

**Bumrungrad leverages our Eye Excellence Center's service by delivering seamless, fast, safe, holistic medical care of even the most complex disorders.**

The eyes are complicated and need special care as there may be underlying health issues. Having ophthalmologists in the field of subspecialties and other specialists closely collaborate to provide holistic, seamless care in one hospital is key. The latest medical innovation strengthens our competency. All of these factors allow us to provide safer and more effective care to our patients.

The World Health Organization reports 2.2 billion people globally suffer from vision problems, with 50% of cases being preventable or otherwise treatable conditions. Moreover, in 2020, 1.1 billion permanently lost their sight and over the next 30 years this number is expected to rise by 600 million to 1.7 billion people.

**Mrs. Artirat Charukitpipat, Chief Executive Officer of Bumrungrad International Hospital** reveals that eye problems have big consequences regarding quality of life and affect our ability to navigate our day-to-day responsibilities. Eye disorders affect people of all ages and genders. Bumrungrad understands the dangers eye conditions pose and hence is hosting the Eye Excellence Center press event to raise awareness regarding proper eyecare and eye disorder prevention. **Our eyes are one of our most important and complex sensory organs and so it is important to engage specialists to take proper care of them as we age.**

**The Bumrungrad Eye Excellence Center is ready to comprehensively treat all eye disorders, from the simplest to most complex cases, and for patients of all ages – including damage due to severe trauma or injury.** Our ophthalmic surgeons include cornea specialists, retina specialists, eye muscle specialists, and for complex cases involving co-morbidities, our ophthalmologists will coordinate treatment with the other doctors on the patient treatment team which might represent specialties such as endocrinology & metabolism, neurology, pharmacy, or other fields. All our doctors and medical professionals on staff make use of the most modern tools to aid diagnosis and perform treatment quickly and accurately, all being key factors for increased patient safety and quality of outcome.

**Dr. Maytinee Sirimaharaj, director and ophthalmologist specializing in retina and vitreous at Bumrungrad Eye Excellence Center, Bumrungrad International Hospital** shares that all parts of the eye work together to help people see clearly. The retina is most important because it determines image quality. When the retina is healthy, light passes through the cornea to the lens. The cornea and the lens help to focus the light onto the retina, producing a sharp image. However, when retinal problems are left untreated, permanent vision loss can occur. When the retina is damaged it cannot be replaced, unlike the cornea. Common retinal problems include retinal detachment, age-related macular degeneration, diabetic retinopathy, retinal dystrophy, which often occurs at birth, or progressive thinning & rupture of the cornea, which results in nearsightedness or vision loss.

**Dr. Nuthida Wongwirawat, orthoptist and pediatric ophthalmologist at Bumrungrad International Hospital,** states, “Parents today may not know that a new born can have vision problems, especially when the baby is born pre-mature, or weighs less than 1,500 grams. These babies risk having retinopathy of prematurity, an abnormal growth of blood vessels in the retina. The retina may bleed, scar, and pull away from its normal position. At the Bumrungrad NICU, pediatricians work closely with pediatric ophthalmologists to monitor and evaluate infant vision development and the risks of developing eye problems. If such problems are not treated in a timely manner, it may cause permanent vision loss and blindness.

In the case of antenatal and childbirth mothers at Bumrungrad International Hospital, we provide the internationally standard infant vision development test. If the infant is at risk of retinopathy of prematurity or other vision problems are detected, retina specialists and pediatric ophthalmologists will work together to devise an appropriate treatment plan. Potential treatment options include laser treatment, intravitreal drug injection, and vitrectomy. Such infants are at greater risk of nearsightedness or strabismus than full term babies. Our pediatric ophthalmologists will provide follow-up care based on the treatment plan and perform tests to ensure the eyes stay healthy in the long run and to lessen the complications and severity of retinopathy of prematurity.

Currently, childhood myopia is common and growing. The conditions under which children develop myopia have become unpredictable and it is now found at younger ages. Some children become nearsighted when they are only a year old. One reason for this is premature birth. Some children have uneven vision or even develop anisometropia or are at risk of having amblyopia. At present, the Bumrungrad Eye Excellence Center has a

specialized pediatric eye clinic. Pediatric ophthalmologists provide treatment and advice on how to prevent or slow myopia based on the latest medical knowledge. **People who have myopia cannot just wait for LASIK eye surgery because myopia causes changes in the eyes and increases the risks of retinal disease.** Parents and caretakers should prioritize pediatric eye health and bring children to have their eyes tested at an early age to prevent, treat, or slow myopia. The Bumrungrad Eye Excellence Center specializes in preventing and treating vision problems based on the existing research on myopia. For example, we provide low-dose atropine treatment, given as eye drops, and bifocal spectacle lenses. Pediatric ophthalmologists perform screenings and treatment advice for each individual case. Bumrungrad also conducts on-going international research to further develop atropine treatment protocols to provide the most effective treatment to our patients.

