

## Appendix 1. Predefined Search Strategy

| #  | Searches                                                                                                                                                                                                                       |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | eclampsia/                                                                                                                                                                                                                     |
| 2  | (eclamp* adj5 (predict* or model* or (risk or risks))).mp.                                                                                                                                                                     |
| 3  | predict*.mp.                                                                                                                                                                                                                   |
| 4  | model*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] |
| 5  | sensitivit*.mp.                                                                                                                                                                                                                |
| 6  | specificit*.mp.                                                                                                                                                                                                                |
| 7  | (LR* or likelihood ratio*).mp.                                                                                                                                                                                                 |
| 8  | negative predictive value*.mp.                                                                                                                                                                                                 |
| 9  | positive predictive value*.mp.                                                                                                                                                                                                 |
| 10 | (risk or risks).mp.                                                                                                                                                                                                            |

Hastie R, Brownfoot FC, Cluver CA, Walker SP, Hesselman S, Tong S, et al. Predictive value of the signs and symptoms preceding eclampsia: a systematic review. *Obstet Gynecol* 2019;134.

The authors provided this information as a supplement to their article.

|    |                                                                            |
|----|----------------------------------------------------------------------------|
| 11 | or/3-10                                                                    |
| 12 | 1 and 11                                                                   |
| 13 | 12 or 2                                                                    |
| 14 | limit 13 to (case reports or editorial or guideline or letter or "review") |
| 15 | 13 not 14                                                                  |
| 16 | limit 15 to English language                                               |

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## Appendix 2. Risk of Bias and Applicability of Included Studies

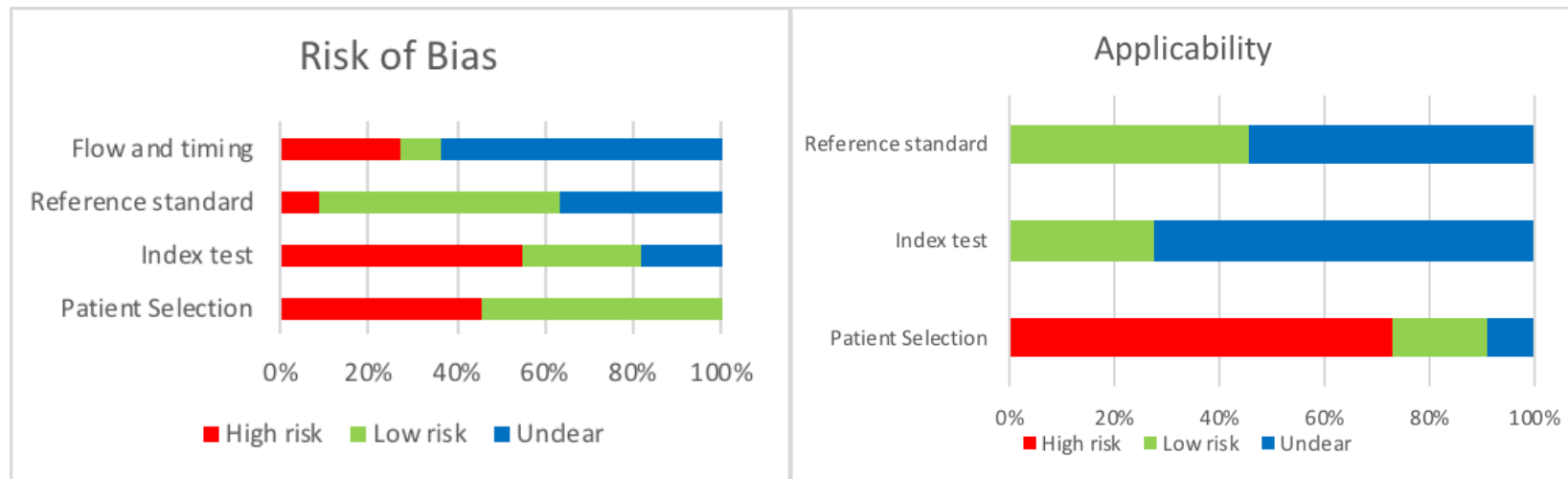
|                  | Bias              |            |                    |                 | Applicability     |            |                    |
|------------------|-------------------|------------|--------------------|-----------------|-------------------|------------|--------------------|
|                  | Patient Selection | Index test | Reference standard | Flow and timing | Patient selection | Index test | Reference standard |
| Bugalho (2001)   | Low               | High       | Low                | High            | Unclear           | Low        | Unclear            |
| Cavkaytar (2007) | Low               | High       | Unclear            | Low             | High              | Low        | Unclear            |
| Haddad (2000)    | Low               | High       | Unclear            | Unclear         | High              | Unclear    | Unclear            |
| Koopmans (2011)  | High              | High       | Low                | High            | High              | Unclear    | Low                |
| Nathan (2017)    | Low               | Low        | Unclear            | Unclear         | Low               | Unclear    | Unclear            |
| Ogunyemi (2004)  | High              | High       | High               | High            | High              | Unclear    | Unclear            |
| Raghurama (2014) | Low               | Unclear    | Low                | Unclear         | Low               | Unclear    | Low                |
| Sobande (2007)   | High              | Unclear    | Low                | Unclear         | High              | Low        | Low                |
| Taweessuk (2014) | High              | High       | Low                | Unclear         | High              | Unclear    | Low                |
| Urassa (2006)    | High              | Unclear    | Unclear            | Unclear         | High              | Unclear    | Unclear            |
| Witlin (1999)    | Low               | Low        | Low                | Unclear         | High              | Unclear    | Low                |

