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| **Study reference** | **Study characteristics** | **Patient characteristics** | **Intervention (I)** | **Comparison / control (C)** | **Follow-up** | **Outcome measures and effect size** | **Comments** |
| Djamin 2020 | RCT  COLUMBUS trial  single centre study  the Netherlands |  | azithromycin maintenance therapy  45 patients | Placebo  47 patients | throat samples (e-swabs)  were collected at baseline, 6 months and 12 months, as  well as during each exacerbation that required admission to the hospital | the presence and relative abundance of specific macrolide resistance genes ermB, ermF and mefA  Real-time PCR  macrolide resistance gene mefA was present in all  available throat samples at all time points  Before treatment,  prevalence of the macrolide resistance genes ermF and ermB were respectively 44.4% (n = 16/36)  and 86.1% (n = 31/36) in the placebo group (n = 36), and  respectively 59.1% (n = 26/44) and 97.7% (n = 43/44) in the  azithromycin group  After 12months of placebo treatment ermF  and ermB genes were detected in 48.1% (n = 13/27) and 74.1%  (20/27) | AIM: to determine  the effect of azithromycin maintenance therapy on the  dynamics of macrolide resistance genes in the  pharyngeal microbiota of COPD patients  original report RCT (Uzun 2014) included in Cochrane review Herath 2018 |