



**TRANSMEDCON 2016**

Safe Blood - Healthy India

सुरक्षित रक्त - हर जीवनदायिणी रूढ़ि से स्वस्थ भारत

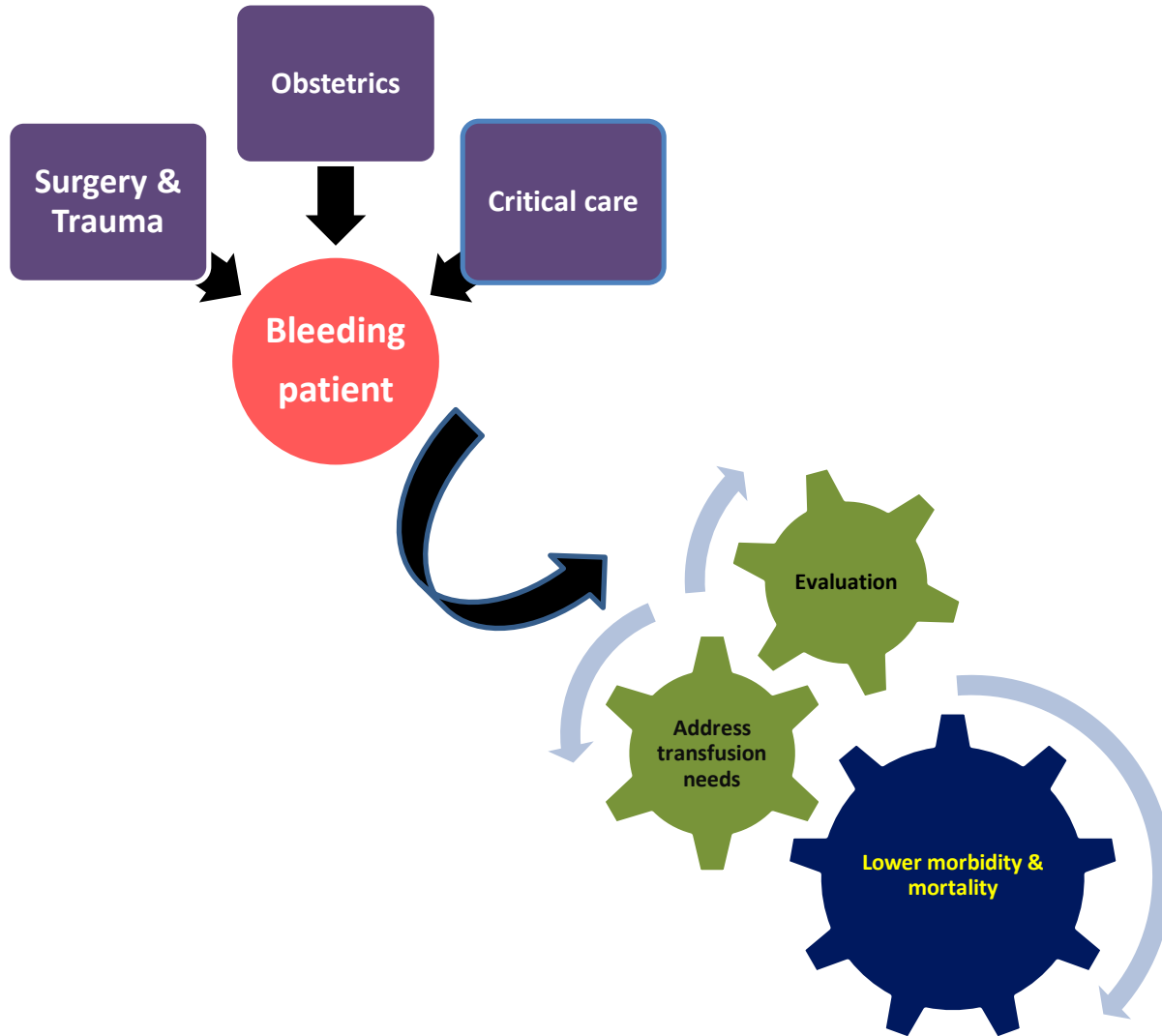
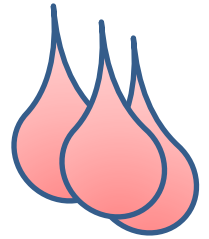


# **Bleeders- Is there a meeting point between thromboelastogram and traditional tests of coagulation: An Observational study**

