Pemeriksaan Screening Hemostasis Primer

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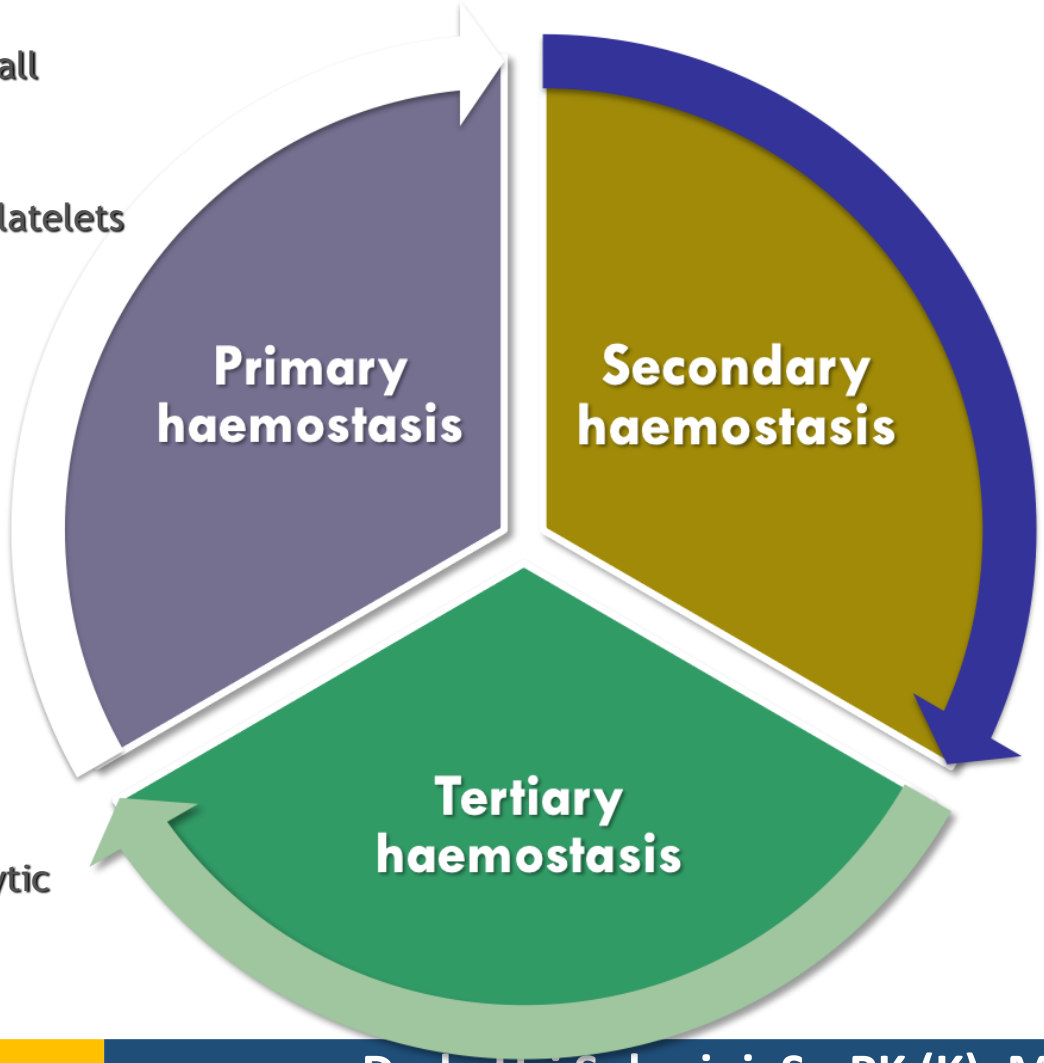
Haemostasis Screening tests

Laboratory test for primary haemostasis:

