In this paper we shall point out and discuss a certain inconsistency that is present in the currently approved method of diagnosis.

The inconsistency is between creation of a comprehensive differential diagnosis and prescription of the Bayesian method for diagnosis.

We are encouraged to create a comprehensive differential diagnosis which includes diseases with low prior probabilities (atypical presentations) as well as those with high prior probabilities (typical presentations) in every patient (1, 2) to reduce diagnostic errors.

The effectiveness of this step in increasing diagnostic accuracy is well documented. For example, the 98 percent diagnostic accuracy achieved in 50 clinico-pathologic conferences (CPCs) found in one study (3), was attributed primarily to creation of a comprehensive differential diagnosis in each CPC.

The Bayesian method, in which prior probability of a disease is considered prior evidence for it in a patient, has been prescribed for diagnosis on grounds of the rationality of this method (4).

If the Bayesian method were to be strictly employed for diagnosis in every patient, a disease with atypical presentation would be considered to have prior evidence against it in a patient due to its low prior probability. This may discourage inclusion of this disease in a differential diagnosis in a patient.

We note thus an inconsistency between creation of a comprehensive differential diagnosis and prescription of the Bayesian method for diagnosis.

Experienced physicians resolve this inconsistency in practice by choosing to create a comprehensive differential diagnosis and not employing the Bayesian method for diagnosis as we see in published CPCs and clinical problem solving exercises (3, 5).

We believe it is important for novice physicians to be aware of this inconsistency as they may fail to include diseases with atypical presentations (low prior probabilities) in differential diagnosis due to the belief that this is sanctioned by the prescribed Bayesian method.
We wonder if this factor played a role in diagnostic errors due to failure to suspect diseases with atypical presentations which have been reported in several studies (6, 7).

References