**Version 1.2024**
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NCCN Clinical Practice Guidelines in Oncology
(NCCN Guidelines®)

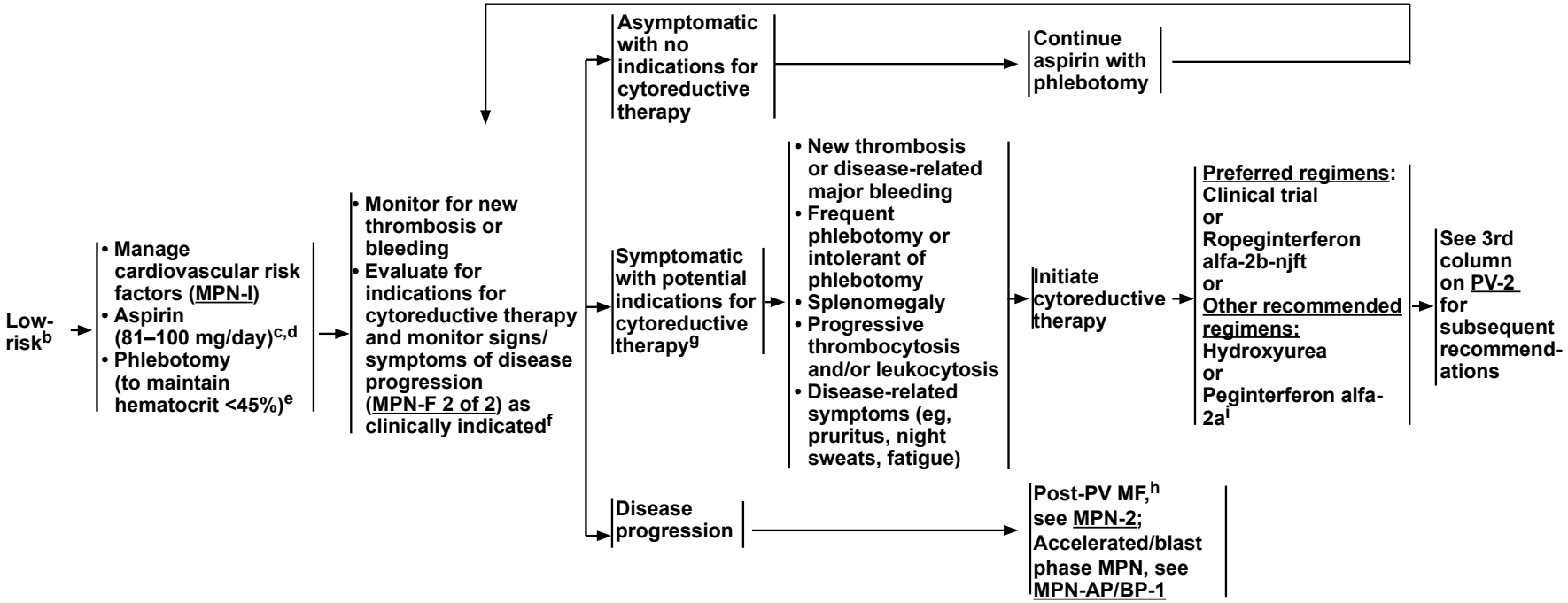
# Myeloproliferative Neoplasms

Overall management of Myeloproliferative Neoplasms is described in the full NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Myeloproliferative Neoplasms. Visit NCCN.org to view the complete library of NCCN Guidelines®.



NCCN National Comprehensive Cancer Network®

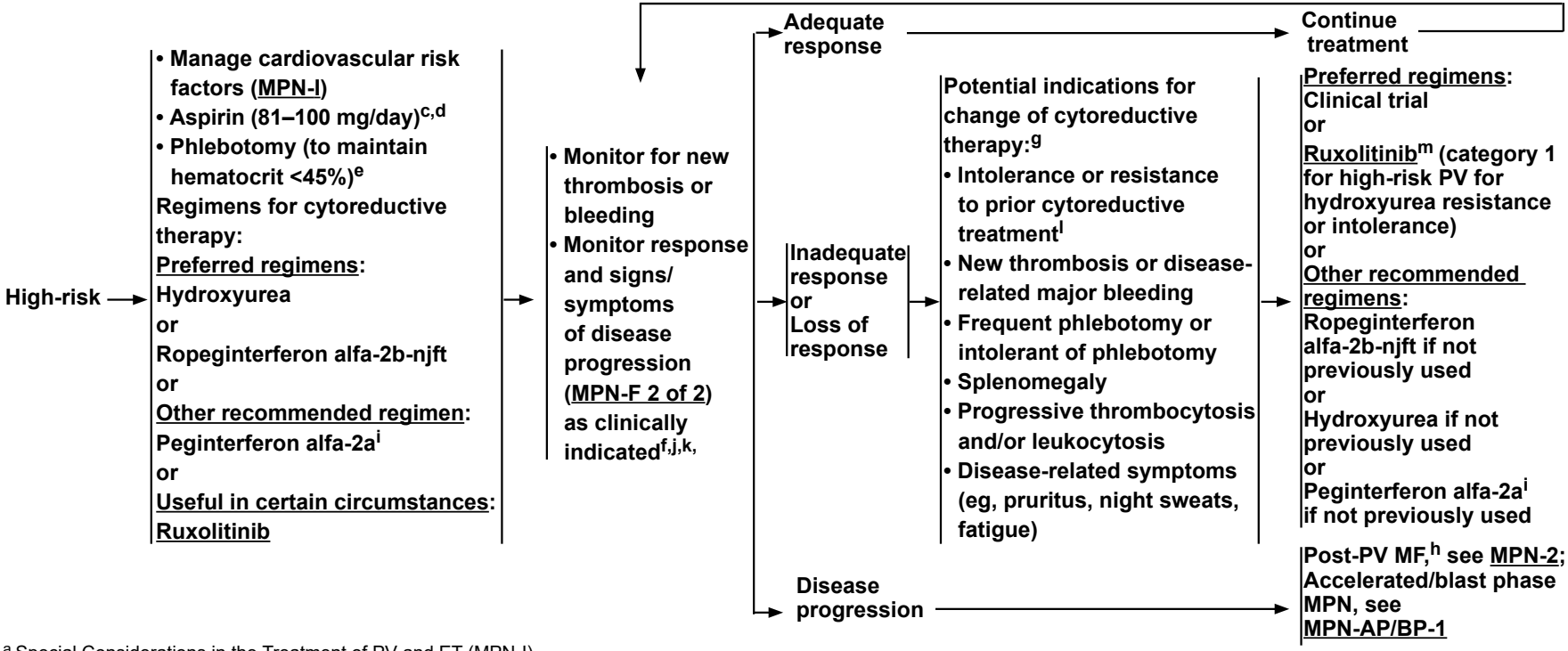
## TREATMENT FOR LOW-RISK POLYCYTHEMIA VERA[a]