The QUADAS-2 tool was used to assess the risk of bias and applicability to the review question, with two reviewers independently assessing each study using predefined signalling questions.

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### Appendix 3. Pooled risk of bias/applicability across each QUADAS-2 domain.



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#### Appendix 4. Test Characteristic of Individual Signs and Symptoms

| Finding/study              | Design       | Control population | N   | Sensitivity, 95% CI | Specificity, 95% CI | LR+, 95% CI            | LR-, 95% CI       |
|----------------------------|--------------|--------------------|-----|---------------------|---------------------|------------------------|-------------------|
| <b>Visual disturbances</b> |              |                    |     |                     |                     |                        |                   |
| Cavkaytar, 2011            | Cohort       | High risk          | 61  | 0.62 (0.44, 0.79)   | 0.76 (0.56, 0.90)   | 2.59 (1.29, 5.21)      | 0.49 (0.30, 0.81) |
| Sobande, 2007              | Cohort       | High risk          | 315 | 0.39 (0.17, 0.64)   | 0.98 (0.95, 0.99)   | 16.50 (6.49, 41.96)    | 0.63 (0.43, 0.91) |
| Witlin, 1999               | Cohort       | High risk          | 445 | 0.35 (0.21, 0.52)   | 0.80 (0.75, 0.83)   | 1.71 (1.07, 2.72)      | 0.82 (0.65, 1.03) |
| Ogunyemi, 2004             | Case-control | High risk          | 58  | 0.36 (0.18, 0.57)   | 0.85 (0.68, 0.95)   | 2.38 (0.91, 6.22)      | 0.75 (0.54, 1.05) |
| Taweesuk, 2016             | Case-control | Moderate risk      | 320 | 0.30 (0.20, 0.41)   | 1.00 (0.98, 1.00)   | 145.79 (8.97, 2370.32) | 0.70 (0.61, 0.81) |
| Bugalho, 2001              | Case-control | Unclear            | 515 | 0.18 (0.12, 0.26)   | 0.94 (0.91, 0.96)   | 2.87 (1.68, 4.90)      | 0.88 (0.81, 0.95) |
| <b>Epigastric pain</b>     |              |                    |     |                     |                     |                        |                   |
| Cavkaytar, 2011            | Cohort       | High risk          | 61  | 0.38 (0.21, 0.56)   | 0.86 (0.68, 0.96)   | 2.72 (0.99, 7.49)      | 0.73 (0.53, 0.98) |
| Sobande, 2007              | Cohort       | High risk          | 315 | 0.09 (0.00, 0.41)   | 0.96 (0.93, 0.98)   | 2.37 (0.34, 16.78)     | 0.95 (0.78, 1.14) |
| Witlin, 1999               | Cohort       | High risk          | 445 | 0.17 (0.07, 0.33)   | 0.75 (0.71, 0.79)   | 0.71 (0.35, 1.42)      | 1.10 (0.94, 1.28) |
| Ogunyemi, 2004             | Case-control | High risk          | 58  | 0.36 (0.18, 0.57)   | 0.76 (0.58, 0.89)   | 1.49 (0.67, 3.30)      | 0.84 (0.59, 1.20) |
| Taweesuk, 2016             | Case-control | Moderate risk      | 320 | 0.21 (0.13, 0.32)   | 1.00 (0.98, 1.00)   | 104.14 (6.33, 1712.19) | 0.79 (0.70, 0.88) |
| Bugalho, 2001              | Case-control | Unclear            | 515 | 0.44 (0.36, 0.53)   | 0.74 (0.69, 0.78)   | 1.67 (1.30, 2.16)      | 0.76 (0.64, 0.89) |
| <b>Headache</b>            |              |                    |     |                     |                     |                        |                   |
| Cavkaytar, 2011            | Cohort       | High risk          | 61  | 0.69 (0.5, 0.84)    | 0.62 (0.42, 0.79)   | 1.81 (1.08, 3.05)      | 0.50 (0.28, 0.91) |
| Sobande, 2007              | Cohort       | High risk          | 58  | 0.22 (.06, 0.48)    | 0.76 (0.71, 0.81)   | 0.94 (0.39, 2.29)      | 1.02 (0.79, 1.31) |
| Witlin, 1999               | Cohort       | High risk          | 315 | 0.63 (0.46, 0.77)   | 0.56 (0.51, 0.61)   | 1.42 (1.09, 1.85)      | 0.67 (0.44, 1.01) |
| Taweesuk, 2016             | Case-control | Moderate risk      | 320 | 0.44 (0.33, 0.55)   | 1.00 (0.98, 1.00)   | 105.00 (14.62, 754.12) | 0.56 (0.47, 0.69) |
| Ogunyemi, 2004             | Case-control | High risk          | 445 | 0.72 (0.51, 0.88)   | 0.73 (0.54, 0.87)   | 2.64 (1.44, 4.85)      | 0.38 (0.20, 0.75) |

