

INTERVIEW

Douglas Anderson founder of Optos

Douglas Anderson, the founder of Optos, has reflected on a 25-year-long journey to bring ultra-widefield imaging into the consulting room, inspired by the experience of his own son. **Joe Ayling** reports

Optos was founded in the 1990s on the principle that capturing an ultra-widefield image of the retina is clinically crucial for identifying and monitoring eye and other systemic diseases.

A quarter of a century later, the Scottish firm has sold 11,500 systems for use on 70 million patients.

However, founder Douglas Anderson entered the profession with no prior optical or academic connections with the profession.

A product development expert within healthcare, what he did understand was the need for better equipment to scan the full width of the retina.

His five-year-old son Leif, born with high myopia, had lost sight in his right eye following the late diagnosis of a retinal detachment – prompting a huge programme of development and the creation of Optos.

Now, as the company reaches its quarter century milestone, Anderson tells *Optician* more about the beginnings of the Scottish technology giant, now under the ownership of Nikon.

He says: 'We started out by looking at existing technology in the market to see if we could identify any technology that might be enhanced to achieve the level of performance I wanted. This primarily being the ability to scan the peripheral retina of a five-year-old child without dilation.'

'I learned very quickly that children weren't getting comprehensive retinal exams, even for adults the optician's routine standard of care with regard to retinal examination was modest and even worse for children.'

Douglas Anderson



MODEST BEGINNINGS

Initially, feedback from the market was often that requirements could not be fulfilled and, even if successful, the technology would be too expensive.

Having commenced development in 1992, Optos went to market with an early device placing the unit entirely free of capital cost seven years later.

Anderson said: 'The technology was inherently costly and [to include capital] would have greatly restricted the number of practices that could afford it. In order to enable the widest possible access to the technology we decided to remove the capital entirely and offer the technology on a pay per patient business model instead.'

'It was a very innovative approach, and certainly it was regarded with some scepticism at first, however, it gradually gained acceptance and we couldn't have achieved the market penetration we did without it. Only when we had a lot of machines out there did sentiment shift and the majority of people start saying they had to have one in their practice.'

The early Optos devices gave high street optical practices the equivalent clinical tools of an ophthalmologist and with digital records to boot.

Technology has since progressed into angiography, pleasing Anderson who had long believed diabetic retinopathy must first present in the peripheral retina. A keen mountaineer, he likens the onset of DR to how in hyperthermia the body shuts down the periphery first.



Looking back at 25 years of Optos

1990
Leif Anderson, son of Douglas Anderson, suffers a spontaneous retinal detachment

1992
Optos was registered with the name Zenoplan Ltd which changed to Besca Ltd then became Optos Ltd

1995
First Plus 180 displayed at the American Academy of Ophthalmology (AAO)

1998
US headquarters opens

1999
Panoramic 200 launched at both AAO's

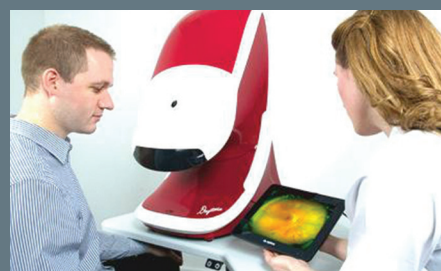
2000
Panoramic 200 becomes commercially available in the US, Canada and Germany

2004
HRH the Princess Royal visits the Optos office

2006
Optos opens London Stock Exchange to celebrate admission and first day of unconditional trading

2007
First LensCrafter customer in the US

2007
Optos awarded the 2007 Queen's Award for Enterprise



2014
California revealed at AAO 2014

2015
Optos acquired by Nikon Corporation

2016
More than 10,000 devices installed worldwide

2016
Daytona Plus launched

2017
Optos celebrates quarter century milestone

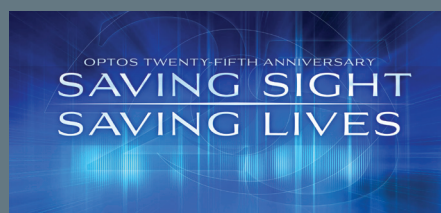


2010
Optos acquires Opto Global

2011
Daytona introduced

2012
First Daytonas ship to UK and US

2013
40 millionth optomap patient imaged



Anderson adds: ‘The devices we make today are the devices I intended to make from the outset. It’s just that big advances tend to take a long time.

‘The discoveries made through ultra-widefield imaging, particularly angiography and AF modalities, has meant that the understanding of the pathogenesis and hence the management of many conditions presenting in the retina is changing dramatically.’

FINDING FUNDS

For almost the whole of its existence, the provision of funding remained a constant challenge to Optos, which had no track record and proceeded the paradigm shift in retinal technology the profession has since witnessed.

Only in recent years have other big technology players decided to follow a similar development path to Optos, he adds. In this respect, the £260m acquisition by Nikon in 2015 could not have been more timely.

‘I hadn’t set out to run a business,’ says Anderson.

‘The buyout brings financial stability and Nikon’s brand strength enhances the huge technological capability of our devices.’

Anderson’s achievements were marked by receiving an OBE in 2006, the same year he won the prestigious Royal Academy of Engineering MacRobert Award.

Continuing in an advocacy role for Optos, he tells *Optician* how his journey went full circle when Leif nearly lost sight in his other eye at the age of 20.

However, thanks to technology that his own father had

helped establish, eye care professionals detected the issue quickly, replacing his retina and saving his sight.

‘When he lost his sight the first time, we weren’t even told as his parents that he was at high risk of retinal detachment. They said this was because they didn’t want to worry us,’ says Anderson.

Indeed, he would now like to see better communication of the risks associated with high levels of myopia, thus reflecting his early founding ideas stressing the importance of identifying

“The devices we make today are the devices I intended to make from the outset. It’s just that big advances tend to take a long time.”

and monitoring eye and other systemic diseases, and ensuring the image capture process is ‘quick and comfortable for patients’.

Optos, meanwhile, has launched the Daytona Plus version of its signature desktop retinal imaging device, and continues to enjoy high exposure at leading US optical practices, while its integration within Nikon expands geographical reach.

Meanwhile, the story of this Dunfermline venture is proof necessity is both the father and mother of invention. **○**