averbis
text analytics

2021 |

Averbis GmbH
AI assisted Pharmacovigilance and Adverse Event Detection

powered by

INFORMATION discovery

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Averbis in a nutshell

Averbis is a text analytics company specialized in Machine Learning and Natural Language Processing (NLP)

Our solution

INFORMATION discovery

AI assisted Machine Learning/Text Mining Platform for Pharma

AVERBIS IS AWARDED AS AI CHAMPION
KI-Champions Baden-Württemberg
FROM BADEN-WÜRTTEMBERG TO THE WORLD

Hospitals

- Universitätsmedizin Mainz
- FAU Friedrich-Alexander Universität Erlangen-Nürnberg
- Rhön-Klinikum AG
- Universitäts Klinikum Freiburg
- Medizinische Universität Graz
- St George's Healthcare NHS Trust

Healthcare Partners

- TriNetX
- Cerner
- IQVIA
- Rhenus Logistics
- SAP

Pharma

- Merck
- Bayer
- Janssen
- Roche
- BASF We create chemistry
- syngenta
- Fresenius Kabi
- Genentech
- Takeda
- genzyme

Awards

- Innovativ durch Forschung
- kununu Top Company – von Mitarbeitern empfohlen

Focus on patient safety

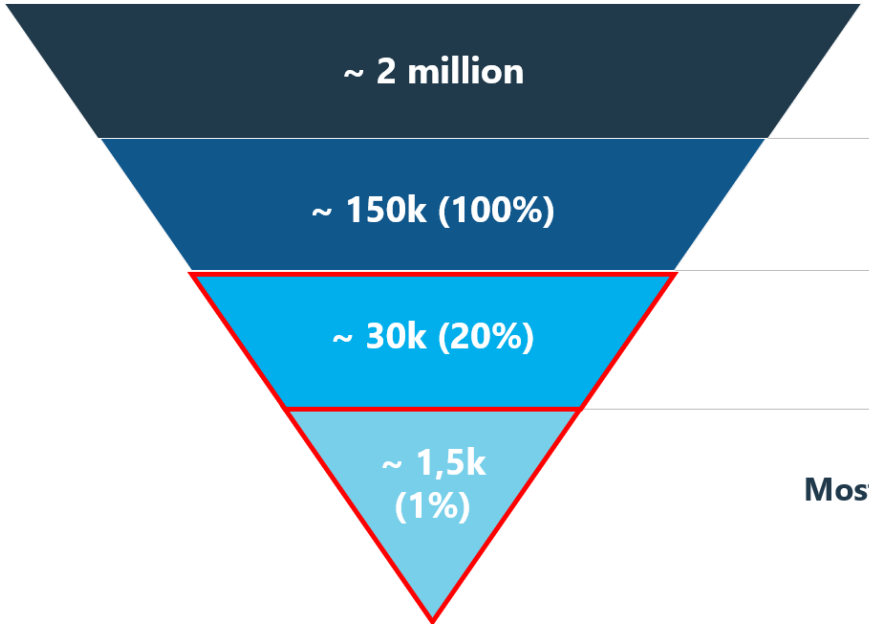
Free up your pharmacovigilance experts

The number of **scientific publications** is continuously increasing. The **Averbis Information Discovery** combines **machine learning** and **text mining** to preselect the **relevant publications** and to highlight adverse events. This **automated approach** supports the very time-critical and sophisticated screening process. The combined approach is **much faster and less time consuming**, but most importantly it enhances the accuracy of detecting all adverse events in terms of **patient safety**.

The challenges of pharmacovigilance

Save up to 80% of your effort and get better results

- It is impossible to **manually** analyze **2 million** Biomedical publications per year
- There is a lot of **valuable** information **hidden** in these publications



Yearly publications in Biomedical Literature

Publications matching primary search criteria (keywords)

Relevant publications that are checked in depth

Most relevant publications to find new insights/answer research question

Averbis Information Discovery uses AI/ML assisted Text Mining to not only find that information, but also structure it according to your needs!

