Response to 'Aberrant expression of TdT in seminomatous germ cell neoplasia'

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Received: 27 June 2018 / Accepted: 27 June 2018 / Published online: 6 July 2018
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Dear Prof. Massi,

Thank you for the opportunity to respond to the letter by Gayhart et al.

With great interest, we noticed the additional and important data on TdT expression in germ cell tumors.

The extension of our previous work dealing with TdT expression in seminomas by Gayhart and co-workers to “aberrant” TdT expression in dysgerminoma and extragonadal germinoma underlines the importance of the TdT expression in germ cell tumors, particularly since these tumors are located in similar locations as lymphoblastic leukemias/lymphomas.

Since the publication of our data, we continued in staining seminomas for TdT expression. As discussed for case 7 in our work, we also observed cases with patchy TdT expression; however, most cases displayed a strong expression throughout all the tumor cells. This holds also true for the germ cell neoplasia in situ component, as described before.

As perceived by Gayhart et al., the prevalence of the TdT staining in seminomas and extragonadal germinomas is prob-

ably based on sample size. Thus, we exclusively use whole sections for TdT staining to cover any aspect of potential tumor heterogeneity or fixation caused false negative staining results. In hematological diagnostics, it is well established that TdT staining strongly depends on the quality of the tissue fixation. In concordance with Gayhart et al., we assume that the fixation issue results in biased staining results using a TMA-based method.

Furthermore, the newly established expression of TdT in dysgerminoma and extragonadal germinoma reinforces a probable involvement of TdT in the tumorigenesis of germ cell-derived tumors. Here, more (functional) studies are needed to elucidate the impact of the TdT expression on tumorigenesis and potential differences in patients' outcome.

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