

# MLL News

12/20/2019

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## A very Merry Christmas from MLL!

Dear friends and colleagues,

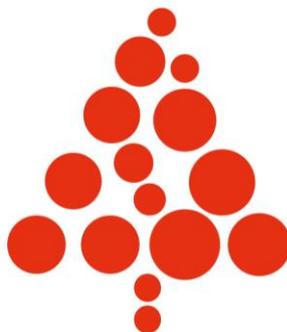
The turn of the year is right around the corner. We want to take this opportunity to once again thank you for your good and successful cooperation and for the trust you have placed in us.

During 2019, we continued to work hard and conduct research in order to offer and advance our extensive leukemia diagnostic services. The methods in molecular genetics have been developed further and now include accredited genome sequencing. Cloud computing has been integrated into routine complex analyses and has been accredited according to ISO 15189 as well. Artificial intelligence is also playing an increasingly important role in cytogenetics and is being developed in all areas of the laboratory at the same time. In doing so, we are striving to provide even more dedicated diagnostics faster and to enable more individualized therapy for patients.

MLL wishes you a wonderful, joy-filled Christmas celebration in the presence of your family and friends and a good start in a successful and healthy year 2020. We are very much looking forward to collaborating with you further.

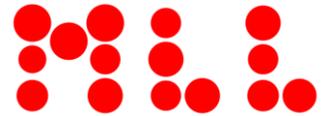
Best regards,

Your MLL Münchner Leukämielabor



FROHE  
WEIHNACHTEN





## Munich Leukemia Laboratory Developing a Digital Order Entry Platform

In this digital age, MLL has now set up a way to enter orders online. Following an extensive beta testing phase in the outpatient area, it is now possible to use a corresponding digital platform free of charge.

There are many advantages to digital order entry. It is no longer necessary to print out and send paper documents – all patient information can be conveyed digitally. An assistance system helps with the order process, such as by checking the information provided for plausibility or by giving entity-specific diagnostic recommendations according to applicable guidelines. Accompanying material such as findings or doctor's letters can be uploaded together with the order, and any laboratory values are automatically retrieved from the doctor information system (DIS). When the order is finished, only a barcode and, if necessary, a referral letter and an informed consent form are automatically printed locally for the sender. Orders that have already been made can be modified online (e.g. subsequent requests or cancelations). What is more, the processing status of ongoing analyses can be reviewed as well. Even completed findings are available online in their entirety in PDF format.

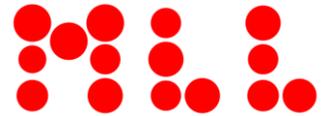
We have closely collaborated with several other hematological practices in order to intensively test the system and develop it further. The process of linking with a DIS generally uses specific IT interfaces and adapts to each individual situation. All current data protection rules are strictly adhered to and guaranteed. We also want to take this opportunity to thank all of the beta testers for the successful teamwork.

We hope that by providing our order entry platform we have increased the quality of data transmission and simplified the placing of orders for our customers. You can find a short overview in the form of a video tutorial [here](#).

If you are interested in using the system, please contact us either over the phone at +49 (0)89 99017-551 or via email at [orderentry@mll.com](mailto:orderentry@mll.com) for information on the next steps. Any costs incurred for installation will be covered by MLL.

At the same time that the system is being released for the outpatient area, a second beta testing phase is being planned for a few hospitals in order to evaluate the use of the platform in the context of hospital information systems (HIS).

Author: Dr. Christian Pohlkamp



Hotline: 089-99017551

**Neue Befunde  
vorhanden**

### Arzt

- Professor Torsten Haferlach
- Dr. med. Christian Dornes
- Dr. med. Frauke Bellos
- Dr. med. Richard Schabath

**Laborbuch**  
Allgemein

**Befunde**  
Allgemein

### Patientendaten

Abrechnungsart  
Privat ambulant

Patientendaten	Versicherung	Kontaktinformationen
Nachname: <input type="text" value="Test"/>		Straße: <input type="text" value="Testallee"/> <input type="text" value="1"/>
Vorname: <input type="text" value="Tester"/>		PLZ / Ort: <input type="text" value="85080"/> <input type="text" value="Gaimersheim"/>
Titel: <input type="text"/>		Adresszusatz: <input type="text"/>
Namenszusatz: <input type="text"/>		Bundesland: <input type="text"/> <input type="text"/>
Vorsatzwort: <input type="text"/>		Postfach: <input type="text"/>
Geburtsdatum: <input type="text" value="14.12.1999"/>		PLZ / Ort zum Postfach: <input type="text"/> <input type="text"/>
Geburtsname: <input type="text"/>		E-Mail: <input type="text"/>
Religion: <input type="text"/>		Telefon 1: <input type="text"/>
* Geschlecht: <input type="radio"/> w <input checked="" type="radio"/> m <input type="radio"/> unbestimmt <input type="radio"/> unbekannt		Telefon 2: <input type="text"/>
		Fax: <input type="text"/>

**Neuer Auftrag**  
Angefragene Aufträge vorhanden

**Laborbuch**  
Patientenbezogen

**Standardanforderung**

**Befunde**  
Patientenbezogen

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## Video Tutorial on the Intelligent PDF Version of the Test Request

In order to facilitate and expedite the process of selecting suitable diagnostic methods and parameters, MLL has simplified the test request for you and developed a *Smart Version* of the document – in other words, a dynamic PDF document in which, once you have preselected the desired test method and the (suspected) diagnosis, only the relevant diagnostic parameters in this combination will be shown.

