Project/Topic of your Clinical Question: _____

Reviewer: _____ **Today's Date:** _____ **Final Evidence Level:** _____

Article Title: _____

Year: _____ **First Author:** _____ **Journal:** _____

Do the study aim/purpose/objectives and inclusion/exclusion criteria assist in answering your clinical question? ☐ Yes ☐ No ☐ Unknown

- Study Aim/Purpose/Objectives:

- Inclusion Criteria:

- Exclusion Criteria:

Is a cross-sectional study congruent with the author's study aim/purpose/objectives above? ☐ Yes ☐ No ☐ Unknown

Comments:

When reading the bolded questions, consider the bulleted questions to help answer the main question.

If you are uncertain of your skills in evidence evaluation, please consult a local evidence expert for assistance:

CCHMC Evidence Experts: http://groups/ce/NewEBC/EBDMHelp.htm

Unfamiliar terms can be found in the LEGEND Glossary: http://groups/ce/NewEBC/EBCFiles/GLOSSARY-EBDM.pdf

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VALIDITY: ARE THE RESULTS OF THE CROSS–SECTIONAL STUDY VALID OR CREDIBLE?

1. Are the study methods clearly described and appropriate for the question? ☐ Yes ☐ No ☐ Unknown
- Is the setting clearly described and appropriate?
- Was there a representative sample of patients at a well-defined point in the course of disease?
- Is the sample population clearly described and sufficient?
- Were the participants recruited prospectively?

Comments:

2. Were all potentially important prognostic factors assessed? ☐ Yes ☐ No ☐ Unknown
- Were the patients sufficiently homogeneous with respect to prognostic risk?
- Are there subgroups in the sample with very different prognosis compared to other subgroups in the study?

Comments:

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3. **Were objective and unbiased outcome criteria used?** ☐ Yes ☐ No ☐ Unknown
   - Were the outcomes quantifiable and precisely measurable?
   - Were instruments used to measure the outcomes tested to be valid and reliable?
   - Was the assessment of the outcome made independent of knowledge of prognostic factors?

   Comments:

4. **Were all participants accounted for at the conclusion of the study?** ☐ Yes ☐ No ☐ Unknown
   - Were withdrawals from the study explained?
   - Was the rate of attrition acceptable?

   Comments:

5. **Was there freedom from conflict of interest?** ☐ Yes ☐ No ☐ Unknown
   - Sponsor/Funding Agency or Investigators

   Comments:

RELIABILITY: ARE THESE VALID STUDY RESULTS IMPORTANT?

6. **Were the statistical analysis methods appropriate?** ☐ Yes ☐ No ☐ Unknown
   - Were the statistical analysis methods clearly described?
   - If subgroups in the sample had different prognostic factors *(e.g., demographics, disease specifics, comorbidity)*, was an adjustment made for the differences between groups?
   - Does the prognosis change by age?

   Comments:

7. **Did the study have a sufficiently large sample size?** ☐ Yes ☐ No ☐ Unknown
   - Was a power analysis described?
   - Did the sample size achieve or exceed that resulting from the power analysis?
   - Did each subgroup also have sufficient sample size *(e.g., at least 6 to 12 participants)*?

   Comments:

8. **What are the main results of the study?** *(e.g., Helpful data: Page #, Table #, Figures, Graphs)*

   - How likely are the outcomes over time?
     - Absolute results *(e.g., 5 year survival rate)* or Relative results *(e.g., risk from prognostic factor)* or Survival Curves *(e.g., cumulative events)*

What were the measures of statistical uncertainty *(e.g., precision)*?
(Were the results presented with Confidence Intervals or Standard Deviations?)

9. **Were the results statistically significant?**   ☐ Yes ☐ No ☐ Unknown
    Comments:

10. **Were the results clinically significant?**   ☐ Yes ☐ No ☐ Unknown
    - If potential confounders were identified, were they discussed in relationship to the results?
    Comments:

APPLICABILITY: CAN I APPLY THESE VALID, IMPORTANT STUDY RESULTS TO TREATING MY PATIENTS?

11. **Can the results be applied to my population of interest?**   ☐ Yes ☐ No ☐ Unknown
    - Is the setting of the study applicable to my population of interest?
    - Do the patient outcomes apply to my population or question of interest?
    - Were the patients in this study similar to my population of interest?
    Comments:

12. **Are my patient's and family's values and preferences satisfied by the knowledge gained from this study** *(such as outcomes considered)*?   ☐ Yes ☐ No ☐ Unknown
    Comments:

13. **Would you include this study/article in development of a care recommendation?** ☐ Yes ☐ No ☐ Unknown
    Comments:

ADDITIONAL COMMENTS OR CONCLUSIONS ("TAKE-HOME POINTS"):

QUALITY LEVEL / EVIDENCE LEVEL

- *Consider each "No" answer and the degree to which this limitation is a threat to the validity of the results, then check the appropriate box to assign the level of quality for this study/article.*
- *Consider an "Unknown" answer to one or more questions as a similar limitation to answering "No," if the information is not available in the article.*

THE EVIDENCE LEVEL IS:

☐ **Good Quality Cross-Sectional Study** [4a]

☐ **Lesser Quality Cross-Sectional Study** [4b]

☐ **Not Valid, Reliable, or Applicable**

Table of Evidence Levels													
	TYPE OF STUDY / STUDY DESIGN												
DOMAIN OF CLINICAL QUESTION	Systematic Review Meta–Analysis	Cohort – Prospective	Cohort – Retrospective	Case – Control	Cross – Sectional	Descriptive Study Epidemiology Case Series	Mixed Methods Study	Decision Analysis Economic Analysis Computer Simulation	Guidelines	Case Reports N-of-1 Study	Bench Study	Published Expert Opinion	Local Consensus Published Abstracts
Prognosis	1a 1b	2a 2b	3a 3b	4a 4b	4a 4b	4a 4b	2/3/4 a/b	5a 5b	5a 5b	5a 5b	5a 5b	5a 5b	5

Development for this appraisal form is based on:

1. Guyatt, G.; Rennie, D.; Evidence-Based Medicine Working Group; and American Medical Association.: Users' guides to the medical literature : a manual for evidence-based clinical practice. *Users' guides to the medical literature: a manual for evidence-based clinical practice:* "JAMA & archives journals." Chicago, IL, 2002
2. Melnyk, B. M. and E. Fineout-Overholt (2005). Evidence-based practice in nursing & healthcare: a guide to best practice. Philadelphia, Lippincott Williams & Wilkins.
3. Phillips, et al: Oxford Centre for Evidence-based Medicine Levels of Evidence, 2001. Last accessed Nov 14, 2007 from http://www.cebm.net/index.aspx?o=1025.
4. Fineout-Overholt and Johnston: Teaching EBP: asking searchable, answerable clinical questions. *Worldviews Evid Based Nurs,* 2(3): 157-60, 2005.