- Bleeding time (BT)
- Platelet count

Haemostasis mechanism

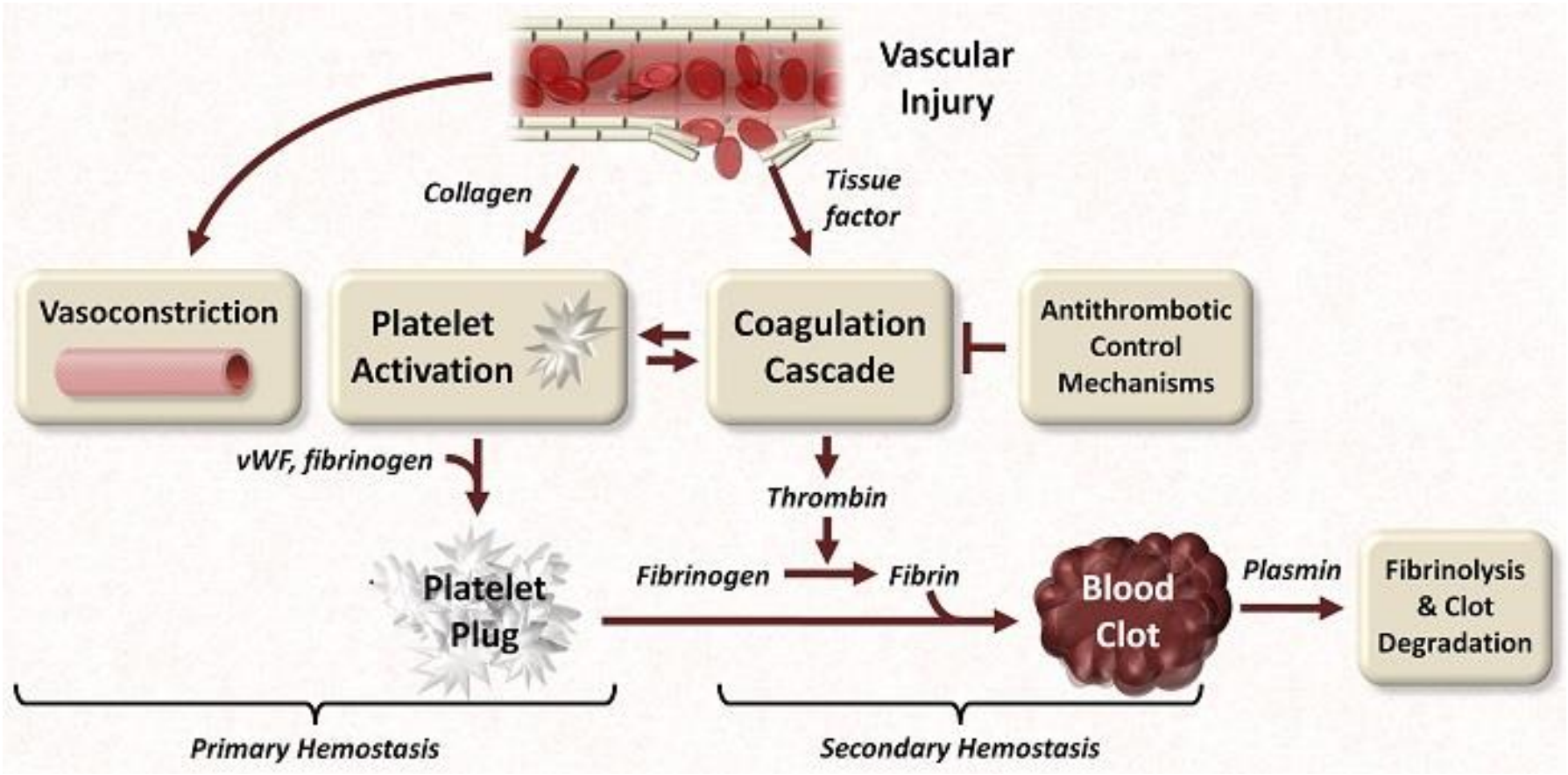
- descuamation & small injuries
  blood vessels
- vascular intima & platelets
- Rapid, short -lived response



- large injuries and other tissues
- platelets & coagulation system
- delayed, long-term response

- Control or regulatory mechanism
- involves fibrinolytic system

Major component of haemostasis



Screening test

- Bleeding time (BT)
- Platelet count
- Plasma Prothrombin Time (PPT) / PT
- Activated Partial Thromboplastin Time (APTT)
- Thrombin Time (TT)

