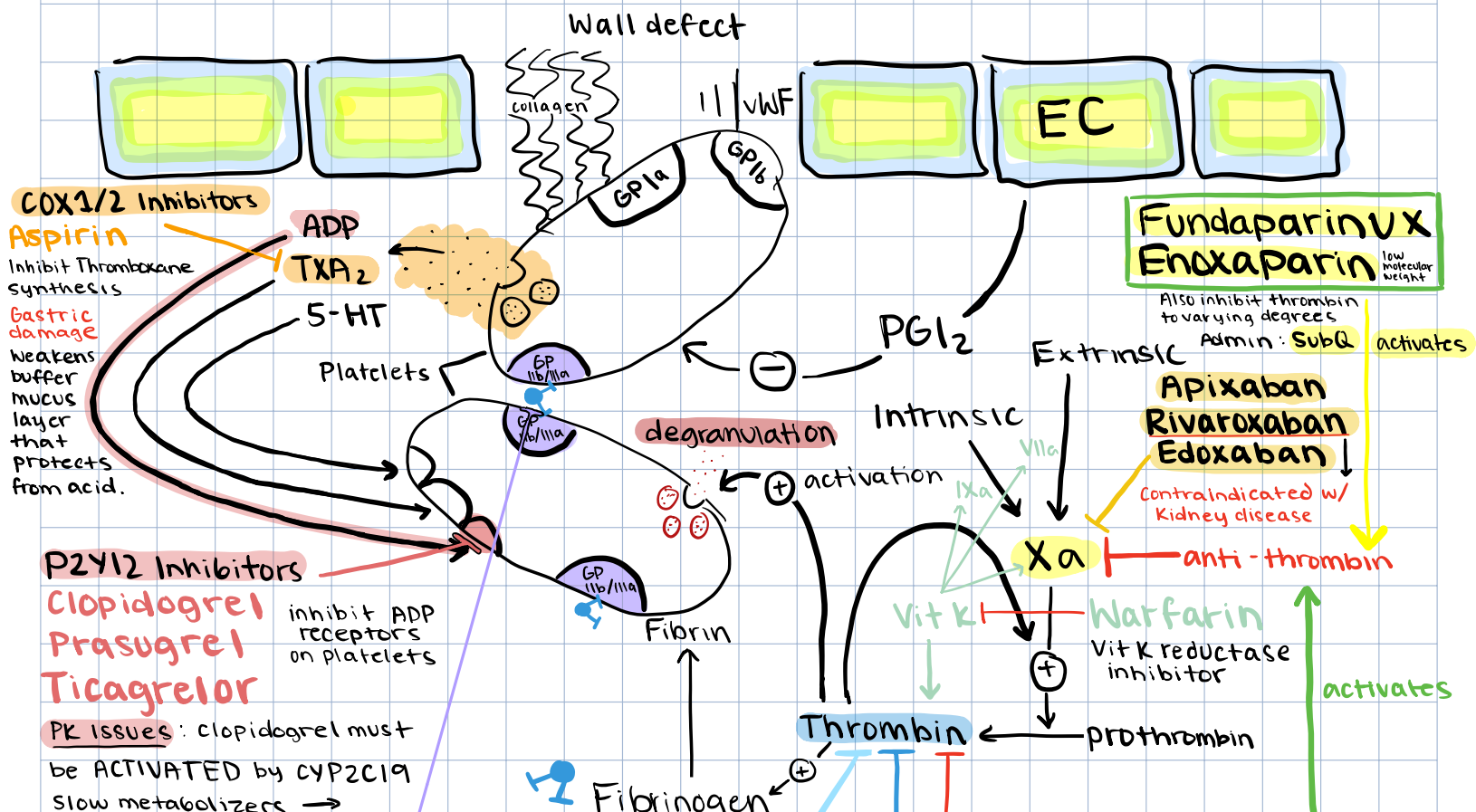
GOALS of venous thromboembolism treatment:

1. Prevent thrombus extension
2. Prevent embolization
3. Prevent Recurrance
4. Reduce mortality

Clot formation involves platelet aggregation and thrombin activation



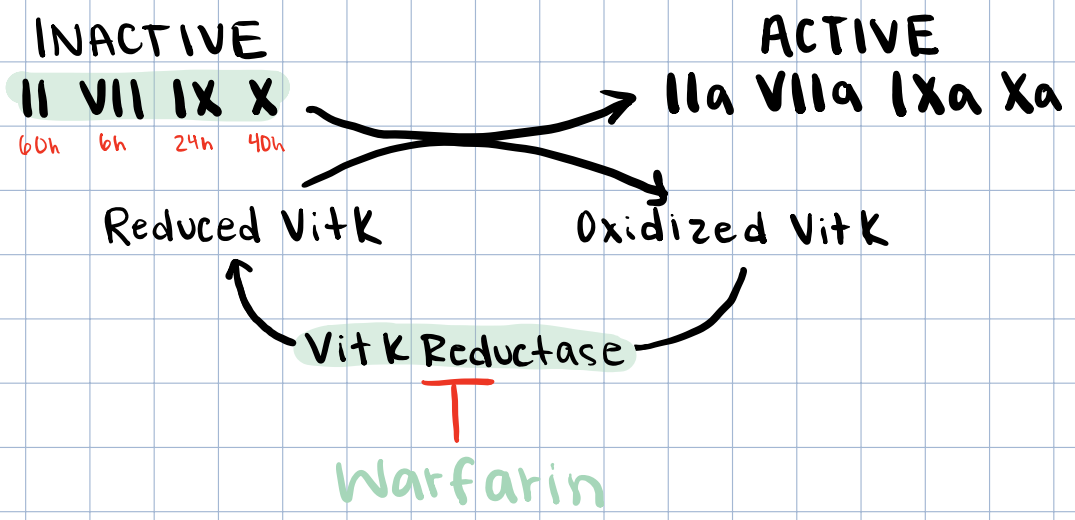
PK Issues: clopidogrel must be ACTIVATED by CYP2C19
Slow metabolizers → reduced therapeutic effect
*62% of people don't react predictably

CLOT BUSTERS: Plasminogen activators

Alteplase - plasminogen degrades fibrin clot as wounds heal. t-PA = tissue plasminogen activator

Meds are synthetic t-PAs. Bleeding risk - don't give to pts where clotting is important
*not given for strokes caused by cerebral hemorrhage

WARFARIN - Vitamin K Reductase Inhibitor



PK issues:

- Slow onset time → often needs heparin bridge
- Low Vd, high plasma protein binding → NSAIDs increase free Warfarin.

Non-therapeutic effects:

- inhibits anti-clotting factors, Proteins S and C (8 hr half life)
  - ↳ may produce paradoxical short-term increase in clot risk.

Immediate pro-clotting effect AND delayed anti-clotting effect

- thrombosis
- skin necrosis
- other clotting events

$CHADS_2$ Score to determine risk in Afib

Patient specific factors: VKORC2 and CYP2CP polymorphisms affect warfarin dosing. Amiodarone.

INR = 2.0-3.3

Variability in diet makes Warfarin dosing hard

Toxicities: PREGNANCY CATEGORY X

Birth defects - nasal hypoplasia, depressed nasal bridge, groove between nostril and nasal tip, bone defects, shortened fingers, low birth weight, intellectual disability