**Subbaiah RM, Snehil Kumar, Vikram Mathews, Biju George,  
Joy J Mammen, Sukesh C Nair, Dolly Daniel**

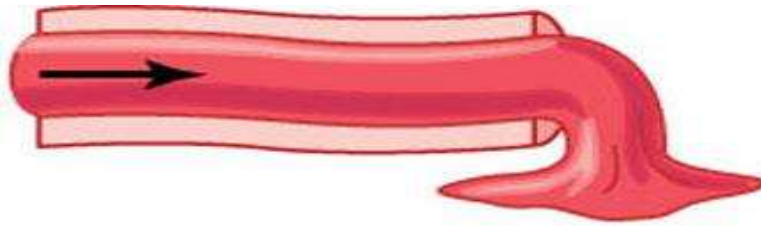
**Christian Medical College, Vellore, India**

# Introduction

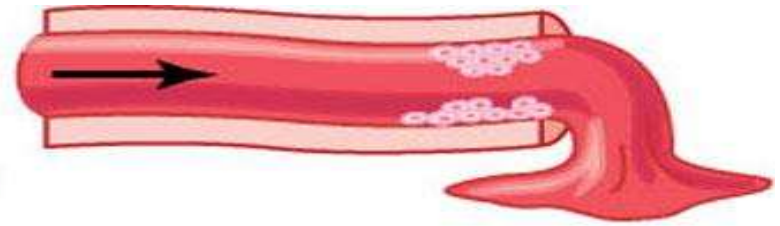


**Remains a challenge!**

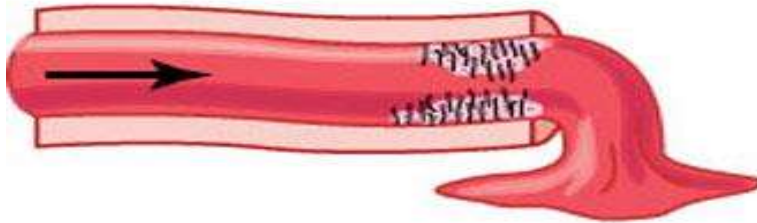
