

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 cohort 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>

**VALIDITY: ARE THE RESULTS OF THE COHORT STUDY VALID OR CREDIBLE?**

1. **Were data collected prospectively?**  Yes  No  Unknown  
*Comments:*
  
2. **Was the study sample representative of patients with the disease in question?**  Yes  No  Unknown  
*Comments:*
  
3. **Were all participants at the same well-defined point in the course of the disease?**  Yes  No  Unknown  
*Comments:*
  
4. **At the start of the study, were the participants similar with respect to known prognostic factors (e.g., demographic and clinical variables)?**  Yes  No  Unknown
  - Were the patients sufficiently homogeneous with respect to prognostic risk?*Comments:*
  
5. **Were all potentially important prognostic factors assessed?**  Yes  No  Unknown  
*Comments:*

**6. Were the outcomes quantifiable and precisely measurable?** Yes  No  Unknown

- Were instruments used to measure the outcomes valid and reliable?
- Was the assessment of the outcome made independent of knowledge of prognostic factors?

*Comments:***7. Were participants followed long enough for outcomes to occur?** Yes  No  Unknown

- Was the follow-up process clearly described?
- Was the follow-up process complete?

*Comments:***8. 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:***9. Was there freedom from conflict of interest?** Yes  No  Unknown

- Sponsor/Funding Agency or Investigators

*Comments:***RELIABILITY: ARE THESE VALID STUDY RESULTS IMPORTANT?****10. 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:***11. 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?
- Was an adjustment made for changes that occur as the patient ages, if any?

*Comments:*

**12. 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?)

**13. Were the results statistically significant?** Yes  No  Unknown

Comments:

**14. 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?****15. 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:

**16. 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:

**17. 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 Prospective Cohort Study** [2a]  
 **Lesser Quality Prospective Cohort Study** [2b]  
 **Good Quality Retrospective Cohort Study** [3a]  
 **Lesser Quality Retrospective Cohort Study** [3b]  
 **Not Valid, Reliable, or Applicable**

Table of Evidence Levels													
DOMAIN OF CLINICAL QUESTION	TYPE OF STUDY / STUDY DESIGN												
	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.