

RETINA READ RISK - 18 FEBRUARY NEWSLETTER

Transforming Diabetic Retinopathy
Screening with AI and Telemedicine

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About Retina Read Risk

Retina Read Risk was officially launched in 2022. The goal of this 3-year project is to develop hardware and software for a new vision-screening process for diabetic retinopathy that, compared to previously developed methods, is both safer for patients and less time-consuming for medical staff. Retina Read Risk is a multidisciplinary endeavor centered on patient and caregiver perspectives. The project consortium includes various innovation partners: research laboratories, hospitals, a patient association, one of the world's largest telecom groups, a hospital telecom service provider, a consulting firm specialized in launching health start-ups, and a non-profit foundation that funds applied medical research. They share a common objective: *to improve and personalize vision-screening of diabetic patients through E-health systems.*

Advancing Diabetic Retinopathy Screening with AI and Telemedicine

Early detection of diabetic retinopathy is essential in preventing vision loss, yet access to specialized care remains limited. To address this challenge, the RRR project is transforming screening by integrating artificial intelligence (AI) and telemedicine solutions, making early diagnosis more efficient and widely accessible.

To test its feasibility, the RRR program was introduced in five primary care centers with two fully incorporating it into their daily practice. This implementation enabled the screening of 9,676 patients, among whom 774 were diagnosed with diabetic retinopathy, while 424 required further testing. By equipping primary care settings with advanced diagnostic tools, the project is narrowing the gap between patients and specialized ophthalmological care.

At the core of this initiative lies innovative technology that makes screening more accurate and accessible. The Aurora retinal camera enables high-quality imaging without the need for pupil dilation, significantly reducing the chances of misdiagnosis. To reach more patients, especially in rural or underserved areas, VistaView mobile devices have been deployed. To further refine diagnostic capabilities, AI-driven image analysis algorithms are constantly learning from thousands of retinal scans, allowing for personalized patient monitoring based on the severity and progression of the disease.

Before RRR, only 33% of patients had access to specialized diabetic retinopathy centers. With its implementation, this rate is expected to rise to 72%, ensuring faster, more effective care. By reducing unnecessary consultations and improving patient management, the project could save up to €10 million in healthcare costs. This is made possible through the integration of RRR with telemedicine, enabling better coordination between healthcare professionals and optimizing patient management.

While patients have embraced the project, the integration of AI in healthcare brings key ethical and regulatory considerations. Ensuring data confidentiality, securing communication, and conducting impact assessments are key steps in making this technology sustainable.



VistaView Device (named as "sistema mòbil")

To get the **latest news** on the Retina Read Risk project, please **subscribe** to the [newsletter](#).

You can also **contact us** by email: contact@retinareadrisk.eu

This project is supported by [EIT Health](#), a knowledge and innovation community of the European Institute of Innovation and Technology (EIT).



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The Consortium of Retina Read Risk project

RetinaReadRisk

RetinaReadRisk is the spin-off created within the framework of the European project Retina Read Risk and founded by Institut d'Investigació Sanitària Pere Virgili (IISPV), GENESIS Biomed, UP2Smart and Grupo TRC in February 2023, it aims to bring a solution to facilitate screening of diabetic retinopathy. The creation of the company emerged from a project supported by EIT Health, an aspect that also gives it an international projection. The new spin-off RetinaReadRisk benefits from more than 10 years of work from researchers and hopes to attract private and public funding in the next 2-3 years to be able to finalize the development of the product and commercialize the solution developed during Retina Read Risk project.

For more information visit: <https://retinareadrisk.eu/>

Institut d'Investigació Sanitària Pere Virgili (IISPV)

The IISPV is a biomedical research institute placed in the province of Tarragona (Catalonia, Spain) that combines clinical and basic research in order to accelerate the translation of knowledge to the benefit of patients. Founded in 2005, the institute integrates the Hospital Universitari de Tarragona Joan XIII, the Hospital de Tortosa Verge de la Cinta, the Hospital Universitari Sant Joan de Reus, the Hospital Universitari Institut Pere Mata and the Universitat Rovira i Virgili, in order to bring together and manage biomedical research and innovation in the territory. The IISPV aims to be a national and international reference centre in biomedical research and translation, at the service of the population, linking the health centres to the community.

For more information visit: <https://www.iispv.cat/en/>



Institut Català de la Salut (ICS)



Generalitat
de Catalunya



Institut Català
de la Salut

The Catalan Institute of Health (ICS) is the largest public health services company of Catalonia with a staff of over 53,031 professionals, that provides health care to nearly six million people across the country. As a reference entity of the public health system, the aim of ICS is to improve people's health and quality of life, through the provision of innovative and excellent health services, regarding both the promotion of health and the treatment of diseases, from the most prevalent to the most complex ones. ICS structure includes 953 primary care centres and local consultancy, 8 Hospitals and 7 research institutes, including IISPV as a one of them. Our organization mission states to be a model that, through its structure and participants, responds to projects of strategic relevance to the ICS, guaranteeing the capacity and sufficient knowledge to

execute them in short terms and obtaining fast returns in the form of results and value for the organization. ICS' vision would become a reference and reliable model for all management structures, corporate and territorial, and ICS professionals to promote innovative projects, advise on their approach and relate, if necessary, external agents that collaborate in its deployment and / or provide resources. Since mid-2021 till mid-November 2023, Mr Francesc Iglesias, responsible of the Research and Innovation support office of ICS, has been the chairman of the Governing Board of EIT Health Spain, being actually the vicechair of the EIT Health Spain foundation and Chair of INNOLIFE.