Adverse Events Detection Process

Biomedical Literature

~2 million articles/year

- embase BIOMEDICAL ANSWERS
- PubMed
- Your Data Lake

Text Mining/ML

INFORMATION discovery

Automatically extract signals

Adverse Events

Company drugs

Competitor drugs

+

Analyze historical decisions

Output

Safety information needed for compliance

Automatically sort the most relevant results on top

Minimize risk of missing AE's

Comply with regulations

e.g. find 30,000 relevant articles/year

Adverse Events Detection Features

Adverse Events

- Indicator words
- Synonyms
- Deep Learning

Mechanism of Action

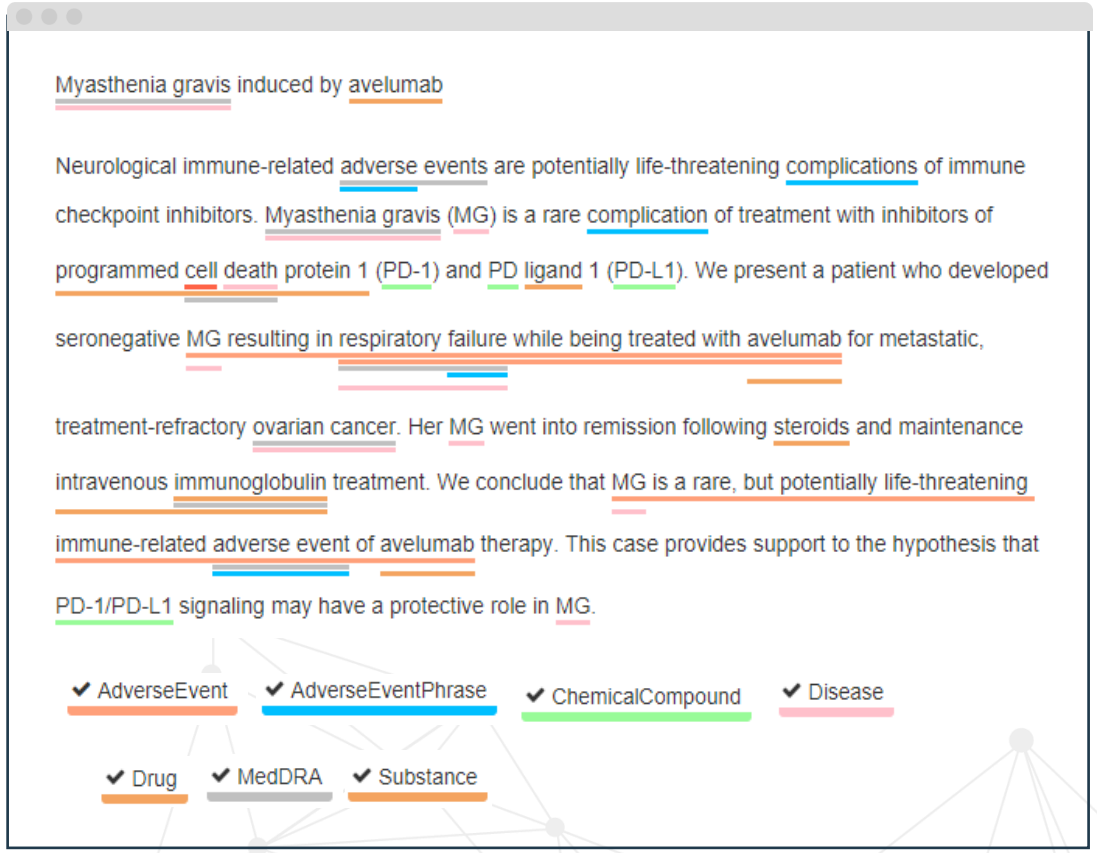
- Functional Classes
- Target
- Relations

