Characteristics of the level-of-evidence-1 disease forecast cancer biomarkers uPA and its inhibitor PAI-1.

In cancer, the serine protease urokinase-type plasminogen activator, its inhibitor (plasminogen activator inhibitor type-1) and the receptor (CD87), among other proteolytic factors, are involved in tumor cell dissemination and turnover of the extracellular matrix. Unsurprisingly, a battery of very uniform data, amassed since the end of the 1990s, has put these members of the plasminogen activation system into the forefront of prognostic/predictive cancer biomarkers relevant to predict the clinical course of cancer patients and their response to cancer therapy. The present review focuses on the molecular characteristics of the disease forecast biomarkers urokinase-type plasminogen activator and plasminogen activator inhibitor type-1, and techniques to quantitatively assess these cancer biomarkers, in the context of potential clinical application and personalized disease management.