

Managing Myelofibrosis-Associated Thrombocytopenia

Gabriela Hobbs, MD

Clinical Director, Leukemia Service

Assistant in Medicine

Massachusetts General Hospital

Boston, MA



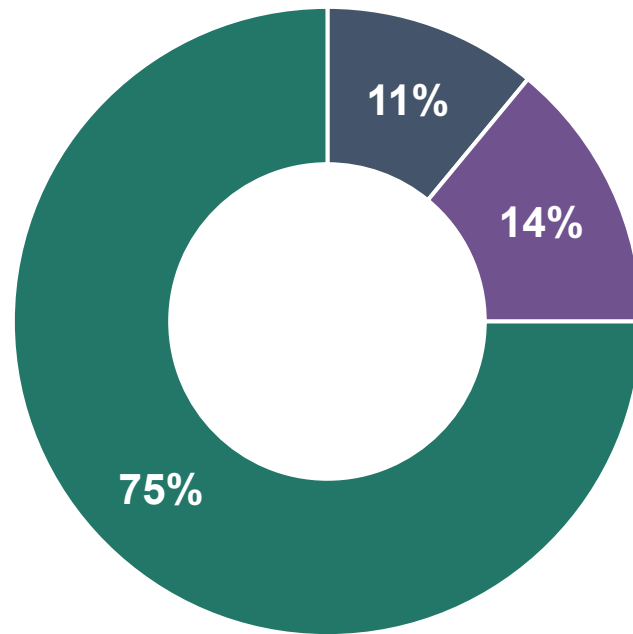
Thrombocytopenia Incidence and Prevalence

The **incidence** of thrombocytopenia (PLT count $< 100 \times 10^9/L$) is approximately **25%** in patients newly diagnosed with MF¹

The **prevalence** of thrombocytopenia (PLT count $< 100 \times 10^9/L$) is approximately **68%** in all patients diagnosed with MF²

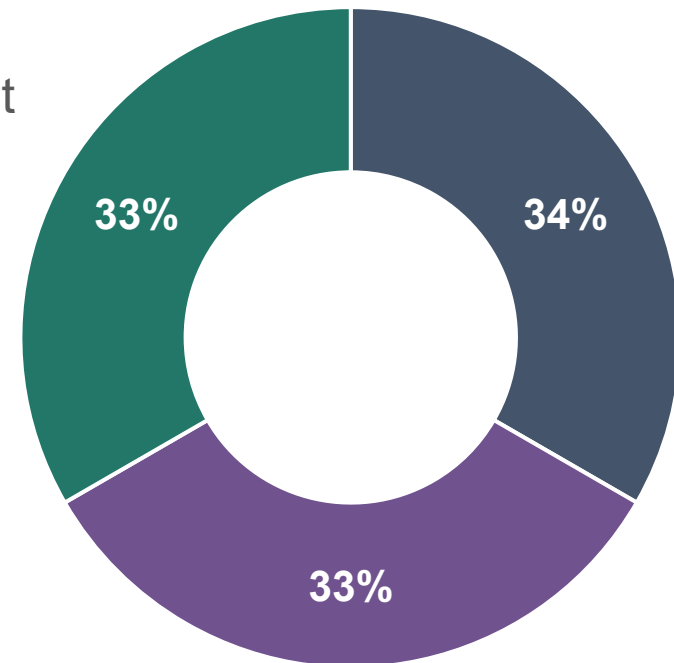
PLT Count

- <50K
- 50-100K
- 100K+



PLT Count

- <50K
- 50-100K
- 100K+



PLT, platelet.

