45. Soft Tissue Sarcoma - Unusual Histologies and Sites

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Emerging Prognostic Factors for Clinical Care

The Cancer Genome Atlas and other efforts have genomically characterized several sarcomas. These data, however, do not yet have an impact on prognosis or definitive predictive value for response to treatment to date. For example, it is recognized that mutations in *TP53* and *CDKN2A* are common in aneuploid tumors, but the data regarding these alterations and their impact on staging and treatment remain too sparse to form any recommendations.

Risk Assessment Models

The AJCC recently established guidelines that will be used to evaluate published statistical prediction models for the purpose of granting endorsement for clinical use.[1] Although this is a monumental step toward the goal of precision medicine, this work was published only very recently. Therefore, 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 following stratification criteria stem from the prognostic factor analyses suggested for use in sarcoma trials, depending on the specific objectives of the study, the STS stage(s), and the population under study, including sample size. These recommended criteria for clinical trials are listed in approximate order of their statistical power stage by stage.

STS Stages I to III
>	Age
>	Gender
>	Tumor size
>	Nodal involvement
>	Tumor grade, if defined
>	Diagnostic molecular abnormality/abnormalities
>	Other molecular abnormalities characterized for the STS (e.g. mutations, copy number variations), as available, with name of test used

STS Stage IV
>	Age

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Gender

Original primary tumor size

Present nodal involvement

Tumor grade, if defined

Sites of metastatic disease, up to five

Diagnostic molecular abnormality/abnormalities

Bibliography

1. Kattan MW, Hess KR, Amin MB, et al. American Joint Committee on Cancer acceptance criteria for inclusion of risk models for individualized prognosis in the practice of precision medicine. *CA: a cancer journal for clinicians.* 2016.