Supplementary Table 1. Risk of bias assessment by a Modified Newcastle-Ottawa scoring guide.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Author** | **Selection** | | | **Comparability** | | | **Total** |
| **Case and Control** | | | **Sample** | | |
| description | Selection | Definition | Description  collection | Analytical technique | KP dosage parameters |
| De Vries, 2009 | 2 | 0 | 2 | 1 | 2 | 2 | 9 |
| Pita, 2011 | 2 | 0 | 1 | 1 | 2 | 1 | 7 |
| Rhie, 2011 | 2 | 2 | 1 | 1 | 2 | 1 | 9 |
| Demirbilek, 2012 | 2 | 0 | 0 | 0 | 1 | 0 | 3 |
| Chen, 2013 | 2 | 2 | 2 | 1 | 2 | 2 | 11 |
| Abaci, 2014 | 2 | 2 | 2 | 1 | 2 | 2 | 11 |
| Yang, 2014 | 2 | 2 | 2 | 1 | 2 | 1 | 10 |
| Özgen, 2014 | 2 | 0 | 1 | 0 | 1 | 0 | 4 |
| Parlak, 2017 | 1 | 0 | 2 | 0 | 1 | 1 | 5 |
| Kang, 2018 | 1 | 2 | 1 | 0 | 1 | 0 | 5 |
| Ge, 2020 | 2 | 2 | 2 | 1 | 2 | 2 | 11 |

Quality Assessment – KP Metanalysis

**Methods.** Modified Newcastle-Ottawa scoring guide.

Based on: GA Wells, B Shea, D O'Connell, J Peterson, V Welch, M Losos, P Tugwell, The Newcastle-Ottawa Scale (NOS) for assessing the quality of nonrandomised studies in meta-analyses. < <http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp> >

***SELECTION/REPRESENTATIVENESS***

1. **Case Definition**
2. 2 point: Tunner criteria
3. 1 point: other criteria
4. 0 point: no criteria described
5. **Selection of Controls**
6. 2 point: Hospital controls (i.e. same community as cases and would be cases if had outcome)
7. 1 point: Community controls
8. 0 point: No description
9. **Definition of Controls**
10. 2 point: No comorbidities, data presented (i.e. biomarkers, clinical records).
11. 1 point: No comorbidities, but insufficient data.
12. 0 point: No description.

# COMPARABILITY

1. **Description of sample collection (tube, centrifugation)**
2. 1 point: Was described
3. 0 point: No description
4. **Analytical technique for kisspeptin dosage (ELISA, Mass spectrometry)**
5. 2 point: Manufactured kit and complete information.
6. 1 point: Incomplete description
7. 0 point: No description
8. **Kisspeptin dosage parameters (Kisspeptin fraction, Sensibility, Especificity, Manufacturer)**

a) 2 point: Full description.

b) 1 point: Incomplete

c) 0 point: No description