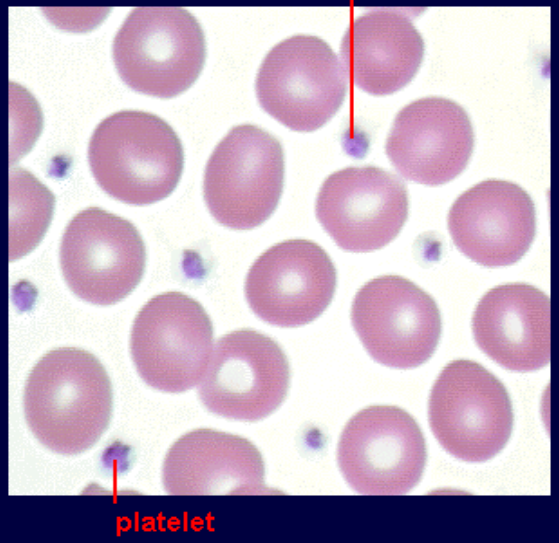
Platelet Count

- Determines the amount of platelet in blood volume
- Could be manually or using blood analyzer
- Reference range: 150,000-450,000 / uL

Platelet morphology

- When examining peripheral blood smears, platelet size and morphology should be observed
- Normal platelets are seen to contain a variable number of azurophilic granules concentrated in the center and surrounded by a clear area

Platelets



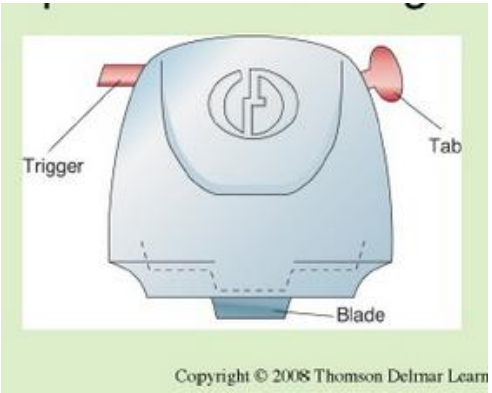
Key features :

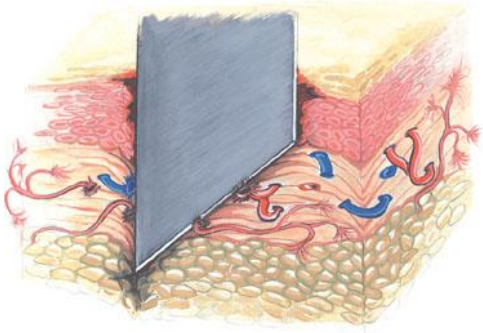
- Round or oval
- Size: 1.5 to 4 microns in diameter
- Nucleus:
  - absent
- Cytoplasm:
  - pale blue cytoplasm
  - purple granules

Menu Back

Bleeding Time

- A sharp skin puncture is made and bleeding time is noted
- It measures interaction between platelets and injured vascular endothelium
- Reference value: 1-7 minutes
- Prolonged values are found in some vascular defects, qualitative and quantitative platelet abnormalities





Bleeding Time (BT)