For more information visit: <http://ics.gencat.cat/es/inici/index.htm>

Telefonica

Telefónica is one of the world leaders integrated operator in the telecommunication sector, providing communication, digital services, information and entertainment solutions, with operations in 12 countries in Europe and Latin American and with a global present in 38 countries. As of the end of 2022, Telefónica's total number of customers amounted more than 383 million and 103,000 professionals. Telefónica spends more 3.700 million euros each year on technological innovation, including more than 714 million euros on R&D of new products, services and management systems and improvement of existing ones. In the health sector, Telefonica is working in several areas like Telemedicine, geo-localised transport of living tissue between hospitals, assisted surgery operations with 5G and VR, AI applied to disease detection, etc.



For more information visit: <https://www.telefonica.com/en/>

Grupo TRC

Grupo TRC has over 30 years of experience working hand in hand with groups of hospitals, developing applications to optimize and integrate all activities and processes of a health center in a unified platform.



The experience in the integration of advanced telecommunications systems, in the deployment of voice operator and connectivity services and in the development of customized software, both public and private sectors, national and international, are the guarantee of the commitment to the quality of our deployments, solutions and services.

For more information visit: <https://www.grupotrc.com/>

GENESIS Biomed

GENESIS Biomed is a consultancy firm in the biomedical healthcare sector specialized in providing consulting services in the genesis and first phases of lifecycle of biomedical spin-off and start-up companies, entrepreneurs, and research centers.

Based in its expertise GENESIS Biomed helps entrepreneurs and researchers to shape their business plan and supports them in the private fundraising process. GENESIS Biomed has raised >68,5 M€ in the last years in 20 rounds.

GENESIS Biomed expertise domains are biopharmaceutical, biotechnological, medical devices, in vitro diagnostic, nutraceutical and cosmetic. With more than 20 years of expertise in the healthcare sector, GENESIS Biomed is born in May 2017, and it is located in the Barcelona Science Park, and also with company sites in Madrid center and at La Marina in Valencia.



For more information visit: <https://genesis-biomed.com/>

E-Seniors

E-Seniors is a French non-profit association, founded in 2004 by Monique EPSTEIN. E-Seniors aims at fighting against e-exclusion by providing access to and training in ICT to seniors and/or disabled



people. Its main objectives are bridging and shrinking the digital gap between generations, caring for elders by fighting against senior isolation, and opening new horizons for efficient use of free time. Besides teaching “basic computer skills”, E-Seniors has opened more thematically oriented workshops for “advanced” students, dealing with, for example, digital images and sounds, interactive messaging and chat, “writing memories”, and meetings dealing with the fight against e-exclusion. Through its work for elderly people and with them, the association tries as well to enhance awareness of the importance of ICT solutions in everyday life.

For more information visit: https://www.e-seniors.asso.fr/en_main.htm

Fondation de l'Avenir



Fondation de l'Avenir

Accélérons la recherche en santé

The Fondation de l'Avenir is a non-profit organization that funds, supports and promotes applied medical research for the benefit of patients. Created in 1987 by French mutual healthcare associations, it has been recognized as a public-interest non-profit since 1988. Today, the Fondation is the link between the mutual-healthcare movement and public health stakeholders. The Fondation de l'Avenir has more than 43,000 donors as well as 40 partners from the social and solidarity economy, working in concert to advance medical progress. The Foundation has funded more than 1,300 projects since its creation, including many world firsts. It is managed by an Executive Board, chaired by Marion Lelouvier, under the control of a Supervisory Board, chaired by Matthias Savignac.

For more information visit: <https://www.fondationdelavenir.org/>

EIT Health



EIT Health is a network of best-in-class health innovators with approximately 130 partners and is supported by the [European Institute of Innovation and Technology \(EIT\)](#), a body of the European Union. We collaborate across borders to deliver new solutions that can enable European citizens to live longer, healthier lives.

As Europeans tackle the challenge of increasing chronic diseases and multi-morbidity, and seek to realise the opportunities that technology offers to move beyond conventional approaches to treatment, prevention and healthy lifestyles, we need thought leaders, innovators and efficient ways to bring innovative healthcare solutions to market. EIT Health addresses these needs. We connect all relevant healthcare players across European borders – making sure to include all sides of the “knowledge triangle”, so that innovation can happen at the intersection of research, education and business for the benefit of citizens.

Co-funded by the
European Union



EIT Health: Together for healthy lives in Europe.

For more information visit: www.eithealth.eu.

Disclaimer

The Retina Read Risk project is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the EIT. Neither the European Union nor the granting authority can be held responsible for them.

A project supported by



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