Cataract surgery is currently the most common surgical procedure in the developed world, whereas cataract is the most common cause of treatable blindness in the developing world. During past decades, cataract surgery has evolved from a potentially traumatic intervention, bearing several and frequent complications, to a brief and safe outpatient surgery. Evolution of surgical methods from intracapsular extraction to extracapsular extraction with phacoemulsification has changed the indications for cataract surgery from severe visual loss due to cataract formation to mild visual ailment or even to correction of ametropias in presbyopic patients. At the same time, in developed countries, patients undergoing cataract surgery have high expectations for the postoperative result and want spectacle independence in distance and near vision.\(^1\)

When their presbyopia is accompanied by incipient cataract formation, patients who seek presbyopia correction are more often guided toward cataract surgery than to corneal surgery. Even in the presence of a clear crystalline lens, if there is concomitant refractive error (eg, moderate to high hyperopia), cataract surgery, rather than corneal surgery, is the procedure of choice. Cataract surgery is then called refractive lens exchange (RLE), thus indicating that the procedure is taking place without the presence of a cataract.

Apart from the evolution in the surgical technique, new intraocular lens (IOL) materials and designs have given additional impetus to the use of cataract surgery for refractive reasons. New foldable IOLs can be easily inserted in the capsular bag through minor incisions, and modern IOL designs are now offered for presbyopia (multifocal, accommodative IOLs), astigmatism correction (toric), reduced aberrations (aspheric), and blue-light protection (tinted IOLs; Figure 17-1).

**MODERN CATARACT SURGERY**

**Basics of Techniques**

Introduction to Techniques of Cataract Surgery

Two generic terms are used for cataract extraction—intracapsular and extracapsular.

Intracapsular cataract extraction (ICCE) consists of removing the whole lens still within its intact capsule.