To provide by spectral-domain anterior segment optical coherence tomography (AS-OCT) assessment, morphological details of nonpenetrating deep sclerectomy. NPDS: filtering blebs and analyze the correlation between the post-surgical intraocular pressure (IOP) reduction and three different filtering bleb characteristics.

**MATERIAL AND METHODS**
A total of 52 eyes were included in this study. N. 36 NPDS and N. 16 FACO. NPDS: All patients underwent a complete ophthalmic examination at baseline, 1 week, 1, 3, and 6 months follow up.

Surgical Technique: All non penetrative surgeries were performed by the same surgeon: A.U. After fornix-based conjunctival flap, a 4×4 mm scleral flap was dissected including one-third of scleral thickness into 1.5 mm clear cornea. The second scleral flap 3×3 mm was resected in order to deroof Schlemm’s canal and expose the TrabeculoDescemet window. Figure 1. Surgeries were performed with 2 minutes antimetabolite agent: mitomycin C 0, 2 mg/ml after conjunctival dissection, without saturating the remaining superficial scleral flap and avoiding any scleral implant.

**RESULTS**

**Table 3 and 4**

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| IOP and number of drugs significantly decrease after surgery | Dynamic changes of morphological parameters during wound healing process. No statistical correlation with IOP decrease. |

**DISCUSSION**

Prospective analysis by AS-OCT cross sectional images of the filtering bleb, contributes to a comprehensive evaluation of the wound healing process in NPDS surgery. We did not find statistically significant correlation with respect to tested morphological bleb parameters and IOP decrease. Presence of microcysts and PEF is common in the first weeks of postop and in most cases AEF delays nearly 1 month in becoming manifest. Interestingly, this parameter: not described before; could be a specific consequence of our NPDS protocol. After the removal of deep scleral flap there is an significant increase of transcleral outflow facility secondary to a reduction of the hydrostatic pressure in a thinner sclera. In the first weeks the aqueous humor percolate through corneoscleral meshwork and accumulates in many structures: subconjunctival, in supraciliary space and creating a lake under the scleral flap. Avoiding the suture of the scleral flap and using any space supporting implant may drive the aqueous outflow through the points with a reduced hydrostatic pressure: PEF and AEF. Finally, we hypothesize that the aqueous in the lake may egress through transcleral pathway and secondarily delayed post-surgical recanalization - 1 months: of previous collector channels existing in removed scleral flap may contribute to the creation of the AEF we describe.

**REFERENCES**