So that you can familiarize yourself with this test request, we have now prepared a video tutorial describing the individual steps. Click [here](#) to go directly to the video tutorial.

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## Successful Participation by MLL in the ASH Conference in Orlando

This year as well, several MLL scientists took advantage of the ASH (American Society of Hematology) in Orlando to get an overview of the current research emphases and future developments. They also gave a number of lectures there and presented a large number of posters. Moreover, MLL was a key player in a project that was selected as a late breaking abstract and presented there.

MLL's main contributions this year involved optimizing the diagnosis of leukemia and lymphoma by means of new methods such as whole-genome sequencing (WGS) and whole-transcriptome sequencing (WTS). In addition, the very extensive data plus the outstanding cooperation with the referring doctors forms the basis for developing important prognostic parameters and correlating them with the response to therapy.



A new focal point of MLL's research activities is the use of artificial intelligence, both for assisting with diagnostics (especially in cytogenetics, molecular genetics, and immunophenotyping) as well as for detecting new patterns in the existing data of conventional diagnostics and genome-wide data. Observing the data from current standard diagnostics and genome sequencing together makes it possible to evaluate the potential of the new methods for diagnostics and leads to important scientific findings.

What is more, MLL is involved in numerous collaborative research projects and supports the development of laboratories and the establishment of workflows in other countries, something that was able to be promoted in various accompanying forums at the ASH. The goal is to expand the international networking further on a scientific and diagnostic level. Multiple pilot projects are being established with the aid of algorithms and the use of artificial intelligence with strict scientific criteria and according to ISO 15189-compliant rules.

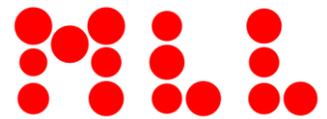
Author: Prof. Dr. Dr. Torsten Haferlach



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## MLL Academy – Workshop on Next-Generation Sequencing

The “MLL Academy - Workshop on Next-Generation Sequencing (NGS)” was held for the first time from November 7 - 8, 2019. The eighteen international participants were able to



gain detailed insights into the theoretical and practical principals of all individual NGS steps – from generating a library to sequencing to interpreting the data. Due to the overwhelmingly positive feedback of the participants, a two-day “MLL Academy – Workshop on Next-Generation Sequencing” is already in the works for 2020.

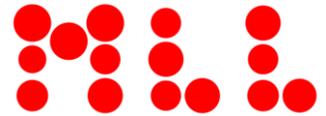
Next-generation sequencing has rapidly developed into an essential method in molecular genetics. In the context of hematological neoplasia, NGS has made significant contributions towards the progress of leukemia and lymphoma research, diagnostics, and the development of targeted therapies. Back in 2010, MLL had already established NGS as a routine procedure in an accredited environment, the first laboratory in Europe to do so. Over the years, the NGS protocol has been continuously optimized, starting from the preparation of the samples for sequencing to the improvement in panel designs to the development of bioinformatic tools and data bases for the best possible interpretation of the data.

In addition to routine diagnostics, MLL 2017 has also started working on the “5,000 Genome Project.” In order to acquire as much knowledge as possible, various leukemia and lymphoma subgroups have been studied using high-throughput sequencing – both the genome (WGS, whole-genome sequencing) as well as the transcriptome (whole-transcriptome sequencing, RNA-seq) of the patient. During the two-day workshop, we shared with the participants our experience and knowledge in processing and interpreting NGS data, in diagnostics, and in experimental research.

The participants included doctors, (molecular) biologists, and bioinformaticians. The practice-oriented mix of theoretical introductory talks and overview lectures, practical exercises, group discussions, and satellite sessions spotlighting the topic at hand went over very well.

MLL would like to express its appreciation for the positive participant feedback, and it is looking forward to hosting a two-day MLL Academy workshop focusing on NGS in the coming year as well. As soon as we have confirmed the date, we will of course publish it on [mll.com](http://mll.com).

Author: Niroshan Nadarajah



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## Important Dates

### MLL Academy 2020

From **April 20 - 24, 2020**, the five-day MLL Academy will be taking place for the third time already. The focus of this international technical workshop is on state-of-the-art diagnostics for leukemia and lymphoma. Awaiting the 12 participants is a proven combination of theory and practice and profound insight into the different pathologies and the significance of integrated diagnostics. Registration is still possible up until 12/31/2019. More information can be found [here](#).

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