Correspondence
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Evaluating laparoscopic skills

In the paper by Derossis and associates entitled "Evaluation of laparoscopic skills: a 2-year follow-up during residency training" (*Can J Surg* 1999;42[4]:293-6), we disagree with the assertion that "this simulator is a valuable teaching tool for training and evaluation of basic laparoscopic tasks in laparoscopic surgery." This conclusion does not appear to be substantiated by the authors' methods.

Finding a linear correlation between performance scores and level of training only serves to confirm that residents coincidentally become more dexterous at artificial exercises as they advance in their surgical training. It does not demonstrate construct validity of the measure but rather serves only to show convergence between simulator scores and year of residency. Furthermore, the authors do not indicate how much simulator practice time was accumulated by residents in the 2-year interval, a factor that could be singly responsible for the improved scores. Since all residents presumably complete a full 5-year program of training, to be of true value in assessing surgical skills this measure should be able to discriminate among residents, in the same year of training, deemed strongly and poorly competent by other means.

We further contend that to establish this simulator as a valuable training instrument requires evidence of improved clinical surgical skill that correlates with practice time on the training device.

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Drs. Fried and Derossis reply

We agree in part with the criticism of Schlachta and colleagues that our conclusion that the simulator we used "is a valuable tool for training and evaluation of basic tasks in laparoscopic surgery" is not substantiated by the methods used. However, our article is only one of several that have been presented at national and international peer-reviewed meetings and have been published or accepted for publication in this and other peer-reviewed journals.[1–3]

Validity is a matter of degree and does not exist on an all-or-none basis. Finding a significant correlation between performance scores and level of training from junior to senior residents suggests a degree of construct validity. Further, in this pilot study, where residents were followed through their training, residents' scores and the total score increased as they underwent more training in 2 out of 3 tasks. Practice effects could confound such results; however, these residents were only evaluated at 2 points in time and had no practice on the simulator in the interim. The original 7 inanimate tasks developed[1] were modelled after fundamental laparoscopic techniques rather than isolated psychomotor skills, thus adding face validity. Face validity was further ensured by consensus of more than 20 well-known advanced laparoscopic surgeons that these tasks were meaningful representations of components of laparoscopic surgery. In another study[2] we found that residents who practised in this inanimate model performed better in a live animal model and acquired skill more quickly than a peer group at the same PGY3 level of training who had not practised in the inanimate model. The scores in the animate model for the group that practised were also superior to those of the group without practice,[3] and the scores in the inanimate model correlated significantly with analogous skills measured in the live animal in the operating room.[2] All of these data support the validity of the inanimate system for measuring laparoscopic skills.

We agree that this model will require further validation by ultimately correlating performance in the model with level of surgical skill in the operating room. At this point there is no measure of skill in the operating room that can act as the "gold standard." We are in the process of conducting a large multicentre study to test the reliability and validity of such a scoring system.

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References

1. Derossis AM, Fried GM, Abrahamowicz M, Sigman HH, Barkun JS, Meakins JL. Development of a model for training and evaluation of laparoscopic skills. *Am J Surg* 1998;175:482-7.
2. Fried GM, Bothwell J, Derossis AM, Sigman HH. Comparison of laparoscopic performance in vivo with performance measured in a laparoscopic simulator. *Surg Endosc* (in press)
3. Derossis AM, Bothwell J, Sigman HH, Fried GM. The effect of practice on performance in a laparoscopic simulator. *Surg Endosc* 1998;12:1117-20.

Slipped capital femoral epiphysis

In the April 1999 issue of the Journal (pages 145 to 148), Drs. Marx and Wright reported on an unusual case of slipped capital femoral epiphysis after septic arthritis of the hip in an adolescent boy. Although it is certainly most unusual to see these conditions simultaneously in an ado-