# The haemostatic process



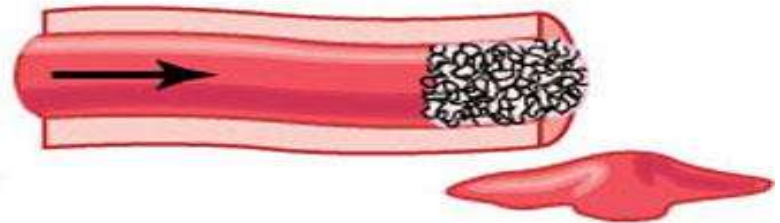
1. Severed vessel



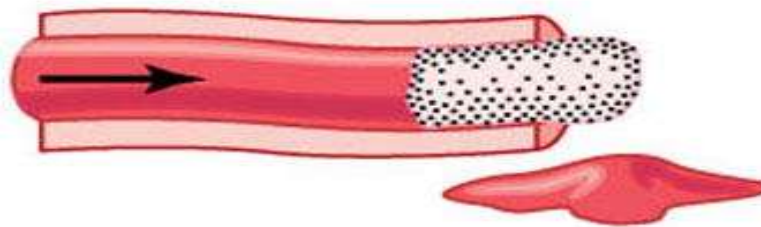
2. Platelets agglutinate



3. Fibrin appears

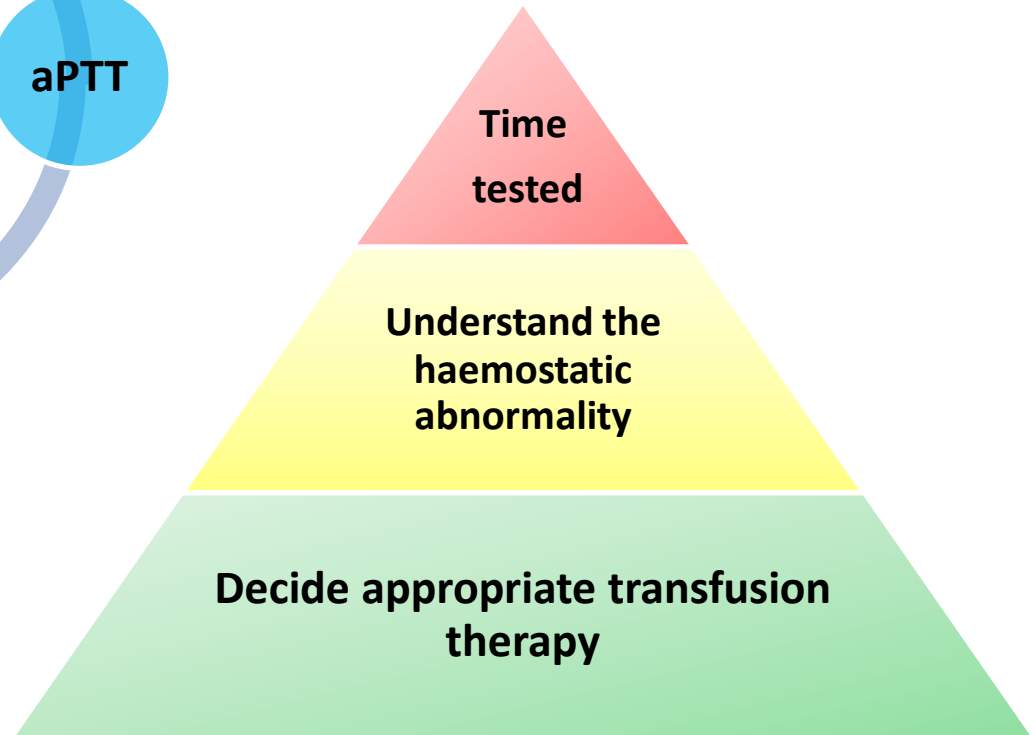
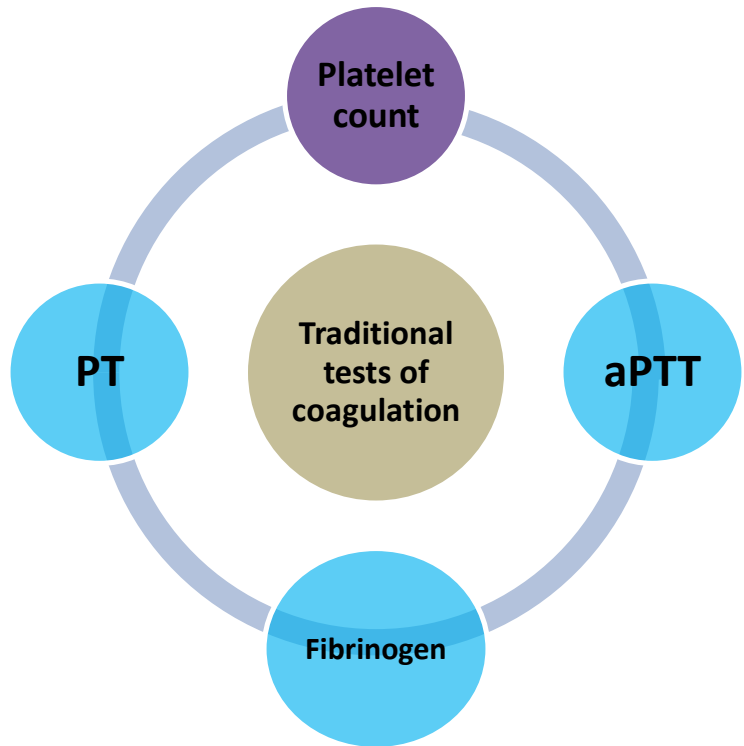


