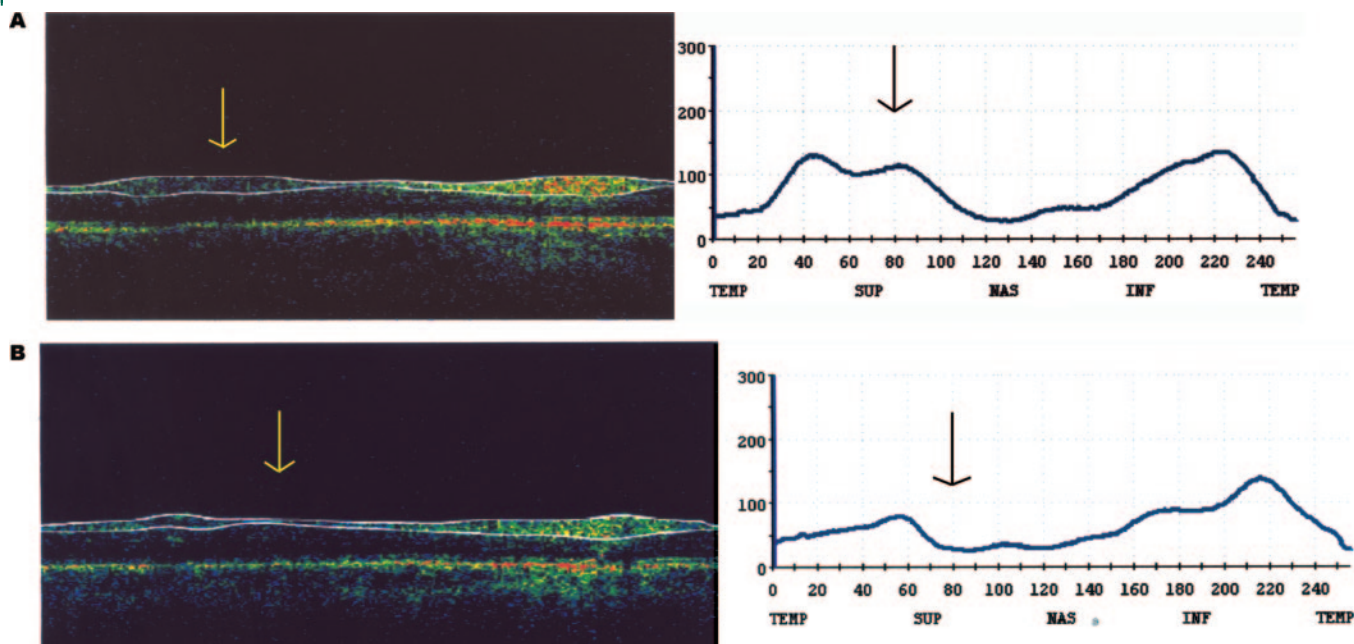


Neuroimaging of retinal nerve fiber layer in AD using optical coherence tomography

Figure Normal retinal NFL (A) and moderate AD NFL (B)



On the left are optical coherence tomography images; to the right are graphs depicting the thickness. The arrows point to the superior area of the NFL and indicate areas of difference due to AD. The normal has a superior NFL thickness of 104 μm and the AD thickness is 58 μm . AD = Alzheimer disease; NFL = nerve fiber layer; TEMP = temporal; SUP = superior; NAS = nasal; INF = inferior. Images were acquired using a Stratus OCT™ (Carl Zeiss Meditec, Inc.).

Optical coherence tomography (OCT) is used for the management of diseases affecting the eye. It has the ability to measure the thickness of the nerve fiber layer (NFL) of the retina. OCT is similar to ultrasound, but utilizes light. Unlike ultrasound, there is no tissue contact. OCT measures structures less than 10 μm scale. In a study that evaluated individuals with Alzheimer disease (AD) and control individuals, Danesh-Meyer and colleagues¹ found a reduction in NFL in those with AD, but not control individuals. Parisi and colleagues² also found significant reductions in the NFL of those with AD and this group included mild AD.

Denise A. Valenti, OD, FAAO, Boston, MA

Address correspondence and reprint requests to Dr. D.A. Valenti, Ophthalmology, Boston University, 715 Albany St., 9th fl., Boston, MA 02118; dvalenti@bu.edu

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