

The use of DNA and mRNA-based methods to determine the relative contribution of cell number and expression changes to molecular response in chronic myeloid leukaemia (CML)

 **59** Newly diagnosed chronic phase CML patients from the TIDEL-II clinical trial

Diagnostic methods



RQ-PCR for *BCR-ABL1* mRNA



PCR for *BCR-ABL1* DNA

Rational of using both methods: N° copies of genomic *BCR-ABL1* \propto N° leukemic cells

Blood collection

Baseline

PCR for *BCR-ABL1* DNA

RQ-PCR for *BCR-ABL1* mRNA

100% by karyotyping

(range, 85-100%)

70%

(range, 3.7-425%)

184% by PCR

(range, 45-164 %)

TKI treatment



0

1

2

3

Median reduction:

2.05-log

1.75-log

Months

6

9

12

15

18

21

24

BCR-ABL1 DNA values were significantly higher than the corresponding BCR-ABL1^{IS} values

Excellent agreement between the level of MRD measured by BCR-ABL1 DNA and by RQ-PCR, indicating that the decline in BCR-ABL1^{IS} is closely paralleled by declining numbers of BCR- ABL1-positive cells