

Policy Briefing

German Israeli cooperation in digital health and artificial intelligence

This publication by the German Israeli Health Forum for Artificial Intelligence (GIHF-AI), the health policy innovation program of the European Leadership Network (ELNET), takes an exemplary look at the cooperation between Germany and Israel in the fields of digital health and AI in healthcare.

Author: Lea Ledwon

Scientific cooperation has paved the way for diplomatic relations

German Israeli scientific relations can look back on a long tradition. In the **mid-1960s**, they manifested themselves in the first cooperation programs, which paved the way for stronger diplomatic relations between the two countries. To this day, they are the **foundation of intensive cooperation** and continue to inspire new exchanges at various levels between ministries, universities, research institutes, or individual researchers from both countries.¹

Since 1969, the **Federal Ministry of Education and Research (BMBF)** has been working closely with the **Israeli Ministry of Innovation, Science and Technology (MOST)** and the **Israeli Ministry of Economy and Industry (MOEI)**. The **focus in the life sciences is primarily on cancer research**. The COVID-19 pandemic has also led to joint research activities between the German Cancer Research Center (DKFZ) and the Israeli Weizmann Institute (WIS).² In addition, there is intensive collaboration in the neurosciences, biotechnology, and medical technology. With **GIHF-AI**, which was funded by the **Federal Ministry of Health (BMG)** until 2024, the **area of AI in health research was also added as a priority topic** in 2021.³ The signing of the declaration by the German Medical Association (BÄK) and the Israel Medical

Association (IMA) on June 23, 2022, in Dresden, ensuring the mutual recognition of continuing medical education, has further strengthened cooperation in this field.⁴

However, **since the Hamas attack on Israel on October 7** and the subsequent war, **cooperation between researchers from Israel and Europe has declined**, according to a report by the Israeli Ministry of Innovation, Science, and Technology. An Israeli survey from April 2024 also documented a wide range of discriminatory experiences faced by Israeli researchers.⁵ **This underlines the importance of supporting existing collaborations and initiating new ones**. In particular, cooperation between university hospitals offers great potential.

German and Israeli university hospitals are increasingly cooperating

When it comes to the digitalization of healthcare, Israel is years ahead of Germany. This point was also emphasized by the **German Minister of Health, Prof. Dr. Karl Lauterbach**, during the third annual GIHF-AI conference in June 2024. According to the minister, the **cooperation agreements signed between university hospitals as part of GIHF-AI are among the program's most important achievements**. Progress in healthcare digitalization can be

made not only through discussions but, more importantly, through joint action.⁶ The **cooperation agreements and implementations between German university hospitals** – Charité - Universitätsmedizin Berlin, Hamburg Eppendorf (UKE), Essen (UME), and Schleswig-Holstein (UKSH) – and Israel's largest hospitals, Sheba Medical Center (Sheba) and Tel Aviv Sourasky Medical Center (Ichilov), as well as the largest Health Maintenance Organization (HMO), Clalit Health Services, are **outlined below**.

Medicine of the future: Israel's hospitals are among the best in the world

The country's largest hospital, **Sheba Medical Center, was originally founded in 1948 as Israel's first military hospital**. Today, it treats over one million patients every year. The complex comprises 159 medical departments and clinics, 33 laboratories, and four specialized hospitals with around 2,000 beds. Sheba is also home to the **ARC (Accelerate, Redesign, Collaborate) Center** for Digital Innovation. It has over 100 startups that have developed numerous digital applications used worldwide.⁷ In 2024, Sheba Medical Center was again ranked as **one of the 10 best hospitals in the world by US magazine Newsweek**.⁸

Tel Aviv Sourasky Medical Center (Ichilov) is the largest acute care hospital in Israel, with 1,500 beds and 1.8 million patient visits annually. The hospital combines patient-centered care with clinical excellence, research, and teaching. It is also home to the **IMed Innovation Center**, which provides an ideal environment for health tech startups, fostering partnerships among entrepreneurs, startups, multinational companies, and investors.⁹ **In 2023, Ichilov became the first hospital in Israel to implement an AI-based triage system in its emergency department**. This system, built on a database of over 30 million evidence-based medical findings, offers doctors and nurses clinical insights into patients' symptoms ahead of time, making treatment planning more efficient.¹⁰

