Interpretation of colposcopy data

TO THE EDITOR:

Grimm and Meadows' evidence-based answer ("Who should have colposcopy?," *J Fam Pract* 2003; 52:64–66) raises an important topic, which they presented in Table 1. Hidden within the first line of information in the table are several statements that need to be spelled out and clarified.

The triage of a result of atypical squamous cells of undetermined significance (ASCUS), using data from the Intraepithelial Lesion Triage Study (ALTS) trial,[1] is accomplished by 3 medically equivalent methods. As long as there is definite colposcopy/treatment for unresolved lesions at 2 years, all 3 have the exact same rate of detecting cervical intraepithelial neoplasia 2 and 3. The choice of which method to use after an ASCUS result is a *joint patient-physician discussion*—something family physicians excel at doing.

The discussion that must ensue after an ASCUS smear is whether the woman is less anxious about, feels more comfortable with, and can monetarily afford one method vs. others. For instance, it is immoral to order a human papillomavirus (HPV) test for high-risk types without notifying the patient that HPV is a sexually transmitted infection as well as a cancer marker. Many women have taken legal action against their providers for uninformed and unconsented testing for sexually transmitted infections. Likewise, the woman may not want the results of a sexually transmitted infection put into her medical record. The pros and cons of repeating her Pap smear in 6 months are fairly standard and describe a procedure well-known to women; the pros and cons of undergoing an anxiety provoking examination, such as colposcopy, are not known to most women, but have the benefit of offering an endpoint to the screening/triage tests.

The cost-effectiveness of these 3 methods has been addressed in the Consensus Conferences for the Bethesda System and for the Management of Abnormal Cervical Cytology, as well as in the background work provided to the American Cancer Society for revision of their recommendations for cervical cancer screening. An HPV test for high-risk types is only cost-effective if it is done from a liquid cytology sample and liquid cytology is used for screening every 3 years if they have had 3 prior consecutive normal smears annually.

If the latter half of the prerequisite is not observed in your screening facility, you are expending large amounts of health care money needlessly. Repeating the Pap at 6 months is nearly as cost-effective as doing the HPV test under the above 2 constraints. The largest gains in cost-effectiveness are in lengthening the interval of screening for women with normal findings, not a new triage test.

Liquid cytology can be kept in the laboratory for up to 21 days by Food and Drug Administration approval awaiting an order for HPV testing. Depending on how quickly the cytology is reported to the provider will determine the way in which a follow-up test will be discussed and ordered. If there is sufficient time for the discussion and documentation about which method the woman prefers for follow-up, and if the HPV test is her preferred choice, then she may be able to use the remaining cytology fluid for an HPV test. If the discussion results in the choice of an HPV test after 21 days, she may return for a Dacron swab sampling of her cervix (physician- or self-administered) for the HPV test.

Lastly, it is important for family physicians to realize that 80% of the women who have ASCUS cytology and are positive for high-risk HPV types are completely clear at colposcopy. These women are put into a repeat cytology management plan looking for 2 consecutive, adequate, negative reports at 6-month intervals. If subsequent cytology reports are ASCUS, there is no need for HPV

triage, as they must return to colposcopy to resolve the initial ASCUS/HPV positive results. HPV testing should only be used for high-risk types. Testing for low-risk HPV types have nothing to offer the screening or diagnostic procedures for cervical cancer screening.

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DR GRIMM RESPONDS:

I appreciate the clarification offered by Dr Harper on several points.

I agree that the workup of an ASCUS Pap smear needs to be individualized for each patient. Many factors go into deciding between the available options for follow-up of this low-grade cytological abnormality. The ALTS study does demonstrate near equivalence among the 3 strategies cited by Dr Harper. While HPV DNA testing is not a required component of ASCUS follow-up, if high-risk HPV is detected then colposcopy is clearly indicated, as stated in our initial review.

I also strongly agree with Dr Harper's assessment that we inform our patients that we are testing for a sexually transmitted disease with HPV DNA testing. I would go a step further and suggest we have this discussion with our patients before doing cervical cytology screening in the first place. Cervical cancer and its precursors are sexually transmitted diseases, and our patients should know that as we are performing their Paps.

I agree with Dr Harper's conclusions regarding the cost-effectiveness of cervical cytology. As with most forms of population-based screening, the screening interval is a primary determinant of cost. Reasonable evidence from modeling studies has suggested that little benefit is gained with annual vs every-3-year Pap smears.

Finally, I would like to emphasize that the majority of cases of cervical cancer in this country are the result of a lack of screening altogether. Cervical cancer mortality has been reduced by at least 70% since the introduction of the Pap smear. Cervical pathology detection and treatment is one of the largest success stories of primary prevention.