**Dr. Tharinee Kulkamthorn, ophthalmologist specializing in vision correction, and refractive surgery at Bumrungrad International Hospital** reveals, “A lot of patients come to Bumrungrad for the ReLEx SMILE to correct nearsightedness and astigmatism. They usually think the treatment takes one day. Actually, ReLEx SMILE involves a delicate process. Doctors need to evaluate co-morbid and pre-existing conditions and the root causes of the problem. Some cases are so complicated doctors need to consult teams of experts before performing ReLEx SMILE to deliver the best treatment outcomes while prioritizing patient safety.

For example, a patient came to Bumrungrad presenting with a long history of migraines. That patient turned out to suffer nearsightedness and astigmatism in one eye and farsightedness and astigmatism in the other. His vision was dramatically uneven. He had a slight case of strabismus too. Ophthalmologists and orthoptists worked together to calculate the angle of strabismus and the eye so the laser treatment would be successful. The goal was to enable the patient to see clearly without worsening the strabismus. Another patient was going through an IVF cycle and wanted to have ReLEx SMILE to correct nearsightedness before having the embryos transferred to the uterus. Ophthalmologists consulted with reproductive endocrinologists regarding the IVF process so the ReLEx SMILE procedure could safely be performed. We also supported the patient’s wish to be able to see their baby clearly at birth. We understood it would be a happy moment and an important milestone for our patient, so we worked hard to maintain our standards of safety and achieve the best outcome possible. We performed ReLEx SMILE first because it did not conflict with IVF. After a month-long pause, we collected the patient’s eggs and continued on with the IVF process.

**Dr. Nattawut Wanumkarng, ophthalmologist specializing in oculoplastic and reconstructive surgery at Bumrungrad International Hospital,** adds, “The Bumrungrad Eye Excellence Center performs cosmetic and reconstructive surgery as well. We perform surgery on the eye socket and around the eyes. For example, we provide treatment for thyroid eye disease, exophthalmos, nasolacrimal duct obstruction, ptosis, and entropion & ectropion. We treat eye injuries caused by accidents, too.

We have treated patients who have had accidents which severely injured the eye socket. Our ophthalmologists at the Bumrungrad Eye Excellence Center collaborated with specialists to deliver the most effective treatment. For example, a Ukrainian woman had a motorcycle accident resulting severe facial fractures. The case was complex and needed the expertise of several specialists. Orthoptists, ophthalmic surgeons, and teams of experienced specialists worked closely together to coordinate treatment. It took 11 hours to perform the surgery and 3-6 months of follow-up care. After the injuries healed, orthoptists performed another operation to correct her eye movement. Now, the patient has made close to a full recovery – her face has healed and her vision is back to almost normal. Another patient suffered from thyroid eye disease. He had a severe case of exophthalmos and was almost blind. Ophthalmologists at Bumrungrad collaborated with endocrinologists, orthoptists, neuro-ophthalmologists, and surgeons to operate on the bulging eyes. Radiologists performed radiation therapy. Also, biological products were prescribed to help treat the condition. Thyroid patients need at least 2 years of follow-up care until the condition improves.

**Assoc. Prof. Dr. Ngamjit Kasetsuwan, President of Cornea and Refractive Society of Thailand, and a cornea specialist at Bumrungrad International Hospital,** adds, “Bumrungrad performs corneal transplantation, which shows our competence in providing holistic, comprehensive eyecare. Prior to corneal transplant surgery, ophthalmologists carefully go over the patient’s medical records and perform a thorough checkup and eye test to ensure the patient is ready. For example, ophthalmologists need to consider whether the patient has glaucoma. We check the patient’s optic nerve, retina, and intraocular pressure and look for signs of redness or infection as well. Then ophthalmologists prepare the surface of the eyes for the corneal transplant procedure. Inflammation triggers rejection of the transplanted cornea, all eye specialists need to work together to evaluate each case. Importantly, Bumrungrad collaborates with the Thai Red Cross Eye Bank and high-standard international eye banks to provide donor corneas. We

ensure clear, good quality, disease-free corneas for our patients so any eye diseases are not likely to occur after corneal transplantation.

The Bumrungrad Eye Excellence Center can treat corneal dystrophy and cataracts during the same operation. If treated like a general cataract treatment, the patient's cornea may be damaged. Before the treatment, ophthalmologists plan together and conduct an analysis to see if the patient's condition is suitable for treatment of both conditions at once. Ophthalmologists use a patient-centered process to help patients decide which treatment option they would like to choose. At present, few private hospitals in Thailand treat corneal dystrophy and cataracts simultaneously. It requires expertise and experienced ophthalmologists and specialists who can work together seamlessly, which is our strength at Bumrungrad.

**Dr. Maytinee Sirimaharaj, director and ophthalmologist specializing in retina and vitreous at Bumrungrad International Hospital**, concludes, "Thai doctors are smart and skillful. The way to move forward is to leverage the expertise and strength of each specialist as they work together, resulting in the best treatment and post-treatment outcomes. This benefits patients significantly, especially those who suffer from rare or complex conditions. In 2022, our success rate for eye surgeries was over 90%, higher than called for by international standards. This reflects the Bumrungrad Eye Excellence Center's competency and readiness in providing holistic, comprehensive eyecare."

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