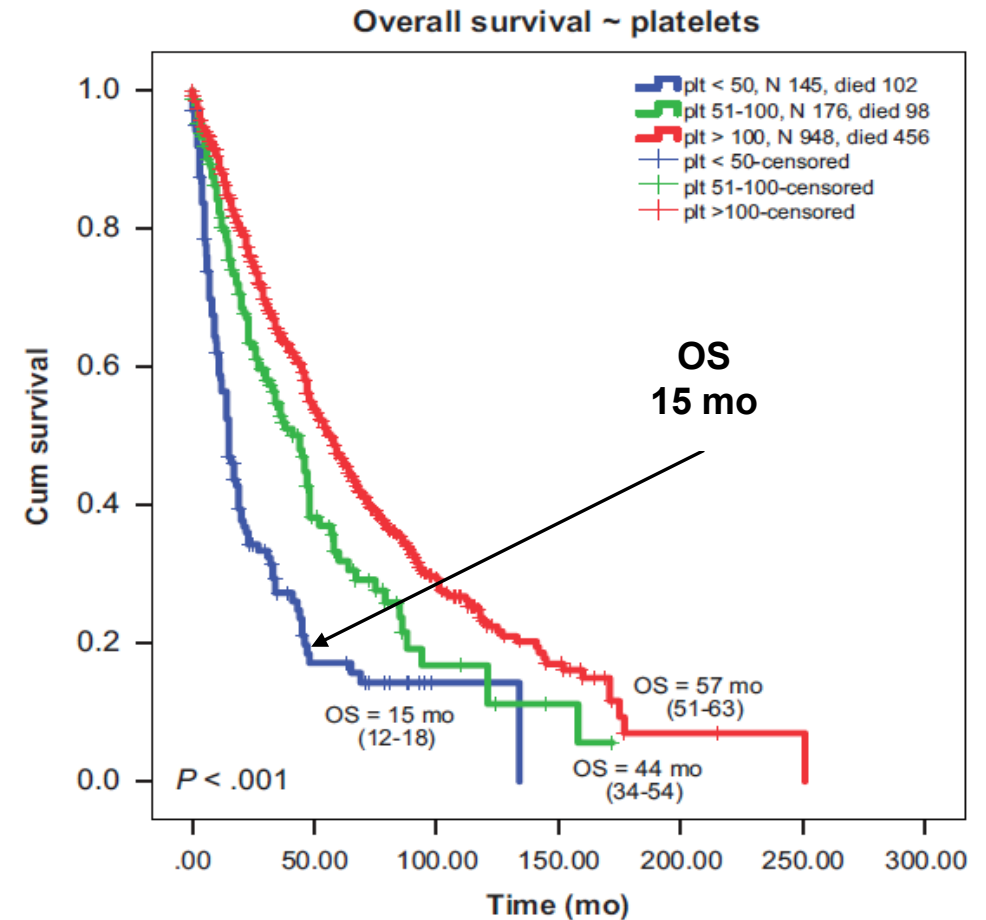
1. Masarova L, et al. *Eur J Haematol.* 2018;100(3):257-263. 2. Masarova L, et al. *Leuk Res.* 2020;91:106338.

Thrombocytopenia A Poor-Prognosis Indicator

- OS of patients with PLT count $<100 \times 10^9/L$ is worse than those with counts $>100 \times 10^9/L$

PLT ($\times 10^9/L$)	<100	>100	P Value
Median OS (mo)	26	57	<0.001

- 1.7-fold increased risk of death
- In patients with PLT count $<50 \times 10^9/L$
 - 2 \times higher risk of leukemia¹
 - High-grade marrow fibrosis²
 - More anemia and leukopenia²



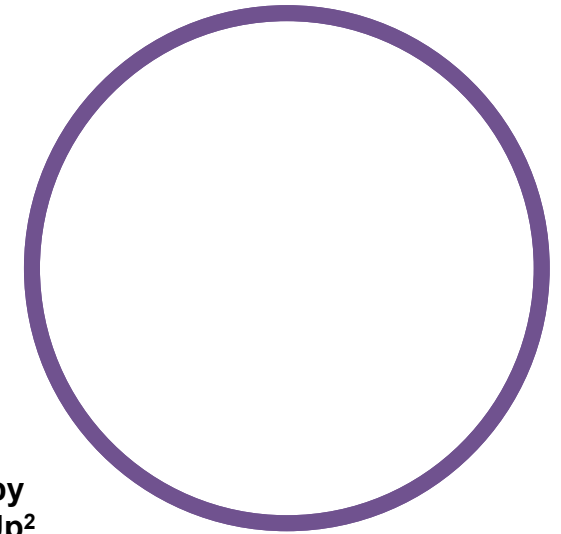
PLT, platelet; OS, overall survival.

