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ABSTRACTS

Differential Sensitivity to chemotherapy in leiomyosarcoma depending on site.

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Background: There is evidence that leiomyosarcomas are less chemo-sensitive than other histological subtypes of soft tissue sarcoma. Uterine leiomyosarcomas appear to be more chemo-sensitive than leiomyosarcomas of other sites, however the literature is sparse. We performed a retrospective review to investigate the role of primary site of disease as a variable in chemo-responsiveness in patients with leiomyosarcomas.

Methods: We conducted a retrospective analysis of our database. This is a prospectively maintained database of patients with soft tissue sarcoma patients treated at the Royal Marsden Hospital. There were 244 (104 trunk, 56 extremity and 84 uterine) patients with histologically proven leiomyosarcoma treated with chemotherapy for metastatic or unresectable disease at the Royal Marsden from 1988 until August 2005. We excluded patients reclassified as having gastrointestinal stromal tumours. The chemotherapy schedules varied but the majority were treated with a doxorubicin containing regime.

Results: The response rate for uterine leiomyosarcomas was 33% compared to 14% and 18% for extremity and trunk leiomyosarcomas respectively. The relative risk of uterus vs trunk is 0.45 $p=0.019$ and for uterus vs peripheral 0.448 $p=0.075$. Logistic regression analysis demonstrated an odds ratio for likelihood of response of 0.371 (95% CI 0.152-0.910) for peripheral compared to uterus and 0.452(95% CI 0.230-0.888) for trunk compared to leiomyosarcomas.

Conclusions: This retrospective analysis has shown that the site of the primary disease is an important prognostic variable of chemo-responsiveness, with those patients with uterine leiomyosarcomas demonstrating a significantly higher response rate compared with other sites. The reason for this difference is unknown and may reflect a difference in the underlying biology of this subgroup of leiomyosarcomas.