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■ Statistics to assess patient satisfaction with primary care called into question

TO THE EDITOR:

I believe wholeheartedly in the value of patient-centered interaction, but I am not confident that the cross-sectional observational study by Flocke and colleagues ("Relationships between physician practice style, patient satisfaction, and attributes of primary care," *J Fam Pract* 2002; 51:835–840) provides much evidence to support my belief. The 9-item visit rating form from the Medical Outcomes Study[1] that was used in Flocke's study is an ordinal scale. Although each of the succeeding levels of satisfaction (poor, fair, good, very good, and excellent) denotes "more satisfaction" than the preceding level, they do not necessarily do so by any uniform interval. "Excellent" is better than "very good," but we don't know if "good" is better than "fair" by the same increment. Attaching the numbers 1 to 5 to the ordered response categories does not change this fact.

With numbers attached, means can be calculated to many decimal places, as they are in Tables 3 and 4 of Flocke's article, but they have no substantive meaning, and indeed can be deceptive. I believe the appropriate measure of central tendency for an ordinal scale is the median. I would not be surprised if the differences seen in Tables 3 and 4

disappeared, and all the numbers evolved into "4s," if the medians of the variables were used, along with an appropriate statistical test.

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DR FLOCKE RESPONDS:

I thank Dr Ryan for his comments regarding the choice of analyses for the data in our article. He is correct that the outcome variables represent the sum of ordinal variables and use of a nonparametric statistical test such as the Kruskal-Wallis test that utilizes rankings would be appropriate. Univariate analyses of these data using a Kruskal-Wallis test resulted in medians and *P* values that were similar to means and *P* values generated using analysis of variance.

Our choice of analysis was driven by the nested structure of the data. In our case, multiple patient observations are represented per physician; our dependent variable is a patient level score; and our independent variable is measured at the physician level.

The appropriate analysis to avoid bias given this structure of data is multilevel modeling. Multilevel modeling can take into account the effect of patients being nested within physician and correctly model the data without inflating (ignoring the physician level and analyzing data as if 2760 patients) or deflating the sample size (aggregating patient data to the physician level as if the sample were 138 physicians).

However, no nonparametric equivalent exists for multilevel modeling as there is for analysis of variance. Therefore, we needed to decide which analysis option was the least biased. Our decision was to use the multilevel modeling because this strategy also allows inclusion of covariates at the patient and physician levels to rule out alternative explanations for the observed associations.

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■ Gingko: smart pill or not?

TO THE EDITOR:

While we agree it is important to look critically at the claims made by the nutraceutical industry, we must not lose sight of the need to hold herbal studies to the same evidence-based standards to which we hold all medical research. Therefore, we were troubled by Lazar's conclusions ("Gingko is not a smart pill," *J Fam Pract* 2002; 51:912) that "gingko is not a smart pill," and "if you do not currently recommend gingko supplements to older patients who are worried about memory loss, do not start now."

The purpose of the original paper by Solomon et al was to evaluate gingko in healthy elderly volunteers using standardized tests.[1] Nowhere in their report did they explicate whether the intervention itself was standardized. Without this crucial information about the quality of the herbal product that is being tested, the internal validity of any botanical research cannot be judged, nor can any conclusive inferences be made.

One unfortunate result of the 1994 Dietary Supplement and Health Education Act is that what is on the label may not be what is in the bottle.[2] The potency of herbal products can vary from manufacturer to manufacturer and from lot to lot, in part because of nonstandard processing and manufacturing methods, and in part due to the variability of cultivation conditions.[3] Therefore, a distinction must always be made between a brand (eg, Ginkoba) and a plant (eg, *Gingko biloba*). Saying that something is just "gingko," as if all gingko products are the same, is not enough.

Examples of the rigorous level of inquiry and analysis needed to conduct meaningful botanical research exist even in the case of *G biloba*. Interestingly enough, in the very same month that the paper by Solomon et al was published, Mix

and Crews reported on a study with an identical goal.[4] However, unlike the Solomon study, they used a *G biloba* extract known as EGb 761 that is standardized to contain 24% flavone glycosides, 6% terpene lactones, and less than 5 ppm gingkolic acids. Using 180 mg of this extract daily for 6 weeks resulted in enhancing certain neuropsychological and memory processes of cognitively intact older adults, aged 60 years and over.

So is gingko a smart pill? We would let the readers decide. What we do know is that smart conclusions depend on critical appraisal and appropriate interpretation of all the evidence available. We conclude that the question of whether to recommend gingko supplements to older patients who are worried about memory loss remains open.

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DR LAZAR RESPONDS:

Ginkoba is not effective in improving memory in nondemented older adults who are worried about their memory. Other ginkgo products not studied here may have benefit.

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■ **To our readers:** an additional letter to the editor—**"Should the population be offered general health screenings?"**—may be found online at **www.jfponline.com**.