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|                                                           |              |               |      |                      |                   |                      |                   |
|-----------------------------------------------------------|--------------|---------------|------|----------------------|-------------------|----------------------|-------------------|
| <b>Any edema</b>                                          |              |               |      |                      |                   |                      |                   |
| Sobande, 2007                                             | Cohort       | High risk     | 315  | 0.56 (0.31, 0.78)    | 0.86 (0.81, 0.89) | 3.84 (2.33, 6.31)    | 0.52 (0.31, 0.87) |
| Urassa, 2006                                              | Case-control | Unclear       | 819  | 0.31 (0.27, 0.36)    | 0.85 (0.82, 0.89) | 2.14 (1.63, 2.81)    | 0.81 (0.75, 0.87) |
| Taweesuk, 2016                                            | Case-control | Moderate risk | 320  | 0.76 (0.65, 0.85)    | 0.48 (0.41, 0.54) | 1.46 (1.23, 1.74)    | 0.50 (0.33, 0.75) |
| Ogunyemi, 2004                                            | Case-control | High risk     | 58   | 0.56 (0.35, 0.76)    | 0.27 (0.13, 0.46) | 0.77 (0.51, 1.15)    | 1.61 (0.79, 3.29) |
| <b>Nausea and vomiting</b>                                |              |               |      |                      |                   |                      |                   |
| Cavkaytar, 2011                                           | Cohort       | High risk     | 61   | 1.0 (0.66, 1.0)      | 0.5 (0.41, 0.69)  | 17.27 (1.05, 284.19) | 0.72 (0.58, 0.90) |
| Witlin, 1999                                              | Cohort       | High risk     | 445  | 0.38 (0.29, 0.46)    | 0.43 (0.34, 0.53) | 0.71 (0.27, 1.86)    | 1.05 (0.94, 1.17) |
| Ogunyemi, 2004                                            | Case-control | High risk     | 58   | 0.56 (0.77, 0.74)    | 0.53 (0.36, 0.70) | 1.70 (1.06, 2.71)    | 0.49 (0.24, 0.97) |
| <b>Proteinuria (&gt;1+ dipstick)</b>                      |              |               |      |                      |                   |                      |                   |
| Koopmans, 2011                                            | Case-control | Moderate risk | 1225 | 0.116 (0.088, 0.015) | 0.97 (0.96, 0.98) | 1.98 (1.67, 2.34)    | 0.47 (0.33, 0.66) |
| Raghuraman, 2014                                          | Case-control | High risk     | 241  | 0.202 (0.144, 0.27)  | 0.63 (0.51, 0.74) | 0.75 (0.59, 0.95)    | 1.73 (1.19, 2.52) |
| Urassa, 2006                                              | Case-control | Unclear       | 819  | 0.643 (0.562, 0.72)  | 0.55 (0.51, 0.58) | 1.89 (1.40, 2.56)    | 0.87 (0.81, 0.93) |
| <b>systolic BP ≥160 mmHg and/or diastolic BP≥110 mmHg</b> |              |               |      |                      |                   |                      |                   |
| Cavkaytar, 2011                                           | Cohort       | High risk     | 61   | 0.64 (0.44, 0.81)    | 0.58 (0.39, 0.75) | 1.63 (0.91, 2.94)    | 0.67 (0.42, 1.07) |
| Nathan, 2017                                              | Cohort       | High risk     | 1647 | 0.08 (0.05, 0.11)    | 0.91 (0.89, 0.92) | 0.86 (0.59, 1.25)    | 1.03 (0.96, 1.12) |
| Taweesuk, 2016                                            | Case-control | Moderate      | 320  | 0.69 (0.59, 0.79)    | 0.92 (0.87, 0.95) | 6.92 (4.71, 10.17)   | 0.28 (0.19, 0.41) |
| <b>AST level &gt;150 U/L</b>                              |              |               |      |                      |                   |                      |                   |
| Cavkaytar, 2011                                           | Cohort       | High risk     | 61   | 0.36 (0.188, 0.59)   | 0.38 (0.23, 0.55) | 0.54 (0.28, 1.05)    | 1.49 (0.96, 2.30) |
| Haddad, 2000                                              | Cohort       | High risk     | 183  | 0.04(0.016, 0.09)    | 0.88 (0.75, 0.96) | 0.70 (0.41, 1.21)    | 2.06 (1.02, 4.17) |
| <b>Platelet count &lt;50,000 cells/uL</b>                 |              |               |      |                      |                   |                      |                   |
| Cavkaytar, 2011                                           | Cohort       | High risk     | 61   | 0.778 (0.4, 0.97)    | 0.52 (0.38, 0.66) | 3.17 (0.72, 14.06)   | 0.84 (0.68, 1.03) |
| Haddad, 2000                                              | Cohort       | High risk     | 183  | 0.035 (0.007, 0.10)  | 0.92 (0.84, 0.96) | 0.56 (0.21, 1.48)    | 1.42 (0.96, 2.10) |

