Predicting Patient Survival in Oncology: Is it Time to Take a New Path?

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COMMENTARY

Predicting Patient Survival in Oncology: Is it Time to Take a New Path?

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In oncology, assessing the response to treatment has always been assumed to provide critical value in predicting patient survival. However, in the recent past many clinical trials, including randomized phase 3 trials, designed to test the efficacy of new drugs have debunked this assumption. Rather, it appears that the pattern of disease progression more than the actual response to the treatment in the tumor itself may be more accurately indicative of post-progression survival (PPS). If this is the case, identifying patterns of disease progression that are characteristic of a specific treatment type, such as the various loco-regional therapies for example Yttrium-90 radioembolization, could help predict which patients will do best with a particular therapy allowing a second line treatment to be started early in case of failure [1]. In this issue of CVIR, a retrospective analysis conducted over a 12-year period—in a single center—of patients with advanced hepatocellular carcinoma (HCC) treated with resin-based Yttrium-90 radioembolization shed light on how pattern of progression after selective internal radiotherapy (SIRT) could predict PPS and therefore overall survival. Here, the development of intrahepatic or extrahepatic lesions post-SIRT, rather than growth within the treated tumor itself regardless of whether it was effectively targeted or not by SIRT, was a sign of poor prognosis and low survival [2]. By itself, the results of this study are quite remarkable because they confirm those of recent reports that have questioned the exclusive reliance on tumor response imaging—usually in the form of RECIST 1.1 or even mRECIST—to predict patient survival. Indeed, the clinical trials on patients with HCC with sorafenib and more recently regorafenib—where overall survival was not affected by a shorter time to tumor progression (TTP) than the one with sorafenib when it was given in front line—have brought to light the disconnect that exists between tumor response as assessed by RECIST and overall patient survival [3]. Furthermore, in this new era of available second-line therapies for patients with HCC, identifying patterns of progression as early as possible would grant patients who have progressed access to potentially life-extending second-line drug therapy. As the authors of the current CVIR study explained, SIRT continues to play a role in the treatment of patients with HCC despite a number of failed clinical trials. Therefore, the time is right for a prospective clinical trial conducted in a homogeneous patient population not previously treated (treatment-naïve) using the latest technological advances in SIRT such as tumor targeting with cone beam CT and improved dosimetry in order to confirm the findings of this CVIR study [4].

Given the growing interest in identifying valuable and reliable predictors of patient survival, further supported by the findings of recent clinical trials, it is imperative that such questions be answered by prospective clinical trials properly designed. The stakes are too high to deserve anything less.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

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