# Treatment-Free Remission in Chronic Myeloid Leukemia-Chronic Phase , Kuwait Experience

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## Background

CML is one of the greatest successful stories in modern medicine. The treatment of CML has evolved and goals of therapy have advanced over the past two decades. Treatment free remission (TFR) is the optimal goal in many CML patients especially younger patients.

## Objectives

To evaluate the trend of TFR with different tyrosine kinase inhibitors (TKIs) in CML patients treated at the Kuwait Cancer Control Centre (KCCC)

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## Materials & Methods

A retrospective review was undertaken of all the CML patients treated in the KCCC who had a trial of TFR. Data were collected from the charts and electronic medical records. Patients who stopped TKIs due to intolerance or pregnancy were included if they were in deep molecular remission (DMR; as defined by a molecular log reduction of 4.0 or deeper) regardless of the duration of therapy.

## Tables

**Table 1: Patient Demographics**

| Sex | | Median Age (yrs) | TKI Received | | | TKI Duration of therapy | | TKI Duration for the 10 patients with lost MMR | |
|---|---|---|---|---|---|---|---|---|---|
| M (n) | F (n) | 38.5 (Range 10-65 yrs) | I | D | N | < 5yrs | >5yrs | <5yrs | >5yrs |
| 21 | 21 | | 39 | 1 | 2 | 6 | 36 | 9 | 1 |

I=Imatinib; D=Dasatinib; N=Nilotinib

**Table 2: Duration of response before TFR trial for those who lost MMR**

| | < 5 years | >5 years |
|---|---|---|
| DMR (n) | 3 | 7 |
| MR4 (n) | 3 | 7 |
| MR4.5 (n) | 4 | 6 |

**Table 3: Time to regain response after immediate restart of same TKI**

| | MMR | MR 4 | MR 4.5 |
|---|---|---|---|
| Within 3 months (n) | 8 | 7 | 2 |
| Within 6 months (n) | 2 | 2 | 5 |
| Within 9 months (n) | | | 1 |
| Within 15 months (n) | | 1 | 1 |
| Within 21 months (n) | | | 1 |

## Discussion

A total of 42 patients were eligible for TFR. 39/42 (93%) patients were treated with imatinib. All patients had achieved optimal CML response milestones as per the ELN criteria. Patients who stopped treatment in DMR due to intolerance or pregnancy were also included. Median age was 38.5 years reflecting our younger population. Most patients had low risk Sokal/ELTS score. Our cohort had a long duration of TKI exposure at a median of 103 months and DMR at 70 months. **At a median follow up of 50 months, the TFR rate was 74%.** As shown in Tables 2 and 3, 10/42 (24%) lost TFR and were able to regain DMR upon re-starting TKI therapy. All of them were re-treated with imatinib.

## Conclusion

1.Successful TFR rates are high among patients treated in Kuwait. This is largely due to a longer duration of therapy and higher percentage of patients with low risk disease. Patients who had lost MMR, regained it after restarting TKIs.

## Refrences

Cortes et al, 2022.