

# Introducing Critical Appraisal of Biomedical Literature to First-year Medical Students in Histology

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## ABSTRACT

During the preclinical phase of medical school, most students rely on instructor-provided lecture notes and required textbooks, and note taking during lectures. By the time medical students begin their clinical clerkships, they are accustomed to accepting the word of authority at face value. Paradoxically, physicians must be able to critically evaluate and solve patient problems from a rapidly expanding body of biomedical literature. To address this discrepancy and to help show the relevance of histology to medicine, we implemented a program to introduce critical reading of biomedical literature throughout our 21-week histology course. During weeks one through four, students in the class of 2003 (N = 224) were randomly divided into 56 groups (n = 4) and taught how to conduct a MEDLINE search. Groups were required to submit a biomedical publication abstract from their MEDLINE search that contained histological and clinical elements by week eight. Subsequently, students attended two 60-minute critical appraisal seminars. By week 15, groups submitted a one-page summary of their selected journal publication and answered a set of critical appraisal questions. During weeks 16-19, students prepared a four-minute oral presentation. Three years later, these students were asked to assess the value of our critical appraisal program. Most respondents agreed and strongly agreed (96.1%) that the time needed to complete Critical Appraisal program was manageable. Nearly three-quarters of the respondents (74.5%) agreed and strongly agreed that the Critical Appraisal program demonstrated the relevance of histology to medicine, helped in other courses, and fostered collegiality among classmates. More than four-fifths of respondents (86.3%) agreed and strongly agreed that the Critical appraisal program was worth the effort. The critical appraisal program described herein is a resource-efficient method for introducing critical appraisal of biomedical literature to first-year medical students within the context of a first-year basic science course.

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