

Different Pathological Types of Adult Prostate Sarcoma were Associated with Distinctive Prognosis: Experience of a High-volume Center in China

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INTRODUCTION AND OBJECTIVE

Prostate sarcoma is an extremely rare and highly aggressive neoplasm. Owing to its rarity, knowledge of the clinical features, management, and prognosis are lacking. It has primarily been derived from case reports, small institutional series, and counterparts of other genitourinary sites.

MATERIAL & METHODS

The medical records of 39 adult patients from January 2000 to March 2017 with a diagnosis of primary prostate sarcoma were retrieved. Univariate and multivariate Cox regression analysis were applied to identify the predictors of overall survival (OS) and progression-free survival (PFS).

RESULTS

The most common histological type was rhabdomyosarcoma (10 cases, 25.6%). Patients were divided into 4 pathological groups based on prognosis: I. carcinosarcoma and extra-gastrointestinal stromal tumor (EGIST); II. leiomyosarcoma; III. rhabdomyosarcoma; IV. stromal sarcoma, undifferentiated pleomorphic sarcoma, unclassified sarcomas and other rare sarcomas (SS/UPS/US/ORS), the median OS for each group was 56.1, 41.9, 16.2 and 12.0 months, respectively.

Multivariate Cox regression revealed that advanced clinical T stage (T3/T4 vs T2, HR 3.09, $p = 0.020$) and pathological type (SS/UPS/US/ORS vs carcinosarcoma and EGIST, HR 8.84, $p = 0.001$; rhabdomyosarcoma vs carcinosarcoma and EGIST, HR 3.75, $p = 0.049$) were associated with OS. Patients with SS/UPS/US/ORS (HR 9.40, $p = 0.003$) and rhabdomyosarcoma (HR 3.80, $p = 0.027$) had shorter progression-free survival compared with carcinosarcoma and EGIST.

Figure 1 Kaplan-Meier analysis of overall survival of patients with different pathology types (a), clinical T stages (b), clinical M stages (c) and with or without adjuvant therapy (d)