Israel has **numerous other state-of-the-art hospitals**, both large and small, all equipped with their

own innovation hubs and startup incubators. According to Newsweek's ranking of Israel's best hospitals, **Rabin Medical Center (RMC)** ranks third, after Sheba and Ichilov, both of which are also located in central Israel.¹¹ **Operated by Clalit**, RMC employs state-of-the-art methods and technologies. The center is not only medically engaged but also serves as a clinical base for Tel Aviv University's Faculty of Medicine.¹²

Hadassah University Medical Center (Hadassah) in Jerusalem is the only academic medical institution in Israel that combines teaching and training on a single campus. It is **affiliated with the Hebrew University** and is Israel's oldest hospital.¹³ Northern Israel is home to **Rambam Healthcare Center (Rambam)**, the country's fifth-largest hospital. Rambam is heavily involved in medical research and innovation, collaborating with the renowned **Technion – Israel Institute of Technology** in Haifa and other global research institutions to advance medical science and develop new treatments.¹⁴ With only 7.5 percent of Israel's gross domestic product allocated to healthcare (compared to 12.8 percent in Germany), **self-sustaining innovation is crucial for the financial stability** of hospitals.¹⁶

Charité - Universitätsmedizin Berlin and Sheba Medical Center

In **late 2022, Charité – Universitätsmedizin Berlin and Sheba Medical Center signed a Memorandum of Understanding** on strategic, scientific and academic collaboration aimed at driving innovation in medicine. While the partnership **focuses primarily on research into Long COVID**, the two institutions also collaborate in other areas, such as **hospital IT**. The cooperation was initiated in June 2022 during a delegation visit to Israel. By combining Israel's innovation expertise with Charité's access to large patient cohorts, the collaboration has advanced research in both countries. The exchange of best practices in hospital management and IT is another key component. Despite the ongoing Middle East conflict since October 7, the two institutions continue to work closely together, with workshops and funding projects in the pipeline.¹⁷

Charité - Universitätsmedizin Berlin and Clalit Health Services

Since 2022, Charité has also been collaborating with Clalit Health Services. In addition to its role as a health insurance provider, Clalit operates its own hospitals, clinics, and pharmacies, similar to the three other Israeli HMOs. Clalit serves five million members, managing 14 hospitals and over 1,300 primary care clinics, pharmacies, and dental clinics. Through its innovation hub, Clalit Innovation, the organization fosters research and development and leverages its excellent digital infrastructure, including **AI-driven care platforms**, which are widely implemented in practice. In 2022, **ten German Israeli research tandems** were established in the areas of artificial intelligence, health data, immunology, infectiology, oncology, and cardiology. In June 2023, a meeting at Charité allowed Israeli and Berlin scientists to present results and discuss future joint projects. New project groups were also created, focusing on **women's health** and **mental health**. Additionally, Prof. Dr. Ran Balicer, Chief Innovation Officer of Clalit Health Services and Founding Director of the Clalit Research Institute, is receiving support through a visiting fellowship funded by Stiftung Charité. The goal of this fellowship is to **establish a new working group at Charité**.¹⁸

University Medicine Essen (UME) and Israeli healthcare facilities

University Medicine Essen (UME) and Sheba Medical Center have also formalized their collaboration through a Memorandum of Understanding. In May 2024, UME became the **first German university hospital to announce a partnership with Aidoc**, a startup founded at Sheba Medical Center in 2016.¹⁹ Through this three-year partnership, **UME is implementing six AI algorithms** from Aidoc, designed to support the detection and prioritization of acute pathologies. These algorithms help identify conditions such as pulmonary embolism, cerebral artery aneurysms, spinal and rib fractures, and free gas in the abdomen, thereby speeding up patient treatment and improving working conditions for healthcare professionals.²⁰ The first partnership of

this nature was initiated in 2021 by Unfallkrankenhaus Berlin (UKB), which adopted several of Aidoc's AI solutions to enhance the prioritization and acceleration of treatments for patients with life-threatening conditions.²¹