1. Masarova L, et al. *Eur J Haematol.* 2018;100(3):257-263. 2. Masarova L, et al. *Leuk Res.* 2020;91:106338.

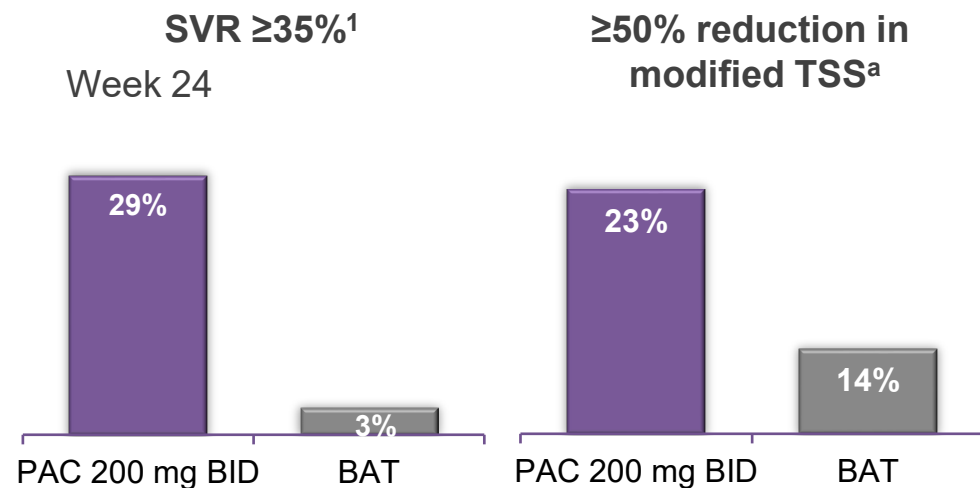
Limited Treatment Options for MF and Severe Thrombocytopenia

Variable	PLT <50,000/ μ L, % (n = 57)	PLT \geq 50,000/ μ L, % (n = 834)	P Value
Hydroxycarbamide	25	56	<0.001
JAKi	5	22	<0.002
Interferon	0	2	0.34
Splenectomy	5	3	0.22
Spleen radiation	2	2	0.80
RBC transfusions	67	34	<0.001
Erythropoiesis-stimulating agents	26	35	0.19
Danazol	25	14	0.030
Immunomodulators	19	7	0.001
Corticosteroids	37	9	<0.001
Allogeneic transplant	12	7	0.17

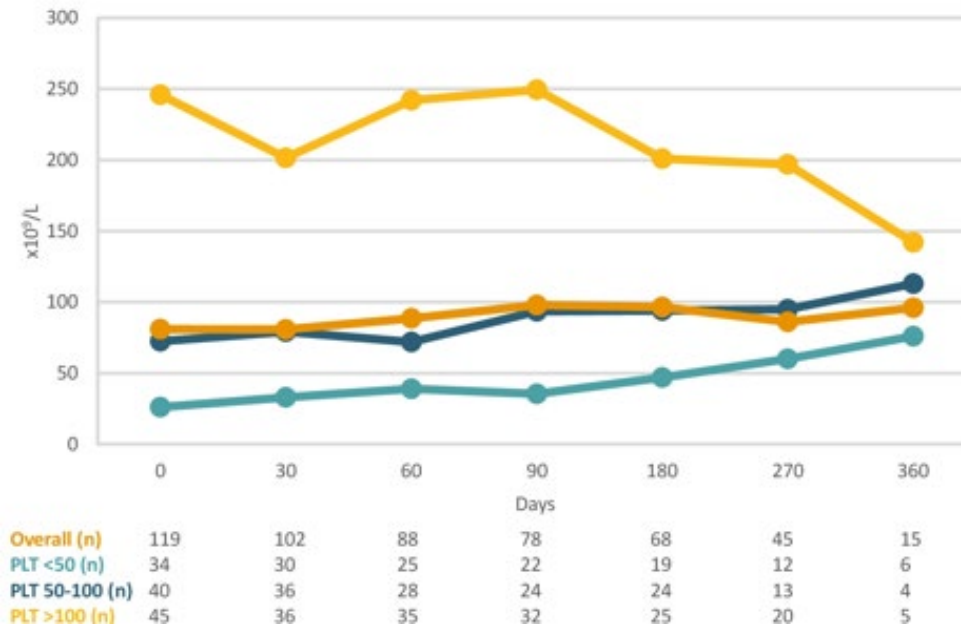
Pacritinib: First-Line Agent for Platelets $< 50 \times 10^9/L$



