Evidence Table 8. KQ 4 medical outcomes

| **Study** | **Comparators** | **Visual Field Mean Deviation at baseline** | **Visual Field Mean Deviation at follow-up** | **Comments** |
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| Berry  198424 | Betaxolol  Timolol | Not reported | Not reported | Small changes, consistent with  glaucomatous damage, were observed  between the visual fields before treatment and at 26 weeks in three betaxolol-treated and two timolol-treated patients. These changes were  considered to be within the expected  normal range of variation. |
| Chiselita  200526 | Latanoprost 0.005%  Travoprost 0.004%  Dorzalamide/Timolol | Entire study  MD= -4.01 | Entire study  MD= -4.68 ± 4.51  2-9 months | No significant difference |
| Dirks  200633 | Bimatoprost 0.03%  Latanoprost 0.005% | Not reported | Not reported | Defects of visual field in one patient in the latanoprost group worsened in both eyes. No other changes were reported during the 3 months. |
| Evans  200837 | Latanoprost - Timolol  Timolol – Latanoprost | CS 3 cpg 1.35±0.11  CS 18cpd 0.86±0.23  MD -2.22±1.97  CS 3cpd 1.36±0.21  CS 18 cpd 0.77±0.30  MD -3.63±4.27 | Increase in MD from -1.49 (at cross over) to -2.41  6 months | Significant loss in CS at 3cpd and 18 cpd  Significant improvement in CS 3cpd |
| Flammer  199239 | Carteolol  Timolol | 4.1  4.4 | Not reported | Majority of the patients had a stable visual field, although few experienced either a deterioration or improvement after 1 year of treatment. There was no significant difference between groups. |
| Heijl  200043 | Timolol 0.5%  Placebo |  |  | At 5 years of follow-up, eight patients in the placebo group, and five patients in the timolol group developed glaucomatous field loss. No significant difference (P=0.53) in survival function between treatment groups during this period. At 10 years, 15 patients in the placebo group and seven patients in the timolol group had developed glaucoma. The Kaplan-Meier plot suggests a difference between the treatment groups, but the difference is not significant (P=0.07). |
| Herman (OHTS)  200644 | Observation  Topical hypotensives | 0.21  0.28 | -0.42±1.94  -0.20±1.57  Last follow-up (mean follow-up duration = 6.3 years) | No significant difference between the 2 groups |
| Krupin  201154 | Brimonidine  Timolol | 0.89 ± 0.2  0.90 ± 0.2 | Not reported | Primary outcome of the study was visual field progression. Fewer patients treated with Bimonidine (9.1%) had visual field progression than timolol-treated patients (39.2%) (p=0.001). However, more brimonidine-treated (28.3%) than timolol-treated (11.4%) patients discontinued treatment because of adverse events (p=0.008). |
| Marcon  199059 | Betaxolol  Levobulol | Not reported | Not reported | One patient showed marked visual field improvement from baseline to 12 weeks in Betaxolol group, but there were no measurable changes in the other 19 patients in Betaxolol group and all 20 patients in Levobunolol group |
| Martinez  201061 | Dorzolamide-timolol  Brinzolamide-timolol | -3.1 ±0.9  -3.1 ±0.9 | Not reported | Mean deviation slopes during followup were -0.26 dB ⁄ year and -0.46 dB⁄ year for the DT and BT treatment groups, respectively (p = 0.008).  According to the event-based method, progression was observed in 24 eyes (24%) in the DT group and 55 eyes (47%) in the BT group (p = 0.0006; chi-square test). |
| Melamed 200060 | Brimonidine 0.2%  Timolol 0.5% |  |  | In the brimonidine group (n =40), 36 patients had no change in visual fields (within 5 dB of baseline) and 2 patients had improvement. In the timolol group (n = 39), 36 patients had no change and 1 showed improvement. Two brimonidine and 2 timolol patients had worsening of visual fields >5 dB from baseline. |
| Messmer  199162 | Betaxolol 0.5%  Timolol 0.5% | 2.2  3.4 | Not reported | In both treatment groups, visual fields tended to improve in the first 6 months and then remained stable or deteriorated. The treatment effect on visual fields was better in betaxolol group than in the timolol group |
| Miglior  200564 | Dorzalamide  Placebo | Not reported | Not reported | Visual field progression 38/407 in placebo group, 26/345 in dorzolamide group.  Optic disc progression in 22/407 in placebo group, 20/345 in dorzolamide group. |
| Mirza  200065 | Timolol 0.5%  Carteolol 2%  Metipranolol 0.3% | 5.0  3.4  3.8  3 months | 4.9±3.0  3.9±2.5  3.1±1.9 | No significant differences between groups |
| Prata  200969 | Timolol 0.5%  Brimonidine 0.2%  Travoprost 0.004% | -6.84  -5.45  -7.10 | 1.01±2.53  0.68±2.70  0.81±2.32  Mean improvement in MD at 1 month | Significant improvement in MD from baseline to 1 month in all three arms.  In the travoprost group alone there was a mean (0.81±2.32 ) improvement of nerve damage |
| Rainer  200373 | Betaxolol 0.25%  Timolol 0.5% | -3.6  -2.9 | -2.6±6.1  -2.3±3.4  3 months | No significant differences between groups.  Significant difference from baseline to 3 months in Betaxolol group only |
| Tuulonen  198993 | Laser  Medical | -7.4 ± 9.0  -9.1 ± 6.1 | -8.6 ± 9.7  -9.4 ± 8.5  At 12 months | No significant differences between group |
| Vainio-Jylha  199994 | Betaxolol 0.5%  Timolol 0.25% | 23.1±3.1  22.2±4.1 | 24.3±3.5  23.9±3.4  24 months | No significant differences between groups but differences were significant for within group comparisons |
| Yamamoto  199695 | Timolol 0.5%  Carteolol 1%  Carteolol 2% | Not reported | Not reported | Visual field was considered to have progressed if there was a decline in light sensitivity of 10 dB or more at any points except the four superior most ones and/or deterioration in mean deviation of 2 dB or more.  During the study there were no significant changes in visual field |