Letters about Published Papers

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To the Editor,

We read the article by Bicakli et al.1 entitled “Adjuvant chemotherapy may contribute to an increased risk for metabolic syndrome in patients with breast cancer.” Thanks to the authors for their interesting research in which they claimed that adjuvant chemotherapy might have contributed to an increased risk for metabolic syndrome in patients with breast cancer. However, we wish to make some comments on prealbumin which the authors thought as a marker for nutritional status.

Prealbumin, or transthyretin, is a serum transfer protein for thyroxine and retinol. Previous studies showed that certain diseases such as anorexia nervosa, Alzheimer’s disease, chronic liver diseases, chronic kidney disease, malnutrition, acute phase response (infection, inflammation, trauma), type 1 diabetes mellitus, rheumatoid arthritis, ankylosing spondylitis, pneumonia, protein losing enteropathy, Helicobacter pylori infection, Kawasaki disease, major depression, and thyroid diseases could affect the serum prealbumin levels.2,3 Bicakli et al.1 did not express these contributing diseases in their paper.

Several drugs such as anabolic steroids, nonsteroidal anti-inflammatory drugs, estrogens, progestational agents, and anti-thyroid drugs could alter serum prealbumin levels.2,4 In addition, dietary food supplements such as omega-3 fatty acids, zinc, vitamin A, and vitamin C can affect serum prealbumin concentration also.5,6 In this respect, the authors should express whether the participants used these kinds of drugs and dietary supplements in their recent history.

The body position is significant to specify while taking blood specimen. It is recommended that blood specimens for measuring of plasma proteins be taken after nearly 15–20 min in the sitting position.7 Otherwise, concentrations have to be evaluated with consideration of position.2 Lower levels are to be expected in bedridden patients.

Lastly, Bruguerolle et al.7 suggested that circadian rhythm was defined for serum prealbumin. We think that it is essential to define sampling time for the measurement of serum prealbumin to present reliable data. Therefore, interpretation of findings with its current form seems problematic.

In conclusion, we believe that the study of Bicakli et al.1 contributes valuable data to medical literature. However, clarifying these concerns will provide clearer picture to the readers.

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Conflict of interest
The authors declare no conflicts of interest.

References

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Reply

To the Editor,

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We thank Agilli et al. for their interest in our article and their comments on prealbumin. Agilli et al. emphasized the importance of the differential effects on prealbumin and acknowledged that certain accompanying conditions and medications may influence our results. They mentioned that certain diseases especially the chronic ones such as chronic liver diseases, chronic kidney disease, etc. may affect serum prealbumin levels. However, all the participants in our study had adjuvant chemotherapy, and this means that they did not have these mentioned chronic diseases. Because, if they had, they could not be treated with such toxic chemotherapeutics in the adjuvant setting. Besides, 81.7% of the patients had no comorbid diseases as we had defined both in the manuscript text and in Table 1. The remainder had various chronic diseases such as diabetes mellitus (6.7%), hypertension (8.7%), gastric ulcer (1.9%), and osteoporosis (1%). In addition, our inclusion criteria were Eastern Cooperative Oncology Group performance status <2 and adequate organ function, and we excluded the patients with morbid obesity (body mass index >40 kg/m²) and a known family history of dyslipidemia.

In our study, none of the patients received hormone replacement therapy including estrogens and progestational agents and any anabolic steroids. Our patients were early stage breast cancer patients with good performance status, and therefore, no dietary food supplements and vitamins were prescribed to them. Additionally, in literature search, we could not find any interactions between serum prealbumin levels and various drugs in patients with malignant diseases.¹ Studies concerning prealbumin and malignancy were all investigating the role of prealbumin as a biomarker for predicting nutritional status of the patients or cancer diagnosis.²-⁵ So, despite its interactions, prealbumin can be one of the indicators of nutritional status and is indicated especially as a biochemical nutritional parameter used in the monitoring of nutrition applications in ESPEN guidelines.⁶

In order to measure serum hormonal (estradiol, follicle stimulating hormone, luteinizing hormone, free T₃ and T₄, thyroid stimulating hormone) and metabolic parameters related with metabolic syndrome (serum glucose, triglyceride, total cholesterol, high-density lipoprotein, low-density lipoprotein, apolipoprotein A-1, lipoprotein A-1) and nutritional status (transferrin, albumin, prealbumin), blood samples were analyzed in fasting state. Blood samples for measuring serum proteins were taken in the sitting position as these patients were evaluated in outpatient clinic.

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References