is similarly variable in the human brain, then this variation must be the first consideration in any attempt to estimate brain lesion size. This requires that the lesions must be clearly defined by region. One might expect the direct correlation of brain lesion size in humans with any serum CK isoenzyme values to be of little value until more is known about the distribution of these enzymes in human brain and how they are released.

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Colorimetric Screening Method for Microalbuminuria: Intra-individual Variability for Untimed Day Specimens

To the Editor:

We recently reported a screening procedure for microalbuminuria in which the colorimetry of total protein in an untimed day urine specimen was related to its respective albumin concentration (*1*). The intra-individual variability, with respect to the initial urinary protein concentrations, however, was not considered. Subsequently, we have estimated urinary protein in 30 diabetic patients who have had at least four repeat measurements during a six-month period. The methodology is as previously described (*1*), except that the microtiter plate reader was fitted with a filter that allowed measurement of the absorbance at 600 nm, the protein-shifted spectrum maximum (*2*).

Pitman's test for dependence (*3*) established that there was no significant relation ($P > 0.05$) between the individual urinary protein means (median, 46 mg/L; range, 9–512 mg/L) and their respective CVs. Total analytical variance, based on repeated measurement of duplicates, was 8.8% (n = 39) and 12.7% (n = 15) at urinary protein concentrations of 41.5 and 17.7 mg/L, respectively. The intra- and interindividual variances, corrected for analytical variance, were estimated as 37.5 ± 4.5% and 133.9 ± 12.9%, respectively, by using the "bootstrap" method (*4*), a distribution-free procedure that simultaneously minimizes sample bias.

The critical difference (*5*) for a significant change to have occurred in consecutive urinary protein values for an individual patient is therefore 109%. Previously, critical differences of 170% and 109% have been reported for urinary albumin in first morning specimens, expressed as milligrams per liter and milligrams per millimole of creatinine, respectively (*6*). Consequently estimations of urinary protein may represent a viable alternative for the serial monitoring of patients to assess initial development and progression of microalbuminuria. In measurements on 487 different patients' specimens, minimum protein values for a corresponding albumin concentration of 20 or 30 mg/L were 56 and 65 mg/L, respectively.

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Choriogonadotropin Discriminatory Zone and Ultrasonography

To the Editor:

The recent paper by Bandi et al. (*1*) describing clinically significant decision levels with pregnancy test reagents is very informative but omitted one very important detail on the sonographic diagnosis of pregnancy. The βHCG "discriminatory zone" of 6000–6500 int. units/L (1st IRP) described by Kadar et al. (*2*) refers to ultrasound done by transabdominal procedure. Newer technology has allowed ultrasound investigations to be done with an endovaginal transducer, which allows for much earlier detection of an intrauterine pregnancy. The value for the βHCG "discriminatory zone" for the endovaginal transducer will be much lower than the transabdominal procedure. In our preliminary studies this value is ~1000 int. units/L (1st IRP). This corresponds to a 40-fold dilution of serum in using the Tandem Icon II device to screen for the "discriminatory zone" with the endovaginal ultrasound procedure.

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