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European Association of Urology



Letter to the Editor

Reply to Yubo Yang, Xin Wei, and Ping Han's Letter to the Editor re: Roger Li, Philippe E. Spiess, Scott M. Gilbert, Andrea Necchi. Towards Personalized Neoadjuvant Therapy for Muscle-invasive Bladder Cancer. *Eur Urol* 2019;76:4–6

We thank Yang and colleagues for their correspondence prompted by our article [1] in which they highlight the increasing incidence of myocarditis reported for cancer patients treated with immune checkpoint inhibitors. Fatality rates are high (ranging from 46% to 50%) because of its insidious onset and fulminant progression [2,3]. Fortunately, despite recent increased recognition, myocarditis is still a rare complication of checkpoint inhibitors: using the US Food and Drug Administration adverse events reporting system, Raschi et al. [4] reported 88 incidences among 21 034 reports of adverse events (0.4%). Similarly, Johnson et al. [5] estimated an incidence of 0.27% among patients treated with the combination of ipilimumab and nivolumab, and just 0.09% overall among all patients treated with nivolumab, ipilimumab, or a combination of the two. A brief review of the literature on checkpoint blockade in urothelial cancer covering IMvigor210, KEYNOTE 052, Checkmate 275, Study 1108, and JAVELIN in the metastatic setting, PURE-01 and ABACUS in the neoadjuvant setting, and KEYNOTE 057 in the bacillus Calmette-Guérin-unresponsive setting yielded no reported incidence, although four cases were reported among urothelial cancer patients treated with immune checkpoint inhibitors according to Vigibase, the World Health Organization database of individual case safety reports [3]. As with the introduction of any novel therapy, vigilance needs to be exercised in monitoring for adverse events. Measurement of post-treatment electrocardiograms and troponin levels may be considered in the future.

Conflicts of interest: Andrea Necchi has received honoraria from Roche, Merck, AstraZeneca, and Janssen Pharmaceuticals; acts in a consulting or

advisory role for Merck Sharp & Dohme, Roche, Bayer, AstraZeneca, Clovis Oncology, Janssen Pharmaceuticals, Incyte, BioClin Therapeutics, Seattle Genetics, and Astellas Pharma; has received institutional research funding from Merck Sharp & Dohme and AstraZeneca; and has received travel and accommodation expenses from Roche, Merck Sharp & Dohme, AstraZeneca, and Janssen Pharmaceuticals. The remaining authors have nothing to disclose.

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