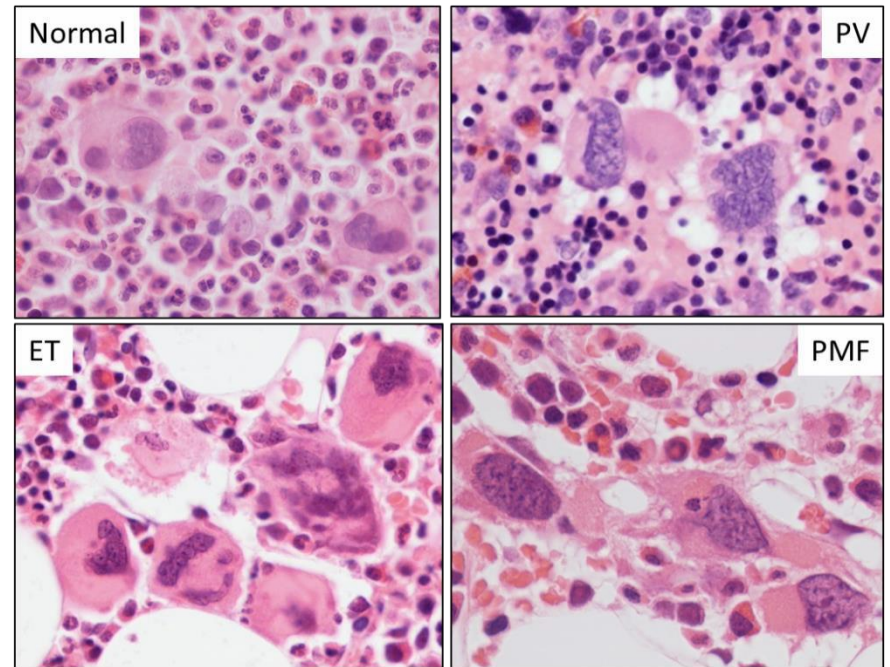
Week 12: Genetics & disease

- Principles
 - Autosomal vs X-linked
 - Dominant vs recessive
- Methods
- Management
- Haemophilia
- Thalassaemia
- Cystic fibrosis



Week 13: Research & Course Review

- Translating pathology to practice
- Clinical pathology research
- All disciplines
- Biology, treatment, prognosis, monitoring
- Importance of pathology in understanding human disease



Teaching programme: lectures

Day	Time	Venue
Monday	10:00 – 10:45 (Mechanism)	FJ Clark Lecture Theatre, Queen Elizabeth II Medical Centre
Tuesday	10:00 – 10:45 (Disease 1)	FJ Clark Lecture Theatre, Queen Elizabeth II Medical Centre
Tuesday	11:00 – 11:45 (Disease 2)	FJ Clark Lecture Theatre, Queen Elizabeth II Medical Centre

Teaching programme: ePracticals

Day	Time	Venue
Thursday	09:00 – 10:45	eLearning Suites Ground Floor, M Block Queen Elizabeth II Medical Centre
Friday	09:00 – 10:45	eLearning Suites Ground Floor, M Block Queen Elizabeth II Medical Centre

eLearning Suites



ePracticals

- Attend Thursday or Friday
- Interactive sessions using clinical cases to illustrate pathology of human disease
- Macroscopic, microscopic & radiological images
- Text, on-line resources
- Worksheets with questions
- Work in groups of 6
- Post-class quizzes: comprise 15% of unit mark
 - Deadline: Monday 5pm each week

PATH2220 Assessment

- PATH2220 unit assessment: % of Final Mark
 - ePractical assessment 15%
 - Written assignment 15%
 - Mid-Semester test 20%
 - Final examination (End of semester): 50%
 - Extended matching questions 25%
 - Written (short answer) questions 25%

Written Assignment

- 1 written assignment
- Select an assignment topic from a list
- All details of requirements in Unit Guidebook
- Maximum 6 pages
- Submit via LMS in PDF format
- **Deadline: by 5pm Monday 2nd October**
- 15% of unit mark

Mid Semester Test

- To see how you are going
- **Date: Thursday 21st or Friday 22nd September**
- Location: eLearning Suites
- 1 hour duration
- Format the same as final exam
 - Extended Matching Questions (50%)
 - Short answer questions (50%)
- 20% of unit mark

End of Semester Exam

- 2 hour duration
- Format
 - Extended Matching Questions (50%)
 - Short answer questions (50%)
- 50% of unit mark

Recommended Texts

- Your main source of information will be the lecture notes and epractical resources provided to you
- Complementary texts
 - Pathology at a Glance – C. Finlayson & B. Newell, 1st Ed. 2009. Publisher: Wiley-Blackwell
 - Immunology at a Glance – J.H.L Playfair and B .M. Chain, 10th Ed. Publisher: Wiley-Blackwell
 - Haematology at a Glance – A. Mehta and V. Hoffbrand, 4th Ed. 2013. Publisher: Wiley-Blackwell
 - Medical Genetics at a Glance – D.J. Pritchard and B.R. Korf, 3rd Ed. 2013. Publisher: Wiley-Blackwell

Contact Information

- Direct your enquiries to the LMS discussion board
 - I am subscribed so I will see them
 - Your questions may benefit others
- Confidential enquiries - email unit coordinator directly
 - If detailed information is required a phone call or appointment may be appropriate
- Questions about unit content should be directed to the LMS discussion forum
- Please check the “Announcement” section before sending an email - your question may have already been addressed!