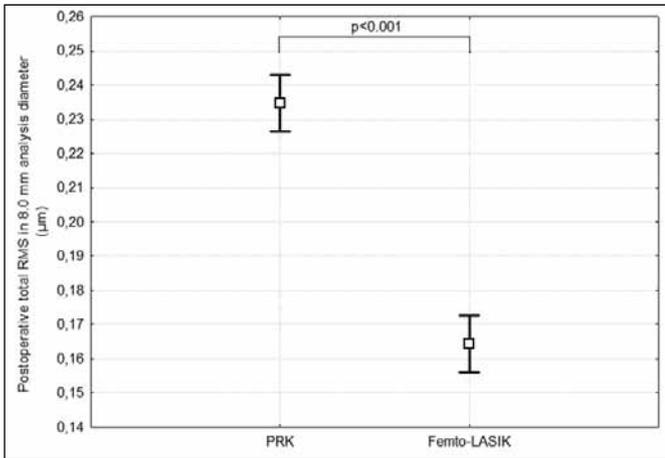


**TABLE 4**  
**RESULTS OF GENERAL LINEAR MODELS**

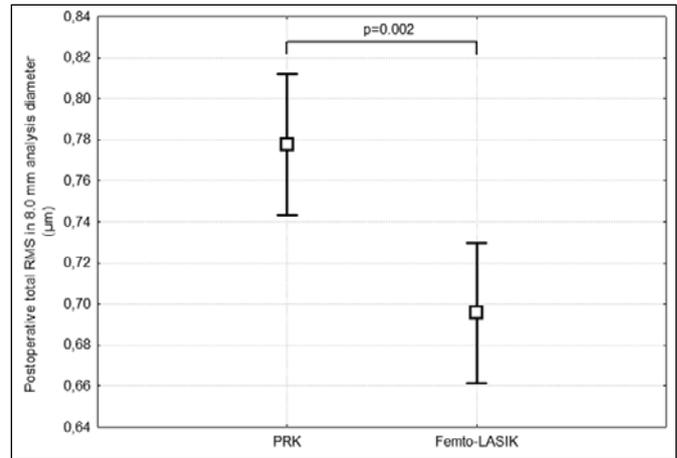
	<b>P Preop Refraction</b>	<b>P RMS Total Baseline</b>	<b>P Group</b>
RMS total 4.5 mm 3 months	.976	.299	.472
RMS total 6.0 mm 3 months	.02*	.739	<.001*
RMS total 8.0 mm 3 months	<.001*	<.001*	.002*

After adjusting for preoperative refractive error and preoperative RMS values we found statistically significant difference between the two study groups in postoperative higher-order aberrations in 6.0 and 8.0 mm analysis diameters.

\*P<.05.



**Figure 4.** Between groups difference in postoperative total corneal RMS values in 6.0-mm analysis diameter after adjusting for preoperative refractive and wavefront error ( $P<.001$ ).



**Figure 5.** Between groups difference in postoperative total corneal RMS values in 8.0-mm analysis diameter after adjusting for preoperative refractive and wavefront error ( $P=.002$ ).

90.0% (27/30) 3 months after surgery. In the femto-LASIK group, UCVA proved to be 0.8 or better in 100% of the cases (30/30), 0.9 or better in 96.67% (29/30), and 1.0 or better in 93.3% (28/30) 3 months after surgery. BSCVA remained stable and proved to be 1.0 in all cases postoperatively.

Three months after surgery, higher-order RMS values of the anterior corneal surface and the total cornea increased significantly in all analysis diameters ( $P<.001$ ) while higher-order aberrations regarding the posterior corneal surface remained stable (4.5 mm:  $P=.142$ ; 6.0 mm:  $P=.052$ ; 8.0 mm:  $P=.65$ ) in the PRK group. In the femto-LASIK group, higher-order aberrations of the anterior and posterior corneal surface and the total cornea increased significantly in all analysis diameters after the surgical procedure ( $P<.001$ ).

Three months after surgery, there was no statistically significant difference in induced higher-order corneal aberrations in 4.5-mm analysis diameter between the two study groups; however, higher-order RMS values, representing wavefront errors of the anterior corneal surface and the total cornea in 6.0- and 8.0-mm analysis

diameters, proved to be significantly higher in the PRK group compared to the femto-LASIK group. We found no statistically significant difference between the two study groups in higher-order aberrations of the posterior corneal surface in these analysis diameters.

After adjusting for preoperative refractive error and preoperative RMS values, general linear models also showed significant difference in postoperative higher-order aberrations in 6.0- and 8.0-mm diameters between the two study groups (RMS total 6.0 mm:  $P<.001$ ; RMS total 8.0 mm:  $P=.002$ ) (Table 4 and Figs 4 and 5).

### CONCLUSION

The visual acuity and OCT analysis results mentioned in the studies above showed that safety, efficacy, and reliability of this new, multifunctional femtolasers system during femto-LASIK procedures were proven appropriately.

Despite more postoperative pain and longer recovery, PRK treatment is often preferred over LASIK to avoid greater amounts of induced higher-order aberrations. With the invention of femto-LASIK technique, corneal