

HARMONY

Healthcare Alliance for Resourceful Medicines
Offensive against Neoplasms in Hematology

European public– private partnership for big data in hematology

Enabling better and faster treatment
for patients with blood cancer

What is HARMONY?



Established in January 2017, the HARMONY Alliance is a European public–private partnership for big data in hematology.

HARMONY captures and mines big data on hematologic malignancies (blood cancers) to accelerate the development of new treatments and personalized care for patients.

Currently, more than 100 organizations from across 17 European countries are officially part of the HARMONY Alliance. Funded by the Innovative Medicines Initiative (IMI).

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Sharing anonymized data in a secure way, for research purposes, is like a new form of blood donation in the era of digitalization and Big Data. As a result, it has the power to save lives...”

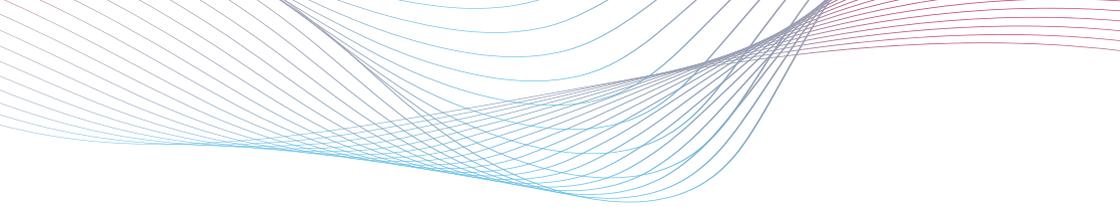
What are blood cancers?

There are three major types of blood cancers: leukemia, lymphoma and myeloma, all of which influence the production and function of various blood cells.

In 2018, more than 1 million new cases of blood cancer and 700,000 blood cancer-related deaths were reported worldwide.¹ Blood cancers are also the most common type of cancer among children.² These diseases have a significant burden on patients and their families, healthcare systems and society. Despite the high cost of treatment, outcomes remain poor.³

By collecting large volumes of data on blood cancers from multiple sources, we can identify the underlying reasons behind poor outcomes and high mortality in order to accelerate development of effective treatments.

To treat blood cancers effectively, we must improve our understanding of how they work. Critical research questions surrounding these diseases can only be addressed by studying large volumes of data from patients with blood cancers.



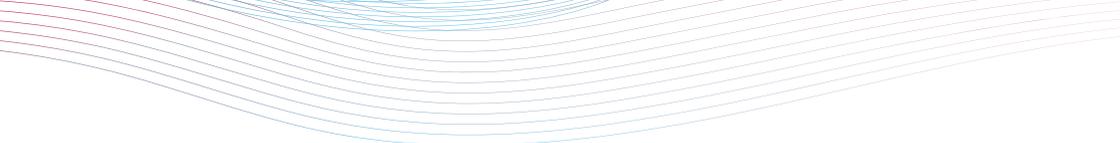
What is 'big data' and why is it important in blood cancers?

Big data refers to large volumes of data from many sources that are combined in a single database.

Big data from clinical trials, registries and national disease networks can be analyzed using big data analytics and artificial intelligence to enable the identification of novel drug targets and facilitate precision medicine.

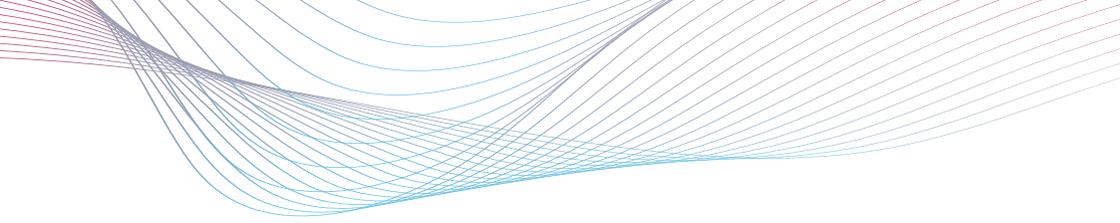
How does HARMONY use big data?

HARMONY Partners and Associated Members have been contributing data on genetics, treatment, lab results, quality of life, and use of healthcare resources from patients with blood cancers. HARMONY orchestrates the merging, storage and mining of these data via the HARMONY Big Data Platform. So far, data sets from 45,000 patients have been identified. De-facto anonymization is used to remove sensitive patient data, in concordance with EU data protection laws.

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- ALL** Acute Lymphoblastic Leukemia
 - AML** Acute Myeloid Leukemia
 - CLL** Chronic Lymphocytic Leukemia
 - MM** Multiple Myeloma
 - MDS** Myelodysplastic Syndromes
 - NHL** Non-Hodgkin's Lymphoma
 - PEDIATRIC HM** Pediatric Hematologic Malignancies
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Ongoing and pipeline HARMONY Research Projects in 7 blood cancers aim to harmonize outcome measures and endpoints, and predict disease course and treatment responses.

HARMONY plans to conduct research in more blood cancers in the near future.



What makes HARMONY unique?

- HARMONY fosters the collaboration of numerous multidisciplinary stakeholders from across Europe: academic institutions, national disease networks, patient advocacy groups, hospitals, pharmaceutical companies, regulatory agencies, experts in economics and ethics, and technology specialists.
- The HARMONY Big Data Platform is one of the largest databases of its kind in Europe. It upholds the highest standards of data privacy and security.
- HARMONY brings together more than 300 hematology professionals from all healthcare-related areas.

Co-operative working groups, hospitals and academic institutions are invited to collaborate and contribute data to the HARMONY Alliance.

Learn how to become involved:
www.harmony-alliance.eu

Accomplishments

Visit our YouTube Channel @ Harmony Alliance for Big Data in Hematology to watch our [2017–2019 mid-term success video](#), which visualizes HARMONY achievements!



Future plans

By December 2021, HARMONY strives to have captured data from 100,000 patients with blood cancers in the HARMONY Big Data Platform. HARMONY stakeholders will be able to continue using this rich data source to identify new biomarkers of disease, determine new drug targets and facilitate precision medicine. Ultimately, HARMONY will improve clinical decision making among healthcare professionals by enabling them to better predict treatment effectiveness and side effects of specific therapies.



HARMONY

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