Company Drugs

- Brand Names
- Generic Names
- Ingredient substances
- Product classification

Competitor Drugs

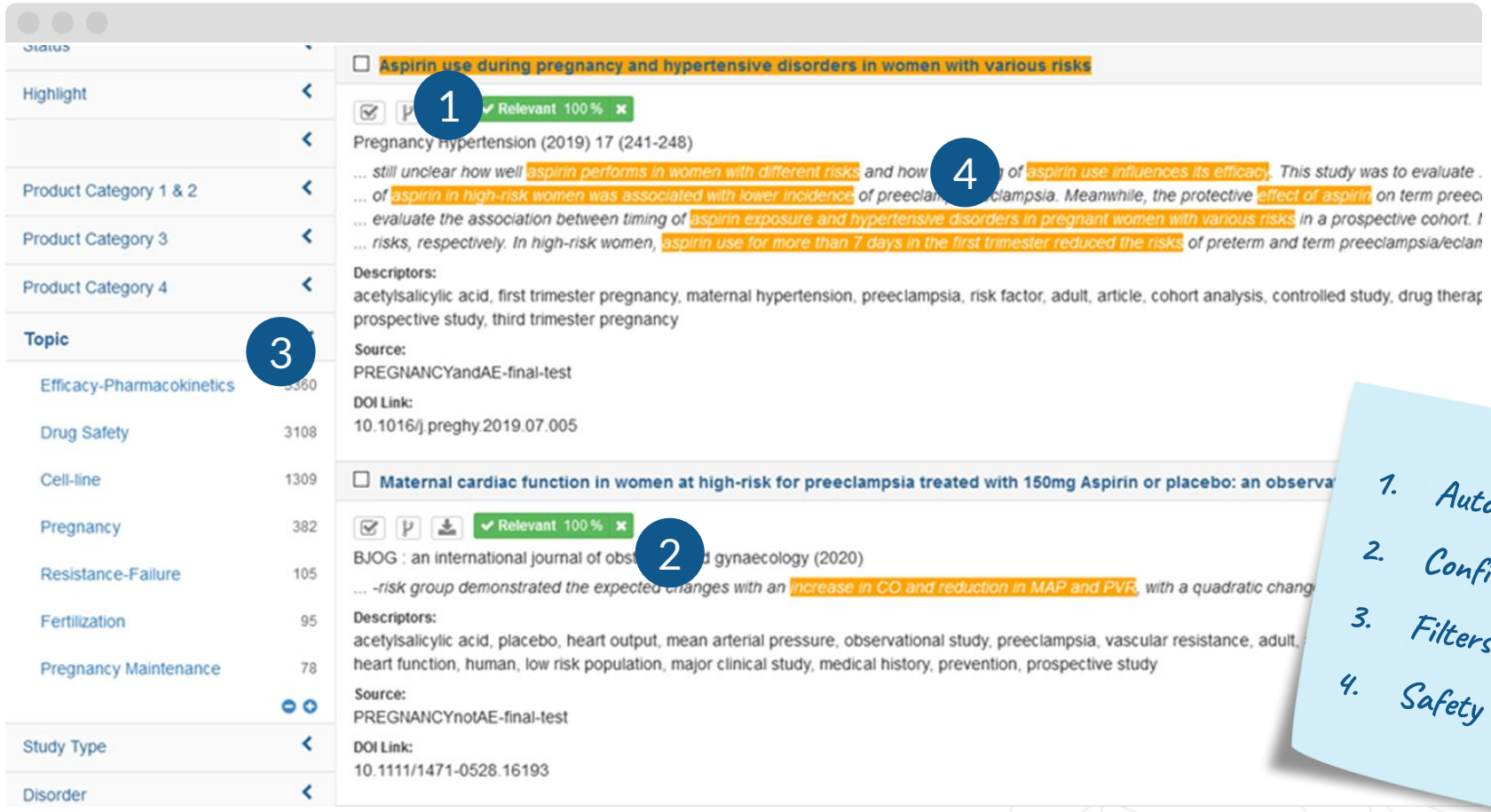
- Brand Names
- Generic Names
- Ingredient substances
- Related company drugs



Text Mining example: Benefit from combining different annotators to quickly and reliably identify different relevant insights

