Myelofibrosis (MF) is a rare myeloproliferative neoplasm of the bone marrow associated with shortened survival. The disease is characterized by splenomegaly, cytopenias, and multiple disease-related symptoms that reduce quality of life. The clinical management of MF can be challenging because of its heterogeneous presentation and disease course. Therefore, knowledge of the underlying pathology and clinical manifestations of MF is needed. Ruxolitinib, a Janus kinase (JAK) 1 and 2 inhibitor, is the first therapy to be approved by the U.S. Food and Drug Administration for intermediate- or high-risk MF. Ruxolitinib therapy offers advantages over the previous palliative treatments and has shown durable reductions in splenomegaly and disease symptoms as well as improvements in quality of life. Two-year follow-up of the phase III trials also has shown that ruxolitinib treatment was associated with a survival advantage relative to control groups. Dose-dependent thrombocytopenia and anemia are expected but manageable adverse effects caused by the targeted JAK inhibition of ruxolitinib. This review provides an overview of MF and assessment of the primary clinical disease manifestations, with a focus on ruxolitinib from the oncology nurse perspective.

Patricia J. Manea, RN, OCN®, is a research coordinator at Cancer Care Centers of South Texas in San Antonio. The author takes full responsibility for the content of the article. Manea is a member of the speakers bureau at Eisai Inc., and Cancer Care Centers of South Texas has received research funding from Incyte Corporation. Medical writing support was provided by Clay Isbell, MA, CMMPP, and Susan Sutch, PharmD, CMMPP, of Evidence Scientific Solutions through funding from Incyte Corporation. The content of this article has been reviewed by independent peer reviewers to ensure that it is balanced, objective, and free from commercial bias. No financial relationships relevant to the content of this article have been disclosed by the independent peer reviewers or editorial staff. Manea can be reached at patricia.manea@usoncology.com, with copy to editor at CJONEditor@ons.org. (Submitted June 2013. Revision submitted September 2013. Accepted for publication September 15, 2013.)

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