

MLL News

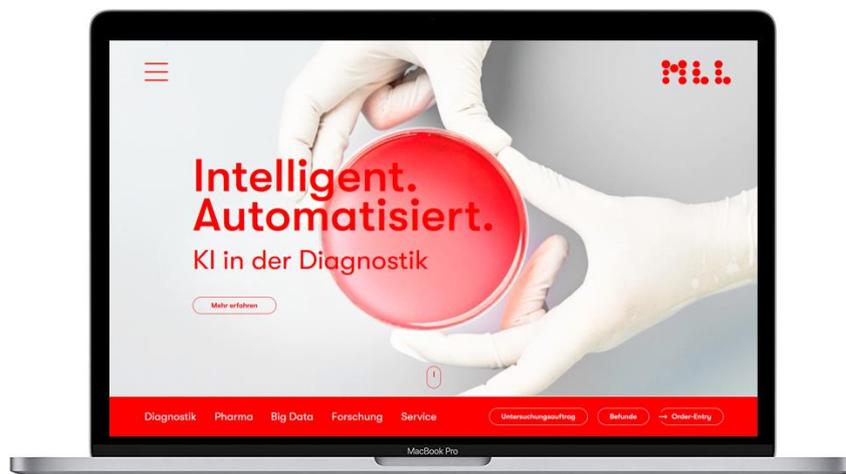
April 20, 2022

Our new website has arrived

Over the last two years we have worked hard on our brand architecture, developing it further, and making it fit for the future. During the course of this we have harmonized the layout of our websites and improved them by incorporating your feedback as a site user. The websites of MLL, MLL MVZ, and MLLSEQ are now available in a new and harmonized design. The goal was to increase the user-friendliness of the website and to allow for rapid and targeted navigation through its pages. We look forward to your visit and to your feedback!

The new Fast Lane: one-click direct access to the most important information

What's new? What have we changed on the new website? The Fast Lane at the bottom edge of the screen provides you with permanent access to the most important information and pages. In addition to access to the "Diagnostics" page, which provides information on guideline-compliant recommended diagnostics for the various diseases, the Fast Lane also permits access to the new subject areas "Pharma" and "Big Data" as well as to the "Research" and "Service" pages. The service page has been expanded to include the "FAQs" section – frequently asked questions. In this way, we hope to quickly provide you with answers to frequently asked questions on our website. In the right section of our Fast Lane, we have now combined direct access to all the forms under the heading "Test Order". Here you will find everything you need to submit a sample along with a brief explanation. In addition, you will also have access to "Results", our findings portal and all information about our "Order-Entry" system, which you can use for submitting the test orders digitally. Naturally, you can also find additional detailed information about our methodologies, our quality management system, our team, careers at MLL, and the MLL Magazine via our "burger" menu at the top left.



We have integrated Pharma and Big Data

Although the MLL has always been true to its role as a reference laboratory for clinical studies, this information was not previously displayed on our website. We've changed that now. The new "Pharma" section aims to convey our portfolio, experience, know-how, and access to our support for the benefit of our clinical trials partners.



We have also integrated “Big Data”, which provides the link to MLLi, a sister company of MLL. Through our sister company MLLi, which is built on “Big Data”, we offer our variant interpretation service and various tools for everything to do with NGS – next-generation sequencing.

Familiarity and togetherness of all MLL websites

In addition to greater website user-friendliness, the focus has been on a new brand architecture for MLL. For almost 17 years now, MLL has stood for knowledge, courage, pushing boundaries, and the responsibility that we tackle head on every day with our work. We live up to these values not only at MLL but also at all our sister companies – with every task that we accept and manage. Our new brand architecture extends this to all areas of the company, which now clearly show that they go together as one: through both the company abbreviation MLL and its associated websites, which all function in the same way with regard to design and navigation. You will immediately feel at home on all our websites – mll.com, mll-mvz.com, and mllseq.com – and recognize them as part of the MLL family. We look forward to your virtual visit.



Author: Dr. rer. nat. Manja Meggendorfer

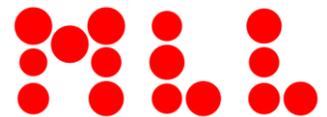
Validation of the laboratory-specific conversion factor for *BCR::ABL1* p210

The standardization of *BCR::ABL1* quantification according to the international scale (IS) is of great importance for managing **chronic myeloid leukemia (CML)**. The laboratory-specific conversion factor required for this is redetermined annually during quality assurance rounds. Over the last five years, MLL has been a member of the EUTOS project, in which, among other things, a procedure was developed to allow each and every laboratory to determine its own conversion factor in the future. We have collected the most important results of the project for you plus its associated future innovations.

