



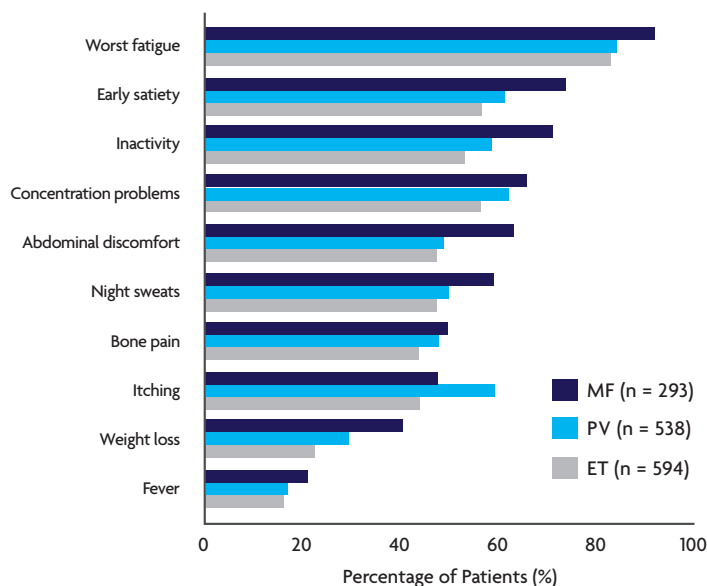
Implementing
a Quality
Intervention
to **Assess**
Symptom Burden
in Patients with
Myeloproliferative
Neoplasms (MPNs)

**A GUIDE FOR PHARMACY
DIRECTORS AND CLINICAL
PHARMACISTS**

Help your clinicians identify
patients with burdensome
disease-related symptoms

Patients with MPNs often have burdensome disease-related symptoms

Disease-Associated Symptoms in Patients with MPNs (N = 1425)^{1,a}



■ Numerous studies have demonstrated the burden of disease-related symptoms, such as fatigue, night sweats, itching, and bone pain in patients with MPNs¹⁻³

■ In a prospective study of symptom burden in patients with MPNs, the majority of patients reported multiple symptoms^{1,a}

- Fatigue carried the highest symptom intensity in patient ratings of symptom severity
- 68% of patients were currently receiving cytoreductive therapy, most commonly hydroxyurea

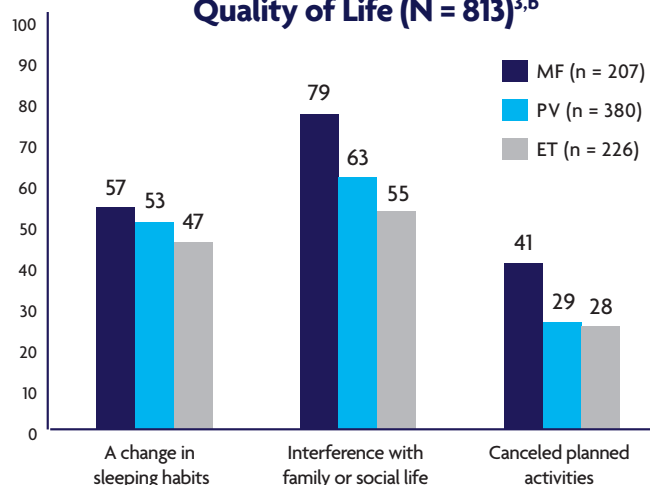
MPN-related symptoms may persist even in patients receiving active therapy.

MPN-related symptoms may impact quality of life

■ In a survey of patients with MPNs, many respondents reported that their MPN-related symptoms reduced their quality of life (MF, 81%; PV, 66%; ET, 57%)^{3,b}

■ This study highlights the importance of using surveys or questionnaires, or similar systematic approaches—to accurately capture patient-reported disease burden on a regular basis³

Impact of MPN Symptoms on Quality of Life (N = 813)^{3,b}



Symptoms of MPNs may increase over time, which is indicative of the progressive nature of these blood cancers.^{1,4}

^aThis prospective study included 1433 patients with MPNs who were queried on the 10 symptoms from the MPN-SAF TSS—worst fatigue, concentration problems, early satiety, inactivity, night sweats, itching, bone pain, abdominal discomfort, weight loss, and fever—scored on a scale of 0 (absent/as good as it can be) to 10 (worst imaginable/as bad as it can be).¹

^bThe MPN Landmark Survey, funded by Incyte Corporation, was a web-based questionnaire composed of 65 multiple-choice questions intended to help evaluate the patient disease burden in the MPN disease setting. A total of 813 patients in the US with a previous diagnosis of MF, PV, or ET completed the survey (MF, n = 207; PV, n = 380; ET, n = 226).³

^cData reflect the percentages of patient respondents who did not select each symptom in response to the question, “Which of these symptoms do you believe are the result of your MPN?” Data are from all respondents who reported experiencing each symptom (excluding those who had missing data).⁵

^dPatients with MF and ET had night sweats, and patients with PV had day or night sweats.⁵

Proactive symptom assessment is an important component of patient monitoring

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

recommend assessing symptoms at baseline and monitoring symptom status (stable, improved, or worsening) during the course of treatment.⁶ A progressive increase in symptom burden could be a sign of disease progression.