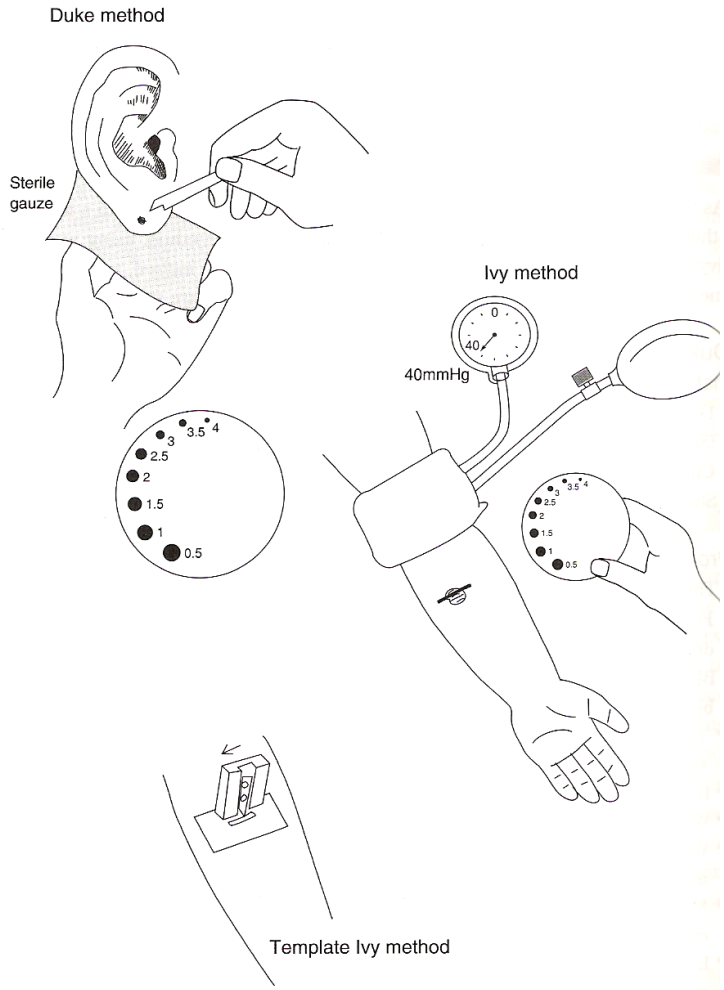
- **Purpose:**

  to screen patients with platelet dysfunction

- **Principle:**
  - The bleeding time is time (in minutes) that it takes for bleeding to cease from a small, superficial wound made under standardized condition
  - The bleeding time is mainly affected by primary hemostatic mechanism (platelet number & function), but is also affected by a variety other conditions

Bleeding time

- Duke method
- Ivy method
- Template Ivy method



Methods of bleeding time

- **Duke method**
  - using an ear lobe
  - normal range: 1-3 minutes
  - the reproducibility is poor

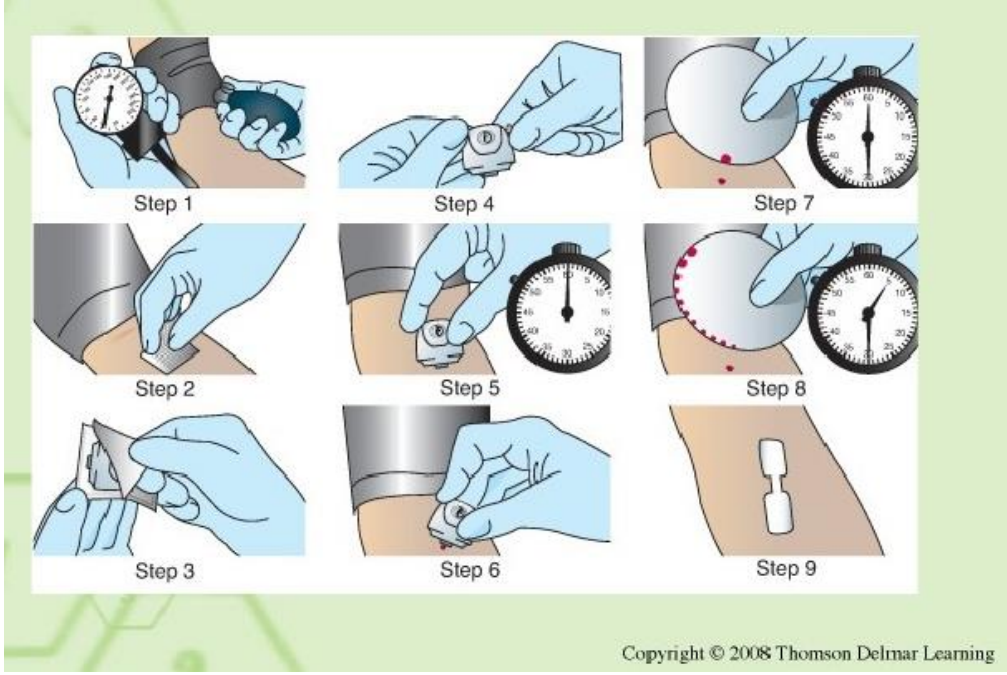
- **Ivy method**
  - the skin of hand surface of forearm is incised
  - vein pressure is standardized by pressuring constantly to the upper arm
  - normal range: 1-7 minutes

- **Template Ivy method**
  - a template and fixation plate for blade are used instead of a blade make a constant incision
  - normal range: 2-7 minutes (with 9 mm incision)

Ivy tempate bleeding time

Standardize the method → Template Method

- **involves the use of an automatic blade which makes a standard-sized incision (approximately 6mm in length x 1mm in depth) on the volar aspect of the forearm**



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Thank You ☺