Monitoring molecular response using reliable *BCR::ABL1* quantification is essential for patients with chronic myeloid leukemia (CML) who are undergoing tyrosine kinase inhibitor therapy. The standardization of *BCR::ABL1* quantification according to the international scale (IS) is of particular importance for managing the disease in each patient. It is used to compare the analytical results with the guidelines and recommendations of the European Leukemia Network (ELN) while also enabling the results to be compared between different laboratories.

MLL has been setting the standardized value *BCR::ABL1*^{IS} since 2011, which is calculated as follows:

$$BCR::ABL1^{IS} = \frac{\text{Summe } BCR::ABL1 \text{ Kopien}}{\text{Summe } ABL1 \text{ Kopien}} \times 100 \times \text{laborspezifischer Konversionsfaktor}$$



The laboratory-specific conversion factor is determined annually during a quality assurance round. Until now, this has involved the time-consuming exchange of samples with other reference laboratories. Between 2016 and 2021, MLL was a member of the EUTOS (EUropean Treatment and Outcome Study) project, an initiative of ELN and Novartis Oncology.

The main objectives of the study were:

- Optimization of current examination methods in CML
- Improvement of therapeutic outcomes
- Standardization of molecular follow-up in CML therapy
- Attainment of universal comparability of findings between different laboratories

Among other things, the EUTOS project investigated the use of a secondary *BCR::ABL1* reference panel based on lyophilized cells for determining and validating IS conversion factors. This reference material is traceable to the primary WHO international genetic reference panel for quantifying *BCR::ABL1* translocation (Cross et al., Leukemia 2016). It consists of five components, each containing lyophilized cells that correspond to a specific *BCR::ABL1* expression level (Figure 1).

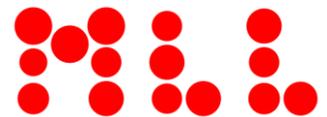
Results of the EUTOS project (excerpt):

- Secondary reference panels can be used successfully for identifying and validating conversion factors.
- The use of secondary reference panels is equivalent to exchanging samples and is significantly less complex.
- Using secondary reference panels is recommended for independent validation of the laboratory-specific conversion factor.

The examination panel used in the study is now commercially available and can be obtained by laboratories for self-validation of their conversion factor (currently, the only supplier is AcroMetrix™ *BCR::ABL1* Panel, Thermo Fisher Scientific, Figure 1).

Panelkomponente	Zielwert^{IS}
Panel A	10 % BCR-ABL/ABL
Panel B	1 % BCR-ABL/ABL
Panel C	0,1 % BCR-ABL/ABL
Panel D	0,01 % BCR-ABL/ABL
Panel E	0,0032 % BCR-ABL/ABL

Figure 1: Components of the AcroMetrix™ *BCR::ABL1* panel



Starting this year, MLL will be validating the laboratory-specific conversion factor annually according to EUTOS recommendations using the AcroMetrix™ *BCR::ABL1* panel. Over the coming months, the data for 2022 will be gathered according to the diagram in Figure 2.

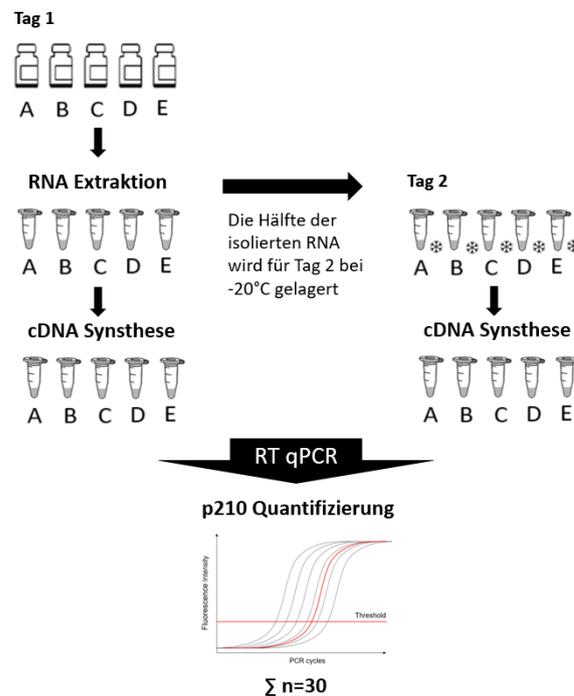


Figure 2: Schematic view of the validation of the laboratory-specific conversion factor. The RNA gets extracted from each of the five panel components. Half of each is used for cDNA synthesis on two different days, resulting in ten measurement points (two on each expression level) from each AcroMetrix™ *BCR::ABL1* panel. This procedure takes place three times at one-month intervals, meaning that a total of 30 measuring points are recorded.

