

# Absolute and relative white cells count

Absolute value (leukocytes/mm<sup>3</sup> =

Total leukocyte count (cells/mm<sup>3</sup> X Relative value(%)

Example:

Total leukocyte count = 6000

Segmented forms (relative no.) = 50 %

Segmented forms (absolute no.) = 6000 X  $\frac{50}{100}$  = 3000/mm<sup>3</sup>

# Monocyte Macrophage system

Monocytes in blood plus both fixed and wandering macrophages and few specialized endothelial cells in bone marrow, spleen and lymph nodes -----Reticuloendothelial system

Brain: Microglia

Skin: Histiocytes

Lungs: alveolar macrophages

Liver: Kupffer cells

Spleen, Bone marrow: Sinusoids

Lymphatic Channels: littoral cells

# Inflammation

1<sup>st</sup> line of defense: Macrophages

2<sup>nd</sup> line of defense: Neutrophils

3<sup>rd</sup> line of defense: Second macrophage  
invasion

4<sup>th</sup> line of defense: increased production of  
granulocytes and monocytes by bone  
marrow

# Feedback control of the macrophage and Neutrophil responses