Additionally, in November 2023, UME signed a long-planned **Letter of Intent with Ichilov** (Tel Aviv Sourasky Medical Center). This was **part of the Shalom - Chaveruth: Solidarity Partnerships NRW-Israel** initiative, which was developed **in response to the October 7** events. It allows municipalities in North Rhine-Westphalia to support the development of Israeli partner municipalities near the Gaza Strip. The cooperation will focus on **digital health** and **emergency medicine**, addressing both physical health and **mental health**, including **psychological trauma**. UME has also been supporting Barzilai Medical Center in Ashkelon since October 7.²²

University Medical Center Hamburg Eppendorf (UKE) and Tel Aviv Sourasky Medical Center

Initiated by the German Israeli Health Forum for Artificial Intelligence (GIHF-AI), the **University Medical Center Hamburg Eppendorf (UKE) and the Tel Aviv Sourasky Medical Center (Ichilov) signed a Memorandum of Understanding in May 2023** to deepen their collaboration. This partnership was formalized in the presence of **Hamburg's First Mayor Dr. Peter Tschentscher**, then President of the Bundesrat. The first online symposium was held on June 10, 2024, after a planned in-person symposium in Tel Aviv in November 2023 was postponed due to political circumstances. During the event, five **focus topics** for future collaboration were outlined: **Cell Therapies, Big Data and AI, Immunology, Neuroscience, and Regenerative Medicine**. Discussions also included the topic of **stem cell transplantation**.²³

University Medical Center Schleswig-Holstein (UKSH) and Tel Aviv Sourasky Medical Center

In **July 2023, UKSH and Ichilov** signed a **Memorandum of Understanding** aimed at promoting **educational and research exchanges**. The partnership

includes exchanging faculty, staff, and students, supporting joint research initiatives, developing collaborative education and training programs, promoting the sharing of academic and scientific publications, and facilitating **joint fundraising efforts**. Additionally, the institutions are working together on **digitization and data exchange projects**.²⁴

In May 2024, the **UKSH Hackathon took place in Berlin in cooperation with Ichilov**. A delegation of experts in data science, radiology, and emergency medicine from Ichilov participated in the event. One of the key innovations presented was ***binah.ai***, an **AI-powered, video-based software solution already being used in UKSH's emergency department**. This technology allows automated measurement of health indicators – such as blood pressure, heart rate, oxygen saturation, and respiratory rate – using smartphones, tablets, or laptops. An external PPG signal can be used for continuous monitoring, and the software integrates easily into apps via an SDK (Software Development Kit). Additionally, innovative non-invasive blood tests, such as hemoglobin and hemoglobin A1C, are in development.²⁵

Conclusion and outlook

In addition to the existing German Israeli collaborations between university clinics, healthcare facilities, and hospitals, **state-of-the-art AI-based healthcare applications from Israel** are **helping some of Germany's leading hospitals** enhance their data strategies and optimize patient care. One notable example is **MDClone's ADAMS platform** which integrates with electronic health records and enables comprehensive data interoperability. This platform allows clinicians to gain insights from comprehensive data sets. As a result, it serves as a robust data lake and is now also set to support hospitals in Germany in developing into fully data-driven companies.²⁶ These **examples demonstrate the value** of cooperation between Germany and Israel in the fields of digital health and AI. It is therefore **advisable to initiate further agreements of this kind** and with **continued political support**. GIHF-AI remains the leading bilateral digital health platform for fostering such digital health collaborations.

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Supported by:



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by the German Bundestag



An initiative by ELNET

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GIHF-AI

German Israeli
Health Forum for
Artificial Intelligence

An Initiative by:

ELNET Deutschland e.V.

Albrechtstraße 22
10117 Berlin
deutschland@elnetwork.eu

Author: Lea Ledwon

Date: 04.09.2024



gihf-ai.eu



[@GIHFAI](https://www.linkedin.com/company/gihfai)

CONTACT

Carsten Ovens

CEO
ELNET (DACH)

Lea Ledwon

Program Manager GIHF-AI
ELNET