Semi-automated adverse event detection

Classification Results

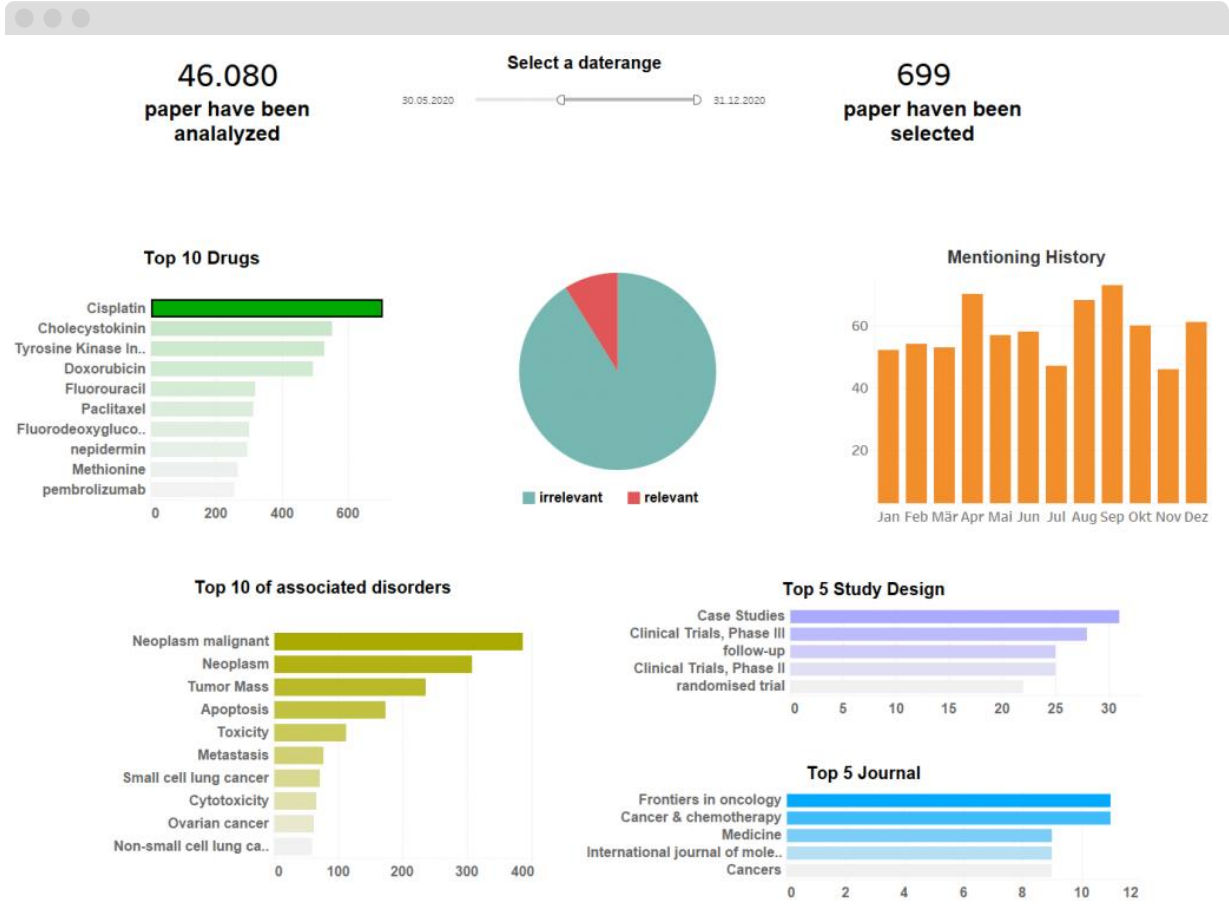


Filtering and indexing: Publications and articles get sorted into topics and relevant text is highlighted automatically (Screenshot taken from the Information Discovery dashboard)

