UK Optometric Practices Advancing AI-Driven Screening Through the I-SCREEN Project

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The European optometric and optical sector continues to evolve at pace, and few initiatives reflect this momentum better than the I-**SCREEN project**. At its heart lies the ambition to harness artificial intelligence (AI) to enhance the early detection of **age-related macular degeneration** (**AMD) and geographic atrophy (GA)** across Europe. With the goal of developing a common European AI-supported screening model for AMD and GA using OCT imaging, I-SCREEN is well underway.

While the project is driven by a diverse consortium of European partners, optometric practices in Northern Ireland are making a meaningful contribution to this ambitious effort.

A European Vision with Local Impact

I-SCREEN, funded by the EU's Horizon Europe programme, brings together a wide-ranging consortium of academic institutions, eye-care providers, and professional associations with a shared objective: to **make AI-supported OCT screening for AMD and GA more accessible, consistent, and clinically useful in primary-care settings.**

By collecting high-quality OCT images with Topcon Maestro devices from community-based practices, the project aims to train and validate AI tools capable of detecting early pathological signs. This has the potential to transform referral pathways, ease pressure on specialist services, and significantly improve long-term visual outcomes for patients. The study is supported, among others, by Topcon.

The European Council of Optometry and Optics (ECOO), as a project partner, plays a crucial role in connecting the consortium to the wider professional community across Europe. Thanks to **funding for this work package from the Swiss State Secretariat for Education, Research and Innovation (SERI)**, ECOO has been able to identify and coordinate a strong network of participating practices across Europe and including in the UK each one highly engaged and committed to advancing the I-SCREEN mission.

A Meaningful Contribution: UK Practices in Focus

The involvement of UK optometric practices is important, especially given the project's milestone goal of collecting **5,000 OCT images** to train and validate the AI screening system. **More than 600 of these images are to be sourced from practices in Northern Ireland, underscoring the country's valuable contribution.**

The United Kingdom's contribution to I-SCREEN is organised around a key clinical ophthalmology partner, **Queen's University Belfast**. A network of dedicated optometric practices collects high-

quality OCT images from primary-care settings. Working with Queen's University Belfast, assisted by the Optometry department at Ulster University, are optometry **practices across Northern Ireland, including I-Care, J McKeown Opticians, Harris Rundle, EK Eyecare, RA Glass and Faith Donaldson Optometrists.** Each brings a strong commitment to advancing the project's data-collection efforts. Their collective work will contribute to developing a reliable and widely applicable AI tool for AMD and GA screening and is offering their patients opportunity for further follow up if neccessary.

The Role and Impact of Optometrists in I-SCREEN

Optometrists are central to the success of the I-SCREEN project and the broader transformation of eye care across Europe. As primary eye-care professionals, they serve as the first point of contact for many patients and are uniquely positioned to identify early signs of AMD and GA.

Overall, the involvement of optometrists in I-SCREEN not only advances the project's objectives but also showcases their role as **primary eye-care providers**, essential to preventive eye health.

Join the Effort

As the project continues to build momentum, **there is still room for additional involvement. If your practice is equipped with a Maestro OCT device**, and is based in Northern Ireland, you may be eligible to participate in this landmark initiative.

To express interest or learn more, please contact: secretariat@ecoo.info

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ABOUT THE PROJECT

I-SCREEN is funded by EU's Horizon Europe programme under the EIC Pathfinder Open call (GA No 101130093), which is designed to support groundbreaking innovations in deep-tech fields, promoting high-risk, high- reward research that addresses global challenges. These calls encourage visionary ideas with the potential for transformative impact, fostering interdisciplinary collaboration and pioneering solutions. As part of this call, ECOO has received its funding from the Swiss State Secretariat for Education Research and Innovation (SERI).

For more information about the I-SCREEN project, visit i-screen.eu.

ABOUT ECOO

The European Council of Optometry and Optics (ECOO) represents the interests of optometrists and opticians across Europe, both within and outside the EU. Our members are national professional associations from 25 countries who together represent more than 200,000 opticians and optometrists. ECOO aims to promote eye health to the public across borders and to harmonise clinical and educational standards of optometric and optical practice throughout Europe.