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|                                |              |           |     |                      |                   |                   |                   |
|--------------------------------|--------------|-----------|-----|----------------------|-------------------|-------------------|-------------------|
| <b>No Symptom</b>              |              |           |     |                      |                   |                   |                   |
| Bugalho, 2001                  | Case-control | Unclear   | 515 | 0.18 (0.06, 0.37)    | 0.75 (0.70, 0.78) | 0.65 (0.25, 1.68) | 1.02 (0.98, 1.07) |
| Sobande, 2007                  | Cohort       | High risk | 315 | 0.03 (0.01, 0.08)    | 0.93 (0.88, 0.96) | 0.57 (0.24, 1.38) | 1.27 (0.98, 1.65) |
| <b>Leg/foot edema</b>          |              |           |     |                      |                   |                   |                   |
| Bugalho, 2001                  | Case-control | Unclear   | 515 | 0.42 (0.35, 0.49)    | 0.87 (0.82, 0.90) | 2.17 (1.79, 2.63) | 0.47 (0.37, 0.61) |
| Ogunyemi, 2004                 | Case-control | High risk | 58  | 0.4 (0.24, 0.58)     | 0.52 (0.31, 0.73) | 0.88 (0.57, 1.36) | 1.21 (0.64, 2.28) |
| <b>Dizziness</b>               |              |           |     |                      |                   |                   |                   |
| Bugalho, 2001                  | Case-control | Unclear   | 515 | 0.367 (0.29, 0.45)   | 0.80 (0.76, 0.84) | 1.74 (1.35, 2.24) | 0.74 (0.63, 0.88) |
| <b>Ear buzzing</b>             |              |           |     |                      |                   |                   |                   |
| Bugalho, 2001                  | Case-control | Unclear   | 515 | 0.429 (0.26, 0.61)   | 0.76 (0.72, 0.80) | 2.24 (1.18, 4.25) | 0.93 (0.87, 1.00) |
| <b>Irritability</b>            |              |           |     |                      |                   |                   |                   |
| Bugalho, 2001                  | Case-control | Unclear   | 515 | 0.31 (0.23, 0.40)    | 0.77 (0.72, 0.81) | 1.32 (0.95, 1.83) | 0.91 (0.80, 1.03) |
| <b>Insomnia</b>                |              |           |     |                      |                   |                   |                   |
| Bugalho, 2001                  | Case-control | Unclear   | 515 | 0.384 (0.31, 0.47)   | 0.81 (0.76, 0.81) | 1.87 (1.44, 2.42) | 0.73 (0.61, 0.86) |
| <b>Excessive weight gain</b>   |              |           |     |                      |                   |                   |                   |
| Bugalho, 2001                  | Case-control | Unclear   | 515 | 0.0588 (0.01, 0.20)  | 0.94 (0.91, 0.97) | 1.03 (0.27, 3.97) | 1.00 (0.84, 1.18) |
| <b>LDH level &gt;1400 U/L</b>  |              |           |     |                      |                   |                   |                   |
| Haddad, 2000                   | Cohort       | High risk | 183 | 0.067 (0.025, 0.14 ) | 0.95 (0.88, 0.98) | 1.12 (0.64, 1.96) | 0.89 (0.46, 1.73) |
| <b>Elevated blood pressure</b> |              |           |     |                      |                   |                   |                   |
| Urassa, 2006                   | Case-control | Unclear   | 819 | 0.70 (0.62, 0.77)    | 0.56 (0.53, 0.60) | 2.43 (1.79, 3.32) | 0.81 (0.76, 0.87) |
| <b>Diastolic BP ≥110 mmHg</b>  |              |           |     |                      |                   |                   |                   |

