

Too many platelets: Keep calm and trend on.

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Objectives:

At the end of this presentation, participants will be able to:

- Generate a differential diagnosis for new thrombocytosis in a patient.
- Initiate the diagnostic work up for a patient with new thrombocytosis.
- Recognize when to consult hematology for possible myeloproliferative neoplasm.

KEY POINT #1

Initial approach to patients with new thrombocytosis

- What is the clinical context?
 - Routine BW? Inpatient vs Outpatient? Acute illness? Infection?
- Is the thrombocytosis transient or sustained?
 - Don't jump to conclusions with one CBC reading.
- Majority of patients with new thrombocytosis are reactive rather than clonal in nature.



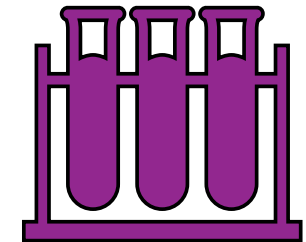
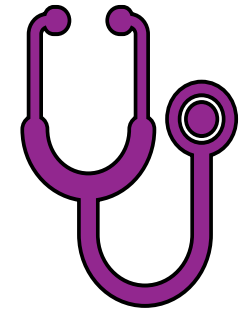
One of the most useful diagnostic tools for abnormal PLT counts is *time and patience*
(*especially in inpatients*)



KEY POINT #2

Outpatient evaluation: Assess for spurious or secondary thrombocytosis

- CBC with smear (smear will rule out spurious thrombocytosis)
 - Microcytic anemia?
 - Leukocytosis?
- Iron deficiency (Ferritin<30 or TSAT<20%)
- Inflammation (H&P; CRP/ESR)
 - Inflammatory bowel disease?
 - Rheumatoid arthritis?
 - Connective tissue disease?
- Infections (H&P; viral serologies)
 - Acute infectious symptoms?
 - Chronic infections? (Hep B, C)
- Malignancy (H&P; cancer screening)
- Splenectomy



KEY POINT #3

Extreme thrombocytosis: PLT > 1,000-1,500

- Reactive thrombocytosis remains most common etiology.
- **Common question:** Do we need to start empiric ASA for thromboprophylaxis?
- **Answer:** It's complicated...
 - No evidence for empiric ASA use in *secondary* thrombocytosis, regardless of PLT count.
 - Clotting risk in clonal thrombocytosis is related to inflammatory nature of disease rather than the PLT count.
 - Extreme thrombocytosis further complicated by risk of ***acquired von willebrand disease and increased bleeding.***
- **Thromboprophylaxis** should be guided by clinical context and risk factors for thrombosis/bleeding in.



Extreme thrombocytosis with PLT>1,000 associated with ***increased bleeding risk***



KEY POINT #4

Unexplained Thrombocytosis:

When is early referral to Hematology warranted?

- Worrisome findings on CBC (blasts, leukoerythroblastosis)
 - Leukoerythroblastosis = WBC left shift (immature granulocytes), NRBCs, tear drop cells
 - Can be seen with myelofibrosis, infiltrative process in marrow, significant marrow stress
- Unexplained constitutional symptoms (fever, sweats, weight loss)
- History of unusual thrombotic events (arterial or venous)
 - <45yo, unprovoked/recurrent DVTs, unusual sites (splanchnic veins, portal veins), multiple sites
- Splenomegaly
- Extreme thrombocytosis (PLT>1000)

Blasts = phone a friend
(or otherwise concerned)



Otherwise, send a consult
(or via e-consult if unsure)



For all other asymptomatic patients with unexplained thrombocytosis (no secondary causes found):

Trend the PLT count for 6 months with CBC every 1-3 months.

If persistent, consult Hematology

