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Letter to the Editor

DNA ploidy and chromosome (FISH) pattern analysis of peripheral nerve sheath tumors

To the Editor,

We appreciate the interest of Dr. Cremer in our article on DNA ploidy and chromosome (FISH) pattern analysis of peripheral nerve sheath tumors [3]. We welcome the opportunity to emphasize the importance of novel methods such as light optical nanoscopy and COMBO-FISH [1,2] mentioned by Dr. Cremer. We absolutely agree, that the main goal is to diagnose cancer related genetic instabilities, from the chromosomal level down to microdeletions, perhaps even point mutations. This is especially true in the field of soft tissue tumors. Nowadays it is accepted that two main groups of soft tissue sarcomas can be distinguished depending on the complexity of their molecular alterations. In this regard there is a group of sarcomas, whose cytogenetic alterations are relatively simple, usually balanced translocation resulting in formation of fusion genes, which are supposed to be implicated in the pathogenesis of these tumors. In this group the sarcomas (i.e. synovial sarcoma, myxoid liposarcoma, etc.) arise *de novo*, and the fusion genes are probably an initial and necessary event in their genesis. The second group of sarcomas (i.e. MPNST, leiomyosarcoma, etc.) is characterized by complex karyotypes and lack of fusion genes. Clear signs of chromosomal and genomic instability are present in this type of sarcomas. It seems that these tumors may arise *de novo* but sometimes a "dysplastic-precursor" condition does exist as we emphasized in our article [3]. Though the dysplasia is very well known (even in molecular level) in many epithelial malignances, the soft tissue dysplasia is still to be discovered. Hopefully these new methods mentioned by Dr. Cremer will help us to gain a better understanding on the molecular mechanisms of soft tissue dysplasias.

References

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