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|                                                            |              |               |      |                     |                   |                     |                   |
|------------------------------------------------------------|--------------|---------------|------|---------------------|-------------------|---------------------|-------------------|
| Taweek, 2016                                               | Case-control | Moderate risk | 320  | 0.86 (0.73, 0.94)   | 0.86 (0.81, 0.90) | 18.00 (8.43, 38.45) | 0.49 (0.39, 0.62) |
| <b>MAP 141-160 mm Hg</b>                                   |              |               |      |                     |                   |                     |                   |
| Witlin, 1999                                               | Cohort       | High risk     | 445  | 0.066 (0.018, 0.16) | 0.91 (0.87, 0.93) | 0.71 (0.27, 1.86)   | 1.05 (0.94, 1.17) |
| <b>MAP 121-140 mm Hg</b>                                   |              |               |      |                     |                   |                     |                   |
| Witlin, 1999                                               | Cohort       | High risk     | 445  | 0.03 (0.01, 0.06)   | 0.84 (0.79, 0.89) | 0.31 (0.16, 0.61)   | 1.89 (1.58, 2.26) |
| <b>Systolic BP 140–159 and/or diastolic BP 90–109 mmHg</b> |              |               |      |                     |                   |                     |                   |
| Nathan, 2017                                               | Cohort       | High risk     | 1647 | 0.1 (0.084, 0.12)   | 0.94 (0.92, 0.96) | 1.14 (1.05, 1.23)   | 0.63 (0.44, 0.91) |
| <b>Dipstick +</b>                                          |              |               |      |                     |                   |                     |                   |
| Koopmans, 2011                                             | Case-control | Moderate      | 1225 | 0.641 (0.551, 0.72) | 0.93 (0.91, 0.95) | 0.49 (0.25, 0.96)   | 1.14 (1.05, 1.24) |
| <b>Dipstick ++</b>                                         |              |               |      |                     |                   |                     |                   |
| Koopmans, 2011                                             | Case-control | Moderate      | 1225 | 0.19 (0.125, 0.26)  | 0.95 (0.94, 0.97) | 3.47 (2.40, 5.01)   | 0.74 (0.63, 0.87) |
| <b>Dipstick +++</b>                                        |              |               |      |                     |                   |                     |                   |
| Koopmans, 2011                                             | Case-control | Moderate      | 1225 | 0.29 (0.184, 0.41)  | 0.95 (0.94, 0.96) | 6.05 (3.80, 9.61)   | 0.77 (0.67, 0.88) |
| <b>Face edema</b>                                          |              |               |      |                     |                   |                     |                   |
| Ogunyemi, 2004                                             | Case-control | High risk     | 58   | 0.44 (0.20, 0.70)   | 0.57 (0.41, 0.72) | 1.03 (0.44, 2.38)   | 0.99 (0.72, 1.37) |
| <b>Hand edema</b>                                          |              |               |      |                     |                   |                     |                   |
| Ogunyemi, 2004                                             | Case-control | High risk     | 58   | 0.46 (0.17, 0.77)   | 0.57 (0.42, 0.72) | 1.10 (0.38, 3.20)   | 0.98 (0.76, 1.26) |
| <b>Face or hand edema</b>                                  |              |               |      |                     |                   |                     |                   |
| Bugalho, 2001                                              | Case-control | Unclear       | 515  | 0.64 (0.49, 0.77)   | 0.79 (0.75, 0.83) | 5.32 (3.09, 9.15)   | 0.79 (0.71, 0.87) |

Accuracy of each individual sign and symptom for the diagnosis of eclampsia. N; number of participants in each study. 95% CI; 95% confidence interval, LR+; positive likelihood ratio, LR-; negative likelihood ratio.

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