

Abbott's iDesign System Creates 3-D Map Of The Eye For Precise, Personalized LASIK Vision Treatment

- FDA approves iDesign Advanced WaveScan Studio System for use in LASIK procedures in the U.S.
- The iDesign System generates a scan of the eye 25 times more precise than traditional methods used to measure and correct vision
- Sensor technology behind iDesign System also used in NASA's James Webb Space Telescope

ABBOTT PARK, Ill., July 20, 2015 /PRNewswire/ -- Abbott (NYSE: ABT) announced today the U.S. Food and Drug Administration approval and launch of the iDesign Advanced WaveScan Studio System. The system acts as the "brain" of the LASIK procedure, generating a high-definition scan that measures and maps irregularities of the eye that may impact vision. From these measurements, the iDesign System creates an accurate and personalized LASIK treatment plan based on the unique "blueprint" of each person's eyes.

Experience the interactive Multimedia News Release here: <http://www.multivu.com/players/English/7571951-abbott-idesign-system-3-d-eye-map/>

The iDesign System captures more than 1,200 micro readings of the eye, as well as identifying the shape of the cornea, its curvature, how light passes through the eye and pupil diameter under different lighting conditions – all in one, three-second scan that can be used to precisely correct vision.

Measuring Telescope Mirrors and Now...Eyes

The development of the sensor technology within the iDesign System was the result of an earlier discovery by Abbott scientists, which NASA used to accurately measure and shape the mirrors in the James Webb Space Telescope to ensure it will transmit high resolution images of deep space back to earth. The telescope is scheduled to launch in 2018.

[Click here](#) to watch a brief video about the iDesign System and the James Webb Telescope.

"The iDesign System for LASIK is a leap forward for laser vision correction in the United States, enabling a highly personalized treatment unique to the vision needs of each person," said Leonard Borrmann, head of research and development for Abbott's vision business. "The same technology used to help build NASA's new James Webb Space Telescope, which will allow high-definition views of space, is allowing us to map the human eye with great precision."

In a clinical study on 334 eyes treated with the iDesign System, 99 percent of patients experienced little or no difficulty with the clarity of their vision and 97 percent of patients had little or no difficulty with their daily activities after surgery. In addition, patients saw significant improvements in their vision while driving at night and a reduction in glare.

"The iDesign System allows doctors to detect details of the eye that we were never able to see before," said Dr. Borrmann. "After surgery, people who were treated with the iDesign System in a clinical study reported high satisfaction rates, as well as improvements in all areas of vision well-being, such as their quality of vision and vision needed for healthy, active lifestyles."

With the approval of the iDesign System, more people may now be eligible for LASIK compared to Abbott's existing WaveScan WaveFront technology. Doctors can treat higher levels of astigmatism in people with nearsightedness, a wider range of pupil sizes, and those who are 18 years of age and older.

The iDesign Advanced WaveScan Studio has been approved in several countries around the world since 2012, including China and the European Union.

Abbott, the LASIK market leader and innovator for more than a decade, pioneered the first wave-front guided LASIK technology that transformed the vision correction industry. Abbott's iLASIK treatment is an all-laser, bladeless procedure that shapes the cornea to help improve a person's vision. Today, more than 15 million iLASIK procedures have been performed on Abbott machines around the world – with 94 percent of patients seeing 20/20 or better based on clinical studies. Today's launch of the iDesign Advanced WaveScan Studio heralds an advance in the use of lasers to correct vision issues.

The iDesign System is now available for U.S. ophthalmologists and patients. For more information, visit www.backinfocus.com. If you are considering LASIK, ask your doctor about the iDesign System.

Indications and Important Safety Information

Indications: Advanced CustomVue LASIK[®] (laser assisted in situ keratomileusis) is a customized wavefront-guided laser surgery procedure that uses the iDesign Advanced WaveScan Studio System to measure visual imperfections of your eye and the STAR S4 IR[®] Excimer Laser to permanently reshape the cornea. Advanced CustomVue LASIK treatment is used to correct, or reduce myopia (nearsightedness) with and without astigmatism for patients 18 years of age and older and whose vision has been stable for at least one year. Only eye care professionals trained in laser vision correction can determine whether you are a suitable candidate.

Contraindications:

You should not have LASIK if you have collagen vascular (e.g., rheumatoid arthritis), autoimmune (e.g., lupus), or

immunodeficiency diseases (e.g., AIDS) because they affect the body's ability to heal. You should not have this procedure if you are pregnant or nursing; show signs of corneal abnormalities or corneal thinning; have symptoms of significant dry eyes; advanced glaucoma; and uncontrolled diabetes. If you have severely dry eyes, LASIK may increase the dryness, may delay healing after surgery, may or may not go away and it may result in poor vision after LASIK.

Warnings and Precautions: LASIK is not recommended if you have cataracts, corneal scars, or dry eye syndrome; glaucoma; diabetes; severe allergies; history of Herpes simplex or Herpes zoster keratitis; are taking Isotretinoin (Accutane® brand), Sumatriptan (Imitrex® brand), Amiodarone hydrochloride (Cordarone® brand) or antimetabolites for any medical conditions; history of crossed eyes; previous corneal, intraocular surgery, LASIK or refractive surgery; family history of degenerative corneal disease; and history of inflammation of the eye. Your doctor will examine your eyes to determine if you are a candidate for this procedure. Talk to your doctor about any eye-related conditions, injuries, or surgeries you have had, any medications you are taking, and any changes to your vision in the past year. After surgery, you may find it more difficult to see in conditions such as dim light, rain, snow, fog, or glare from bright lights at night. Future measurements of your eye pressure or future cataract surgery can be affected by this procedure. Tell your future doctor you've had Advanced CustomVue LASIK surgery.

Risks:

As with any surgical procedure there are risks associated with Advanced CustomVue LASIK treatments. It is important to discuss these risks with your doctor before you make any decision to have the surgery. If the results of the surgery are not satisfactory, your doctor may want to perform additional laser treatment in either one or both eyes. Talk to your doctor about what is best for you. Some risks are related to the creation of the corneal flap. Corneal flap complications include but are not limited to: cutting an incomplete, irregular flap or free flap; misalignment of the flap; and perforation of the cornea. Corneal flap complications range in severity from those that simply require the treatment to be postponed for several months, to those which create corneal irregularities resulting in permanently blurred vision. You may need reading glasses even if you did not wear them before. Your vision may not be perfect, and you may need to wear glasses or contact lenses for some activities even after laser vision correction.

Side Effects:

Possible side effects include loss of vision and visual disturbances such as double vision, sensitivity to bright lights, increased difficulty with night vision, fluctuations in vision, and other visual irregularities that may be debilitating.

Please consult with your eye care professional and carefully review the Patient Information Booklet regarding the potential risks and benefits of this procedure. Results may vary for each individual patient.

Caution:

U.S. Federal Law restricts this device to sale, distribution, and use by or on the order of a physician or other licensed eye care practitioner.

About Abbott:

At Abbott, we're committed to helping you live your best possible life through the power of health. For more than 125 years, we've brought new products and technologies to the world -- in nutrition, diagnostics, medical devices and branded generic pharmaceuticals -- that create more possibilities for more people at all stages of life. Today, 73,000 of us are working to help people live not just longer, but better, in the more than 150 countries we serve.

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