

CAP TODAY

COLLEGE OF AMERICAN PATHOLOGISTS

July 2006

Pathology/Laboratory Medicine/Laboratory Management

Vol. 20 No. 7

For tumor markers, hope springs eternal

William Check, PhD

Devotees of Eastern mindfulness practices such as meditation and yoga believe it is possible to attain self-awareness and enlightenment, or satori, in this life. Not that it's easy, but that it's a goal that can be reached through intense effort and focus. Those who search for specific and sensitive serum tumor markers also believe they can reach their goal with focused thought and hard work. But just as most people who seek enlightenment fall short, so, too, most tumor markers end up being helpful, but not ideal, as screening tests.

Nonetheless, as new molecular methods have arisen, particularly microarray gene expression analysis, those who seek serum tumor markers continue their quest with renewed enthusiasm. With tumor markers, as with satori, reality is a mixture of compromise and hope.



"Most classical biomarkers that we use today in the clinic—which were developed 20 years ago or more—are actually not very good for diagnosis but are useful for monitoring therapy and predicting response," says Eleftherios P. Diamandis, MD, PhD, FRCPC, head of clinical biochemistry at Mount Sinai Hospital, University Health Network, and Toronto Medical Laboratories and professor and head of the Division of Clinical Biochemistry, Department of Laboratory Medicine and Pathobiology, University of Toronto.

"There has always been a lot of interest in finding markers that are good for diagnosis and especially for screening, identifying latent disease in asymptomatic individuals,"

continues Dr. Diamandis, who organized and will speak at a course this month at the AACC annual meeting on the use of tumor markers in the clinic and new developments. "Unfortunately, we have never had a very good way to screen for cancers, with the possible exceptions of the Pap smear, mammography, and prostate-specific antigen."