



Robot gets positive reaction

Macular Society members have helped provide useful feedback to researchers looking at the possibility of robots performing eye surgery.

Dr Christos Bergeles from University College London visited a Macular Society support group to gain an insight into how patients would feel about the development.

Christos (right), who is a lecturer in the department of medical physics and biomedical engineering, posed a number of questions to the Bromley Support Group, including whether they would be willing to be operated on by a robot.

Christos said: “Sight restoration in age-related macular degeneration (AMD) may be possible with novel



cell-based therapies that replace the damaged cells in the eye. However, delivery of these treatments, under the retina, is currently performed using a hand-held needle. This is very demanding for surgeons and is at the limit of what can be achieved with conventional surgery, which restricts what success can be achieved.

“This is why we are proposing the development of a tailored, flexible

robotic system, which will be able to perform these more intricate surgeries. They will enable safe, dexterous interventions at the retinal and subretinal layers.”

The idea is that the robot acts like a mechanical hand, which will be guided by the clinician. Expert retinal surgeon Professor Lyndon da Cruz from Moorfields Eye Hospital is collaborating on the project. The robotic device would be designed to eliminate unwanted tremors in the surgeon’s hand, so the surgery can be safely carried out within the eye.

The members were also asked how far they would travel for such a surgery, with many stating they would go as far as they needed to

if it would have a positive effect on their vision. However, the majority of those asked were not prepared to undergo a procedure that would see them operated on by a robot controlled remotely by a surgeon in another town or city.

The overall reaction from the group was positive and many members would be happy to undergo the procedure as soon as possible, if it would improve their vision.

Christos added: “It is important to gain an insight from patients themselves as they will be the ones undergoing surgery. If they are not happy with what is being developed we need to know now, so this can be addressed.”



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