



For Immediate Release

## **HKSH Introduces New Femtosecond Laser Enhanced Refractive Cataract Surgery High Precision and Safety**

(30 August, 2012 – Hong Kong) Hong Kong Sanatorium & Hospital (“HKSH”) proudly announces the introduction of the Femtosecond Laser Enhanced Refractive Cataract Surgery. With higher safety and precision, this new generation of Femtosecond Laser Technology for Cataract Surgery can facilitate wound recovery with higher safety, precision and effectiveness, providing clinical conveniences and benefits to both doctors and patients.

A cataract is a clouding that develops in the clear crystalline lens of the eye, causing blurred vision. Early-stage cataract patients can improve vision by adjusting the diopter of their glasses. However, as cataract progresses and causes vision loss, changing glasses will no longer be useful. Currently, cataract is not preventable and treatable by any medication, and the only effective treatment is surgery and intraocular lens implantation.

Developed in 1970s, phacoemulsification cataract surgery was introduced to Hong Kong by Dr. Walton Li, Medical Superintendent and Head of Department of Ophthalmology of HKSH in the early 1980s. The technology has made great advancements in the last three decades, and now doctors can perform the surgery by manually opening a 2mm incision at the cornea with a blade, then breaking up and removing the cloudy lens with an ultrasonic probe. An artificial lens is then inserted into the capsule bag. No suture is required and the self-healing wound will heal after about 3 to 4 weeks.





Featuring a 3D-imaging and guidance system, the new Femtosecond Laser Technology for Cataract Surgery allows comprehensive and thorough analysis of one's eye structure by creating a 3D map, ensuring precise lens placement for surgery. This also enables surgeons to make accurate measurement to carry out surgical steps, facilitating surgery with minimised risks.

With the use of this innovative technology enhanced with Femtosecond Laser, the three steps of cataract surgery, namely corneal incision<sup>1</sup>, capsulotomy and lens fragmentation, are performed by computer-controlled laser. Thank to its function of 3D mapping of the eye, the technology enables the doctors to cut and fragment the lens more accurately and evenly with ideal shape and depth. Therefore the artificial lens can be inserted into the exact position, minimising lens displacement. Due to its reliability and meticulousness, this technology can reduce the possibility of surgical trauma and inflammation.

“In the past the corneal incision and lens capsulotomy of cataract surgery were performed manually, which depends on doctor's skills.” said Dr. Ivan Chen, Director of Eye Surgery Centre of HKSH. “With the new technology enhanced with Femtosecond Laser, the cutting and fragmentation process can be done accurately by laser. On the other hand, the harder the cataract, the higher the amount of ultrasound is required, implying a higher potential risk of cornea damage. Now we can soften the lens with this laser system, and emulsify it using a reduced amount of ultrasound, thereby greatly minimising the trauma to the cornea and resulting in faster restoration of eyesight.”

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<sup>1</sup> Pending for final approval



“Laser-assisted In-situ Keratomileusis (LASIK) can now be applied to cataract surgery for lens exchange. After the removal of cataract lens, an artificial lens with vision correction function can be used to treat nearsightedness, farsightedness, astigmatism and presbyopia in one procedure,” said Dr. John Chang, Director of Guy Hugh Chan Refractive Surgery Centre of HKSH. Research results show the 3D imaging and guidance of Femtosecond Laser technology can substantially improve surgical precision by ten times compared with conventional approaches. It also gives more accurate estimation of post-operative refractive errors. With better safety factors and treatment results, this new technology provides significant benefits to patients in the long term.”

- End -

### **About Eye Surgery Centre**

Established in 2003, the Eye Surgery Centre is equipped with the most advanced facilities and technologies. Wide-ranging eye-related surgeries including cataract surgery are performed by the ophthalmologists of Department of Ophthalmology.

### **About Hong Kong Sanatorium & Hospital**

Hong Kong Sanatorium & Hospital is one of the leading private hospitals in Hong Kong. With the motto “Quality in Service Excellence in Care”, the Hospital is committed to serving the public as well as promoting medical education and research.

