PROSTATE CANCER

Molecular markers and prognosis

New research has found that abnormal levels of markers of cell-cycle regulation and angiogenesis at diagnosis are associated with long-term mortality in men with prostate cancer. Study leader John Concato, from the Veterans Affairs Connecticut Healthcare System, says “these markers could be helpful in identifying more aggressive tumors, evaluating mechanisms of progression, and potentially developing new therapies.”

At present, methods for assessing prognosis for prostate cancer patients at the time of diagnosis are based mainly on determining serum PSA level, histological grade and the anatomical extent of the cancer. “Combining methods of clinical epidemiology (to assess clinical factors) and immunohistochemistry (to assess molecular markers) is an under-utilized strategy,” Concato comments.

Concato’s team reviewed the medical records of 1,270 men with prostate

cancer to obtain information such as age, comorbid diseases, histological score and PSA level. Original biopsy specimens had immunohistochemical staining for Bcl-2, p53 (cell-cycle regulators) and β -3 integrin, vascular endothelial growth factor, and microvessel density (markers of angiogenesis).

The researchers found an “independent relationship between abnormal Bcl-2, p53 and microvessel density at diagnosis and long-term mortality,” Concato describes. “The markers may not immediately change primary treatment for men when diagnosed with prostate cancer, but they can help to identify patients at higher risk of subsequent progression,” he concludes.

Lisa Richards

Original article Concato, J. *et al.* Molecular markers and death from prostate cancer. *Ann. Intern. Med.* **150**, 595–603 (2009).