used to demonstrate basic skills competency in a laboratory setting early in the residency.

Both Lee and Chung et al call attention to the continued testing of the validity of the ESSAT. As Dr Lee describes, numerous forms of validity testing can be used to ensure that a test, such as the ESSAT, is indeed measuring what it is intended to measure. Curricular validity is implicit in our design, which includes specific teaching towards the tasks in a microsurgical course curriculum. Another type of validity testing to which Dr Lee alludes at the end of his letter is a form of construct validity that addresses the question "Does a relatively more experienced surgeon do better on the ESSAT than a novice?" Indeed, we chose this measure as our next step in the validity assessment of the ESSAT and have found that the ESSAT consistently discriminates between residents at different levels of training—that is, a postgraduate year 4 resident gets higher ratings than a postgraduate year 2 resident (unpublished data). In addition, we have tested the ESSAT's interrater reliability ("Do multiple raters watching the same resident give similar scores on the assessment forms?") to further determine whether the ESSAT has strong enough test characteristics to be incorporated into residency curricula as a response to the ACGME mandate. As more data points are collected on the ESSAT and compared with other forms of resident skills assessment (e.g., surgical video review, operative procedure–specific checklists, global rating scores), we will have the ability to comment on criterion-related concurrent and convergent validity. And as residents who have been assessed with ESSAT advance through their careers, we will better be able to measure predictive validity, not losing site of the tool's value as an early assessment of basic surgical skills regardless of its long-term predictive validity.

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Contrast Sensitivity and Aging

Dear Editor:
We read with interest the article regarding the correlation of wavefront aberration and contrast sensitivity by Oshika et al.[1] The authors note in their introduction that "contrast sensitivity function [CSF] has been reported to be age related," a phenomenon we consider to be a well-accepted fact.[2] Seven studies are cited in their references to support this statement. Nevertheless, the authors found CSF "significantly correlated with ocular higher-order aberrations . . . but not with subject age." Despite this divergent finding, the authors offer no potential explanations in their "Discussion." It is surprising that they find a significant correlation between best spectacle-corrected high-contrast visual acuity (VA) and age but not between CSF and age, especially when it has been shown that high-contrast VA is not correlated with measures of retinal image quality.[3]

One possible explanation for these inconsistent results may be that the area-under-the-curve calculation washes out differences that could have been seen if the contrast sensitivity data were plotted as log CSF versus log spatial frequency, as generally plotted in the literature. Their data show very little predictive power, which they acknowledge. These results suggest possible methodological problems with the contrast tests used. We are not aware of the publication of age-stratified data using the CSV-1000E (VectorVision, Greenville, OH). It would have been helpful if the authors had plotted that data so it could be related to prior research.

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References

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2. Packer M, Fine IH, Hoffman RS. Contrast sensitivity and measuring cataract outcomes. Ophthalmol Clin North Am 2006;19:521–33.
3. Applegate RA, Marsack JD, Thibos LN. Metrics of retinal image quality predict visual performance in eyes with 20/17 or better visual acuity. Optom Vis Sci 2006;83:635–40.

Author reply

Dear Editor:
I thank Drs Packer and Ginsburg for their interest in our article but are puzzled by their comment. In our study, multiple linear regression analysis was performed to evaluate the correlation between visual function and several variables. Multiple regression analysis (multivariate analysis) explores determinant factors of the dependent variables, the concept and results of which naturally differ from those of repeated application of univariate or bivariate analysis to test the individual correlation among all variables. It is common that some variables not significant in univariate analysis may become significant in multivariate analysis and vice versa. Such results are neither divergent nor inconsistent. In fact, if simple regression analysis (univariate analysis) is employed with our data, age shows significant correlation with some of the contrast sensitivity functions, such as the area under the log contrast sensitivity function. On the other hand, multiple regression analysis indicated that age is not a significant determinant of contrast sensitivity. These combined results of multivariate and univariate analyses show that the association between age and contrast sensitivity can be a spurious correlation via ocular higher-order aberration as a lurking causal variable. In statistics, it is often said that "correlation does not imply causation." Univariate testing cannot reveal a spurious relationship, and thus, we believe that the multivariate test is the most appropriate method in our data analysis. Moreover, multiple univariate statistical tests increase the risk