Wondershare EdrawMind

intro lab

- immunohematology
  - refers to
    - the serologic, genetic, biochemical, and molecular study of antigens associated with membrane structures on the blood cells
    - the immunologic properties and reactions of blood components and constituents.
- Transfusion medicine
  - encompassing all aspects of:
    - blood donation.
    - blood component preparation.
    - blood cell serology.
    - blood transfusion therapy.
  - divided between
    - Blood centers
      - recruit and collect blood from donors
      - manufacture and distribute blood components.
    - Transfusion services
      - perform pretransfusion compatibility testing (blood grouping and cross match),
      - select and issue blood components for patients
      - provide medical support for blood transfusion.
- blood bank
  - storage of blood cells
    - Units of WB and packed RBC are both kept refrigerated at 33.8 to 42.8 °F (1.0 to 6.0 °C), with maximum permitted storage periods of 35 and 42 days respectively.
    - Platelets have a shelf life of 5 to 7 days. Platelets are stored at room temperature (72 °F or 22 °C) and must be rocked/agitated
  - When keeping blood tube in standing position
    - a layer between the red cells and the plasma is formed and referred to as the buffy coat
      - is sometimes removed to make platelets and WBC for transfusion.
  - plasma
    - ifs frozen promptly and is intended for transfusion, it is typically labeled as fresh frozen plasma.
    - If it is intended to be made into other products, it is typically labeled as recovered plasma or plasma for fractionation.
  - important tube stopper color
    - red(plain)
      - no additive
      - Dept:tube blood bank
      - liquid post centrifugation
        - serum minus fibrinogen
      - clot(blood cells in fibrin clot)
      - test:type,Rh, Ab screen and crossmatch
    - Pink
      - additive:EDTA
      - Dept:gel blood bank
      - liquid post centrifugation
        - plasma contains fibrinogen
      - contains seperated WBCs,platelets(buffy coat) and RBCs
      - test:type,Rh, Ab screen and crossmatch
- haemocytometer
  - cheapest,simplest and most convenient method to count the number of cells
  - used with a microscope
  - normal WBC range:
    - children at one year: 6-18*10^9/L
    - children at 4-7 years: 5-15
    - adult:4-10