

**Impact of hospital experience on the quality of tyrosine kinase inhibitor response monitoring and consequence for chronic myeloid leukemia patient survival**

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## Supplementary information

### Impact of hospital experience on the quality of tyrosine kinase inhibitor response monitoring and consequence for chronic myeloid leukemia patient survival

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## **Supplementary methods**

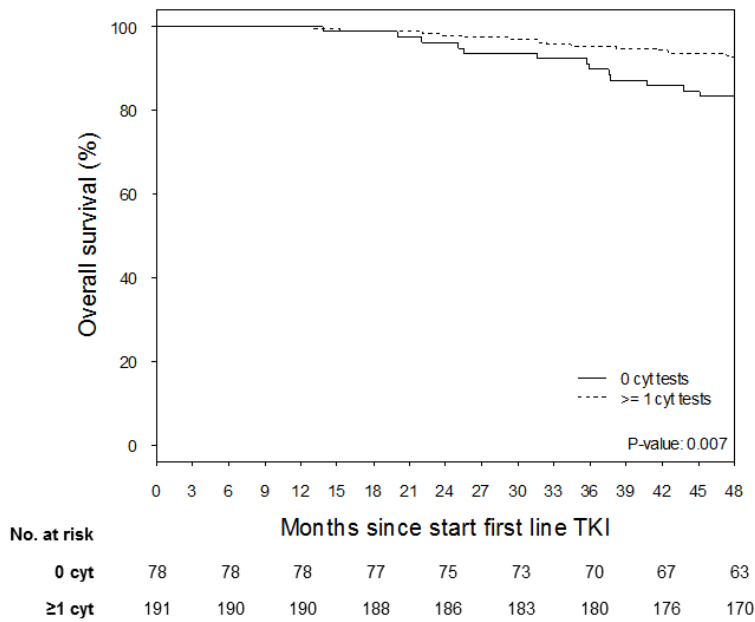
### Statistical analysis

Data are presented as a median with interquartile range (IQR). For baseline comparisons between the three subgroups of hospitals based on experience, chi-square tests and Kruskal-Wallis analysis were used. Overall survival was analyzed using the Kaplan-Meier method, log rank test and a Cox-proportional hazards model. Proportional hazards assumptions were tested. Binary logistic regression modeling was applied to determine predictors of adequate response and mutational assessments performance. The goodness-of-fit of the models was evaluated with the Hosmer-Lemeshow test. A p-value of less than 0.05 was considered significant. All statistical analyses were performed using SPSS version 24 and R-software<sup>1</sup> version 3.2.4.

### **References**

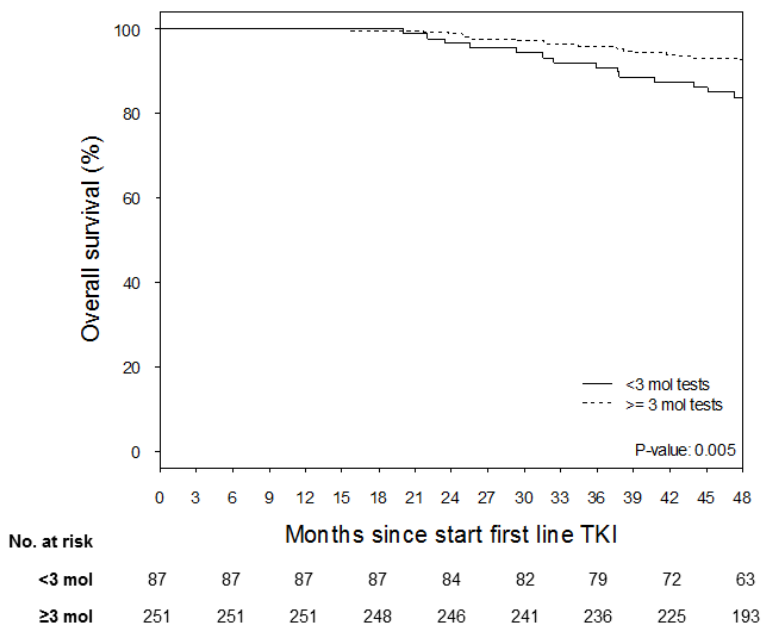
1. Team RC. R: A Language and Environment for Statistical Computing. 2016;.

