Critically Appraised Topic

A Critically Appraised Topic (or CAT) is a brief, evidence-based assessment of the one or two most relevant studies retrieved to answer a focused clinical question that may have arisen from a real-life situation. A critically appraised topic is not a comprehensive review of a subject or a synthesis of all the available knowledge. The manuscript should contain the following elements:

Case presentation: In one paragraph, describe the patient's age and sex, clinical and geographic setting, presenting complaint, relevant medical history, and pertinent physical and lab findings.

Clinical question: To achieve a focused, pertinent clinical question—the key aspect of a critically appraised topic that leads to a well-defined literature search and pertinent results—consider the "PICO" approach. Answers to PICO questions help you clarify the type of information you need to answer your clinical question and shape your online search terms.

P — Patient population. What group do you want information on (eg, postmenopausal women)?

I — Intervention. What medical event do you want to study the effect of (eg, hormone therapy)?

C — Comparison. Compared to what? Better or worse than no intervention at all, or than another intervention or test (eg, no hormone therapy)?

O — Outcomes. What is the effect of the intervention (eg, incidence of osteoporosis, breast cancer, endometrial cancer, death)?

Search criteria: Choose the type of study that is most relevant to your question. Randomized clinical trials are most appropriate for questions about therapy; cohort studies for questions about prognosis, modifying risk factors, and quality of life given a particular treatment. Questions about diagnostic studies are best answered by studies that look at sensitivity, specificity, and predictive values. On the PubMed Web site (www.ncbi.nlm.nih.gov/entrez/query), use the filters under the "Clinical Queries" link to focus your search on diagnosis, treatment, or prognosis. Briefly describe the decision-making process that guided your search, and provide the terms of your search so that others can repeat it.

Search results: How many citations did you retrieve? List the one or two citations you chose to evaluate and why you chose them.

Evaluating the evidence: Briefly describe the paper and its major outcomes and conclusions. Describe any problems with the study, particularly as it relates to your clinical question. A CAT should not grade study authors on their epidemiologic skill but should assess the validity and importance of the study as it relates to your clinical question. The use of evidenced-based medicine concepts such as likelihood ratios, predictive values, and numbers needed to treat is encouraged.

Clinical bottom line: Will the study change or affect how you practice medicine? Why or why not? (Ask yourself if your findings are worth telling your colleagues about.)