The EUTOS consortium provides a calculation template for determining the conversion factor according to the criteria on its website (<https://www.uniklinikum-jena.de/eutos/Downloads.html>). The individual conversion factor is determined by entering the measured values. In the future, this calculation will replace the certificate issued annually by EUTOS.

The newly validated conversion factor will be published on the MLL homepage, after which it can be used to calculate the *BCR::ABL1*^{IS} for the CML progressions for one year.

Author: Dr. rer. nat. Sandra Weißmann

The contact point for all departments – the MLL Secretariat – introduces itself



Every day, the MLL team works together to provide patients worldwide with the best possible therapy through rapid and targeted leukemia diagnostics. But what exactly does the day-to-day work of the more than 200 employees look like? What departments and areas are there? Our magazine series, “MLL introduces itself”, provides you with an insight into our laboratory, with the third section introducing you to our secretariat.



The central interface within MLL is the secretariat. For the large number of samples that come in every day, the secretariat acts as a contact point both for external calls as well as for numerous various internal issues. Reliability is the top priority here, in order to provide every caller and all areas and specialist departments with binding and perfectly satisfactory assistance.

The employees on the secretariat team

The secretariat team consists of nine employees who, thanks to their top level professional and social competence, provide a solid backbone for MLL and are also a central interface for the referring doctors and diverse business partners. The focus of our work – as for the entire MLL team – is always the patient. The secretariat staff members include a telephone operator who handles issues raised by clients over the phone each day. Ms. Anja Neumayer is in charge of the secretariat.

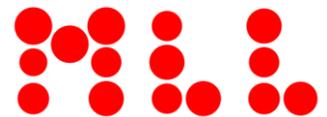
An ordinary unusual working day

Everyday work at the secretariat is diverse and extremely varied, with hardly any day being like another. Of course there is also routine work, such as mail processing, telephone support for clients, or the writing of physician reports. There are many other tasks as well, which might include booking travel, organizing external and internal events, preparing and following up on company doctor visits, coordinating duty rosters, or managing the various conference rooms. In addition, the team also works with various departments, such as accounting and human resources, and supports the **receipt of samples**. The working day in the secretariat is therefore extremely varied and never gets boring. No two days are ever the same.

Music of the future

The COVID-19 pandemic has shown us how fast-paced the world has now become. While three years ago it was still quite unusual to plan or attend hybrid congresses, it seems to have become quite normal now. Digitalization is progressing more and more, and we are now having to keep pace with it to remain “state-of-the-art”. Whatever the task, we will try our best every day to do the extraordinary, to help the sick, and to keep our finger on the pulse of technological process.

Author: Anja Neumayer



Most Recent Publications with MLL Involvement

- Anliker M et al. Upregulation of Checkpoint Ligand Programmed Death-Ligand 1 in Patients with Paroxysmal Nocturnal Hemoglobinuria Explained by Proximal Complement Activation. *J Immunol.* 2022;208(5):1248-1258. [🔍 open publication](#)
 - Baliakas P et al. Cytogenetics in Chronic Lymphocytic Leukemia: ERIC Perspectives and Recommendations. *Hemasphere.* 2022;6(4):e707. [🔍 open publication](#)
 - Geissler K et al. Multistep pathogenesis of chronic myelomonocytic leukemia in patients. *Eur J Haematol.* 2022. [🔍 open publication](#)
 - Hoermann G et al. Standards of Genetic Testing in the Diagnosis and Prognostication of Systemic Mastocytosis in 2022: Recommendations of the EU-US Cooperative Group. *J Allergy Clin Immunol Pract.* 2022. [🔍 open publication](#)
 - Kimura S et al. Enhancer retargeting of CDX2 and UBTF::ATXN7L3 define a subtype of high-risk B-progenitor acute lymphoblastic leukemia. *Blood.* 2022. [🔍 open publication](#)
 - Stein A et al. Case Report: Personalized Therapeutical Approaches with Lenalidomide in Del(5q): A Case Series. *Front Oncol.* 2022;12:866470. [🔍 open publication](#)
 - Valent P et al. Personalized Management Strategies in Mast Cell Disorders: ECNM-AIM User's Guide for Daily Clinical Practice. *J Allergy Clin Immunol Pract.* 2022. [🔍 open publication](#)
 - Woerner J et al. Circulating microbial content in myeloid malignancy patients is associated with disease subtypes and patient outcomes. *Nat Commun.* 2022;13(1):1038. [🔍 open publication](#)
- [Click here to go to all publications](#)

© 2022 MLL Münchner Leukämielabor GmbH

MLL Münchner Leukämielabor GmbH

Max-Lebsche-Platz 31
81377 Munich, Germany
Phone: +49 89 990 17 0
Fax: +49 89 990 17 111
E-mail: info@mll.com
Internet: www.mll.com