Prognostic Role of Plasma Insulin-Like Growth Factor (IGF) and IGF-Binding Protein 3 in Metastatic Colorectal Cancer

To the Editors: Fuchs et al. (1) report convincing evidence documenting the predictive and prognostic capacity of a single baseline determination of insulin-like growth factor-binding protein 3 (IGFBP3) and IGF-I plasma levels in advanced colorectal cancer patients undergoing first-line chemotherapy.

Plasma levels of serum markers may oscillate and differences in the time elapsed from sample retrieval to the initiation of treatment may bias the results. A more robust approach might be the use of the variations of the plasma levels of these markers along the time as the independent variable. Our group recently reported how changes along the time in serum IGF-I and IGFBP3 associate with response to first-line chemotherapy in 41 advanced colorectal cancer patients (2). In view of the interesting results of Fuchs et al. (1), we completed our database with survival data. Baseline IGF-I was not associated with overall survival in our cohort. But interestingly, those patients having an increase of IGF-I over baseline after 3 months on therapy (n = 18, 44%) had a better survival rate (hazard ratio, 0.42; 95% confidence interval, 0.18-0.95; P = 0.038; multivariate model adjusted by age and performance status). This finding suggests that the oscillations of tumor markers under therapy might be a more powerful approach to assess survival. The association of an increase on IGF-I with better survival supports the counterintuitive finding of Fuchs et al. (1) who associated also higher baseline levels of IGF-I with better survival. These findings cast doubt on whether plasma determination of this biomarker really reflects its role in tumor promotion.

Fuchs et al. (1) use quartiles to create groups to compare the different outcomes. Several experts in risk prediction encourage the use of predictive values to assess the clinical relevance of biomarkers (3). This is why we think that providing the positive and negative predictive values for each of the cut points elected, regarding response and 6-month survival, would allow the scientific community to take advantage of their results by validating these biomarkers in different clinical populations.

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Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed.

References

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