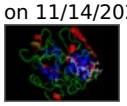
Overproduction of thrombin raises risks of blood clots, metastasis and septicemia in cancer patients.

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Thrombin is a naturally occurring protein responsible for the clotting of blood in normal tissue. High levels of thrombin in cancer patients, however, are correlated with serious health threats. When the body is under stress, it triggers an inflammatory response, which signals the body to increase thrombin production. There are several negative results from this response. First, this elevated level of thrombin increases a patient's chances of developing a blood clot. Second, thrombin also aids in the development of new blood vessels (angiogenesis) and is capable of breaking down the extracellular matrix (which could facilitate metastasis). Scientists have known that anti-coagulants help cancer treatment, but only recently have the details of how this approach works come to light.

Recent work has shown that p38 MAPK, a protein known to be involved in the regulation of cell death via apoptosis, also plays a role in the elevated levels of thrombin seen in cancer. The results open up a new potential target for cancer treatments.

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