[a] Special Considerations in the Treatment of PV and ET (MPN-I).
[b] Cytoreductive therapy is not recommended as initial treatment.
[c] Landolfi R, et al. N Engl J Med 2004;350:114-124.
[d] Aspirin twice daily may be considered for patients with refractory symptoms (Dillinger JG, et al. Thromb Res 2012;129:91-94; Pascale S, et al. Blood 2012;119:3595-3603).
[e] Hematocrit <45% is based on the data from the CYTO-PV study (Marchioli R, et al. N Engl J Med 2013;368:22-33). There may be situations in which a lower hematocrit cutoff may be appropriate and it should be individualized (eg, 42% for female patients and/or progressive symptoms).
[f] Supportive Care for Patients with MPN (MPN-G).
[g] Barbui T, et al. Leukemia 2018;32:1057-1069.
[h] See IWG-MRT (MPN-B), ICC, and WHO diagnostic criteria for post-PV MF (MPN-C).
[i] Peginterferon alfa-2a is an option for younger patients or in pregnant patients in need of cytoreductive therapy.

**Note: All recommendations are category 2A unless otherwise indicated.**
**Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.**

## TREATMENT FOR HIGH-RISK POLYCYTHEMIA VERA[a]




[a] Special Considerations in the Treatment of PV and ET (MPN-I).
[c] Landolfi R, et al. N Engl J Med 2004;350:114-124.
[d] Aspirin twice daily may be considered for patients with refractory symptoms (Dillinger JG, et al. Thromb Res 2012;129:91-94; Pascale S, et al. Blood 2012;119:3595-3603).
[e] Hematocrit <45% is based on the data from the CYTO-PV study (Marchioli R, et al. N Engl J Med 2013;368:22-33). There may be situations in which a lower hematocrit cutoff may be appropriate and it should be individualized (eg, 42% for female patients and/or progressive symptoms).
[f] Supportive Care for Patients with MPN (MPN-G).
[g] Barbui T, et al. Leukemia 2018;32:1057-1069.
[h] See IWG-MRT (MPN-B), ICC, and WHO diagnostic criteria for post-PV MF (MPN-C).
[i] Peginterferon alfa-2a is an option for younger patients or in pregnant patients in need of cytoreductive therapy.
[j] Response criteria were developed mainly for use in clinical trials. Clinical benefit may not reach the threshold of the 2013 IWG-MRT and ELN Response Criteria for PV (PV-A). Response assessment should be done based on the improvement of disease-related symptoms at the discretion of the clinician.
[k] While normalization of blood counts after initiation of treatment is usually a goal in clinical practice, it is not associated with long-term clinical benefit and there are no evidence-based data to recommend a target white blood cell (WBC) or platelet count for patients receiving cytoreductive therapy. In selected patients with a severe thrombotic event or other disease-related symptoms, normalization of blood counts might be an essential goal of treatment.
[l] Definition of intolerance/resistance to hydroxyurea (MPN-J).
[m] Ruxolitinib is FDA approved for the treatment of patients with PV who have had an inadequate response to or are intolerant of hydroxyurea. Ruxolitinib may have activity after inadequate response or loss of response to other agents besides hydroxyurea. See Discussion.

**Note: All recommendations are category 2A unless otherwise indicated.**
**Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.**

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| **Category 1** | Based upon high-level evidence, there is uniform NCCN consensus that the intervention is appropriate. |
| **Category 2B** | Based upon lower-level evidence, there is NCCN consensus that the intervention is appropriate. |

All recommendations are category 2A unless otherwise indicated.

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| **Preferred intervention** | Interventions that are based on superior efficacy, safety, and evidence; and, when appropriate, affordability. |
| **Useful in certain circumstances** | Other interventions that may be used for selected patient populations (defined with recommendation). |

All recommendations are considered appropriate.

**Note: All recommendations are category 2A unless otherwise indicated.**
**Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.**