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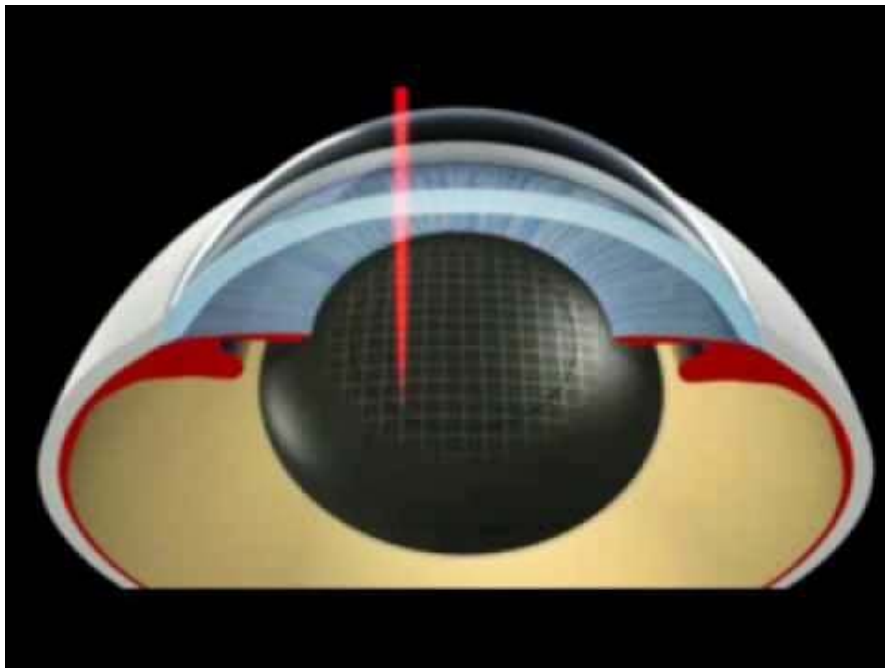


## Glossary

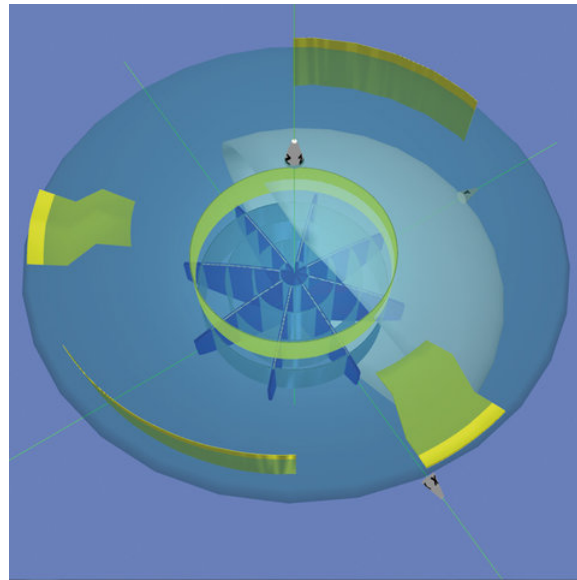
新一代飛秒激光白內障手術儀 (儀器)	Femtosecond Laser Technology for Cataract Surgery
新一代飛秒激光輔助矯視白內障手術 (手術)	Femtosecond Laser Enhanced Refractive Cataract Surgery
角膜切口	Corneal incision
撕囊 (晶體)	Capsulotomy
擊碎晶體	Lens fragmentation

## Photos

1. Lens fragmentation is enhanced with Femtosecond Laser, thus reducing the amount of ultrasound, thereby greatly minimizing the trauma to the cornea



2. New generation of Femtosecond Laser Technology for Cataract Surgery enables 3D Scanning, which is more accurate



3. LensAR Femtosecond Laser Machine for Cataract Surgery

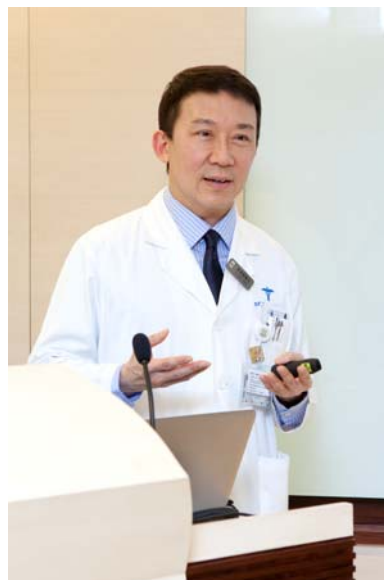




4. Dr. Ivan Chen, Director of Eye Surgery Centre of HKSH, stated that the new technology enhanced with Femtosecond Laser can greatly minimise the possibility of cornea trauma and hence facilitate faster restoration of eyesight



5. Dr. John Chang, Director of Guy Hugh Chan Refractive Surgery Centre of HKSH explained how Femtosecond Laser technology helps improving surgical precision



6. Live demonstration of New Femtosecond Laser Enhanced Refractive Cataract Surgery by Dr. Ivan Chen, Director of Eye Surgery Centre of HKSH



7. Dr. John Chang, Director of Guy Hugh Chan Refractive Surgery Centre of HKSH demonstrates the suction ring, which prevents the cornea to be in direct touch with during the fragmentation process





8. The patient, Mr. Francis Stewart KAVANAGH, aged 73, who has had cataract for 2-3 years, expressed satisfaction with the New Femtosecond Laser Enhanced Refractive Cataract Surgery regaining clear vision in 1 day