4. Fibrin clot forms

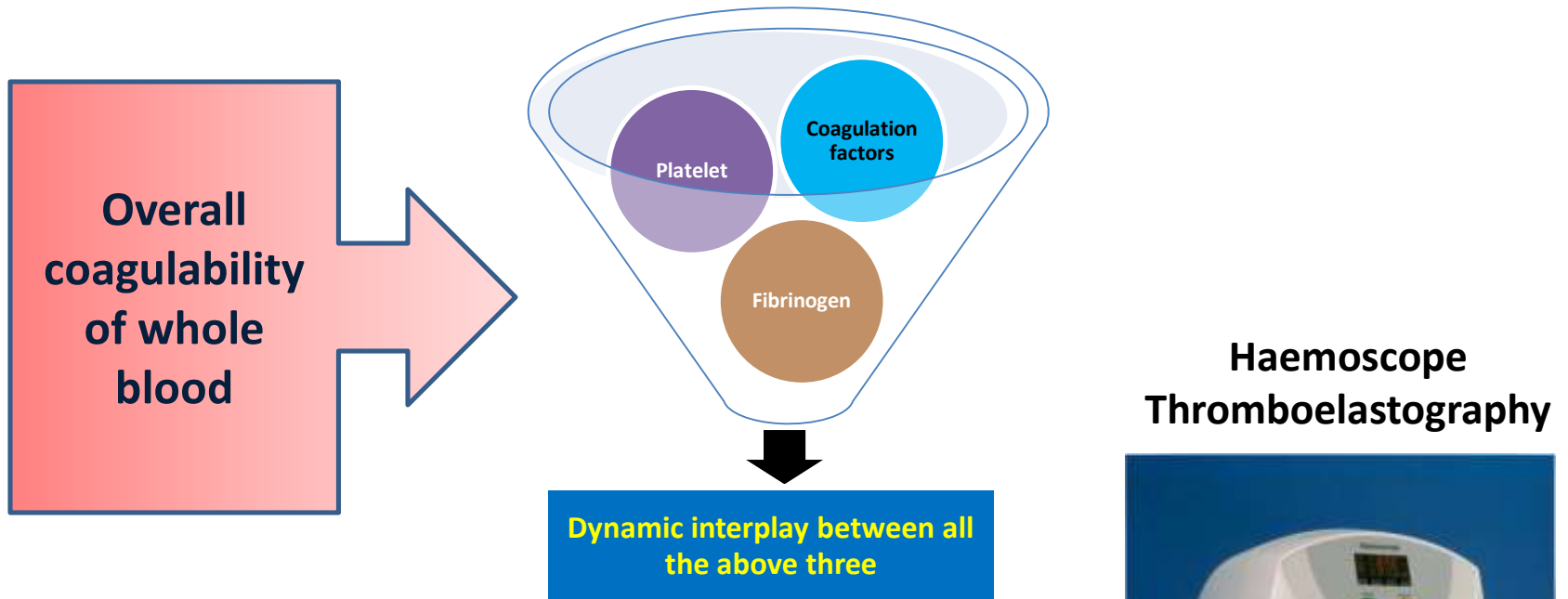


5. Clot retraction occurs

# Traditional tests of coagulation



# Global haemostatic tests

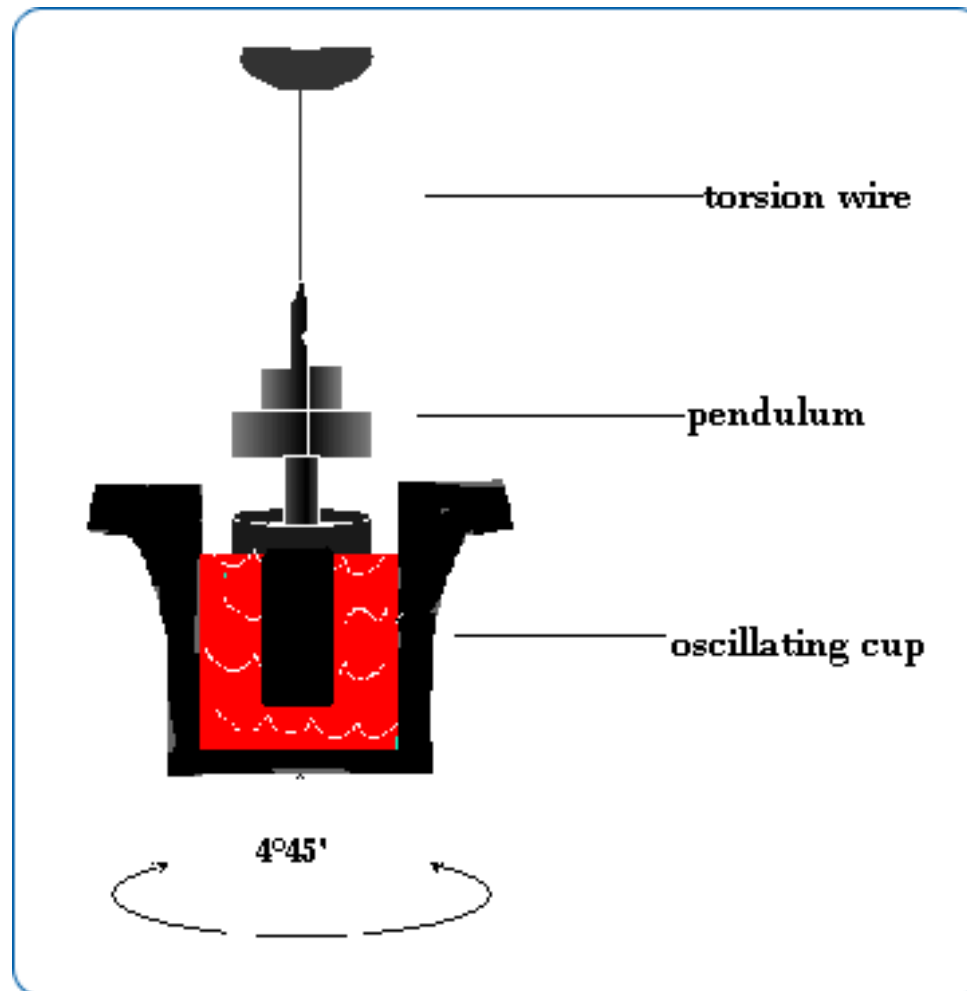


Haemoscope  
Thromboelastography

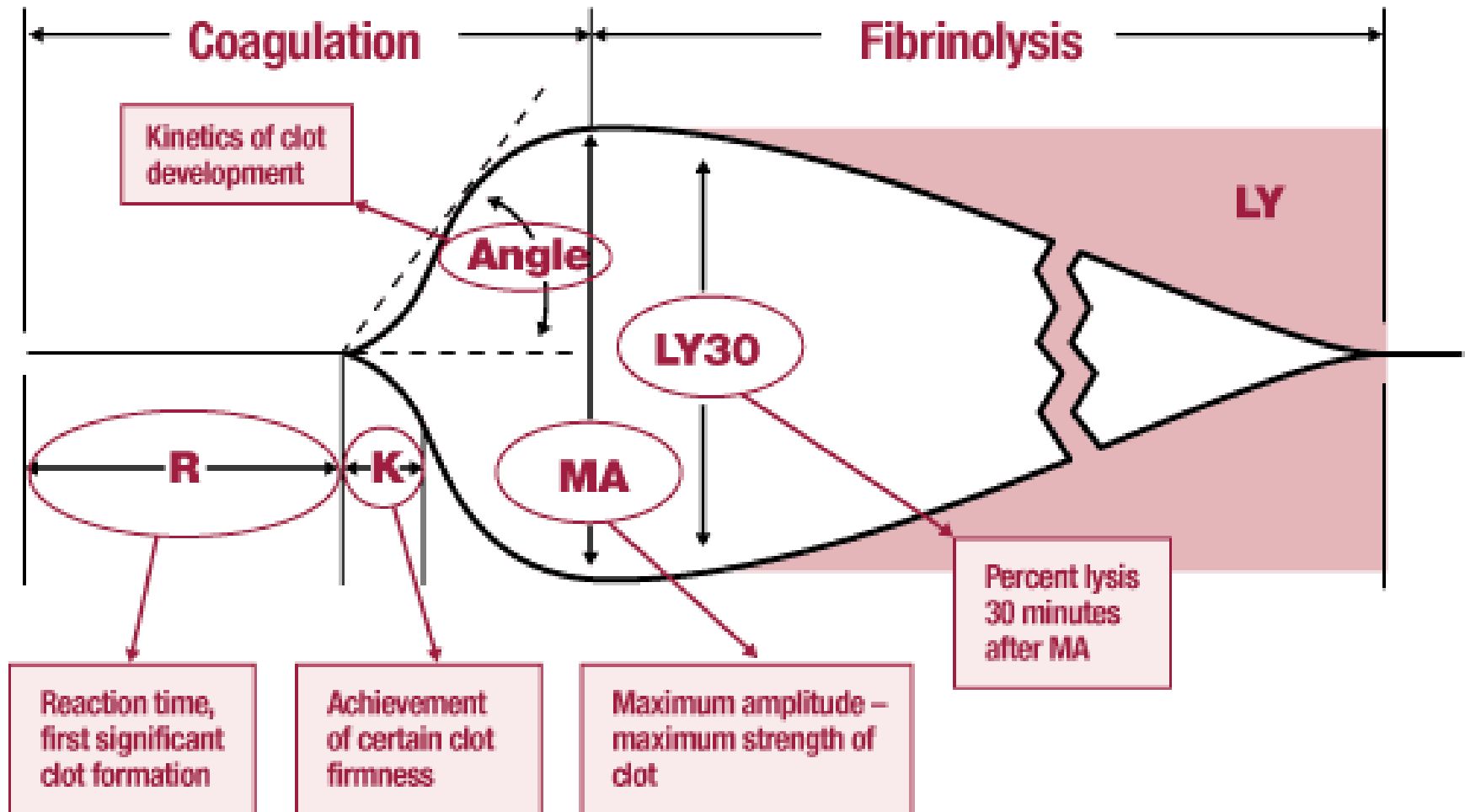


The newer point of care testing

# TEG principle

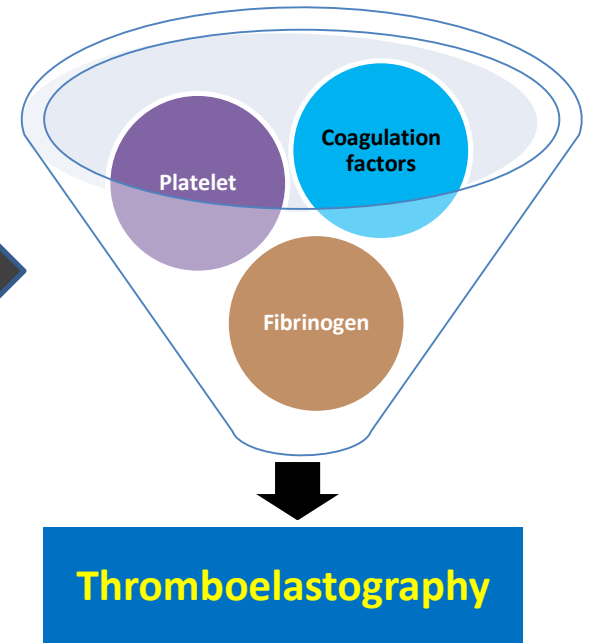
