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LETTER TO THE EDITOR

Response to "Novel" nomogram and algorithm do not aid in the distinction of primary vs. metastatic mucinous carcinoma of ovary: letter to the Editor

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To the Editor,

We thank Dr. Komforti and Dr. Thomas for their critical evaluation of our recent study aimed to facilitate diagnosis of mucinous ovarian carcinomas. We hope that the evoked confusion can be solved by the explanations below.

We conducted a very large study ($n = 1753$) to gain insight into the origin of mucinous carcinomas of the ovary, which since long has troubled pathologists. A correct diagnosis is of importance for further diagnostic workup and possibly for further therapy decisions.

Dr. Komforti describes their own cases ($n = 44$), demonstrating several different observations, in particular, with respect to assumed tumor origin, tumor laterality, and patient age. Part of these differences might be due to bias because of small numbers, which is why we performed a nationwide study.

Our nomogram is a visual aid that can be helpful in case of unilateral tumors of non-signet ring cell histology to determine the possibility of metastatic disease. The definitive score per case is determined by a combination of the weighed values of age of the patient and the size of the tumor, as determined by their regression coefficients. The diagonal that links both items indicates the combined score. While a cut-off value of 6.1 is suggested based on ROC curves, the score in itself gives an indication of the risk of metastatic disease. For example, a patient aged 65 with a tumor size of 18 cm (or smaller) is more likely to suffer from metastatic disease since the diagonal, extrapolated line will indicate a $\text{score}_{(\text{size + age})}$ of approximately 5 (see Fig. 1, red line). On the other hand, a 25-year-old patient with a tumor of 18 cm is more likely to suffer from primary ovarian disease since $\text{score}_{(\text{size + age})}$ is approximately 20 (see Fig. 1, blue line). The exact scores for tumor size and patient age can also be found in the supplemental tables to prevent "guesstimation," although for most cases it will be clear whether the $\text{score}_{(\text{size + age})}$ will exceed 6.1.

We absolutely agree with Dr. Komforti that the definitive diagnosis of a mucinous carcinoma in the ovary should not rely solely on this nomogram. The creation

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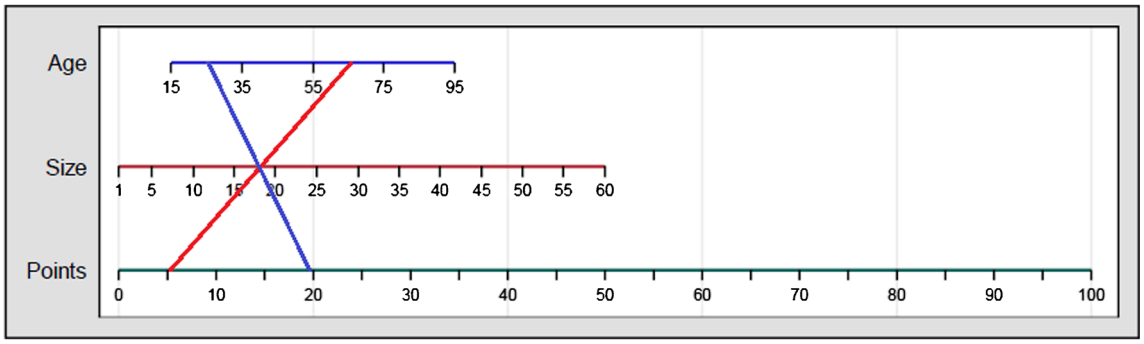

Fig. 1 Two examples of application of the nomogram, leading to an indication of origin based on points extrapolated from patient age and tumor size

of this algorithm and nomogram was an attempt to facilitate the diagnosis and to serve as a diagnostic aid. After careful integration of clinical, surgical, and imaging data and macroscopic and microscopic pathology workup including ancillary studies, the final diagnosis should be the result of multidisciplinary discussion.