MPN CONNECT

International Working Group for Myeloproliferative Neoplasms Research and Treatment (IWG-MRT) Diagnostic Criteria for Post–PV MF and Post–ET MF[1]

Polycythemia vera (PV) and essential thrombocythemia (ET) progress to myelofibrosis (MF) at a rate of 10% and <4% over 10 years, respectively.[2] Careful monitoring of patients with PV and ET can facilitate early identification of disease progression to Post–PV MF and Post–ET MF.

Check off the major and minor criteria corresponding to a patient's clinical presentation. Add the number of check marks in the HIGHLIGHTED criteria in each column and compare the result against the totals required to meet IWG-MRT guidelines for diagnosis of Post–PV MF and Post–ET MF.

			POST–PV MF		POST–ET MF	
Source		**Criteria**	**Major criteria**	**Minor criteria**	**Major criteria**	**Minor criteria**
Patient history		Previous diagnosis of WHO-defined PV	○	○	○	○
		Previous diagnosis of WHO-defined ET	○	○	○	○
Clinical examination		Increasing splenomegaly[a]	○	○	○	○
		Development of at least 1 of the following constitutional symptoms: >10% weight loss in 6 months, night sweats, or unexplained fever	○	○	○	○
Bone marrow biopsy		Bone marrow fibrosis[b]	○	○	○	○
OTHER LAB RESULTS	**Complete blood count**	Anemia[c]	○	○	○	○
	Biochemistry	Increased serum LDH[d]	○	○	○	○
	Blood film (smear)	Leukoerythroblastosis	○	○	○	○
TOTAL NUMBER OF HIGHLIGHTED CRITERIA ○ ○						
To meet IWG-MRT diagnostic criteria for this MPN »		Must have at least »	2	2	2	2

ET = essential thrombocythemia; IWG-MRT = International Working Group for Myeloproliferative Neoplasms Research and Treatment; LDH = lactate dehydrogenase; PV = polycythemia vera; MPN = myeloproliferative neoplasm; WHO = World Health Organization

[a]Either an increase in palpable splenomegaly of ≥5 cm (distance of the tip of the spleen from the left costal margin) or the appearance of a newly palpable splenomegaly.
[b]Grade 2-3 according to the European classification: diffuse, often coarse fiber network with no evidence of collagenization (negative trichrome stain) or diffuse, coarse fiber network with areas of collagenization (positive trichrome stain). Grade 3-4 according to the standard classification: diffuse and dense increase in reticulin with extensive intersections, occasionally with only focal bundles of collagen and/or focal osteosclerosis or diffuse and dense increase in reticulin with extensive intersections with coarse bundles of collagen, often associated with significant osteosclerosis.
[c]Below the reference range for appropriate age, sex, and altitude of residence. For Post–PV MF, sustained loss of requirement for phlebotomy in the absence of cytoreductive therapy is sufficient. For Post–ET MF, must be accompanied by ≥2 g/dL decrease from baseline hemoglobin level.
[d]Above reference level.

REFERENCES **1.** Barosi G. *Leukemia.* 2008;22:437-438. **2.** Tefferi A. *Am J Hematol.* 2008:83:491-497.

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