

The limited utility of currently available venous thromboembolism risk assessment tools in gynecological oncology patients



TO THE EDITORS: We have read with interest the manuscript by Barber and Clarke-Pearson¹ because we share the interest on a topic of large impact. We have comments, however, regarding some of their conclusions.

Although the title claims that the available risk assessment tools have limited utility, this is not an accurate generalization. The studied patients in the study by Barber and Clarke-Pearson¹ had a 1 month, 1.8% incidence of symptomatic venous thromboembolism (VTE) despite at least 95% compliance with prophylaxis. Consistent with prior literature on bariatric, orthopedic, oncologic surgery and current guideline opinion, this rate may be considered as high.²⁻⁵ Thus, it is not surprising that the Caprini risk score (CRS) classified most gynecological cancer patients as individuals in need of pharmacological prophylaxis.

Given that there was a presumed high thromboprophylaxis rate done with no stratification based on either CRS or Rogers score, one cannot conclude that the scores and consequently risk-based prophylaxis are inadequate. There was no appropriate standard for comparison or an organized strategy by risk tier. Moreover, although the authors interpret that the scores do not stratify the thrombosis risk among patients with gynecological malignancy, their findings show that higher Caprini and Rogers scores exhibited a matching higher probability of VTE with good statistical linearity. They actually found, in concordance with other authors, a subgroup of adequately classified patients with high VTE risk despite conventional prophylaxis.⁶

It is concerning that the authors used 2 different stratifications of the CRS (Table 2 vs Table 3) but did not clarify the rationale for using them interchangeably in the conclusion. In addition, many of the CRS variables were not available, which limits the interpretation, including the paradoxical VTE incidence in a misclassified CRS risk group. Indeed, contrary to the findings by Barber and Clarke-Pearson,¹ Stroud et al⁷ have validated the CRS in a gynecology-oncology population. Among 1123 patients, the 3 month rate of VTE was 3.3% and the CRS accurately predicted all VTE events.

What the authors have successfully presented is that both the Rogers and Caprini scores have a demonstrable linearity with respect to the occurrence VTE among patients with gynecological malignancies. What needs to be urgently defined is which intensity and duration of thromboprophylaxis shall be offered to patients with very high scores, which despite conventional prevention had a potentially fatal 1 month VTE >2% in the present study. The idea of personalized duration of prophylaxis is not a new concept and has been successfully implemented in other surgical entities.⁸ ■

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REPLY



We thank Dr Tafur et al for their comments on our article, which raises issues specific to the gynecologic oncology

patient. Regarding the utility of the risk assessment tools, we agree that when the highest-risk group of the Caprini score is substratified (score ≥ 5 group divided into smaller groups), it is highly correlated with venous thromboembolism (VTE) as reported in Figure 1 of our paper.¹

In this setting, the Caprini score has utility to risk stratify gynecologic oncology patients. However, both the American College of Chest Physicians (ACCP) chest guidelines² and the 2005 Caprini risk assessment model (RAM)³ define a Caprini score of ≥ 5 as a single highest-risk group (although, as noted by Dr Tafur, the lower-risk groups are defined differently by the ACCP² and Caprini risk assessment model³ as seen in Tables 2 and 3 of our paper¹, respectively). We found that 97% of gynecologic oncology patients have a score of ≥ 5 , meaning that risk stratification is limited if all are in a single group.

Placing all patients in a single high-risk group would be acceptable if all gynecologic oncology patients harbored a high risk of VTE and all required maximum prophylaxis. However, we believe the Caprini score highest-risk group overestimates the VTE risk for a significant proportion of gynecologic oncology patients. In modern gynecologic oncology surgery, greater than 40% of patients undergo minimally invasive surgery (MIS), and these percentages are increasing each year.^{1,4} Patients undergoing MIS have a risk of 30 day VTE as low as 0.57%, even with no perioperative mechanical or pharmacologic prophylaxis.⁵ The Caprini score assigns the same point values to patients undergoing open laparotomy or MIS, although the VTE risk is quite different (relative risks of 3.9¹ and 3.1⁶ for VTE for open vs MIS).

The cited validation of the Caprini score in gynecologic oncology included only patients undergoing laparotomy and did not address MIS.⁷ Furthermore, modern-era prophylaxis is not one size fits all. According to ACCP guidelines, patients undergoing abdominopelvic operations for cancer with a Caprini score of ≥ 5 require mechanical, pharmacologic, and extended-duration prophylaxis. The benefit of extended-duration prophylaxis or even pharmacologic prophylaxis for gynecologic oncology MIS is unclear.

We agree that with substratification of the highest risk group, the Caprini score could be a useful tool to preoperatively assess gynecologic oncology patients. However, the inability to distinguish VTE risk between patients undergoing MIS and open surgery limits the Caprini score's utility in this population. ■

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Concerns about the safety of nicotine replacement therapy during pregnancy on lung development in children



TO THE EDITORS: We read with great interest the article "Success of smoking cessation interventions during pregnancy."¹ Bérard et al¹ evaluated the effect of nicotine

replacement therapy (NRT) during pregnancy and found that NRT had a favorable impact on smoking cessation rates in expectant mothers. In addition, this retrospective cohort