

over the years. As a general proposition, medical writers need to be aware that the criteria for measuring the severity for various diseases are updated periodically. In oncology, for example, the RECIST criteria for measuring the size and number of solid tumors have been periodically updated, as indicated in the cited references (148,149,150,151).

This concerns an algorithm that generates a predictive score using only biomarker data, but no clinical parameters. The name of the algorithm is Risk of Ovarian Malignancy Algorithm (ROMA). According to one commentator, "ROMA is a reliable tool characterized by high accuracy and reproducibility to stratify patients into a high or a low ovarian cancer risk" (152). The ROMA algorithm makes use of simple arithmetic, and requires input of data from two biomarkers. The two biomarkers are CA125 and serum human epididymus protein (HE4) (153,154). Please note that, in addition to being expressed in ovarian cancers, HE4 is expressed in normal tissues of both males and females, where it is found in epithelial cells of the

trachea, renal tubules, breast, and epididymus (155). The ROMA algorithm, which involves simple arithmetic, provides a score called "Predictive Index." The algorithm, which requires inputting the concentrations of both CA125 and HE4 is as follows (156):

$$\begin{aligned} \text{Predictive Index} = & -1.25 + 2.38 \times \text{logarithm} \\ & \times [\text{HE4}] + 0.0626 \\ & \times \text{logarithm}[\text{CA125}] \end{aligned}$$

This particular algorithm is used only for premenopausal women. A different, but equally simple algorithm, is used for postmenopausal women. To repeat, the Predictive Index stratifies patients into low and high risk of malignancy groups.

Yet another diagnostic test used in ovarian cancer, is the OVA-1 test. This test requires expression data from five biomarkers, CA125, prealbumin, apolipoprotein A-1, beta2-microglobulin, and transferrin. The OVA-1 score can be any number between 1 and 10 (157,158).

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