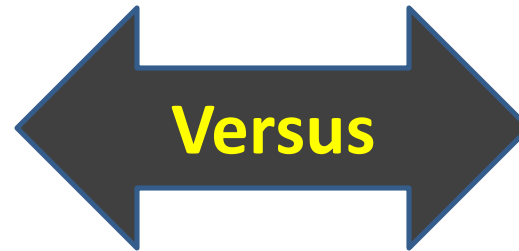
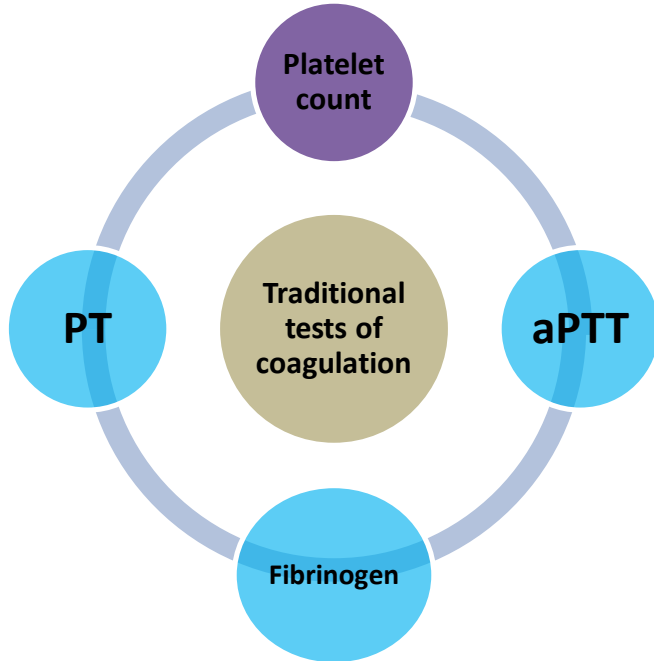


# Thromboelastogram



# Aim

Bleeding in Surgical & critically ill non-transplant pts

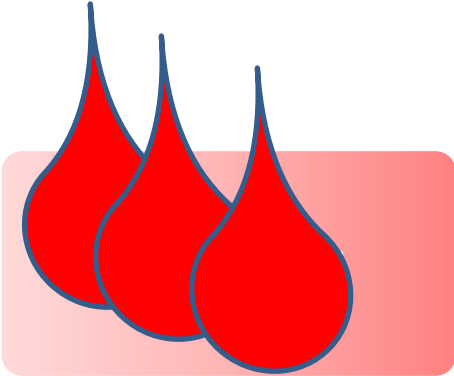




# Materials & methods

- **Retrospective** study
- Over a period of **4 months** (Sep 2015- Jan 2016)
- **350 patients** who were assessed for bleeding
