The scientific communications department of the Ural Federal University reported that university scientists developed and patented a new way to analyze electoretinography images (ERG) using artificial intelligence (AI). The method allows you to more accurately diagnose eye diseases, including glaucoma, diabetic retinopathy and retinal dystrophy.

Electroretinography is a research method in which the retina responds to light flashes, developing electrical signals. These signals are converted into graphs by which doctors diagnose. However, the interpretation of such graphs is traditionally difficult due to their complexity and blurring signs of diseases.

The new algorithm increases the accuracy of the analysis to 91%. It removes interference caused by eye movement, standardizes the data and recognizes dozens of signs of diseases using its own database. This allows you to get more clear and informative pictures for diagnosis.

The developers note that ERG can identify at least 10 common eyes of the eyes, while more common methods, such as the shooting of the fundus of a halter, often require additional examinations.

The development of software is currently underway, which is planned to be adapted for Russian and foreign equipment. Scientists also collaborate with specialists from Australia and Germany who are engaged in the development of ERG technology and the development of international standards.