Patients With Platelets $< 50 \times 10^9/L$



Median Platelet Values ($\times 10^9/L$) by Baseline Category Over Follow-Up²

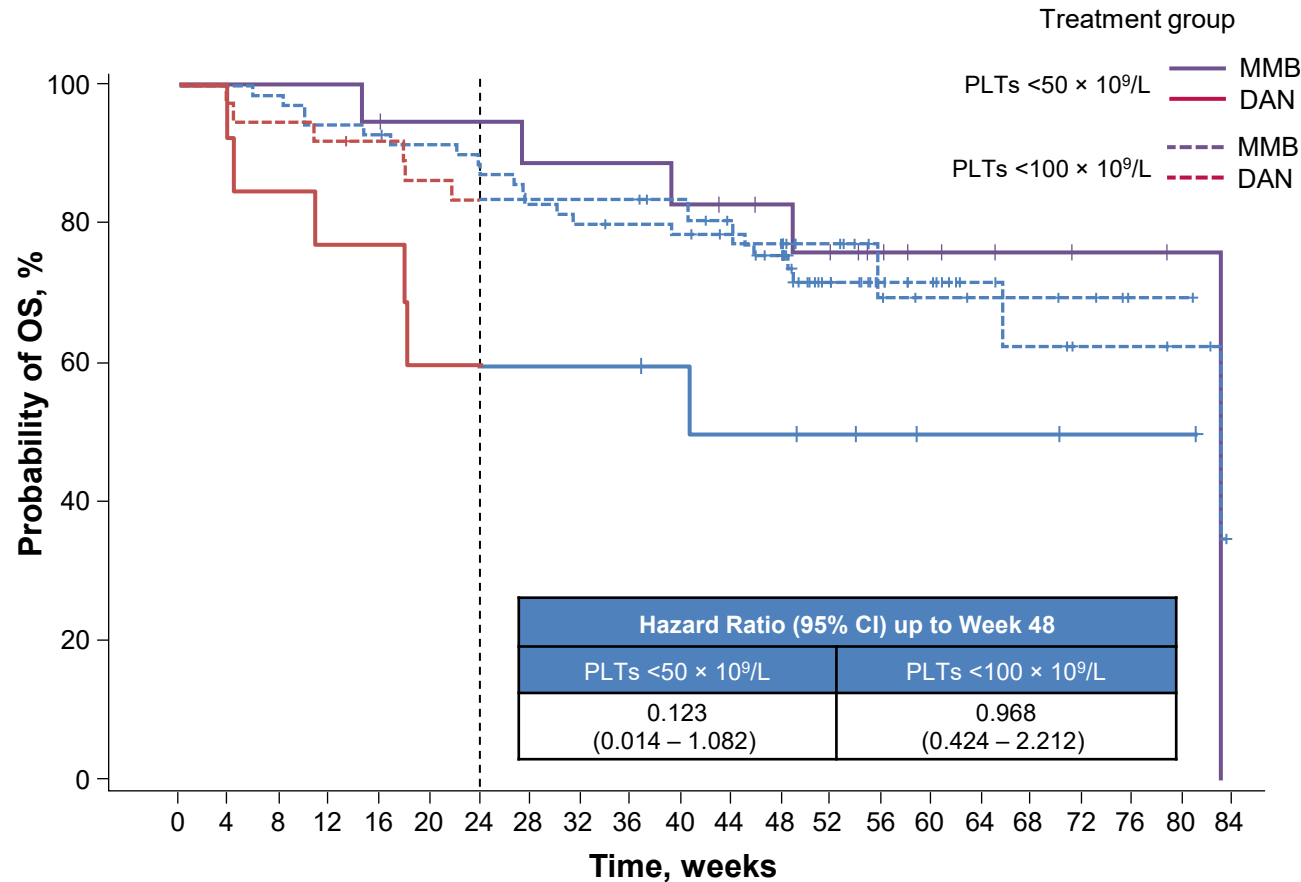
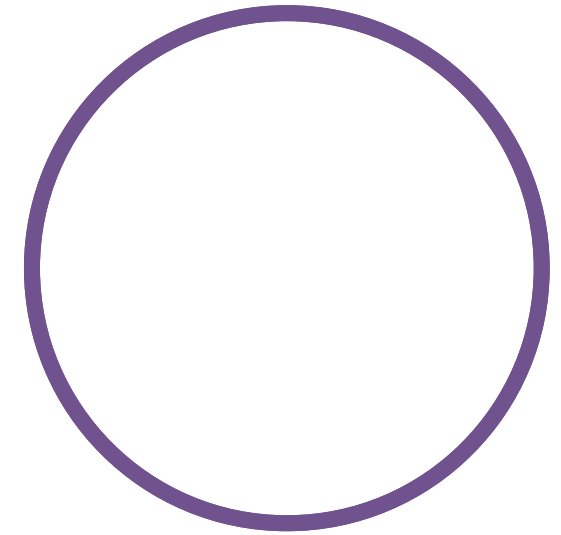