However, patients with MPNs may not recognize their symptoms are related to their cancer

Asking patients with MPNs contextual questions, such as these examples below, may help them recognize and express their symptom burden.

Common Symptoms That Patients May Not Recognize as Being Related to Their MPN^{5,c}

	FATIGUE	<p>What activities do you find are more difficult to perform as the day goes on?</p> <p>What things were you able to do 3 months ago that you struggle to do now?</p>
	DAY/NIGHT SWEATS^d	<p>How many times a week do you experience sweating at night that requires you to change your clothing or sheets?</p>
	ITCHING	<p>How often do you feel itchy during or after showering? Are there other times when you get itchy?</p> <p>How often in the past month have you noticed redness or evidence of scratching due to itchiness/irritation on your skin?</p>

Using an MPN-specific symptom assessment form, such as the MPN-10 (MPN-SAF TSS),¹ can be helpful to clinicians caring for patients with MPNs. The NCCN Guidelines® recommend using the MPN-10 form for the assessment of symptom burden at baseline and monitoring symptom status during the course of treatment.⁶ This form can be provided to patients as part of the intake process, and then used to document symptom severity in the patient's EHR over time.

Proactive symptom assessment at baseline as part of the intake process and regularly during treatment can be incorporated into an MPN quality initiative. A progressive increase in symptoms should prompt the medically integrated team to evaluate the patient more closely.^{4,6}

EHR, electronic health record; ET, essential thrombocythemia; MF, myelofibrosis; MPN, myeloproliferative neoplasm; MPN-SAF TSS, Myeloproliferative Neoplasm Symptom Assessment Form Total Symptom Score (MPN-10); NCCN, National Comprehensive Cancer Network; PV, polycythemia vera.

References: 1. Emanuel RM, Dueck AC, Geyer HL, et al. *J Clin Oncol*. 2012;30(33):4098-4103. 2. Geyer H, Scherber R, Kosiorek H, et al. *J Clin Oncol*. 2016;34(2):151-159. 3. Mesa R, Miller CB, Thyne M, et al. *BMC Cancer*. 2016;16:167. 4. Geyer H, Mesa RA. *Curr Hematol Malign Rep*. 2017;12(5):381-388. 5. Mesa RA, Miller CB, Thyne M, et al. *Cancer*. 2017;123(3):449-458. 6. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Myeloproliferative Neoplasms V.2.2019. ©National Comprehensive Cancer Network, Inc 2018. All rights reserved. Accessed April 2, 2019. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.

Actively monitor symptom status

Proactively identify patients with MPNs who may have burdensome disease-related symptoms

- Patients with MPNs often have burdensome disease-related symptoms that affect quality of life, but they may not recognize them as being related to their cancer^{3,5}
- NCCN Guidelines recommend assessing symptoms at baseline and monitoring symptom status (stable, improved, or worsening) during the course of treatment⁶
- A progressive increase in symptom burden should prompt closer evaluation⁴

Use EHR systems to determine symptom status in patients with MPNs

Patient lists generated through electronic health record (EHR) systems can be used proactively to identify symptom status in patients with MPNs.

Create a list of patients with MPNs and assess for burdensome MPN-related symptoms

- 1 Search your EHR system for patients who have an MPN
 - MF, ICD-10 code D75.81
 - PV, ICD-10 code D45
 - ET, ICD-10 code D47.3
- 2 Check whether the MPN-10 (MPN-SAF TSS) has been used to assess symptoms
- 3 If not, proactively ensure a symptom assessment is performed
- 4 Notify clinicians of patients who appear to be experiencing burdensome symptoms

Most clinically relevant symptoms in patients with MPNs¹:

- Fatigue
- Itching
- Night sweats
- Inactivity
- Early satiety
- Concentration problems
- Bone pain
- Abdominal discomfort
- Unintentional weight loss
- Fever

Patients experiencing burdensome symptoms of MPNs may require additional monitoring. Assess MPN symptom burden regularly and notify clinicians of patients with MPNs experiencing burdensome symptoms.

