Effect of JAK inhibitor prior to allogeneic stem cell transplantation in Myelofibrosis patients

EBMT European Society for Blood and Marrow Transplantation

NOVARTIS

A non-interventional prospective study by the MPN subcommittee of the CMWP

Principal Investigator: Nicolaus Kröger

BACKGROUND

Allogeneic SCT is currently the only available therapy with curative potential for Myelofibrosis (MF). However, it is associated with high treatment-related mortality and morbidity.

JAK2V617F mutation is an acquired point mutation in the pseudo-kinase domain of the Janus kinase-2 which confers a constitutive JAK2 pathway activation with resulting growth factor-independent proliferation of myeloid precursors.

Ruxolitinib is the first JAK inhibitor approved in Europe for symptomatic MF patients with splenomegaly, regardless of the IPSS risk classification.

Ruxolitinib showed early and sustained clinical benefits in patients with intermediate-2 and high-risk MF in a phase 1/2 trial (INCB18424-251) and the phase 3 trials COMFORT-I and COMFORT-II.

OBJECTIVES

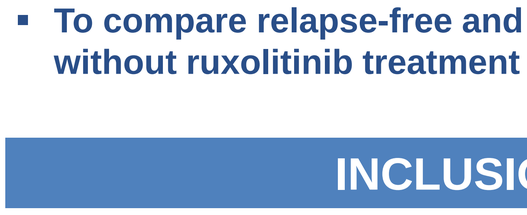
- **To evaluate the influence of ruxolitinib treatment in MF patients on non-relapse mortality at 1 year after allogeneic SCT**
- **To evaluate the effect of ruxolitinib on treatment-related toxicity after allogeneic SCT (incidence and severity of acute and chronic GvHD, pulmonary complications, VOD of the liver, and the causes of treatment-related mortality)**
- **To evaluate the impact of ruxolitinib treatment on spleen size**
- **To compare relapse-free and overall survival of patients with and without ruxolitinib treatment**

INCLUSION CRITERIA

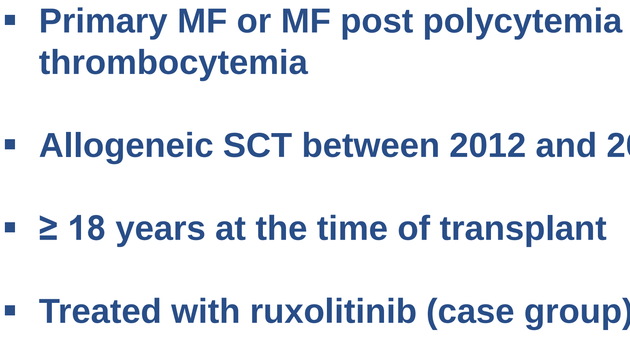
- **Primary MF or MF post polycytemia vera or essential thrombocytemia**
- **Allogeneic SCT between 2012 and 2016**
- **≥ 18 years at the time of transplant**
- **Treated with ruxolitinib (case group) or not treated with ruxolitinib (control group) prior to allogeneic SCT**

