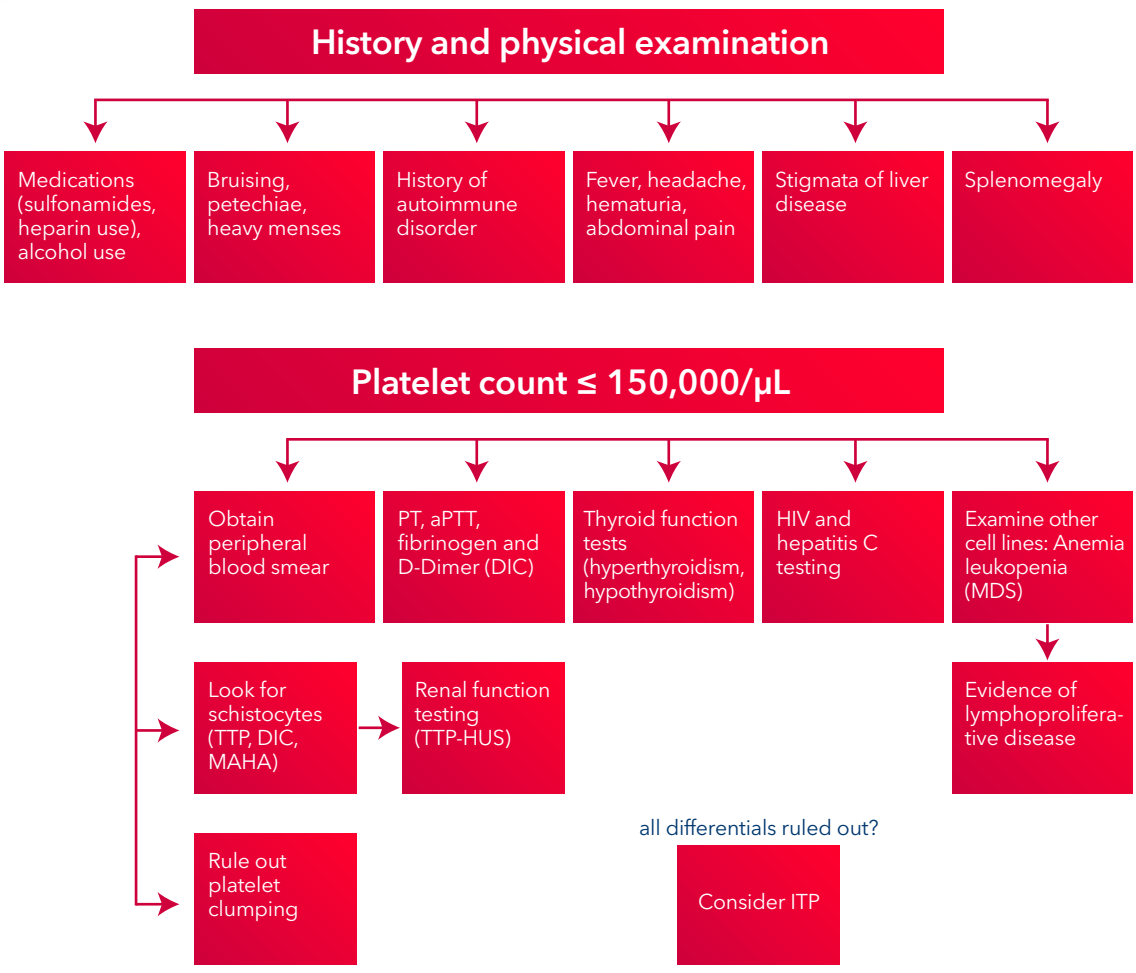
Screening and Diagnosis of ITP



AN APPROACH TO THE WORKUP OF THROMBOCYTOPENIA
PT: prothrombin, aPTT- activated partial thromboplastin time, DIC: disseminated intravascular coagulation, TTP: thrombotic thrombocytopenic purpura, HUS: hemolytic uremic syndrome, MAHA: microangiopathic hemolytic anemia, MDS: myelodysplastic syndrome

Updated international consensus report on the investigation and management of primary immune thrombocytopenia

Basic evaluation in all patients	Tests of potential utility in the management of an ITP patient	Tests of unproven or uncertain benefit*
Patient history	Glycoprotein-specific antibody (can be used in difficult cases, has poor sensitivity, and is not a primary diagnostic test)	TPO level
Family history	Anti-phospholipid antibodies (including anti-cardiolipin and lupus anticoagulant) if there are clinical features of antiphos-pholipid syndrome	Reticulated platelets/immature platelet fraction
Physical examination	Anti-thyroid antibodies and thyroid function	
CBC and reticulocyte count	Pregnancy test in women of childbearing potential	Bleeding time
Peripheral blood film	Antinuclear antibodies	Serum complement
Quantitative Ig level measurement**	Viral PCR for EBV, CMV, and parvovirus	
Blood group (Rh)	Bone marrow examination	
HIV***	Direct antiglobulin test	
HCV***	H pylori***	
HBV		

CMV, cytomegalovirus; EBV, Epstein-Barr virus; PCR, polymerase chain reaction; PTT, partial thromboplastin time; Rh, rhesus; TPO, thrombopoietin. *These tests have no proven role in the differential diagnosis of ITP from other thrombocytopenias and do not guide patient management. **Quantitative Ig level measurement should be considered in children with ITP and is recommended in children with persistent or chronic ITP as part of the reassessment evaluation.***Recommended by the majority of the panel for adult patients in the appropriate geographic setting.

Differential Diagnosis of ITP

Previously diagnosed or possible high risk for conditions that may be associated with immune thrombocytopenia (eg, infections [HIV, HCV, HBV]), autoimmune/immunodeficiency disorders (CVID, systemic lupus erythematosus, or APS), and malignancy (eg, lymphoproliferative disorders)
Liver disease (including cirrhosis or portal hypertension)
Splenomegaly
Drugs (prescription or nonprescription), including heparin, alemtuzumab, PD-1 inhibitors, abciximab, valproate, alcohol abuse, consumption of quinine (tonic water), exposure to environmental toxins, or chemotherapy
Bone marrow diseases, including myelodysplastic syndromes, leukemias, other malignancies, metastatic disease, myelofibrosis, aplastic anemia, megaloblastic anemia, myelophthisis, and Gaucher disease
Recent transfusions (rare possibility of posttransfusion purpura) and recent vaccinations
Inherited thrombocytopenia: TAR syndrome, radioulnar synostosis, congenital amegakaryocytic thrombocytopenia, Wiskott-Aldrich syndrome, MYH9-related disease, Bernard-Soulier syndrome, type IIB VWD, or platelet-type VWD
Other thrombocytopenic disorders (DIC, TTP, HUS, Evans syndrome)

Differential diagnoses of ITP and possible alternative causes of thrombocytopenia identified by patient history.
APS : antiphospholipid syndrome; CVID: common variable immunodeficiency; DIC: disseminated intravascular coagulation; HUS: hemolytic-uremic syndrome; MYH9: myosin heavy chain 9; PD-1: programmed cell death protein 1; TAR: thrombocytopenia-absent radius; TTP: thrombotic thrombocytopenic purpura; VWD: von Willebrand disease.

REFERENCES:
- Provan, Drew, et al. "Updated international consensus report on the investigation and management of primary immune thrombocytopenia." Blood advances 3.22 (2019): 3780-3817.
- Zainal, Abir, Amr Salama, and Richard Alweis. "Immune thrombocytopenic purpura." Journal of community hospital internal medicine perspectives 9.1 (2019): 59-61.