^a Excludes individual symptom score for tiredness from MPN-SAF TSS v2.0; utilized in pivotal trials for other JAK inhibitors.

BAT, best available therapy; BID, twice daily; MPN-SAF, myeloproliferative symptom assessment form; PAC, pacritinib; PLT, platelet; SVR, spleen volume reduction; TSS, total symptom score.

1. Mascarenhas J, et al. *JAMA Oncol.* 2018;4(5):652-659. 2. Marrone M, et al. 2024 ASCO Annual Meeting. Poster 1072; Abstract 6579.

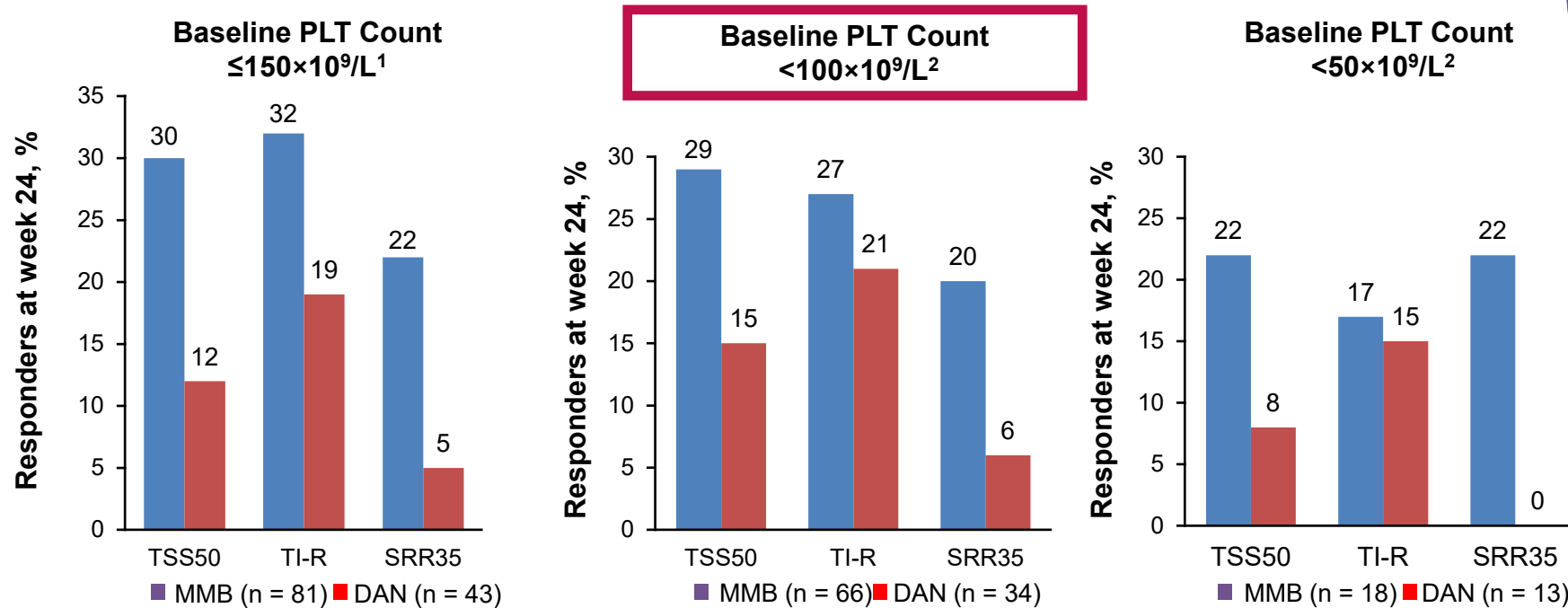
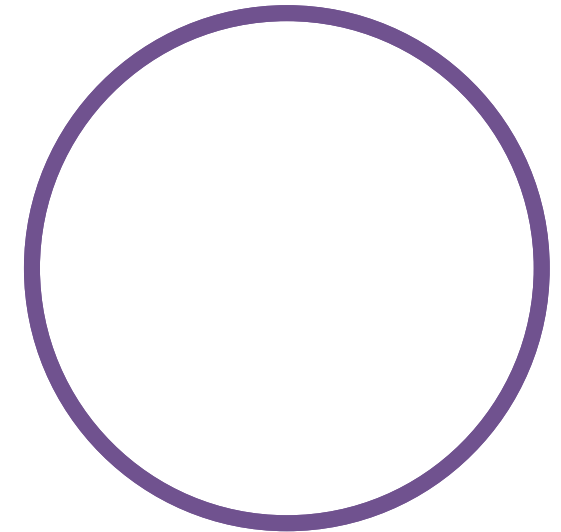
Momelotinib: Improved OS Was Observed in Patients With Baseline PLTs $<50 \times 10^9/L$



