

First-Line Treatment Outcomes of CML Patients in a Real-World Data Setting in Lebanon

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Background

BCR–ABL-targeting tyrosine kinase inhibitors (TKIs) constitute the cornerstone of treatment for CML, leading to a life expectancy that is currently very close to that of age-matched individuals in the general population.

Objective

To describe aspects of CML in a real-world data setting in Lebanon, including responses to first-line treatment with the first-generation TKI imatinib compared to those with the second-generation TKIs dasatinib and nilotinib.

Materials and methods

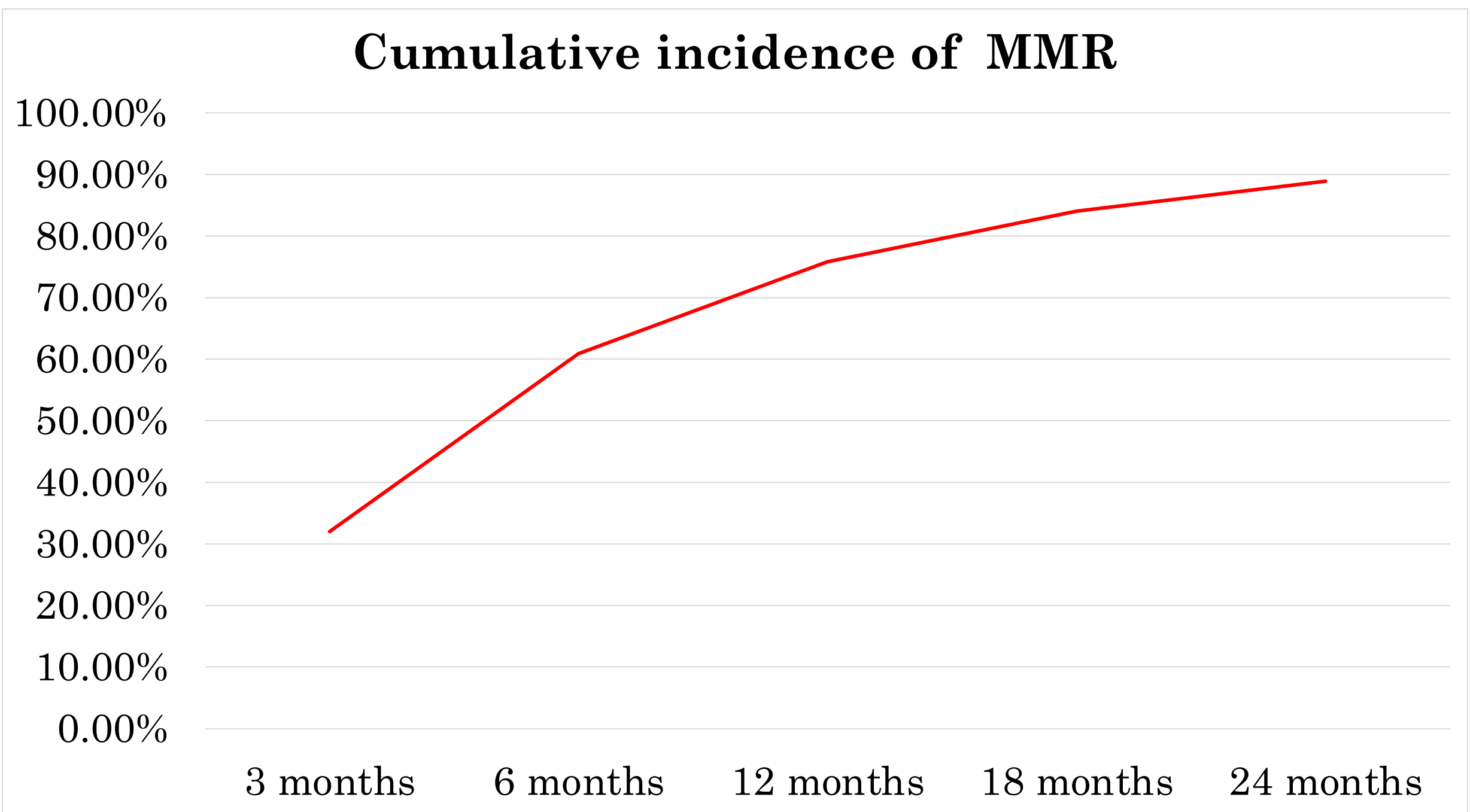
1. Eligible patients: (age > 18 years, ECOG: 0-1)
2. Imatinib was given at a dose of 400 mg once daily, nilotinib 300 mg twice daily, and dasatinib 100 mg once daily
3. Confirmed diagnosis of CML based on BCR-ABL PCR
4. Available follow-up data in the clinical chart for at least 2 years
5. SPSS was used for statistical analysis

