HEMATOLOGY SLIDES

Photographs by Salman Kazmi

Preparation, presentation and labeling by Naeem Majeed

A TREND SETTERS PRODUCT

Special thanks to Dr. Samina Naeem & Dr. Ayaz of Hematology-Pathology Department KEMC.
WARNING

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Message From Mustafa

“In tough conditions, only the tough keep going”

Launching of our first pathology CD was a huge task. It was sheer determination and devotion that made the impossible happen. I would like to congratulate Salman Haider Kazmi, Naeem Majeed and all other members of Trend Setters for such a fantastic effort.

“U rock guys”

I would like to thank Almighty Allah Who gave us the strength and courage for turning this dream into a reality. Any suggestions for further improvement are always welcomed.

Mustafa Mumtaz Hasan
Message From Salman

This CD comprises of photographs of slides shown during the last 3 months in the pathology labs. This CD would prove to be an extremely valuable gift for the students of 4th year and 3rd year, as this is not only useful for those who are regular in the labs but also for those who just stand back and talk. At the end of the year this would prove to be a great help in revision of the practicals which comprise of 90 marks.

We decided to take this bold step, just for the academic betterment of our colleagues and to help them in every way in their studies so that in the future good doctors can be produced for the country. All those who do not have computer facilities can view these CDs in the biochemistry dept. which has been renovated recently.

The tireless efforts we had to make for the preparation of this CD cannot be mentioned here. Taking so many photographs and those too on the microscopes available in the lab was a difficult job, but we have been doing it successfully for the last 3 months, and we will insha Allah continue to do so in the future. The only thing we demand from you is to be regular in your academics. We would be happy if most of our friends turn out to be good doctors. Please be regular in the labs, observe the slides carefully and you will have their photographs every 2 months.

Looking forward for your positive input and comments.

Salman Haider Kazmi

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FOREWORD

To err is human and to forgive Divine. Although I have taken utmost care that no errors be there in formatting and/or labeling of these slides. Errors may, however, creep in. Being a ‘normal’ human being, I believe that this work cannot be error free. So, if any of the users of this software find any discrepancies, shortcomings, technical errors, etc., please do let me know about it. I would be glad to hear suggestions/comments for further improvements from your side. Remember, your suggestions maybe helpful in future, as we will soon start new projects of similar type. If your suggestions are positive and helpful, we may include your name in the list of contributors !!!

And finally, I would wish to appreciate the wonderful work of our colleague, Salman Kazmi. You know its really a frenetic sort of a task running here and there in patho lab amongst the huge ‘frenzy crowd’ around the microscopes, taking snaps of the slides. And running from one room to another, requesting the faculty to help us label the slides... and all of them supported us as much as they could. We are extremely happy for the extra support provided by Dr. Ayaz, Dr. Mahfooz-ur-Rehman and Dr. Samina Naeem. They went with us to the computer lab a number of times and guided us during the labeling process.

Naeem Majeed

For suggestions, corrections mail us at: feedback@tsdocs.org
SHALL WE BEGIN?
Microcytic Hypochromic Anemia

Platelets

Microcyte

Hypochromatic

Hypochromatic
HYPOCHROMIA
MICROCYTOSIS
000
MEGALOBLASTS.
Microcytic Hypochromic Anemia

Hypochromatic RBC

Platelets

Microcyte

Hypochromatic RBC

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Compare the size of lymphocyte & Microcytic RBC

Lymphocyte

Microcytic RBC

Hypochromic RBC

Platelet
MEGALOBLASTS.
Chronic Myeloid Leukaemia

1% of Myeloid cells

Metamyelocytes, Myelocytes, Neutrophils, Blasts, Bands,
CML

A in Blasts, Myelocytes, Metamyelocytes, Band, & Neutrophils.
AML

Large Blast Nucleoli

moderate cytoplasm
AML

Large Size Blast

Moderate cytoplasm
AML
Peripheral Blood Smear
ALL

Blast cells - Prominent nucleoli.
Scanty cytoplasm.
ALL (Acute lymphocytic Leukaemia)
Blast cells
Scanty cytoplasm
Nucleoli
Chronic Lymphocytic Leukaemia

