## Supplementary

Table S1 Methodological Index for Non-Randomized Studies (MINORS) scoring for included comparative clinical studies

| Study | Clearly <br> stated aim | Inclusion of consecutive patients | Prospective data collection | Endpoints appropriate to study aim | Unbiased assessment of study endpoint | Followup period appropriate to study aim | Loss to follow-up less than 5\% | Prospective calculation of the study size | Adequate control group | Contemporary groups | Baseline equivalence of groups | Adequate statistical analysis | Total score* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ge et al. (2018) (9) | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 1 | 2 | 2 | 2 | 19 |
| Proffen et al. (2014) (10) | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 |
| Soreide et al. (2016) (11) | 1 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 21 |

The items are scored 0 (not reported), 1 (reported but inadequate) or 2 (reported and adequate). The global ideal score is 24 for each comparative study.

Table S2 Systematic Review Center for Laboratory Animal Experimentation (SYRCLE) risk of bias assessment for included animal studies

| Study | Selection bias |  |  | Performance bias |  | Detection bias |  | Reporting bias | Attrition bias | Other |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sequence generation | Baseline characteristics | Allocation concealment | Random housing | Blinding | Random outcome assessment | Blinding | Incomplete outcome data | Selective outcome reporting | sources of bias | of bias |
| Bogatov et al. (2003) (12) | + | + | + | + | ? | ? | - | + | + | + | Low |
| Dahners et al. (1988) (13) | + | + | + | ? | ? | ? | ? | + | + | + | Low |
| Elder et al. (2001) (14) | ? | + | ? | ? | ? | ? | ? | + | + | + | Unclear |
| Ferry et al. (2007) (15) | + | + | + | ? | - | + | - | + | + | + | Low |
| Hanson et al. (2005) (16) | + | + | + | $?$ | - | ? | - | + | + | + | Low |
| Moorman et al. (1999) (17) | + | + | + | + | $?$ | ? | $?$ | + | + | + | Low |
| Sauerschnig et al. (2018) (18) | + | + | + | ? | - | + | - | + | + | + | Low |
| Taroni et al. (2017) (19) | + | + | + | + | + | + | + | + | + | + | Low |
| Warden et al. (2006) (20) | + | + | + | + | - | + | - | + | + | + | Low |
| Watson et al. (1976) (21) | + | + | + | + | $?$ | ? | $?$ | + | + | + | Low |

"+" indicates low risk of bias; "?" indicates unclear risk of bias; "-" indicates high risk of bias.