1- Patients Characteristics

- From 2003 to 2019, we included a total of 54 patients.
- 54 % were **males**.
- The median age at diagnosis was **49.00 ± 17.75 years**.

Presentation	Leucocytosis and Thrombocytosis	4.8%
	Leucocytosis	90.5%
	Thrombocytosis	2%
Hematological data at presentation	WBC ≤ 10	5.7%
	WBC 10-50	34.3%
	WBC 50-100	25.7%
	WBC ≥ 100	34.3%
	Peripheral blasts	20%
	Basophilia	52.4%
	Hemoglobin (median)	12.2
Molecular data at presentation	Platelets (median)	304000
	p210 b2a2	75.0%
	p210 b3a2	25.0%

2- Cumulative Incidence of MMR



Results

3- Treatment Responses

Bivariate analysis comparing nilotinib to imatinib in terms of responses at 3, 6, 12, 18 and 24 months.			
Variable	Imatinib	Nilotinib	<i>p</i>
At 3 months			0.185
No MMR	11 (73.3%)	6 (60.0%)	
MMR 1 (<0.1%)	1 (6.7%)	4 (40.0%)	
DMR MR4 2 (<0.01%)	2 (13.3%)	0 (0%)	
DMR MR4.5 3 (<0.0032%)	1 (6.7%)	0 (0%)	
At 6 months			1
No MMR	5 (35.7%)	4 (44.4%)	
MMR 1 (<0.1%)	6 (42.9%)	3 (33.3%)	
DMR MR4 2 (<0.01%)	2 (14.3%)	1 (11.1%)	
DMR MR4.5 3 (<0.0032%)	1 (7.1%)	1 (11.1%)	
At 12 months			0.05
No MMR	6 (27.3%)	2 (18.2%)	
MMR 1 (<0.1%)	9 (40.9%)	3 (27.3%)	
DMR MR4 2 (<0.01%)	1 (4.5%)	5 (45.5%)	
DMR MR4.5 3 (<0.0032%)	6 (27.3%)	1 (9.1%)	
At 18 months			0.825
No MMR	3 (17.6%)	1 (12.5%)	
MMR 1 (<0.1%)	3 (17.6%)	2 (25.0%)	
DMR MR4 2 (<0.01%)	5 (29.4%)	1 (12.5%)	
DMR MR4.5 3 (<0.0032%)	6 (35.3%)	4 (50.0%)	
At 24 months			1
No MMR	2 (11.1%)	1 (11.1%)	
MMR 1 (<0.1%)	6 (33.3%)	3 (33.3%)	
DMR MR4 2 (<0.01%)	3 (16.7%)	2 (22.2%)	
DMR MR4.5 3 (<0.0032%)	7 (38.9%)	3 (33.3%)	

➡ Cumulative incidence of MMR at 24 months of treatment reached **88.9%**

➡ At 24 months, deep molecular response (MR4.0 and MR4.5) was achieved, in 15.3% and 40.3%, of patients respectively, for imatinib, and 22% and 33.5%, respectively, for second-generation TKIs (p=1).

➡ The 5-year cumulative incidence of eligibility for TKI cessation attempt is 37%.

Discussion &conclusion

•No data has been published before on CML in Lebanon. More studies are needed

•No statistically significant difference between Imatinib and Nilotinib in terms of MMR at 24 months

•The criteria for an attempt to stop TKI therapy is met by third of patients