OKULISTYKA 21

FUNDACJA WSPIERANIA ROZWOJU OKULISTYKI

The increase in the prevalence of diabetes is starting to be one of the biggest problem in modern world. As of 2017, an estimated 425 million people had diabetes worldwide, with type 2 diabetes making up about 90% of the cases. This represents 8.8% of the adult population, with equal rates in both women and men. Trend suggests that rates will continue to rise. Diabetes at least doubles a person's risk of early death. In 2017, diabetes resulted in approximately 3.2 to 5.0 million deaths.

One of the complications of diabetes is Diabetic retinopathy. Diabetic retinopathy affects up to 80 percent of those who have had diabetes for 20 years or more. At least 90% of new cases could be reduced with proper treatment and monitoring of the eyes. The longer a person has diabetes, the higher his or her chances of developing diabetic retinopathy. Diabetic retinopathy is also the leading cause of blindness in people aged 20 to 64.

The Foundation for the Development of Ophthalmology "Okulistyka 21" has received European grant (the budget: 1 198 375,46 EUR) for new project for Diabetic Retinopathy screening with the use of artificial intelligence (AI).

The aim of the programme is to increase the early detection of diabetic retinopathy with pre-ophthalmological screening. The project will be conducted during 3 years in 30 diabetic clinics in Wielkopolska Region in Poland and will cover the population of 43,920 diabetic patients. This will be based on fundus pictures made by nurses or technicians, which will be analysed by autonomous deep learning software.
The programme will also:

- Act as a source of medical data on the incidence of diabetic retinopathy in the Polish/ European population,
- Introduce the AI- based diabetic retinopathy sreening into real life conditions
- Provide a background for scientific research on the method, its effectiveness and use on a European or global scale.

The medical consultant of the project is professor Andrzej Grzybowski, MD, PhD email: ae.grzybowski@gmail.com

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