

## CORRESPONDENCE



## Thromboprophylaxis in Patients Receiving Chemotherapy

**TO THE EDITOR:** In their article on the results of the SAVE-ONCO study (ClinicalTrials.gov number, NCT00694382), which showed that semuloparin reduced the risks of deep-vein thrombosis in the lower or upper limbs and pulmonary embolism among patients receiving chemotherapy for cancer, Agnelli and colleagues (Feb. 16 issue)<sup>1</sup> do not mention the development of central-venous-catheter thrombosis. Indeed, deep-vein thrombosis related to a central venous catheter is a frequent complication, reported in 4% of patients with symptomatic events and 20 to 30% of patients with asymptomatic events detected by means of venography or ultrasonography; this complication is associated with the risk of pulmonary embolism and loss of central venous access.<sup>2</sup> A recent Cochrane review did not show any efficacy of heparins or vitamin K antagonists for the prevention of central-venous-catheter thrombosis.<sup>3</sup> Accordingly, national guidelines mention no prophylactic treatment; specifically, they recommend no prophylactic doses of low-molecular-weight heparin or low-dose warfarin.<sup>2</sup> Only the placement of the distal tip of the central venous catheter at the junction between the superior vena cava and the right atrium, and insertion on the right side are indicated.<sup>2,4</sup> Therefore, was central-venous-catheter thrombosis observed in the study, and was semuloparin an effective prophylactic treatment?

Claude Bachmeyer, M.D.  
Jean-Charles Pellen, M.D.

Tenon Hospital  
Paris, France  
claude.bachmeyer@ttn.aphp.fr

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2. Farge D, Durant C, Villiers S, et al. Lessons from French National Guidelines on the treatment of venous thrombosis and

central venous catheter thrombosis in cancer patients. *Thromb Res* 2010;125:Suppl 2:S108-S116.

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4. Debourdeau P, Kassab Chahmi D, Le Gal G, et al. 2008 SOR guidelines for the prevention and treatment of thrombosis associated with central venous catheters in patients with cancer: report from the working group. *Ann Oncol* 2009;20:1459-71.

**THE AUTHORS REPLY:** Bachmeyer and Pellen wonder whether central venous catheter-related thrombosis was observed in the study and whether semuloparin was an effective prophylactic treatment for this complication. In our study, a central venous catheter was present in 19.7% of patients in the semuloparin group and 18.8% of patients in the placebo group. Symptomatic deep-vein thrombosis of the upper limbs, including central-venous-catheter thrombosis, was part of the composite primary efficacy outcome. During the efficacy analysis period, symptomatic deep-vein thrombosis of the upper limbs occurred in 9 of 1604 patients in the placebo group (0.6%) and 3 of 1608 patients in the semuloparin group (0.2%) (hazard ratio, 0.33; 95% confidence inter-

### THIS WEEK'S LETTERS

- 1839 **Thromboprophylaxis in Patients Receiving Chemotherapy**
- 1840 **Paraneoplastic Thrombocytosis in Ovarian Cancer**
- 1841 **Three Patients with Full Facial Transplantation**
- 1842 **Regional Variation in Medicare Part D Drug Spending**
- 1843 **Bortezomib to Treat the TEMPI Syndrome**
- 1845 **Chronic Cyclic Nonnephrogenic Magnesium Depletion without Losses**

val, 0.07 to 1.18). All these patients had a central venous catheter. The risk reduction in deep-vein thrombosis of the upper limbs (including central-venous-catheter thrombosis) associated with semuloparin was consistent with the risk reduction in the other components of the composite primary efficacy outcome of the study, but the number of observed events is small.

Giancarlo Agnelli, M.D.

University of Perugia  
Perugia, Italy  
agnellig@unipg.it

Alexander G.G. Turpie, M.D.

McMaster University  
Hamilton, ON, Canada

Since publication of their article, the authors report no further potential conflict of interest.

## Paraneoplastic Thrombocytosis in Ovarian Cancer

**TO THE EDITOR:** The mean platelet volume (MPV), analogous to the calculation of the mean corpuscular volume, is calculated as the plateletcrit divided by the total number of platelets. Although the MPV is readily available on a routine blood count, many laboratories do not report the MPV to clinicians because of the lack of standardization and the dependency of the results on the age of the sample and the method of measurement. Stone et al. (Feb. 16 issue)<sup>1</sup> found that thrombocytosis was associated with shortened survival and advanced disease in patients with ovarian cancer. A recent population-based study has shown the MPV to be a predictor of venous thromboembolism.<sup>2</sup> Other studies have shown the MPV to be a predictor of cardiovascular risk, with an elevated MPV associated with increased mortality after acute myocardial infarction and an increased rate of restenosis after coronary angioplasty.<sup>3</sup> Similarly, an elevated MPV is associated with a worse outcome for acute ischemic cerebrovascular events, independent of other clinical factors.<sup>4</sup> We would like to know whether the investigators obtained data on the MPV in their study cohort, and if so, whether they found any correlation between the MPV and survival, independent of thrombocytosis.

Harris V. Naina, M.D.

Samar Harris, M.D.

UT Southwestern  
Dallas, TX

harris.naina@utsouthwestern.edu

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4. Greisenegger S, Endler G, Hsieh K, Tentschert S, Mannhalter C, Lalouschek W. Is elevated mean platelet volume associated with a worse outcome in patients with acute ischemic cerebrovascular events? *Stroke* 2004;35:1688-91.

**THE AUTHORS REPLY:** Platelet size, as measured by the MPV and platelet distribution width, correlates with platelet reactivity.<sup>1</sup> Retrospective data suggest that the MPV has potential prognostic and diagnostic value in hematologic and cardiovascular disorders.<sup>2</sup> However, it is not known whether the MPV is a useful prognostic marker in patients with cancer. Although the focus of our investigation was on the mechanisms and effect of thrombocytosis on clinical outcomes in ovarian cancer, in response to the inquiry from Naina and Harris, we examined the association among the MPV, thrombocytosis, and survival in 150 patients with newly diagnosed advanced epithelial ovarian cancer. In this data set, the median MPV was 8 fl (range, 6 to 11). MPV levels were inversely correlated with platelet count ( $r = -0.45$ ,  $P < 0.001$ ). Survival rates were not associated with the MPV (where a high MPV was defined as an MPV greater than either the median or the cutoff value used by our institution [ $>10.4$  fl]). The value of alternative cutoff levels for MPV for prognostic evaluation is unknown.

Rebecca L. Stone, M.D.

Vahid Afshar-Kharghan, M.D.

Anil K. Sood, M.D.

University of Texas M.D. Anderson Cancer Center  
Houston, TX  
asood@mdanderson.org

Since publication of their article, the authors report no further potential conflict of interest.

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