41. Soft Tissue Sarcoma of the Trunk and Extremities

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Emerging Prognostic Factors for Clinical Care

Molecular Markers

Molecular markers and genetic abnormalities are being evaluated as determinants of outcome. Presently, however, insufficient data exist to include specific molecular markers in the staging system. Molecular and genetic markers should be considered as important information to aid in histopathologic diagnosis, but not in determining stage.

Some of the staging issues regarding tumor grade may be supplanted by genomic tests in the future. A characteristic genetic signature of aneuploidy, termed Complexity Index in Sarcomas (CINSARC), outperforms histologic grading in soft tissue sarcomas and GIST alike[1] and in the future may become accepted as a prognostic marker in lieu of FNCLCC sarcoma grade.[2] AJCC Level of Evidence: III

Risk Assessment Models

The AJCC has recently established guidelines that will be used to evaluate published statistical prediction models for the purpose of granting endorsement for clinical use.[3] Although this is a monumental step forward towards the goal of precision medicine, this work was only very recently published. For this reason, the existing models that have been published or may be in clinical use have not yet been evaluated for this cancer site by the Precision Medicine core of the AJCC. In the future, the statistical prediction models for this cancer site will be evaluated, and those that meet all AJCC criteria will be endorsed.

Recommendations for Clinical Trial Stratification

The description of the tumor required for clinical trials varies greatly. For some studies of primary tumors, details of anatomic site and adjoining structures are critical; in studies of metastatic disease, definition of the specific metastatic sites is used for response determination. In nearly all situations, the most detailed definition of the histology is critical—for example, myxoid/round cell liposarcoma instead of liposarcoma—because the biology of each sarcoma subtype is distinct.

Anatomic primary location
Histology
Grade

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AJCC stage
Relevant immunohistochemical markers, if any
Relevant molecular alterations, if any
Histologic grade
Histopathologic type

Bibliography

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