  - both TEG and traditional tests of coagulation ordered at the same time
  - to decide on appropriate blood component transfusion
- The patient groups were not restricted except for **liver transplant** patients who were **excluded**

# Workflow



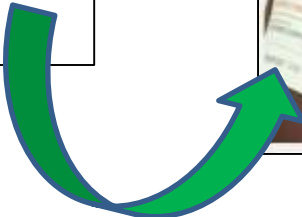
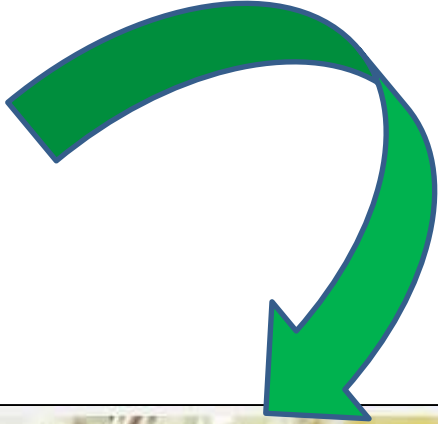
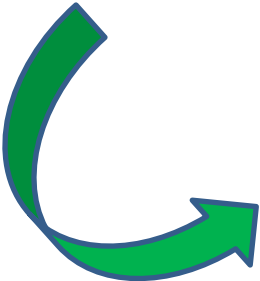
Traditional tests  
of coagulation