## Supplementary figures



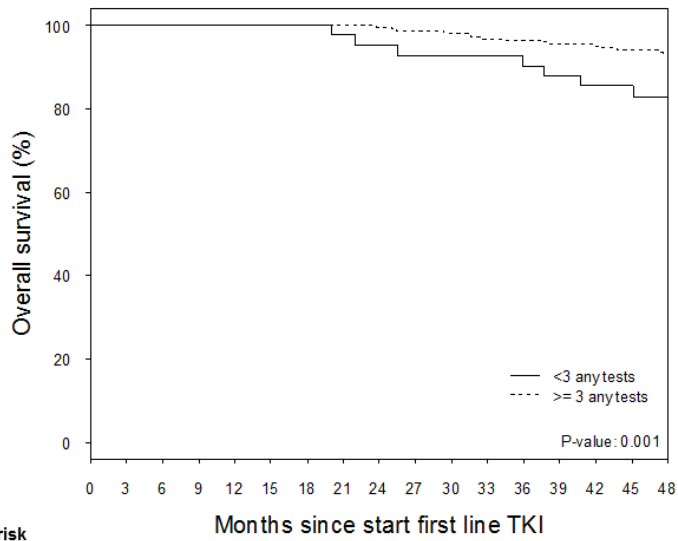
**SI Figure S1.** Kaplan-Meier survival plot of the 1-year landmark analysis of overall survival of patients who underwent no or at least one cytogenetic response assessment in the first year of TKI treatment. The log rank test was used to compare groups.

Abbreviations: cyt tests, cytogenetic response assessments; TKI, tyrosine kinase inhibitor



**SI Figure S2.** Kaplan-Meier survival plot of the 1-year landmark analysis of overall survival of patients who underwent less than 3 or at least 3 molecular response assessments in the first year of TKI treatment. The log rank test was used to compare groups.

Abbreviations: mol tests, molecular response assessments; TKI, tyrosine kinase inhibitor



**SI Figure S3.** Kaplan-Meier survival plot of the 1-year landmark analysis of overall survival of patients who underwent less than 3 or at least 3 response assessments of any type in the first year of TKI treatment. The log rank test was used to compare groups.

Abbreviations: any tests, response assessments of any type; TKI, tyrosine kinase inhibitor

## Supplementary Tables

**SI table S1.** Cox proportional hazards model including cytogenetic assessments in first year

		<b>No. of patients</b>	<b>HR (95% CI)</b>	<b>P-value</b>
<b>Age-adjusted Charlson Comorbidity Index</b>		265	1.46 (1.27-1.69)	<0.001
<b>Hospital experience *</b>		265	1.02 (0.91-1.15)	0.75
<b>Enrollment in first line clinical trial</b>	no	204	1.00	
	yes	61	0.78 (0.23-2.65)	0.70
<b>Cytogenetic assessments first year</b>	0	78	1.00	
	≥1	187	0.58 (0.30-1.10)	0.09

Hazard ratios on overall survival, derived from the 1-year landmark multivariable cox proportional hazards model

including the variable 'no or at least 1 cytogenetic response assessments underwent in the first year of TKI treatment'

\* Absolute number of treatment initiations per year.

Abbreviations: TKI, tyrosine kinase inhibitor; HR, hazard ratio

**SI table S2.** Cox proportional hazards model including molecular assessments in first year

		<b>No. of patients</b>	<b>HR (95% CI)</b>	<b>P-value</b>
<b>Age-adjusted Charlson Comorbidity Index</b>		333	1.39 (1.20-1.59)	<0.001
<b>Hospital experience *</b>		333	1.06 (0.94-1.19)	0.36
<b>Enrollment in first line clinical trial</b>	no	269	1.00	
	yes	64	0.60 (0.18-1.98)	0.41
<b>Molecular assessments first year</b>	<3	85	1.00	
	≥3	248	0.52 (0.27-1.00)	0.05

Hazard ratios on overall survival, derived from the 1-year landmark multivariable cox proportional hazards model including the variable 'less than 3 or at least 3 molecular response assessments underwent in the first year of TKI treatment'

\* Absolute number of treatment initiations per year.

Abbreviations: TKI, tyrosine kinase inhibitor

**SI table S3.** Cox proportional hazards model including any type of assessments in first year

		<b>No. of patients</b>	<b>HR (95% CI)</b>	<b>P-value</b>
<b>Age-adjusted Charlson Comorbidity Index</b>		256	1.45 (1.24-1.70)	<0.001
<b>Hospital experience *</b>		256	1.05 (0.92-1.21)	0.45
<b>Enrollment in first line clinical trial</b>	no	195	1.00	
	yes	61	0.79 (0.22-2.83)	0.72
<b>Assessments of any type first year</b>	<3	40	1.00	
	≥3	216	0.50 (0.23-1.08)	0.08

Hazard ratios on overall survival, derived from the 1-year landmark multivariable cox proportional hazards model

including the variable 'less than 3 or at least 3 response assessments of any type underwent in the first year of TKI treatment'

\* Absolute number of treatment initiations per year.

Abbreviations: TKI, tyrosine kinase inhibitor; HR, hazard ratio