Add Business Intelligence

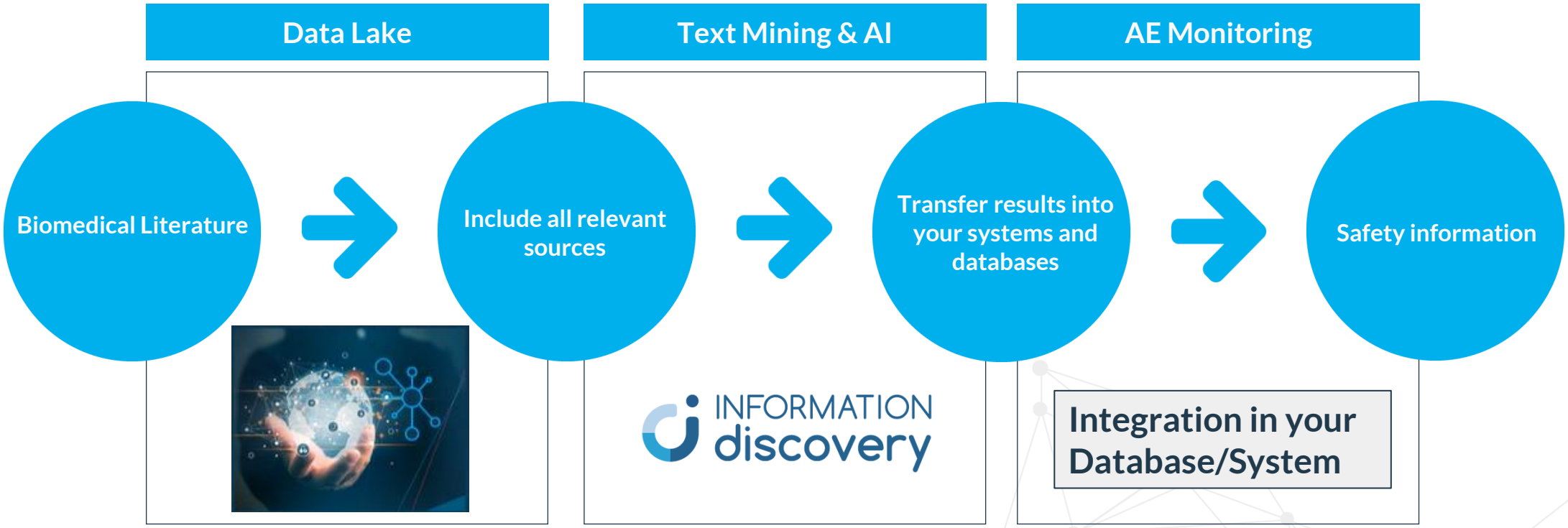
With the added capabilities of data visualization through PowerBI or **Tableau**, one can save time while getting meaningful insights.

You can select which key metrics you want to see and get more detailed views by drill-down menus. Additionally, you can select filters, such as the time period of publications to include in your analysis, by using the slider in the middle.



Dashboard: The interactive dashboard allows you to get a quick and complete overview of key metrics.

Integration into your business process



Success factors for AI assisted adverse event detection

State-of-the-art AI

We use proven methods, evaluate **different approaches**, and help you to find the **best solution** for your needs.

Use standard domain terminologies

We normalize using controlled vocabulary and codes that are up to and above the **industry standards.**

Use AI without technical knowledge

Making AI **easy to use** and understand for **experts in business,** not just programmers.

Design individual solutions

Enrich industry standards to get individual results.
Integrate into your **business** infrastructure, **processes**, and tools.

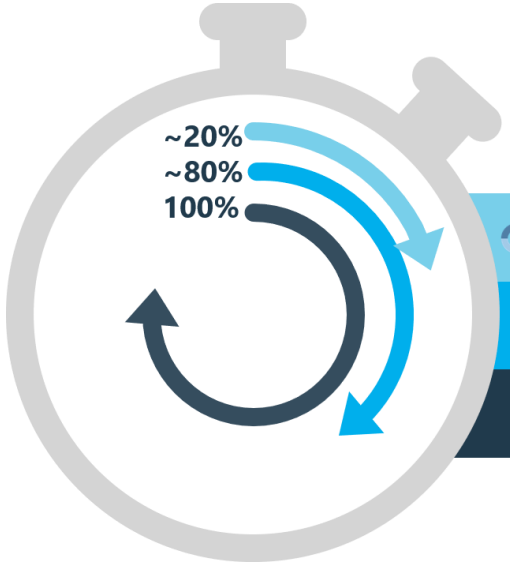
The future of pharmacovigilance

INFORMATION discovery

Text Mining / Machine Learning Platform

helps you to

- Improve Quality and Compliance
- Monitor/Identify Adverse Events
- Reduce manual workload



Save up to 80% of your time and reduce costs for external providers!

INFORMATION discovery AE detection

Tool based AE detection

Manual Literature Review

Let‘s talk about your needs!

Interested? Get in Touch

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