Form for Evaluating the Evidence for Therapeutics

Evidence: ______________________________________________________________________________
(if published = article title and author(s); if unpublished = expert and topic)

**Step 1:** Use the table on the other side to determine the type of evidence, and check the boxes below that apply to the risk of bias and your ability to assess the risk of bias.

**Evidence Type:** ________________________________

<table>
<thead>
<tr>
<th>Risk of bias</th>
<th>☐ Low</th>
<th>☐ High</th>
<th>☐ Cannot assess</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to assess risk of bias</td>
<td>☐ High</td>
<td>☐ Low</td>
<td>☐ Cannot assess</td>
</tr>
</tbody>
</table>

**Step 2:** Review the evidence for additional quality assessments, based on the type of evidence.

For all evidence types

- Results were discussed critically
- The bibliography is adequate (complete and up to date)
- Systematic review (with or without meta-analysis)
  - The literature search was exhaustive and reproducible
  - Trials of high quality (randomized, controlled, blinded, trials) were included
  - Comparability and publication bias were discussed
- Randomized controlled trial (RCT)
  - Randomization procedure was described
  - The trial comprised an adequate number of animals (e.g., a sample size calculation was performed)
  - The control group was completely described and was appropriate for the study
  - The trial was blinded (single, double, triple)
- RCT, cohort study, or case series
  - Appropriate statistical assessments were used
  - Data are complete, or missing data were documented
  - Essential information regarding the animals were given: number, breed, age, sex, housing, inclusion criteria, etc.
  - Exposures and outcomes were described in detail
- PK study
  - Regimen was comparable to clinical use
  - Data exist about concentrations required for pharmacological effect
- In vitro study
  - Cells or system used were similar to in vivo setting
  - Drugs or concentrations used were comparable to those achievable in vivo

**Step 3: Estimate the treatment effect.**

Is an estimate of treatment effect (e.g., number needed to treat) calculated?

☐ Yes    ☐ No

Was a P value or confidence interval calculated for treatment effect?

☐ Yes    ☐ No

Use the table on the next page to determine the precision of the estimate of treatment effect

☐ High    ☐ Low    ☐ Not estimated

**Step 4: Consider your responses above, and circle your overall quality assessment of this evidence.**

<table>
<thead>
<tr>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
<th>Very Low</th>
</tr>
</thead>
</table>

[This form was created by Virginia Fajt and Maya Scott. Material was adapted from SP Arlt and W Heuwieser, Journal of Veterinary Medical Education, 38(2), 135-140, 2011, and A O’Connor and VR Fajt, Vet Clinics of North America: Food Animal, 31(1), 2015, with input from Christine Budke and Annette O’Connor. This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-sa/4.0/ or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.]
Table: Sources of information and the potential for risk of bias, ability to assess the risk of bias, and precision of the effect estimate

[Studies are sorted based on the potential for risk of bias]

<table>
<thead>
<tr>
<th>Evidence Type</th>
<th>Description</th>
<th>Potential for risk of bias</th>
<th>Ability to assess the risk of bias</th>
<th>Estimate of treatment effect calculated or presented</th>
<th>Precision of the effect estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic review with meta-analysis of RCT</td>
<td>Attempts to identify all relevant literature related to a specific condition or treatment; reviews and summarizes all results in a clear and repeatable manner; meta-analysis pools and quantifies data from the literature</td>
<td>Summary</td>
<td>Low</td>
<td>Yes</td>
<td>High</td>
</tr>
<tr>
<td>Large randomized controlled trial (RCT)</td>
<td>At least two groups of individuals are included, one with the treatment of interest and one with placebo or comparison treatment; randomization to group is required; &gt;150 per group</td>
<td>Primary</td>
<td>Low</td>
<td>Yes</td>
<td>High</td>
</tr>
<tr>
<td>Small randomized controlled trial (RCT)</td>
<td>Same as large RCT, with &lt;150 per group</td>
<td>Primary</td>
<td>Low</td>
<td>Yes</td>
<td>Low</td>
</tr>
<tr>
<td>Cohort study</td>
<td>Follows a group of individuals over time; comparison is group with different exposure or different treatment</td>
<td>Primary</td>
<td>High</td>
<td>Low</td>
<td>May be High or Low depending on sample size</td>
</tr>
<tr>
<td>Case series</td>
<td>Reports on the treatment of individuals with the same condition; no control groups</td>
<td>Primary</td>
<td>High</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Case reports</td>
<td>Very small case series (&lt;5 patients)</td>
<td>Primary</td>
<td>High</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Narrative review</td>
<td>Description of conditions or treatments; sources of data are not reviewed or graded; no data pooling performed; literature inclusion and exclusion criteria not specified</td>
<td>Summary</td>
<td>High</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Opinion</td>
<td>May be oral or written; may be based on one's own clinical experience</td>
<td>Summary</td>
<td>High</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Pharmacokinetic studies</td>
<td>Measures drug concentrations in plasma or other tissues</td>
<td>Primary</td>
<td>Cannot assess</td>
<td>Cannot assess</td>
<td>No</td>
</tr>
<tr>
<td>In vitro studies</td>
<td>Performed on cells or tissues outside of animals</td>
<td>Primary</td>
<td>Cannot assess</td>
<td>Cannot assess</td>
<td>No</td>
</tr>
</tbody>
</table>

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