PLTs $<50 \times 10^9/L$	MMB (n)	18	18	18	18	17	16	16	15	15	15	14	13	12	11	8	5	4	3	2	2	1	0
	DAN (n)	13	12	11	10	9	7	7	7	7	7	6	5	5	4	3	2	2	2	1	1	1	0
PLTs $<100 \times 10^9/L$	MMB (n)	66	66	65	62	61	59	57	53	51	50	49	47	43	26	18	14	8	6	4	4	3	0
	DAN (n)	34	33	32	31	30	28	27	27	27	27	25	22	21	13	8	6	5	5	4	1	1	0

- BL PLTs $<100 \times 10^9/L$, median follow-up of 54 weeks for MMB \rightarrow MMB patients and 53 weeks for DAN \rightarrow MMB patients
- BL PLTs $<50 \times 10^9/L$, median follow-up of 56 weeks for MMB \rightarrow MMB patients and 54 weeks for DAN \rightarrow MMB patients

Efficacy in Patients With Thrombocytopenia Was Consistent With the Overall ITT Patient Population



- For baseline PLTs <100×10⁹/L, week 24 responses were also well maintained during OL period:
 - TSS50 responders: 18 of 19 (95%) MMB→MMB and all (5 of 5; 100%) DAN→MMB patients maintained TSS responses
 - TI-R responders: 16 of 18 (89%) MMB→MMB and 5 of 7 (71%) DAN→MMB patients maintained TI responses
 - SRR35 responders: 13 of 13 (100%) MMB→MMB and 2 of 2 (100%) DAN→MMB patients maintained splenic responses

DAN, danazol; ITT, intention-to-treat; MMB, momelotinib; OL, open-label; PLT, platelet; SRR35, splenic response rate ≥35%; TI, transfusion independence; TI-R, TI response; TSS, total symptom score; TSS50, TSS ≥50% response.

1. Gerds AT, et al. 2022 ASCO Annual Meeting. Abstract 7061. 2. Gerds AT, et al. 2022 ASCO Annual Meeting. Poster 292.

Summary

- Thrombocytopenia is a common complication of MF
- Thrombocytopenia is an independent prognostic risk factor and is associated with decreased OS
- There are limited treatment options for the management of patients with thrombocytopenia

Summary

- Pacritinib has demonstrated efficacy and ability to improve TSS and SVR in patients with thrombocytopenia
- Momelotinib has also been investigated in patients with thrombocytopenia
 - Meaningful TSS and SVR as well as possible OS benefits in patients with thrombocytopenia