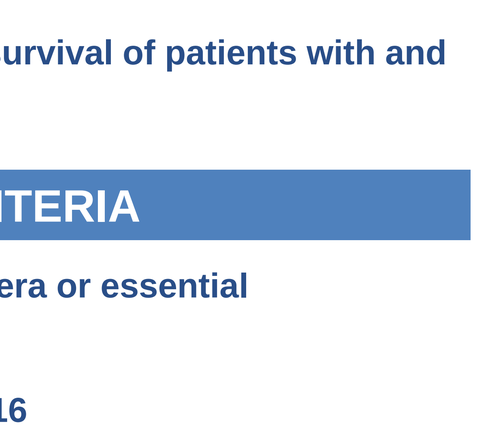
PARTICIPATION

258 centers with eligible patients were invited



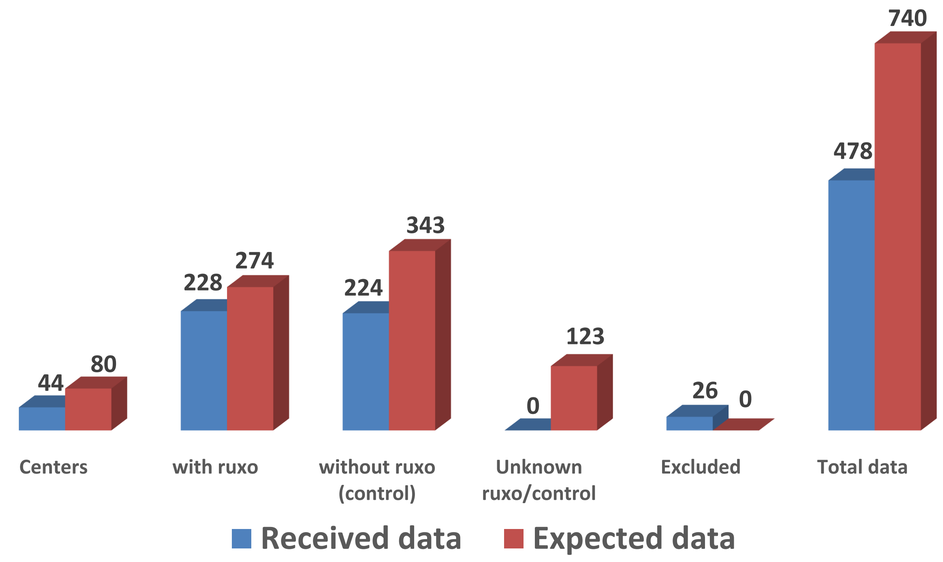
80 centers from 22 countries are participating





DATA

Data collection is ongoing



Complete data from 44 centers

Variables in MedAB		Complete data (%)	
		Before data collection	After data collection
At diagnosis	IPSS risk group	49,9	99,2
	Haemoglobin	55,3	99,0
	Platelets	55,0	98,4
	WBC	55,0	98,7
	Blast in PB	52,7	96,9
	Blast in BM	53,7	97,2
	Palpable splenomegaly	30,6	98,5
	Weakness	0,0	61,4
	Fever	25,4	66,3
At transplant	DIPSS risk group	38,8	96,7
	Haemoglobin	55,5	99,2
	Platelets	55,8	99,2
	WBC	55,5	99,2
	Blast in PB	53,5	97,9
	Blast in BM	54,8	97,7
	Palpable splenomegaly	32,1	97,9
	Weakness	0,0	90,7
	Fever	29,3	91,8
Cytogenetics		51,7	70,4
Molecular markers		68,4	88,4
Pretreatment		75,6	89,5
Conditioning		99,7	100,0
Phrophylaxis		97,4	99,2
Comorbidities		76,1	99,5
Early graft loss		28,5	95,6
Haemopoeitic chimaerism		31,9	98,5
Acute GvHD		84,1	95,9
Chronic GvHD		88,2	98,2
Infections		28,7	79,5
Non-infectious complications		27,0	70,7
Secondary malignancy		99,7	100,0
Relapse status		99,7	100,0
Main cause of death		99,7	100,0

Variables in MedC	Complete data (%)
Night sweat at start of ruxolitinib treatment	77,9
Palpable splenomegaly at start of ruxolitinib treatment	85,9
Weight loss at start of ruxo treatment	80,1
Weakness at start of ruxolitinib treatment	75,7
Fever at start of ruxolitinib treatment	76,6
Tapering ruxolitinib	85,9
Response of ruxolitinib on spleen size	84,5
Response of ruxolitinib on constitutional symptoms	85,4
Discontinuation of ruxolitinib prior to HSCT	91,5
Status of spleen response at HSCT	80,1
Status of constitutional symptoms at HSCT	78,8

CONTACT

Please send your data to CMWPebmt@lumc.nl

For information regarding the submission of data for this study, please contact the CMWP Data Office in The Netherlands:

Tiarlan Sirait
Junior Data Manager
✉ T.sirait@lumc.nl