

AI diagnosis of eye disease will cut delays in NHS treatment

By Sarah Knapton SCIENCE EDITOR

ARTIFICIAL intelligence (AI) is now as good as humans at spotting early signs of blindness, a collaboration between DeepMind, a London-based technology company, and the NHS has shown.

The new system can spot 50 eye problems, including age-related macular degeneration (AMD) and diabetic eye disease, with 94 per cent accuracy and it can even provide a diagnosis for the one in four cases when experts cannot reach a consensus.

Doctors are hopeful the new system will speed up treatment for people who currently wait up to 16 weeks for eye tests, because of shortages in the NHS.

To develop the algorithm, programmers at DeepMind were given access to thousands of eye scans from Moorfields Eye Hospital, London. They used these to train their system to spot dozens of diseases over 18 months.

Dr Pearse Keane, consultant ophthalmologist at Moorfields, said: "The AI we're developing is designed to prioritise patients who need to be seen and treated urgently by a doctor or eye care professional.

"If we can diagnose and treat eye conditions early, it gives us the best chance of saving people's sight."

The next step is for the research to go through clinical trials to explore how this technology might improve patient care. If it is successful, it will then be rolled out throughout Britain.

Cathy Yelf, chief executive of the Macular Society, a sight loss charity, said: "People with wet AMD are supposed to be fast-tracked but we know some aren't getting treatment for up to 16 weeks [due to] pressure on eye clinics. We're excited by this latest development and hope this technology will alleviate the pressure on clinics"

The research was published in the journal *Nature Medicine*.