

## High D-dimer level at presentation in patients with venous thrombosis is a marker for malignancy

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Dear Editor,

Schutgens RE, *et al*<sup>1</sup> have described the predicative value of D-dimer measurement for cancer in patients with deep vein thrombosis. In their study 23% of 218 patients either had or developed a malignancy during the median follow up of 34 months. They found high D-dimer levels of > 4000 µg/L were associated with more cancer incidence especially in patients under the age of 60 years. D-dimer levels are also thought to be an independent risk factor for venous thrombosis recurrence in cancer patients<sup>2</sup> and in patients without malignancy.<sup>3</sup> D-dimer levels in patients with malignancy is shown to be associated with tumour bulk and metastasis.<sup>4,5</sup> Low D-dimer level (<1000ng/mL) at presentation in patients with thrombosis is a strong negative predictor of malignancy.<sup>6</sup>

We have also investigated the correlation between D-dimer levels at presentation with reference to occurrence of malignancy. Our study included 608 (F: 305; M: 303) consecutive patients from the prospectively maintained database of patients with venous thrombosis at a University Teaching Hospital, between February 2001 and May 2005. All patients underwent an ultrasound examination to confirm the diagnosis and determine the extent of venous thrombosis. The database was regularly updated (6 monthly) using hospital information systems, questionnaires and clinical review. D-dimer assays were done using Bio-Merieux kit containing mouse monoclonal antibody. All Patients with thrombosis received standard treatment with low molecular weight heparin and Warfarin. Statistical analysis was carried out using SPSS software by Fisher's exact method (2-sided). 132 (22.2%) patients either had or developed a malignancy during the study period. Median D-dimer level at presentation was 2.3 mg/mL (Range: 0.1-46.3 mg/mL). Median age at diagnosis was 64yrs (Range: 16-96 yrs) and median follow up was 22 months (Range: 0-51 months). 95 (17.3%) patients had a D-dimer of >8mg/ml. Patients with a D-dimer greater than 8 mg/mL had a higher incidence of malignant disorders compared with patients with a D-

dimer level equal or lower than 8 mg/mL ( $P < 0.001$ ).

Our study confirms the findings of Schutgens RE, *et al* that high D-dimer levels of >8 mg/ml is a predictor of malignancy in patients with thrombosis. Prevalence of malignancy in both cohorts of patients appears similar (22.2% vs. 23%). These results are in contrast to the observation by Cushman M, *et al*.<sup>7</sup> We also recommend patients with thrombosis with a high D-dimer at presentation should be investigated for occult malignancy.

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