

moral development call for some clarification.

First, it is unclear why the authors calculated a weighted score based on the students' responses. The most substantial evidence presented for the assertion that moral reasoning declined over the study period was the small but "statistically significant" changes in weighted scores, but the change for the total group was only 17.98 points (out of a possible 450). Does this small change really represent a significant difference in students' moral reasoning abilities?

Second, the authors argue that a lack of improvement in moral reasoning is of concern, and their concluding paragraph indicates a belief that ideally students' moral reasoning skills should increase through their medical education experience. However, many students come to medical school with significant life experience and have already completed advanced degrees. At what point can they be expected to attain the highest stage of moral reasoning that they will achieve?

Finally, although the moral reasoning of students who started at a higher stage declined, that of students starting at a lower stage improved. This finding could be interpreted positively: those who needed improvement most did improve. It also seems odd that the students who were the most morally mature would be most adversely affected by the medical school experience.

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Osteoporosis guidelines

The *CMAJ* supplement containing clinical practice guidelines for osteoporosis¹ is a valuable document.

However, I find it difficult to understand why raloxifene has been classified as a first-line therapy for the prevention of further bone loss (in postmenopausal women with low bone density) and for the treatment of osteoporosis, given that it has not been shown to significantly reduce the occurrence of hip fractures.^{2,3} Moreover, in the Multiple Outcomes of Raloxifene Evaluation (MORE) study,² the incidence of venous thromboembolism was 1% among patients treated with this drug. In my own experience of prescribing this drug for approximately 200 female patients, 2 elderly women with no other known risk factors experienced pulmonary emboli during the first year of treatment, and a third elderly patient was referred to me when deep venous thrombosis developed 1 month after raloxifene was substituted for estrogen therapy.

I feel that the osteoporosis guidelines do not adequately convey the magnitude of the risk for venous thromboembolism during raloxifene therapy. This risk is reported as 3.32 events per 1000 person-years of treatment,¹ but because most raloxifene-related events of this type occur during the first year of treatment,⁴ the risk will appear lower as the duration of follow-up increases. In women under 60 years of age, the risk seems to be low: only 1 case occurred in 859 women treated for 3 years at doses of 30 to 150 mg/day.⁵ If this is so, the risk in older women may be even higher than the 1% reported in the MORE study.

I am concerned that the designation of raloxifene as a first-line therapy may lead to its being prescribed even when a safer and more effective drug such as alendronate or risedronate would be more appropriate. In women over the age of 60, raloxifene should be used with caution and only after the patient has been informed of the magnitude of the risk for venous thromboembolism (at least 1 in 100).

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References

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In most respects, the guidelines for the diagnosis and management of osteoporosis, developed by the Osteoporosis Society of Canada,¹ are excellent. However, they suffer from 2 serious deficiencies.

First, all descriptions of the benefits of therapy are provided as relative risk reductions, with no mention of absolute risk reductions or numbers needed to treat (although, interestingly, the small increase in venous thrombosis associated with use of raloxifene is described as an absolute risk).¹ From a clinical point of view, absolute benefits and risks markedly influence therapeutic decisions. This is particularly important in the prevention and treatment of osteoporosis, because the risk of fracture without therapy varies so much with the patient's characteristics. Groups such as the American College of Physicians Journal Club mandate that both absolute and relative risk reductions be provided when describing the benefits of a therapy.² I am surprised that *CMAJ* does not have a similar policy.

Second, the guidelines make no mention of cost-effectiveness. I believe that cost-effectiveness should be mentioned for any guidelines that could affect the