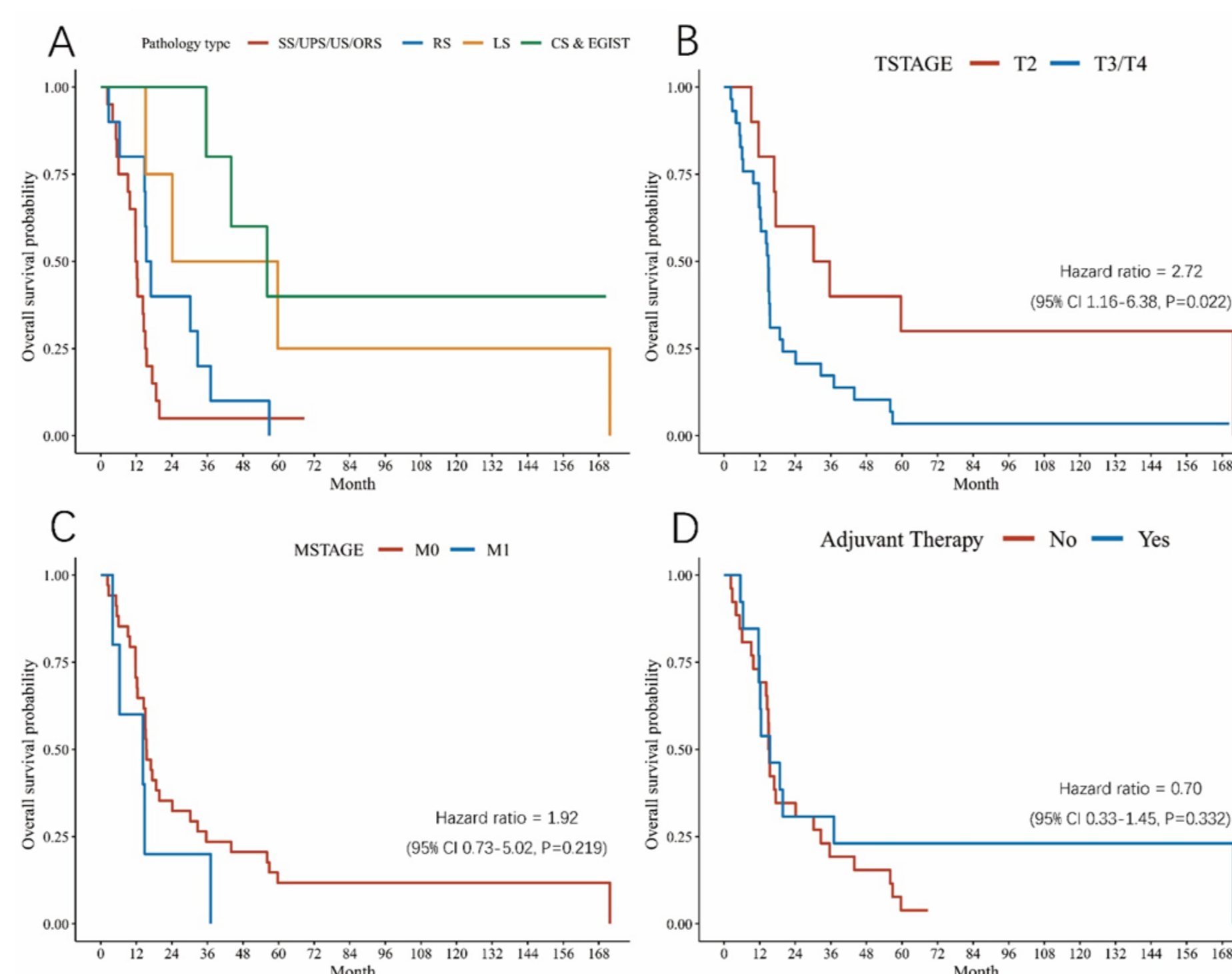
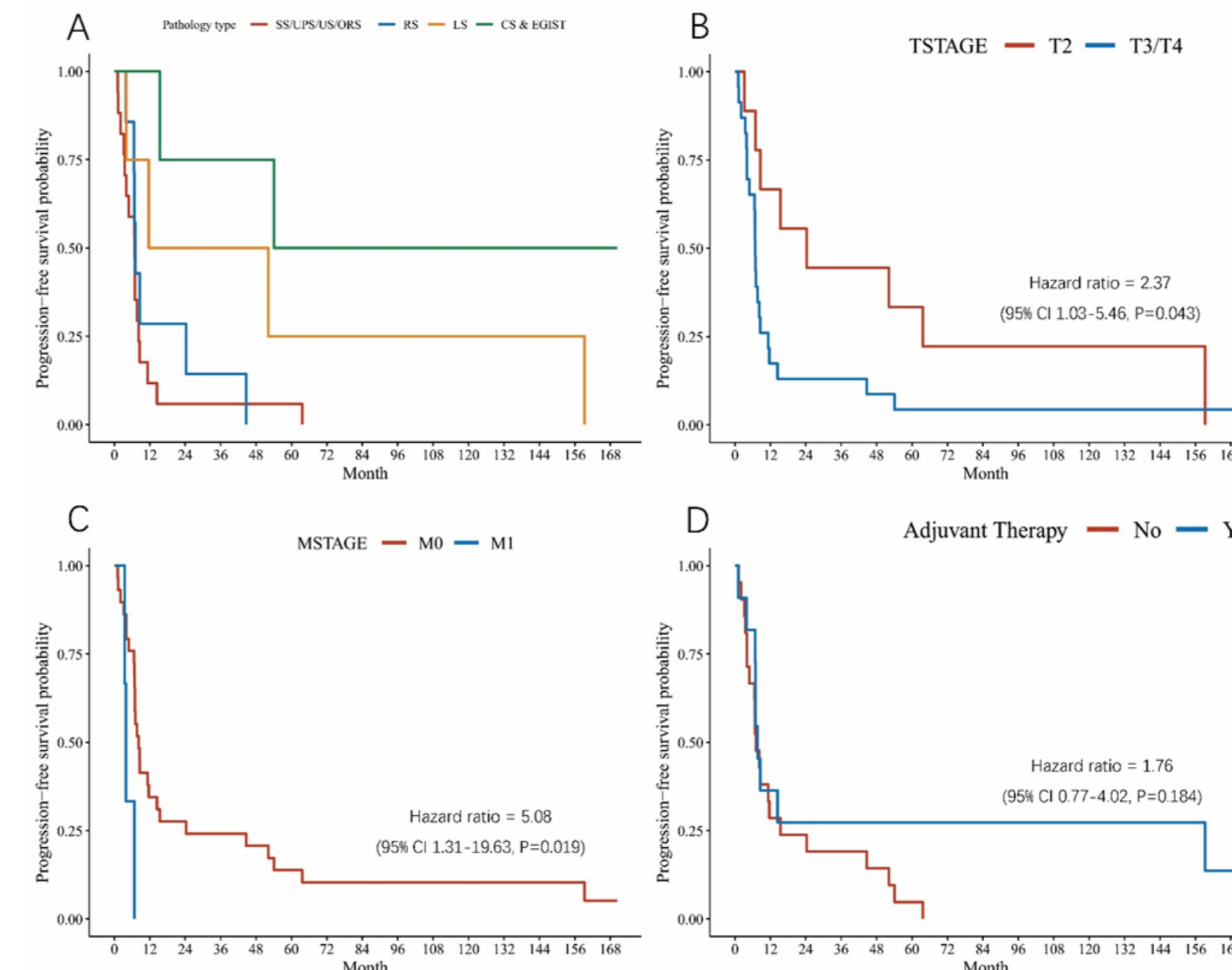


Figure 2 Kaplan-Meier analysis of progression-free survival of patients with different pathology types (a), clinical T stages (b), clinical M stages (c) and with or without adjuvant therapy (d)



SUMMARY / CONCLUSION

Different pathological types of prostate sarcoma were associated with distinctive prognosis. Patients with carcinosarcoma and EGIST of prostate had longer OS and long PFS, followed by leiomyosarcoma, rhabdomyosarcoma and SS/UPS/US/ORS. Advanced Clinical T stage were associated with OS. The application of adjuvant therapy may improve the OS of these patients. Further studies are needed to identify better treatment strategies for prostate sarcoma especially in the age of precision medicine.

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