BACKGROUND
Trabeculectomy is still considered the gold standard for medically uncontrollable glaucoma and is an effective surgical method for lowering intraocular pressure (IOP). However, surgical bleb failure is a common adverse event and is usually caused by scarring in the subconjunctival space. The use of antimetabolites such as Mitomycin C (MMC)2,3 or 5-Fluorouracil has been one of the major advances in glaucoma filtering surgery. The intraoperative application of antimetabolites, particularly MMC2,3, has achieved increasing interest in research. Various techniques of MMC-application including size of surface area, dose of MMC and exposure time have been described.2,5

Thus, the aim of our study was compare two different delivery methods of MMC in patients undergoing trabeculectomy.

MATERIALS AND METHODS
This retrospective trial compares outcomes of 191 consecutive eyes with open-angle and chronic angle-closure glaucoma undergoing trabeculectomy using MMC-soaked sponges measuring 5x6mm in 96 eyes (50.3%) and 4 MMC-soaked strips measuring 2x6mm in 95 eyes (49.7%) between 1996 and 2006 at the Department of Ophthalmology, University of Wuerzburg, Germany.

DIFFERENT DELIVERY METHODS OF MMC-ApPLICATION HAVE BEEN PROPOSED TO INCREASE ITS EFFICIENCY WHILE DECREASING ITS TOXIC EFFECTS. CORDEIRO ET AL.7 FOUND THAT A LARGE AREA OF MMC-APPLICATION COULD STRONGLY MODULATE WOUND HEALING. THEY OBSERVED BLEBS WITH OPEN-ANGLE AND CHRONIC ANGLE-CLOSURE GLAUCOMA UNDERGOING TRABECULECTOMY USING MMC-SOAKED Sponges MEASURING 5x6MM IN 96 EYES (50.3%) AND 4 MMC-SOAKED STRIPs MEASURING 2x6MM IN 95 EYES (49.7%) BETWEEN 1996 AND 2006 AT THE DEPARTMENT OF OPHTHALMOLOGY, UNIVERSITY OF WURZBURG, GERMANY.

RESULTS
At 12 months (n=191)
Complete success (without glaucoma medication) 47 (58.9) 52 (78.8) 0.017
Partial success (≤ 21 mmHg + 30% IOP reduction) 22 (27.3) 37 (56.7) <0.001
Absolute failures (≥ 21 mmHg and IOP ≥ 18 mmHg) 12 (15.0) 1 (1.5) 0.001
Table 2. Success rate.

CONCLUSION
Large-area application seems to be a more efficient delivery method of MMC during trabeculectomy. The larger size of surface area achieves a higher short-term IOP-reduction and the incidence of bleb scarring was significantly lower compared to eyes with small-area MMC application.

REFERENCES
5. Poole TR, Gillespie IH, Knee G et al. Microscopic fragmentation of ophthalmic surgical sponge spears used for delivery of antimetabolites, particularly MMC2,3, has achieved increasing interest in research. Various techniques of MMC-application including size of surface area, dose of MMC and exposure time have been described.2,5