Mature Lymphocytes

Pro lymphocytes
CLL

Prolymphocyte

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CLL  Chronic Lymphocytic Leukaemia

Mature Lymphocytes / Prolymphocytes

↑ 40% in B. Marrow
Chronic Myeloid Leukaemia

1/3 of Myeloid cells

Metamyelocyte, Myelocyte, Neutrophils, Blast, Bands,
CML

A in Blasts, Myelocytes, Metamyelocytes, Band. & Neutrophils.
ALL (Acute lymphoblastic Leukaemia)

Blast cells
Scanty cytoplasm
Nucleoli
Chronic Myeloid Leukaemia

Hyperplastic Myelopoiesis

Increased in ratio of Neutrophils

Myelocytes

Blasts.
Acute Lymphocytic Leukaemia (L)

Variation in Blast Size
Nucleoli prominent.
Cytoplasm scanty → Moderate.
Chronic Lymphocytic Leukaemia

Mature Lymphocytes

Almost total Bone Marrow replacement.
ALL (Acute lymphocytic Leukaemia)

Variation in about cell size

Glandular hyperplasia
Compare this with the next one, both are same, only some thing wrong between the camera and the microscope.
AML
(Sudan Black Staining)

Blast Cells

Photographed by Salman Kazmi, from Pathology Deptt. KEMC, with permission.
Data Collection and Labeling by Naeem Majeed
Blast Cell
Microcytic Hypochromic Anemia

Poikilocytes
Eosinophil

(Observe the granules in cytoplasm)

Special thanks to Dr. Ayaz.
Monocyte (No granules in Cytoplasm)
IRON STAINING

INCREASED IRON STORES.

(BLUE COLOR)
Pearl’s Staining
Increased Iron in BM
IRON STAINING

INCREASED IRON STORES.

(BLUE COLOR)
IRON STAINING. ( DEPLETED STORES.
The slides that follow are mere repetitions of the earlier labeled slides.

Now, test yourself upon what you have learned.
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CLL

Myelocytes

Lymphocytes

Pro-lymphocytes

Basophils
CML

1. Neutrophils
   - Myeloblast
   - Metamyelocytes
   - Basophil

2. Myelocytes
   - Eosinophils

3. Erythroblasts

Photographed by Salman Kazmi, from Pathology Deptt. KEMC, with permission.
AML

Nucleoli

SUDAN BLACK

Myeloblast

Neutrophil

Lamina Reticularis

Cells
ALL, L₂, L₃, AN

Blast cells
Open chromatin
Nuclei
Nucleoli.

Photographed by Saiman Kazmi, from Pathology Dept. KEMC, with permission.
Data Collection and Labeling by Naeem Majeed
Contributors

Mustafa Mumtaz Hasan (Always there to equip us with his moral support and good suggestions)

Salman Kazmi (The most hectic task – collection of snaps from microscope to microscope and from one room to another... was done by him)

Naeem Majeed (You are seeing this presentation because of his efforts... )
Thanks Message From Salman

In the end I will like to that my very dear brother Dr. Naeem Majeed, without him it would never had been possible to launch this CD. His efforts for the betterment of trendsetters and our projects are so great that it is not possible to express them in words. Making a 100Cds, preparing, editing and printing of labels for the covers, cutting them to size, labeling of the slides, preparation of the presentations, and so forth was something which only he could accomplish in such a short time and with such fineness.

Also, I would be thankful to Mustafa Mumtaz for his motivation and help he has provided. He had been ringing me every evening to talk about various matters of concern. I also thank my team and colleagues whose moral support has always been there.

Special thanks to Dr. Ayaz Lone, Dr. Samina Naeem, Dr. Mahfooz-ur-Rehman, Dr. Ishtiaq, Dr. Ihtesham, and most of all Prof. IA Naveed and Prof. GR Qureshi
Special Thanks To

Dr. Samina Naeem
Dr. Mahfooz-ur-Rehman
Dr. Ayaz
THE END