TEG



Follows up the report

Transfusion medicine  
duty physician



# Beckman Coulter DxH 800

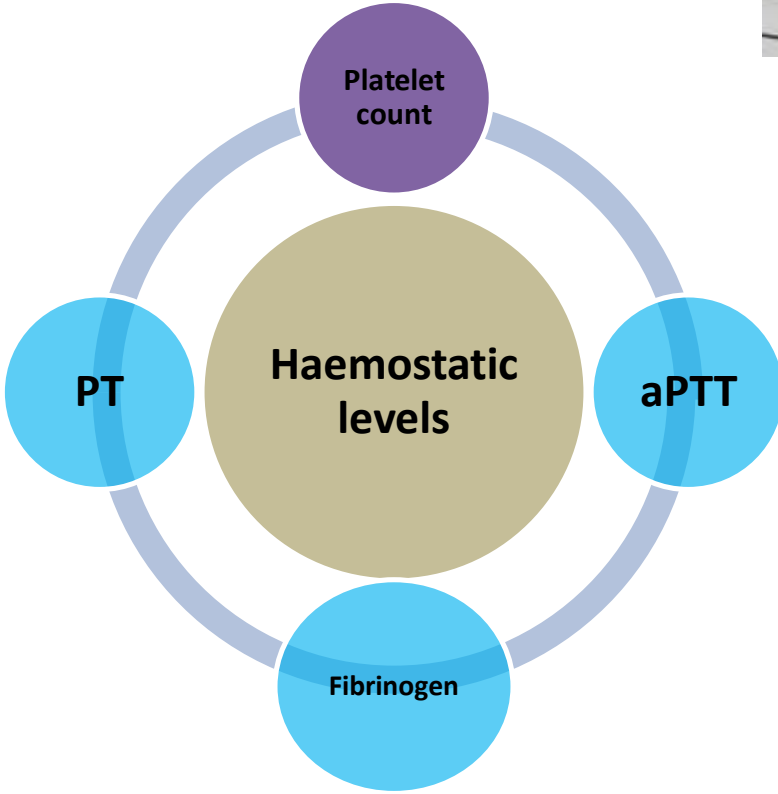


# Sysmex CS-2000i



**> 50000/cu.mm**

**10-12.5 sec**



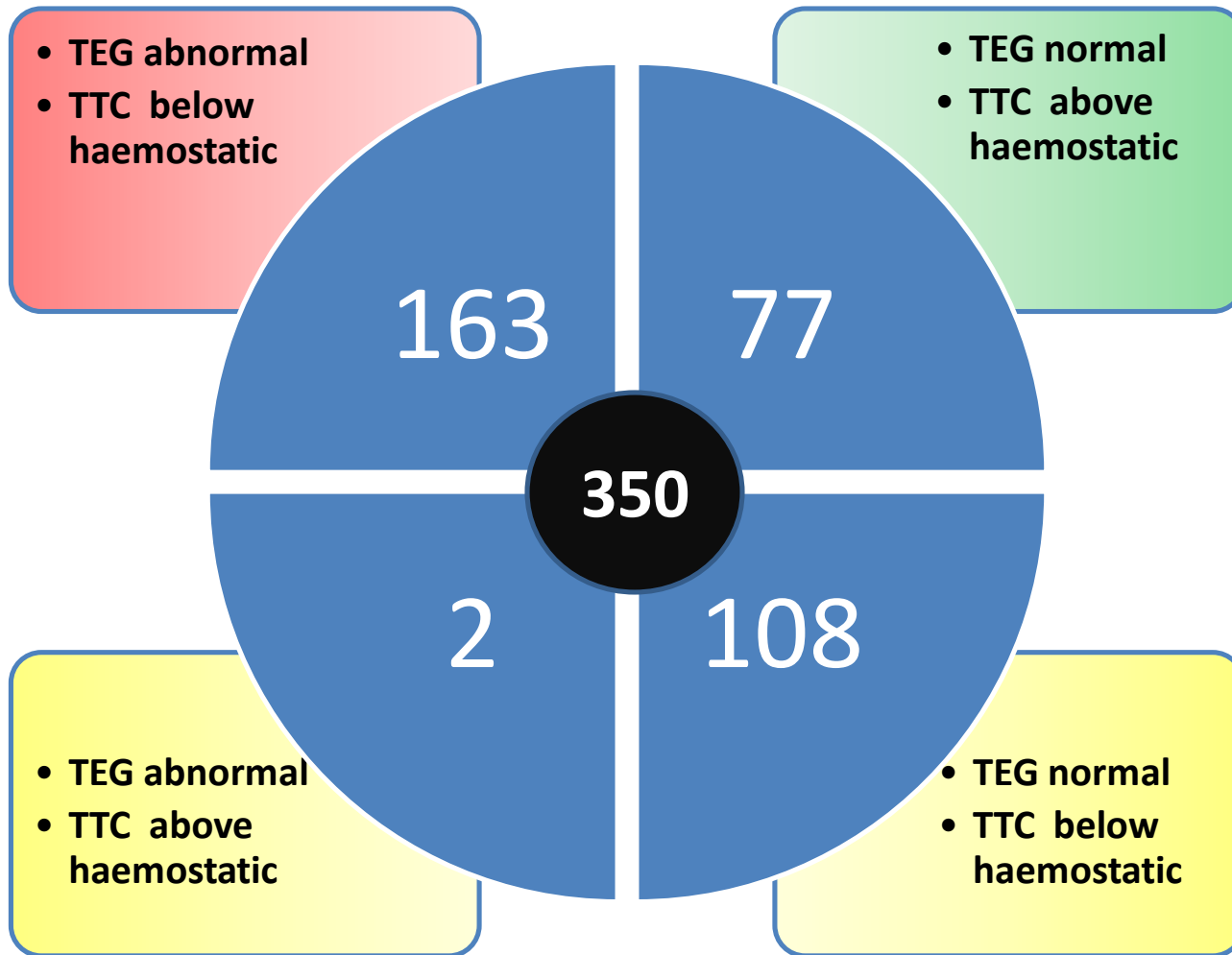
**27.6-42.4 sec**

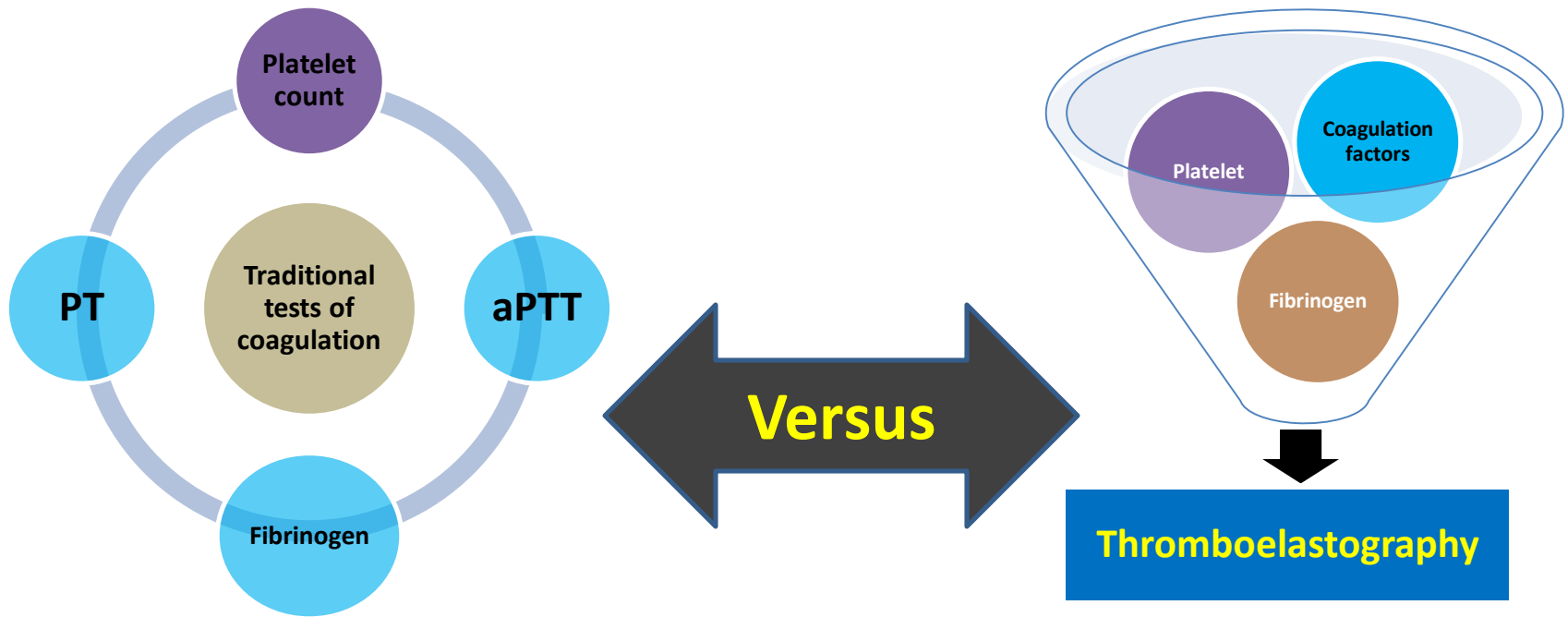
**> 100 mg%**

# TEG parameters

- done on a Haemoscope TEG analyzer
  - R time(3-8 min)
  - K time(1-3 min)
  - alpha angle(55-78 degrees)
  - Maximum amplitude(51-69mm)
  - Maximum lysis at 30 min(0-8%)

# Results





**Concordance: 240/350- 68.5%**

**Discrepancy: 110/350- 31.5%**

# Conclusion

